

Large Systems

**GCOS 8 OS
System Startup**

Honeywell Bull

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LARGE SYSTEMS
GCOS 8 OS
SYSTEM STARTUP

SUBJECT

Initialization of Honeywell Bull Large Information Processing Systems Operating Under General Comprehensive Operating Supervisor 8 (GCOS 8) Software

SPECIAL INSTRUCTIONS

This revision supersedes DH18-02, dated December 1985. Change bars in the margins indicate technical additions and changes, and asterisks indicate deletions. Refer to the Software Release Bulletin (SRB) for this product release for a synopsis of technical changes.

SOFTWARE SUPPORTED

GCOS 8 OS Software Release 3000

ORDER NUMBER

DH18-03

August 1987

Honeywell Bull

PREFACE

The GCOS 8 OS System Startup manual describes software-related procedures for starting up a newly installed system and for restarting that system. This manual is directed at site personnel who must prepare the Startup job stream and at operations personnel who must interface with the Startup program via the system console.

Hardware operating procedures that are necessary to System Startup (e.g., mainframe and peripheral switch settings) are not included in this manual. Refer to the appropriate hardware reference manuals for description of switch settings.

In addition, this manual does not define Startup procedures for the Front-end Network Processors. Refer to the appropriate communications manuals for this information.

The major sections of this manual are:

- o Section 1 presents an overview of the Startup program and the Startup job stream.
- o Section 2 describes techniques for bootloading the system and the operator (console) interface with the Startup program.
- o Section 3 describes procedures for recovery from error conditions that occur during the system startup process.
- o Section 4 describes the procedure for loading Integrated Software and for modifying default parameters for Integrated Software.
- o Section 5 describes the various statements that can be included in each section of the Startup job stream.

In this document, multiple vertical braces and brackets should be assumed to be a single brace or bracket; for example:

$\left\{ \begin{array}{l} \{ \} \\ \{ \} \\ \{ \} \end{array} \right\}$ represent $\{ \}$ and $\left[\begin{array}{l} [] \\ [] \\ [] \end{array} \right]$ represent $[]$

The information and specifications in this document are subject to change without notice. Consult your Honeywell Bull Marketing Representative for product or service availability.

CORRECTING MANUALS VIA PASS

Required corrections to this version of the manual will be entered on the Problem Analysis Solution System (PASS) data base. Query PASS periodically via the procedures described in the Problem Analysis Solution System (PASS) manual, Order Number DW95. Corrections documented on PASS, if applicable to the next release of the software, will be incorporated into the next update of the manual.

LISTING OF MANUALS

A list of large system software manuals is available to all Honeywell Bull users with access to an ASCII terminal. The manuals list is updated regularly to facilitate the ordering of manuals. Manual ordering instructions are printed on the listing. Use the following instructions to obtain a listing.

1. Dial the appropriate telephone number to connect your terminal to the Multics system in Phoenix.

<u>300-baud & 1200-baud</u>	<u>150-baud</u>
(602) 249-5356 249-6430	249-7554

Multics will respond with a computer system identification banner.

2. Enter the login command "login Sam" (without the quote marks). Press the carriage return key.

Multics will respond with a request for the password.

3. Enter the password "Multics" (without the quote marks) and press the carriage return key.

Multics will respond with a welcome message followed by a ready message.

Example: Welcome to the Multics system
For services available online type:
:list
r1111.7 Thu (ready message)

4. Enter ":list" (without the quote marks) to obtain a list of commands. Press the carriage return key.

Multics will list the commands available for specific topics and then display the ready message.

5. Enter the command selected and press the carriage return key.

6. Enter "logout" (without the quote marks) and press the carriage return key to log off the Multics system.

Multics will respond with a logout message.

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SECTION 1

SYSTEM STARTUP OVERVIEW

The purpose of System Startup is to make operational a newly installed system or to restart a previously functioning system that was rendered inoperable by a malfunction. System Startup, also referred to as bootloading, can be divided into four main functions.

1. Bootloading firmware into the following input/output controllers:
 - o IMU on DPS 8
 - o IMX on DPS 8000
 - o IOX on DPS 88
 - o IOP on DPS 90
2. Bootloading of the Startup program
3. Establishing the system environment
4. Executing control statements within the Startup job stream (including bootloading firmware in all MPCs (Micro Programmable Controllers) on DPS 8 and DPS 8000 systems)

The Startup procedure is designed to give the site as much control as possible over its operating environment. Many of the events within the overall bootload process are operator-directed, while others are performed by the Startup program with no operator intervention required. In addition, a great deal of flexibility is allowed when constructing the Startup job stream, which defines the hardware and software environments that best meet the site's processing needs.

This section presents an overview of System Startup in terms of the preceding four functions. Detailed information is the subject of subsequent sections.

BOOTLOAD STARTUP PROGRAM

The Bootloader program, which loads the Startup program into main memory, in actuality, is the front-end of the Startup program.

The Bootloader program must be executed if the Startup program is to be loaded into main memory from magnetic tape. In the process of bootloading the Startup program, the Bootloader program also applies to Startup any existing MASK correction statements. Once Startup is in memory and placed in execution, the remainder of the System Startup procedure comes under its control.

Two additional procedures, neither utilizing the Bootloader program, are frequently used for loading the Startup program into main memory when the Startup program resides on mass storage. Under one procedure, the Startup program is loaded into main memory by the Master Mode Dump program (.MDUMP) from the AUTOLOAD file. Loading occurs as the result of the console entry AUTO or REPL in response to the question *BOOT SOURCE: TAPE, AUTO, OR REPL?.

*

The second procedure, sometimes called a "direct bootload", loads the Startup program from the AUTOLOAD file as the result of the console entry AUTO or REPL in response to the BOOT verb.

ESTABLISH SYSTEM ENVIRONMENT

Once loaded into main memory, the first function of the Startup program is to establish the system environment. This involves a sequence of events designed to reset memory locations to a known status and to establish the identity of the system. Startup performs the following functions at this time:

- o Initialize all of main memory to zero
- o Verify memory size
- o Initialize certain communication region locations and apply default values
- o Invoke the fast boot option (if warranted by conditions)
- o Carry forward the bootload date and time (if the bootload is initiated by the Master Mode Dump program)
- o Establish console tab settings

EXECUTE STARTUP JOB STREAM

After establishing the system environment, the Startup program processes the Startup job stream. This job stream, which comprises up to six separate sections, can reside on magnetic tape, or on the AUTOLOAD file on mass storage. These sections are \$CONFIG, \$INITIALIZE, \$EDIT, \$FILES, \$PATCH, and \$LOAD. The following briefly describes Startup's processing of each section. Section 5, "Startup Job Stream", describes the Startup job stream in detail.

\$CONFIG Section

The \$CONFIG section establishes system software and system hardware parameters. These parameters are contained in the communication region. As a result of \$CONFIG section processing, Startup surveys and verifies processors and issues several questions to the system console. These questions are the first in a series that give the operator some control over the bootload process. Questions include *RESTART? *SYSOUT RECOVERY, *SCF continuation, *DATE?, and *TIME?

The site can use the \$ ANSWER statement in this section to provide answers to questions that otherwise are issued to the system console by the Startup and Master Mode Dump (.MDUMP) programs.

\$INITIALIZE Section

Device initialization, which is the re-establishment of tables and pointers on mass storage devices, is performed during processing of the \$INITIALIZE section. This section is processed by Startup only if the operator makes a positive response (i.e., YES, TOTAL, or PARTIAL) to the *INITIALIZE? question issued to the console.

Optional functions performed only as a result of a positive response to the *INITIALIZE? question include:

- o Formatting mass storage devices
- o Defining mass storage defective space
- o Creating the mass storage device label and allocation tables
- o Bootloading Microprogrammable Peripheral Controllers (MPCs) (DPS 8 only)
- o Creating the deckfile, which contains MPC firmware on mass storage
- o Initializing the Startup Master Catalog

The Startup master catalog - this is not the System Master Catalog - contains information regarding all Startup-created files and resides on the device named in the \$ GCOSFIL statement. Files that are defined on the Startup master catalog subsequently are recataloged within the File Management Supervisor (FMS) program's catalog and file structure under the SYS_CAT SMC entry.

Several functions are performed by Startup regardless of the operator's response to the *INITIALIZE? question. This portion of the Startup processing sequence is referred to as the DEVICE ROLLCALL. Startup functions include recovery or re-creation of mass storage device labels, verification of all permanent mass storage devices, surveying of magnetic tape handlers, surveying of unit record devices, and loading of printer character set and Vertical Format Control (VFC) images.

\$EDIT Section

The \$EDIT section establishes the identity of all GCOS system files and the device on which each file is to reside. Processing of the \$EDIT section is dependent upon the operator's response to the *EDIT? question that is issued to the console. However, if the operator responded TOTAL to the *INITIALIZE? question, the *EDIT? question is automatically answered YES by Startup.

\$FILES Section

The \$FILES section selectively identifies those GCOS system files, defined in the \$EDIT section, that the site intends to access during the system processing following this bootload. Consequently, only system programs residing on the files identified in this section can be used during system processing. System file and program data are written to main memory tables.

\$PATCH Section

The \$PATCH section is a means by which patch corrections (OCTAL statements and PATCH Run Unit directives) can be applied to GCOS system programs and to system programs that were edited by the Startup program onto the system. This includes Run Units installed through the boot process. Corrections can replace the content of single locations within a module or allow the site to select specific operating parameters for system software modules and programs. The second type of correction is referred to as a site-option patch.

Patch corrections are written to an in-memory table, from which they are applied to GCOS system programs/modules when the applicable programs/modules are called into memory.

In addition, the Startup program and job stream are written to the AUTOLOAD file on mass storage during processing of the \$PATCH section.

\$LOAD Section

The \$LOAD section can be used to load modules into main memory. Any module loaded via the \$LOAD section preempts the version of the module existing on mass storage (i.e., the module is copied to mass storage from the total system software tape).

Among the modules that can be loaded via this section are site-prepared modules that do not exist on the total system software tape. The content of this section is written to the load file on mass storage. Subsequently, modules can be loaded from the load file.

*

After loading modules from the \$LOAD section into main memory, Startup loads required system modules from mass storage files. The Memory Allocator (.MPOPM) program is the last system module loaded from mass storage. The module initializes several additional tables required for system processing (e.g., device allocation tables). (Note that the .MPOPM module also can be loaded into memory via the \$LOAD section. If loaded in this manner, the module is temporarily saved in a buffer. After all other modules are loaded into memory, the .MPOPM module is loaded.) During .MPOPM processing, the initial complement of system run unit software is installed into the system and made available for use.

Upon completion of \$LOAD section processing, Startup passes control to .MPOPM, which completes the boot process and initiates the GCOS 8 system.



SECTION 2

BOOTLOADING THE SYSTEM

The term "system bootload" refers to the process of starting up (i.e., making operational) a system that is not operating. The system bootload comprises a series of integrated functions performed by the Startup program, using information in the Startup job stream, and which may require operator intervention via console entries in response to messages issued by the Startup program.

Several techniques can be employed to effect the system bootload. Preference of one technique over another is usually dictated by the circumstances precipitating the bootload and by the operating environment (i.e., hardware configuration and software capabilities) the site wants to achieve from the bootload. These procedures require varying degrees of operator intervention. In some cases, little or no operator-Startup program communication is required. In others, the operator must direct Startup to initiate or bypass specific processing functions.

This section defines and describes the various system bootloading techniques available for starting a system. The interface between the Startup program and the operator is described in detail, including the applicability of optional responses to questions issued during the bootload procedure.

Procedures for generating a site-specific boot tape online, starting from the Honeywell Bull-supplied site-customized boot tape, without a card reader, and for booting from that tape, are described in the Software Installation Bulletin.

DPS 88 AND DPS 90 FIRMWARE AND STARTUP BOOTLOADING

DPS 88 and DPS 90 firmware must be loaded before Startup is bootloaded. The procedures for bootloading firmware and the Startup program in these systems are defined in the DPS 88 Hardware Operations Manual and the DPS 90 IOP Startup Manual.

On the DPS 90, Startup does not allow the operator to edit the DECKFILE or load the firmware (i.e., does not allow the use of the \$ MPCFIG statement).

After the Startup program has been placed in execution on the DPS 88 or the DPS 90, proceed to "Startup-Operator Interface" later in this section.

DPS 8 SYSTEMS WITH IMU CONTROLLERS

The IMU controllers need to have firmware loaded before the Startup program can be bootloaded. Refer to the IMU Hardware Operations Manual for the procedures. At this time, firmware is loaded into the IMU but not into the MPCs. Firmware is loaded into the MPCs by Startup in response to the *INITIALIZE? question, described later in this section.

BOOTLOADING

System startup/restart is performed by the Startup program, which bootloads the system in various ways, depending upon the state of system hardware, the status of software on mass storage, and parameters in the Startup job stream. In a specific situation, some parts of the bootload operation may not be necessary. Appropriate entries in the Startup job stream, or appropriate answers to questions displayed on the console cause unnecessary parts to be bypassed.

<u>Bootload Operation</u>	<u>System Status And Functions Performed</u>
Power-up	Power has just been applied to equipment that depends on firmware for operation; firmware must be loaded.
Cold boot	GCOS software on mass storage is defective or nonexistent; mass storage devices must be initialized and/or edited.
Warm boot	GCOS software on mass storage is valid; mass storage devices do not need to be initialized or edited. Startup questions need to be answered so that GCOS can be restarted.
Fast boot without FASTBT file	Same conditions as warm boot, except that the answers to all Startup questions are known in advance via \$ ANSWER, and Startup job stream includes \$ INFO FASTBT (but not \$ FILCREA FASTBT).
Fast boot with FASTBT file	Same as fast boot without FASTBT file, except that the Startup job stream includes \$ FILCREA FASTBT.

If the AUTOLOAD file already contains a valid, accessible copy of the Startup program and the Startup job stream, the AUTOLOAD file should be used as the input for the bootload. Otherwise, the site-specific boot tape should be used for input. Completion of the bootload requires less time when the Startup program and job stream are obtained from the AUTOLOAD file.

The AUTOLOAD file resides on the device defined via the \$ AUTOLD statement in the \$CONFIG section of the Startup job stream. If a specific device is not defined, the file is created on the first nondedicated mass storage device specified on the \$ GCOSFIL statement in the \$CONFIG section. (Refer to "\$ AUTOLD Statement" and "\$ GCOSFIL Statement" in Section 5 for detailed descriptions.)

Each time the system is bootloaded using a Startup program and job stream from magnetic tape, both the program and the job stream are copied to the AUTOLOAD file to overlay (replace) the version of the Startup program and job stream that previously resided on the AUTOLOAD file.

Bootloading clears in-memory system tables and uses recovery file data to reestablish system conditions as they existed at the time of the failure. System programs are restarted from a predefined point. User-level jobs are either reentered or restarted unless restart is not possible or desired.

During system operation, recovery data is saved at appropriate times to ensure that sufficient information is available for restart.

The Master Mode Dump (.MDUMP) program is invoked at the time of a system failure for the purpose of saving recovery data and failure evidence on mass storage files. The 64-word System Recovery Table, which resides on the mass storage device identified as ST1, contains 16 four-word entries defining the locations of the recovery files for privileged slave programs. (Refer to the GCOS 8 OS System Operating Techniques manual for a description of this table.)

Recovery data also is periodically written to mass storage files while the system is operational. The events at which data is written to the recovery files are referred to as cleanpoints and are controlled by system software. (The saving of cleanpoint data is enabled by including the \$INFO CLENPT statement in the \$CONFIG section of the Startup job stream.) When a system failure occurs, the restart function utilizes data written during the most recent cleanpoint event for each process.

Power-up Operation

When electric power is removed, and then reapplied to an entire system, the mass storage devices are not accessible, even though they may contain valid and useful information (e.g., the Startup program and Startup job stream in the AUTOLOAD file, and the firmware in the DECKFILE). The mass storage devices do not become accessible until firmware has been loaded. That firmware must be read using a magnetic tape device, which also requires firmware. However, MPC-driven magnetic tape subsystems can be equipped with the Reset Out (RSO) hardware option, which provides primitive mode operations, sufficient to allow reading of the MPCB program and needed firmware from tape for loading into the mass storage controller and the magnetic tape controller. Under these conditions the sequence of statements in the \$INITIALIZE section is critical, to ensure that all controllers have firmware loaded before accessing devices, etc. See "Importance Of Sequence In \$INITIALIZE Section" in Section 5.

Cold Boot

When GCOS 8 is not functioning (i.e., is not in main memory and cannot be accessed on mass storage), a cold boot (answer TOTAL, YES, or PARTIAL to the *INITIALIZE? question, or answer YES or PARTIAL to the *EDIT? question) is required to rebuild system software in its entirety on mass storage files. There are several conditions under which the GCOS system can become inoperable (e.g., system files may be destroyed when a system failure occurs). A cold boot is also required when installing system software at a new site. In addition, for DPS 8 and DPS 8000, MPC firmware is loaded onto mass storage during a cold boot.

Four sources of input are required for a cold boot:

1. The total system software tapes (TSST), containing GCOS system software, which are mounted on the magnetic tape handlers defined by logical device name on \$ FILDEF statements in the \$EDIT section of the Startup job stream.
2. The tape containing the MPC firmware to be copied into the deckfile (DPS 8 and DPS 8000).
3. The Startup program, residing on either the AUTOLOAD file or the site-specific boot tape.
4. The Startup job stream, residing on either the AUTOLOAD file or the site-specific boot tape. For DPS 8 and DPS 8000 systems, the \$INITIALIZE section of the Startup job stream must contain the MPC Bootload (MPCB) program deck image, and the two MPC firmware data deck images. MPCB loads firmware data into the MPCs; one data deck bootloads the magnetic tape controller and the other bootloads the mass storage controller for the AUTOLOAD device. On DPS 88 and DPS 90 systems, Startup issues a warning message and ignores any MPC bootload (MPCB) deck.

Warm Boot

The purpose of the warm boot is to restart the system without reloading or rebuilding system software on mass storage (answer NO to *EDIT? question). A warm boot can be performed whenever a valid version of GCOS software is accessible on mass storage, regardless of whether the GCOS system is currently functioning in main memory. The only inputs to a warm boot are the Startup program, residing on mass storage or magnetic tape, and the Startup job stream, also residing on mass storage or magnetic tape.

The warm boot allows the operator to control the restart procedure at several places where it questions the operator. Site management can reduce the time required for the warm boot by using \$ ANSWER statements in the Startup job stream to provide answers to a majority of the Startup questions. Any question that is not answered on a \$ ANSWER statement is directed to the console for operator response. (Refer to "Startup-Operator Interface", later in this section, and to "\$ ANSWER Statement" in Section 5 for a discussion of Startup questions.)

Not all Startup questions can be answered via the \$ ANSWER statement. The operator is required to respond to some questions with a console entry (e.g., the *CHANGE? question). In addition, a YES response to the *CHANGE? question causes the \$ ANSWER statements to be ignored, forcing the operator to respond to each question during the bootload process. (Refer to "*CHANGE? Question", later in this section for additional information.)

A warm boot may be performed when the GCOS system is functioning in main memory. The need for such a bootload may occur under two conditions. Procedures for bootloading under these circumstances differ slightly.

1. The system malfunctions and the fast boot feature for automatic system restart is not in effect. Because the GCOS system is accessible on mass storage, the operator is only required to load the Startup job stream.
2. Startup job stream modifications are required while the system is operational. To halt the system, the operator enters BOOT via the system console. The changes can be made with the Startup Console Editor, as described later in this section, or the entire job stream or the modified section(s) therein can be loaded from punched cards via the card reader.

The preceding procedure can also be used when the operator requests a dump of system software by entering DUMP via the system console.

Fast Boot

A fast boot (with or without the FASTBT file) is a warm boot that bypasses all operator intervention following a system failure. Because GCOS software is functional in memory and the Startup program can be accessed immediately on the AUTOLOAD file, system restart occurs within a few minutes following a failure.

The fast boot feature is enabled by including the \$ INFO FASTBT statement in the \$CONFIG section of the Startup job stream or via the console entry FASTBT ON after GCOS is in operation. Conversely, the fast boot feature can be deactivated and the warm boot procedure activated via the console entry FASTBT OFF. (Refer to "\$ INFO Statement" in Section 5 and to the GCOS 8 OS System Operator Messages manual for a description of the FASTBT ON and FASTBT OFF entries.)

In addition to including the \$ INFO FASTBT statement in the Startup job stream, three other conditions must be satisfied before the fast boot feature is invoked:

1. The Startup program must reside on the AUTOLOAD file.
2. Several questions generated during System Startup must be answered via the \$ ANSWER statement. Failure to use \$ ANSWER to answer a question causes issuance of that question to the system console, thereby requiring an operator response.
3. At least eight minutes must have elapsed since the most recent previous system abort.

Restart is attempted for all jobs that were in process at the time of the failure if the *RESTART? question is answered YES (via \$ ANSWER RESTART/YES) and if the *SYSTEM SCHEDULER CLEAR? question is answered NO (via \$ ANSWER SSCLEAR/NO). The Transaction Processing System (TPS) and the Time Sharing System, which otherwise require operator intervention to restart, also are automatically restarted if a \$ INFO ACALL statement is included in the \$CONFIG section of the Startup job stream.

The three primary reasons for a fast boot restarting the system in less time than a warm boot are:

- o All operator intervention is circumvented by using the \$ ANSWER statement to provide answers to Startup questions.
- o Existing job-related system table information is used. This avoids the process of re-creating these tables, which requires additional time during the warm boot process.
- o MPC bootloading and printer character set loading are bypassed.

Several conditions may prevent restart via the fast boot procedure. These include destruction of one or more critical system tables or loss of a critical system hardware component. In addition, although it is a rarer occurrence than loss of system tables or system components, a user program can create a condition that causes a system failure. This could result in a situation whereby each time the fast boot recovers the system to the point of encountering the problematic job, another system failure occurs. To correct this situation, the operator can either delete the job from the system via the ABORT sssss console entry (where sssss = SNUMB) or inhibit the fast boot feature via the console entry FASTBT OFF.

If a system program causes the fast boot to abort, the message:

ENTER [(O)PTION], (U)SE \$ ANSWER OR (N)ONE?

is issued to the system console, requesting the operator to indicate the extent of the dump. Following the dump, system restart is via a warm boot.

Specification of the \$ INFO ROLLCALL option interrupts the fast boot process, which otherwise bypasses the rolcall function.

Fast Boot With FASTBT File

Additional time can be saved during a fast boot if a \$ FILCREA FASTBT statement is included in the \$CONFIG section of the Startup job stream. This statement establishes the system FASTBT file which contains an image of the first portion (approximately 256K words) of memory as it is built by the Startup program. When the FASTBT file is present, the fast boot procedure reestablishes the contents of memory from the FASTBT file and bypasses most Startup job stream processing.

Bootload Procedures

This section describes procedures to be used when bootloading from mass storage, and from magnetic tape.

BOOTLOAD FROM MASS STORAGE

To do a bootload from mass storage, the AUTOLOAD file must be intact. The AUTOLOAD file resides on the device defined via the \$ AUTOLD statement in the \$CONFIG section of the Startup job stream. (Refer to "\$ AUTOLD Statement" in Section 5 for a detailed description.)

The content of the AUTOLOAD file is produced by the bootload of the system from magnetic tape, in which the Startup program and job stream are copied to the AUTOLOAD file. When Startup creates or updates the AUTOLOAD file it creates a bootload record in sector 2, and puts a pointer in word 14 of the device label of the AUTOLOAD device (i.e., the mass storage device on which the AUTOLOAD file resides). This record permits access to the Startup program in the AUTOLOAD file.

Bootload from mass storage is supported by the MSU0400, MSU0402, MSU0451, MSU0500, MSU0501, MSU3380 and MSU3381 subsystems.

The DPS 88 SMAS command to boot from mass storage is

```
BOOT <os_name> -AUTO
```

where <os_name> is the logical name of the operating system (GCOS 8) as established by the site through the SMAS configuration facility (ICON).

The DPS 90 command to boot from mass storage is

```
BOOT OPSY AUTO.
```

Once the AUTOLOAD file has been established, the Startup program maintains a pointer to the AUTOLOAD file so that a disk boot is always possible, provided that the AUTOLOAD file is readable, and provided that the AUTOLOAD file represents the configuration and options that are desired. Several additional steps are necessary if a bootload is initiated via offline T&D. Those steps are described under "AUTOLOAD File Not On Default Device Number (DPS 8 And DPS 8000 Only)", which follows.

If a read error is encountered reading the AUTOLOAD file the system will halt with a DIS and the AUTOLOAD file will have to be rebuilt.

AUTOLOAD File Not On Default Device Number (DPS 8 And DPS 8000 Only)

The following procedure is required to establish information for using the AUTOLOAD file to bootload directly from mass storage only if the AUTOLOAD file is not on device number one (the default). Note that DSC500 firmware revision A1 (or later) must be loaded to perform this bootload.

1. Examine the \$ AUTOLD statement to determine the logical device name of the mass storage device on which the AUTOLOAD file resides.
2. Examine the input/output controller statements. Determine the physical device number of the mass storage device on which the AUTOLOAD file resides. The device can be determined by matching the logical device name (from #1) with the physical device number.

NOTE: The default addressing executed by firmware is DEVICE-1.

3. Use the same input/output controller statement (from #2) to determine the channel number over which the AUTOLOAD device is to be accessed.
4. Examine the \$ MPC statements. Determine both the PSI number and the associated channel number over which the AUTOLOAD device is to be accessed.
5. Convert the device number (from #2) to hexadecimal.
6. Create RHEX correction statements that identify the channel and the device over which bootloading is to occur. The following depicts the information that must be included on these statements.

MPC CORRECTIONS:

<u>Columns</u> <u>1-4</u>	<u>Columns</u> <u>16-17</u>	<u>Columns</u> <u>18-19</u>
04FE	(0) dd	(1) dd
04FF	(2) dd	(3) dd

where:

dd - Device number

0-3 - PSI numbers, which are defined by the columns in which the device number is specified

DAU(MSP800) CORRECTIONS:

<u>Columns</u> <u>1-4</u>	<u>Columns</u> <u>16-17</u>
02B0	(0) dd
02C0	(1) dd
02D0	(2) dd
02E0	(3) dd

where:

dd - Device number

0-3 - PSI numbers, i.e., Patch 02B0 for PSI-0, 02C0 for PSI-1, etc.

7. Insert the RHEX correction statements into the \$INITIALIZE section of the Startup job stream. The RHEX statement immediately precedes the \$ DKEND statement of the associated mass storage MPC firmware deck.
8. Examine all \$ XBAR statements and go back to step 3 for each of the XBAR channels that may access a different MPC or PSI connection.
9. Patch the firmware tape with the RHEX correction statements. Refer to the offline Test and Diagnostics listing for program 08F for patching procedures. This step is required so that the firmware on the AUToload file reflects the same bootload device and channel information as the bootload deck in the \$INITIALIZE section of the Startup job stream.
10. Bootload the system. The following must be performed during the bootload process: (1) reboot the MPC, (2) include a \$ READIN statement in the \$INITIALIZE section of the Startup job stream, and (3) respond YES to the CLEAR AND OVERWRITE EXISTING DECKFILE? question issued to the console.
11. Issue the console verb, TEST IFAD when the system becomes operational, to install the patched firmware in the online T&D extension file so that the correct device numbers will be restored if online ITRs are run and the firmware is rebooted online.

*

DPS 8 And DPS 8000 Operator Procedure For Disk Bootload

The procedure to boot GCOS from an IMU is described in the IMU Hardware Operations Manual.

The following operator procedures are required to execute a disk bootload to boot GCOS from an IOM, once the firmware is active in the controller.

1. Set the BOOTLOAD SOURCE TAPE/CARD switch to TAPE (even though disk will actually be used) on any IOM/IMU/IMX that can access the AUToload device. Also, set the channel number code switches to identify the channel connected to the AUToload device as the bootload channel.
2. Press, in sequence, the INITIALIZE and BOOTLOAD push buttons on the system console or the IOM/IMU/IMX.
3. At this point, the Startup program issues the *REPLACE? question to the first system console configured on the bootload IOM/IMU/IMX (as recorded on the AUToload file which was written on the previous boot). If no such console was configured, the default console (IMU channel 30 or IOM channel 31 of the prior boot IMU/IOM or as specified on a MASK for location 3) is used. This boot will define the console for the next boot. (Refer to "*REPLACE Question" in this section for operator responses to this question.)

BOOTLOAD FROM MAGNETIC TAPE ON DPS 8 OR DPS 8000

The Reset Out (RSO) hardware option must be included with MPC-driven magnetic tape subsystems to allow primitive mode operation for DPS 8 and DPS 8000 systems. In primitive mode, the subsystem can process a Read Tape Binary command, which is required for reading the first record on the boot tape. For MPC-driven magnetic tape subsystems, the MPC switches must be set as follows:

<u>Switch</u>	<u>Setting</u>
0	Down (reset)
2	Controls bootloading of the MPC firmware
	Up (set) - Bootload firmware via Line Adapter 1
	Down (reset) - Bootload firmware via Line Adapter 0
5-7	MPC port number to which the magnetic tape controller is connected

Before initiating the bootload, set the BOOTLOAD SOURCE TAPE/CARD switch on the input/output controller to TAPE. MPC switches must reflect the density of the boot tape (556, 800, or 1600 bpi), the number of tracks (seven-track or nine-track tape handler), and the magnetic tape handler (1-15) on which the boot tape is mounted. If the tape device is controlled by an IMU or IMX, refer to the Hardware Operations Manual to:

1. Configure the MCA
2. Initialize the IMU by loading the IMU firmware
3. Start the GCOS bootload process.

After mounting the boot tape on the tape handler specified by the MPC switches, and, if a cold boot is necessary, after mounting the total system software tapes on the magnetic tape handlers defined by logical device name on \$ FILDEF statements in the \$EDIT section of the Startup job stream, press the INITIALIZE and BOOTLOAD push buttons on the system console in sequence to initiate the bootload process. If no changes are to be made to the content of the Startup job stream between the boot tape and the AUTOLOAD file, respond NO to the *REPLACE? question.

If changes are to be made to the content of the Startup job stream between the boot tape and the AUTOLOAD file, via the Startup Console Editor, respond PREPASS to the *REPLACE? question (see "*REPLACE? Question", later in this section, for details).

If changes are to be made to the content of the Startup job stream between the boot tape and the AUTOLOAD file, via the card reader, respond YES to the *REPLACE? question (see "Startup-Operator Interface", later in this section, for details). The Startup job stream is read from the boot tape through the section header (e.g., \$EDIT section) for the section that is to be replaced. At that point, the cards in the card reader are read, and then used to overlay (replace) the existing section on the AUTOLOAD file. After skipping the replaced section on the boot tape, the procedure is repeated for any other section(s) to be replaced, and then the tape is read to completion.

Note that the preceding process modifies only the AUTOLOAD file. The boot tape is unaffected. (Refer to "Modifying Content Of Site-Specific Boot Tape", later in this section, for tape modification procedures.)

During the bootload process, the operator may be prompted to identify the card reader to be used for reading the changes via one of the messages:

*NEED READER PORT, IOM, CHANNEL PICCC
or
*NEED READER IOM, CHANNEL ICC

The operator response is in the form piccc or iccc, where p = SCU-0 port number to which the IOM or IMU initiating the bootload process is cabled, i = IOM or IMU number, and ccc = channel number. (Refer to "**REPLACE? Question" later in this section and to "**BOOT SOURCE: AUTO OR REPL? Question" in Section 3 for additional information.)

If the card reader becomes inoperable while reading cards, the operator can press the REQUEST push button and respond to the ??? prompt with

READER piccc or READER iccc

to cause Startup to switch to an operable card reader.

If the bootload is successful, the boot tape is automatically rewound and programmatically dismounted. If the bootload is unsuccessful, the message *ABORT BOOT FROM TAPE is issued to the system console. Check all switch settings, the tape handler, and the tape during the error correction process. (Refer to the GCOS 8 OS System Operating Techniques manual for magnetic tape media-inspection procedures.)

Modification of Startup Job Stream

Execution of the Startup program causes the Startup job stream to be read from one of two sources. The job stream may be read from the boot tape, in which case it is copied to the AUTOLOAD file, or it may be read directly from the AUTOLOAD file. Techniques are available for indirectly modifying the contents of the AUTOLOAD file, and also for producing or modifying the site-specific boot tape.

MODIFYING CONTENT OF AUTOLOAD FILE

The content of the boot tape is written to the AUTOLOAD file when the tape is used to bootload the system, to ensure that the AUTOLOAD file always contains the current copy of the Startup job stream.

On an AUTOLOAD boot, the Startup program and card images are read from the AUTOLOAD file. At the end of processing each section after the \$INITIALIZE section, the Startup program and current card images are re-written to the AUTOLOAD file.

The Startup Console Editor can be used to modify the contents of memory (and thus the AUTOLOAD file) while the Startup program is executing. Refer to "Startup Console Editor" later in this section.

The XCAF (Extract Card Images From AUTOLOAD File) program can be used to extract the various sections of the Startup job stream into user-defined files. Refer to the GCOS 8 OS Service Routines manual for a description of the XCAF program.

Another way of modifying the contents of the AUTOLOAD file is by responding YES or PREPASS to the *REPLACE? question. Refer to "*REPLACE? Question" later in this section.

MODIFYING CONTENT OF SITE-SPECIFIC BOOT TAPE

In the GCOS environment, the RSBT (Read Startup Boot Tape) program can be used to convert the site-specific boot tape into a permanent file in standard system format, for use as an updating master. The *C Editor (SCED) program can then be used for updating this permanent file, after which the permanent file can be converted back to the boot tape format via the WSBT (Write Startup Boot Tape) program. Refer to the GCOS 8 OS Service Routines manual for descriptions of the *C Editor, RSBT, and WSBT programs. Note that although Time Sharing techniques can be used instead of the *C Editor for updating the permanent file, the job stream may include binary records which must be preserved.

If the Startup Console Editor has been used to modify the AUTOLOAD file, a new site-specific boot tape can be built by using the XCAF (Extract Card Images From AUTOLOAD File) program. Refer to "Startup Console Editor" later in this section, and to the GCOS 8 OS Service Routines manual for a description of the XCAF program.

STARTUP RESILIENCE

This feature allows the system to be rebooted following an interruption requiring units to be deconfigured without changing switches and without altering the Startup job stream to reflect the deconfiguration. This is achieved by allowing Startup to release input/output controllers and by allowing Startup to operate with "holes" in memory.

With this feature, systems can be split and split systems can be recombined with minimal modification to the Startup job stream. (See the GCOS 8 OS System Operating Techniques manual for a description of System Resiliency, i.e., splitting systems.)

Areas of defective memory are marked, hence can be assigned later when the system is fully operational. This is preferable to releasing defective memory (and all memory above it), thereby rendering it useless to the system until the next boot.

The communication region word .CRIRL is used as follows:

Bit 0 = 1 A mismatch exists between the size of the configured and physical memory. POPM is required to perform a memory survey during rollcall.

Bits 1-29 Reserved

Bit 32 = 1 Input/output controller 3 released

Bit 33 = 1 Input/output controller 2 released

Bit 34 = 1 Input/output controller 1 released

Bit 35 = 1 Input/output controller 0 released

The following Startup messages are pertinent:

*Iyy-n NOT RESPONDING - YES TO CONTINUE OR R TO RETRY
where Iyy may be IMU, IMX, IOM, IOP, or IOX.

This message indicates that the input/output controller specified as "n" did not respond to a connect. An operator response of YES permits Startup to continue with the specified input/output controller released. A NO response aborts Startup. A RETRY response causes Startup to send another connect to the same input/output controller to see if it will respond. This allows for a delay in case firmware is not yet loaded into an IMU. After the IMU firmware loading process has completed, the RETRY should be made and then the IMU should respond. This message can be suppressed by using a \$ ANSWER IOMERROR/NO statement or a \$ ANSWER IOMERROR/YES statement. *

*MPC-n CHECK SWITCHES: 2{UP } 5{UP }
 {DOWN} {DOWN}

This message indicates that the PSI through which firmware for this MPC is normally booted is connected to a released input/output controller. The operator should confirm that the switches are in the correct positions to enable the MPC to be booted with firmware. This message does not apply to those MPCs having no switches; with these, the firmware handles the situation.

**XXXXXXXX....XXX

This message is from either the \$ CHAN or the \$ UNIT statement. Messages of this form are site-specific usually indicative of the action that should be taken to move peripherals or media from a released input/output controller. The operator should follow the specific site procedure.

*DEPRESS EOM WHEN READY TO CONTINUE

This message indicates that the operator is allowed time to follow instructions given, then, upon completion, pressing EOM reenables activity.

*Iyy-n RELEASED

where Iyy may be IMU, IMX, IOM, IOP, or IOX.

This message indicates that Startup released the specified input/output controller.

The following pertinent message is given by POPM:

MEMORY SURVEY: nnn PAGES FOUND DEFECTIVE

where nnn is the total number of configured pages found to be nonexistent during rollcall.

The control statements \$ CHAN, \$ UNIT, and \$ BASE apply to Startup Resilience.

STARTUP-OPERATOR INTERFACE

The operator interface to Startup allows the site to select desired or desirable approaches to several processing functions. For example, jobs in process can be restarted or reentered in their entirety, statistical collection can be resumed at the point of interruption or can begin anew, or mass storage device content can be modified.

These alternatives are presented to the operator in the form of questions, which are directed to the system console by the Startup program. Each of the questions, the responses that can be made, and the ramifications of each alternative are discussed below.

Note that by the time the question-and-answer sequence has begun, Startup has read the \$CONFIG section of the Startup job stream. Therefore, any questions that have been answered via the \$ ANSWER statement do not require an operator response unless one is desired. (Refer to "\$ ANSWER Statement" in Section 5 for a description of the \$ ANSWER statement and a list of the Startup questions that can be answered.)

Startup Console Editor

The Startup console editor is an edit facility that allows the Startup job stream to be edited from the console. The edited job stream becomes the AUTOLOAD file, which may be used for subsequent boots. The console editor is called into execution during Startup as follows:

Enter the word TEXT in response to any question asked by Startup, or

Enter the word TEXT in response to the ??? prompt after pressing the REQUEST push button

The console edit function operates on the Startup BCD card images in memory. The following commands are available within the editor:

- (F)ind:/string/ - Search the deck image in a cyclic fashion, starting with the current card image plus one and terminating on the current card image.
- (F)orward - Forward space one card image.
- (F)orward;n - Forward space n card images.
- (F)orward;* - Forward space to end of deck.
- (P)rint - Print the current card image.
- (P)rint;n - Print n card images starting at the current card image.
- (P)rint;* - Print all card images from the current card image to the end of the deck.
- (P)rint:/string/ - Print the card image containing the specified string.
- (I)nsert - Insert card images(s) after current card image.
- IB - Insert card images(s) before current card image.
- (D)elete - Delete the current card image.
- (D)elete;n - Delete n card images starting at the current card image.
- (D)elete;* - Delete all card images from the current card image to the end of the deck.
- (C)hange - Change the current card image; delete current card image and insert new card image(s).
- (C)hange:/string1/;/string2/ - Change string1 with string2.
- (B)ackup - Backup to the start of the deck.
- (B)ackup;n - Backup n card images.
- (R)ead - Reinstate Startup (including BCD card images) from AUTOLOAD file.
- (Q)uit - Exit from the editor.
- PO - Switch the output stream to a printer.
- CO - Switch the output stream back to the console.
- (V)erify - Verify editor operators. This is a toggle.

- X - Repeat the last command.
- X;n - Repeat the last command n times.
- = - Print the current card image number.
- (T)ab x - Set tab character to x (default is :).
- (H)elp - Print a summary of the editor commands.

Commands are denoted by their first letter with the exception of PO, CO, and IB.

Multiple commands are permitted on a line. A command is delimited by the next command or by a space. Leading spaces are tolerated. Any character is accepted as a string delimiter.

If an error is encountered, the rest of the command line is ignored.

On card input (insert/replace), colon is interpreted as a tab character. Tabs are set to: 8,16,32,73.

On exit from the editor, an AUTO boot is automatically performed.

If the output stream is a printer, the print command prefixes card images with their relative card number.

Binary card images (firmware) are treated in a totally transparent manner.

Output from the Print command may be terminated by hitting the request key.

MSU3380 And MSU3381 Disk Device Survey Messages

The MSU3380 and MSU3381 disk device survey verifies that the sector size and device type of each MSU3380 and MSU3381 device configured in the Startup job stream agrees with the actual hardware configuration. Unlike the tape survey, the MSU3380 and MSU3381 disk survey is done in the \$CONFIG section. The input/output controllers with MSU3380 or MSU3381 capability interrogate each device and pass this information to the Startup program for comparison. Errors are reported in the following messages:

```
DEVICE TYPE MISMATCH ON i-ccc-dd
CONFIG = type, IPC = type
DEVICE RELEASED
```

where:

```
type = device type, such as MSC1A, MSC1B, MSD1A, or MSD1B
      or UNKNWN
```

```
IPC = Integrated Programmable Controller
```

This message appears if the \$CONFIG device type doesn't match the IPC device type, for example,

CONFIG = MSC1A, IPC = MSC1B.

In this case, Startup aborts at the end of \$CONFIG Section processing. If IPC = UNKNWN, Startup does not abort.

DEVICE FORMAT MISMATCH ON i-ccc-dd
CONFIG = type, IPC = UNFM TD
DEVICE RELEASED

This message appears for unformatted MSU3380 and MSU3381 devices. If the device is removable (RMVBL on the input/output controller statement), it will be marked as a stranger device. If it is not removable, the following message will appear and Startup will abort at the end of \$CONFIG processing.

UNFORMATTED DEVICE MUST BE "RMVBL"

DEVICE STATUS MISMATCH ON i-ccc-dd
CONFIG = type, IPC = NOTONL
DEVICE RELEASED

This message appears if the device is not online, i.e., powered off, not ready, or not there.

Startup Questions

Questions that would otherwise be directed to the system console can be answered in two other ways. Questions can be answered by using the \$ ANSWER statement in the \$CONFIG section of the Startup job stream, as described in "\$ ANSWER Statement" in Section 5. In addition, any question that may be issued several times during the bootload procedure can be answered once by the operator, by appending an asterisk (*) to the first answer given to the specific question. Subsequently, issuance of that question is bypassed and the answer given to the first question is applied. For example, if three MPCs are to be bootloaded, the operator can respond YES* to the first *xxxMPC ON iccc BOOTLOAD? question to answer this question for the second and third MPCs. (Refer to "*PROCESS \$ READIN? Question" later in this section.)

While the sequence in which questions are issued to the console frequently is the same, some operator responses can cause the sequence to vary from bootload to bootload. Therefore, the sequence in which the Startup questions are described in this section may be different from that in which they are issued to the console. In addition, the following informational message may be issued prior to any of these questions being displayed:

* WARNING - SCU IN MANUAL MODE

The operator must decide whether to continue processing in this mode or to reset the SCU.

The general sequence of Startup questions is as follows:

- *REPLACE?
- *CHANGE?
- *RETAIN CONFIGURATION?
- *RESTART?
- *SYSOUT RECOVERY?
- *SCF CONTINUATION?
- *DATE?
- *TIME?
- *DATE mmddy TIME hh.mmm
- *CHANGE SYSTEM CONTROLLER CLOCK?
- *CHANGE DATE?
- *CHANGE TIME?
- *ENTER TIME OR ENTER A CORRECTION FACTOR?
- *CHANGE > 5 MIN, YES TO ACCEPT?
- *INITIALIZE?
- *EDIT?
- *SYSTEM SCHEDULER CLEAR?

One or more additional (secondary) questions may be issued during the initialization (*INITIALIZE?) and editing (*EDIT?) phases of System Startup. These questions are detailed below. (Note that use of the asterisk by the operator to answer subsequent questions is effective with these secondary questions.)

Throughout this section it must be understood that an end-of-message (EOM) response to a question is equivalent to a NO response.

It is recommended that the operator respond NO to a question during the Startup question-and-answer sequence when the correct answer to the question is not apparent. The effects of a NO response are less severe than those of a YES response, which may have undesirable results. For example, a YES response to the *INITIALIZE? question can result in a time-consuming re-editing process involving all configured mass storage devices.

*REPLACE? Question

The *REPLACE? question allows the operator to selectively replace one or more sections of the Startup job stream on the AUTOLOAD file.

A YES response results in the replacement of one or more sections via the card reader. If the replacement section(s) is (are) not in the card reader at the time the YES response is made, the console message:

*BOOTLOAD DEVICE ERROR iccdd: xxxxxx OPERATE WHEN READY

is issued (where i = IOM/IOX/IOP/IMU/IMX number, ccc = channel number, dd = device number, and xxxxxx = error status).

If more than one section is being replaced, the sections must be loaded by their order of appearance in the Startup job stream. For example, if the \$CONFIG and \$INITIALIZE sections are being replaced, the \$INITIALIZE section cannot precede the \$CONFIG section. If sections are nonsequential, the message:

```
*EXPECT s...s ccccc FIX TYPE GO
```

is issued to the console (where s...s = name of the section that is out of sequence and ccccc = image of the last statement read). The operator can enter BOOT via the system console to halt the bootload, place the Startup sections in the correct sequence, and initiate a warm boot.

The last two statements in the Startup job stream must be ***EOF statements (regardless of the number of sections being replaced). If the job stream does not conclude with two ***EOF statements, the message BOOTLOAD DEVICE ERROR is issued to the system console.

Note that the message:

```
*NEED READER PORT, Iyy, CHANNEL {PICC }  
                                {PICCC}
```

may be issued during this procedure. An operator response is required to inform Startup which card reader is being used to load the new section(s). The response is in the form piccc (where p = IOM/IOX/IOP/IMU/IMX port number, i = IOM/IOX/IOP/IMU/IMX number, and ccc = channel number (0 - 127) or cc = channel number (0 - 63)).

A NO response to the *REPLACE? question indicates that no changes are desired to the Startup job stream that resides on the site-customized boot tape.

A PREPASS response to the *REPLACE? question permits the later use of the Startup Console Editor to make changes in the \$CONFIG, \$EDIT, \$FILES, and \$PATCH sections.

After the PREPASS response has been entered, the MASK section of the Startup job stream is read and processed normally. All of the \$CONFIG statements are read from tape. After they have all been read from tape, they are processed as card images being read from memory. If an error is encountered, or if Startup aborts, the Startup Console Editor can be called and used to make corrections. See "Startup Console Editor", earlier in this section. Each time the Startup Console Editor is exited, the first section (MASK or \$CONFIG) is reprocessed with the card images being made available from memory.

When the \$CONFIG section is error free, Startup proceeds to read and process the \$INITIALIZE section from tape in the normal manner. The \$EDIT, \$FILES, and \$PATCH sections are read from the tape without being processed. After these sections have been read in, processing resumes at the \$EDIT section with the card images being read from memory. If an error is encountered, all of the card images are available in memory and corrections can be made using the Startup Console Editor. After the \$PATCH section has been successfully processed, card images are once again read and processed directly from the tape. If a \$LOAD section is present on tape, it is read and processed directly from the tape without "prepass" intervention.

The replacement procedure can also be initiated via a REPL response to the *BOOT SOURCE: AUTO OR REPL? question.

*CHANGE? Question

If any \$ ANSWER statements are included in the \$CONFIG section of the Startup job stream, the *CHANGE? question is issued to allow the operator to override or accept all of the \$ ANSWER statements.

A YES response indicates that the operator desires to override \$ ANSWER statement content. All \$ ANSWER statements are ignored for the duration of this bootload. (Note, however, that this override applies only to the current bootload and that the \$ ANSWER statements are reinstated during the next bootload.) The operator then must answer all bootload questions via the system console, regardless of the bootload media (i.e., mass storage, magnetic tape, or punched cards).

A NO response indicates that all \$ ANSWER statement content is acceptable. Startup executes the response(s) from the \$ ANSWER statement(s).

*RETAIN CONFIGURATION? Question

The *RETAIN CONFIGURATION? question allows the operator to request that the system attempt to retain the status of the hardware configuration at the time the system was last interrupted.

A YES response causes the system to attempt to recover the "assigned/dedicated /released" state of each device.

A NO response causes each device to be returned to its initial state as defined in the Startup job stream. A NO response should be given if any Test and Diagnostic (T&D) jobs were running in the system prior to the last system interrupt. The T&D jobs may have changed the state of various hardware components. These states would be restored on the next boot and could cause problems in the system.

A NO response should also be given whenever a YES response was previously attempted and problems, especially hardware configuration problems, were encountered in the system.

*RESTART? Question

The operator's answer (YES or NO) to the *RESTART? question determines whether or not the system will attempt to restart - near the point of interruption - all jobs/activities that were in progress at the time of the system failure. A response of NO causes the system be cleared of all active jobs.

The response to the *RESTART? question has an impact on the response to the *SYSTEM SCHEDULER CLEAR? question. Startup does not permit a YES response to both questions. If the operator responds YES to *RESTART?, Startup automatically provides a NO response to the *SYSTEM SCHEDULER CLEAR? question. (The effect of YES responses to both questions would be to release job-related system files that are needed for restart of those jobs.)

A YES response to the *RESTART? question allows all jobs in progress at the time of the failure to be restarted from a known condition (i.e., a condition that existed prior to the failure). The following briefly identifies the restart process for jobs that are in the various processing phases at the time of restart:

- o Jobs that were in allocation, execution, or termination will be restarted when the operator enters the RUN REST console verb. The SNUMBs of jobs that cannot be restarted are identified in a system console message.
- o Jobs that were in the input or scheduling phases, but not yet cataloged on the System Scheduler's SSFILE file, may be automatically restarted if the jobs were saved in the SD.INJ table. Jobs that cannot be restarted are identified in a list of job numbers (SNUMBs) following the console message JOBS THAT SYS SCHED CANNOT RECOVER ARE.
- o The system scheduling function will be resumed when the operator enters the JRUN REST console verb. Jobs that were cataloged on the SSFILE file, but not in allocation, execution, or termination, are restarted.

Once restart has been permitted at the system level, individual program restart procedures are invoked for each job at the user level.

A NO response to the *RESTART? question causes all jobs to be restarted from the catalog entry on the SSFILE file when the operator subsequently enters the JRUN REST console verb.

A NO response ensures that the *SYSTEM SCHEDULER CLEAR? question will be issued later during the question-and-answer sequence.

*SYSOUT RECOVERY? Question

The question *SYSOUT RECOVERY? permits system output to be recovered regardless of the answer to the *RESTART? question.

A YES response specifies that all job output and job output specials known to system output are to be recovered. Blinks marked in error are marked as unusable. A NO response specifies that none of the above output is to be recovered and that blinks marked in error are not to be marked as unusable.

NOTE: Blinks for jobs in execution are either kept or released depending on the response to the *RESTART question.

To increase system output reliability, the segments shown in the following list are cleanpointed if the \$ INFO CLENPT statement is included in the \$CONFIG section of the Startup job stream. The segments are:

- DP.JOT - Job Output Table
- DP.JOS - Job Output Specials
- DP.SBT - SYSOUT Blink Table
- DP.BDI - Backdoor Information

DP.JOT and DP.SBT cleanpoints are taken when a new job completes queue entry and blinks and jobs are released. DP.JOT and DP.BDI cleanpoints are taken when a backdoor job queue entry is processed and when backdoor files and jobs are released. DP.JOS cleanpoints are taken each time a special is added to or removed from that segment. Also, DP.SBT is cleanpointed in BRT6 upon activity termination if the job has caused modification to that segment.

*SCF CONTINUATION? Question

The *SCF CONTINUATION? question allows the operator to continue or restart data collection on the Statistical Collection File (SCF).

A YES response results in data collection resuming from the point of interruption.

A NO response results in SCF data collection beginning anew. If the SCF resides on mass storage, this response results in the clearing of all previously written information. This information cannot be recovered. If the SCF resides on magnetic tape, restart does not affect information written to the SCF. The tape containing the SCF must be rewound and a new tape mounted before collection is resumed. Note that rewinding of the tape is automatically effected if a site-option patch is applied to the .MPOPM module (Memory Allocation program). (Refer to "Memory Allocator Options" in Section 5 for the format of this site-option patch to .MPOPM.)

If a system failure prevents the Master Mode Dump (.MDUMP) program from closing the SCF, system restart will not proceed. The .MPOPM module aborts and the existing SCF is not closed. The system must be rebooted and the operator must respond NO to the *SCF CONTINUATION? message. Data collection then resumes on a new SCF.

***SYSTEM CONTROLLER CLOCK AND .CRDAT MISMATCH Message**

This message is issued when Startup detects a difference in the date calculated from the system controller clock and the date recovered from .CRDAT on an autoboot with CHANGE? NO. Startup also issues this message if a difference of one minute or more is determined when the time calculated from the system controller clock is compared to time calculated from .CRDAT+1 and .CRDAT+2. The *DATE question is output and the response values input are used to set the system controller clock and .CRDAT.

***DATE mmddyy TIME hh.mmm Information Message**

This message informs the operator of the date/time, and is issued when the "**CHANGE?" question is answered YES.

***CHANGE SYSTEM CONTROLLER CLOCK? Question**

The *CHANGE? question was answered YES. A YES response causes the *CHANGE DATE? and *CHANGE TIME? questions to be issued.

***CHANGE DATE? Question**

The *CHANGE? question was answered YES. A YES response causes the *DATE? question to be issued.

***CHANGE TIME? Question**

The *CHANGE? question was answered YES. A YES response causes the *ENTER TIME OR ENTER A CORRECTION FACTOR? question to be issued.

***ENTER TIME OR ENTER A CORRECTION FACTOR? Question**

If the *CHANGE TIME? question was answered YES, the operator can issue one of two responses:

1. Enter the time in one of the formats of the *TIME? question (e.g., 01:20).
2. Enter a time correction factor using the format of the *TIME? question, except that a plus (+) or minus (-) sign must precede the correction factor. This allows the operator to correct or change the time of day in increments (e.g., -01:00 would be entered to change a system time to standard time from daylight savings time).

*DATE? Question

Startup detected one of the following conditions:

1. The clock contains a value earlier than the Startup assembly date.
2. The clock contains a value greater than 100 years.
3. A YES response was given to the *CHANGE DATE? question.

Enter the current date (i.e., the date of this bootload) via the system console in the mmddy format (where mm = month, dd = day, and yy = year). Startup validates the date entered (e.g., non-numeric date, invalid month or day). If the date entered is invalid, the *DATE? question is reissued.

*TIME? Question

Startup detected one of the following conditions:

1. The clock contains a value earlier than the Startup assembly date.
2. The clock contains a value greater than 100 years.

Enter the current time (i.e., the time of this bootload) via the system console. Startup validates the entry (e.g., the time cannot exceed 2400 hours or contain non-numeric characters). If the time is invalid, the *TIME? question is reissued.

The time can be entered in one of three formats:

- o hh:mm - where hh = 00-23 hours and mm = 00-59 minutes
- o hht or hh.t - where hh = 00-23 hours and t = tenths of one hour (i.e., 0-9)

*CHANGE > 5 MIN, YES TO ACCEPT? Question

The operator attempted to change the clock time by more than 5 minutes, thus, this message gives the operator the opportunity to reenter the time.

A YES response causes the system to accept the new time. A NO response causes the *ENTER TIME OR ENTER A CORRECTION FACTOR? to be reissued.

*INITIALIZE? Question

The *INITIALIZE? question allows mass storage devices to be reformatted or "initialized". The initialization process provides a clean basis for re-establishing tables, pointers, and files on the mass storage device. It is recommended that initialization be performed on each cold boot. (Refer to "Cold Boot" earlier in this section for additional information.)

Initialization destroys existing tables and pointers on the device prior to rebuilding them. The rebuilding process draws upon information in main memory and included in the \$INITIALIZE section of the Startup job stream.

Among the tables rebuilt are those that compose the device header and define the physical attributes of the device in terms of usable space (i.e., that space which has been allocated or which is available for allocation) and defective space. (Refer to the GCOS 8 OS System Operating Techniques manual for device header information.)

A console message may be issued, warning of allocation table problems following the initialization process. The message:

ST1 AND SMCDUP INITED BUT NOT ALL OTHERS, FILE SPACE WILL BE LOST

is issued if device ST1, containing the System Master Catalog (SMC), and the device containing the duplicate SMC are initialized, but one or more other permanent mass storage devices are not initialized. (This condition may arise as the result of omitting \$ INIT statements in the \$INITIALIZE section for all permanent mass storage devices, or as the result of selective initialization via a PARTIAL response to the *INITIALIZE? question.)

While allocation tables on the devices that were not initialized continue to identify allocated space on those devices, the FMS catalog structure no longer reflects the assigned space. Therefore, the space is lost to the system (i.e., it is unassignable). To correct this condition, all permanent mass storage devices must be initialized.

While data files are not cleared from the initialized mass storage device, destruction (clearing) of the pointers and tables during the initialization process makes it impossible to subsequently access these files. Following device initialization, any write operation to that device overwrites the existing data. Therefore, any data files that are to be retained must be saved on magnetic tape prior to device initialization and then restored to the device following initialization. (Refer to the GCOS 8 OS File Management Supervisor manual for save and restore information.)

In addition to the reformatting process, Startup performs several other functions during initialization including:

1. Volume sets, and their characteristics, can be defined. Volume sets are multi-volume structured removable devices. Refer to "\$ VSET Statement" and "\$ VOPT Statement" in Section 5.
2. Mass storage, magnetic tape, and unit record MPCs are checked to determine if they have been bootloaded with firmware. If they have not, the operator is given the option of bootloading the controllers. MPC verification and bootloading is bypassed during a fast boot. (Refer to "MPC Bootloading" for additional information.)

3. Printer character set and VFC images are loaded from the Startup program's internal copy (i.e., buffer) of the PRINTIMAGE file for all qualifying, configured printers. (Note that if a print image is added to the PRINTIMAGE file on mass storage via the TVIM program, the internal Startup copy does not contain that image.) As with MPC bootloading, loading of character set and VFC images is bypassed during a fast boot. (Refer to "Character Set And VFC Image Loading" in this section for additional information.)
4. Permanent mass storage devices are verified by comparing each mass storage device label with information in the in-memory device name table. The device name table is created from \$CONFIG section information and from the device directory, which occupies several contiguous llinks in the SMC on device ST1. (Refer to "Permanent Mass Storage Device Verification" later in this section for additional information.)
5. All controller-driven (such as an MPC) magnetic tape handlers are surveyed. The density and track-type attributes of each configured device are compared with information specified in the \$CONFIG section. If the comparison fails, the device is unconditionally released (i.e., without querying the operator). (Refer to "Magnetic Tape Handler Survey" in this section for additional information.)

OPERATOR CONTROLS DURING INITIALIZATION

The initialization function is controlled to a great extent by the operator, who can enter one of several responses to the *INITIALIZE? question. Therefore, the operator must be aware of the consequences of each response. The following describes the ramifications of the NO, YES, TOTAL, and PARTIAL responses to the *INITIALIZE? question.

<u>Response</u>	<u>Description of Initialization Process</u>
NO	A response of NO indicates that initialization is not desired. All mass storage device information is to remain intact and mass storage information previously defined in the \$INITIALIZE section of Startup still is valid. However, Startup performs all five other functions that accompany initialization (i.e., volume set definition, MPC verification and bootloading, character set and VFC image loading, mass storage device verification, and magnetic tape handler surveying).
YES or TOTAL	A response of YES or TOTAL initializes all configured mass storage devices. Information included on the \$ INIT statements in the \$INITIALIZE section of Startup is executed to recreate tables and pointers on mass storage devices. A response of YES or TOTAL automatically provides a YES answer to all MPC-related questions. (Refer to "MPC Bootloading" in this section for additional information.)

Response

Description of Initialization Process

A response of TOTAL: (1) provides a YES answer to the *EDIT? question; (2) provides a NO answer to the *FORMAT/LABEL QUESTIONS? question; and (3) results in execution of \$EDIT section content. Startup assumes that all mass storage devices were previously formatted. Under these circumstances, a \$ INIT statement must be included in the \$INITIALIZE section of Startup for each mass storage device.

It is recommended that the bootload medium be magnetic tape when a YES or TOTAL response is made. This ensures that the AUTOLOAD file will contain current information.

PARTIAL

A response of PARTIAL allows the operator to selectively initialize mass storage devices on a device-by-device basis (as opposed to a YES or TOTAL response, which initializes all devices). This response also provides an audit trail of the initialization process, which can prove valuable when debugging initialization problems.

If the operator responds PARTIAL, one of the following additional (secondary) questions is issued to the console.

*INIT DEVICE ddd?
*INIT RMVBL DEVICE ddd?
*INIT SHARED DEVICE ddd?

Each of these messages queries the operator as to whether mass storage device ddd (where ddd = logical device name) is to be initialized. In the message:

*INIT RMVBL DEVICE ddd?

device ddd is configured as a removable (RMVBL) device. In the message:

*INIT SHARED DEVICE ddd?

device ddd is configured as a shared device; i.e., shared with NPS. See "\$ Shared Statement" in Section 5.

A response of NO to these questions indicates that device ddd is not to be initialized (except for any automatic secondary initialization as described below). A response of YES indicates that device ddd is to be initialized. In addition, subsequent questions are issued regarding mass storage device formatting. (Refer to "*FORMAT/LABEL QUESTIONS? Question" in this section for additional information.)

The system allows the operator to respond SECONDARY to one of the secondary questions following a PARTIAL response when circumstances may require an operator-initiated secondary initialization (e.g., the device encounters a temporary descriptor table (TDT) overflow condition). Otherwise, under normal operating conditions, secondary initialization is automatically performed as follows:

1. During System Startup, when the NIAST (No In-Memory Available Space Table) option is in effect, a secondary initialization is performed automatically for each permanent device whose last operating mode was not NIAST. This action establishes a current Available Space Table (AST) on the device. This automatic secondary initialization occurs for both shared and unshared permanent devices. It is not dependent on the response to the INITIALIZE? question or its subsidiary *INIT ... ddd? questions. (The AST resided in memory during non-NIAST operation; therefore, either no AST exists on the device, or it is obsolete.)
2. For removable mass storage devices in the NIAST mode, a secondary initialization is performed automatically whenever a structured disk pack is mounted at Startup. If it is mounted later, the AST rebuilding occurs during system operation. This action is not dependent on the response to the INITIALIZE? question or its subsidiary *INIT ... ddd? questions.
3. When processing D, O, A, L, and Y data (YES response to PROCESS DIRECTORY CARD FOR DEVICE ddd? message) on devices whose last operating mode was NIAST, at least a secondary initialization is required.

A SECONDARY response to one of the secondary questions following a PARTIAL response is logically ignored when NIAST mode is not in effect.

In contrast to an initialization, a secondary initialization releases no permanent file space and uses the device allocation unit table on the device to rebuild a current AST on the device. For permanent devices, the empty TDT is also rebuilt. This action synchronizes both tables containing mass storage space allocation information (i.e., the device allocation unit table and the AST) and, for permanent devices, returns all temporary file space to the system. Note that temporary files do not exist on removable devices.

NOTE: Recovery may not be performed on protected files if a secondary initialization is performed.

MPC BOOTLOADING (DPS 8 AND DPS 8000 ONLY)

MPC firmware must be functional to perform system startup. Separate firmware data decks are used to bootload the magnetic tape and mass storage controllers. These deck images can reside on mass storage, magnetic tape, or punched cards. In addition, the \$INITIALIZE section must contain the MPC bootload (MPCB) program deck image, which permits loading of the data decks. (Refer to "\$INITIALIZE Section" in Section 1 for additional information.)

Several console questions may be issued by the MPCB program to ensure that all MPC firmware is loaded and operational:

- o Startup automatically provides a YES answer to all MPC-related questions if the operator responds YES or TOTAL to the *INITIALIZE? question. As a result, all MPCs are bootloaded from firmware on the deckfile.

If firmware for a specific device type is absent from the deckfile, Startup bypasses bootloading of the MPC in question and completes the bootloading process for all other MPCs. All devices associated with the bypassed MPC are released during the device rollcall function. Messages are issued during the rollcall function to identify released devices. No message is issued when MPC bootloading is bypassed.

To subsequently bootload the MPC while the system is operational, the operator can call the MOLTS subsystem of the Total Online Test System (TOLTS) via the console entry:

```
TEST MPC icc
```

(where i = IOM number and cc = channel number). The console entry ASGN iccdd then can be used to reassign each released device to the system (where i = IOM number, cc = channel number, and dd = device number).

Use of the PARTIAL response to the *INITIALIZE? question during a cold boot can prevent the bypass of MPC bootloading. The PARTIAL response ensures that all bootloading occurs and that all configured devices are activated.

- o Startup automatically provides a NO answer to all MPC-related questions if the operator responds NO to the *INITIALIZE? question and if Startup determines that all MPCs are loaded with firmware.

The following question is issued to the console if the operator responds NO to the *INITIALIZE? question and if Startup determines that one or more MPCs are not loaded with firmware or are not operational.

```
*xxxMPC ON icc NOT RESPONDING PROPERLY  
TYPE (B)OOT, (S)KIP, OR (R)ETRY
```

The following console entries can be made to correct or to circumvent the condition:

- B - Load firmware into MPC xxx from the deckfile. This is the recommended response.
- S - Bypass (skip) bootloading MPC xxx. All devices associated with this MPC are released during the device rollcall function. To subsequently bootload the MPC and reassign released devices, enter the TEST MPC icc and ASGN iccdd console entries as previously described.
- R - Retry the MPC firmware verification function. If Startup again determines that the firmware is not loaded or that the MPC is not operational, the preceding message is reissued.
- o If the operator responds PARTIAL to the *INITIALIZE? question, one or more of the following questions is issued to the console:

*MPC ON icc PRE-INITIALIZE?

*xxxMPC ON icc BOOTLOAD SYS ID NAME "y...y" REV.zz?

*xxxMPC ON icc APPEARS OK, BOOTLOAD?

The PRE-INITIALIZE? question is issued only if a DAU Disk Controller is recognized, and asks if the operator wishes to run concurrent self tests. Answering YES saves time (20 seconds per device), and also requires a YES answer to the BOOTLOAD? question because self tests destroy firmware. Answering NO to the PRE-INITIALIZE? question will add time to the bootloading of firmware if YES is entered in response to the BOOTLOAD? query later on.

The *xxxMPC on icc BOOTLOAD SYS ID NAME "y...y" REV.zz? question is issued for each configured MPC. A YES response results in bootloading of MPC xxx with firmware revision level zz from the deckfile. A NO response bypasses bootloading of MPC xxx. To subsequently bootload the MPC and reassign released devices, enter the TEST MPC icc and ASGN iccdd console entries as previously described.

Only the *xxxMPC ON icc APPEARS OK, BOOTLOAD? question is issued if firmware does not exist in nonshared MPC xxx. A YES response results in bootloading of MPC xxx from the deckfile. A NO response bypasses bootloading of MPC xxx. If the MPC is not bootloaded, all devices associated with the MPC are released during the device rollcall function. To subsequently bootload the MPC and reassign released devices, enter the TEST MPC icc and ASGN iccdd console entries as previously described.

PERMANENT MASS STORAGE DEVICE VERIFICATION

All permanent mass storage devices - especially device ST1 and the device that is to contain the (optional) duplicate System Master Catalog (SMC) - are verified to ensure that logical device labels are accurate. Any inconsistency between logical device label information and system control data in the device directory in the System Master Catalog causes a console message to be issued. The message will be:

```
*EXPECTED PACK NAME xxx FOUND yyy YES TO ACCEPT CHANGE
```

or:

```
*ddd EXPECTED PACK NUMBER xxx FOUND yyy YES TO ACCEPT CHANGE
```

where ddd = logical device name. (Refer to "Verification Of All Permanent Mass Storage Devices" in this section for a description of these messages and operator responses.)

Tables used during the verification process include the in-memory device name table, created from \$CONFIG section data, and the device directory, which occupies several contiguous llinks in the SMC on device ST1.

Normally, this verification procedure is performed with no errors encountered and Startup continues on to the magnetic tape handler survey procedure.

ST1 And SMCDUP Device Name Verification

Startup determines whether the correct disk packs are mounted on device ST1 and on the device containing the duplicate SMC. If the comparison of logical device label and device name table information fails, the console message:

```
*ddd ST1/SMCDUP DEVICE WRONG PACK MOUNTED
```

is issued (where ddd = logical device name).

To correct the condition, power off the device and visually verify the pack serial number, which is stamped on the pack by the manufacturer. If the serial number does not identify the correct disk pack, mount the proper pack on device ddd. It is recommended that the system be restarted via a warm boot to ensure that any erroneous in-memory tables are corrected and rebuilt.

SMCDUP Device And Option Verification

Startup determines whether the device for which the SMCDUP option was specified actually contains the duplicate SMC. If the device does not contain the duplicate SMC, Startup aborts. The console message:

```
*ddd CAN'T CHANGE SMCDUP WITHOUT INIT
```

is issued (where ddd = logical device name). Remove the \$ INFO...SMCDUP statement, which identifies device ddd, from the \$CONFIG section of the Startup job stream and perform a warm boot to restart the system. (As a result of removing the \$ INFO...SMCDUP statement, a duplicate SMC is not created. To provide a duplicate SMC, the device on which the duplicate is to reside must be defined on the \$ INFO...SMCDUP statement and the operator must respond YES to the *INITIALIZE? and *EDIT? questions during the bootload.)

Verification Of All Permanent Mass Storage Devices

Following the preceding verification process, which specifically applies to device ST1 and to the device that contains the duplicate SMC, Startup performs a series of tests that applies to all permanent mass storage devices. As in the previous verification functions, logical device label information is compared with data contained in the device name table and in the device directory.

The following verification sequence is performed for each device:

1. If a Startup statement (e.g., \$ FILDEF or \$ GCOSFIL) includes a logical device name (ddd) not defined on a \$ Iyy statement, the console message:

*DEVICE ddd UNDEFINED

is issued and Startup aborts. While this message also applies to magnetic tape and unit record devices, it is more often associated with mass storage devices.

2. If Startup determines that a device is offline and cannot be accessed, the following console message is issued:

*DISK PACK ERROR icccdd s...s EOM TO CONTINUE -- 'RLSE' TO RELEASE THE DEVICE

where:

i - IOM/IOX/IOP/IMU/IMX number
ccc - channel number
dd - device number
s...s - status message).

The operator can (1) release the device via the console entry RLSE or (2) correct the error defined in the status message. The EOM push button on the system console is then pressed to retry the verification function. If the released device contains any system files, the system aborts.

NOTE: If a \$ INFO...RLSDSK statement is present in the \$CONFIG section of the Startup job stream, the RLSE answer is automatically applied to the preceding message. The device is automatically released during a fast boot and no message is issued.

3. Startup compares the device name (i.e., pack name) contained in the logical device label with the device name contained on the \$ Iyy statement for the device. If the comparison fails, the console message:

*EXPECTED PACK NAME xxx FOUND yyy YES TO ACCEPT CHANGE

is issued (where xxx = device name contained on the \$ Iyy statement and yyy = device name contained in the logical device label).

The operator has the following options:

- a. Power off the device and visually inspect the pack name, which normally is written by site operations personnel on an external pack label. If the wrong pack is mounted, mount the correct pack and perform a warm boot to restart the system.
 - b. Respond YES to the message. As a result, Startup writes the pack name, contained in the logical device label (yyy), into the device name table and continues with the verification process.
 - c. Respond NO to the message. Startup aborts. Rebuild the logical device label via the procedure specified under "2."
4. Startup compares the pack serial number contained in the logical device label with the pack serial number contained in the device directory. If the comparison fails, the console message:

*ddd EXPECTED PACK NUMBER xxxxx FOUND yyyyy YES TO ACCEPT CHANGE

is issued (where ddd = logical device name, xxxxx = pack serial number in the device directory, and yyyyy = pack serial number in the logical device label). The operator has the following options:

- a. Power off the device and visually inspect the pack serial number stamped on the pack by the manufacturer. If the pack serial number is not the one identified in the console message, mount the correct pack and perform a warm boot to restart the system.
 - b. Respond YES to the message. As a result, Startup writes the pack serial number, contained in the logical device label (yyyyy), into the device directory and continues with the verification process.
 - c. Respond NO to the message. Startup aborts. Rebuild the pack label via the procedure specified under "2."
5. If Startup encounters a device whose status has been changed from removable (RMVBL) to permanent (PERM), the console message:

*ddd PRIOR DEVICE STATUS WAS RMVBL CHANGED TO PERM YES TO CONTINUE

is issued to verify that the status change is correct (where ddd = logical device name). The following two console entries are valid:

YES - Startup changes the device status from removable to permanent on the device directory and continues the verification procedure. (Once the device status has been changed from removable to permanent, the only means of returning the status to removable is to initialize and edit the device during a bootload procedure.)

NO - Startup aborts. Modify the \$ Iyy statement to reflect the correct status for device ddd. Perform a warm boot to restart the system.

6. Startup performs four tests, comparing the logical device label information to data in the device directory, to determine if:
 - a. A \$ SHARED statement indicates that the device is shared with NPS.
 - b. A \$ INIT...CAT statement enables FMS creation of catalogs on the device.
 - c. A \$ Iyy...NOFMS statement disables FMS creation of catalogs or files on the device.
 - d. The device status was changed from permanent to removable via the \$ Iyy statement.

If any of the preceding tests fail, the following console message is issued and Startup aborts:

```
*ddd CAN'T CHANGE DEVICE STATUS FROM xxx TO NONxxx
```

where:

ddd - logical device name
xxx - NPS, FMS, CATALOGABLE, or PERM/RMVBL

Correct the error condition by (1) inspecting the \$ SHARED, \$ INIT, and \$ Iyy statements for accuracy, or (2) initializing device ddd or the entire mass storage subsystem during a cold boot.

7. Startup aborts if it does not encounter a \$ INFO...SMCDUP statement, but does encounter a device whose label indicates that the device was initialized as the device on which the duplicate SMC is to reside. The following console message is issued:

```
*ddd CAN'T CHANGE SMCDUP WITHOUT INIT
```

where ddd = logical device name. Insert a \$ INFO...SMCDUP statement, which identifies the correct device, into the \$CONFIG section of the Startup job stream and perform a warm boot to restart the system.

MAGNETIC TAPE HANDLER SURVEY

The magnetic tape handler survey is designed to verify the density (bpi) and track type (seven or nine) attributes of each configured magnetic tape handler. Each magnetic-tape-oriented controller, such as an MPC or IPC, contains an internal table that reflects this information for each tape handler associated with the controller. Startup compares the controller table information with data specified in the \$CONFIG section of the Startup job stream.

If controller table and \$CONFIG section unit number information do not match, the tape handler is released by Startup. The console message:

```
*UNIT NUMBER MISMATCH ON icccdd: CONFIG = nn, MPC = nn DEVICE RELEASED
```

is issued (where i = Iyy number, ccc = channel number, dd = device number, nn = conflicting unit numbers).

If controller table and \$CONFIG section density information do not match, the tape unit will remain assigned and the following console message is issued:

```
*DENSITY MISMATCH ON icccdd: CONFIG = <cdens>, MPC = <mdens>, ASSIGNED = <adens>
```

(where i = same as above, ccc = same as above, dd = same as above, cdens = configured density, mdens = MPC density, adens = assigned density). No operator action is required. The operator subsequently can reassign the released device by correcting the \$CONFIG section data and performing a warm boot.

If an error is encountered during the magnetic tape handler survey while bootloading from magnetic tape, the console message:

```
*TAPE ERROR, icccdd s...s MAY BE RECOVERABLE FIX, TYPE GO OR STOP OR TYPE CONT FOR CONTINUE
```

is issued (where s...s = error status condition). The operator can:

1. Correct the error and enter GO via the system console to resume the bootload;
2. Enter STOP via the system console to abort Startup; or
3. Enter CONT to release all magnetic tape handlers configured on this MPC subsystem and to resume the bootload. (To subsequently bootload the MPC and reassign released devices, enter TEST MPC iccc and ASGN icccdd as described under "MPC Bootloading" in this section.)

Processing is identical on a fast boot, but no message is issued to the console.

CHARACTER SET AND VFC IMAGE LOADING

Information from the \$CONFIG section of the Startup job stream is compared with information contained in Startup's internal copy (i.e., buffer) of the PRINTIMAGE file during loading of the character set and Vertical Format Control (VFC) image. If \$CONFIG section and PRINTIMAGE file information do not match, a console message is issued defining the problem.

If any of the following error conditions is encountered during a fast boot, the device is released and no console message is issued.

1. If Startup attempts to load a character set or VFC image into a printer that is not in a Ready status, the console message:

~~*PRINTER ERROR icccdd s...s FIX TYPE GO OR STOP OR RLSE~~

is issued (where i = Iyy number, ccc = channel number, dd = device number, and s...s = status message). The operator has three options:

- a. Place the device in a Ready status and enter GO via the system console. Startup attempts to load the character set or VFC image.
 - b. Enter STOP via the system console, causing Startup to abort. Deconfigure the device, or bootload the MPC. Then perform a warm boot to restart the system.
 - c. Enter RLSE via the system console to release the device. (If a \$ INFO RLSPNT statement is included in the \$CONFIG section of the Startup job stream, the RLSE answer is automatically applied to the preceding message.)
2. If Startup encounters an error condition (as defined in the status portion of the following message), the device is released. The console message:

*PRINTER ERROR icccdd s...s DEVICE RELEASED

is issued. The operator subsequently can correct the error condition while the system is inoperable and perform a warm boot, or correct the condition while the system is operational and reassign the device to the system via the console entry ASGN icccdd.

3. If Startup fails to find the character set defined in the \$CONFIG section in its internal table, the device is released and the console message:

*TRAIN ID UNKNOWN TO STARTUP DEVICE RELEASED

is issued. The character set subsequently can be loaded onto the PRINTIMAGE file via the TVIM program while the system is operational. The device can be reassigned to the system via the console entry ASGN icccdd.

4. If Startup determines that printer paper is missing or requires realignment, the console message:

*POSITION PAPER IN PRINTER icccdd FIX TYPE GO OR STOP OR RLSE

is issued. After loading or realigning the paper, the operator can enter GO, STOP, or RLSE via the system console to get the same results as described under "1".

5. If Startup determines that a character set exists but is not defined in the \$CONFIG section, the device is released and the console message:

*MOUNTED TRAIN ID xxx REQUESTED TRAIN ID yyy DEVICE RELEASED

is issued. The operator can:

- a. Correct the \$CONFIG section and perform a warm boot to restart the system;
- b. Mount the correct print train or belt (yyy) on the printer and perform a warm boot to restart the system;
- c. Reassign the device via the ASGN icccdd console entry when the system is operational.

SUPPLEMENTAL QUESTIONS DURING INITIALIZATION

A series of supplemental (secondary) questions is issued regarding formatting of mass storage devices, clearing of defective space information from logical device labels, and re-editing the deckfile. The following describes the ramifications of responses to these questions.

Discrepancies During Mass Storage Device Verification

Two console messages are issued during the logical device initialization process if Startup determines that logical device label information differs from data contained on a \$ Iyy statement. One message is issued if logical device names (i.e., pack names) differ, while the other message is issued if the pack serial numbers do not agree.

The console message:

*icccdd xxx CHANGING TO yyy YES TO INITIALIZE PACK

is issued if Startup determines that the logical device name contained on the logical device label (xxx) is different from the logical device name on the \$ Iyy statement (yyy). The operator can respond YES or NO to this message.

A YES response indicates that the correct disk pack is mounted, but the label contains erroneous information. Startup writes the logical device name on the \$ Iyy statement to the logical device label and initialization continues.

A response of NO indicates that the wrong disk pack is mounted. As a result, Startup aborts. The operator can mount the correct disk pack and reboot the system.

If the logical device label was destroyed before Startup compared the logical device label with the \$ Iyy statement, no console message is issued (even if the wrong disk pack is mounted).

The console message:

```
*icccdd: ddd EXPECTED PACK NUMBER xxxxx FOUND yyyyy YES TO ACCEPT CHANGE
```

is issued if Startup determines that the pack serial number on the logical device label (yyyyy) is different from that on the \$ Iyy statement (xxxxx). Note that this comparison is made only if the S-xxxxx option is included on the \$ Iyy statement (where xxxxx = pack serial number).

The operator can respond YES or NO to this message.

A YES response indicates that Startup is to continue the device initialization process. The operator subsequently can change the pack serial number that is contained in the logical device label to match that on the \$ Iyy statement. This modification can be effected during the pack serial number verification procedure that is performed if the operator responds YES to the *FORMAT/LABEL QUESTIONS? question.

A response of NO indicates that the wrong disk pack is mounted. As a result, Startup aborts. The operator can mount the correct disk pack and reboot the system.

FORMAT/LABEL QUESTIONS? Question

A YES response to the question *INIT DEVICE ddd causes Startup to initialize a device, and occurs when a \$ DIRECT statement is encountered for device "ddd" or at the end-of-file for the \$INITIALIZE section, whichever comes first. Startup begins initialization by reading the following disk sectors:

- o Sector 0 - Label
- o Sector 1 - Defective llink directory
- o Sector 3 - Alternate track table (except MSU0500, MSU3380, and MSU3381)
- o Sector 4 - Defective space history table (except MSU0500, MSU0501, MSU3380 and MSU3381)

MSU0500, MSU0501, MSU3380 and MSU3381 disks have neither a defective space history table nor an alternate track table; therefore, Startup does not attempt to read these sectors when processing such devices.

If no \$ DIRECT ddd/CLEAR statement is processed and if one or more of the reads result in nonready status, incorrect checksum, or invalid table format, Startup issues the following console message:

*ddd LLINK 0 BAD, MUST TEST/FORMAT/RTHDRS, YES TO CONTINUE

A NO response causes Startup to abort. A YES response causes Startup to continue the initialization process. At this point, two sets of snaps will have been written to the printer: one before and one after the label sector has been built. Snaps are taken of disk sectors 0-4, associated flags and counters, and the disk I/O trace buffer.

If a \$ DIRECT ddd/CLEAR statement is present and was processed by responding YES to the following console message:

PROCESS DIRECTORY CARD FOR DEVICE ddd?

Startup issues the following console message:

*ddd LLINK 0 CLEARED, MUST TEST/FORMAT/RTHDRS, YES TO CONTINUE

A NO response causes Startup to abort. A YES response causes Startup to continue the initialization process. Again, if any of the sectors read were bad, printer snaps will have been written.

Startup then zeros the bad sectors (or clears sectors 1, 3, and 4 if using \$ DIRECT ddd/CLEAR) and, if the defective space history table was cleared, builds an empty history table.

Startup now issues the following message:

*FORMAT/LABEL QUESTIONS?

If the pack number is 00000, the following message is given regardless of the response to the message above:

*icccdd: ENTER PACK #NNNNN?

The operator responds by entering the desired pack number.

If the response to the *FORMAT/LABEL QUESTIONS? message was YES, the following messages are issued:

*icccdd: CHG PACK #nnnnn?

*icccdd: FMT PACK #nnnnn? (except MSU0500, MSU0501, MSU3380 and MSU3381)

*icccdd: TEST PACK #nnnnn? (MSU0500 and MSU0501 only)

The operator responds to the *icccdd: CHG PACK #nnnnn? message as follows:

NO - pack number is not changed

nnnnn - new pack number

The operator responds to the *icccdd: FMT PACK #nnnnn? message as follows:

NO - No formatting will be done

YES - Startup attempts to format (write track headers on) all tracks, except those in the defective space history table, as GOOD. Those tracks in the history table as well as those which cannot be formatted GOOD are formatted DEFECTIVE/NO ALTERNATE and entered into the defective llink directory.

RTHDRS - Startup issues a "read track header" command to all tracks on the disk. Tracks with track indicator (TI) bits specifying DEFECTIVE/NO ALTERNATE and tracks that cannot be successfully read are entered into the defective llink directory. Tracks with TI bits specifying DEFECTIVE/ALTERNATE ASSIGNED are entered into the alternate track table.

The operator responds to the *icccdd: TEST PACK #nnnnn? message as follows:

NO - No testing will be done

YES - Startup issues a "read track header" command to all tracks on the or
RTHDRS DEFECTIVE/NO ALTERNATE and tracks that cannot be successfully read are entered into the defective llink directory. Tracks with TI bits specifying DEFECTIVE/ALTERNATE ASSIGNED are entered into the alternate track table. MSU0500/0501 disks do not have alternate track tables; therefore, tracks marked DEFECTIVE/ALTERNATE ASSIGNED are treated as if they were marked GOOD.

NOTE: The FMT and TEST options do not apply to the MSU3380 and MSU3381. The FTAR program does the formatting of the devices on-line. In addition, if any defective tracks are encountered they must be assigned to an alternate track or be deallocated by using the \$ DIRECT statement in the \$INITIALIZE section of the Startup job stream.

Note that Startup does not assign alternate tracks. If alternate track assignment is desired, the Removable Storage Initialization Program (RSIP) must be used. Refer to the GCOS 8 OS System Operating Techniques manual for RSIP information.

At the end of the format/test process, Startup equates the defective llink directory with the defective space history table (if one exists).

One result of this is that each entry in the defective llink directory defines a single track's worth of defective space. Startup continues with the initialization of the disk. Sectors 0-4 of the disk are written and the device allocation unit table is created. Defective space in the defective llink directory is marked unavailable in the device allocation unit table. Initialization is now complete.

If a \$ DIRECT ddd JCL statement containing D, O, A, L, and Y data is processed (YES response to PROCESS DIRECTORY CARD FOR DEVICE ddd? message), Startup adds the D, O, A, L, and Y space to the defective llink directory, makes the defective llink directory agree with the history table, rewrites sectors 0-4, and marks defective space as unavailable in the device allocation unit table. Note that the \$ DIRECT ddd is allowed even if the disk ddd is not being initialized. However, a secondary initialize is necessary when the disk ddd last mode of operation was NIAST.

Printer snaps of disk sectors 0-4 and associated flags and counters can be forced by inserting a \$ BUGON statement in the \$INITIALIZE section of the Startup job stream. A \$ BUGOFF statement disables the forced printer snaps. Printer snaps of the Startup disk I/O interval trace table can be forced by inserting a \$ DBGON statement in the \$INITIALIZE section of the Startup job stream. A \$ DBGOFF statement disables the forced printer snaps.

The following console messages may be issued prior to an abort of Startup during disk initialization:

*ddd LLINK ZERO BAD, MUST INIT

Startup detected invalid disk sectors 0, 1, and (or) 4 and one of the following conditions:

1. A NO response was made to the INIT DEVICE ddd? question;
2. No \$ INIT ddd JCL statement was present;
3. \$ DIRECT ddd D, O, A, L, and Y input was being processed.

The pack must be initialized.

*DISK PACK ERROR icccdd (status) TRACK ZERO BAD

Startup was unable to format track 0 GOOD. This pack cannot be used by GCOS unless this condition is due to a site error.

*DISK PACK ERROR icccdd PSEUDO ALT AREA ALL DEFECTIVE

The area to be used for pseudo alternate tracks (MSU3380 and MSU3381) is defective. The pack must be reformatted.

***ddd BLOCK 0 DEFECTIVE MUST REFORMAT DEVICE**

Track zero on the disk couldn't be read successfully (channel ready status), or TI bits did not show a GOOD track. The disk must have track zero reformatted as GOOD and the pack must be reinitialized.

***ddd ERROR DETERMINING ALTERNATE TRACK MUST REFORMAT DEVICE**

The track was found marked DEFECTIVE/ALTERNATE ASSIGNED and the alternate track was not in the alternate track table or it was already assigned to another defective track. The pack must be reformatted.

Some general guidelines for initializing/formatting/testing of mass storage devices are:

1. Use a \$ DIRECT ddd/CLEAR statement whenever the status of the defective llink directory, alternate track table, and (or) the defective space history table sectors is unknown or questionable. Note that whenever a \$ DIRECT ddd/CLEAR statement is processed, a YES response should be given to the *FORMAT/LABEL QUESTIONS? message and formatting or testing should be invoked to rebuild the alternate track table.

This recommendation does not apply to MSU0500/0501 disks as they have no alternate track table. If formatting or testing is not done after a \$ DIRECT ddd/CLEAR statement is processed, a \$ DIRECT ddd (D, O, A, L, and Y) statement must be processed to withdraw all known defective space.

2. The only reason for reading track headers is to rebuild the alternate track table and to build a defective llink directory containing all tracks marked DEFECTIVE/NO ALTERNATE. Since reading track headers takes a relatively small amount of time (less than five minutes for MSU0451 and MSU0500 and about six minutes for an MSU0501), it is recommended that this be done each time a mass storage device is initialized. Reading of track headers is not necessary if the correct D, O, A, L, and Y statements for all tracks formatted DEFECTIVE/NO ALTERNATE are processed.
3. The recommended procedure for initializing mass storage devices is to answer "PARTIAL" to the "*INITIALIZE?" question and never use the "*" when answering any \$INITIALIZE section questions. Use of the "*" not only eliminates the details of what has been done, but can lead to problems (e.g., "NO" to "FORMAT/LABEL QUESTIONS" prevents asking TEST/FMT questions when "DDD LLINK-0 BAD..." - if LLINK-0 is unexpectedly bad and needs TEST/FMT, Startup must be aborted and the "INITIALIZE?" redone).

A further recommendation is to use a \$ DIRECT ddd/CLEAR statement, answer YES or RTHDRS to the TEST/FMT question, and process a \$ DIRECT ddd statement followed by D statements. These D statements should be a set defining all bad space that the pack manufacturer has identified, bad space found during RSIP/MTAR/FTAR formatting, and any bad space found during system operation.

4. Disk formatting during Startup is not a replacement for the disk test functions in RSIP and MTAR. Disk formatting during Startup must be complemented with a \$ DIRECT ddd statement and the necessary D, O, A, L, and Y statements to identify all known marginal or defective space.

CLEAR AND OVERWRITE EXISTING DECKFILE? Question

The CLEAR AND OVERWRITE EXISTING DECKFILE? question introduces the first step in a two-part function that edits new firmware onto the deckfile. This function normally is requested by site techniques personnel when new firmware is to be edited onto the deckfile. The CLEAR AND OVERWRITE EXISTING DECKFILE? question is issued only if a deckfile exists (i.e., only if the file was not cleared earlier in the initialization sequence as a result of a YES or TOTAL response to the *INITIALIZE? question).

A NO response indicates that the file is to remain intact. A YES response clears the file preparatory to rebuilding it from data contained on another firmware tape/deck. This tape/deck is read during processing of the *PROCESS \$ READIN? question.

NOTE: On DPS 88 and DPS 90 systems, Startup creates an empty deckfile to edit the IFAD tape. Therefore, Startup provides for clearing of the deckfile for DPS 88 and DPS 90 systems.

On DPS 8 and DPS 8000 systems, Startup is required to bootload MPC firmware. A copy of the MPCB program must be available. Since MPCB is not saved on the AUTOLOAD file, the deckfile is accessed during an AUTO boot to obtain the MPCB program deck. If a CLEAR AND OVERWRITE EXISTING DECKFILE is performed during an AUTO boot, Startup cannot load MPCB and a Startup abort occurs. Therefore, a TAPE boot or a REPLACE of the \$INITIALIZE section with a copy of the MPCB deck is required to perform a clear and overwrite of the deckfile.

*PROCESS \$ READIN? Question (DPS 8 And DPS 8000 Only)

The *PROCESS \$ READIN? question signals the second step in editing new firmware onto the deckfile. This question permits the contents of a firmware tape/deck to be written to the deckfile. (This question is immediately followed by an image of the \$ READIN statement.)

A NO response indicates there is no firmware tape/deck to be read (i.e., the operator responded NO to the CLEAR AND OVERWRITE EXISTING DECKFILE? question). A YES response indicates that a firmware tape/deck is to be read and its contents are to be written to the deckfile. (This firmware tape/deck normally is supplied by site techniques personnel or by the site's Honeywell Bull Customer Service Division (CSD) representative.)

One of two questions, which query the operator as to whether firmware is to be loaded, may be issued to the system console following a YES response to the *PROCESS \$ READIN? question, or following a response of PARTIAL to the *INITIALIZE? question.

The questions are:

*xxxMPC ON iccc BOOTLOAD SYS ID NAME "y...y" REV.zz?
*xxxMPC ON iccc APPEARS OK, BOOTLOAD?

where:

xxx = subsystem type (e.g., 450)
i = input/output controller number
ccc = channel number
y...y = system name from \$ SYID statement
zz = firmware revision level from the \$ DKEND statement that delimits the
firmware deck

- o If the data images reside on punched cards, one of the preceding questions is issued when the firmware deck image is encountered.
- o If the data images reside on magnetic tape, one of the preceding questions is issued when the \$ READIN statement is encountered in the \$INITIALIZE section of the Startup job stream. The \$ READIN statement identifies the magnetic tape handler from which the firmware tape is to be read.
- o If the data images reside on mass storage, one of the preceding questions is issued when bootloading is to occur.

*EDIT? Question

The *EDIT? question allows GCOS system files to be edited to mass storage (i.e., either created for the first time or content restored following mass storage device initialization or following a severe system problem).

The *EDIT? question is issued only when a \$EDIT section is encountered in the Startup job stream. With one exception, this question is independent of the *INITIALIZE? question. The exception occurs when the operator responds TOTAL to the *INITIALIZE? question. Under these conditions, the *EDIT? question is automatically answered YES by Startup and \$EDIT section contents are executed.

The operator can respond NO, YES, or PARTIAL to the *EDIT? question.

<u>Response</u>	<u>Description of Edit Process</u>
NO	A response of NO is applicable when (1) the *INITIALIZE? question was answered NO, (2) no system files were affected during the initialization function, (3) no new system files are to be added, or (4) no existing system files are to be modified.
YES	A response of YES is required to initially create and/or to restore all system files.

Response Description of Edit Process

If a single magnetic tape handler is being used to edit the system, Startup rewinds the edit tape whenever it encounters a valid tape name on a \$ FILDEF statement. The operator must dismount the old edit tape and mount the new one before replying "YES" to the EDIT question.

When a YES response is entered, Startup expects the total system software tape(s) to already be mounted on one or more magnetic tape handlers. (The \$ FILDEF statements in the \$EDIT section define the device(s) on which the total system software tapes are to be mounted.) If the tapes are not already mounted, the message:

*TAPE ERROR icccdd: ATT I ssssss OPERATE WHEN READY

is issued directing the operator to do so (where i = Iyy number, ccc = channel number, dd = device number, and ssssss = device standby code). (Refer to the GCOS 8 OS I/O Programming manual for standby code definitions.)

(Because several reels constitute the total system software tape, the editing process can be expedited by allocating two tape handlers and mounting two reels. When reading of one reel completes, reading of the second reel can begin while the first reel is automatically rewound. The operator then can mount another reel on the free tape handler.)

Once the total system software tape is mounted, Startup verifies the reel serial number and issues the informational message REEL NO. nnnnnn (where nnnnnn = reel serial number). The tape then is read. This verify-and-read sequence occurs for each tape reel. If the reel number in the message REEL NO. nnnnnn identifies the wrong reel, the operator can press the REQUEST push button on the console to halt the read function, enter BOOT via the console, mount the correct tape reel, and reboot the system.

If the file name on a \$ FILDEF statement differs from that of the file being read from the total system software tape, the console message *FILE IS aaaaaa, SHOULD BE bbbbbb SCFR? is issued (where aaaaaa = name of the file being read and bbbbbb = name of the file specified on the \$ FILDEF statement that should be read). The operator can respond with one of the following console entries.

S - Abort the Startup program. The console message STARTUP ABORTED LOC mmmmmmm PICK ONE DUMP:ALL,NONE,NORMAL is issued. The operator can elect to print a main memory dump or to bypass the dump. (Refer to "Initiating Memory Dump" in Section 3 for additional information.)

C - Accept the error condition and continue processing the current file (aaaaaa).

Response Description of Edit Process

F - Find the required file (bbbbbb) by searching the tape forward from the current position.

R - Rewind the tape and search forward for the required file (bbbbbb).

If (following a YES or PARTIAL response to the *EDIT? question) the end of the tape is reached without encountering the required file, the console message:

*END OF TAPE ENTER FILE NAME

is issued. In addition, names of all files on the tape also are generated at the system console. The operator can (1) enter via the console the name of another file to be searched for and then enter R, or (2) mount another tape reel and enter F to search for the required file.

PARTIAL

A response of PARTIAL is required to (1) selectively add new system files and (2) selectively modify the content of one or more existing system files. Startup queries the operator regarding the disposition of each file that is identified on a \$ FILDEF statement. The query is via the *EDIT ffffff? question (where ffffff = file name).

The *EDIT ffffff? question is issued when a \$ FILDEF statement is encountered in the \$EDIT section. A response of NO indicates that the file is not to be edited. A response of YES indicates that the file is to be modified or added using information from the \$ FILDEF statements in the \$EDIT section.

If the file to be added or modified is not the first file that Startup encounters on the total system software tape, the console message *FILE IS aaaaaa, SHOULD BE bbbbbb SCFR? is issued. A response of F results in the forward search of the tape for the file.

One additional question may be issued during the editing function that occurs following a response of PARTIAL. This question is *PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR?. A response of NO indicates that existing \$ SSFILE statement parameters are still valid. A response of YES indicates that the existing \$ SSFILE statement parameters are to be modified and that the new parameters exist either on the total system software tape or on a \$ SSFILE statement in the \$EDIT section. (A response of YES requires that the operator respond NO to the *RESTART? question.) As a result of the YES response, the informational message:

***SYSTEM SCHEDULER CLEAR FORCED DUE TO PRIOR \$ SSFILE CARD
PROCESS**

is issued to the system console.

***SYSTEM SCHEDULER CLEAR? Question**

The *SYSTEM SCHEDULER CLEAR? question allows the operator to attempt restart of those jobs that were cataloged on the System Scheduler program's SSFILE file (catalog). In general, however, clearing of the SSFILE file is not necessary because jobs in the scheduling phase have not been allocated system resources (i.e., memory or peripheral devices) and have not entered the execution phase.

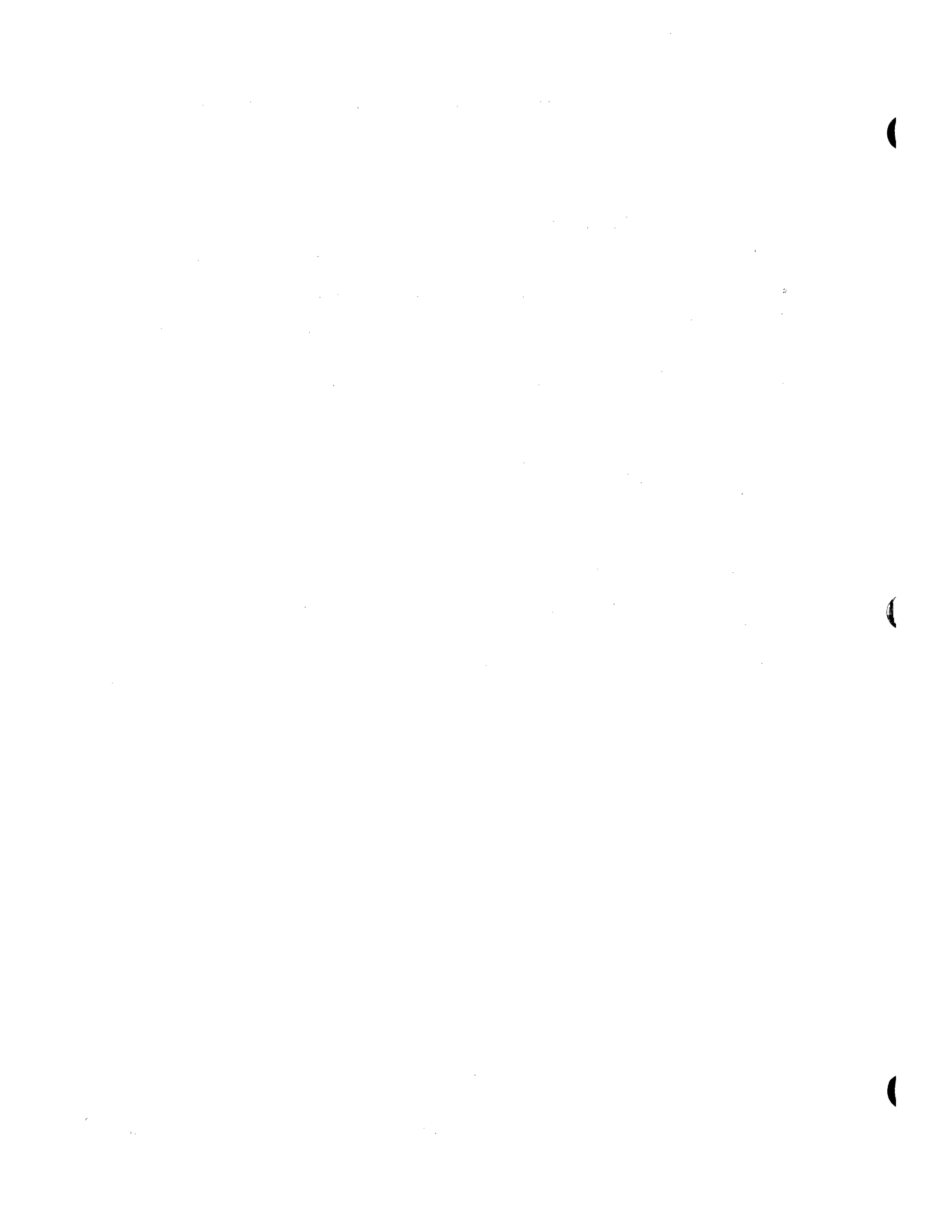
A response of YES to the *SYSTEM SCHEDULER CLEAR? question removes all entries from the SSFILE file (including jobs that were scheduled for running on a cyclic basis). All jobs that were cataloged on the SSFILE file at the time the system became inoperable must be reentered.

As previously indicated, Startup does not permit a YES response to both the *RESTART? and *SYSTEM SCHEDULER CLEAR? questions. If the operator responds YES to *RESTART?, Startup pre-answers the *SYSTEM SCHEDULER CLEAR? question NO.

A response of NO to the *SYSTEM SCHEDULER CLEAR? question retains all jobs that were cataloged on the SSFILE file at the time the system became inoperable and allows restart to be attempted for those jobs. The operator must enter JRUN REST via the system console to activate the scheduling function following restart. (Refer to "*RESTART? Question" in this section for additional information.)

If a system malfunction occurs before System Startup is complete, clearing of the SSFILE file may be incomplete. To ensure that the file is cleared, respond YES to the *SYSTEM SCHEDULER CLEAR? question during the ensuing bootload.

4



SECTION 3

STARTUP RECOVERY PROCEDURES

The System Startup process can be interrupted by two types of error conditions. One type of error aborts the Startup process and requires that the operator reinitiate the entire bootload procedure. The second type of error results in temporary interruption of the bootload procedure and allows the operator to correct the problem and resume System Startup at the point of interruption.

In addition to these two types of error conditions, the operator can intentionally render the system inoperable and reinitiate a system bootload.

Each of these conditions, and techniques to recover from them, are discussed in this section. Also included are procedures for obtaining dumps following a Startup program abort and for patching the Startup program. Descriptions of system aborts that may occur after the system has been bootloaded and is operational are not included in this section.

BOOTLOADER PROGRAM ERRORS

The Bootloader program loads the Startup program into memory. The Bootloader program must be entered in its entirety before Startup program loading can begin.

Once the Bootloader program completes, the Startup program can be loaded into memory. Any error encountered during this loading process results in a console message. No dump can be taken when an error is detected before the Startup program is completely loaded.

Startup assumes the system console is configured on channel 31 of IOM-0, or channel 30 of IMU-0 (for DPS 8), or channel 30 of the boot IMX (for DPS 8000), and attempts to direct the error messages to a console at that location. If the system console is configured on any other input/output controller or channel, the following MASK correction statement must be inserted immediately following the last statement (a *****EOF** statement) of the Bootloader program.

1 8 1
 3

000003 MASK 31cccc000ip

where:

31 - Console type (EMC/SCC)
cccc - PUB (channel) number times 4 (octal)
t - Type of input/output controller - IOM = 0
 IMU/IMX = 4
i - IOM/IMU/IMX number
p - IOM/IMU/IMX port number

NOTE: On the DPS 88, the console emulator is logically connected to channel 31 of IOX-0. On the DPS 90, the console location is passed to Startup via reserved memory. Therefore, in both of these cases, the MASK statement will be rejected.

The type of controller specifies the console I/O protocol. The defaults will be determined as follows:

1. If there is no console MASK, the hardware-set flags (IOM/IMU/IMX) will determine the protocol.
2. If a MASK is used and specifies an IOM/IMU/IMX that is not the bootload IOM/IMU/IMX, the MASK specified protocol will be used.
3. If a MASK is used and specifies the bootload IOM/IMU/IMX, and if IOM protocol is specified (t=0) but the controller is an IMU/IMX (hardware flagged), then the IMU/IMX protocol will be used. However, if the bootload controller is an IOM but the MASK specifies IMU/IMX protocol (t=4), the MASK will be ignored and flagged as an error as follows:
 - a. If the erroneous MASK was applied to the Startup program before the transfer record to cards or tape, the Startup program will halt with a DIS identified in the instruction as 400020616203.
 - b. If the erroneous MASK was input via REPL (in response to BOOT SOURCE: AUTO OR REPL?), it will be identified in the following message:

ILLEGAL MASK CARD BELOW IGNORED
(mask card image)

Only one console message is issued if a Startup program error is encountered while bootloading the program from magnetic tape. This message is STATS/RESIDU = x...x ABORT BOOT FROM TAPE (where x...x = 12-digit (octal) magnetic tape error status). Correct the error and reinitiate the bootload by rewinding the tape, and pressing the INITIALIZE and BOOTLOAD push buttons on the DPS 8 system console, or by following the DPS 8000 IMX Service Processor procedures. (Refer to the GCOS 8 OS I/O Programming manual for a description of magnetic tape status codes.)

Several console messages are associated with Startup program errors encountered while bootloading the program from punched cards. These messages include the following:

<u>Error Message</u>	<u>Description</u>
STATS/RESIDU= x...x -FIX,EOM	A status error was detected. Correct the error and press the EOM push button on the system console to resume the bootload. (Refer to the <u>GCOS 8 OS I/O Programming manual</u> for a description of card reader status codes.)
ILLEGAL BIN. -FIX,EOM	The Startup program includes an invalid binary card. Remove the card and press the EOM push button on the system console to resume the bootload.
CRD CHECKSUM -FIX,EOM	The Startup program contains a statement with a checksum error. Correct the error and press the EOM push button on the system console to resume the bootload.
CARD CHECKSUM ERROR FIX TYPE GO OR TYPE DUMP	The Startup program contains a statement with a checksum error. Correct the error and enter GO, or enter DUMP and follow the standard dump procedure.
CRD SEQUENCE -FIX,EOM	A card is out of sequence in the Startup program. Resequence the cards and press the EOM push button on the system console to resume the bootload.
CARD SEQUENCE ERROR FIX TYPE GO OR TYPE DUMP	A card appeared out of sequence. Resequence the cards correctly and enter GO, or enter DUMP and follow the standard dump procedure.
MISSING/EXTRA CARDS -FIX,EOM	Either a required statement is missing from or an unrecognized statement is included in the Startup deck. Include the required statement or remove the invalid statement and press the EOM push button on the system console to resume the bootload.
ILLEGAL HOL. -FIX,EOM	The Startup program includes an invalid BCD card or an erroneous MASK correction statement. Correct the statement and press the EOM push button on the system console to resume the bootload.
ILLEGAL BCD CARD FIX TYPE GO OR TYPE DUMPGO	The Startup program includes an illegal BCD statement. Correct illegal statement and enter GO or enter DUMPGO.

<u>Error Message</u>	<u>Description</u>
DUPED MASKS -FIX,EOM	The Startup program includes duplicate MASK correction cards. Remove one of the cards and press the EOM push button on the system console to resume the bootload.
ILLEGAL OCT. -FIX,EOM	The Startup program includes a MASK correction card that contains non-octal data. Correct the card and press the EOM push button on the system console to resume the bootload.

RECOVERABLE STARTUP PROGRAM ERRORS

When the Startup program completes loading into memory, it begins processing Startup job stream contents. A variety of error conditions can be encountered during this processing phase. With few exceptions, it is possible for the operator to correct the error condition and continue the bootload.

Most of the errors are device-oriented and dependent upon the medium (i.e., magnetic tape or mass storage) on which the Startup job stream resides. The following defines several console messages that are commonly issued during this portion of the bootload. The messages are defined on a device basis. In each of the messages, i = I/O controller number, ccc = channel number, dd = device number, and s...s = status condition. (Refer to the GCOS 8 OS I/O Programming manual for a description of error statuses.)

The following console messages are issued when errors are encountered while processing a Startup job stream that resides on punched cards, which are being entered via the card reader:

<u>Error Message</u>	<u>Description</u>
*BOOTLOAD DEVICE ERROR, icccdd: s...s OPERATE WHEN READY	The card reader is not in a ready condition. The status of the device is identified via s...s. Correct the condition defined by s...s and resume input.
*BOOTLOAD DEVICE ERROR, icccdd: s...s BACKSPACE OPERATE WHEN READY	An error condition was encountered while reading the last card. This condition is defined by s...s. Clear any cards from the reader, backspace the reader, and resume input.
*CARD CHAR ILLEGAL, icccdd: BACKSPACE, OPERATE WHEN READY	The last card read contained an invalid character. Correct the card, clear any cards from the reader, backspace the reader, and resume input.

The following console messages are issued when errors are encountered while processing a mass storage device:

<u>Error Message</u>	<u>Description</u>
*DISK PACK ERROR, icccdd: s...s EOM WHEN READY	An error condition was encountered while reading from or writing to mass storage. This condition is defined by s...s. Correct the condition and press the EOM push button on the system console to resume the bootload.
*DISK PACK ERROR, icccdd: s...s FIX, TYPE GO OR STOP OR RLSE	An error condition was encountered while reading from or writing to mass storage. This condition is defined by s...s. Correct the condition and enter GO via the system console to resume the bootload or STOP to abort Startup. If STOP is entered, the messages *STARTUP ABORTED LOC mmmmmmm and *PICK ONE DUMP: ALL,NONE,NORMAL are issued. (Refer to "Memory Dump Following Startup Abort" in this section for the dump procedure.) Enter RLSE to release the device and continue the bootload. The device subsequently can be reassigned via the console entry ASGN icccdd.

The following console message is issued when errors are encountered while processing a magnetic tape device:

<u>Error Message</u>	<u>Description</u>
*TAPE ERROR, icccdd: s...s MAY BE RECOVERABLE FIX, TYPE GO OR STOP OR TYPE CONT TO CONTINUE	An error condition defined by s...s was encountered. The operator can (1) correct the condition and enter GO via the system console to resume the bootload; (2) enter STOP via the system console to abort Startup; or (3) enter CONT via the system console to release all magnetic tape handlers configured on this MPC subsystem and, subsequently, to resume the bootload. If STOP is entered, the messages *STARTUP ABORTED LOC mmmmmmm and *PICK ONE DUMP: ALL,NONE,NORMAL are issued. (Refer to "Memory Dump Following Startup Abort" in this section for the dump procedure.)

The following console messages are issued when printer-related errors are encountered while processing the Startup job stream. Refer to "Character Set And VFC Image Loading" in Section 2 for a description of the recovery procedure associated with each message.

- *PRINTER ERROR iccedd s...s FIX TYPE GO OR STOP OR RLSE
- *PRINTER ERROR iccedd s...s DEVICE RELEASED
- *TRAIN ID UNKNOWN TO STARTUP DEVICE RELEASED
- *POSITION PAPER IN PRINTER iccedd FIX TYPE GO OR STOP OR RLSE
- *MOUNTED TRAIN ID xxx REQUESTED TRAIN ID yyy DEVICE RELEASED

STARTUP PROGRAM ABORTS

If the Startup program aborts during the bootload procedure, a console message is issued defining the reason for the abort. Following issuance of this message, an informational message is issued defining the main memory location at which the abort occurred. A third message then is issued giving the operator several dump-related options. (Refer to "Memory Dump Following Startup Abort" in this section for a discussion of the dump procedure.)

After the operator has responded to the dump options and after any dump output has been printed, the question *BOOT SOURCE: AUTO OR REPL? is issued to the console. This question gives the operator the opportunity to reinitiate the bootload procedure. (Refer to "**BOOT SOURCE: AUTO OR REPL? Question" in this section for a discussion of the various restart options.)

The following console messages are commonly issued when Startup aborts.

<u>Error Message</u>	<u>Description</u>
*DISK PACK ERROR, iccedd: ACCESS BEYOND FILE fffff CANNOT PROCEED	An attempt was made to access file fffff beyond the file boundary. Startup aborts under this condition. This message is followed by the messages *STARTUP ABORTED LOC mmmmm and *PICK ONE DUMP: ALL,NONE,NORMAL. (Refer to "Memory Dump Following Startup Abort" for the dump procedure.) Increase the file size on the \$ FILDEF statement in the \$EDIT section and reinitiate the bootload. If this does not correct the error, contact the site's CSD representative.

<u>Error Message</u>	<u>Description</u>
*DISK PACK ERROR, icccdd: s...s CANNOT PROCEED	An error condition defined by s...s was encountered. Startup aborts under this condition. This message is followed by the messages *STARTUP ABORTED LOC mmmmm and *PICK ONE DUMP: ALL,NONE,NORMAL. (Refer to "Memory Dump Following Startup Abort" for the dump procedure.) Correct the condition defined by s...s and reinitiate the bootload.
*FATAL I/O ERROR ON icccdd: s...s	An error defined by s...s was encountered. Startup aborts under this condition.
*TAPE ERROR, icccdd: s...s CANNOT PROCEED	An error condition defined by s...s was encountered. Startup aborts under this condition.

OPERATOR-INITIATED STARTUP AND SYSTEM ABORTS

The console entries BOOT and DUMP immediately render the system inoperable. These entries can be made in response to any Startup question during the bootload sequence. The operator also can press the REQUEST push button on the console while the system is operational and, in response to the console message ???, can enter either BOOT or DUMP.

In addition to the BOOT and DUMP entries, the operator can create an error condition and abort the system or the bootload procedure by placing the EXECUTE SWITCHES/EXECUTE FAULT switch on the processor maintenance panel in the EXECUTE FAULT position. (Refer to "Dumps Initiated From A VIP Maintenance Terminal" in this section for a discussion of this procedure.)

The BOOT and DUMP entries often are useful when Startup program/job stream or bootload changes are desirable. For example, BOOT can be entered to reinitiate the bootload sequence if the operator wishes to change a response to a Startup question (e.g., to change a response of YES to the *INITIALIZE? question).

Each of the preceding techniques results in the system becoming inoperable, in the saving of system restart data, and in the question *BOOT SOURCE: AUTO OR REPL? being issued to the console. In addition, the DUMP entry and use of the EXECUTE SWITCHES/EXECUTE FAULT switch result in a series of dump-related questions and messages being issued to the console prior to the *BOOT SOURCE: AUTO OR REPL? question. (Refer to "Memory Dump Following Startup Abort" in this section for a discussion of the dump process.)

As a result of the DUMP entry, portions or all of the Startup job stream are printed on a printer that is not dedicated.

- o If the system was being bootloaded from a Startup job stream residing on punched cards or magnetic tape, only the statement images that were read prior to the malfunction are printed.
- o If the system was being bootloaded from a Startup job stream residing on mass storage (i.e., the AUTOLOAD file), the entire Startup job stream is printed.

The contents of the \$LOAD section are not printed in either of these cases. In addition, none of the Startup job stream is printed if the operator requests a dump or if Startup aborts while the \$LOAD section is being loaded into main memory.

*BOOT SOURCE AUTO OR REPL? QUESTION

The *BOOT SOURCE: AUTO OR REPL? question is issued when a system failure occurs or when the operator deliberately renders the system inoperable (e.g., to perform system maintenance). As previously indicated, the system becomes inoperable when the operator enters BOOT or DUMP via the system console.

The following responses can be made to this question:

AUTO - The Startup program residing on the AUTOLOAD file is to be used to effect the bootload. This response is not acceptable if the AUTOLOAD file was destroyed by the system failure or is incomplete. Under these circumstances, the message MUST REPLACE FROM s...s is issued (where s...s = Startup section that must be replaced). The *BOOT SOURCE message is reissued. The operator must respond REPL and enter the required section via the card reader. Once the AUTOLOAD file is modified, file content is used to bootload the system.

REPL - The operator can selectively replace one or more sections of the Startup job stream which exists on the AUTOLOAD file. The section(s) must be entered in their entirety via the card reader. Selective replacement of individual statements is not permitted. The entire section is written to the AUTOLOAD file to overlay (replace) the existing section.

Only the affected sections require loading. For example, if the \$INITIALIZE section is being replaced, the replacement section need not be preceded by the \$CONFIG section or followed by the \$EDIT and \$FILES sections.

If more than one section is being replaced, the sections must be loaded in their order of appearance in the Startup job stream. For example, if the \$CONFIG and \$INITIALIZE sections are being replaced, the \$INITIALIZE section cannot precede the \$CONFIG section.

If sections are nonsequential, the message *EXPECT s...s ccccc FIX TYPE GO is issued to the console (where s...s = name of the section that is out of sequence and ccccc = image of the last card read). To correct a sequencing problem, the operator can enter BOOT via the system console to render the system inoperable. After placing the sections in the proper sequence, the operator can enter REPL or GO to resume the bootstrap.

When the operator responds AUTO to the *BOOT SOURCE question, the deckfile cannot be rebuilt because the \$ READIN statement is excluded from the \$INITIALIZE section existing on the AUTOLOAD file. To rebuild the deckfile via the \$ READIN statement, the \$INITIALIZE section can be entered via the card reader following a REPL response to the *BOOT SOURCE question.

Modules included in the \$LOAD section are saved on the loadfile if a \$ LOADFIL statement is included in the Startup job stream. Under these circumstances, these modules are automatically loaded when the system is restarted. If a loadfile is to be replaced, the \$LOAD section can be entered via the card reader following a REPL response to the *BOOT SOURCE question.

PATCHING STARTUP PROGRAM

The Startup program can be patched via MASK correction statements. These statements are written to the AUTOLOAD file and are applied to the Startup program each time the system is bootloaded. A copy of the patched location's original content is saved on the file. If the applicable MASK statement is removed, the copy is applied on the next bootstrap to restore original data to the location.

MASK statements must immediately precede the transfer statement which is the last statement in the Startup program. (Exceptions to this are (1) the MASK statement that defines the input/output controller and channel on which the system console is configured and (2) MASK statements that are to be applied to the Bootloader program. These statements immediately follow the Bootloader program. Refer to "Bootloader Program Errors" in this section for a discussion of this statement.)

Modification, deletion, or addition of one or more MASK statements requires that all applicable MASK statements be loaded via the card reader during the bootstrap. The operator can respond using one of the following methods:

1. Respond REPL to the question:

*BOOT SOURCE: AUTO OR REPL?

2. At the end of the MASK section, insert:

***EOF

instead of a TRANSFER statement.

The format of the MASK correction statement follows. Fields beginning in columns 1, 8, and 13 must be completed. If they are not, bootloading halts and the console message ILLEGAL OCT. -FIX,EOM is issued. Correct the statement and press the EOM push button on the system console to resume the bootload.

		1	2	7
1	8	3	6	3

aaaaaa MASK dddddddddddd cccccc .MINIT

where:

aaaaaa - Absolute address (octal) of the location to be patched in the Startup program. This address must contain six digits (i.e., leading zeros must be included if the address is fewer than six digits).

d...d - Patch correction data (octal) to be applied to location aaaaaa. This data must contain 12 digits (i.e., leading zeros must be included if the data is fewer than 12 digits).

ccccc - Patch-related comments optionally can be included in columns 26-72.

.MINIT - An optional Startup program identifier.

DEBUGGING AIDS

Three techniques can be employed to generate main memory and mass storage dumps during System Startup. These include an operator-initiated dump and use of \$ SNAP and \$ DUMP statements in the Startup job stream.

Memory Dump Following Startup Abort

There are several conditions under which a memory dump can be effected and which subsequently require the system to be bootloaded. Among these are the occurrence of an abort during System Startup, an operator-initiated malfunction via the console entry DUMP, occurrence of an unrecoverable system error, and setting of a switch on the processor maintenance panel.

Described below is the procedure to obtain a dump when the Startup program aborts during bootloading and how master mode dumps can be initiated from the processor maintenance panel. Other dump procedures are described in the GCOS 8 OS System Operating Techniques manual.

INITIATING MEMORY DUMP

When an abort occurs during System Startup, two messages are issued. One message defines the main memory location (mmmmmm) at which the abort occurred. The second message allows the operator to dump main memory, to dump only buffer areas and the communication region, or to forego any dump.

All dump output is directed to an undedicated printer (i.e., dumping to magnetic tape or to mass storage is not available during System Startup). If printer PR1 is available, the dump is directed to that device. If PR1 is not available, the dump is directed to any available undedicated printer.

*STARTUP ABORTED LOC mmmmmmm

*PICK ONE DUMP: ALL,NONE,NORMAL

The following responses can be made via the system console:

NORMAL - Dump only Startup buffer areas and all of the communication region. Under most conditions (i.e., except those cited with the ALL response), this response provides adequate debugging information. The date and time of the dump are printed in the dump banner and in a console message.

ALL - Dump all of main memory. This response is necessary only when illegal procedure, memory, or parity faults are encountered. The date and time of the dump are printed in the dump banner.

NONE - Do not take a dump.

If the Startup program aborts before the \$CONFIG section of the Startup job stream has been processed, the printer to which the dump is to be directed (in response to an entry of NORMAL or ALL) is unknown to Startup (i.e., the printer is defined in the \$CONFIG section). The console message:

*NEED PRINTER PORT,Iyy,CHAN,MPC/CPI,TRAIN(PICCCS [TTTT])

is issued. The operator must identify the printer via a console entry in the format picccstttt,

where:

p - input/output controller port number

i - input/output controller number

ccc - Channel number

s - Printer type:

M - Printer is connected to an MPC

C - Printer is not connected to an MPC

tttt - Character set identification number. Startup recognizes only the following character set identification numbers:

764 - Standard BCD character set for PRU1200/1600 printers

1130 - Standard ASCII character set PRU1200/1600 printers

If the printer is connected to an MPC that was not bootloaded, a dump cannot be taken. An informational message is issued to the console indicating a device power off status. The operator can load the firmware from punched cards, magnetic tape, or mass storage. (Refer to "MPC Bootloading (DPS 8 And DPS 8000 Only)" in Section 2 for additional information.)

DUMPS INITIATED FROM A VIP MAINTENANCE TERMINAL (DPS 8 ONLY)

Master mode dumps can be initiated from a VIP maintenance terminal using the following procedure:

1. Set the Maintenance Panel mode switch to TEST, thus enabling the Processor Maintenance Panel.
2. Press the RESET CONSOLE push button on the system console to reset the console (if necessary).
3. At the maintenance VIP terminal, enter EX4 <RETURN> to execute the fault.

If the preceding procedure does not generate the dump, perform the following:

1. Enter ST CU, ST VU <RETURN> to stop the processor (i.e., Control Unit and Virtual Unit).
2. Enter TXA 002000 <RETURN> to enter the transfer address (i.e., the address referenced by module .CRSET from which the dump will execute).
3. Enter GO <RETURN> to execute the dump.

NATIVE STAND-ALONE DUMP PROGRAMS

There are three Native Stand-Alone (NSA) dump programs that can be used to obtain a physical memory dump when all normal methods of obtaining a system dump have been unsuccessful. NSAR is used for the DPS 8000, NSA8 for the DPS 88, and NSAD for the DPS 8. (No corresponding program is provided for the DPS 90 because the necessary functions are provided by MSOS.) These programs write the contents of the physical memory connected to their respective systems to a magnetic tape. The tape should then be processed by the DCPY (Dump CoPY) program described below.

For NSAD (DPS 8) this tape contains the binary image of the program (currently two binary card image records), followed by a two-record set for each 4K (4096) words of physical memory.

For NSA8 (DPS 88) this tape contains the binary image of the program (currently two binary card image records), followed by a 4K record for each 4K (4096) words of physical memory.

For NSAR (DPS 8000) this tape contains the binary image of the program (currently four binary card image records), followed by a two-record set for each 4K (4096) words of physical memory.

The first record of each set contains information used by the DCPY program to determine the physical memory address of the data in the second record of the set. If the NSA program encounters a tape write error, it retries the current write sequence until the write is successful or until the end of the magnetic tape has been reached. If the NSA program succeeds in writing all of the memory to the magnetic tape before reaching the end-of-tape marker, it writes an end-of-file (EOF) mark on the tape prior to issuing a rewind and standby (REWS) command. If the end of the tape is reached prior to reaching the end of memory, the NSA program writes an EOF mark, but does not issue any rewind command; the system operator must manually rewind the tape before resuming normal system operations.

The NSA programs can be booted into memory from either a non-FIPS or FIPS tape controller. If a non-FIPS tape controller is used, a 9-track tape written at 1600 BPI is recommended. (Note: A 7-track tape written at 800 BPI can be used; however, a significantly smaller amount of physical memory will be written to the tape.) For FIPS tape controllers, a 9-track tape written at either 1600 BPI or 6250 BPI can be used.

The NSA programs can write more than 8 MW (megawords) of physical memory to the dump tape at 1600 BPI. This amount of memory should be sufficient to allow a systems techniques person to determine the cause of the system failure.

Creating Bootable NSA Tapes

After the GCOS 8 system is operational, the following JCL can be used to create a bootable dump tape containing the appropriate NSA program.

1 8 1
 6

```
$ IDENT site option
$ FILEDIT SOURCE,NOBJECT
$ LIMITS 100,48K,,5000
$ TAPE M*,X1D,,####,,VS-PRIMARY
$ PRMFL *7,W,S,source program file
$ DATA *C,,COPY
$ LIST xxxx,COMDK
$ ENEDIT
$ ENDCOPY
$ GMAP DECK,NSAF,ON5
$ LOWLOAD
$ PRMFL G*,R,S,source program file
$ FILE C*,X1S,25L
$ PROGRAM SCED
$ FILE IN,X1D
$ FILE OT,X2S,25L
$ DATA A*,,COPY
$ CHANGE 1,1            See NOTE
$ CHANGE 5,5            See NOTE
$ ENDCOPY
$ PROGRAM WSBT
$ FILE I1,X2D
$ TAPE9 OT,X3D,,,,RAWDUMP,,DEN16
$ ENDJOB
```

where xxxx on the \$ LIST statement is

```
NSAR for the DPS 8000
NSA8 for the DPS 88
NSAD for the DPS 8
```

NOTE: For NSAR, the \$ CHANGE statements should be

```
$ CHANGE 1,1
$ CHANGE 7,7
```

Dumps Initiated At The DPS 8 MCA

The following procedure can be used at the DPS 8 MCA (Maintenance Computer Adapter) to boot the NSAD program into DPS 8 memory.

1. Enter <Escape>#nn where nn is the MCA number (e.g., 01). This allows the next line of input to be processed by the MCA, and not by GCOS 8. The MCA will display the 'greater than' character ('>') to prompt for input.
2. The NSAD boot/dump tape should be mounted on the tape handler selected by the device switches of the Tape MPC. The Tape MPC does not allow writes to be issued to the dump tape if the RSO signal has been received.

3. Enter the IBOOT command to reinitialize the system hardware. The reinitialization of the hardware takes several minutes. When it completes, the two boot records from the NSAD boot/dump tape will be booted into memory and NSAD will write 4 MW (megawords) of memory per minute to the boot/dump tape. The configuration file used must have the RSO REQ variant set to N for the tape channel used to boot the NSAD dump tape.

Dumps Initiated At The IOM Maintenance Panel (DPS 8 Only)

The following procedure can be used at the IOM maintenance panel to boot the NSAD program into DPS 8 memory.

1. Press the SYSTEM INITIALIZE button on the IOM maintenance panel.
2. Wait for the console to become ready.
3. The NSAD boot/dump tape should be mounted on the tape handler selected by the device switches of the Tape MPC. The Tape MPC does not allow writes to be issued to the dump tape if the RSO signal has been received.
4. Push the RESET/BRANCH button on the Tape MPC being used. Ensure that the HEX dial is set 480 first.
5. Push the BOOT button on the IOM maintenance panel.
6. The two boot records from the NSAD boot/dump tape will be booted into memory and NSAD will write 4 MW (megawords) of memory per minute to the boot/dump tape.

Dumps Initiated At The Console (DPS 8 Only)

The following procedure can be used at the DPS 8 console to boot the NSAD program into DPS 8 memory.

1. Enter <Escape>I to initialize the hardware.
2. Wait for the console to become ready.
3. The NSAD boot/dump tape should be mounted on the tape handler selected by the device switches of the Tape MPC. The Tape MPC does not allow writes to be issued to the dump tape if the RSO signal has been received.
4. Push the RESET/BRANCH button on the Tape MPC being used. Ensure that the HEX dial is set 480 first.
5. Enter <Escape>B to boot the hardware.
6. The two boot records from the NSAD boot/dump tape will be booted into memory and NSAD will write 4 MW (megawords) of memory per minute to the boot/dump tape.

Dumps Initiated Via DPS 8000 Service Processor

In order to boot the NSAR program into DPS 8000 memory, the system operator must be able to communicate with the service processor attached to the system. At the service processor the operator should enter

```
<Escape>  
#SP
```

to inform the service processor that the next input is to be processed by it and not GCOS 8. The service processor responds with a greater than ('>') character to prompt for input.

Sample Console Dialog For DPS 8000 Dump

Figure 3-1 shows a console log from a tandem DPS 8000 system. The system operator used the RLOAD command to inform the service processor that both IMUs configured were to be reloaded. IMU #0 was loaded before IMU #1. Approximately three minutes later, the operator entered the IBOOT command to boot the NSAR boot/dump tape into memory. Approximately two minutes after the IBOOT command was entered, the NSA tape moved off the load point. NSAR writes approximately 4 MW (megawords) of memory per minute to the boot/dump tape.

The configuration file used to boot the NSAR boot/dump tape must have the RSO REQ variant set to N in order for the NSAR program to function correctly. NSAR writes to the boot tape after all four of the binary card images have been loaded into memory and placed in execution. The tape MPC does not allow writes to be issued to the dump tape if the RSO signal is sent to the tape MPC.

The configuration file used in Figure 3-1 could be listed via the LISTCFIG command. To do this, the operator enters the pound sign character '#' followed by the characters '00'. The MCA responds with a greater than character '>'. The operator may now enter the LISTCFIG command to display the current configuration file.

```
#50>MCA 01 RLOAD IMU .Cfilename
#50>MCA 00 RLOAD IMU .Cfilename
...
# CONSOLE SELF TEST SUCCESSFUL #
# IPC CONSOLE READY (F/W TAB 003) #

# MULTIDROP ENABLED #

...

#00<STATE status
#00< ...
#00< ...
#00<Please set new date & time with the command:
#00<TIME mmddy,hhmmss
...
#SP>IBOOT_

...

SCU 0 CONFIGURATION LOADED
...
SCU 1 CONFIGURATION LOADED
...
CPU 0 LOADED CONFIGURATION
...
CPU 1 LOADED CONFIGURATION
...
<<0000>> - LOAD APPLICATION - NORMAL TERMINATION
...
<<0000>> BOOT SENT - BOOT NORMAL TERMINATION

<<0000>> INIT - NORMAL TERMINATION

...

#00<MSG MCA SYSTEM BOOT IN PROGRESS: CH 008 DEV 00
...
```

Figure 3-1. Sample DPS 8000 Console Log For Dump By NSAR

DCPY Description

The DCPY program copies dump tapes created by NSAR, NSAD, NSA8, or SMAS to a user specified disk dump file. The user must create the dump file as a random file with an initial size of 3300 llinks per megaword of physical memory prior to running DCPY. For example, the dump file size necessary for a 4 megaword system is $4 * 3300$ llinks, or 13,200 llinks. This dump file can then be analyzed by PERSUE 8 or printed by .MMDMP. The dump file will not contain any of the following data:

- o Cache Memory
- o Associative Memory
- o Reserved Memory
- o EPILOG data -- the BCD card images from the Startup job stream
- o Summary data for each process in execution at the time of the system hang

SYSOUT report code 00 contains a list of seek addresses corresponding to each tape record processed. When DCPY terminates, it produces a few lines of summary data indicating how many tape reads and disk writes were done. Also, a list of tape read errors for the NSAD/NSAR dump tapes is given.

The following options may be specified with DCPY on the \$ EXECUTE statement.

STARTUP

This option indicates that the dump tape was produced when the GCOS 8 system was not fully operational. DCPY will copy the first megaword of physical memory to the dump file.

NEWSAD

This option must be used to process the dump tapes created by the NSAD or NSAR programs. DCPY reads data from the dump tape in two-record sets.

The following options are intended to be used for internal debugging of the DCPY program.

ZDEBUG

This option allows the use of the master-mode debugger (.MDEBG) while DCPY is executing.

TESTn

This option allows simulation of a limited amount of program flow without requiring an NSA program dump tape. The value of 'n' can be from 0 to 3:

- 0 - No testing
- 1 - Simulate dump tape created by SMAS
- 2 - Simulate dump tape created by NSAD
- 3 - Simulate dump tape created by NSA8

The following JCL illustrates the use of DCPY. The file USER/DCPY.OBJ contains an object deck produced by assembling the source for the DCPY program, which is packaged on the M* source tapes, plus any alters contained on the latest MRT or the PASS database on System T in Phoenix. The file USER/DCPYFILE must be created prior to running the JCL.

1	8	1
\$	SNUMB	site option
\$	IDENT	site option
\$	LOWLOAD	
\$	SELECT	USER/DCPY.OBJ
\$	EXECUTE	DUMP,NEWSAD
\$	LIMITS	9,36K,,20K
\$	TAPE9	IN,T1D,,#####,,NSAD,,DEN16
\$	PRMFL	OT,W,R,USER/DCPYFILE
\$	ENDJOB	

After DCPY has written the contents of the dump tape to the specified file, analysis can begin using either PERSUE 8 or the system dump analyzer .MMDMP. To access the dump file from .MMDMP, use a \$ PRMFL statement similar to:

```
$ PRMFL IN,R,R,USER/DCPYFILE
```

Creating The DCPY Object Deck

The following JCL can be used to obtain the source file (USER/DCPY.SRC) and create an object file (USER/DCPY.OBJ) from the M* source library tapes. Alters from the latest MRT or the PASS database on System T in Phoenix can be applied using the procedure documented in the SIB.

1	8	1
\$	SNUMB	site option
\$	IDENT	site option
\$	FILEDIT	SOURCE,NOBJECT
\$	LIMITS	100,48K,,5000
\$	TAPE	M*,X1D,,#####,,VS-PRIMARY
\$	PRMFL	*7,W,S,USER/DCPY.SRC
\$	DATA	C*,COPY
\$	LIST	DCPY,COMDK
\$	ENDEDIT	
\$	ENDCOPY	
\$	GMAP	DECK,NSAF,ON5
\$	PRMFL	G*,R,S,USER/DCPY.SRC
\$	PRMFL	C*,W,S,USER/DCPY.OBJ
\$	ENDJOB	

UTILIZATION OF THE DIAGNOSTIC PROCESSOR UNIT

With the assistance of a Honeywell Bull Customer Services Division (CSD) representative, the Diagnostic Processor Unit (DPU) can be used for the following purposes:

- o System maintenance, when executing instruction (KWIK) tests on isolated procedures, or on IOMs and SCUs, once they are physically deallocated (via the RLSEP console verb) from the system.
- o Connecting to the system console for online/offline system testing and development.
- o Connecting to an individual line on a system, which allows for maintenance of normal time sharing connections.
- o Diagnosing DATANET 8s from a local or remote site.

To initiate a dump from the DPU, the site should contact the Honeywell Bull Response Center in Phoenix.

DUMP BANNER

A one-line banner is common to several types of Startup-generated printer output: Startup dumps, file dumps, system maps, and file maps. The format of this banner is as follows.

```
GCOS 8 p...p (aaaaaa) DATE bbbbbb TIME hh.ttt SYSTEM ID-nnnnnn SYSTEM NO.-0
```

where:

p...p - FILE MAP, identifies a map of the internal Startup file catalog.

SYSTEM MAP, identifies a map of the GCOS file structure.

FILE DUMP, identifies a dump of Startup-initiated files and which is initiated via the \$ DUMP statement.

STARTUP DUMP, identifies a dump that was initiated via a console entry of NORMAL or ALL in response to the console message *PICK ONE DUMP: ALL,NONE,NORMAL.

aaaaaa - Date from the TTL statement in the Startup assembly job stream. The format of this date is yymmdd.

bbbbbb - Date of this output. The format of this date is mmdyy.

hh.ttt - Time of this output (where hh = hour 00-23 and ttt = thousandths of one hour).

nnnnnn - Identification of this system. This identification is specified on the \$ SYID statement in the \$CONFIG section.

STARTUP SNAPSHOT DUMP

A Startup-initiated snapshot dump is automatically directed to an undedicated printer whenever Startup aborts as the result of an error in the Startup file system. Dump content includes:

- o Processor register contents at the time of the abort, occupying the three lines immediately following the banner.
- o Content of the Startup file system buffers residing in main memory follow the processor register information.

After the snapshot dump is printed, the console message:

```
*PICK ONE DUMP: ALL,NONE,NORMAL
```

is issued. If an illegal procedure fault caused Startup to abort and if the operator responds NORMAL or ALL to the console message, history register or transfer register content is printed following the snapshot dump.

Dump Via \$ SNAP Statement

The \$ SNAP statement can be used to generate a dump of one or more locations in main memory. The dump is directed to an undedicated printer.

The \$ SNAP statement is used frequently to monitor main memory that is affected by a module in the \$LOAD section of the Startup job stream.

The \$ SNAP statement can be included in any section of the Startup job stream. The format for this statement is:

```
1      8      1
      _____
$      SNAP   aaaa,nnnn
```

where:

aaaa - Main memory address (octal) at which the dump is to begin.

nnnn - Number of words of main memory to be dumped, beginning at location aaaa.

The following example indicates that the contents of 64 words of main memory are to be dumped beginning at location 2200 (octal).

```
1      8      1
      _____
$      SNAP   2200,64
```

Dump Via \$ DUMP Statement

The \$ DUMP statement can be used to dump the content of a specific file or of one or more contiguous llinks/links of a device. Once the debugging procedure is complete, it is recommended that the \$ DUMP statement be removed from the Startup job stream to avoid dumping the same locations on a subsequent bootload.

A \$ DUMP statement can be included in the \$INITIALIZE, \$EDIT, \$FILES, or \$PATCH sections of the Startup job stream. The statement is invalid if it is included in the \$CONFIG or \$LOAD sections. The console message:

```
*ILLEGAL xxxxxx CARD BELOW IGNORED
```

(where xxxxxx = \$CONFIG or \$LOAD) is issued. This message is followed by the \$ DUMP statement image.

Because processing of the \$INITIALIZE and \$EDIT sections is dependent upon a positive response by the operator to the *INITIALIZE? and *EDIT? questions during the bootload, it is recommended that the \$ DUMP statement(s) be included in the \$FILES section, which is always processed.

Two \$ DUMP statement formats can be used. In each case, dumping of noncontiguous areas on a device or within a file requires multiple \$ DUMP statements.

DUMP LLINKS/LINKS

The following \$ DUMP statement format allows dumping of one or more contiguous llinks or links from a device:

```
1      8      1  
1      8      6  
-----  
$      DUMP    ddd,{LLINK}{-}bbb{,}xxx  
                {LINK }{/}  {/}
```

where:

ddd - Logical device name of the mass storage device.

LLINK - One or more llinks (320 words) are to be dumped.

LINK - One or more links (12 llinks) are to be dumped.

bbb - Number of the llink or link at which dumping is to begin. If bbb is preceded by a minus sign (-) the number is decimal; if preceded by a slash (/) the number is octal.

xxx - Number of contiguous llinks or links to be dumped, beginning with llink/link number bbb. If xxx is preceded by a comma (,) the number is decimal; if preceded by a slash (/) the number is octal.

The following example indicates that 18 (decimal) contiguous llinks on mass storage device DP4 are to be dumped. The dump is to begin at llink 49 decimal.

```
      1
1     8     6
-----
$     DUMP  DP4,LLINK-49,18
```

The following example indicates that 22 (octal) contiguous llinks on mass storage device DP4 are to be dumped. The dump is to begin at llink 61 (octal).

```
      1
1     8     6
-----
$     DUMP  DP4,LLINK/61/22
```

DUMP FILE CONTENT

The following \$ DUMP statement format allows a Startup-created file to be dumped:

```
      1
1     8     6
-----
$     DUMP  ddd,fffff
```

where:

ddd - Logical device name of the mass storage device on which file fffff resides. This is an optional field.

fffff - Name of the Startup-created file to be dumped. If the System Master Catalog (SMC) is to be dumped, enter SMC. If the duplicate SMC is to be dumped, enter SMCDUP.

The following example indicates that the SSFILE file, which resides on device DP3, is to be dumped:

```
      1
1     8     6
-----
$     DUMP  DP3,SSFILE
```

PROCESSOR RELEASE AND ASSIGNMENT AT STARTUP

All physical processor numbers must be defined either by the \$ MCT or the \$ CIU statement in the \$CONFIG section of the Startup job stream. PROC NUMBER switches on each processor's configuration panel must reflect the same number as specified on the \$ MCT or the \$ CIU statement.

Because any processor can handle interrupts, there are no restrictions on the release of processors. Any processor can be released during the bootload sequence if the processor does not respond to a Startup query during the rollcall function. As a result, the console message:

*PROCESSOR ON PORT p DOESN'T ANSWER CONNECT, YES TO CONTINUE

is issued (where p = number of the SCU port to which the processor is connected). The operator can respond with YES or NO:

YES - Release the processor and continue the bootload. The released processor is identified via the console message *PROCESSOR n RELEASED (where n = physical processor number). The processor subsequently can be restored (assigned) to the system via the console entry ASGNP n while the system is operational.

NO - Abort the Startup program. Correct the problem and reinitiate the bootload.

This question can be answered via the \$ ANSWER PROCERROR/YES statement. The processor subsequently can be restored to the system via the ASGNP console entry. The question cannot be answered PROCERROR/NO. (Refer to "\$CONFIG Section" in Section 5 for a complete description of the \$ ANSWER statement.)

An additional System Startup technique affecting the status of any processor is the /OFF option on the \$ MCT statement. This option permits definition of a processor that is not currently assigned, but which may be assigned (activated) in the future.

SECTION 4

INTEGRATED SOFTWARE

Integrated Software provides generalized services to the GCOS 8 Operating System and to a site's application programs. It consists of shared domains as well as storage space for buffers and tables.

While the content of the Integrated Software package varies depending on the site's system configuration and selected options, the following domains constitute Integrated Software (the related module name is in parentheses):

- o After Journal Management Domain (.MAJAC, .MAJIO)
- o Automatic Workstation Enable Domain (.MWCMI, .MWCMS)
- o Before Journal Management Domain (.MBJDO)
- o Buffer Management Domain (.MBMGT)
- o Checkpoint Journal Manager Domain (.MCKJM)
- o Concurrency Control Domain (.MCC00)
- o Data Base Procedure Domain (.MDZPC)
- o Data Management Control System Domain (.MDMCS)
- o Global Data Management Domain (.MDMGL)
- o Historical Log Domain (.MHLOG)
- o Integrated Software Termination Domain (.MUT01)
- o Integrated Software Trace Domain (.MUTTR)
- o Integrated Software Trace and Load Map Display Domain (.MUTTD)
- o Integrated Software Output Report Domain (.MUTOR)
- o Integrity Management Domain (.MIM00)
- o Protected File I/O Domain (.MPFIO)
- o Session Control Domain (.MMC01)
- o Shared Data Base Control System Domain (.MDBCS)
- o Shared Fault Handler Domain (.MUTFH)
- o TP8 Command Executive Domain (.MCX00)
- o Tenant Management Domain (.MTM00)
- o Transaction Queuer Support Domain (.MTQ00)
- o Workstation Management Domain (.MWMAN)

This section discusses:

1. The procedure to load Integrated Software into real memory for execution
2. Various site-modifiable parameters for Integrated Software
3. Real memory requirements for Integrated Software
4. Syntax and usage of Integrated Software Shared Domain Loader (SDL) directives

INSTALLING INTEGRATED SOFTWARE

Integrated Software is delivered to a user site on the first reel of the stacked save tape under the SYS SOFTWARE file structure. The save tape content must be installed (restored) and loaded into memory for execution under the snumb SHARD immediately after the system is bootloaded. Refer to the Software Installation Bulletin for this Software Release for instructions to install Integrated Software.

LOADING INTEGRATED SOFTWARE FOR EXECUTION

Integrated Software is loaded into memory by the privileged slave program SHARD, which is spawned during System Startup. No special Startup procedure is required. The following message is issued to the system console to indicate that Integrated Software has been successfully loaded.

```
*S#SHARD ***** SI4.2 INTEGRATED SOFTWARE LOADED SUCCESSFULLY *****
```

If errors were found, the following message is issued to the system console:

```
*S#SHARD ***** SI4.2 INTEGRATED SOFTWARE STATUS *****
*S#SHARD SHARED NAME= SYS      LOADED SUCCESSFULLY
*S#SHARD # OF FATAL ERRORS - ff  # OF NON-FATAL ERRORS - nn
*S#SHARD # OF BUFFER POOL COMMANDS - mm  # OF B-F ERRORS - bb
*S#SHARD MAXIMUM WIRED PAGES ALLOWED(dddd) - ccc
*S#SHARD BACKDOOR LOAD-MAP - YES
```

where:

- ff - Number of fatal errors.
- nn - Number of non-fatal errors. The site should determine whether or not to continue processing after reviewing all of these errors.
- mm - Number of buffer pool commands.
- bb - Number of errors in the buffer pool commands.
- ccc - Maximum number of pages that S#SHARD can wire. Default is 511. The site can change this via ASSIGN_SITE_PARAMETER -SET_MAX_WIRED_PAGES.

dddd - DEFAULT or REQUESTED.

REQUESTED will be used if ASSIGN SITE PARAMETER -SET_MAX_WIRED_PAGES is specified. Otherwise, DEFAULT will be used.

Integrated Software must be executing before any dependent processes can execute. The software remains in execution as long as GCOS 8 software is active or until Integrated Software aborts. In addition, Integrated Software automatically restarts each time GCOS 8 software is rebooted.

While the Shared Domain Loader (SDLD) automatically loads the Integrated Software program into execution, a spawn file can also call the program into execution (the spawn file must be named SHARD and must be stored under OPNSUTIL). Several seconds may elapse from the time of the *SRT message before the software is actually ready for execution. The issuance of the "SI4.2 INTEGRATED SOFTWARE LOADED SUCCESSFULLY" information message indicates that Integrated Software is available for reference.

Only one version of Integrated Software can be active at any single time. Consequently, special attention must be given to scheduling so that all system users (i.e., development, production, and test organizations) are aware of which version is active.

Integrated Software is loaded and placed in execution by inclusion of the following SPAWN directive in the job stream supplied to the System Spawn Facility (SYSPN) program:

```
SPAWN -SNUMB SHARD -PATHNAME SYS_SOFTWARE/yyyy/JCL/SHARD.SPWN
```

where: yyyy is the Software Release identifier (i.e., 3000)

SYSPN is automatically spawned during the system boot process. Refer to the GCOS 8 OS System Operating Techniques manual for further details.

To load Integrated Software from a spawn file:

1. Edit a \$ SELECTD SYS_SOFTWARE/yyyy/JCL/SHARD.SPWN statement onto the OPNSUTIL/SHARD file (where yyyy = the Software Release identifier).
2. Enter SPAWN SHARD via the system console.

The following job stream is called into execution from the SHARD.SPWN file:

1	8	6	NOTES
\$	IDENT	nnnnn	1
\$	RUN	RUFILE=SYSTEM,RUNAME=.VSDLD,OPTION=DUMP,SSDUMP	2
\$	PRIVITY		3
\$	LIMITS	,,,,5K	
\$	RESOURC	VSPACE=3800K,RSPACE=100K	4
\$	DATA	BP,,COPY	5
CREATE BUFFER POOL STD..POOL &			
-BUFFER_SIZE 2048 &			
-MIN_NUMBER_BUFFERS 0 &			
-MAX_NUMBER_BUFFERS 100 &			
-BI_SUPPRESSION_ENTRIES 0 &			
-TYPE PUBLIC &			
-POOL_ALLOCATION IMMEDIATE			
--- END STANDARD BP ALLOCATION ---			
\$	ENDCOPY		
\$	DATA	I*	
START DEFAULTS			
-- NOTE - THESE ARE THE SLDL DEFAULT DIRECTIVES NEEDED TO			
-- LOAD INTEGRATED-SOFTWARE			
--			
ALLOCATE	-LIBRARY Q.	-PATHNAME SYS SOFTWARE/<sti>/SYS -OPTIONAL	6, 10
-- **** THE 'Q.' LIBRARY IS THE PRIMARY SEARCH FILE ****			
ALLOCATE	-LIBRARY .Q	-PATHNAME USER-BACKUP/LIBRARY -OPTIONAL	7
-- **** THE '.Q' LIBRARY IS THE SECONDARY SEARCH FILE ****			
.			
.		(See NOTES 8 through 10)	
.			
END DEFAULTS			
ALLOCATE	-DIRECTIVES	-PATHNAME SYS SOFTWARE/yyyy/DATA/SHARD.CHGS	10

NOTES:

1. Site-defined content (nnnnn) for the \$ IDENT statement; replaces the default user identification provided in OPNSUTIL. If this statement is not included, system software provides a default \$ IDENT statement.
2. This \$ RUN statement points to a run unit that loads Integrated Software into memory for execution.
3. Required to execute this process.
4. Specifies the defaults for allocation of virtual memory space (VSPACE) and for initial allocation of real memory (RSPACE) for Integrated Software. These values can be increased to meet site requirements.
5. The \$ DATA BP file contains SLDL directives to explicitly define a buffer pool (i.e., CREATE_BUFFER_POOL and ASSIGN_PRIVATE_BP_FILE directives). An ALLOCATE -BPDIRECTIVES directive may be used instead of the \$ DATA BP file.

6. Identifies the primary search library (Q.) from which Integrated Software domains are loaded.
7. Identifies the secondary search library (.Q) from which Integrated Software domains are loaded if the primary search library is unavailable. To use, remove the initial characters ("-- ") and supply a pathname.
8. The following Integrated Software domains reside on the SHARD.SPWN file:

```

INCLUDE DOMAIN .MUTTR -LIBRARY Q. -REQUIRED Trace
INCLUDE DOMAIN .MUTFH -LIBRARY Q. -REQUIRED Shared Fault Handler
INCLUDE DOMAIN .MUTOR -LIBRARY Q. -REQUIRED Output Report
INCLUDE DOMAIN .MUTTD -LIBRARY Q. -REQUIRED Trace Display
INCLUDE DOMAIN .MUTO1 -LIBRARY Q. -REQUIRED Termination Wrapup
INCLUDE DOMAIN .MPFIO -LIBRARY Q. -REQUIRED Protected File I/O
INCLUDE DOMAIN .MBJDO -LIBRARY Q. -REQUIRED Before Journal Management
INCLUDE DOMAIN .MIMOO -LIBRARY Q. -REQUIRED Integrity Management
INCLUDE DOMAIN .MCCOO -LIBRARY Q. -REQUIRED Concurrency Control
INCLUDE DOMAIN .MHLOG -LIBRARY Q. -REQUIRED Historical Log
INCLUDE DOMAIN .MCKJM -LIBRARY Q. -REQUIRED Checkpoint Journal Management
INCLUDE DOMAIN .MBMGT -LIBRARY Q. -REQUIRED Buffer Management
INCLUDE DOMAIN .MDMGL -LIBRARY Q. -REQUIRED Global Data Management
INCLUDE DOMAIN .MAJAC -LIBRARY Q. -REQUIRED After Journal Access and
Reconstruction
INCLUDE DOMAIN .MAJIO -LIBRARY Q. -REQUIRED After Journal Shared I/O
Support
INCLUDE DOMAIN .MDMCS -LIBRARY Q. -REQUIRED Data Management Control
System
INCLUDE DOMAIN .MDZPC -LIBRARY Q. -REQUIRED Data Base Procedures
INCLUDE DOMAIN .MMC01 -LIBRARY Q. -REQUIRED Session Control
INCLUDE DOMAIN .MWCMI -LIBRARY Q. -REQUIRED Automatic Enable
INCLUDE DOMAIN .MTMOO -LIBRARY Q. -REQUIRED Tenant Management
INCLUDE DOMAIN .MWMAN -LIBRARY Q. -REQUIRED Workstation Management

```

9. The following default parameters are assembled in UTOR for Integrated Software and reside on the SHARD.SPWN file. For more information on these default parameters, refer to "Integrated Software Default Parameter Modification", later in this section, and to the GCOS 8 OS Protected Files Administrator's Guide and the GCOS 8 OS Integrity Control manual.

```

ASSIGN_SITE_PARAMETER -AJ_USERID USERID$PASSWD
ASSIGN_SITE_PARAMETER -AJ_SAVE RESTORE ** FILE SYS SOFTWARE/<sti>/SYS
(See NOTE 10)
ASSIGN_SITE_PARAMETER -MAX_NUMBER JOURNALS 20
ASSIGN_SITE_PARAMETER -JOURNAL_DIRECTORY_CISIZE 2
ASSIGN_SITE_PARAMETER -AJ_NFIELDS 8
ASSIGN_SITE_PARAMETER -AJ_IDENT "ACCOUNT,GUESS-WHO"
ASSIGN_SITE_PARAMETER -BJ_CISIZE 2816
ASSIGN_SITE_PARAMETER -BJ_MIN_CI 1000
ASSIGN_SITE_PARAMETER -BJ_MAX_CI 0 -- ZERO MEANS UNLIMITED
ASSIGN_SITE_PARAMETER -BJ_HEADER_WRITE_PERIOD 30
ASSIGN_SITE_PARAMETER -RS_DUP NO
ASSIGN_SITE_PARAMETER -RS_DEVICE 000000 (See NOTE 10)

```

ASSIGN_SITE_PARAMETER -RS DUP DEVICE 000000 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -CC PROCESS PAGES 25900
 ASSIGN_SITE_PARAMETER -BM PARAMETER CHECK YES
 ASSIGN_SITE_PARAMETER -BM COMPRESSED JOURNAL YES
 ASSIGN_SITE_PARAMETER -BI SUPPRESSION ENTRIES 0
 ASSIGN_SITE_PARAMETER -MOVE MODE MAX BUF 10
 ASSIGN_SITE_PARAMETER -DEFAULT BP BUFFERS 40
 ASSIGN_SITE_PARAMETER -PFIO OPEN BUFFERS 2
 ASSIGN_SITE_PARAMETER -PFIO INTERNAL TRACE NO
 ASSIGN_SITE_PARAMETER -WCC 1 STAR FILE SYS SOFTWARE/yyyy/DATA/WCC-1STR
 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -WCC 6 STAR FILE SYS SOFTWARE/yyyy/DATA/WCC-6STR
 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -WD FILE SYS SOFTWARE/yyyy/DATA/WS-DB
 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -SC VIRTUAL BUFFER SIZE 1000
 ASSIGN_SITE_PARAMETER -SC INTERNAL TRACE NO
 ASSIGN_SITE_PARAMETER -TM INTERNAL TRACE NO
 ASSIGN_SITE_PARAMETER -WM INTERNAL TRACE NO
 ASSIGN_SITE_PARAMETER -HISTORICAL LOG NO
 ASSIGN_SITE_PARAMETER -HL CISIZE 2048
 ASSIGN_SITE_PARAMETER -HL NUM CI 1000
 ASSIGN_SITE_PARAMETER -HL DUP NO
 ASSIGN_SITE_PARAMETER -HL DEVICE 000000 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -HL DUP DEVICE 000000 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -CKPT IDENT "ACCOUNT,GUESS-WHO"
 ASSIGN_SITE_PARAMETER -CKPT USERID USERID\$PASSWD
 ASSIGN_SITE_PARAMETER -CKPT FILE SIZE 40000
 ASSIGN_SITE_PARAMETER -CKPT FILE DEVICE 000000 (See NOTE 10)
 ASSIGN_SITE_PARAMETER -CKPT DUMP FILL 60
 ASSIGN_SITE_PARAMETER -CKPT DUMP TIME 0 -- NO DEFAULT
 ASSIGN_SITE_PARAMETER -CKPT COLLECT ALL
 ASSIGN_SITE_PARAMETER -CKPT FILE CONTROL NONE
 ASSIGN_SITE_PARAMETER -CKPT MAX ACTIVITIES 200
 ASSIGN_SITE_PARAMETER -CKPT FILE RMVBL 000000,000000 -- ANY DEVICE,PACK
 ASSIGN_SITE_PARAMETER -ISSTAT ENABLE NO
 ASSIGN_SITE_PARAMETER -ISSTAT ABNORMAL TERM NO
 ASSIGN_SITE_PARAMETER -ISSTAT FILE CODE J*
 ASSIGN_SITE_PARAMETER -ISSTAT REPORT CODE 74
 ASSIGN_SITE_PARAMETER -ISSTAT ALL SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT ALL PROC LEVEL YES -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT BM SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT DM SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT AJ SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT CC SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT HL SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT PFIO SYS LEVEL NO -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT BM PROC LEVEL YES -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT DM PROC LEVEL YES -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT BJ PROC LEVEL YES -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT AJ PROC LEVEL YES -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT PFIO PROC LEVEL YES -PRINT ZERO NO
 ASSIGN_SITE_PARAMETER -ISSTAT IDS2 PROC LEVEL YES -PRINT ZERO NO

```

ASSIGN_SITE_PARAMETER -ISSTAT_BATCH PROCESSES YES
ASSIGN_SITE_PARAMETER -ISSTAT_WS PROCESSES NO
ASSIGN_SITE_PARAMETER -ISSTAT_TP PROCESSES NO
ASSIGN_SITE_PARAMETER -ISSTAT_TDS PROCESSES NO
ASSIGN_SITE_PARAMETER -ISSTAT_TS8 PROCESSES NO
ASSIGN_SITE_PARAMETER -CKPT_FILE_DUP NO
ASSIGN_SITE_PARAMETER -CKPT_FILE_DUP DEVICE 000000 -- NO DEFAULT
ASSIGN_SITE_PARAMETER -HL_IGNORE_ERRORS YES
ASSIGN_SITE_PARAMETER -HL_COMMITMENT_ENTRY YES
ASSIGN_SITE_PARAMETER -HL_FILE_OPEN_ENTRY YES
ASSIGN_SITE_PARAMETER -HL_FILE_CLOSE_ENTRY YES
ASSIGN_SITE_PARAMETER -TRACE_BUFFER_SIZE 1 -- ONE 4K BUFFER

```

10. 000000 (Six zeros) - Any device
 yyyy - Current Software Release
 sti - Software Technical Identifier (see the appropriate SRB for the STI name)

INTEGRATED SOFTWARE DEFAULT PARAMETER MODIFICATION

Integrated Software is assembled with parameters that provide controls over specific processing conditions (see note 9 above for a list of parameters). Assembled parameter values are default values, which are defined in the following files (where yyyy = software release identifier, such as 3000) and described below.

- o SYS_SOFTWARE/yyyy/JCL/SHARD.SPWN
- o SYS_SOFTWARE/yyyy/DATA/SHARD.CHGS

Each default value can be modified to meet installation processing requirements. It is recommended that any modification be applied to the SHARD.CHGS file. This approach leaves the default parameters unchanged in the SHARD.SPWN file, which provides a point of reference for determining default values.

Modification of a parameter in either the SHARD.SPWN or SHARD.CHGS file applies changes to Integrated Software spawned either from the OPNSUTIL/SHARD file or during System Startup.

A two-step procedure can be used to apply parameter modifications to either the SHARD.SPWN file or the SHARD.CHGS file. First, use the time sharing system CONVER subsystem to copy the file (e.g., SHARD.CHGS) into the current file; then, use the time sharing system EDIT command to modify the value in question.

The following usage rules apply to SDDL directives.

1. If a syntax error is encountered in the parameter definition, either the default is applied or - if a previous assignment was made for the parameter - the existing value is used.

2. If an `ASSIGN SITE PARAMETER` directive is duplicated, the last iteration encountered is applied.
3. A literal string is permitted only in an argument field.
4. Quotation marks (") serve as beginning and ending delimiters of a literal string. Use of these delimiters permits embedded blanks within the string.
5. If a quotation mark is embedded within a literal string, it must be immediately preceded by another quotation mark. For example, "a""b" is interpreted as a"b.
6. If the directive is misspelled (e.g., `ASSIGN-SITE-PARAMETER`), SDDL cannot recognize the directive as valid, which causes SHARD to abort.

Site Parameters

This section describes the valid parameters that can be used with the SDDL directive `ASSIGN SITE PARAMETER`.

SITE PARAMETERS FOR ARCHIVED BEFORE/AFTER/ACCOUNTING JOURNALING

Maximum Number of Journals

The `-MAX NUMBER JOURNALS` parameter is used to specify the maximum number of journals:

```
ASSIGN SITE PARAMETER -MAX NUMBER JOURNALS n
```

where:

n - Maximum number of journals. This value may range from 1-20. The default value is 10.

Journal Directory Control Interval Size

The `-JOURNAL DIRECTORY CISIZE` parameter is used to specify the journal directory control interval size:

```
ASSIGN SITE PARAMETER -JOURNAL DIRECTORY CISIZE c
```

where:

c - Control interval size, specified in K (while other control interval size parameters are specified in bytes). This value may range from 1-16 (K). The default value is 2 (K).

SITE PARAMETERS FOR AFTER JOURNALING

After Journaling is a means by which data bases can be protected against media failure (usually disk) and erroneous data base modifications. Any data base file created or modified with the FMS RDERR/JOURNAL/ option is protected by After Journaling. The following parameters instruct the After Journaling software with the site's selection of options.

After Journal \$ IDENT Statement

A \$ IDENT statement is assembled into a job stream that is spawned by the After Journal domain to interface with the File Management Supervisor (FMS) save and/or restore process. Columns 16-80 must be redefined by each site via the -AJ_IDENT parameter:

```
ASSIGN_SITE_PARAMETER -AJ_IDENT x
```

where:

x - 1-65 alphanumeric characters to be placed in columns 16 to 80 of the \$ IDENT statement. Blank is a valid character in this field, provided that the field is enclosed with quotes (e.g., "b c"). ACCT#,GUESS-WHO is used as the default.

After Journal \$ USERID Statement

A \$ USERID statement is assembled into a job stream that is spawned by the After Journal domain to interface with the File Management Supervisor (FMS) save and/or restore process. Columns 16-80 must be redefined by each site via the -AJ_USERID parameter:

```
ASSIGN_SITE_PARAMETER -AJ_USERID y
```

where:

y - 1-65 alphanumeric characters to be placed in columns 16 to 80 of the \$ USERID statement. USERID\$PASSWD is used as the default.

After Journal Save/Restore ** File Pathname

A default pathname is provided for this file. There may be some circumstances, however, under which pathname modification is desirable. For example, before installing a new version of a file, the system administrator may wish to test file content; by modifying the pathname of the new (test) version, the file can be accessed without interrupting system processing that uses the existing version. The pathname can be modified via the -AJ_SAVE_RESTORE ** FILE parameter:

```
ASSIGN_SITE_PARAMETER -AJ_SAVE_RESTORE ** FILE p
```

where:

p - File pathname. SYS_SOFTWARE/W2SI00842000/SYS is the default.

SITE PARAMETERS FOR BEFORE JOURNALING

Before Journaling provides a means by which files are protected from incomplete updating due to process abort or system failure. A Before Journal is created and maintained for each process accessing a file for which the FMS ABORT/ROLLBACK/ file option has been specified. The following parameters instruct the Before Journaling software with the site's selection of options.

Before Journal Control Interval Size

The -BJ_CISIZE parameter is used to specify the before journal control interval size:

```
ASSIGN_SITE_PARAMETER -BJ_CISIZE c
```

where:

c - Control interval size, in bytes, ranging from 256-66536. The default is 2816 bytes (704 words) which accommodates two 320-word control intervals for a file with ABORT/ROLLBACK protection and supporting header information.

Minimum Number Of Before Journal CIs Per Commitment Unit

The -BJ_MIN_CI parameter is used to specify the minimum number of before journal control intervals per commitment unit:

```
ASSIGN_SITE_PARAMETER -BJ_MIN_CI n
```

where:

n - Minimum number of before journal control intervals per commitment unit, ranging from 5-100000. The default is 1000.

Maximum Number Of Before Journal CIs Per Commitment Unit

The -BJ_MAX_CI parameter is used to specify the maximum number of before journal control intervals per commitment unit:

```
ASSIGN_SITE_PARAMETER -BJ_MAX_CI n
```

where:

n - Maximum number of before journal control intervals per commitment unit, ranging from 5-100000. The default is unlimited.

Before Journal Control Interval Writes Between Header Writes

A header record containing control information is periodically written to the before journal. The header record occupies one control interval and is always the first control interval in the file. The number of before journal control intervals written between header records can be modified via the `-BJ_HEADER_WRITE_PERIOD` parameter:

```
ASSIGN_SITE_PARAMETER -BJ_HEADER_WRITE_PERIOD n
```

where:

n - Number of before journal control intervals written between header records, ranging from 1-1000. The default value is 30. A larger value of n reduces the number of run-time I/O operations. However, a longer recovery period is required in the event of a system failure.

FMS Protection For Before Journal Recovery Structure

The `-RS_DUP` parameter is used to specify whether the RDERR/DUP/ FMS protection option should be applied to the recovery structure (before journals and PAT image files):

```
ASSIGN_SITE_PARAMETER -RS_DUP x
```

where:

x - 0 or NO or OFF applies RDERR/NONE/. This is the default.

1 or YES or ON applies RDERR/DUP/.

Before Journal Device Specification

The `-RS_DEVICE` parameter is used to assign a specific device or devices on which all before journals and PAT image files will be created:

```
ASSIGN_SITE_PARAMETER -RS_DEVICE ddd,dde,ddf,...ddm
```

where:

ddd,dde,ddf,...ddm - Device codes. 1-10 may be specified. If a specific device is not assigned, FMS will create the before journals and PAT image files on a device of its choosing. If more than one device is specified, the before journals and PAT image files will be placed on the devices in a round robin manner. Note that these devices must be configured as permanent FMS devices.

Before Journal Duplicate Device Specification

The `-RS DUP_DEVICE` parameter assigns a specific device or devices (up to 10) on which all duplicate before journals and PAT image files will be created:

```
ASSIGN_SITE_PARAMETER -RS_DUP_DEVICE ddd,dde,ddf,...ddm
```

where:

ddd,dde,ddf,...ddm - Device codes. 1-10 may be specified. If a specific device is not assigned, FMS will create the duplicate before journals and PAT image files on a device of its choosing. If more than one device is specified, the duplicate files will be placed on the devices in a round robin manner. Note that these devices must be configured as permanent FMS devices. They must be different physical devices from the devices specified with the `-RS_DEVICE` parameter.

SITE PARAMETERS FOR CHECKPOINT JOURNALING

Checkpoint Journaling \$ IDENT Statement

A \$ IDENT statement is assembled into a job stream that is spawned by the Checkpoint Journal Manager domain to dump the checkpoint journal to the checkpoint journal archive (i.e., to tape). Columns 16-80 must be redefined by each site via the `-CKPT_IDENT` parameter:

```
ASSIGN_SITE_PARAMETER -CKPT_IDENT x
```

where:

x - 1-65 alphanumeric characters to be placed in columns 16 to 80 of the \$ IDENT statement. Blank is a valid character in this field, provided that the field is enclosed with quotes (e.g., "b c"). ACCT#,GUESS-WHO is used as the default.

Checkpoint Journaling \$ USERID Statement

A \$ USERID statement is assembled into a job stream that is spawned by the Checkpoint Journal Manager domain to dump the checkpoint journal to the checkpoint journal archive (i.e., to tape). Columns 16-80 must be redefined by each site via the `-CKPT_USERID` parameter:

```
ASSIGN_SITE_PARAMETER -CKPT_USERID y
```

where:

y - 1-65 alphanumeric characters to be placed in columns 16 to 80 of the \$ USERID statement. USERID\$PASSWD is used as the default.

Default Checkpoint File For Checkpoint Journaling

The `-CKPT_FILE_CONTROL` parameter is considered the master checkpoint Journal parameter. It determines the type of file on which process snapshots are collected, unless an activity statement option is used to override this value. The file used for process snapshot collection may be either the system-wide checkpoint journal or a user-specific checkpoint file (e.g., QX file used for I-D-S/I and Indexed Sequential Processor (ISP) data base management programs). Values for this parameter are NONE, USER, JOURNAL, and SYSTEM.

The `-CKPT_FILE_CONTROL` parameter is specified as follows:

```
ASSIGN_SITE_PARAMETER -CKPT_FILE_CONTROL {NONE|USER|JOURNAL|SYSTEM}
```

where:

- NONE - The checkpoint journal is not used. No process snapshots are collected on the checkpoint journal. User-specific checkpoint files may be used on a per-process basis to collect the process snapshot from the most recent commitment. This is the default.
- USER - Process snapshots from the most recent commitment are maintained on user-specific checkpoint files. Activity statement options `CHKPT/{ARCH|JRNL|DEFER}` can be used to override the effects of this SLD directive on a per-process basis.
- JOURNAL - Process snapshots are maintained on the checkpoint journal, which is a cataloged, permanent file under the user identifier `SYS RECOVERY`. Activity statement option `CHKPT/USER/` can be used to override the effects of this SLD directive on a per-process basis.
- SYSTEM - Produces the same results as specifying JOURNAL (i.e., process snapshots are maintained on the checkpoint journal). In addition, SYSTEM imposes a security restriction by preventing the use of the `CHKPT/USER/` activity statement option to override the collection of checkpoints to the checkpoint journal (i.e., use of the activity option `CHKPT/USER` is invalid).

Checkpoint Journaling Collection Of Historical Process Snapshots

The `-CKPT_COLLECT` parameter specifies the extent of checkpoint information to be collected when `-CKPT_FILE_CONTROL JOURNAL` or `-CKPT_FILE_CONTROL SYSTEM` has been specified:

```
ASSIGN_SITE_PARAMETER -CKPT_COLLECT {ALL|NONE}
```

where:

- ALL - Specifies that all process snapshots for processes using protected files are to be collected. In addition, activity start and termination are registered for these processes. ALL is the default. For processes that do not use protected files, no checkpoint information is collected unless use of the checkpoint journal is requested via activity statement options, or required via -CKPT_FILE_CONTROL SYSTEM. Collection of all process snapshots can be selectively suppressed for an individual process using activity statement options. (Refer to the GCOS 8 OS Integrity Control manual for more information.)

- NONE - Specifies that no process snapshots are to be collected for processes using protected files (i.e., only activity start and termination are registered). The two most recent snapshots are maintained on the checkpoint journal, but deleted if the activity terminates normally. The most recent checkpoint is maintained if the process terminates abnormally. For processes that do not use protected files, no checkpoint information is collected unless use of the checkpoint journal is requested via activity statement options, or required via -CKPT_FILE_CONTROL SYSTEM. Collection of all process snapshots can be selectively enabled for an individual process using activity statement options. (Refer to the GCOS 8 OS Integrity Control manual for more information.)

Checkpoint Journal Size

The -CKPT_FILE_SIZE parameter specifies the maximum size of the checkpoint journal:

```
ASSIGN_SITE_PARAMETER -CKPT_FILE_SIZE s
```

where:

- s - Maximum size (in llinks) of the checkpoint journal. The valid range is 1000-131071 llinks. The default value is 40000.

Maximum Number Of Activities Using Checkpoint Journal

The -CKPT_MAX_ACTIVITIES parameter defines the maximum number of activities that will write process snapshots to the checkpoint journal:

```
ASSIGN_SITE_PARAMETER -CKPT_MAX_ACTIVITIES n
```

where:

n - Maximum number of activities. The range for this parameter is 5-2200, with a default value of 200. This value is used in a file control block to reserve space for the process snapshots. It can be determined by using the following formula:

$$\text{nnnn} = (\text{Number of activities taking commitments}) \\ * (\text{No. of times activities are run before journal is dumped})$$

For example, if an installation has 20 activities taking commitments and each activity is run 5 times before the checkpoint journal is dumped to the checkpoint journal archive (i.e., tape), then the `-CKPT_MAX_ACTIVITIES` parameter should be assigned a value of 100.

Checkpoint Journal Dump Frequency (Percent Filled)

The `-CKPT_DUMP_FILL` parameter specifies the percentage full requirement for dumping the checkpoint journal to archive (i.e., tape):

```
ASSIGN_SITE_PARAMETER -CKPT_DUMP_FILL p
```

where:

p - Percent (0-100). The default value is 60 percent. For example, if this value is 70, the checkpoint journal is dumped to archive when it has been filled to 70 percent of its capacity.

If this parameter is used in conjunction with the `-CKPT_DUMP_TIME` parameter, then whichever condition is met first determines when the journal is dumped.

Checkpoint Journal Dump Frequency (Time)

The `-CKPT_DUMP_TIME` parameter indicates a specific time interval for dumping the checkpoint journal to the checkpoint archive (i.e., tape):

```
ASSIGN_SITE_PARAMETER -CKPT_DUMP_TIME t
```

where:

t - Time interval (0-1440) minutes. There is no default; a value must be supplied if the parameter is used.

Duplicate Checkpoint Journal

The `-CKPT_FILE_DUP` parameter is used to specify whether the protection option `RDERR/DUP/` is applied to the checkpoint journal:

```
ASSIGN_SITE_PARAMETER -CKPT_FILE_DUP x
```

where:

x - 0 or NO or OFF applies `RDERR/NONE/`. This is the default.

1 or YES or ON applies `RDERR/DUP/`. This FMS protection option maintains a duplicate checkpoint journal, thus protecting against loss of the primary checkpoint journal.

Checkpoint Journal Device Specification

The `-CKPT_FILE_DEVICE` parameter is used to assign a specific device on which to create the checkpoint journal:

```
ASSIGN_SITE_PARAMETER -CKPT_FILE_DEVICE d
```

where:

d - Device code. If a specific device is not assigned, FMS will create the checkpoint journal file on a device of its choosing.

Duplicate Checkpoint Journal Device Specification

The `-CKPT_FILE_DUP_DEVICE` parameter is used to assign a specific device on which to create the duplicate checkpoint journal:

```
ASSIGN_SITE_PARAMETER -CKPT_FILE_DUP_DEVICE d
```

where:

d - Device code. If a specific device is not assigned, FMS will create the duplicate checkpoint journal file on a device of its choosing.

Removable Device For Checkpoint Journal

The `-CKPT_FILE_RMVBL` parameter is used to assign a removable device on which to create the checkpoint journal. If this parameter is not used, the file is created on `PERM` device.

```
ASSIGN_SITE_PARAMETER -CKPT_FILE_RMVBL t,x
```

where:

t - Device type. Valid values are 400PK, 450PK, 500PK, 501PK, C1APK, and C1BPK.

x - Pack serial number. Five alphanumeric characters.

SITE PARAMETERS FOR HISTORICAL LOG

The Historical Log is a chronological record of activity for processes accessing protected files and processes that use journals.

Create Historical Log

The `-HISTORICAL_LOG` parameter specifies whether or not the historical log is to be created:

```
ASSIGN_SITE_PARAMETER -HISTORICAL_LOG x
```

where:

x - 0 or NO or OFF. The historical log will not be created (default).

1 or YES or ON. The historical log will be created. Specifying YES is recommended if an installation is processing with protected files and is using the checkpoint journal service to collect all process snapshots during the life of a process.

Number Of Historical Log Control Intervals

The `-HL_NUM_CI` parameter defines the number of control intervals for the historical log:

```
ASSIGN_SITE_PARAMETER -HL_NUM_CI n
```

where:

n - Number of control intervals. The valid range for this value is 5-100000. The default value is 1000. Multiplying the value of this parameter by the value of the control interval size parameter (`-HL_CISIZE`) determines the size of the historical log.

Historical Log Control Interval Size

The `-HL_CISIZE` parameter defines the size (in bytes) of the control interval for the historical log:

```
ASSIGN_SITE_PARAMETER -HL_CISIZE c
```

where:

c - Control interval size, in bytes. The valid range is 256-65536. The default value is 2048 bytes (512 words).

Ignore Errors When Writing To Historical Log

The `-HL_IGNORE_ERRORS` parameter specifies whether errors that occur when a process is writing to the historical log are ignored:

```
ASSIGN-SITE-PARAMETER -HL_IGNORE_ERRORS x
```

where:

x - 0 or NO or OFF will cause processes to abort when they encounter an error writing to the historical log.

1 or YES or ON (default) will cause processes to ignore errors that occur when writing to the historical log.

Duplicate Historical Log

The `-HL_DUP` parameter specifies whether a duplicate historical log will be created:

```
ASSIGN_SITE_PARAMETER -HL_DUP x
```

where:

x - 0 or NO or OFF. The duplicate historical log will not be created (default).

1 or YES or ON. The duplicate historical log will be created.

Historical Log Device

The `-HL_DEVICE` parameter is used to define a specific device upon which to create the historical log:

```
ASSIGN_SITE_PARAMETER -HL_DEVICE ddd
```


where:

ddd - Device code. Any configured three-character logical device name is a valid argument. If a specific device is not assigned, FMS will create the historical log file on a device of its choosing.

Historical Log Duplicate Device

The `-HL DUP DEVICE` parameter defines a specific device upon which to create the duplicate historical log, if one was specified.

ASSIGN_SITE_PARAMETER -HL_DUP_DEVICE ddd

where:

ddd - Device code. Any configured three-character logical device name is a valid argument. If a specific device is not assigned, FMS will create the historical log file on a device of its choosing.

Historical Log Commitment Entry

The `-HL COMMITMENT_ENTRY` parameter determines whether a historical log entry is made each time a commitment is taken:

ASSIGN_SITE_PARAMETER -HL_COMMITMENT_ENTRY a

where:

a - 0 or NO or OFF prevents a historical log entry from being made each time a commitment is taken.

1 or YES or ON (default) causes a historical log entry to be made each time a commitment is taken.

Historical Log Entry For Each Protected File Open

The `-HL FILE_OPEN_ENTRY` parameter determines whether a historical log entry is made each time a protected file is opened:

ASSIGN_SITE_PARAMETER -HL_FILE_OPEN_ENTRY a

where:

a - 0 or NO or OFF prevents a historical log entry from being made each time a protected file is opened.

1 or YES or ON (default) causes a historical log entry to be made each time a protected file is opened.

Historical Log Entry For Each Protected File Close

The `-HL_FILE_CLOSE_ENTRY` parameter determines whether a historical log entry is made each time a protected file is closed:

```
ASSIGN_SITE_PARAMETER -HL_FILE_CLOSE_ENTRY a
```

where:

a - 0 or NO or OFF prevents a historical log entry from being made each time a protected file is closed.

1 or YES or ON (default) causes a historical log entry to be made each time a protected file is closed.

SITE PARAMETER FOR CONCURRENCY CONTROL

Maximum Reservations Retained For One Process

The `-CC_PROCESS_PAGES` parameter specifies the maximum number of concurrency control reservations (i.e., data base pages and files) retained for a single process:

```
ASSIGN_SITE_PARAMETER -CC_PROCESS_PAGES r
```

where:

r - Maximum number of reservations per process. The valid range for this value is 1-25900 reservations. The default is 25900. (One reservation requires five words of memory for each record and five words for each file.)

SITE PARAMETERS FOR BUFFERING

Maximum Number Of Buffers In Default Buffer Pools

The `-DEFAULT_BP_BUFFERS` parameter specifies the maximum number of buffers that can exist in each buffer pool:

```
ASSIGN_SITE_PARAMETER -DEFAULT_BP_BUFFERS b
```

where:

b - Maximum number of buffers in each buffer pool. The value can range from 1 to 512. By default, 40 buffers exist in each buffer pool.

This parameter does not necessarily specify the actual number of buffers assigned to each buffer pool. For example, if the buffer pool limit is 20 and a process requests 12 buffers, then 12 buffers are assigned. However, if the buffer pool limit is 20 and a process requests 24 buffers, an error status will be returned.

Note that the number of buffers in a buffer pool is reduced for each open file by the value of the PFIO_OPEN_BUFFERS parameter. For example, if the DEFAULT_BP_BUFFERS value is 40 and the PFIO_OPEN_BUFFERS value is 10, 30 buffers are available from the buffer pool after one file has been opened.

Buffers Allocated To Protected Files

The -PFIO_OPEN_BUFFERS parameter specifies the number of buffers allocated to each protected file at file-open time in a batch or TPE processing environment:

```
ASSIGN_SITE_PARAMETER -PFIO_OPEN_BUFFERS b
```

where:

- b - Number of buffers allocated to each protected file at file-open time. This value can range from 1 to 512. The default is 2.

Buffer Management Parameter And Descriptor Consistency Checks

The -BM_PARAMETER_CHECK parameter specifies whether buffer management parameter and descriptor consistency checks are to be performed:

```
ASSIGN_SITE_PARAMETER -BM_PARAMETER_CHECK c
```

where:

- c - 0 or NO or OFF causes the consistency checks to be bypassed, so that Buffer Management will execute faster.
- 1 or YES or ON (default) causes the consistency checks to be performed.

If a problem arises while the consistency check is bypassed, reinstate the check; then rerun the process to verify parameters and descriptors before attempting to analyze the problem.

Compressed And Full Control Interval Journalization

The `-BM COMPRESSED JOURNAL` parameter provides a choice between compressed journalization and full control interval journalization:

```
ASSIGN SITE PARAMETER -BM COMPRESSED JOURNAL c
```

where:

`c - 0` or `NO` or `OFF` causes full control interval journalization, so that entire control intervals (i.e., the modified record(s) and all unmodified records for that control interval) are written to the appropriate journal(s).

`1` or `YES` or `ON` (default) causes compressed journalization, so that when modifying a file with `ABORT/ARCHIVE/`, `ABORT/ROLLBACK/`, and/or `RDERR/JOURNAL/` protection, only the modified control interval portions of the file are journalized. (An algorithm divides each file control interval into partitions containing a minimum of 64 words per partition. A maximum of 16 partitions is created.)

Number Of Modifications Before Control Interval Written

The `-AJ_NFIELDS` parameter defines the maximum number of times a specific control interval can be modified before the entire control interval is written to the after journal:

```
ASSIGN SITE PARAMETER -AJ_NFIELDS f
```

where:

`f -` Maximum number of times a specific control interval can be modified before the entire control interval is written to the after journal. The valid range for this value is 1-16. The default value is 8.

Minimize Before Image Journalization

The `-BI_SUPPRESSION_ENTRIES` parameter is used to modify the number of internal entries used to minimize before image journalization:

```
ASSIGN SITE PARAMETER -BI_SUPPRESSION_ENTRIES g
```

where:

`g -` Number of internal entries. The valid range for this value is 0-280. The default value is 0 (i.e., before image journalization is not minimized).

Maximize Buffers For Access Methods

The `-MOVE MODE MAX BUF` parameter is used to modify the maximum number of buffers for each file open that a particular access method (e.g., Relational File Manager (RFM)) can allocate:

```
ASSIGN_SITE_PARAMETER -MOVE_MODE_MAX_BUF m
```

where:

`m` - Maximum number of buffers. The valid range for this value is 1-50. The default value is 10.

SITE PARAMETER FOR WIRED REAL MEMORY FOR INTEGRATED SOFTWARE

The `-SET MAX WIRED PAGES` parameter allows the site to exercise some control over system performance by allowing the Shared Domain Loader (S#SHARD) to wire the desired number of pages:

```
ASSIGN_SITE_PARAMETER -SET_MAX_WIRED_PAGES n
```

where:

`n` - Maximum number of pages to be wired for Integrated Software. The value specified can range from 40 to 16384 pages (1K). If a value is not specified, the GCOS 8 default of 511 is applied.

If too many pages are wired, other jobs may swap in and out of memory, degrading system performance. If too few pages are wired, jobs that access protected files may abort. For more information about determining memory requirements, refer to "Determining Minimum Wired Real Memory Page Requirements" later in this section.

SITE PARAMETER FOR VIRTUAL MEMORY

The `-SC VIRTUAL BUFFER SIZE` parameter is used to specify the size of the virtual memory buffer used by Session Control:

```
ASSIGN_SITE_PARAMETER -SC_VIRTUAL_BUFFER_SIZE m
```

where:

`m` - Number of pages. The valid range is 16-4080 pages (1K). The default is 1000. If `m > 1000`, the value of the `VSPACE` parameter on the `$ RESOURC` statement must be increased.

SITE PARAMETERS FOR TRACES

Integrated Software Trace Buffer Size

The `-TRACE_BUFFER_SIZE` parameter specifies the size of the buffer used for Integrated Software trace event information:

```
ASSIGN_SITE_PARAMETER -TRACE_BUFFER_SIZE n
```

where:

n - Number of buffers. The valid range is 1 to 4. Each buffer has a size of 4K words. Thus the total buffer size may be 4K, 8K, 12K, or 16K words.

Increasing the default size during debugging sessions may be useful. For more information on Integrated Software trace, refer to the GCOS 8 OS Protected File Administration Guide.

Internal Traces For Specific Domains

Site parameters are provided to cause generation of internal traces in the following specific domains, to collect trace-event information that might otherwise be overwritten in the Integrated Software trace:

- o Session Control (SC)
- o Tenant Management (TM)
- o Workstation Management (WM)
- o Protected File I/O (PFIO)

These parameters are:

```
ASSIGN_SITE_PARAMETER -SC_INTERNAL_TRACE t
```

```
ASSIGN_SITE_PARAMETER -TM_INTERNAL_TRACE t
```

```
ASSIGN_SITE_PARAMETER -WM_INTERNAL_TRACE t
```

```
ASSIGN_SITE_PARAMETER -PFIO_INTERNAL_TRACE t
```

where:

t - 0 or NO or OFF (default) turns off the internal trace in the specified domain.

1 or YES or ON enables the internal trace in the specified domain.

SITE PARAMETERS FOR INTEGRATED SOFTWARE STATISTICS

Statistical information provided by Integrated Software can be extremely useful to the site for system-tuning purposes. The printing of both process-level and system-level Integrated Software statistics can be controlled through use of the following parameters. The site can specify file code (J* or P*), report code, and whether or not each group of statistics should be printed. Process-level statistics are available for the Buffer Management, Global Data Management, Before Journaling, After Journaling, Protected File I/O, and I-D-S/II domains. System-level statistics are available for Buffer Management, Global Data Management, After Journaling, Concurrency Control, Historical Logging, and Protected File I/O domains. Refer to the GCOS 8 OS System Operating Techniques manual for more information on these parameters, as well as a description of their output.

Print Integrated Software Statistics (Normal Termination)

The `-ISSTAT_ENABLE` parameter determines whether Integrated Software statistics are to be printed if a process terminates normally:

```
ASSIGN_SITE_PARAMETER -ISSTAT_ENABLE x
```

where:

x - 0 or NO or OFF (default) inhibits printing of statistics if a process terminates normally.

1 or YES or ON enables printing of statistics if a process terminates normally.

Print Integrated Software Statistics (Abnormal Termination)

The `-ISSTAT_ABNORMAL_TERM` parameter determines whether Integrated Software statistics are to be printed if a process terminates abnormally:

```
ASSIGN_SITE_PARAMETER -ISSTAT_ABNORMAL_TERM x
```

where:

x - 0 or NO or OFF (default) inhibits printing of statistics if a process terminates abnormally.

1 or YES or ON enables printing of statistics if a process terminates abnormally.

Integrated Software Statistics Output File Code

The `-ISSTAT_FILE_CODE` parameter defines the output file code for Integrated Software statistics:

```
ASSIGN_SITE_PARAMETER -ISSTAT_FILE_CODE c
```

where:

c - Output file code. Valid file codes are J* (default) or P*. If the P* file code is selected, a report code must also be specified via the `-ISSTAT_REPORT_CODE` parameter.

Integrated Software Statistics Report Code

If the P* file code is selected via the `-ISSTAT_FILE_CODE` parameter, the `-ISSTAT_REPORT_CODE` parameter must be used to define a report code for Integrated Software statistics:

```
ASSIGN_SITE_PARAMETER -ISSTAT_REPORT_CODE r
```

where:

r - Report code. Valid report codes are 0-77 (octal). The default report code is 74.

Print All Integrated Software System-Level Statistics

The `-ISSTAT_ALL_SYS_LEVEL` parameter specifies whether all system-level statistics (i.e., Buffer Management, Global Data Management, After Journal, Concurrency Control, Historical Log, and Protected File I/O domains) are to be printed:

```
ASSIGN_SITE_PARAMETER -ISSTAT_ALL_SYS_LEVEL x -PRINT_ZERO y
```

where:

x - 0 or NO or OFF inhibits printing of all system-level statistics, regardless of the values of any of the individual system-level statistics parameters.

1 or YES or ON causes printing of all system-level statistics, regardless of the values of any of the individual system-level statistics parameters.

If a value is not specified for x, the printing of system-level statistics for one or more individual domains may be enabled by the value of the individual system-level statistics parameter.

y - 0 or NO or OFF suppresses printing of zero-valued system-level statistical fields, regardless of the value of any PRINT_ZERO parameter used with individual system-level statistics parameters.

1 or YES or ON causes printing of zero-valued system-level statistical fields, regardless of the value of any PRINT_ZERO parameter used with individual system-level statistics parameters.

If a value is not specified for y, the printing of zero-valued system-level statistical fields for individual domains may be controlled by the value of the PRINT_ZERO parameter used with the individual system-level statistics parameter.

Print Buffer Management Domain System-Level Statistics

The -ISSTAT BM SYS LEVEL parameter specifies whether system-level Buffer Management Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the -ISSTAT_ALL_SYS_LEVEL parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_BM_SYS_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of system-level Buffer Management Domain statistics (default).

1 or YES or ON causes printing of system-level Buffer Management Domain statistics.

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Global Data Management Domain System-Level Statistics

The -ISSTAT DM SYS LEVEL parameter specifies whether system-level Global Data Management Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the -ISSTAT_ALL_SYS_LEVEL parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_DM_SYS_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of system-level Global Data Management Domain statistics (default).

1 or YES or ON causes printing of system-level Global Data Management Domain statistics.

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print After Journal Domain System-Level Statistics

The `-ISSTAT_AJ_SYS_LEVEL` parameter specifies whether system-level After Journal Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_SYS_LEVEL` parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_AJ_SYS_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of system-level After Journal Domain statistics (default).

1 or YES or ON causes printing of system-level After Journal Domain statistics.

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Concurrency Control Domain System-Level Statistics

The `-ISSTAT_CC_SYS_LEVEL` parameter specifies whether system-level Concurrency Control Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_SYS_LEVEL` parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_CC_SYS_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of system-level Concurrency Control Domain statistics (default).

1 or YES or ON causes printing of system-level Concurrency Control Domain statistics.

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Historical Log Domain System-Level Statistics

The `-ISSTAT_HL_SYS_LEVEL` parameter specifies whether system-level Historical Log Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_SYS_LEVEL` parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_HL_SYS_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of system-level Historical Log Domain statistics (default).

1 or YES or ON causes printing of system-level Historical Log Domain statistics.

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Protected File I/O Domain System-Level Statistics

The -ISSTAT_PFIO_SYS_LEVEL parameter specifies whether system-level Protected File I/O Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the -ISSTAT_ALL_SYS_LEVEL parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_PFIO_SYS_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of system-level Protected File I/O Domain statistics (default).

1 or YES or ON causes printing of system-level Protected File I/O Domain statistics.

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print All Integrated Software Process-Level Statistics

The -ISSTAT_ALL_PROC_LEVEL parameter specifies whether all process-level statistics (i.e., Buffer Management, Global Data Management, Before Journal, After Journal, Protected File I/O, and I-D-S/II domains) are to be printed:

ASSIGN_SITE_PARAMETER -ISSTAT_ALL_PROC_LEVEL x -PRINT_ZERO y

where:

x - 0 or NO or OFF inhibits printing of all process-level statistics, regardless of the values of any of the individual process-level statistics parameters.

1 or YES or ON causes printing of all process-level statistics, regardless of the values of any of the individual process-level statistics parameters.

If a value is not specified for x, the printing of process-level statistics for one or more individual domains may be enabled by the value of the individual process-level statistics parameter.

y - 0 or NO or OFF suppresses printing of zero-valued process-level statistical fields, regardless of the value of any PRINT_ZERO parameter used with individual process-level statistics parameters.

1 or YES or ON causes printing of zero-valued process-level statistical fields, regardless of the value of any PRINT_ZERO parameter used with individual process-level statistics parameters.

If a value is not specified for y, the printing of zero-valued process-level statistical fields for individual domains may be controlled by the value of the PRINT_ZERO parameter used with the individual process-level statistics parameter.

Print Buffer Management Domain Process-Level Statistics

The -ISSTAT_BM_PROC_LEVEL parameter specifies whether process-level Buffer Management Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the -ISSTAT_ALL_PROC_LEVEL parameter.

```
ASSIGN_SITE_PARAMETER -ISSTAT_BM_PROC_LEVEL xxx -PRINT_ZERO yyy
```

where:

x - 0 or NO or OFF inhibits printing of process-level Buffer Management Domain statistics.

1 or YES or ON causes printing of process-level Buffer Management Domain statistics (default).

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Global Data Management Domain Process-Level Statistics

The -ISSTAT_DM_PROC_LEVEL parameter specifies whether process-level Global Data Management Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the -ISSTAT_ALL_PROC_LEVEL parameter.

```
ASSIGN_SITE_PARAMETER -ISSTAT_DM_PROC_LEVEL xxx -PRINT_ZERO yyy
```

where:

x - 0 or NO or OFF inhibits printing of process-level Global Data Management Domain statistics.

1 or YES or ON causes printing of process-level Global Data Management Domain statistics (default).

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Before Journal Domain Process-Level Statistics

The `-ISSTAT_BJ_PROC_LEVEL` parameter specifies whether process-level Before Journal Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_PROC_LEVEL` parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_BJ_PROC_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of process-level Before Journal Domain statistics.

1 or YES or ON causes printing of process-level Before Journal Domain statistics (default).

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print After Journal Domain Process-Level Statistics

The `-ISSTAT_AJ_PROC_LEVEL` parameter specifies whether process-level After Journal Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_PROC_LEVEL` parameter.

ASSIGN_SITE_PARAMETER -ISSTAT_AJ_PROC_LEVEL xxx -PRINT_ZERO yyy

where:

x - 0 or NO or OFF inhibits printing of process-level After Journal Domain statistics.

1 or YES or ON causes printing of process-level After Journal Domain statistics (default).

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Protected File I/O Domain Process-Level Statistics

The `-ISSTAT_PPIO_PROC_LEVEL` parameter specifies whether process-level Protected File I/O Domain statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_PROC_LEVEL` parameter.

```
ASSIGN_SITE_PARAMETER -ISSTAT_PPIO_PROC_LEVEL xxx .-PRINT_ZERO yyy
```

where:

x - 0 or NO or OFF inhibits printing of process-level Protected File I/O Domain statistics.

1 or YES or ON causes printing of process-level Protected File I/O Domain statistics (default).

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print I-D-S/II Domain Process-Level Statistics

The `-ISSTAT_IDS2_PROC_LEVEL` parameter specifies whether process-level I-D-S/II Domain (Shared Data Base Control System (SDBCS)) statistics are to be printed. This parameter is ignored if a value has been specified (YES or NO) for the `-ISSTAT_ALL_PROC_LEVEL` parameter.

```
ASSIGN_SITE_PARAMETER -ISSTAT_IDS2_PROC_LEVEL xxx -PRINT_ZERO yyy
```

where:

x - 0 or NO or OFF inhibits printing of process-level I-D-S/II Domain statistics.

1 or YES or ON causes printing of process-level I-D-S/II Domain statistics (default).

y - 0 or NO or OFF suppresses printing of zero-valued fields (default).

1 or YES or ON causes printing of zero-valued fields.

Print Statistics For Batch Processes

The `-ISSTAT_BATCH_PROCESS` parameter specifies whether Integrated Software statistics for batch processes are to be printed:

```
ASSIGN_SITE_PARAMETER -ISSTAT_BATCH_PROCESS x
```

where:

x - 0 or NO or OFF inhibits printing of statistics for batch processes.

1 or YES or ON causes printing of statistics for batch processes (default).

2 or ISSTAT causes printing of statistics for batch processes that specified the ISSTAT option on the JCL activity definition statement.

Print Statistics For Workstation Processes

The `-ISSTAT_WS_PROCESSES` parameter specifies whether Integrated Software statistics for workstation processes are to be printed:

```
ASSIGN_SITE_PARAMETER -ISSTAT_WS_PROCESSES x
```

where:

x - 0 or NO or OFF inhibits printing of statistics for workstation processes (default).

1 or YES or ON causes printing of statistics for workstation processes.

2 or ISSTAT causes printing of statistics for workstation processes that specified the ISSTAT option on the JCL activity definition statement.

Print Statistics For DM-IV/TP Processes

The `-ISSTAT_TP_PROCESSES` parameter specifies whether Integrated Software statistics for DM-IV/TP processes are to be printed:

```
ASSIGN_SITE_PARAMETER -ISSTAT_TP_PROCESSES x
```

where:

x - 0 or NO or OFF inhibits printing of statistics for DM-IV/TP processes (default).

1 or YES or ON causes printing of statistics for DM-IV/TP processes.

2 or ISSTAT causes printing of statistics for DM-IV/TP processes that specified the ISSTAT option on the JCL activity definition statement.

Print Statistics For TDS Processes

The `-ISSTAT_TDS_PROCESSES` parameter specifies whether Integrated Software statistics for TDS processes are to be printed. Specifying a value of YES for the parameter indicates that the statistics are to be printed. Valid arguments are YES or NO. NO is the default value. The directive containing this parameter is as follows:

```
ASSIGN_SITE_PARAMETER -ISSTAT_TDS_PROCESSES x
```

where:

- x - 0 or NO or OFF inhibits printing of statistics for TDS processes (default).
- 1 or YES or ON causes printing of statistics for TDS processes.
- 2 or ISSTAT causes printing of statistics for TDS processes that specified the ISSTAT option on the JCL activity definition statement.

Print Statistics For TS8 Processes

The `-ISSTAT TS8 PROCESSES` parameter specifies whether Integrated Software statistics for TS8 processes are to be printed:

```
ASSIGN SITE_PARAMETER -ISSTAT TS8 PROCESSES x
```

where:

- x - 0 or NO or OFF inhibits printing of statistics for TS8 processes.
- 1 or YES or ON causes printing of statistics for TS8 processes (default).
- 2 or ISSTAT causes printing of statistics for TS8 processes that specified the ISSTAT option on the JCL activity definition statement.

SITE PARAMETERS FOR WORKSTATIONS

Default pathnames for three Integrated Software files are provided. There may be some circumstances, however, under which pathname modification is desirable. For example, before installing a new version of a file, the system administrator may wish to test file content; by modifying the pathname of the new (test) version, the file can be accessed without interrupting system processing that uses the existing version.

Pathnames are provided for the following files:

- o Workstation definition data base (WS-DB)
- o Workstation management schema file (WCC-1STR)
- o Workstation management subschema file (WCC-6STR)

Pathnames for these files are defined via the directives:

ASSIGN_SITE_PARAMETER -WD_FILE p

where:

p - File pathname. The default is SYS_SOFTWARE/yyyy/DATA/WC-DB

yyyy - Software Release identifier, such as 3000

ASSIGN_SITE_PARAMETER -WCC_1_STAR_FILE p

where:

p - File pathname. The default is SYS_SOFTWARE/yyyy/DATA/WCC-1STR

yyyy - Software Release identifier, such as 3000

ASSIGN_SITE_PARAMETER -WCC_6_STAR_FILE p

where:

p - File pathname. The default is SYS_SOFTWARE/yyyy/DATA/WCC-6STR

yyyy - Software Release identifier, such as 3000

Buffer Pools

The CREATE_BUFFER_POOL directive creates buffer pools for protected files. Each buffer pool must be assigned a name and a control interval size using this directive. Other parameters that can be assigned specify:

- o Minimum and maximum number of buffers comprising the buffer pool
- o Number of internal table entries used to minimize before image journalization
- o Whether the buffer pool is public or private
- o When the buffer pool is created.
 - When Integrated Software is loaded
 - When protected files are accessed

If the `CREATE_BUFFER_POOL` directive declares a buffer pool private, the directive:

```
ASSIGN -PRIVATE_BUFFER_POOL_FILE
```

must be used to define the pathname (i.e., catalog/file string) of the file assigned to the pool and the buffer pool name when a process opens the file. The GCOS 8 OS Integrity Control manual provides a detailed discussion of buffer pools.

The following directives can be used to define buffer pools and to modify parameter values. The abbreviated format of the directive or keyword is in parentheses.

```
CREATE_BUFFER_POOL (CBP) aaaaa &  
  -BUFFER_SIZE (-BS or -CI_SIZE) bbbbb &  
  [option(s)]
```

where option(s) = one or more of the following keyword-argument fields:

```
[-TYPE ttttt]  
[-MIN_NUMBER_BUFFERS (-MNNB) cccc]  
[-MAX_NUMBER_BUFFERS (-MXNB) dddd]  
[-POOL_ALLOCATION (-PA) eeeee]  
[-BI_SUPPRESSION_ENTRIES (-BSE) fff]
```

```
ASSIGN -PRIVATE_BP_FILE &  
  -BUFFER_POOL_NAME (-BPN) aaaaa &  
  -PATH_NAME (-PN or -PATHNAME) ggggg &  
  -NUMBER_BUFFERS (-NB) hhhhh
```

where:

- & - Continuation character, which is required when a directive extends to more than one line.
- aaaaa - Buffer pool name, which can contain from 1 to 12 alphanumeric characters. No blanks are permitted.
- bbbb - Size of the buffer or control interval, specified in bytes or words, as indicated by a "B" (default) or "W", respectively, following the value. The size can range from 256 to 65536 bytes, in increments of 256 bytes. Values that are not multiples of 256 bytes are rounded up to the next 256-byte increment.
- cccc - Minimum number of buffers in the buffer pool. This value can range from 0 to 4096; the default is 0.
- dddd - Maximum number of buffers in the buffer pool. This value can range from 1 to 4096; the default is 40 or the `MIN_NUMBER_BUFFERS` value if `cccc` is greater than 40.

ttttt - Literal identifying the buffer pool type:

PRIVATE = private buffer pool

PUBLIC = public buffer pool

eeeeee - Literal identifying when the buffer pool is created:

IMMEDIATE = Created when Integrated Software is loaded

DEFERRED = Created when protected files are accessed

fff - Number of entries used to suppress before images. Range is 0-280, default is 0.

ggggg - Pathname of the protected file assigned to the private buffer pool bbbbb. The pathname cannot contain passwords.

hhhhh - Number of buffers to be assigned when a process opens the file (0-1024; default is 0). When this parameter has a value of 0, the value specified for ASSIGN SITE PARAMETER -PFIO OPEN BUFFERS (buffers allocated at file_open) is used. When a value other than 0 is specified, it overrides the value specified for -PFIO OPEN BUFFERS.

TERMINATING INTEGRATED SOFTWARE

Integrated Software must be explicitly aborted to terminate execution. The operator must enter an ABORT SHARD console command. This makes Integrated Software unavailable for starting any new processes; however, no negative effects result on any processes currently executing, as enough SHARD facilities remain active to continue processing until all processing completes. Thus, any attempt to terminate SHARD prematurely is delayed.

If S#SHARD hangs in termination, use the following procedure:

1. Enter "WORKST LIST" at the console to determine the active workstations. Then abort each workstation by entering "WORKST ABORT xxxx" for each of the active workstations (where xxxx is the workstation id).
2. Run SHRNM to determine if jobs are still tied to SHARD, then abort them.
3. Wait until all abort messages for requested jobs have been typed on the console log. S#SHARD will then terminate.

To restart Integrated Software after it terminates, execute the privileged slave program that loads the software into memory. (Refer to "Loading Integrated Software For Execution" earlier in this section for additional information.)

*

ENSURING SUFFICIENT MEMORY FOR INTEGRATED SOFTWARE EXECUTION

Integrated Software memory requirements are of the following categories.

1. Virtual memory for all Integrated Software domains, Session Control buffers, and data base buffers. The \$ RESOURC statement that is incorporated into the Honeywell Bull-supplied job stream which loads Integrated Software into memory requests 3800K of virtual memory. This value is normally sufficient for most sites.
2. Wired real memory pages for all buffers reserved for all batch and workstation processes executing portions of Integrated Software. The maximum number of real memory pages that Integrated Software can wire is defined via the -SET_MAX_WIRED_PAGES parameter.

NOTES: a. Every 1000K of virtual memory requires 1K of table space in wired real memory pages. Therefore, if less than the default allocation of virtual memory (3800K) is required, some real memory space can be saved by reducing the default allocation via the \$ RESOURC statement.

- b. Real memory requirements for Integrated Software are initially defined via the RSPACE filed on the \$ RESOURC statement in the job stream that spawns Integrated Software into execution. By default, 100K of real memory is reserved for Integrated Software. However, if this value is understated or overstated, the GCOS 8 System Dynamic Memory Manager program dynamically modifies allocated real memory for Integrated Software to meet the immediate demand. Integrated Software's working set is dynamically increased to reduce page faults during peak periods of processing. Conversely, memory is returned to the pool of available space for other uses during low-processing periods.

If the \$ RESOURC statement specifies insufficient space for the VSPACE, which Integrated Software is to load, Integrated Software aborts and an abort code of VF is issued.

The SLDL directive ASSIGN_SITE_PARAMETER -SET_MAX_WIRED_PAGES establishes the maximum number of real memory pages that Integrated Software may wire. The default for this parameter is 511(K). The range for the parameter value is 40-16384(K). If this parameter value is set too low, processes attempting to wire memory will abort. If the parameter value is set too high, performance of other applications run on the system may be impacted.

Processes encountering an Integrated Software memory allocation problem may abort with the error message:

```
UFAS ERR TYPE 8 - ERR # 015:  
UNABLE TO RECOGNIZE IO STATUS 477702000000 ON FILE ff  
or:  
IMG/WSM ERROR RETURN
```

issued to the Execution Report (where ff = file code).

Determining Minimum Wired Real Memory Page Requirements

Determining the number of wired real memory pages for Integrated Software may require some experimentation. The following formula yields a value that may be used as a starting point for determining a value for the `-SET MAX WIRED PAGES` parameter (i.e., maximum number of real memory pages that Integrated Software may wire). This wired real memory is used for executing Integrated Software and for other job-related functions (e.g., journalizing after images). When using this formula, it is recommended that each variable value specified represent the maximum expected during the load of Integrated Software.

The recommended approach for setting a final value for `-SET MAX WIRED PAGES` is to determine a value such that if all memory wired for Integrated Software (i.e., `SNUMB` of `SHARD`) were used, sufficient memory would still be available to support remaining system functions.

$$\text{minimum value for } \text{-SET_MAX_WIRED_PAGES} = S + P + B + J + A + H$$

<u>Variable</u>	<u>Description</u>
-----------------	--------------------

S	Integrated Software domain wired pages.
---	---

$$14 + (4 * n)$$

where n is the value specified via the site parameter `-TRACE BUFFER SIZE n` which determines the number of 4K trace buffers.

P	Wired real memory pages for system-wide protected file services. This value is required any time one or more executing jobs access protected files (i.e., files created with the <code>ACCESS/MONITOR/</code> , <code>ABORT/ROLLBACK/</code> , <code>ABORT/ARCHIVE/</code> , <code>ACCESS/CONCURRENT/</code> , and/or <code>RDERR/JOURNAL/</code> option specified).
---	--

This value is determined via the formula

$$(3 * F) + 5$$

where:

F - Number of different control interval sizes for all jobs accessing protected files at any one time. For example, if a total of 10 jobs access protected files at one time or another but only 3 jobs access the files at any one time and if control interval sizes are 256 and 512 (words), specify 2. Consequently, the number of wired pages required for system-wide protected file service is

$$(3 * 2) + 5 = 11 \text{ (K)}$$

<u>Variable</u>	<u>Description</u>
B	Wired real memory pages for buffer space required for protected files accessed by executing jobs. Determine this value via the formula

$$F * C * N$$

where:

F - Number of allocations to protected files of the same control interval size (C) for all executing jobs concurrently accessing those files.

C - Control interval size (in words) of the protected files. This is the page size for the files.

N - Default value is 2. Other values may be specified via the site parameter:

-PFIO_OPEN_BUFFERS bbb.

Repeat this formula for each different control interval size and derive a cumulative RSPACE value from the totals; then divide by 1024 to get the number for wired pages. Round the result upward to the nearest integer.

For example, three executing jobs access nine protected files with varying control interval sizes. Four files have 256-word control interval sizes, four files have 512-word control interval sizes, and one file has a 1024-word control interval size. The value for B would be:

$$[(4*256*2) + (4*512*2) + (1*1024*2)]/1024 = 8(K)$$

J Wired real memory for journalizing before images. If any file accessed by a process was created with the ABORT/ROLLBACK/ option, this value is required. Determine the value via the formula

$$3 + (3 * C * P)/1024$$

where:

C - Value for parameter -BJ_CISIZE (in words). Default is 704 words.

P - Maximum number of processes using before journals at any one time. For example, if a total of four batch processes use before journals at one time or another, but only two processes are executing at any one time, specify 2. Consequently, the amount of wired pages required for before journals (assuming the default value of 704 words is in effect for -BJ_CISIZE) is:

Variable Description

$$3 + \frac{3*704*2}{1024} = 8 \text{ (K)}$$

Refer to the GCOS 8 OS TP8 Administrator's Guide for information on the additional wired memory pages required for TP8 workstation processing.

A Wired real memory pages for system-level journals (i.e., archived before journals, after journals, and checkpoint journal). Specify 18K for the first (or only) journal implemented. For each additional journal created, add the following:

$$2 * B$$

where:

B - Control interval size (in K words) of the journal (i.e., value for BLKSIZ option of Create Journal (CRJR) command)

For example, assuming that an installation has one archived before journal and one after journal and that both journals are created with a BLKSIZ value of 2 (K), the value for A would be

$$18 + (2 * 2) = 22 \text{ (K)}$$

H Wired real memory pages for the historical log. If this feature is implemented (i.e., SDL D parameter -HISTORICAL LOG has a value of YES), this value is required. Determine the value via the formula

$$(C * 3)/1024$$

where:

C - Control interval size of historical log (SDL D parameter -HL_CISIZE) in words.

Round the result upward to the nearest integer.

For example, if -HL_CISIZE has a value of 2816 bytes (704 words) the value for H is

$$(704 * 3)/1024 = 3$$

The following example approximates the minimum wired real memory pages required at an installation where (1) -TRACE_BUFFER_SIZE parameter has a value of 1 (default); (2) there are two control interval sizes for protected files; (3) four files have a control interval size of 256-words and four files have a control interval size of 512 words; (4) a maximum of two processes journalize before images at any one time and the before journal has a control interval size of 2816 bytes (704 words); (5) one after journal and one archived before journal have been created; and (6) historical log is implemented with a control interval size of 28816 bytes (704 words).

S =	18 (K)	14 + (4 * 1)
P =	11 (K)	(3 * 2) + 5
B =	6 (K)	[(4 * 256 * 2) + (4 * 512 * 2)]/1024
J =	8 (K)	3 + (3 * 704 * 2)/1024
A =	22 (K)	18 + (2 * 2)
H =	3 (K)	(704 * 3)/1024
	68 (K)	

EXAMPLES APPROXIMATING WIRED REAL MEMORY PAGES REQUIREMENTS

The following examples suggest minimum wired real memory page requirements when batch processes access protected files. As previously indicated, these requirements represent a starting point for determining a value for the -SET_MAX_WIRED_PAGES parameter.

1. The following examples assume one 4K trace buffer. Add 4 for each additional 4K trace buffer.
2. The following examples assume PFIO_OPEN_BUFFERS is 2.
3. Each additional data base file having the same control interval size as those files already considered in the wired pages computation creates a requirement for additional wired real memory pages. The following formula needs to be evaluated for each such additional data base file:

$$B = (F * C * N) / 1024$$

where:

B = the number of wired real memory pages required for this file
 F = the number of processes accessing this file concurrently
 C = control interval size, in words
 N = 2 open buffers

If B is not an integer it should be increased to the next larger integer.

4. The value of B should be increased by 3 for each additional control interval size that is different from those already considered in the wired pages computation, to represent the overhead of each buffer pool.

Accessing One Protected File

NOTE: The value of B should be increased by 1 for each additional process accessing the data base file.

1. A minimum of 36 wired real memory pages is required when two batch processes access one data base file having the following characteristics:
 - o The file is allocated with Write/Concurrent permission.
 - o The file control interval size is 512 words.
 - o ACCESS/MONITOR/ and/or ABORT/ROLLBACK/ protection is specified.

2. A minimum of 54 wired real memory pages is required when two batch processes access one data base file having the following characteristics:
 - o The file is allocated with Write/Concurrent permission.
 - o The file control interval is 512 words.
 - o ACCESS/MONITOR/, ABORT/ROLLBACK/, and RDERR/JOURNAL/ permissions are specified.

*

Accessing Multiple Protected Files Of Same Control Interval Size

NOTE: The value of B should be increased by 2 for each additional process accessing the data base files.

1. A minimum of 38 wired real memory pages is required when two batch processes access two data base files, each of which has the following characteristics:
 - o The files are allocated with Write/Concurrent permission.
 - o The file control interval size is 512 words.
 - o ACCESS/MONITOR/ and/or ABORT/ROLLBACK/ protection is specified.

2. A minimum of 56 wired real memory pages is required when two batch processes access two data base files, each of which has the following characteristics:

- o The files are allocated with Write/Concurrent permission.
- o The file control interval size is 512 words.
- o ACCESS/MONITOR/, ABORT/ROLLBACK/, and RDERR/JOURNAL/ protections are specified.

*

Accessing Multiple Protected Files Of Different CI Size

NOTE: The value of B should be increased by 2 for each additional process accessing the data base files.

1. A minimum of 41 wired real memory pages is required when two batch processes access two data base files, which have the following characteristics:

- o The files are allocated with Write/Concurrent permission.
- o One file has a control interval size of 320 words; the other file has a control interval size of 512 words.
- o ACCESS/MONITOR/ and/or ABORT/ROLLBACK/ protection is specified for each file.

2. A minimum of 59 wired real memory pages is required when two batch processes access two data base files, which have the following characteristics:

- o The files are allocated with Write/Concurrent permission.
- o One file has a control interval size of 320 words; the other file has a control interval size of 512 words.
- o ACCESS/MONITOR/, ABORT/ROLLBACK/, and RDERR/JOURNAL/ protections are specified for each file.

*

Executing Only Unpurge

The minimum number of wired real memory pages required to execute only the Unpurge program (i.e., no other processing is occurring in the system) is 15. If the Unpurge program is executing with any other programs in the product set, use the preceding formula to determine the wired pages requirement.

INTEGRATED SOFTWARE SHARED DOMAIN LOADER (SDL) DIRECTIVES

The SDL directives specify configuration information for the load of the Integrated Software shared domains such as files to be allocated, domains to be included or excluded, domain patches, start and end of defaults or changes, comments, and the assignment of a shared space name.

The SDL directives are initially read from the I* filecode. The "ALLOCATE -DIRECTIVES" diverts the input to the specified input file. When an EOF is found in the directives file, processing of input continues from I*.

SDL Directives Syntax (General)

The SDL directives syntax is a subset of Honeywell Bull Control Language (HCL) with the following restrictions:

- CHARACTER-SET: BCD for the I* file (\$ DATA limitation); BCD or ASCII for "Allocate Directives" files.
- DELIMITER: SPACE is a field delimiter. Multiple or leading spaces are treated as one or ignored, except leading spaces cannot be used for continuation. The PATCH directive has a fixed format.
- CONTINUATION: Ampersand (&) specifies input continuation to the next input statement. DATA after the "&" is ignored (see NOTE).
- comments/remarks: The three-character escape sequence of "-- " (2 hyphens, space) indicates the beginning of a comment field. Data following the comment sequence is ignored (see NOTE).
- line-numbers: Line numbers are not allowed; use \$\$STRIP on ASCII files.

NOTE: The SDL LOAD-MAP generator checks arguments for a valid domain name; if found, the input line is listed in the Load Map for the specified domain.

SDL D Directives Format

The format of SDL D directives is:

<command> <arg> <keyword-1 arg-1>...<keyword-n arg-n>

where:

<command> = SDL D directive name
<arg> = Positional argument, as required
<keyword-1 arg-1>
<keyword-n arg-n> = SDL D keyword and the keyword argument (as required).
All keywords must begin with "-" (hyphen) (e.g.,
-LIBRARY, -PATHNAME).

NOTE: <Keyword arg> phrases may appear in any order. Abbreviated <command> and <keyword> forms are valid as described later, under "Directives Syntax (Specific)".

Shared Loader Domain Directives Description

The Shared Loader Domain directives specify the actions the SDL D performs and are described, alphabetically, as follows:

<u>Directive</u>	<u>Description</u>
ALLOCATE	Specifies a dynamically allocated file for SDL D execution. File options available are: -LIBRARY, for virtual domain Q* library -DIRECTIVES, for diverting the input stream to a directives file -BACKDOOR, for a backdoor print of LOAD-MAP -BPDIRECTIVES, for Buffer Pool directives file
ASSIGN_SITE_PARAMETER	Assigns site parameter values.
END_CHANGES	Specifies the end of the CHANGE directives.
END_DEFAULTS	Specifies the end of the DEFAULTS directives.
EXCLUDE_DOMAIN	Specifies a virtual domain not to be loaded (i.e., excludes a domain specified by the DEFAULT directives).
INCLUDE_DOMAIN	Specifies a virtual domain to load.
PATCH or OCTAL	Patches a virtual domain. Either format is fixed and consistent with the Startup PATCH directives format. The word PATCH is conventionally used for patches for Integrated Software.

<u>Directive</u>	<u>Description</u>
Remarks:	Remarks are specified by "-- " in columns 1-3. SDL D inserts "REMARKS" images in the Load Map when a valid domain-id is found in columns 73-78.
START_CHANGES	Specifies the beginning of the CHANGE directives.
START_DEFAULTS	Specifies the beginning of the DEFAULT directives.
NOTE:	The START and END directives specify a block of directives with consistent usage (i.e., an END DEFAULTS must follow the START_DEFAULTS and precede START_CHANGES). Also, MOST directives must be preceded by a START block directive. An exception is "ALLOCATE -DIRECTIVES", which may precede the START block directives.

Directives Syntax (Specific)

The general syntactical format for the directives was described earlier, under "SDL D Directives Syntax (General)". The specific format for each directive is described alphabetically below, with any valid abbreviations enclosed within parentheses "()".

ALLOCATE Directive (ALLO)

ALLOCATE <file-type> <path-name> <abt-ctl>

where:

<file-type> = -LIBRARY <lc> (-LIB <lc>)

To specify domain library allocation. <lc> is the library-code reference used on the INCLUDE_DOMAIN directive and is two alphanumeric characters. Library_code ".Q" is reserved for the DEFAULT search library.

-BACKDOOR <lc> (-BD <lc>)

To specify the backdoor load map print file. The default value for <lc> is ".B".

-DIRECTIVES <lc> (-DIRE <lc>)

To specify an input directives file. The default value for <lc> is ".D".

-BPDIRECTIVES <lc> (-BPDIRE <lc>)

To specify an input Buffer Pool directives file which will override the "\$ DATA BP" data file specified in SHARD.SPWN JCL. The default value for <lc> is "BP".

<path-name> = -PATHNAME <cat-string> (-PN <cat-string>)

To specify the pathname of the file to be allocated. <cat-string> is the catalog file string (e.g., UMC/CAT1/CAT2/FILE).

<abt-ctl> = -REQUIRED (-R)
To specify SLD fatal abort control if allocation fails. This is the default.

-OPTIONAL (-O)
To specify SLD non-fatal abort control if allocation fails.

Examples:

ALLOCATE -LIBRARY AA -PATHNAME UMC/CAT1/CAT2/FILE -REQUIRED
or ALLO -LIB AA -PN UMC/CAT1/CAT2/FILE -R

ALLOCATE -BACKDOOR -PATHNAME UMC/LOAD-MAP -OPTIONAL
or ALLO -BD -PN UMC/LOAD-MAP -O

ALLOCATE -DIRECTIVES -PATHNAME UMC/CHANGES (-REQUIRED is default)
or ALLO -DIRE -PN UMC/CHANGES

ALLOCATE -BPDIRECTIVES -PATHNAME umc/BP-DIRE
or ALLO -BPDIRE -PN umc/BP-DIRE

ASSIGN_SITE_PARAMETER Directive

ASSIGN_SITE_PARAMETER <keyword-1><arg-1>

where:

<keyword> is one of the allowed site parameter keywords. See "Site Parameters", earlier in this section.

<arg> is the value associated with the keyword.

NOTE: Only one site parameter is allowed per ASSIGN_SITE_PARAMETER directive.

END_CHANGES Directive

END_CHANGES

This directive specifies the end of the CHANGES directives and must appear as shown.

END_DEFAULTS Directive

END_DEFAULTS

This directive specifies the end of the DEFAULTS directives and must appear as shown.

EXCLUDE_DOMAIN Directive (EXCL)

EXCLUDE_DOMAIN <domain-id>

where: <domain-id> = Name of the domain to exclude.

Examples:

EXCLUDE_DOMAIN .MZZZZ
or EXCL .MZZZZ

INCLUDE_DOMAIN Directive (INCL)

INCLUDE_DOMAIN <domain-id> -LIBRARY <lc> <abt-ctl>

where:

<domain-id> = Name of the domain to be included.

-LIBRARY <lc> = <lc> specifies the library-code from which the domain is to be loaded (-LIB <lc>). If library <lc> is not located, library ".Q" is searched.

<abt-ctl> = -REQUIRED (-R)
To specify SLDL FATAL "ERROR" if the domain search fails.
This is the default.

-OPTIONAL (-O)
To specify a SLDL NON-FATAL "ERROR" if the domain search fails.

Examples:

INCLUDE DOMAIN .MZZZZ -LIBRARY XX -REQUIRED
or -INCL .MZZZZ -LIB XX -R
or -INCL .MZZZZ -LIB XX

PATCH Or OCTAL Directive

The PATCH and OCTAL directives have fixed formats as follows:

<u>Position</u>	<u>Description</u>
1-6	The 1-6 positions of the OCTAL location to patch.
8-12	"PATCH" or "OCTAL". "PATCH" is used by convention.
16-27	The 1-12 positions of the octal value for PATCH or OCTAL
n-72	Comments may be entered. There must be at least one space between a comment and the preceding field.
73-78	The domain-id to patch. This field is required.

Examples:

1	8	1 6	7 3
123	PATCH	1234 Set location 123=0...1234	.MZZZZ
000123	OCTAL	000000001234 Set location 123=00...1234	.MZZZZ

START_CHANGES Directive

START_CHANGES

This directive specifies the beginning of the CHANGES directives and must appear as shown. This directive must not precede the START_DEFAULTS ... END_DEFAULTS directives. See Figure 4-1, "Order Of SDDL Directives".

START_DEFAULTS Directive

START_DEFAULTS

This directive specifies the beginning of the DEFAULTS directives and must appear as shown. This directive must precede the START_CHANGES directive. See Figure 4-1, "Order Of SDDL Directives".

Remarks:

The SDDL remarks line is specified by "-- " in columns 1-3 of any directive and causes all data on that line to be ignored. However, if a valid domain-id is specified in columns 73-78, the remarks line is displayed in the Load Map domain-id section.

Examples:

1	8	1 6	7 3
---	---	--------	--------

```
-- THIS IS A "REMARKS" LINE WITH NO DOMAIN-ID  
-- THIS IS A "REMARKS" LINE THAT WILL APPEAR IN DOMAIN .MUTTD  
-- 0123 PATCH 007777001001 THIS DELETES A PATCH FROM .MZZZZ
```

NOTE: PATCH directives may be deleted by placing "-- " (dash, dash, space) in columns 1-3.

```
START DEFAULTS  
-- allocate all DEFAULT library files  
ALLOCATE -LIBRARY AA -PATHNAME path-name  
.  
.  
.  
ALLOCATE -LIBRARY ZZ -PATHNAME path-name  
ALLOCATE -LIBRARY .Q -PATHNAME path-name  
-- specify DEFAULT DOMAINS to be loaded  
INCLUDE DOMAIN .MUTTR -LIBRARY AA  
.  
.  
.  
INCLUDE DOMAIN .MZZZZ -LIBRARY ZZ  
END DEFAULTS  
-- allocate CHANGE directive file  
ALLOCATE -DIRECTIVES -PATHNAME change/path/name  
-- directives read from "change/path/name"  
START CHANGES  
ALLOCATE -LIBRARY AA -PATHNAME test/lib/aa  
EXCLUDE DOMAIN .MZZZZ -- don't load .MZZZZ  
0123 PATCH 123412341234 patch loc 123 .MUTTR  
ASSIGN SHARED NAME XYZ  
ALLOCATE -BACKDOOR -PATHNAME test/backdoor/file  
END CHANGES  
(EOF on directive file)  
(EOF on I*)
```

Figure 4-1. Order Of SLD Directives

Shared Domain Loader Configuration

The Shared Domain Loader (SDL) configuration is controlled by the ALLOCATE directive, which dynamically allocates the SDL input and output files. The dynamic allocation facility provides the ability to bypass the allocation of files that cannot be allocated when the -OPTIONAL control argument is specified. This allows non-fatal references to missing files (e.g., during cold boot).

The dynamic feature also provides configuration of Integrated Software options not ordered, without causing a fatal error during loading.

The ALLOCATE directive specifies the pathname which SDL uses to attempt dynamic allocation. Allocation errors are controlled by SDL instead of GEIN or PALC.

INPUT FILE ALLOCATION

Library Files

The SDL Library files are searched to load specified domains using a library code specifying unique files. The default value is ".Q".

Directive Files

SDL input Directive files can be dynamically allocated to allow for bypassing of CHANGE directive files during cold boot or any time a Directives file is missing.

OUTPUT FILE ALLOCATION

Backdoor File

Backdoor file allocation is done dynamically to prevent fatal aborts if the Backdoor file is unavailable; thus, preventing the listing of the Load Map via the Backdoor facility. A Backdoor file is not allocated in the DEFAULT directives, where, normally, no Backdoor Load Map is generated. The user may allocate the Backdoor file as desired.

JCL And Directives Usage

JCL REQUIREMENTS

SDLD is executed as a native mode batch process. The required virtual domains are loaded with the SNUMB "SHARD" and started during System Startup ROLLCALL. SDLD may be restarted with a set of JCL in a TSS JRN file or through the card reader. JCL requirements to load Integrated Software are:

```

1      8      1
1      8      6
-----
$      IDENT  <ident-image>
$      USERID <user-id$password>
$      RUN    RUFIL=SYSTEM,RUNAME=.VSDLD,OPTION=DUMP  (1)
$      RESOURC VSPACE=3800K                          (2)
$      PRIVITY
$      DATA  I*
$      - SDLD Directives (see Figure 4-1)
$      ENDJOB
```

- NOTES: 1. The \$ RUN JCL Statement invokes the SDLD loader from the installed set of system run units taken from the seed workspace image file.
2. The \$ RESOURC JCL Statement has the virtual space limits for Integrated Software loading.

LOADING REQUIREMENTS FOR INTEGRATED SOFTWARE DOMAINS

The SDLD directives are processed by SDLD from the I* file, normally, by using the "\$ DATA I*" JCL statement. The directives usually specify DEFAULT and, optionally, CHANGE directives.

The best method of configuring SDLD into the system uses the "ALLOCATE -DIRECTIVES" directive for DEFAULT and CHANGE file allocation. This method provides dynamic allocation of the directives files and documents the files used on the SDLD reports.

Example:

```

1      8      1
1      8      6
-----
$      DATA  I*
$      ALLOCATE -DIRECTIVES -PATHNAME UMC/DEFAULTS
$      ALLOCATE -DIRECTIVES -PATHNAME UMC/CHANGES
$      ENDJOB
```

The directives files may be allocated using GCOS allocation via a "\$ SELECT" JCL statement. The previous example can thus be restated as:

```
1      8      1
      _____
$      DATA  I*
$      SELECT UMC/DEFAULTS
$      SELECT UMC/CHANGES
$      ENDJOB
```

SDLD Standard DEFAULTS File

Notes 8-10 of "Loading Integrated Software for Execution" (earlier in this section) illustrate a load of all available domains for standard DEFAULTS and CHANGES directives using the SI4.2 virtual domain.

The CHANGES directives file normally contains replacements or additions to the DEFAULT directives to form a loader task block used for domain loading. The CHANGES directives replace matching DEFAULTS directives or add the task block entries when a match is not found.

The resulting task block directives are used in the domain load. An internal line number is assigned to each CHANGE and DEFAULT directive. The Load Map report displays the internal line number for each task block directive to provide reference to the DEFAULTS or CHANGES line number.

OPNSUTIL/SHARD FILE REQUIREMENT FOR CONSOLE SPAWN OF "SHARD"

The OPNSUTIL/SHARD file needs the following JCL statement to support the "SPAWN SHARD" console request:

```
1      8      1
      _____
$      SELECTD SYS_SOFTWARE/yyyy/JCL/SHARD.SPWN
```

where yyyy is the Software Release identifier, such as 3000.

SDLD Reports

SDLD output is Report Code 01 on the SYSOUT file and contains four sections:

1. The directives
2. The virtual domain load-map
3. Buffer Pool directives
4. The loader summary

All sections have a page header line containing:

- o The SNUMB assigned to the SLDL activity
- o The date and time of the SLDL execution
- o The report title - "INTEGRATED SOFTWARE DOMAIN LOADER"
- o The report type - Directives, Load Map, Summary, or BPDirectives
- o SLDL version (8SI4.2) and the SLDL assembly date
- o Report/page number

DIRECTIVES LIST

The Directives list is divided into DEFAULT and CHANGE Sections, with the directives listed in each block as assigned by their internal line number, which is carried with the directive into the load task block. During the domain load, each directive used is displayed in the Load Map and the respective DEFAULT or CHANGE line number to ease cross-referencing to the input directive.

The Directives list shows the exact content of each input line and the line number assigned to that line. Syntax errors are shown as they occur.

LOAD MAP LIST

The Load Map list consists of a domain Load Map for each domain loaded. Each domain Load Map block contains:

- o The domain subtitle line with the domain-id
- o The INCLUDE_DOMAIN directive for the domain-id
- o The ALLOCATE -LIBRARY directive used to load the domain-id
- o The domain memory allocation values
 - SEG address
 - ISR descriptor
 - Initialization entry
 - Patch Table Space
 - STI offset
 - STI value
 - Software protection notice

- o Module Information
 - Module name
 - Module number
 - Load offset
 - Assembly date
 - Title date
 - Transmittal logs
- o Patch directives applied
- o Remarks directives with domain-id in columns 73-78.
- o Fatal or non-fatal error messages

LOAD MAP SUMMARY

The Load Map Summary Section is produced after the last domain has been loaded, and contains the status for the following items:

- o Number of fatal errors
- o Number of non-fatal errors
- o Number of domains loaded
- o Number of pages required to load shared software
- o Number of buffer pool commands
- o Number of buffer pool command errors
- o Maximum wired pages allowed
- o Shared software <loaded successfully> or <aborted>
- o ASSIGN_SHARED_NAME <name>

BACKDOOR REPORTS

The "ALLOCATE -BACKDOOR" directive is required if the user wants a Backdoor Load Map report. This report duplicates the SDL D report code 01 and is released to SYSOUT at the end of the domain-load sequence. Report Code 01 is not available until the SDL D activity is aborted. SDL D normally does not terminate.

SDL D Error And Warning Messages

SDL D issues fatal and conditionally fatal (warning) error messages. Errors are controlled as follows:

- o When possible, the loading procedure continues until all directives are processed (the first fatal error does not stop the load process).
- o At the end of directive processing, if any fatal errors were encountered, processing terminates.
- o The Load Map Summary displays the count of fatal and non-fatal errors encountered.

FATAL ERRORS

MESSAGE: *** FATAL ERROR *** SYNTAX ERROR <reason>

CAUSE: Any directive syntax error is treated as fatal. The erroneous field (<reason>) indicates where the error occurred.

MESSAGE: *** FATAL ERROR *** SYNTAX ERROR -- DEFAULT/CHANGE CONFLICT

CAUSE: The START and END directives do not match. The correct sequence is:

START_DEFAULTS

.

.

END_DEFAULTS

START_CHANGES

.

.

END_CHANGES

NOTE: The CHANGE block is optional. The DEFAULT block is required.

MESSAGE: *** FATAL ERROR *** <PATCH statement processing>

CAUSE: Any PATCH statement error causes processing to abort; check all fields for:

- Invalid PATCH value
- Long field
- Non-octal characters (8 or 9)
- PATCH location out of bounds
- Invalid domain
- Non-applied patches; i.e., the domain needing to be patched was not loaded.

CONDITIONALLY FATAL ERRORS

The abort-control <abt-ctl> field determines if an error message is fatal or non-fatal by the use of the -REQUIRED/-OPTIONAL conditions. The following conditional errors are FATAL when issued in conjunction with a -REQUIRED option and NON-FATAL when issued in conjunction with an -OPTIONAL option:

MESSAGE: *** <error-type> ERROR *** <error message detected by file system>

CAUSE: Allocate directive condition incorrect.

MESSAGE: *** <error-type> error *** domain <DOMAIN-ID> NOT FOUND IN LIBRARY
<lc>

CAUSE: INCLUDE DOMAIN directive contains incorrect value(s).

NOTE: All error messages contain the term "FATAL" to provide an easy method to find loader errors using the TSS JOUT scan facility.

Example:

If the SDLD activity aborts, the scan output shows all errors and includes them in the Summary Report, as follows:

```
JOUT SNUMB
SCAN 01 D Y
PS:/FATAL/;*
```

SDLD Abort Codes

The SDLD abort codes are documented in the GCOS 8 OS Programmer Messages And Abort Codes manual.

MODIFYING INTEGRATED SOFTWARE ERROR MESSAGES

Integrated Software error messages that are issued to an Execution Report reside within the .MUTOR domain. These messages can be modified to revise message text and/or change the language in which message text is issued (e.g., from English to French).

Message modifications can be effected using the following procedure.

1. Review the existing messages. The following Time Sharing System command can be executed to generate a listing of all messages.

```
JRN SYS_SOFTWARE/yyyy/JCL/UTOR.CMPL
```

where yyyy = Software Release identifier, such as 3000.

2. Create a file on which installation-specific message modifications will reside.

3. Prepare \$ ALTER statements identifying all message modifications. Incorporate these statements into the file created in step 2.

Note that the content of this alter file can be modified and applied to the .MUTOR domain when subsequent system software releases are installed.

4. Incorporate a \$\$SELECT statement that identifies the pathname for the alter file created in step 2 into the JCL residing on the file pointed to by pathname,

```
SYS_SOFTWARE/yyyy/JCL/UTOR.CMPL
```

where yyyy = Software Release identifier, such as 3000.

Modify the \$ IDENT statement to site specifications. Store the resulting JCL file at a site-created pathname.

5. Execute the following Time Sharing System command to rebuild the .MUTOR domain.

```
JRN fffff
```

where fffff is the pathname of the file created in the last step.

The next time GCOS 8 system software is booted with "RESTART NO", installation-specific message modifications will be issued to Execution Reports.

In conjunction with message modification, the following may prove beneficial:

- o Review the Load Map generated the next time Integrated Software (SNUMB of SHARD) executes. Verify that the UTOR module shows the assembly date on which the message modifications were bound in.
- o Retain the alter file prepared in steps 2 and 3 to use in rebuilding the UTOR module when a subsequent GRR is restored.



SECTION 5

STARTUP JOB STREAM

The Startup job stream comprises six sections in the following fixed sequence:

```
$CONFIG
$INITIALIZE
$EDIT
$FILES
$PATCH
$LOAD
```

Each of the six sections serves a distinct purpose. For example, one section defines the site's hardware configuration, while another section applies patch corrections to GCOS programs. The purpose of each section and the control statements required and permitted in each section are described below.

If a section is not in the proper position, the console message *EXPECT s...s FIX TYPE GO, OR TYPE STOP is issued (where s...s = name of the section that is out of sequence). The operator can enter BOOT via the system console to halt the bootload, place the section in the proper position, and initiate a warm boot.

Only two of the sections (\$CONFIG and \$FILES) are required to be processed. For various reasons, processing of the other sections may be bypassed. For example, processing of the \$INITIALIZE and \$EDIT sections can be bypassed if the operator enters NO in response to the *INITIALIZE? and *EDIT? questions when issued to the system console; the \$PATCH section can be omitted if there are no patches to apply via this section; and the \$LOAD section is required only to load qualifying modules into main memory.

Each section is delimited by a section identification statement and a ***EOF statement. The section identification statement specifies the section name, which begins in column 1 (e.g., \$CONFIG). Following the ***EOF statement delimiting the last section in the Startup job stream, another ***EOF statement must be included to denote the end of the Startup job stream.

A section identification statement and ***EOF statement are not required if a section is not included in the Startup job stream.

Duplicate statements are invalid and can cause the Startup program to abort. In other instances, the duplicate statements are ignored by Startup and identified via a console message.

COMMENTS IN STARTUP JOB STREAM

Comments can be included on any statements, including section identification statements, in the Startup job stream. Any comment included on a ***EOF statement is ignored. At least one blank space must separate a comment from Startup data. Comments cannot be continued to another statement. A statement with ** in character positions 1 and 2 contains nothing but a comment.

Comments are printed on a dump report when a dump is requested. In addition, quotation marks (" ") cause the enclosed comment to be printed at the system console. For example, the comment on each of the following statements is printed at the console when the statement is processed:

```
      1
1      8      6
-----
$CONFIG "DEFINING MS0450 SYSTEM "
...
$ INIT ST1,DS1 "DESTROY PERM FILES?"
```

An exception to printing comments at the console is when the operator responds NO to either the *INITIALIZE? or the *EDIT? question. If the operator responds NO to *INITIALIZE?, only comments on the \$INITIALIZE section identification statement are printed. Comments on all other statements in the \$INITIALIZE section are ignored. If the operator responds NO to *EDIT?, only comments on the \$EDIT statement are printed. Comments on all other statements in the \$EDIT section are ignored.

RULES FOR NOTATION

The following rules apply to the notations used in the descriptions of the Startup statements:

1. Parameters enclosed in brackets, [], are optional and may be included or omitted, as required by the user. Optional fields can appear in any sequence following the required fields unless a requirement for a specific sequence is stated in the description of the statement.
2. When parameters are enclosed in braces, { }, one, and only one, of the enclosed parameters must be chosen.
3. An ellipsis, ... , indicates that the preceding parameter may be repeated.
4. The vertical bar "|" indicates that a choice among the parameters separated by vertical bars must be made.
5. All text printed entirely in uppercase letters must be typed as is, unless the portion of the general form containing it is itself optional.
6. Any spaces, semicolons, commas, dashes, parentheses, etc., shown in the general form are required punctuation.

\$ ETC STATEMENT

In most cases, data can be continued from a Startup statement onto a \$ ETC statement. (Those instances in which a \$ ETC statement cannot be used are identified in the descriptions of the statements, later in this section.) A comma must terminate the statement preceding each \$ ETC statement. The \$ ETC statement must reflect the format of the statement that it is continuing. For example, a \$ IOX statement might be continued as follows:

		1
1	8	6
<hr/>		
\$	IOX	CH-14,MS0450,UNITS-2,
\$	ETC	UNIT-1,MS1,
\$	ETC	UNIT-2,MS2

NOTE: In this example, the use of "CH-14" to assign channel 14 is equivalent to "PUB-14". Both are valid designations and are interchangeable.

\$CONFIG SECTION

The \$CONFIG section defines system software and system hardware parameters. The \$CONFIG section is one of two sections required in the Startup job stream (the other is the \$FILES section). Control statements in this section define device connections, device characteristics, shared mass storage devices, and the maximum hardware configuration. This section is preceded by MASK statements and followed by the \$INITIALIZE section in the Startup job stream.

Internal configuration and device control tables are derived from \$CONFIG section information. When a device rollcall is performed during the initialization portion of the bootload, connections are verified and the status of peripheral devices is determined. Inoperable devices at System Startup time are released, but the entries remain within internal tables so that the devices may be restored (i.e., assigned) to the system at a later time.

Startup also performs a survey of processors and initializes .CRCMC for each processor during \$CONFIG section processing. (Refer to "Processor Release And Assignment At Startup" in Section 3 for additional information and to the GCOS 8 OS System Tables manual for the .CRCMC format.)

Startup issues the following questions, described in Section 2 under "Startup-Operator Interface", to the system console during \$CONFIG section processing:

- o *RETAIN CONFIGURATION?
- o *RESTART?
- o *SCF CONTINUATION?
- o *DATE?
- o *TIME?
- o *DATE mmddyy TIME hh.mmm
- o *CHANGE DATE?
- o *CHANGE TIME?
- o *ENTER TIME OR ENTER A CORRECTION FACTOR?
- o *CHANGE > 5 MIN. YES TO ACCEPT?

System configurations vary greatly depending upon the choice of configuration options in the \$CONFIG section. Peripheral device options permit the system to be tailored to the needs of the site. For this reason, it is recommended that preparing the \$CONFIG section be closely coordinated, so that the configuration described in the Startup job stream accurately reflects the physical configuration of devices.

The following are requirements for the \$CONFIG section control statement sequence:

1. Several options on the \$ INFO statement (e.g., MIXED, RLSDSK, RLSPNT) and the \$ BASE statement must precede the \$ MCT and any input/output controller (i.e., \$ IOM/IOX/IOP/IMU/IMX) statements.
2. The \$ MCT/\$ CIU statement must precede all input/output controller statements.
3. The input/output controller statements must precede \$ XBAR statements, which, in turn, must precede the \$ MPC statement.
4. The \$ IMAGE statement(s) must precede any \$ TRAINS statement(s).
5. The \$ GCOSFIL statement must follow the mass storage \$ Iyy statement(s).

The following statement types, described later in this section, are accepted by the \$CONFIG section of Startup for DPS 8, DPS 8000, DPS 88, and DPS 90 systems, unless a system type (DPS xx) follows the statement type. In that case, the statement is valid only in the system(s) indicated.

\$ ANSWER	\$ IMAGE	\$ MPC
\$ AUTOLD	\$ IMU (DPS 8)	\$ MPCFIG
\$ BASE	\$ IMX (DPS 8000)	\$ SECURE
\$ CHAN	\$ INFO	\$ SHARED
\$ CIU (DPS 88, DPS 8000)	\$ IOM (DPS 8)	\$ SYID
\$ DECKFIL	\$ IOP (DPS 90)	\$ TRACE
\$ DUP	\$ IOX (DPS 88)	\$ TRAINS
\$ FILCREA	\$ LOADFIL	\$ UNIT
\$ GCOSFIL	\$ MCT (DPS 8, DPS 90)	\$ URP
\$ GROUP		\$ XBAR

\$ ANSWER Statement

The \$ ANSWER statement allows site personnel to provide answers, in the Startup job stream, to questions that otherwise are directed to the system console during System Startup or dump operations. Any System Startup or dump questions with answers defined via the \$ ANSWER statement are not issued to the console. Conversely, questions without predefined answers are issued to the console and require operator response via a console entry.

The \$ ANSWER statement normally is used to expedite warm and fast boots (i.e., to circumvent console questions requiring operator responses).

Answers to System Startup and dump questions are specified in the format qqqqqq/aaaaa (where qqqqqq = parameter denoting a specific question, and aaaaa = answer). The question parameters and related answers can be specified in any sequence (e.g., the SSCLEAR parameter and answer can precede the RESTART parameter and answer).

Answers to multiple questions can be defined on one \$ ANSWER statement, using the comma as a separator. If one statement does not accommodate all responses, information can be continued onto additional \$ ANSWER statements or onto \$ ETC statements. Some sites have found that one question parameter and its related answer per \$ ANSWER statement simplifies maintenance of the Startup job stream when only one answer is to be changed or removed.

If at least one \$ ANSWER statement is encountered, Startup issues the *CHANGE? question to the console during the bootload sequence. If the operator responds YES, the \$ ANSWER statements are ignored for that bootload.

The format for the \$ ANSWER statement is:

		1
1	8	6

\$ ANSWER qqqqqq/aaaaa,...

Tables 5-1, 5-2, and 5-3 indicate which System Startup and dump questions can be answered on the \$ ANSWER statement, along with the format for the parameter denoting the question and the format for the answer. (Refer to "Startup-Operator Interface" in Section 2 for additional information on system Startup questions.) Table 5-2 indicates additional Startup questions for which answers can be defined; however, because these questions are issued only under special circumstances, \$ ANSWER should not be used for these questions.

It is not possible to guarantee that a mass storage device will be fully initialized when using \$ ANSWER statements to answer Startup questions.

Table 5-1. Frequently Used \$ ANSWER Responses To Startup Questions

<u>Startup Question To Be Answered</u>	<u>\$ ANSWER Parameter (qqqqqq/aaaa)</u>
*RETAIN CONFIGURATION?	RETCONFIG/YES RETCONFIG/NO
*RESTART?	RESTART/YES (See note 1.) RESTART/NO
*SCF CONTINUATION?	SCF/YES SCF/NO
*TIME?	TIME/NO (See note 2.)
*INITIALIZE?	INITIALIZE/YES INITIALIZE/TOTAL INITIALIZE/PARTIAL INITIALIZE/NO
*EDIT?	EDIT/YES EDIT/PARTIAL EDIT/NO
*SYSTEM SCHEDULER CLEAR?	SSCLEAR/YES (See note 1.) SSCLEAR/NO
*PROCESSOR ON PORT p DOESN'T ANSWER CONNECT	PROCERROR/YES (See note 3.)
*SYSOUT RECOVERY?	SYSOTRCVY/YES (See note 4.) SYSOTRCVY/NO

- NOTES: 1. If the *RESTART? question is answered RESTART/YES on the \$ ANSWER statement, Startup automatically answers the *SYSTEM SCHEDULER CLEAR? question NO.
2. Once the time has been established via an operator entry, Startup continually updates the time. Use of this option ensures that the most recent time saved by Startup is used to answer the *TIME? question.
3. A PROCERROR/YES response indicates that a warm or fast boot is desired following release of the slave processor. A PROCERROR/NO response aborts the Startup program and is invalid on the \$ ANSWER statement. (Refer to "Processor Release And Assignment At Startup", in Section 3 for additional information.)
4. A SYSOTRCVY/YES answer allows for recovery of system output regardless of answers to RESTART questions.

Table 5-2. Special \$ ANSWER Responses To Startup Questions

Startup Question To Be Answered	\$ ANSWER Parameter (qqqqqqq/aaaaa)
*FORMAT/LABEL QUESTIONS?	LABEL/YES LABEL/NO
*FORMAT/LABEL QUESTIONS?	FORMAT/YES FORMAT/NO
*INIT DEVICE ddd?	INIT/YES INIT/SECONDARY INIT/NO
*INIT SHARED DEVICE ddd?	SINIT/YES SINIT/SECONDARY SINIT/NO
*INIT RMVBL DEVICE ddd?	RINIT/YES RINIT/SECONDARY RINIT/NO
MPC ON icc PRE-INITIALIZE?	INITDAU/YES INITDAU/NO
SHARED MPC ON icc PRE-INITIALIZE?	INITSHRDAU/YES INITSHRDAU/NO
PROCESS DIRECTORY CARD FOR DEVICE ddd?	DIRECT/YES DIRECT/NO
PROCESS DIRECTORY CARD FOR SHARED DEVICE ddd?	SDIRECT/YES SDIRECT/NO
*SHARED MPC on iccc APPEARS OK, BOOTLOAD?	SBOOTLOAD/YES SBOOTLOAD/NO
*xxxMPC ON iccc BOOTLOAD SYS ID NAME "y...y" REV.zz?	BOOTLOAD/YES BOOTLOAD/NO
*xxxMPC ON iccc APPEARS OK, BOOTLOAD?	BOOTLOAD/YES BOOTLOAD/NO
*CLEAR AND OVERWRITE EXISTING DECKFILE? (FIRMWARE)	DECKCLEAR/YES DECKCLEAR/NO
*Iyy-n NOT RESPONDING - YES TO CONTINUE OR R TO RETRY	IOMERROR/YES IOMERROR/NO

NOTE: The SYSTEMMAP/NO response inhibits printing of a system map and a file map. There is no console message offering this option.

Table 5-3. \$ ANSWER Responses To Dump Questions

Dump Question To Be Answered	\$ ANSWER Parameter (qqqqqqq/aaaaa)
SELECT DEVICE: (PRINT), (DISK), PRINTER NAME (PR1), (DDD/TAPE#,DENSITY), (NONE)	DUMPON/PRINT DUMPON/(ttt/rrrr,dddd) DUMPON/DISK DUMPON/NONE
ADDITIONAL OPTIONS: ALL,HCM,SOFT,SLV,W/XX, P/XX,REAL,NPURE,NONE,DEVICE,DUMPO,(-)SD.XXX, .MXXXX,PH.XXX,PSH,SSF,HIS,TRC,COM,PTW,ONLY, EXEC,FLTKPX,CACHE,SDC,AUTO,PAED,RES,END	DUMP/ALL DUMP/HCM DUMP/SOFT DUMP/SLV DUMP/Wxxx-yyy (W/xxx-yyy) DUMP/ppp (P/ppp) DUMP/REAL DUMP/NPURE DUMP/NON DUMP/OPTS DUMP/SD.sss DUMP/.Mmmmm DUMP/PH.sss DUMP/PSH DUMP/SSF DUMP/HIS DUMP/TRC DUMP/COM DUMP/PTW DUMP/ONLY DUMP/SDC DUMP/EXEC DUMP/FLTKPX DUMP/AUTO DUMP/PAED DUMP/RES DUMP/CACHE
*BOOT SOURCE: AUTO OR REPL?	BOOT/AUTO BOOT/REPL

*

where:

ttt - Logical device name of the magnetic tape handler
 rrrr - Tape reel number
 dddd - Tape density
 xxx-yyy - Dump working spaces
 ppp - Dump known process index
 sss - Segment identification
 mmmm - Module identifier

The following example specifies that job restart (RESTART/YES) is desired, that system restart is to occur from the Startup job stream residing on the AUTOLOAD file (BOOT/AUTO), that statistical collection is to resume at the point of interruption (SCF/YES), that neither the initialization nor the edit function is desired (INITIALIZE/NO and EDIT/NO), that the SSFILE is not to be cleared (SSCLEAR/NO), that a warm or fast boot is desired following release of the slave processor (PROCERROR/YES), and to use the most recent time saved by Startup to answer the *TIME? question (TIME/NO).

```

1      8      1
1      8      6
-----
$      ANSWER  RESTART/YES,BOOT/AUTO,SCF/YES
$      ANSWER  INITIALIZE/NO,EDIT/NO,SSCLEAR/NO,PROCERROR/YES,TIME/NO

```

\$ AUTOLD Statement

The \$ AUTOLD statement specifies the permanent mass storage device on which the AUTOLOAD file is to reside and defines the file size. (This device is referred to as the AUTOLOAD device.) The Startup job stream is written to the AUTOLOAD file, and used during subsequent warm and fast boots.

If the \$ AUTOLD statement does not specify a device, the AUTOLOAD file is written to the first nondedicated mass storage device that is defined on a \$ GCOSFIL statement. Note that Startup also writes the content of the file specified on the \$ DECKFIL statement to the AUTOLOAD device.

The format for the \$ AUTOLD statement is:

```

1      8      1
1      8      6
-----
$      AUTOLD  ddd,n

```

where:

ddd - Logical device name of the mass storage device on which the AUTOLOAD file is to reside. For device types requiring unit numbers of the form UNIT-uu.s, where s is the subunit number, the AUTOLOAD file must be assigned to a logical device for which s is zero.

n - Size (in llinks) of the AUTOLOAD file. The default size and minimum size is 600 llinks.

The following example shows the AUTOLOAD file specified to reside on mass storage device DS3, with the default size of 600 llinks.

```

1      8      1
1      8      6
-----
$      AUTOLD  DS3

```

\$ BASE Statement

The \$ BASE statement defines the maximum site mainframe configuration and, thus, the amount of memory to be allocated in memory-resident tables for input/output controllers and network processors.

The configuration panel switches or configuration file must be set to reflect the number of input/output controllers and network processors specified on the \$ BASE statement. These settings apply regardless of the number of input/output controllers, network processors, and CPUs configured on the system. This allows mainframe components to be added or deleted without changes to either the Startup job stream or mailbox switches.

The \$ BASE statement, when supplied, must precede the \$ MCT/\$ CIU statement. If it is not supplied, memory is allocated in memory-resident tables for the number of input/output controllers and network processors described in the \$CONFIG section of the Startup job stream.

The format for the \$ BASE statement is:

1	8	1
<hr/>		
\$	BASE	{IMU-x},DN-y {IMX-x} {IOM-x} {IOP-x} {IOX-x}

where:

- x - Maximum number of input/output controllers used by the site.
- y - Maximum number of network processors for DNET/ROUT mode plus any configured On Line Page Processing Systems used by the site (exclude Network Processors for CXI mode). The value y can range from 0-16 and should be equal to n in the FNP/n parameter of the \$ INFO statement. There is no default value.

The following example specifies that memory is to be allocated in memory-resident tables for four IOMs and four network processors. Note that the same type of statement can be used in a DPS 88 environment by specifying IOX-2 (maximum of 2 IOXs) instead of IOM-4, and in a DPS 90 environment by specifying IOP-4 instead of IOM-4.

1	8	1
<hr/>		
\$	BASE	IOM-4, DN-4

\$ CHAN Statement

The \$ CHAN statement permits peripheral devices to be switched from one channel to another during Startup by specifying another channel for the device. Any number of \$ CHAN statements can be included in the Startup job stream.

The format for the \$ CHAN statement is:

```
1      8      1
1      8      6
-----
$      CHAN   Iyy-a,{PUB-b},Iyy-c,{PUB-d},message
                {CH-b }      {CH-d }
```

where:

Iyy-a,{PUB-b} - A channel previously configured on a \$ Iyy or \$ XBAR
{CH-b } statement (Iyy = IMU, IMX, IOM, IOP, or IOX).

Iyy-c,{PUB-d} - A channel not previously configured.
{CH-d }

If Iyy-a has been released by Startup, all references to Iyy-a,PUB/CH-b are changed to reference Iyy-c,PUB/CH-d (assuming they have not been released). The system operates as though the devices configured on Iyy-a,PUB/CH-b have been configured on Iyy-c,PUB/CH-d.

The user specified "message" in the control statement is issued to the system console if Iyy-a has been released and Iyy-c has not been released. If Iyy-a has not been released or if both Iyys have been released, the control statement is ignored.

The example below indicates that PUB-20 on IOM-2 has been previously configured and that PUB-16 on IOM-3 has not been previously configured.

```
1      8      1
1      8      6
-----
$      CHAN   IOM-2,PUB-20,IOM-3,PUB-16,NOTIFY SITE OPS
```

If IOM-2 is released during Startup, the following message is displayed on the system console:

NOTIFY SITE OPS

\$ CIU Statement

For the DPS 88 the \$ CIU statement defines the memory size, number of processors, and IOXs connected to the CIU. For the DPS 8000 the \$ CIU statement defines the memory size, number of processors, and IMXs connected to the SCU. The \$ CIU statement must precede all \$ IOX or \$ IMX statements. Only one \$ CIU statement may be specified. For DPS 8 and DPS 90, see "\$ MCT Statement", later in this section. The \$ MCT statement cannot be used for DPS 88 and DPS 8000.

The fields of the \$ CIU statement can be arranged in any order; however, CPUs and IOXs or IMXs must be configured contiguously, beginning with 0.

```
1      8      1
      6
-----
$      CIU    [MEM/sss,]PRO-n,{IMX-m|IOX-m}
```

where:

MEM/sss - The number of blocks of 1K words of memory configured into the system. The maximum value is the total available memory size; however, it need not be set to that value.

If this field is omitted, the available memory is determined via a survey of reserved memory by the SSF or service processor.

PRO-n - Required for every CPU configured into the system (maximum = 4). CPUs must be configured contiguously, beginning with 0.

IMX-m - Required for every IMX or IOX configured into the system. IMXs or IOX-m IOXs must be configured contiguously, beginning with 0.

The following example defines a system with 2048 1K blocks of memory, two CPUs, and two IOXs:

```
1      8      1
      6
-----
$      CIU    PRO-0,PRO-1,IOX-0,IOX-1,MEM/2048
```

The minimum memory size required to support GCOS 8 is 4MB. If less than this is specified, Startup will issue the following error message and abort:

GCOS-8 REQUIRES AT LEAST 1024K OF MEMORY

\$ DECKFIL Statement

The \$ DECKFIL statement specifies the name of the file to which the MPC Bootload (MPCB) and firmware data decks are written. The file also contains the MPCC deck (table), which is used to pass data to the MOLTS subsystem of the Total Online Test System (TOLTS).

The deckfile is created on the same permanent mass storage device that contains the AUTOLOAD file (refer to "\$ AUTOLD Statement", earlier in this section). The size of the deckfile, which also is specified on this statement, is dependent upon the size of the MPCB, firmware data, and MPCC decks. For this reason, it is recommended that site personnel verify the file size with the site's Customer Service Division (CSD) representative.

If the \$ DECKFIL statement is not included in the Startup job stream, a file with the name DECKFILE is created by default.

The deckfile can be rebuilt during a warm or cold boot. The operator must respond YES or PARTIAL to the *INITIALIZE? question and YES to the CLEAR AND OVERWRITE EXISTING DECKFILE? question during the bootload procedure. (Refer to "*INITIALIZE? Question" and to "CLEAR AND OVERWRITE EXISTING DECKFILE? Question" in Section 2 for additional information.)

The format for the \$ DECKFIL statement is:

1	8	1
		6

\$ DECKFIL fffff,n[/O]

where:

fffff - Name of the deckfile (maximum of 12 characters), the first four characters of which must be "DECK".

n - Size (in llinks) of the deckfile. There is no default size; therefore, this field must be defined.

/O - Overwrite any existing deckfile (letter O).

The following example allocates the deckfile named DECKFILE 250 llinks of space on the permanent mass storage device containing the AUTOLOAD file. Any existing deckfile contents are to be overwritten (/O).

1	8	1
		6

\$ DECKFIL DECKFILE,250/O

NOTE: To install the Integrated Firmware And Diagnostic (IFAD) tape, a corresponding DECKFILE Extension File must be created, and a \$ PFILES statement must be included in the \$EDIT and \$FILES sections of the Startup job stream. The DECKFILE Extension File uses the same name as the DECKFILE, except replace "DECK" with "TAND" (e.g., "DECKFILE" becomes "TANDFILE").

IFAD - integrated firmware & diagnostic

\$ DUP Statement

The \$ DUP statement specifies two removable disk devices which are to be associated with each other as primary and secondary mirrored disk devices. The \$ DUP statement has the following format:

1	8	1
<hr/>		
\$	DUP	ddd,Iyy-m,{CH-p},{UNIT-uu } {PUB-p} {UNIT-uu.s}

where:

- ddd - Logical device name of the primary device.
- m - Number of the Iyy to which the secondary device and channel (CH/PUB) are connected. The value of m can be 0-3. Iyy = IMU, IMX, IOM, IOP, or IOX.
- p - Iyy channel (CH/PUB number to which the secondary device is connected).
- uu - Logical device identification number of the secondary device. The uu.s subunit portion (.s) of this field is only valid for some device types. (Refer to Table 5-4, later in this section, for the valid form for each device type.)

Both devices (primary and secondary) of a pair must be defined via \$ Iyy statements before using the \$ DUP statement to establish the pairing. The secondary device must be configured with the device name of SPARE.

\$ FILCREA Statement

The \$ FILCREA statement creates the FASTBT file used by the fast boot feature. The \$ FILCREA statement has the following format:

1	8	1
<hr/>		
\$	FILCREA	FASTBT,fffff

where:

- fffff - Name of the fast boot disk reload file (maximum of 12 characters).

\$ GCOSFIL Statement

The \$ GCOSFIL statement identifies all devices on which files, identified in the \$CONFIG section and the \$EDIT section, can reside. When searching for \$CONFIG section and \$EDIT section files, Startup checks only devices identified on the \$ GCOSFIL statement(s).

The format for the \$ GCOSFIL statement follows.

1	8	1 6
---	---	--------

\$ GCOSFIL ddd[,ddd]...

where:

ddd - Logical device name. A maximum of 63 devices can be identified.

The following example indicates that system files are permitted on devices DP3, DP4, DP5, and DP6. Other devices in the configuration (e.g., DP2, DP7, and DP8) are reserved for other uses. For example, one device may be reserved for recovery purposes, another may be defined as removable (RMVBL) - system files cannot reside on removable devices - and another may be reserved for user data base purposes.

1	8	1 6
---	---	--------

\$ GCOSFIL ST1,DP3,DP4,DP5,DP6

\$ GROUP Statement

The \$ GROUP statement identifies the physical channels of the IMU/IMX/IOP/IOX to which an MSU3380, MSU3381, MSS8080, or MTS8200 subsystem is physically connected. The \$ GROUP statement also identifies the logical channels associated with those physical channels. The \$ GROUP statement is required for MSU3380, MSU3381, MSS8080, and MTS8200 subsystems and is optional for other devices. A separate \$ GROUP statement is required for each subsystem. The \$ GROUP statement has the following format:

1	8	1 6
---	---	--------

\$ GROUP Iyy-m, {PUB-p-q}[, {PUB-p-q}]...[,
 {CH-p-q }[{CH-p-q }]

\$ ETC Iyy-n, {PUB-r-s}[, {PUB-r-s}]...[,
 {CH-r-s }[{CH-r-s }]

where:

Iyy - IMU, IMX, IOP, or IOX.

m,n - Number (0-3) of the Iyy to which the MSU3380, MSU3381, MSS8080, or MTS8200 subsystem is connected.

p,q,r,s - Iyy channel (CH/PUB) number. Permissible values are:

IMU	8-63
IMX	0-127
IOP	8-63
IOX	0-127

Channel number p (and r) must be the primary channel. Channel number q (and s) must be the last logical channel number in the group to which the subsystem is connected. Logical channels for the same physical channel are specified using the hyphen (-) as a separator indicating consecutive channels. Channels on a different subsystem are specified using another \$ GROUP statement. Physical channels to a subsystem are specified using a comma as a separator on the \$ GROUP statement. Each physical channel number on \$ Iyy and \$ XBAR statements for MSU3380, MSU3381, MSS8080, and MTS8200 must be specified on a \$ GROUP statement.

Example:

1	8	1
		6

\$ GROUP IMU-1,CH-40-43,CH-50-53

Channels 40 and 50 are physical channels; channels 41, 42, 43, 51, 52, and 53 are logical channels.

\$ IMAGE Statement

The \$ IMAGE statements provide a logical representation of the characters on a physical belt. Each position in the image corresponds to the graphic character on the belt at that position. Placement of a particular internal code in that position on the image causes that internal code to print as the graphic character at that position on the belt. The image defined on \$ IMAGE statements replaces the standard ASCII or BCD image. The \$ IMAGE statement defines the image of a printer belt to replace the default image associated with a specific printer type. The default images are defined in an internal buffer of the Startup program.

In addition, the first six 64-word sectors of the PRINTIMAGE file, containing the print train catalog and the VFC catalog, are overwritten with information from the \$ IMAGE statement. Overwriting of the catalogs on the PRINTIMAGE file destroys existing file content.

If Startup detects a difference in the content of the PRINTIMAGE file and the \$ IMAGE statements, the following error message will result:

```
*CHECKSUM ERROR, FILE PRINTIMAGE
* ANSWER YES TO IGNORE ERROR AND CONTINUE
* ANSWER NO TO ABORT, & THEN EDIT PRINTIMAGE.
```

If the file contained any images other than standard printer belt and vertical format control (VFC) images, the TVIM program must be used to rebuild the images on the file. (Refer to "Printer Belt Characters/Codes" in the GCOS 8 OS System Operating Techniques manual for PRINTIMAGE file information and for procedures to use the TVIM program.)

Default printer belt images can be restored to both the internal Startup buffer and the PRINTIMAGE file during a bootload from punched cards or magnetic tape. Re-edit the PRINTIMAGE file by defining the file on a \$ FILDEF statement in the \$EDIT section of the Startup job stream and responding YES to the *EDIT? question during the bootload procedure.

All \$ IMAGE statements must precede the \$ TRAINS statement (or its related \$ ETC statement) in the Startup job stream. If the \$ IMAGE statements follow the \$ TRAINS statement, Startup aborts. (Refer to the \$ TRAINS, \$ Iyy, and \$ FILDEF statements in this section for additional printer-related information.)

Each printer belt has 240 character positions to be defined. Multiple \$ IMAGE statements are used (15 for ASCII belts, 5 for BCD belts) for this purpose. Continue the printer belt definition from one \$ IMAGE statement to another. Do not use a \$ ETC statement to continue the definition. Startup aborts if a \$ ETC statement is used for this purpose.

Startup also aborts if information in the printer belt identification number (nnnn) or \$ IMAGE statement sequence number (s) field is incorrect.

The format for the \$ IMAGE statement is:

```
1      8      1
1      8      6
-----
$      IMAGE  ppp,ccc,nnnn,s,x...x
```

where:

ppp - Printer type number:

4nn

where nn = any numerical value

ccc - Printer belt being replaced:

BCD - Replacing standard BCD printer belt

ASC - Replacing standard ASCII printer belt

nnnn - Printer belt identification number (octal) of the standard belt being replaced. The software identification of any belt is obtained by converting the belt number (given in decimal) into its octal equivalent (e.g., for the PRB0500 belt, 0500 (decimal) = 764 (octal), so the software identification is 764). For PR54 printer belts the first digit (3) should be dropped before conversion (e.g., PRB3600 is converted by dropping the 3, and then converting 600 (decimal) to 1130 (octal)).

<u>PRB Number</u> <u>(decimal)</u>	<u>(octal)</u>
0500 or 3500	764
0600 or 3600	1130

s - \$ IMAGE statement sequence number, one or two digits, starting with 1 (or 01) and incrementing by 1, up to 15 for ASCII belts or 5 for BCD belts. Within a range of sequence numbers (1-15 or 1-5), Startup will abort if the ppp, ccc, and nnnn fields do not remain constant.

x...x - When ccc = ASC this field defines a sequence of 16 of the 240 character positions of the printer belt replacing the standard printer belt for this device. Each position is specified by three octal digits.

When ccc = BCD this field defines a sequence of 48 of the 240 character positions of the printer belt replacing the standard printer belt for this device. Each position is specified by one BCD character.

The following example shows the fifteen statements required to define a nonstandard ASCII printer belt for PRU1200/1600 printers:

1	8	1	2	7
1	8	6	9	9
\$	IMAGE	400,ASC,1130,01,	102104106107110112147123060101103105111116117122	
\$	IMAGE	400,ASC,1130,02,	114124141142143144145146113150151152153154155115	
\$	IMAGE	400,ASC,1130,03,	060120121125126127130131132072073077041045067170	
\$	IMAGE	400,ASC,1130,04,	171156157160162163164167060172061062063064065066	
\$	IMAGE	400,ASC,1130,05,	043070071056054050051100044075046057047134136137	
\$	IMAGE	400,ASC,1130,06,	060042074076133135147123176101103105111116117122	
\$	IMAGE	400,ASC,1130,07,	173124141142143144145146060150151152153154155175	
\$	IMAGE	400,ASC,1130,08,	174140055052053161165166102104106107110112067170	
\$	IMAGE	400,ASC,1130,09,	060156157160162163164167114172061062063064065066	
\$	IMAGE	400,ASC,1130,10,	113070071056054050051115060120121125126127130131	
\$	IMAGE	400,ASC,1130,11,	132072073077041045147123171101103105111116117122	
\$	IMAGE	400,ASC,1130,12,	060124141142143144145146043150151152153154155100	
\$	IMAGE	400,ASC,1130,13,	044075046057047134136137060042074076133135067170	
\$	IMAGE	400,ASC,1130,14,	176156157160162163164167173172061062063064065066	
\$	IMAGE	400,ASC,1130,15,	060070071056054050051175174140055052053161165166	

The following example shows the five statements necessary to define the nonstandard BCD print belt, PRB 3513/0513. (Refer to the GCOS 8 OS System Operating Techniques manual).

1	8	1	2	7
		6	9	9

```

$ IMAGE 400,BCD,0764,01,=5678GHIJKL\0.-*/MNOPQR:&(9),STUVWX[01234YZ$@#+!
$ IMAGE 400,BCD,0764,02,?5678ABCDEF^0.-+ /GHIJKL<>(9),MNOPQR[01234STUVWX;
$ IMAGE 400,BCD,0764,03,'5678YZ$@#% 0.-*/ABCDEF"=(9),GHIJKL\01234MNOPQR:
$ IMAGE 400,BCD,0764,04,&5678STUVWX[0.-*/YZ$@#+!?(9),ABCDEF^01234GHIJKL<
$ IMAGE 400,BCD,0764,05,>5678MNOPQR[0.-*/STUVWX;'(9),YZ$@#%_01234ABCDEF"

```

\$ INFO Statement

The \$ INFO statement defines a variety of operating system parameters. Multiple parameters can be included on one \$ INFO statement, or they can be continued onto as many \$ INFO or \$ ETC statements as required.

The format for the \$ INFO statement is:

1	8	1
		6

```

$ INFO parameter[,parameter]...

```

The following parameters can be included on the \$ INFO statement(s):

<u>\$ INFO Parameter</u>	<u>Description</u>
ACALL/ {nn } {TSS} {TPE} {TSx}	Automatically execute an ACALL instruction following a restart via fast boot. The associated parameters indicate that the specified network processor is to be reconnected (where nn = processor number 0-16) and/or the Time Sharing System (TSS parameter) or the Transaction Processing System Executive (TPE parameter) is to be restarted (if either was executing at the time the system malfunctioned) upon system restart.

The TSx parameter (where x = 1-4) identifies the copy of Time Sharing that is to be restarted in a multicopy configuration. For example, TS2 indicates that only the second copy of Time Sharing is to be restarted if a system failure occurs. More than one TSx parameter can be specified; each must be preceded by ACALL/ (e.g., ACALL/TS1, ACALL/TS2).

If more than one parameter is specified, ACALL must be included for each (e.g., \$ INFO ACALL/2,ACALL/TSS).

\$ INFO Parameter

Description

ASCII

A printer with ASCII capabilities (i.e., with an ASCII printer belt) is configured and can be allocated to print ASCII output.

NOTE: This is not a SYSOUT parameter. If online ASCII printer output is collected by SYSOUT, periodic attempts are made to allocate an ASCII printer (MGEOT INFO (025) -- ASCII PRINTER NEEDED). This continues until an ASCII printer becomes available, or until the output is disposed of via REDRC (REDRC APRONL BPRONL), NOPRO or other SYSOUT console verb.

CATDUP

Duplicate all File Management Supervisor (FMS) catalogs. File content is not duplicated. This parameter ensures file availability in the event of a hardware failure on the device containing the original catalog structure. The following conditions apply to this parameter:

1. Original and duplicate catalogs are written to mass storage devices for which the CAT parameter is specified on the \$ INIT statement. If the CAT parameter is not specified, Startup assigns the original and duplicate FMS catalogs to the same devices on which the original and duplicate System Master Catalogs (SMCs) reside. Startup ensures that the original and duplicate catalogs are not on the same device.
2. The CATDUP parameter is not activated unless the SMCDUP parameter also is specified on the \$ INFO statement. If the CATDUP parameter is specified and the SMCDUP parameter is not, Startup aborts.

CATFNC/n

Startup defined files will be allocated at or above llink number "n"(decimal) on devices containing FILSYS catalogs. The purpose is to preserve the lower address range for FILSYS catalog growth. The minimum value of n = 0; the maximum value of n = 51200 (decimal); the default value of n = 30000. A message:

*UPPER LIMIT FOR CATALOG FENCE IS 51200

is issued indicating that the value for n entered exceeded the allowable maximum for the \$ INFO CATFNC/n statement.

\$ INFO Parameter

Description

CCACHE/nnn

Main memory buffers are reserved in support of the FMS catalog cache feature. The value nnn can range from 0-400 (0 is equivalent to not specifying the parameter). Each buffer is 320 words.

NOTE: This is a Priced Software Product that requires KEY3 to be loaded.

CHKSUM

Checksum all modules during the module-load process. If not specified, modules are not checksummed.

CLENPT

Enable the cleanpoint function for system restart. The cleanpoint facility attempts to restart jobs which were in process at the time of system failure at a predefined point (i.e., at a cleanpoint). If cleanpoint recovery is unsuccessful, restart is from the beginning of each job that was in process.

Recovery/restart is vitally important to system output. For this reason, and to increase reliability, the segments shown in the following list are cleanpointed if the \$ INFO CLENPT statement is included in the \$CONFIG section. The segments are:

- DP.JOT - Job Output Table
- DP.JOS - Job Output Specials
- DP.SBT - SYSOUT Blink Table
- DP.BDI - Backdoor Information

DP.JOT and DP.SBT cleanpoints are taken after a new job, which has completed queue entry, is processed and when blinks and jobs are released. DP.JOT and DP.BDI cleanpoints are taken when a backdoor job queue entry is processed and when backdoor files and jobs are released. DP.JOS cleanpoints are taken each time a special is added to or removed from the current segment. Also, DP.SBT is cleanpointed in BRT6 upon activity termination if the job modified that segment.

NOTES: Cleanpoint cannot be used on a single pack system.

If a \$ INFO SMCDUP is also specified, the cleanpoint control file is also duplicated on another device to be used in the event the primary control file on ST1 is destroyed.

CNTDCW

This parameter causes the number of words transferred by an activity when doing disk I/O to be counted and collected with other accounting information. Enabling of this option may adversely affect I/O overhead constraints.

\$ INFO Parameter

Description

DENxx/DENyy

The default high and low densities for the site's MPC-driven magnetic tape subsystem are specified by the values xx and yy, respectively. If the option is not specified, default high and low densities for NRZI devices are 800 bpi and 556 bpi, respectively. Note that if a tape density is not specified on the \$ ACCOUNT or \$ FILDEF statements, the default high density of 800 bpi is used.

The following density specifications are valid:

DEN2 - 200 bpi
DEN5 - 556 bpi
DEN8 - 800 bpi
DEN16 - 1600 bpi
DEN62 - 6250 bpi

If PE (1600 bpi) and GCR (6250 bpi) subsystems/devices are configured, a \$ INFO statement must be included in the Startup job stream to activate the default-density feature. Both parts of the option contain the same numeric identifier in these cases (e.g., DEN16/DEN16 for PE devices).

If default densities are not specified and if no other subsystem/device is configured with the standard (800/556) default density capabilities, Startup aborts. The console message NO HANDLERS CAPABLE OF DEFAULT HIGH/LOW DENSITY is issued.

DPSE

This parameter must be present if a DPS 8/50 or 8/70 processor is configured. It allows the operator to dynamically assign (i.e., place online) the processor, if it is currently offline, via the ASGNP console entry.

ENCRYP

Activate password encryption so that SMC passwords entered via FILSYS directives CRMAST and MODMAS will be encoded. This security feature protects against unauthorized examination and disclosure of passwords.

Immediately before the first installation of password encryption, the site must run the encryption utility program ENCRYP. (Refer to GCOS 8 OS System Operating Techniques manual.) As soon as password encryption has been installed for the first time, the MODMAS file created by the ENCRYP utility must be entered into the system via a \$ FILSYS activity.

Once the ENCRYP option has been activated, the \$ INFO ENCRYP statement must be included in the \$CONFIG section for all subsequent Startups.

\$ INFO Parameter

Description

EXTTDS/xxx,yyy

This parameter defines the amount of memory available to the Transaction Driven System (TDS) or to DM-IV/TP when Extended Memory is utilized. The value xxx specifies the number of auxiliary instruction segments assigned to TDS and the value yyy specifies the maximum number of pages assigned. The maximum limit on xxx is 61. There is no maximum limit on yyy. There is no default for xxx. The default for yyy is 64.

EXTTSS/xxx,yyy[,zzz]

This parameter defines the amount of memory available to the Time Sharing System. The value xxx specifies the number of auxiliary instruction segments assigned to Time Sharing and the value yyy specifies the maximum number of pages assigned. The maximum limit on xxx is 61 (61 is the maximum capacity of a page table). There is no maximum limit on yyy. There is no default for xxx. The default for yyy is 64. (The value zzz is a literal assigned to the value of the work space.) THIS IS A REQUIRED STATEMENT -- SYSTEM WILL ABORT IF THE \$ INFO EXTSS STATEMENT IS NOT INCLUDED AND TIME SHARING IS CONFIGURED ON THE SYSTEM.

FASTBT

Enable the fast boot function for automatic system restart. This parameter is equivalent to the FASTBT ON console entry. If the FASTBT option is specified, rolcall messages are suppressed. However, operator interface messages are suppressed during the Startup question-and-answer sequence only if \$ ANSWER statements are present in the Startup job stream.

FMSCT/n

The value n specifies the maximum percentage (%) of the FMS catalog area of a CAT DISK device that may be used for file content in FMS file create and restore. The value of n may range from 0 to 100. The default value is 100.

FMSDT/n

The value n specifies a descriptor threshold (maximum number of space descriptors) for a selected disk device in FMS file create and restore. When the threshold is exceeded, a different device is selected. The value of n may range from 0 to 127. A value of 0 indicates an unlimited number of descriptors. The default value is 8.

FMSST/n

The value n specifies a space threshold (% of size of the selected device) for file content in FMS file create and restore. When the threshold is exceeded a different device is selected. The value of n may range from 1 to 100. The default value is 50.

\$ INFO Parameter

Description

FMSTAT

Accumulate statistics for File Management Supervisor (FMS) program functions (e.g., the number of times a function is used, the number of I/O operations for a function, and the average amount of time required to perform a function).

FNP/n

The value n identifies the number of network processors for DNET/ROUT mode (exclude network processors for CXI mode and include any configured On Line Page Processing Systems) configured on an input/output controller. The \$ INFO...FNP/n statement directs Startup to establish the Network Processor mailbox descriptor and is required if any Network Processors for DNET/ROUT mode and/or On Line Page Processing Systems are configured. This statement must precede the \$ MCT or \$ CIU statement. The value n can range from 0-16 and should be equal to y in the DN-y parameter of the \$ BASE statement. There is no default value.

GENSYS

Generalized Tape Management System (GTMS). The system is to execute with tape management enabled. Module .MKEY7 (SPS element), and the files 'GSYSDATABASE' and 'GSYSAJ' must be edited onto the system. If this parameter is not specified, GTMS cannot be invoked, even with the presence of the .MKEY7 module. This parameter sets bit 30 in .CROPT and may be referenced by the symbol .FGSYS.

GEOTRC[/n]

Enable GEOT trace for more thorough SYSOUT delivery trouble analysis. The optional octal mask, which limits enabling to selected traces, is normally omitted unless requested by a Honeywell Bull CSD Representative.

*

HEX/ {ON }
 {OFF}

The HEX/ON option results in acceptance of MME GMODES requests for setting HEX floating point mode. This option is valid only if all online processors have hexadecimal capability. The console message HEX MODE ENABLED is issued if Startup encounters a \$ INFO...HEX/ON statement and determines that all online processors have hexadecimal capability.

The console message:

*NO HEX CAPABILITY ON CPU-n HEX OPTION DISABLED

is issued if a \$ HEX/ON statement is included in the Startup job stream, but processor n is incapable of running in HEX mode. As a result, the HEX option is disabled while Startup continues processing.

The HEX/OFF option results in denial of MME GMODES requests to enter HEX mode. HEX/OFF is the default.

<u>\$ INFO Parameter</u>	<u>Description</u>
INTERRUPT/xxx	<p>This parameter selects the interrupt processing type for multiprocessor systems.</p> <p>xxx - ALL allows all processors to receive interrupts</p> <p>- ONE selects the control processor to receive interrupts (default for DPS 8 and DPS 88)</p> <p>For DPS 90 systems this parameter is not valid, and ONE is used. For DPS 8000 systems this parameter is not valid, and ALL is used. If this parameter is present on a DPS 90 or a DPS 8000 system, an error message is given and Startup attempts to process the remainder of the \$CONFIG section, after which Startup aborts.</p>
<p>Native mode memory management parameters KLFTH, KLMIW, KMMWP, KLMWS, KLWPR, and KLWSW can be varied to obtain better performance for different situations. However, the system is effectively self-adjusting for a variation of load. Except for very extreme cases, optimal performance will be obtained without varying these parameters, because the adjustment mechanisms are sufficient to cope with considerable load variations. Refer to the <u>GCOS 8 OS System Operating Techniques</u> manual for more information.</p>	
KLFTH/n	<p>This native mode memory management parameter designates the number of pages for the system free-chain low threshold. The value n is placed in the upper half of .KLFTH. The default value is 18.</p>
KLMIW/ssss	<p>This native mode memory management parameter designates minimum window time for a shared workspace in 16-microsecond units. The value ssss is placed in .KLMIW. The default value is 1875.</p>
KLMWP/ssss	<p>This native mode memory management parameter designates maximum window time for a process workspace in 16-microsecond units. The value ssss is placed in .KLMWP. The default value is 625000.</p>
KLMWS/ssss	<p>This native mode memory management parameter designates maximum window time for a shared workspace in 16-microsecond units. The value ssss is placed in .KLMWS. The default value is 2097152.</p>
KLWPR/xxxx	<p>This native mode memory management parameter designates the initial number of missing page faults which will constitute a window for a process workspace and can be considered as the "Page Fault Window Delimiter". The value xxxx will be placed in the upper half of .KLWPR. The default value is 35.</p>

<u>\$ INFO Parameter</u>	<u>Description</u>
KLWSW/xxxx	This native mode memory management parameter designates the initial number of missing page faults which will constitute a window for a shared workspace and can be considered as the "Page Fault Window Delimiter". The value xxxx will be placed in the upper half of .KLWSW. The default value is 35.
LIMITS	<p>When a program exceeds its SYSOUT record or processor time limit, rather than aborting, the operator is asked:</p> <p>S#sssss aa SYSOUT LINES EXHAUSTED CONTINUE OR ABORT C/A? or S#sssss aa RUN TIME EXHAUSTED CONTINUE OR ABORT C/A?</p> <p>where:</p> <p>sssss - Snumb.</p> <p>aa - Activity number.</p> <p>When the operator response is "C", the job is granted 10,000 additional lines of SYSOUT, or another 5 minutes of processor time, and the job continues processing. When the operator response is A, the job is aborted with the appropriate abort code.</p>
LINES/n	The value n establishes the maximum number of lines per page of output. This value must be a minimum of 6. The default number of lines per page is 55.
LOGON	<p>The \$ INFO LOGON parameter sets appropriate flags in system software to recognize that LOGON may be operational. If TS8 is configured (via the \$ INFO TS8 statement), and this statement is not included, GCOS 8 system initialization proceeds. However, the following error message is displayed at the console when the \$LOAD section is processed. (TS8 is also deconfigured as a result of this error.)</p> <p>TS8 - COMMON LOGON REQUIRED (\$ INFO LOGON), CAN'T CONFIGURE TS8</p>
MCPTSS/n	The value n specifies the configured number of Time Sharing System copies. This value can range from 1-4. The default value is 1.

\$ INFO Parameter

Description

MEMORY/n

The value n specifies the sieve limit for the maximum memory size allowed for any one activity in a job. The number, n, is specified in 1024(1K) blocks. There is no maximum value for n (other than the constraint imposed by the system's memory size). The default value is 511K if this parameter is not specified. The operator can modify the value n via the console entry LIMIT SIZE nK.

MIGRAT

Specifies that Startup is to attempt to migrate SR 4/JS3 Startup-defined files for use with a GCOS 8 release.

The following message is given on the system console to indicate successful migration of a file:

4JS3 FILE filename MIGRATED

No message is given if a file cannot be migrated.

Migrated files cannot be released or grown.

NOTE: When executing 4/JS3-DPS1.3 software release and software release 2000, 2300, or 2500 mixed systems, individual disk packs containing Startup defined files must be initialized via 4/JS3-DPS1.3 .MINIT, because no procedure exists in software releases 2000, 2300, or 2500 to remove the space contained in the 4/JS3-DPS1.3 Startup master catalog. Initializing the disk under 4/JS3-DPS1.3 clears the pointer to the SR 2000/2300/2500 Startup master catalog.

Examples of such mixed operating systems include:

- o Migration testing when the site is using unique files for each release
- o Production environments when the site is cycling between releases

This restriction applies whether or not the \$ INFO MIGRAT option or unique file names are used.

MIXED

CPL and NPL peripheral device types coexist within the same configuration for a single-system. If a device is unavailable for allocation, the MIXED parameter allows substituting its equivalent device type to satisfy the request (e.g., if a CPL PRT401 printer is unavailable for allocation, its NPL counterpart (PRU1200) could be allocated).

\$ INFO Parameter

Description

MODULE/.mmmmmm

One or more modules (.mmmmmm) can be specified to reside in main memory, thereby avoiding the system overhead resulting from the module-load function. For example, several FMS modules are high-use modules and loading these modules into main memory via the MODULE/.mmmmmm option can prove beneficial.

Modules that are not reentrant are loaded in the Hard Core Monitor (HCM). A memory-to-memory transfer is then executed when the module is called.

Multiple modules can be specified on one \$ INFO statement by repeating the MODULE/.mmmmmm option for each module; or each module can be identified on a separate \$ INFO statement.

MODULE/.MSDCB

Same as above; required for use of Rapid Access Data System (RADS). This parameter activates all RADS functions. RADS remains dormant until the .MSDCC control program utilizes the cache memory and issues an enable request. If .MSDCB is unknown to the system, RADS is inoperable.

NDFMAP

The deckfile map is not to be printed. If this parameter is not specified, the deckfile map is printed.

NIAST/ {ALL/n }
{RMVBL/n}

No In-memory Available Space Table.
For each removable (RMVBL) mass storage device on which a structured removable disk pack is mounted, and for each permanent device, several tables are used to maintain control of disk space allocation to files.

The device allocation unit table maintains a current record of whether or not each allocation unit (AU) is allocated for permanent file usage. For each device, this table is maintained on the device itself.

The system builds an available space table (AST) from the device allocation unit table information whenever the operator requests an initialization or secondary initialization. This same action is also triggered automatically whenever one of several circumstances occur (described under "Other NIAST Considerations" below). The system maintains the AST with a record of whether or not each AU is allocated for file use (including both permanent and temporary file use, without distinction). The temporary file space considered is only the space allocated since the AST was built.

ADS -
Rapid Access
Data System

\$ INFO Parameter

Description

NOTE: The NIAST option is implied when the \$ SHARED Startup statement is specified. Devices that are connected to shared mass storage controllers and not specified as removable can be shared with the Network Processing Supervisor (NPS).

The parameters available for use with the NIAST option are:

- ALL - Specifies maintaining the AST on the device, rather than in memory, for each removable device on which a structured removable disk pack is mounted and for each permanent device.
- RMVBL - Specifies maintaining the AST on the device for each removable mass storage device on which a structured removable disk pack is mounted. (Typically, removable devices have less space allocation activity than permanent devices. Therefore, for some sites, the best memory and I/O utilization may occur by using the RMVBL option. Resource trade-off is discussed in detail below.)
- n - Specifies the number of I/O buffers required to read from or write to the ASTs. The default value reserves one buffer for every four NIAST devices.

Other NIAST Considerations

The AST resides on the device when NIAST is specified. (Although the maintained AST is on the device, the site sets the number of memory buffers (n) used to manage the entire group of ASTs for all devices operating in NIAST mode.) In addition to the AST and the device allocation unit table, a third table, the temporary descriptor table (TDT), resides on each permanent device when NIAST is specified. The TDT is rebuilt automatically whenever the AST is rebuilt. The availability of the ASTs and TDTs on the devices enables reallocation of a temporary file after a system bootload (e.g., for restart purposes), unless the device is initialized or given a secondary initialization during the bootload.

\$ INFO Parameter

Description

Because the AST resides on the device when NIAST is specified, the AST can be read and modified by sources external to the system that built it. This mode is invoked automatically when the \$ SHARED statement specifies that the device is shared with a network processor using the Network Processor Supervisor (NPS) software. The NIAST option enables the system and network processor to have direct access to a common, current source of space allocation information located on the device.

The AST resides in memory when NIAST is not specified or implied (i.e., neither \$ SHARED nor \$ INFO NIAST are specified in the Startup job stream). When the NIAST option is not in effect, the AST is rebuilt automatically from the device allocation unit table whenever the system is bootloaded. Thus, reallocation of a temporary file is not guaranteed after a system bootload for a device when NIAST is not specified. As a result, jobs may need to be reentered to reestablish file space and data previously resident on temporary files. (If a job is unsuccessful in its attempt at such a reallocation, it is deleted from the system. The operator is then notified.)

The following circumstances cause the system to rebuild the device's AST:

1. When NIAST is specified, the AST is automatically rebuilt on permanent mass storage devices whenever the system is bootloaded and the device was last operating without the NIAST option activated.
2. When NIAST is not specified, the AST is rebuilt automatically in memory for permanent mass storage devices whenever the system is bootloaded.
3. In either case, the AST is rebuilt automatically for removable mass storage devices whenever a structured disk pack is mounted at Startup, or if it is mounted later, the AST rebuilding occurs during system operation.

The site's decision to use the NIAST option involves the following trade-off considerations as to the availability of memory versus the need for I/O resources (except when \$ SHARED is used, which automatically invokes the NIAST option).

1. The NIAST option requires less memory because there are fewer memory buffers than there are devices.

\$ INFO Parameter

Description

2. When NIAST is not specified, memory space is required for each AST. Also, increased Startup time for I/O activity results from generating the in-memory AST whenever the system is bootloaded.
3. The NIAST parameter requires more run-time I/O activity, because, unless it is already present in one of the I/O buffers, the AST must be read into memory each time it is modified.

The "Mass Storage Operations" section in the GCOS 8 OS System Operating Techniques manual contains instructional information on this subject.

NPCHSZ/nnn

This parameter enables the application of virtual mode patches from the Startup job stream \$PATCH section. The value nnn specifies the size (in words) of the system segment holding the patch card images. A value of 256 is recommended; this may be increased or decreased, depending on site patch requirements. There is no default for this parameter. If a size is not specified, a segment of zero size is provided.

Virtual mode patches are in GCL-style format, which is a free form format beginning with a PATCH RU directive and followed by a positional parameter and keyword parameters. If a virtual mode patch included in the \$PATCH section of the Startup job stream is in error and is not applied, Startup gives an error message sequence to flag this condition. For example:

```
erroneous patch statement image
** PATCH RUN UNIT COMMAND HAS INCORRECT COMMAND SYNTAX.
erroneous patch statement image
** KEYWORDS ARE REQUIRED FOR THE PATCH COMMAND.
erroneous patch statement image
** A PATCH VALUE IS REQUIRED FOR A PATCH DIRECTIVE.
erroneous patch statement image
** THERE IS NOT ENOUGH INFORMATION TO PERFORM PATCH.
```

Report the occurrence of any unapplied patches to the Honeywell Bull Response Center.

NPRINT

No printer is available to the Startup program. Any print routines encountered during System Startup are ignored and no output is generated. If a printer becomes inoperable during a dump operation, the operator can respond SKIP to the message DUMP nnn FROM ddd TO TAPE (where nnn = file name and ddd = logical device name of a mass storage device), which permits the system to be rebooted with the NPRINT option active.

\$ INFO Parameter

Description

This parameter prevents Startup from doing any printing, to prevent destroying preprinted forms which may be mounted in printers following a system crash. If Startup aborts, or is directed to abort via the DUMP command, and this option is in effect, Startup will ask for a printer via the NEED PRINTER message. If no printer is available, press the EOM push button on the system console and the dump will be skipped (lost).

NPUNCH

No card punch is configured for local punch output.

If a CCU0401 card reader/card punch is configured, the NPUNCH option makes the card punch unusable but permits use of the card reader.

If the NPUNCH parameter is specified, bit 2 is set in .CROPT to indicate that no card punch is configured. If an activity includes a \$ PUNCH statement, the Peripheral Allocator program deletes the job.

NPUNCH instructs SYSOUT to collect local card punch output (PNCONL), without delivering it. Such output remains in SYSOUT space until the system is rebooted with "SYSOUT RECOVERY=NO", or until one of the following console verbs is applied to it: NOPRO, PURGE, or REDRC (e.g., NOPRO PNCONL).

NSYASC

No SYOT ASCII Space Compression. ASCII print line records (media codes 7 and 15) are normally edited by SYOT to reduce disk storage requirements. Editing consists of replacing sequences of three or more spaces with an equivalent two-character, unit-separator control sequence. The NSYASC option disables ASCII space compression.

NSYBSC

No SYOT BCD Space Compression. BCD print line records (media codes 3 and 11) are similarly edited by replacing sequences of nine or more spaces with an equivalent two-character escape sequence. As with ASCII space compression, the escape sequence is recognized by the printer hardware (or network processor software). It is therefore unnecessary to expand compressed records at the time they are printed. The NSYBSC option disables BCD space compression.

\$ INFO Parameter

Description

NSYSAV

No SYOT Seek Address Validation. SYOT normally validates the seek address for every write operation it initiates. This is accomplished by mapping the referenced link number for the write back to the blink table to ensure correct ownership of the blink. If an error is detected, the job aborts after taking the following SNAPS:

- 1 The .MSYOT module itself (with trace table)
- 2 Slave being serviced (or at least the GFRC buffer)
- 3 Slave's collection control segment (PH.SYT)
- 4 Slave's SSA segment (PH.SSA)
- 5 GCOS communication region segment (SD.CR)
- 6 SYSOUT blink table segment (SD.SBT)
- 7 SYSOUT collection area segment (SD.SCA)

The NSYSAV parameter disables the seek address validation procedure.

NSYTRC

No SYOT TRaCe. SYOT normally maintains a circular trace of the last 100 key processing events which took place. The table is an invaluable aid for problem analysis purposes but, of necessity, requires some processor and memory resources to maintain. For the benefit of sites which feel this overhead is prohibitive, the NSYTRC parameter may be employed to disable the trace mechanism.

OWNID/xxxxxxxxxxxx

Default value for FIPS-79 Owner-id. Fills the communication region locations, beginning with .CROID, with up to 12 ASCII characters used by FIPS-79 UFAS tape labels. The first blank character encountered terminates the string.

PASSWD/nnn

Password expiration interval. The value nnn specifies the maximum number of days for which a user password can remain valid, and ranges from 1 through 365. This statement is optional; if it is included, it applies to the Time Sharing System (TSS) as well as TS8, and keeps the password expiration interval consistent between the two time sharing systems. When the interval is exceeded, a user trying to log on is prompted to change the password before being allowed to continue.

If the value for nnn is zero, or if this statement is not included, there is no expiration interval for user passwords (i.e., passwords do not have to be changed).

\$ INFO Parameter

Description

If the value for nnn is nonnumeric, the following message is output to the system console, and Startup aborts:

```
*CONFIG CARD BELOW CONTAINS AN ERROR NEAR COLUMN 23.  
$      INFO      PASSWD/xxx
```

where xxx is the nonnumeric value.

If nnn is greater than 365, the following message is output to the system console:

```
VALUE FOR PASSWORD EXPIRATION INTERVAL > MAXIMUM
```

Startup continues, using the maximum of 365 as a default.

PROEXT

Process Extension. Required to enable the Six-Processor Functionality. When this statement is included, Startup expects the processor number to be in bits 9-11 of the Fault Base Switches. This parameter is not valid on DPS 8000, DPS 88, and DPS 90 systems.

PSUM/nnn

The value nnn specifies the maximum number of processes to be allowed (cataloged) in the system.

The value nnn must be in the range of 63 to 487. These values are applied by Startup if less than the minimum (e.g., 62) or more than the maximum (e.g., 488) is specified. The value nnn must be an odd-numbered value (e.g., 65 or 67). If it is not, the specified number plus 1 is substituted by Startup (e.g., 66 becomes 67). The default value of nnn is 127. A maximum of 487 processes, including the number of TS8 users who will be concurrently logged on, can be cataloged.

\$ INFO Parameter

Description

PT1SIZ/nmnn

The value nmnn specifies the size of the page table for working space 1. The default size of this page table is 2048 words, which is sufficient for most software configurations. When the default is not sufficient, it will be detected and reported by POPM immediately after it receives control from Startup. When the condition is detected, the normal START ROLL CALL message to the operator's console will be followed by

```
***ERR
***ERR WORK SPACE 1 PAGE TABLE IS TOO SMALL.
***ERR USE $ INFO PT1SIZ/nmnn AND REBOOT.
***ERR
```

where nmnn is the needed page table size, in words, as determined by POPM. The operator should do a warm boot using the AUTOLOAD file for input, and using the Startup console editor to add the \$ INFO PT1SIZ/nmnn.

PTCHSZ/nnn

The value nnn specifies the maximum number of patches that can be included in the \$PATCH section. The default value is 256.

It is recommended that consideration be given to subsequent additions of patches via the system console when establishing the patch limit.

If the number of patches included in the \$PATCH section exceeds the number specified with the \$ INFO PTCHSZ parameter, Startup accepts only the number of patches specified with the PTCHSZ parameter. All patches exceeding this number are ignored and the message:

```
TOO MANY PATCHES USE $ INFO PTCHSZ/N
```

is issued to the system console.

<u>\$ INFO Parameter</u>	<u>Description</u>
--------------------------	--------------------

RESVID/FORMS,id1[,id2,...,idn]/

The RESVID/FORMS parameter provides a means to reserve certain station ids for use as collection nodes for special forms. No remote connection will be allowed to these reserved ids, which will be class supported. At least one id must be specified if the parameter is used; a maximum of 512 ids may be declared. Each id must consist of a two-character identifier. The identifiers 00, space-space, and !! are not permitted. A space is not permitted as part of an identifier. Segment DP.RID is allocated for the reserved id list and is organized as follows:

Word 0: TALLY 1,n (n = number of ids)
Word 1-n: VFD 2/1,22/0,H12/xx (xx=BCI id)

RESVID/{PPSOFL},id1[,id2,...,idn]/
{PPSONL}

The RESVID/PPSOFL and RESVID/PPSONL parameters provide a means to reserve certain station ids for use as collection nodes for the Page Processing System (PPS) in offline and online modes, respectively. No remote connection will be allowed to these reserved ids, which will be class supported. At least one id must be specified if the parameter is used; a maximum of 512 ids may be declared. Each id must consist of a two-character identifier. The identifiers 00, space-space, and !! are not permitted. A space is not permitted as part of an identifier.

PPSOFL - Required parameter to enable offline PPS functionality; either the offline or online PPS software must be available to the system when PPSOFL is specified. Any output for PPS reserved ids is spooled to tape for subsequent input to the Page Processor.

PPSONL - Required parameter to enable both online and offline functionality; the online PPS software must be available to the system when PPSONL is specified. User jobs may assign output to the reserved ids for subsequent transfer directly to the Page Processor, as well as spooling to a PPS tape.

Destination id(s) for the PPS correspond to remote station id(s) used for standard remote output. They are reserved id(s) and are included in the reserved id table within memory.

\$ INFO Parameter

Description

The PPSOFL and PPSONL parameters and reserved id(s) on the \$ INFO RESVID statement do not represent a one-to-one correspondence with Page Processors actually configured on a system. Two or more Page Processors may utilize the same reserved id(s) and one system may be configured online while another is configured offline.

Multiple \$ INFO RESVID statements can be used to assign more reserved ids than can be contained on one statement; however, the same processing mode (i.e., PPSOFL or PPSONL) must be specified on each statement.

RLSDSK

Startup is to release any mass storage devices that are offline during System Startup. If the released device contains any GCOS system files, Startup aborts. If the device is online at System Startup, it is not released.

RLSPNT

Startup is to release any printer that is offline during System Startup. If the released printer is that which is used by the Startup program, the NPRINT parameter is automatically invoked. A released printer can be reassigned to the system via the console entry ASGN icccdd (where i = input/output controller number, ccc = channel number, and dd = device number). If the device is online at System Startup, it is not released.

ROLLCALL/ddd

Rollcall messages, which are issued during System Startup, are directed to printer ddd instead of to the system console (where ddd = logical device name of the printer). Use of this parameter interrupts a fast boot process, which otherwise bypasses the rollcall function.

\$ INFO Parameter

Description

SAVDMP/list

The list defines the set of default options used to control what is dumped to system-controlled space (i.e., a save dump) at the time a process (slave) dump is taken. The options specified on this statement are augmented with options specified on the SAVDMP= option of the \$ DMPOPT JCL statement associated with the activity in which the dump is taken. The options are specified after the "/", and are separated by commas. The underlined option is the default:

ALL7 - Dump the entire contents of dynamically allocatable space behind WSR7.

ANY - Utilize default options, which means to dump OS control segments behind WSR7.

NODUMP - Produce no save dump of any kind. If the site desires that the activity definer SSDUMP option be effective, or allow the use of the SAVDMP option on the \$ DMPOPT JCL statement to be effective, a \$ INFO SAVDMP option must be used to specify a value other than NODUMP.

PSDUMP or

W4DUMP - Dump the entire dynamically allocatable contents of WSR4 (private shared space).

SSDUMP or

W5DUMP - Dump the entire dynamically allocatable contents of WSR5 (integrated software space). This is the same as specifying SSDUMP on the activity definer.

WSDUMP or

W6DUMP - Dump the entire dynamically allocatable contents of WSR6 (workstation space).

C4DUMP - Dump the OS control segments behind WSR4.

C5DUMP - Dump the OS control segments behind WSR5.

C6DUMP - Dump the OS control segments behind WSR6.

SCFPRG

The SCF purge-to-disk option is enabled, so that SCF data will be collected on permanent files instead of on magnetic tape. Refer to the GCOS 8 OS Accounting manual for details.

\$ INFO Parameter

Description

SCHSAV

All job input is saved. This feature protects against the loss of jobs following a system malfunction. The duration of the save period is dependent upon System Scheduler program parameters (i.e., the size of the class catalog and the amount of processing activity within the job class). All saved jobs are placed in a temporary status (i.e., "saved"). Rerunning a saved job is initiated via the console entry JRRERUN sssss (where sssss = SNUMB).

If this parameter is active, the 15 oldest saved jobs that have completed execution are removed from the System Scheduler's SSFILE file as space for a class approaches exhaustion (i.e., approaches the class maximum as specified on the \$ SSFILE statement in the \$EDIT section).

Errors within the job stream (i.e., JCL statements), which cause fatal processing errors, override the save function and job input is not saved.

SDCOL/n

The value n specifies the number of additional pages to be allocated to the SD.COL segment, which is used by IOS and ECOL to store and retrieve type 3 GEPR records. The default size of SD.COL is two pages. If three pages are desired, specify the value of n as 1. If four pages are desired, specify the value of n as 2.

If the value of n is not 0, 1, or 2, the following error message is issued to the console:

CONFIG CARD BELOW CONTAINS AN ERROR NEAR cc
\$ INFO SDCOL/n

where cc is the JCL statement column number.

*

SLAVE/n

The value n specifies the maximum size of the slave Instruction Segment (i.e., the largest slave job in execution) in 1K blocks. The default value is 255. Any value exceeding the default is truncated to 255.

SLINKS/n

The value n specifies the sieve limit for the number of mass storage links requested for any temporary file. There is no default value set.

SLTAPE/n

The value n specifies the sieve limit for the number of magnetic tape files requested by any activity in a job. There is no default value set.

\$ INFO Parameter

Description

SLTIME/hhmm

The value hhmm specifies the maximum amount (i.e., sieve limit) of processor time that can be allocated to one job (where hh = hours and mm = hundredths of one hour). The maximum value that can be specified is 9999. The default time limit is 9.99 hours. The time specified must not be less than 0.01 hours.

SMCDUP/ddd

The System Master Catalog (SMC) is to be duplicated on mass storage device ddd (where ddd = logical device name). Device ddd must not be device ST1, which contains the SMC. If ST1 is defined with the SMCDUP parameter, Startup aborts.

SMCDUP status can be added or deleted only when the operator responds YES to both *INITIALIZE? and *EDIT? during a bootload. If an attempt is made to change the status by adding or deleting the parameter to/from the \$ INFO statement, except during a bootload sequence, Startup aborts.

Startup also aborts if an attempt is made to assign the SMC and the duplicate SMC to two logical devices on the same physical unit.

SPN,umc_1[/cat-or-file-1],umc_2[/cat-or-file-2]

The system path name (SPN) replacement parameter replaces the actual UMC or UMC/cat-or-file specified in the first argument (umc_1/cat-or-file-1) with that specified in the second argument (umc_2/cat-or-file-2) whenever FMS accesses umc_1/cat-or-file-1. The rules for replacement follow:

1. SYS_CAT cannot be specified as umc_1 or umc_2.
2. Commas must separate SPN, the first argument, and the second argument.
3. umc_1 must either begin with SYS_ or be OPNSUTIL.
4. umc_2 must begin with SYS_ if umc_1 begins with SYS_, or umc_2 must be a replacement for a umc_1 of OPNSUTIL.
5. Default UMCs do not exist (i.e., umc_1 and umc_2 cannot be null).
6. If a slash delimiter follows umc_1 or umc_2, it must follow both, and a cat-or-file (either catalog name or quick access file name) must follow both.

\$ INFO Parameter

Description

7. The UMC/cat-or-file arguments are limited, as the format shows, to two levels.
8. Multiple replacement sets are allowed. Each replacement set must be contained on one \$ INFO SPN statement (i.e., \$ ETC is not supported with the SPN parameter).

The specified replacements are made for all FMS accesses (e.g., JCL statements (including \$ USERID statements), Time Sharing accesses, and FILSYS directives (including USERID but excluding RESTORE, SAVE, RESTOREMAST, and SAVEMAST)).

Error messages that apply to the SPN parameter are listed below. The rules violated are denoted in parentheses (and are not part of the message).

- * SPN ERR SYS CAT CANNOT BE CHANGED (1)
- * SPN ERR EXPECT , OR / (2)
- * SPN ERR "OLD" FIELD NOT FOLLOWED BY COMMA (2)
- * SPN ERR "NEW" NOT SYS OR REPL FOR OPNSUTIL (4)
- * SPN ERR BLANK USERID FIELD INVALID (5)
- * SPN ERR BLANK CATALOG, FIELD INVALID (5)
- * SPN ERR ONLY ONE SET PER INFO CARD (8)

SSAOVL/n

The value n specifies the number of real pages allocated to Slave Service Area (SSA) cache. The default value is 8. The minimum value is 4 and the maximum value is 64.

SYBDI/n

Size of backdoor information segment. The default value of 1024 allows for approximately 50 backdoor jobs in the system.

SYBRT/n

GEOT blink release threshold. This parameter defaults to a value of 20. This parameter should be used by a site wanting to discard output more rapidly after delivery is complete.

SYJOS/n

Size of job output special segment. The default value of 64 allows for 15 output specials. Note: because of the reduced use of the specials table, this should probably be sufficient for most sites.

SYJOT/n

Size of job output table segment (SNUML). The default value of 1024 allows for 146 jobs with one output type and destination. A reasonable value for sites requiring space for 500 jobs with more than one output type or destination is 4096.

\$ INFO Parameter

Description

SYSOUT/n

The value n specifies the sieve limit for the maximum number of SYSOUT records allowed for the job. Only the job \$ LIMITS statement is considered if it is present; otherwise, the value considered is the sum of the limits specified for the individual activities by a \$ LIMITS statement, if present; or by the default value for the activity type. There is no default value set.

SYSTEMMAP/NO

Do not print the map of the GCOS file structure. The default is for this map to be printed. Inclusion of this parameter reduces the time required for starting the system.

TAPDEN/xxxx

The codes specified as xxxx summarize the total density capabilities of all configured magnetic tape handlers.

The xxxx field overrides the system default value used when processing the DEN9 field of the \$ TAPE control statement (see the GCOS 8 OS Job Control Language manual for further details). The xxxx parameter can include the following codes:

<u>Code</u>	<u>Description</u>
ABCD	200, 556, 800, 1600 bpi
ABC	200, 556, 800 bpi
BCD	556, 800, 1600 bpi
BC	556, 800 bpi
CD	800, 1600 bpi
DE	1600, 6250 bpi
D	1600 bpi
E	6250 bpi

TIMEZ/zzz

Universal date/time is automatically set from the local date/time entry by the operator when the system is booted. This is done from a time zone entry which must be included on the \$ INFO TIMEZ statement. The \$ INFO TIMEZ must be included in the Startup job stream. If this statement is not included, Startup will abort with the following message:

*MANDATORY \$ INFO TIMEZ CARD WAS NOT FOUND

The value zzz specifies the local time zone identifier. The following list defines the time zone identifiers recognized by Startup:

\$ INFO ParameterDescription

<u>ZONE</u>		
<u>IDENT</u>	<u>OFFSET</u>	<u>DESCRIPTION</u>
NT	-11	NOME TIME
AHST	-10	ALASKA-HAWAII STANDARD TIME
YST	-9	YUKON STANDARD TIME
PST	-8	PACIFIC STANDARD TIME
MST	-7	MOUNTAIN STANDARD TIME
PDT	-7	PACIFIC DAYLIGHT TIME
CST	-6	CENTRAL STANDARD TIME
MDT	-6	MOUNTAIN DAYLIGHT TIME
EST	-5	EASTERN STANDARD TIME
CDT	-5	CENTRAL DAYLIGHT TIME
AST	-4	ATLANTIC STANDARD TIME
EDT	-4	EASTERN DAYLIGHT TIME
NST	-3:30	NEWFOUNDLAND STANDARD TIME
GST	-3	GREENLAND STANDARD TIME
ADT	-3	ATLANTIC DAYLIGHT TIME
AT	-2	AZORES TIME
WAT	-1	WEST AFRICA TIME
UT	+0	UNIVERSAL TIME
Z	+0	ZERO ("ZULU")
GMT	+0	GREENWICH MEAN TIME
CET	+1	CENTRAL EUROPEAN TIME
MET	+1	MIDDLE EUROPE TIME
BST	+1	BRITISH SUMMER TIME
SWT	+1	SWEDISH WINTER TIME
FWT	+1	FRENCH WINTER TIME
EET	+2	EASTERN EUROPEAN TIME
SST	+2	SWEDISH SUMMER TIME
FST	+2	FRENCH SUMMER TIME
BT	+3	BAGDAD TIME
ZP4	+4	Universal time +4 HOURS
ZP5	+5	Universal time +5 HOURS
IST	+5:30	INDIAN STANDARD TIME
ZP6	+6	Universal time +6 HOURS
ZP7	+7	Universal time +7 HOURS
JT	+7:30	JAVA TIME
CCT	+8	CHINA COAST TIME
JST	+9	JAPAN STANDARD TIME
SAST	+9:30	SOUTH AUSTRALIA STANDARD TIME
ZP10	+10	Universal time +10 HOURS
ZP11	+11	Universal time +11 HOURS
NZT	+12	NEW ZEALAND TIME

TS8

This statement requires that TS8 module .MTSVC be edited onto the system. If this module is not present, system initialization proceeds but the following error message is displayed when the \$LOAD section is processed:

\$ INFO Parameter

Description

TS8 - REQUIRED MODULE .MTSVC NOT FOUND, CAN'T CONFIGURE
TS8

The presence of this message indicates that the required module was not part of the tapes comprising the Software Release media. The Honeywell Bull Response Center should be contacted immediately.

USRDMP/list

The list defines the set of default options used to control what is dumped to the destination specified for the process (by default to the SYSOUT P* file) at the time a process (slave) dump is taken. The options specified on this statement are augmented with options specified on the USRDMP= option of the \$ DMPOPT JCL statement associated with the activity in which the dump is taken. The options are specified after the "/", and are separated by commas. The underlined option is the default. Those marked with asterisks (*) apply only to processes with privity.

ALL7 - Along with active domains, dump the entire contents of dynamically allocatable space behind WSR7.

ANY - Utilize default options, which means for all active domains to dump OS control segments behind WSR7 and writeable segments behind other workspace registers 2-6.

* C4DUMP - Dump the OS control segments behind WSR4.

* C5DUMP - Dump the OS control segments behind WSR5.

* C6DUMP - Dump the OS control segments behind WSR6.

* INHIBD - Include domains whose property keys say to inhibit dump as active domains.

MINI - Produce a dump including only summary information, history registers, and the dump causing the safe-store frame.

NODUMP - Produce no user dump of any kind.

NOSHR - Do not dump segments in shared workspaces, even if they exist in active domains.

OSEXT - Dump OS control segments not normally useful in analyzing process dump problems. This includes most notably SYSOUT control segments.

\$ INFO Parameter

Description

- * PSDUMP or
- * W4DUMP - Dump the entire dynamically allocatable contents of WSR4 (private shared space).

- SHRRW - Dump all segments in active domains, even if they are read-only.

- * SSDUMP or
- * W5DUMP - Dump the entire dynamically allocatable contents of WSR5 (integrated software space).

- * STACKS - Dump the content, including residual, of stack segments PH.ADS, PH.AP, and PH.SS.

- * WSDUMP or
- * W6DUMP - Dump the entire dynamically allocatable contents of WSR6 (workstation space).

- * WSR01 - Dump segments behind WSR0 and WSR1 for active domains.

WSSIZE/2,s2,b2
WSSIZE/3,s3,b3

These statements can be used to set the virtual sizes and backing store file coverage of system shared workspaces.

The s2 value is ignored. This field is reserved for future use.

The b2 value is used to specify the percentage of virtual memory for which backing store file space is to be allocated for the standard WSR2 (Workspace 4). The value is specified in percent, with 20% being the default.

The s3 value is used to establish the size of the standard WSR3 (Workspace 10) virtual memory size, in megawords. The default is 1M.

The b3 value is used to specify the percentage of virtual memory for which backing store file space is to be allocated for the standard WSR3 (Workspace 10). The value is specified in percent, with 50% being the default. The virtual size for WSR3 is taken from the s3 parameter. The b3 value can be omitted, even if the s3 value is specified.

Input/Output Controller Statements

The input/output controller statements (`$ IMU`, `$ IMX`, `$ IOM`, `$ IOP`, or `$ IOX`) are used to define the site's peripheral devices. Each peripheral that is assigned to a specific channel (CH/PUB) of an input/output controller must be identified. If a device is not specified on such a statement, the Startup program does not consider that device a part of the system configuration, even though the device may be referred to on other statements in the Startup job stream.

Once the system has been initialized, the operator cannot deconfigure a permanent device via a console entry or by removing the `$ Iyy` statement from the Startup job stream. However, a permanent device can be released via the console entry `RLSE iccdd` (where `i` = input/output controller number, `ccc` = channel number, and `dd` = device number). If a device is released, the Startup or FMS program may abort if required files and/or catalogs were assigned to the device.

If the mass storage hardware configuration is to change, all jobs in the system must first run to termination before the modification can be effected. After all jobs have terminated, the `$ Iyy` statement (images) can be modified to reflect the new configuration. During the bootload sequence, the operator must respond NO to the `*RESTART?` question and YES to the `*SYSTEM SCHEDULER CLEAR?` question.

The DEDICATED option can be used to reserve (restrict) use of the specific device to only those programs that request the device by its logical device name (ddd field). If the device is not requested by its logical device name, it is not allocated - even if the device is not busy at allocation time. It is not a good practice to dedicate ST1.

This feature frequently is used to avoid repeated printer form or magnetic tape reel changes. For example, a job that requires a special form can have its output directed via the `$ PRINT JCL` statement to a dedicated printer, which contains the special form.

The DEDICATED option cannot apply to the system console.

A device also can be dynamically dedicated via the console entry `DEDCAT`. The dedicated status - either Startup or console assigned - can be dynamically removed via the console entry `UNDED`. (Refer to the GCOS 8 OS System Operator Messages manual for a description of the `DEDCAT` and `UNDED` entries.)

* In addition to the DEDICATED option, the following comments apply to the logical device name (ddd) field. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric.

With the exception of mass storage devices, which can have only one logical device name, each device can be assigned multiple logical device names. Each peripheral must have at least one logical device name and each logical name must be unique. A maximum of 2048 logical device names can be assigned via the Startup job stream. (Two additional names are reserved for assignment via the system console.)

Logical device names also can be assigned via the console entry NAME iccdd nnn (where i = input/output controller number, ccc = channel number, dd = device number, and nnn = logical device name). Logical device names also can be removed from the name table via the console entry UNAME nnn (where nnn = logical device name). Note, however, that neither of these entries can be used in conjunction with mass storage devices.

Logical device names TY1-TY4 (console) and ST1 (mass storage) must be specified at System Startup. If device names ST1 and TY1 are not defined, the console message *DEVICE xxx UNDEFINED is issued and Startup aborts (where xxx = ST1 or TY1).

One \$ Iyy statement is required for each console configured as a system control device, while a separate \$ Iyy statement is required to configure a System Control Center (SCC) that is to be used by the VIDEO program.

NOTE: The choice of the input/output controller statement type (\$ IMU, \$ IMX, \$ IOM, \$ IOP, \$ IOX) is dependent on the hardware platform (DPS 8, DPS 8000, DPS 88, or DPS 90) and the peripheral subsystem (in the DPS 8 platform). A DPS 8 system may use either \$ IOM or \$ IMU statements or both. A DPS 8000 system may use only \$ IMX statements. A DPS 88 system may use only \$ IOX statements. A DPS 90 system may use only \$ IOP statements. Channels can be specified interchangeably either as 'CH' or 'PUB', regardless of the statement type.

Throughout the rest of this section, \$ Iyy is used to represent \$ IMU/\$ IMX/\$ IOM/\$ IOP/\$ IOX in the text and examples. Substitution of the proper statement type should be based upon the rules previously outlined. Any additional restrictions are noted in reference to the affected statement type.

\$ Iyy STATEMENT FOR SYSTEM CONTROL DEVICES

The four system console names TY1, TY2, TY3, and TY4 must be assigned via \$ Iyy statements defining system control devices (i.e., consoles). (GCOS software issues system messages to the consoles on the basis of the four console names.) These four names must be assigned even if only one device is configured.

When multiple consoles are configured, the four required console names can be assigned to any of the consoles in any manner (e.g., one name can be assigned to one console and three names can be assigned to another console). However, all four names must be specified.

The format for \$ Iyy statements defining system control devices is:

```

1      8      1
      6
-----
$      Iyy-m  {PUB-p},tttttt,nnn,...,nnn
              {CH-p }

```

where:

m - Number of the Iyy to which the system control device (i.e., console) is connected. The value of m can be 0-3.

p - Iyy channel (CH/PUB) number. Permissible values are:

```

IMU  8-63
IMX  0-127
IOM  8-31
IOP  8-63
IOX  0-127

```

tttttt - Device type as follows:

<u>Code</u>	<u>Description</u>
CS66/RMC66	CSU6601 console
CS6001	CSU6001 console
CS6002	CSU6002 console
CS6602	CSU6602 console
CS6604	CSU6604 console
CS6605	CSU6605 console

nnn - Name of the system console assigned to this Iyy and channel. The console name can only be TY1, TY2, TY3, and TY4.

The following example shows the logical device names assigned to the CSU6601 console (CS66) configured on channel 31 (CH-31) of Iyy-0.

```

1      8      1
      6
-----
$      Iyy-0  CH-31,CS66,TY1,TY2,TY3,TY4

```

The following example indicates use of two \$ Iyy statements to configure logical devices TY1-TY4 on two CSU6601 consoles (CS66). Note that these devices may be connected to one or two Iyys and that the channel number must be different on each \$ Iyy statement.

```

1      8      1
      6
-----
$      Iyy-0  CH-30,CS66,TY1,TY2
$      Iyy-0  CH-31,CS66,TY3,TY4

```

\$ Iyy STATEMENT FOR VIDEO DEVICE

The logical device name TY5 can be assigned to a CSU6001, CSU6601, or CSU6602 if reserving one of the devices for use as a VIDEO device. The reserved device (for VIDEO purposes) is a CRT output-only device, and cannot be used for general input purposes. The device can be used to enter VIDEO-related commands.

The format for the \$ Iyy statements defining a VIDEO device follows. The variables m, p, and tttttt are the same as those for defining system control devices.

```
      1
1     8     6
-----
$     Iyy-m {CH-p }
      {PUB-p},tttttt,TY5
```

VIDEO operations change when the Console Manager software option is to be used or when GCOS 8 is executing on the DPS 88 system. In both of these instances, the VIDEO facility must be run on a terminal configured on a Front-end Network Processor. Refer to the GCOS 8 OS VIDEO manual for instructions for using VIDEO on a terminal.

\$ Iyy STATEMENT FOR REMOTE MAINTENANCE CONSOLE

The Remote Maintenance Console is used primarily for the support of Customer Service maintenance and is configured in the Startup job stream as follows:

```
      1
1     8     6
-----
$     Iyy-m {CH-p }
      {PUB-p},RMC66,TR1
```

where:

RMC66 - The Remote Maintenance Console device mnemonic

TR1 - The Remote Console Device name

The variables m and p are the same as those defined under "\$ Iyy Format For System Control Device" on the preceding pages in this section.

The RMC66 resides on the remote port of the CSU6601 console channel adapter when the adapter is configured for two channels. It consists of a Diagnostic Processor Unit (DPU) with its on site console and remote port which has dial-in capability for Honeywell Bull Response Center usage.

The CSU6601 console in this mode requires that the channel for the Master Console have an even number. The channel for the Remote Console must have a contiguous odd number.

A second RMC66 channel may be configured as the odd-numbered channel on another channel adapter board, but is not given a device name. Access through the second channel to the RMC66 is accomplished by use of the MOVE console verb.

The following is a recommended Local/Remote system initialization procedure using TY1 and the RMC66 where TY1 and the RMC66 are configured on the same CSU6601 channel adapter board. The TY1 operator enables the RMC66 at that point via the ENABLE verb, and either the TY1 or RMC66 operator enters the RELINQUISH console verb. Then, either the TY1 or RMC66 operator places their keyboard in control (by pushing the RETURN or End Of Message key) and responds to system initialization dialog.

\$ IMU OR \$ IMX STATEMENT FOR THE MAINTENANCE CONSOLE

Every IMU or IMX in a system configuration has a maintenance console adapter (MCA) channel. It is fixed on channel 3 traditionally in the overhead channel group. It is configured in the Startup job stream as follows:

```

1      8      1
      6
-----
$      {IMU-m} {CH-p },MCA[,ddd][,DEDICATED][,RLSE]
      {IMX-m} {PUB-p}

```

where:

m - IMU or IMX #

p - Channel # (Must be equal to 3)

ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric.

Example:

```

1      8      1
      6
-----
$      IMU-1  CH-3,MCA,MC1

```

For each configured IMU or IMX, for which no MCA is configured in the Startup job stream, Startup builds an entry at the end of the device SCT area, as though the following statement were included in the Startup job stream:

```

1      8      1
      6
-----
$      {IMU-m} CH-3,MCA
      {IMX-m}

```

where:

m - IMU or IMX #

\$ Iyy STATEMENT FOR MASS STORAGE SUBSYSTEMS

The same basic \$ Iyy statement format applies for all mass storage devices. The format for these \$ Iyy statements follows. (If more than one device is defined on a single \$ Iyy statement, the UNIT-u and ddd fields must be repeated for each mass storage device configured within the device type (tttttt field) specified.)

1	8	1
<hr/>		
\$	Iyy-m	{CH-p } {PUB-p},tttttt,UNITS-n[,NONSEQ],
\$	ETC	{UNIT-uu } {ddd } {UNIT-uu.s},{SPARE}[,vvvvvv][,S-xxxxx][,AU-a][,RMVBL][,
\$	ETC	DEDICATED][,NOFMS][,RLSE]

where:

m - Number of the Iyy to which this mass storage subsystem is connected. The value of m can be 0-3.

p - Iyy channel (CH/PUB) number. Permissible values are:

IMU	8-63
IMX	0-127
IOM	8-31
IOP	8-63
IOX	0-127

tttttt - Device type for all units except those for which vvvvvv is specified. Refer to Table 5-4 for valid device types.

NOTE: The MSU3380, MSU3381, and MSS8080 subsystems have the following configuration restrictions:

1. These subsystems may not be specified on a \$ IOM statement.
2. These subsystems may not be used for NPS sharing environment.
3. The MSS8080 may only be specified on a \$ IMX statement.

Table 5-4. Mass Storage Subsystem Parameters

Device Type Code (tttttt)	Description	Maximum Physical Devices	Maximum Logical Devices (UNITS-n)	Logical Device Number (UNIT-uu)
MS0400	MSU0400	32	32	1 - 32
MS0402	MSU0402	32	32	1 - 32
MS0450	MSU0451	32	32	1 - 32
MS0500	MSU0500	63	63	1 - 63
MS0501	MSU0501	63	63	1 - 63
MSC1A	MSU3380 *	32	32	0 - 31
MSC1B	MSU3380 **	32	64	0.0 - 31.1
MSD1A	MSU3381 *	32	64	0.0 - 31.1
MSD1B	MSU3381 **	32	96	0.0 - 31.2
MMS1A	MSS8080 *	64	64	0 - 63
MMS1B	MSS8080 **	64	128	0.0 - 63.1
MMS1E	MSS8080 **	64	64	0 - 63

* 64-word sector format

** 512-word sector format

- n - Number of logical devices on this channel (CH/PUB) for this device type (tttttt field). If the value n is not the same as the total number of logical devices defined by UNIT-u fields, Startup aborts. For example, if there are three UNIT-u fields, n must be 3 (UNITS-3). (Refer to Table 5-4 for the maximum number of logical devices that can be specified for each device type.)

When defining MSC1B, MSD1A, MSD1B, and MSM1B subsystems, UNIT applies to a logical device. One MSC1B, MSD1A, or MSM1B comprises two logical devices. One MSD1B comprises three logical devices. Each logical device must be separately defined by a UNIT-u field.

- NONSEQ - The logical devices that are defined by UNIT-u fields are not necessarily in numeric sequence. For example, the devices may be defined in the sequence UNIT-2, UNIT-3, UNIT-1, and UNIT-4 rather than in the sequence UNIT-1, UNIT-2, UNIT-3, and UNIT-4. Because mass storage devices are allocated in the same sequence that devices are defined on \$ Iyy statements, the NONSEQ parameter can be used to influence the order of allocation.

- uu
uu.s - Logical device identification number. The logical device name (ddd field) immediately following this field is associated with this logical device identification number. The subunit portion (.s) of this field is only valid for the device types in Table 5-4 that show subunits in the Logical Device Number column. (Refer to Table 5-4 for the valid form for each device type.)

- ddd - Logical device name, comprised of three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric. One device on the system must be named ST1. If ST1 is not defined, the console message DEVICE ST1 UNDEFINED is issued and Startup aborts. For mirrored pairs of devices, "SPARE" must be used as the logical device name for the secondary device.
- vvvvvv - Device type, for logical device ddd, immediately preceding. Valid codes are the same as for tttttt. vvvvvv defaults to the value specified for tttttt.
- xxxxx - Five-character alphanumeric identifier (device label) of the logical device named ddd.

- a - Number of llinks per allocation unit (AU). If this AU size is not the same as that used to initialize the logical device (i.e., via the \$ INIT statement in the Startup job stream, Removable Storage Initialization Program (RSIP), or Removable Disk Initialization Program (RDIP)) the device will be released when there is an attempt to allocate space on the device.

It is recommended that AU size always be specified in conjunction with a released or removable device. Startup passes this value to the Mass Storage Allocation program, which builds in-memory allocation tables.

If a device is to have an AU size other than the default value, the value must be specified in this field. Otherwise, Startup assigns the default value, which is one for all devices except the MSU0501, MSC1B, MSD1B, MSM1B, and MSM1E. Those devices have a default value of eight.

For any volume formatted in 512-word sectors, that is to be a member of a volume set, the AU size must be eight or a multiple of eight.

The AU size may also be specified via the \$ INIT statement in the \$INITIALIZE section. If the size specified on the \$ Iyy statement and the size specified on the \$ INIT statement are different, the smaller size is used.

In addition, if the \$ SHARED statement defines a logical device as being shared with NPS, the AU size for that logical device must be 12. (NPS allocates mass storage space in one-link (12-llink) increments.) If the device does not have an AU size of 12, NPS aborts.

- RMVBL - This logical device is a removable device. (System files cannot reside on a device defined as RMVBL.) Any device that is to be a member of a volume set must be declared as RMVBL.

- DEDICATED - This is a dedicated device.

NOFMS - The FMS catalog and permanent file structure is not permitted on this device. All space on this mass storage device is temporary file space. NOFMS cannot be used with RMVBL. If NOFMS is specified for device ST1, the console message:

ST1/SMCDUP/GCOS FILE/CAT DEVICES CAN'T DEFINE FMS

is issued and Startup aborts.

Startup also aborts if the CAT option is specified on the \$ INIT statement for a device for which a \$ Iyy...NOFMS statement is included.

RLSE - This device is configured and released at Startup.

The following example indicates that four (UNITS-4) MSU0451 mass storage devices (MS0450) are configured on channel 14 (CH-14) of IOM-0. One device (UNIT-1, logical device name MS1) contains permanent space and has a default allocation unit size of 1. The second device (UNIT-2, logical device name MS2) is a removable (RMVBL) device with an allocation unit size of 1 (AU-1). The third device (UNIT-3, logical device name MS3) is a dedicated (DEDICATED) permanent mass storage device with a default allocation unit size of 1. Programs using UNIT-3 must request this device by its logical device name. The fourth device (UNIT-4, logical device name MS4) contains only temporary space (NOFMS) and has a default allocation unit size of 1.

	1	8	1		6
<hr/>					
\$	IOM-0	CH-14,MS0450,UNITS-4,			
\$	ETC	UNIT-1,MS1,			
\$	ETC	UNIT-2,MS2,RMVBL,AU-1,			
\$	ETC	UNIT-3,MS3,DEDICATED,			
\$	ETC	UNIT-4,MS4,NOFMS			

The next example indicates that two physical MSU0500 mass storage devices are configured on channel 15 (CH-15) of IOX-0. The logical device definitions for each physical device must be in odd/even pairs. UNIT-1 and UNIT-2 refer to one physical device and have logical device names ST1 and DS1 respectively. UNIT-5 and UNIT-6 refer to a second physical device and have logical device names DS5 and DS6 respectively.

Space is allocated on logical device DS5 in two-llink allocation units (AU-2). AU size on all other logical devices defaults to one llink. Use of this field exemplifies that each logical device is independent of the others and that parameters can be assigned on an individual logical device basis.

1	8	1
1	8	6
\$	IOX-0	CH-15,MS0500,UNITS-4,
\$	ETC	UNIT-1,ST1,
\$	ETC	UNIT-2,DS1,
\$	ETC	UNIT-5,DS5,AU-2,
\$	ETC	UNIT-6,DS6

The next example indicates two physical MSC1B mass storage devices configured on channel 56 (CH-56) of IMU-2. The UNIT-00.0 and UNIT-00.1 logical device designators refer to the same physical device and have logical device names MSA and MSB. The UNIT-01.0 and UNIT-01.1 logical device designators refer to the second physical device and have logical device names MSC and MSD. (Refer to the GCOS 8 OS System Operating Techniques manual for information about physical and logical device characteristics for each device type.)

1	8	1
1	8	6
\$	IMU-2	CH-56,MSC1B,UNITS-4,
\$	ETC	UNIT-00.0,MSA,
\$	ETC	UNIT-01.0,MSC,
\$	ETC	UNIT-00.1,MSB,
\$	ETC	UNIT-01.1,MSD

The next example indicates two physical devices configured on channel 44 (CH-44) of IMU-0. The logical device designators for one physical device are UNIT-04.0 and UNIT-04.1, with logical device names of MS4 and MS6, respectively. The other physical device has only one logical device designator, UNIT-05, with a logical device name of MS5. Note that this device is an exception to the attributes defined for the subsystem since it has only one logical device name for the physical device.

1	8	1
1	8	6
\$	IMU-0	CH-44,MSC1B,UNITS-3, NONSEQ,
\$	ETC	UNIT-04.0,MS4,
\$	ETC	UNIT-05,MSC1A,MS5,
\$	ETC	UNIT-04.1,MS6

The MSU0501, MSC1B, MSD1B, MSM1B, and MSM1E devices are formatted into 512-word sectors which are transparent to software.

Device assignment and release functions for Startup are on the basis of logical devices. When one logical device is released the other logical device on the same spindle may still be assigned (not released). The release/assign condition of the other logical device should be interrogated using the PSTATS command. For the PSTATS, ASGN, or RLSE verbs, the following message is output to indicate the device release/assignment condition:

```

DEV icccdd { RLSE }
           { ASGN }

```

MSU0501, MSU3380, MSU3381, and MSS8080 logical devices cannot be exchanged via the EXCHG console verb or the X response to an Exception Processing message.

MSU0501 logical devices can be mixed with MSU0451 and MSU0500 logical devices on the same subsystem (subject to the Startup rules for mixed configurations).

\$ Iyy STATEMENT FOR MAGNETIC TAPE SUBSYSTEMS

The same basic \$ Iyy statement format can be used to define MTS0400/0500, MTS0600/0610, MTS500, and MTS8200 magnetic tape subsystems. The format for this \$ Iyy statement follows. (If more than one device is defined on a single \$ Iyy statement, the UNIT-u and ddd fields must be repeated for each configured magnetic tape device within the device type (tttttt field) specified.)

```

1      8      1
_____ 6
$      Iyy-m {CH-P }
$      ETC  {PUB-p},tttttt,aaaa,UNITS-n[,NONSEQ],UNIT-u,ddd[,
           zzzzz][,CLASS-c][,RESERVED][,DEDICATED][,RLSE]

```

where:

m - Number (0-3) of the Iyy to which this magnetic tape subsystem is connected.

p - Iyy channel (CH/PUB) number. Permissible values are:

```

IMU    8-63
IMX    0-127
IOM    8-31
IOP    8-63
IOX    0-127

```

tttttt - Device type:

Code	Description
TAPE*500*7	MTS500 seven-track magnetic tape
TAPE*500*9	MTS500 nine-track magnetic tape
TAPE*500*7	MTS0400/0500 seven-track magnetic tape
TAPE*500*9	MTS0400/0500 nine-track magnetic tape
TAPE*600*7	MTS0600 seven-track magnetic tape
TAPE*600*9	MTS0600 nine-track magnetic tape
TAPE*610*7	MTS0610 seven-track magnetic tape
TAPE*610*9	MTS0610 nine-track magnetic tape
TAPE*FIPS*9	MTS8200 nine track magnetic tape

NOTE: TAPE*FIPS*9 may not be specified on a \$ IOM statement.

aaaa - Density code. This code represents the density capabilities of most of the devices (ddd) that are specified for this device type (ttttt). Valid density codes are:

<u>Code</u>	<u>Description</u>
ABCD	200, 556, 800, and 1600 bpi
ABC	200, 556, and 800 bpi
BCD	556, 800, and 1600 bpi
BC	556 and 800 bpi
CD	800 and 1600 bpi
DE	1600 and 6250 bpi
D	1600 bpi
E	6250 bpi

For example, if the UNITS-n field specifies four units are being defined for this device type and three of the units have density capabilities of 200, 556, 800, and 1600 bpi, the aaaa field would contain ABCD.

Exceptions to the entry in the aaaa field (i.e., any device that has density capabilities that differ from those defined by the density code) are defined in the zzzzz field.

n - Number of magnetic tape units on this channel (CH/PUB) for this device type (ttttt field). (Refer to Table 5-5 for the maximum number of units that can be specified for each device type.) If the value n does not equal the combined number of magnetic tape units defined in the UNIT-u fields, Startup aborts. For example, if there are three UNIT-u fields, n must be 3 (UNITS-3).

NONSEQ - The units (devices) defined in the UNIT-u field are not necessarily in numeric sequence. For example, the devices may be defined in the sequence UNIT-2, UNIT-3, UNIT-1, and UNIT-4 rather than in the sequence UNIT-1, UNIT-2, UNIT-3, and UNIT-4. Because magnetic tape handlers are allocated in the same sequence that devices are defined on \$ Iyy statements, the NONSEQ parameter can be used to influence the order of allocation.

u - Unit identification number. The logical device name (ddd field) that immediately follows the UNIT-u field is associated with this unit number. (Refer to Table 5-5 for valid unit numbers for each device type.) Note that FIPS devices can have UNIT-0 as a valid unit number.

ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric.

zzzzz - Magnetic tape characteristics (i.e., tape density and number of tracks) for individual magnetic tape units that are exceptions to information specified in the tttttt and aaaa fields. For each exception device, the zzzzz field must immediately follow the UNIT-u,ddd fields for the exception device:

UNIT-u,ddd,zzzzz

The last character of the zzzzz field represents the magnetic tape track type (i.e., 7 or 9). The preceding characters represent the tape density capabilities. Valid exception codes are:

<u>Code</u>	<u>Description</u>
ABC7	Seven track, 200/556/800 bpi
BC7	Seven track, 556/800 bpi
ABCD9	Nine track, 200/556/800/1600 bpi
BCD9	Nine track, 556/800/1600 bpi
CD9	Nine track, 800/1600 bpi
DE9	Nine track, 1600/6250 bpi
D9	Nine track, 1600 bpi
E9	Nine track, 6250 bpi

For ease of reference, it is recommended that each exception device be defined on a separate \$ ETC statement.

c - Allocation class for logical device ddd. This parameter allows the site to reserve devices for specific uses based on site-defined considerations. For example, speed and transfer rate are two device attributes that can be considered when defining magnetic tape allocation classes. Physical location of devices also may be a consideration. Valid class codes are:

<u>Code</u>	<u>Description</u>
3	Most preferred
2	Preferred
1	Ordinary
0	Subordinate (unclassified) <i>default code</i>

If no allocation class is specified, class code 0 is assigned by default.

Based on the site-defined classes, the user programmer can indicate on the \$ TAPE JCL statement which device and/or class is required for a specific application. (Refer to the GCOS 8 OS Job Control Language manual for a description of the \$ TAPE JCL statement.)

RESERVED - The designated tape unit may be allocated only when the associated class is requested via the \$ TAPE JCL statement. If the class is not specified on the \$ TAPE statement, the tape unit is not allocated.

DEDICATED - This is a dedicated device.

RLSE - This device is configured and released at Startup.

Table 5-5. Magnetic Tape Subsystem Parameters

Device Type Code (tttttt Field)	Maximum Number of Units (UNITS-n Field)	Unit Number (UNIT-v Field)
TAPE*500*7	16	1-16
TAPE*500*9	16	1-16
TAPE*600*7	16	1-16
TAPE*600*9	16	1-16
TAPE*610*7	16	1-16
TAPE*610*9	16	1-16
TAPE*FIPS*9	17	0-16

NOTE: The device type codes TAPE*500*7 and TAPE*500*9 apply to seven-track and nine-track MTS500 and MTU0400/0500 devices.

The following example indicates that six (UNITS-6) MTU0600 magnetic tape handlers (TAPE*600*9) are configured on logical channel 16 (CH-16) of IOX-0. A majority of the six tape units are nine-track (*9) handlers with density capabilities of 800 bpi and 1600 bpi (CD). All six units are defined on \$ ETC statements. One unit (TB6) is an exception to the attributes defined for the subsystem (i.e., 800 bpi and 1600 bpi density capabilities and nine-track handlers). TB6 is a seven-track handler with 200, 556, and 800 bpi density capabilities (ABC7).

In addition, TB4 is assigned to class 2 (CLASS-2) and will be allocated (RESERVED) only when that class is specified on the \$ TAPE JCL statement. TB5 is dedicated (DEDICATED) and will be allocated only when requested by its logical device name.

1	8	1 6
\$	IOX-0	CH-16,TAPE*600*9,CD,UNITS-6,
\$	ETC	UNIT-1,TB1,
\$	ETC	UNIT-2,TB2,
\$	ETC	UNIT-3,TB3,
\$	ETC	UNIT-4,TB4,CLASS-2,RESERVED,
\$	ETC	UNIT-5,TB5,DEDICATED,
\$	ETC	UNIT-6,TB6,ABC7

An equivalent set of Startup statements can be used on a system using any of the other input/output controller types.

The next example indicates that six units (UNITS-6) of MTS8200 magnetic tape handlers (TAPE*FIPS*9) are configured on channel 40 (CH-40) of IMU-1. All units are defined on a separate \$ ETC statement for clarity. UNIT-2 is an exception to the attributes defined for the subsystem since it has a density capability of 800/1600 bpi.

1	8	1 6
\$	IMU-1	CH-40,TAPE*FIPS*9,DE,UNITS-6,NONSEQ,
\$	ETC	UNIT-0,F0,
\$	ETC	UNIT-1,1F1,
\$	ETC	UNIT-2,CD9,1F2,
\$	ETC	UNIT-8,1F8,
\$	ETC	UNIT-9,1F9,
\$	ETC	UNIT-10,1FA

\$ Iyy STATEMENT FOR PRINTERS

The following statement format is used to specify a printer. Note that printer belt and vertical format control (VFC) image files must be created and initialized via a \$ FILDEF statement in the \$EDIT section of the Startup job stream for all printers except the PRU1100. Only one printer is permitted per logical Iyy channel (i.e., per \$ Iyy statement).

The format for the \$ Iyy statements for defining printers is:

```

1      8      1
_____
$      Iyy-m  {CH-p }
$      ETC    {PUB-p},tttttt,UNITS-1,UNIT-1,
              TRAIN-nnnn,ccc,ddd[,DEDICATED][,RLSE]

```

where:

m - Number (0-3) of the Iyy to which this printer subsystem is connected.

p - Iyy channel (CH/PUB) number. Permissible values are:

```

IMU  8-63
IMX  0-127
IOM  8-31
IOP  8-63
IOX  0-127

```

tttttt - Device type:

Code				Description
DPS 8	DPS 8000	DPS 88	DPS 90	
PR1100	PR1100	PR1100	N/A	PRU1100 printer
PR0901	PR0901	PR0901	N/A	PRU0901 printer
PR0901	PR0901	PR0901	N/A	PRU0903 printer
N/A	N/A	N/A	PR1200	PRU0908 printer
PR1200	PR1200	PR1200	PR1200	PRU1200 printer
PR1201	PR1201	PR1201	N/A	PRU1201 printer
PR1201	PR1201	PR1201	N/A	PRU1203 printer
N/A	N/A	N/A	PR1600	PRU1208 printer
PR1600	PR1600	PR1600	PR1600	PRU1600 printer

NOTE: On a DPS 88, the configuration of the PRU0901, PRU1201, PRU0903, or PRU1203 may require an upgrade to the IOX for this capability. Contact your Honeywell Bull representative for more details concerning this upgrade.

UNITS-1 - Number of printers on this channel (CH/PUB) for this device type (tttttt). (Only one printer can be configured on each channel.)

- UNIT-1 - Unit identification number.
- nnnn - Printer belt code. The printer belt number is imprinted in decimal on the carriage and must be converted to octal for this field. This field does not apply to PRU1100 printers. Valid codes are:

<u>Code</u>	<u>Description</u>
1130	Standard ASCII printer belt
764	Standard BCD printer belt

- ccc - Print line width. This field does not apply to PRU1100 printers. Valid entries in this field are:

136 - Standard 136-character print line
 160 - Extended print line of 160 characters

- ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric.

- DEDICATED - This is a dedicated device. The Startup program prints only on a printer that is not dedicated. If output is desired during System Startup, there must be at least one printer which is not dedicated.

- RLSE - This device is configured and released at Startup.

\$ Iyy STATEMENT FOR FRONT-END PROCESSORS

There are two methods of communicating with a DATANET 8 Front-End Processor running DNS. The first of these, called FEP Gateway (DNET/ROUT mode), is an interrupt driven interface using traditional GCOS remote communication protocol. The second method is standard DSA Common Exchange Interface (CXI), a time driven queued interface used only for native mode GCOS 8 communications.

There are three different \$ Iyy formats to configure the DATANET 8 Front-End Processor, one for each of the above methods and one for a combination of both.

Network Processor Using FEP Gateway (DNET/ROUT Mode)

The \$ Iyy statement defines the configuration of a DATANET Network Processor for DNET/ROUT mode on a logical channel of an input/output controller. Only one DATANET Processor can be defined per logical input/output controller channel (i.e., per \$ Iyy statement). The format for the \$ Iyy statement which defines a DATANET Processor for DNET/ROUT mode is:


```

1      8      1
-----
$      Iyy-m {PUB-p},tttt-n,LINES-xxx
          {CH-p }

```

where:

m - Number (0-3) of the Iyy to which the DATANET Processor is connected.

p - Iyy channel (CH/PUB) number. Permissible values are:

```

IMU  8-63
IMX  0-127
IOM  8-31
IOP  8-63
IOX  0-127

```

tttt - DATANET Network Processor identification (i.e., 6616, 6624, 6632, 6670, FNP)

n - DATANET Network Processor number. Processors must be sequentially numbered. The value of the processor number can range from 0-7.

xxx - Maximum number of lines (i.e., terminals) configured on DATANET Network Processor tttt that can be connected to the central system at the same time. Only the number of lines specified in this field are available, even though additional lines may be configured. This is a required field.

If multiple \$ Iyy statements are used to define several DATANET Processors, the statements must be in processor number sequence (i.e., the \$ Iyy statement for DATANET Processor 1 must precede the \$ Iyy statement for DATANET processor 2). If the statements are not in the correct sequence, the console message:

```
*CARD BELOW IS OUT OF ORDER
```

is issued and Startup aborts. This message is immediately followed by an image of the statement out of sequence.

The following example indicates that one DATANET 6616 Network Processor (DNET/ROUT interface) is configured on channel 24 (CH-24) of IOM-1. The configured processor is processor number 0. A maximum of 50 terminals (LINES-50) can be connected to the central system.

```

1      8      1
-----
$      IOM-1  CH-24,6616-0,LINES-50

```

An equivalent statement can be used for a system configured with IMUs, IMXs, IOPs, or IOXs.

DSA Common Exchange Interface (CXI Mode)

The DATANET 8 Network Processor in Common Exchange Interface (CXI) mode must be configured on an Input/Output Controller Direct Interface Adapter (DIA) port under a device type of UNCP. This configuration is reflected in the following \$ Iyy statement in the GCOS 8 Startup job stream:

```
1      8      1  
_____ 6
```

```
$      Iyy-m {CH-p }  
                {PUB-p},tttt,ddd
```

where:

m - Number of the Iyy serving the DATANET 8 processor

p - Iyy channel (CH/PUB) number. Permissible values are:

IMU	8-63	IOP	8-63
IMX	0-127	IOX	0-127
IOM	8-31		

tttt - Device type

UNCP - DATANET 8 network processor
SSF - System Support Facility

ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric. Recommended names are FE0, FE1, FE2, ..., FE9, FEA, FEB, ..., FEF.

The logical device names FE0, FE1, FE2, FE3, FE4, FE5, FE6, FE7, FE8, FE9, FEA, FEB, FEC, FED, FEE, and FEF and the default values for CXI communications are defined in the standard workstation definition data base (WD) file in the SYS SOFTWARE structure. If other names or values are used, the site administrator must make the appropriate changes in the WD file. New names must be chosen using the device naming conventions discussed under the input/output controller statements earlier in this section.

Note that Network Processors for CXI mode must be configured independently of Network Processors for DNET/ROUT mode. The GCOS 8 Startup process sees the following differences between the configurations:

- o Device types for the two modes are different, even when the physical device is the same. For CXI mode, the device type is UNCP and the following field of the configuration statement contains the Network Processor name (e.g., FEn, where n = 0 - F). For DNET/ROUT mode, the device type is 66xx-n, where xx is the specific device type and n is the device number in the configuration.

- o Network Processors for CXI mode must be numbered starting from device 0 (e.g., FE0, FE1,...FE9 ,FEA ,FEB,...FEF) and need not be in any particular number sequence. Network Processors for DNET/ROUT mode must be numbered sequentially (e.g., 6670-0 - 6670-7) and must be defined in processor number order in the \$CONFIG section of the Startup job stream. While the configuration statements may be intermingled in the Startup job stream, the two numbering sequences must not be mixed.
- o Network Processors for CXI mode are not included in the FNP count on the \$ INFO FNP/n statement in the Startup job stream. The n value must include only the Network Processor configured for DNET/ROUT mode.
- o Mailbox address switches for all Network Processors in CXI mode are BF8 (hexadecimal). Mailbox addresses for Network Processors in DNET/ROUT mode are based on input/output controller mailbox addresses and vary with the number of input/output controllers and Network Processors in the configuration.

For example, if location 3000 (octal) defines the beginning of the mailbox area for the (first and) last input/output controller configured, the mailbox area for the first DATANET Processor (Processor 0) begins at location 5400 (octal). The mailbox area for each additional DATANET processor is obtained by incrementing the mailbox address of the preceding DATANET Processor by 100 (octal).

The need to change mailbox address switches when splitting a large system configuration into two smaller configurations can be avoided by using the \$ BASE statement.

\$ IOX Statement For DPS 88 System Support Facility

The DPS 88 System Support Facility is configured as a DATANET 8 Network Processor in Common Exchange Interface (CXI) mode. Refer to "DSA Common Exchange Interface (CXI Mode)" above, for the definition of the Startup job stream statement to configure the System Support Facility.

Both DNET/ROUT Mode And CXI Mode

This format is used for a DATANET 8 processor that is used for both DNET/ROUT mode and CXI mode over the same input/output controller channel. The format is as follows:

```

1      8      1
      6
-----
$      Iyy-m {CH-p }
      {PUB-p},DDIA-n,ddd,LINES-xxx

```

where:

m - Number (0-3) of the Iyy to which the DATANET processor is connected.

p - Iyy channel (CH/PUB) number. Permissible values are:

IMU 8-63
IMX 0-127
IOM 8-31
IOP 8-63
IOX 0-127

n - DATANET processor number. n must be sequentially consistent (0,1,2,3,...) with all other DATANET processors that use DNET/ROUT mode (including On-Line PPSs)

ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric. Recommended names are FEO, FE1, FE2,..., FE9, FEA, FEB,..., FEF

xxx - Maximum number of lines that can be connected at the same time on this DATANET processor. This is a required parameter for this format. It has significance in the DNET/ROUT mode but not in the CXI mode.

The logical device names FEO, FE1, FE2, FE3, FE4, FE5, FE6, FE7, FE8, FE9, FEA, FEB, FEC, FED, FEE, and FEF and the default values for CXI communications are defined in the standard workstation definition data base (WD) file in the SYS SOFTWARE structure. If other names or values are used, the site administrator must make the appropriate changes in the WD file. New names must be chosen using the device naming conventions discussed under the input/output controller statements earlier in this section.

The following example illustrates the configuration of a DATANET 8 processor with the capability of using both DNET/ROUT mode and CXI mode over the same channel.

```
1      8      1  
      6  
-----  
$      IOP-0  PUB-53,DDIA-0,FE0,LINES-200
```

This is functionally equivalent to the following example, which requires the DATANET 8 processor to be physically connected to two channels.

```
1      8      1  
      6  
-----  
$      IOP-0  PUB-53,UNCP,FE0  
$      IOP-0  PUB-54,6632-0,LINES-200
```

Page Processing System

A Page Processing System directly connected to an Iyy is specified to the Startup program via a \$ Iyy statement. The format is:

```
1      8      1
-----
$      Iyy-m  {PUB-p},PPS*FEP-n,LINES-1
           {CH-p }
```

where:

m - Number (0-3) of the Iyy to which the Page Processing System is connected.

p - Iyy channel number (CH/PUB).

PPS*FEP - PPS device type code.

n - Network Processor number.

LINES-1 - Number of lines which may be connected to the PPS. This value is always 1.

The PPS is configured as a network processor (for DNET/ROUT mode), and the parameters required are analogous to those used to configure a DATANET Network Processor (for DNET/ROUT mode). The network processor number must be sequentially consistent (e.g., 0,1,2,...) with other PPSs and DATANET Processors (for DNET/ROUT mode) included in the system configuration.

A Page Processing System which is connected remotely to a DATANET Processor does not require this statement.

Examples Of Front-End Processor Configuration Formats

```
1      8      1
-----
$      BASE   IOX-2,DN-3
$      INFO   FNP/3
$      IOX-0   PUB-60,SSF,FE0           SYSTEM SUPPORT FACILITY
$      IOX-0   PUB-61,UNCP,FE1         CXI MODE
$      IOX-0   PUB-62,DDIA-0,FE2,LINES-100 CXI & DNET/ROUT
$      IOX-0   PUB-63,6632-1,LINES-50   DNET/ROUT MODE
$      IOX-0   PUB-64,PPS*FEP-2,LINES-1  ON-LINE PPS
```

NOTES: 1. With the \$ BASE statement included, the \$ INFO FNP statement is redundant; however, if the statements do not agree on the number of FNPs, Startup will use the larger of the two numbers.

2. The number of FNPs in the \$ INFO FNP/n statement and the \$ BASE statement includes only the FNPs that use DNET/ROUT mode, PUBs 62, 63, and 64.
3. The devices on the three CXI mode channels are assigned logical device names FE0, FE1, and FE2. Although the \$ IOX statements were presented in logical device name sequence in this example, no particular sequence is required for CXI mode.
4. The Network Processor number for DNET/ROUT mode device types are sequentially numbered 0, 1, and 2. It is required that statements be presented in that sequence for DNET/ROUT mode.

\$ Iyy STATEMENT FOR HYPERCHANNEL COMMUNICATIONS ADAPTER

One \$ Iyy statement is required per HYPERchannel (HYPERchannel is a trademark of the Network Systems Corporation) adapter to define the primary channel for the device. Additional logical channels on the same Peripheral Subsystem Interface Adapter (PSIA) may be used and are defined via a \$ XBAR statement. A logical device should be defined for each use of the physical adapter by different communications protocols (e.g., DSA, MASSNET). The logical device, in conjunction with the HYPERchannel adapter logical device capabilities, separates I/O using the HYPERchannel into "logical streams" containing different protocols. The format for these \$ Iyy statements is shown below.

```

1      8      1
      _____
           {CH-p }
$      Iyy-m {PUB-p},HYPER,UNITS-n,UNIT-u,ddd[ ,DEDICATED][ ,RLSE]

```

where:

m - Number (0-3) of the Iyy to which this HYPERchannel adapter is connected.

p - Iyy channel (CH/PUB) number. Permissible values are:

```

IMU  8-63
IMX  0-127
IOM  8-31
IOP  8-63
IOX  0-127

```

HYPER - HYPERchannel device type.

n - Number of logical devices on this channel (CH/PUB) for this HYPERchannel adapter. If value n does not equal the number of logical devices defined in the UNIT-u fields, Startup aborts.

- u - Logical device identification number. The logical device name (ddd field) that immediately follows the UNIT-u field is associated with this device number.
- ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric.
- DEDICATED - Specifies a dedicated device.
- RLSE - Specifies a device that is configured and released at Startup.

\$ Iyy STATEMENT FOR DATABASE COMPUTER

The \$ Iyy statement defines the configuration of channels between the main frame and the database computer. A database computer includes two or more Interface Processors (IFPs), each of which is configured as two devices (one for input, the other for output).

A maximum of eight IFPs, or 16 devices, can be configured per physical channel.

A separate \$ Iyy statement is required for each physical channel. If there are multiple physical channels, they may be connected to one or more input/output controllers.

The format for the \$ Iyy statement defining database computer connections is:

	1	8	1	
			6	
<hr style="border: 0.5px solid black;"/>				
\$	Iyy-m			{PUB-p}
\$	ETC			{CH-p },DBC,UNITS-n,
\$	ETC			UNIT-0,ddd,
\$	ETC			UNIT-1,ddd, ...
\$	ETC			UNIT-n-1,ddd

where:

- m - Number (0-3) of the Iyy to which the channel is connected.
- p - Iyy channel (CH/PUB) number of the first of the four logical channels assigned to the FIPS channel connected to the database computer. Permissible values are:

IMU	8-63
IMX	0-127
IOM	8-31
IOP	8-63
IOX	0-127

DBC - Symbol for database channel

n - Number of devices (twice the number of IFPs configured on this channel)

ddd - Logical device name. A logical device name comprises three alphanumeric characters. The first character must be nonzero, the second character must be alphabetic, and the third character can be alphabetic or numeric. These may be DB0, DB1, ..., DB9, DBA, ..., DBF corresponding to UNIT-0, ..., UNIT-15, respectively.

A separate UNIT-u phrase is provided for each of the n devices configured on the channel. Each phrase gives the name for that device. One or more \$ ETC statements may be used to contain these phrases. Only unit numbers from 0 through 15 may be used. Unit numbers must appear in pairs. The first number in each pair must be even, and the second number in each pair must be one greater than the first. Numbering must start with zero.

Each physical channel is usually configured with two or four logical channels. To indicate logical channel usage, a \$ XBAR statement is required. See "\$ XBAR Statement", later in this section. A \$ GROUP statement must be used to show that the logical channels can be used interchangeably. See "\$ GROUP Statement", earlier in this section.

In the following example, two physical channels are connected to the database computer, and each is connected to four IFPs or eight devices. Four logical channels are provided for each physical channel.

```
      1
1      8      6
-----
$      IOX-0   CH-12,DBC,UNITS-8,
$      ETC     UNIT-0,DB0,UNIT-1,DB1,UNIT-2,DB2,UNIT-3,DB3,
$      ETC     UNIT-4,DB4,UNIT-5,DB5,UNIT-6,DB6,UNIT-7,DB7
$      XBAR    IOX-0,CH-12,CH-13,CH-14,CH-15
$      GROUP   IOX-0,CH-12-15
$      IOX-0   CH-16,DBC,UNITS-8,
$      ETC     UNIT-0,DB8,UNIT-1,DB9,UNIT-2,DBA,UNIT-3,DBB,
$      ETC     UNIT-4,DBC,UNIT-5,DBD,UNIT-6,DBE,UNIT-7,DBF
$      XBAR    IOX-0,CH-16,CH-17,CH-18,CH-19
$      GROUP   IOX-0,CH-16-19
```

\$ Iyy STATEMENT FOR CARD READERS AND CARD PUNCHES

The same basic \$ Iyy statement format can be used to define card readers and card punches. Only one device can be defined per logical Iyy channel (i.e., per \$ Iyy statement). The format for the \$ Iyy statement defining card readers and card punches is:

```
      1
1      8      6
-----
                {CH-p }
$      Iyy-m   {PUB-p},ttttt,UNITS-1,UNIT-1,ddd[,DEDICATED][,51OPT][,RLSE]
```


p - Iyy channel (CH/PUB) number. Permissible values are:

IMU 8-63
IMX 0-127
IOM 8-31
IOP 8-63
IOX 0-127

tttttt - Device type:

<u>Code</u>	<u>Description</u>
READER#MPC31	CRU1050 card reader
CC0401	CCU0401 card reader/card punch
CR0501	CRU0501 card reader
CR1050	CRU1050 card reader
PUNCH#200	CPZ201 card punch
PUNCH#300	CPZ300 card punch
PUNCH#MPC30	CPZ300 or PCU0120/0121 card punch
PC0120	PCU0120 card punch
PC0121	PCU0121 card punch
PC0300	CPZ300 card punch

UNITS-1 - Number of card readers or card punches on this channel (CH/PUB) for this device type (tttttt). (Only one card reader or card punch can be configured on each channel.)

UNIT-1 - Unit identification number.

ddd - Logical device name.

DEDICATED - This is a dedicated device.

510PT - This parameter applies only to CRU1050 card readers and indicates that the device defined in the logical device name (ddd) field has the capability of reading 51-column cards.

RLSE - This device is configured and released at Startup.

The following example defines one CRU1050 card reader (CR1050) with a logical device name of CR1. The device is configured on logical channel 10 (CH-10) of Iyy-0. This device can read 51-column cards (510PT) and is dedicated (DEDICATED) to programs that request the device by its logical device name.

```
      1  
1     8     6  
-----  
$     Iyy-0   CH-10,CR1050,CR1,510PT,DEDICATED
```

\$ LOADFIL Statement

The \$ LOADFIL statement defines the mass storage device and the file onto which the \$LOAD section of the Startup job stream is to be written. (The \$LOAD section contains modules in object deck format that are to be loaded into main memory.) A response of AUTO or REPL to the Startup message *BOOT SOURCE: AUTO OR REPL? during the bootload sequence results in the \$LOAD section being read from the mass storage file (as opposed to loading the section from punched cards or magnetic tape).

The format for the \$ LOADFIL statement is:

```
1      8      1
_____
$      LOADFIL ddd,fffff,sss
```

where:

ddd - Logical device name of the mass storage device on which a file is created to contain the \$LOAD section of the Startup job stream.

fffff - Name of the load file (maximum of 12 characters) to which the \$LOAD section is to be written. The file name cannot contain an embedded hyphen ("-").

sss - Size (in llinks) of the load file. There is no default size; therefore, this field must be defined.

The following example indicates that file LOADFILE is to be allocated 500 llinks of space on mass storage device DS2.

```
1      8      1
_____
$      LOADFIL DS2,LOADFILE,500
```

\$ MCT Statement

The \$ MCT statement defines the physical attributes (i.e., memory size and port connections) of each System Control Unit (SCU) for DPS 8 and DPS 90 systems. See "\$ CIU Statement", earlier in this section for DPS 88 and DPS 8000. This statement must precede all \$ Iyy statements.

Below is the format for the \$ MCT statement. The optional fields (i.e., those enclosed in brackets) can be repeated to define a maximum of eight SCU port connections.

```
1      8      1
_____
$      MCT-n  ssss[,PORT-p,mmmmm/OFF]
```

where:

n - SCU number.

ssss - Memory size of this SCU. This value is specified as the number of 1K (1024 words) blocks. For DPS 90 the entire SCU configuration should be described on one \$ MCT statement.

p - SCU port number (0-7).

mmmmmm - Type code of the hardware module that is connected to the specified SCU port (p). The following codes are valid:

Code	Module
Iyy-x	Input/output controller (IMU/IOM/IOP) number x
PRO-x	Physical processor number x (x=0-5) (DPS 8 only)
EPU-x	Physical processor number x (x=0-3) (DPS 90 only)

NOTES: 1. Whichever device is configured here must be used throughout the Startup job stream or an error message will be displayed.

2. Refer to the "\$ CIU Statement", earlier in this section, for DPS 88 and DPS 8000 systems.

3. In a DPS 8 system with a mixture of IOM and IMU input/output controllers, the input/output controller number must be unique among both controller types (i.e., specifying IMU-0 and IOM-0 is not valid).

/OFF - Defines the processor not currently assigned, but which may be assigned (activated) in the future. (Refer to "Processor Release And Assignment At Startup" in Section 3 for additional information.)

The following example defines two ports (0 and 1) on SCU 0, which has a memory size of 1024K. Processor 0 is connected to port 0. IOM 0 is connected to port 1.

```
      1
1     8     6
-----
$     MCT-0 1024,PORT-1,IOM-0,PORT-0,PRO-0
```

The minimum memory size required to support GCOS 8 is 4MB. If less than this amount is specified, Startup will issue the following error message and abort:

GCOS-8 REQUIRES AT LEAST 1024K OF MEMORY

DPS 90 CONSIDERATIONS

Figure 5-1 shows the hardware (physical) port assignments for a DPS 90 system.

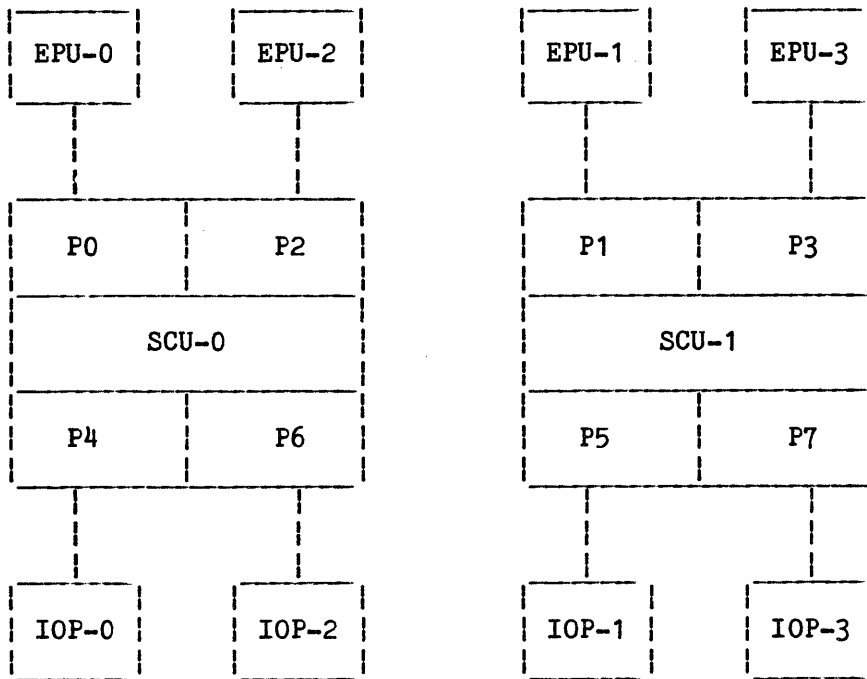


Figure 5-1. DPS 90 Hardware Port Assignments

Only one \$ MCT statement should be used, even though two SCUs are physically present. The port assignments on the \$ MCT statement must be made as shown under the appropriate columnar heading for "TWO SCUs" or "ONE SCU".

	<u>TWO SCUs</u>	<u>ONE SCU</u>
Port-0	EPU-0	EPU-0
Port-1	EPU-1	
Port-2	EPU-2	EPU-1
Port-3	EPU-3	
Port-4	IOP-0	IOP-0
Port-5	IOP-1	IOP-1
Port-6	IOP-2	
Port-7	IOP-3	

In order to avoid configuring more memory than is available, the entire SCU configuration should be described on a single \$ MCT statement (with appropriate \$ ETC statements).

Example 1

The logical EPU/IOP number is derived from the \$ MCT statement. For a dual SCU system the logical EPU/IOP number can be the same as the physical EPU/IOP number. The following control statements define the maximum DPS 90 configuration available on a two-SCU system (i.e., 4 EPUs and 4 IOPs):

```
      1
1     8     6
-----
$     MCT-0  ssss,PORT-0,EPU-0,PORT-1,EPU-1,PORT-2,EPU-2,PORT-3,EPU-3,
$     ETC    PORT-4,IOP-0,PORT-5,IOP-1,PORT-6,IOP-2,PORT-7,IOP-3
```

where:

ssss - The total amount of memory configured to the system.

Example 2

However, on a single SCU, dual IOP, dual EPU system, the logical EPU/IOP numbers cannot be the same as the physical EPU/IOP numbers. In this case the following control statement should be used to define the configuration:

```
      1
1     8     6
-----
$     MCT-0  ssss,PORT-0,EPU-0,PORT-2,EPU-1,PORT-4,IOP-0,PORT-5,IOP-1
```

where:

ssss - The total amount of memory configured to the system.

In example 2, physical IOP number 2 is logical IOP number 1, and physical EPU number 2 is logical EPU number 1. It should also be noted in this example that logical IOP-1 is defined on PORT-5, even though PORT-5 is not physically present on a single SCU system. This is due to the fact that the port numbers specified on the \$ MCT statement for IOPs are used in the following manner:

For every logical IOP defined in the IOPMPS configuration, MSOS builds a connect table entry in Reserved Memory Space (RMS). If two logical IOPs are defined, then two connect entries will be built. These entries contain the true SCU port number to which the IOPs are connected. The port number specified on the \$ MCT statement is used as an index into the RMS connect table as follows:

connect table index = MCT port number -4

(The first entry in the table is accessed with an index of zero.)

So, in example 2, IOP-1 is defined on PORT-5 on the \$ MCT statement in order to obtain the correct index value of 1. The connect table entry at position 1 will contain the true SCU port number of 6.

\$ MPC Statement

The \$ MPC statement defines each configured Microprogrammable Peripheral Controller (MPC), URPO600 Unit Record Processor, or PPU and all active Peripheral Subsystem Interface (PSI) logical channels on that MPC or PPU. Hereafter, except for the SIZE parameter, MPC is used for either an MPC, URPO600, or PPU. Definition of the PSI logical channel includes identifying each associated input/output controller (i.e., IMU/IMX/IOM/IOP/IOX) and each logical channel (CH) on the input/output controller.

The format for the \$ MPC statement is:

1	8	1
<hr/>		

\$ MPC-m parameter-1,parameter-2,...,parameter-n

where:

m - MPC number (0-63). Each configured MPC must be assigned a logical number and defined via the \$ MPC statement. If an MPC is not defined on this statement, the Startup program aborts or the MPC and its associated PSI configuration is ignored.

The following parameters can be included on the \$ MPC statement(s):

<u>\$ MPC Parameter</u>	<u>Description</u>
SIZE-s	The value s (default s = 4) specifies the size of the MPC read/write memory in 1K (1024 words) blocks. The value may be: MPC 4 PPU 4 (TAPE) PPU 16 (DISK)
TAPE*URC	Required only when a magnetic tape-unit record MPC is configured.
PSI-p <i>iph subsystem interface</i>	PSI logical channel number (0-3). The PSI that is used to bootload the MPC must be the first defined on the \$ MPC statement. Thereafter, PSIs can be defined in any sequence (e.g., 0, 1, 3, 2).
SDB	The SDB (shared data base) parameter indicates that this PSI is being shared with NPS. This option is required to prevent Startup from bootloading the MPC firmware each time the system is bootloaded.

\$ MPC Parameter

Description

BOOT The use of the BOOT parameter following the PSI-p parameter allows the site to specify an alternate PSI logical channel over which bootloading can be performed. If BOOT is specified, the MPC Bootload program (MPCB) determines which PSI channel to use as the primary PSI channel, and which to use as the alternate channel. The MPCB program is not supported on the DPS 88 and DPS 90 systems. The following example specifies that bootloading should occur over PSI logical channel 0 (primary) or PSI logical channel 1 (alternate).

```

1      8      1
1      8      6

```

```

$      MPC-0  SIZE-4,PSI-0,IOM-0,CH-8,IOM-0,CH-9,
$      ETC    PSI-1,IOM-1,BOOT,CH-10,CH-11

```

It is recommended that the BOOT parameter be used only with MTS0610 magnetic tape subsystems. If BOOT is specified for any other subsystem, bootloading problems may occur.

PORT-u Unit record MPC controller port number associated with the preceding channel number. Port and channel numbers are assigned on a one-to-one basis. Startup assigns port numbers by default (1) if they are not specified on the \$ MPC statement; or (2) if they are not specified sequentially beginning with PORT-0. Port numbers are not applicable on the DPS 88 system. On TAPE*URC controllers only ports 4-7 may be used, if specified.

Iyy-i (Iyy = IMU, IMX, IOM, IOP, or IOX). The value assigned to i ranges from 0 to 3 and corresponds to the Iyy to which the PSI is connected.

CH-c Base Iyy channel (CH/PUB) number.

The base channel number is the lowest channel number in a particular application. Due to a hardware requirement, the base channel number must be defined with a modulo 2, 4, or 8 value, as follows:

<u>Number of Channels In Application</u>	<u>Legal Base Channel Numbers</u>
1	8 to 31 ...
2	8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 ...
3-4	8, 12, 16, 20, 24, 28 ...
5-8	8, 16, 24 ...

<u>\$ MPC Parameter</u>	<u>Description</u>
	Logical channels for unit record MPCs must be sequentially defined in one-digit increments (e.g., 8, 9, 10 and not 8, 10, 12). Each Iyy channel number that is included on a \$ Iyy statement must be defined on \$ MPC statements. Permissible values are:
	IMU 8-63
	IMX 0-127
	IOM 8-31
	IOP 8-63
	IOX 0-127

The following briefly depicts the hierarchical structure that must be defined on \$ MPC statements and associated \$ ETC statements:

MPC-m	Defines the first MPC configured. After all subordinate PSI-p, Iyy-i, and CH-n have been defined, this is followed by other MPCs.
PSI-p	Defines the first PSI to which this MPC is connected. After all subordinate Iyy-i and CH-n have been defined, this is followed by other PSIs on this same MPC.
Iyy-i	Defines the input/output controller to which this PSI is connected.
CH-n	Defines the lowest logical channel number on the input/output controller to which this PSI is connected, followed in numerical order by other logical channel numbers on the input/output controller to which this PSI is connected.

This sequence is repeated until (1) all logical channels (CHs) are defined for the input/output controller, (2) the input/output controller is defined for its corresponding PSI, (3) all PSIs are defined for the MPC, and (4) all configured MPCs are defined. The MPCs can be defined in any sequence; however, for ease of reference, they should be defined sequentially.

EXAMPLES

MPC Examples

The following example defines three PSI logical channels (0-2) on MPC-0, which has 4K of read/write memory. PSI-0 is connected to Iyy-0, which has four logical channels (CH-8 through CH-11). PSI-1 is shared (SDB) with NPS. PSI-2 is connected to four logical channels (CH-16 through CH-19) on Iyy-1.


```

1      8      1
      6
-----
$      MPC-0   SIZE-4,PSI-0,Iyy-0,CH-8,CH-9,CH-10,CH-11,
$      ETC     PSI-1,SDB,PSI-2,Iyy-1,CH-16,CH-17,CH-18,CH-19

```

PPU Example

The following example defines two PPU logical channels (0 and 3) on MPC-1, which has 16K of memory. PSI-0 is connected to Iyy-0, channels 14 and 15. PSI-3 is connected to Iyy-1, channels 42 and 43.

```

1      8      1
      6
-----
$      MPC-1   SIZE-16,PSI-0,Iyy-0,PUB-14,PUB-15,PSI-3,Iyy-1,PUB-42,PUB-43

```

\$ MPCFIG Statement

The \$ MPCFIG statement permits identification of the firmware revision level to bootload to a specific Microprogrammable Peripheral Controller (MPC). This information is written to a table on the deckfile. If a firmware revision level is not specified for an MPC, Startup bootloads the MPC with the first firmware that it encounters on the deckfile. To ensure that all MPCs are bootloaded with the correct firmware, it is recommended that a \$ MPCFIG statement be included for each configured MPC.

It is required that only one logical channel be defined per \$ MPCFIG statement. If multiple \$ MPCFIG statements are required, it is recommended that the statements be grouped at the end of the \$CONFIG section to facilitate scanning by the MPC Bootload (MPCB) program.

The format for the \$ MPCFIG statement is:

```

1      8      1
      6
-----
$      MPCFIG  icc,pppp,REV.rr[,U-nndnn]

```

where:

- i - Input/output controller number (0-3).
- cc - Logical channel number that is used to bootload the MPC.
- pppp - Four-character object deck (program) identification from columns 73-76 of the \$ OBJECT statement in the firmware deck.
- rr - Two-character revision level from columns 71 and 72 of the \$ DKEND statement in the firmware deck.

nn - Device codes. These codes are used in conjunction with Microcoded Device Routines (MDRs) for precise definition of the devices for which MDRs are to be executed. It is recommended that the site's Customer Services Division (CSD) representative be consulted when defining the parameters in this field. Depending upon the device, the following codes apply:

- 00 - All devices are affected
- 01-32 - Mass storage or magnetic tape devices
- 00-07 - Controller ports (or devices) for unit record MPC
- 01-08 - Same as 00-07
- 01-02 - Link Adapter or Controller Adapter 0 and 1, respectively

d - Delimiters for the nn field

- Blank - End of field
- Comma (,) - Continuation of the field (e.g., 01, 03)
- Hyphen (-) - Separates a string of devices (e.g., 01-03)

The following example indicates that the MPC connected to Iyy-0 and to logical channel 16 is to be bootloaded with revision E1 of firmware deck M601.

```
      1  
1      8      6  
-----  
$      MPCFIG 016,M601,REV.E1
```

\$ SECURE Statement

The GCOS 8 Multi-Level Security Manager (Security) provides several levels of system security. A site may choose the options which provide the level of security required. The \$ SECURE statement is used to specify which Security options are to be activated. The format for the \$ SECURE statement is:

```
      1  
1      8      6  
-----  
$      SECURE [option[ -arg]...[;option[ -arg]...]...]
```

The valid options and their respective valid arguments are:

ACCESS -TRYS n1
-COM a1

The ACCESS option activates the security authentication process, which requires the user to specify a valid userid and password for all remote system accesses. The ACCESS option also allows the system console operator to use the SECUR console verb to manually lock out a registered userid. The effect of the ACCESS option is modified by the PID option and the ALL option.

SCC -TRYS n1
-COM a1

The SCC option turns on the ACCESS option and, in addition, allows classification of userids and files by means of Security Classification Codes (SCCs), so that access to files can be limited based on the SCC. The SCC option also activates security breach processing, so that occurrence of a security breach locks the userid out of the system. The effect of the SCC option is modified by the PID option and the ALL option.

SYSTEM -TRYS n1
-COM a1
-MINLVL x
-MAXLVL y

The SYSTEM option turns on the ACCESS and SCC options, and also provides the capability to establish the minimum and maximum security levels for the system. The minimum security level defines the lowest security level allowed to access the system, and can be specified to disallow non-classified users and work units. The maximum security level defines the highest security level allowed to access the system.

PID -TRYS n1
-COM a1
-RANGE n2 n3

The PID option turns on the ACCESS option, and requires all remote users to use a person id and a Personal Identification Code (PIC) instead of a userid and password in the logon sequence for the functions of the ACCESS option. When the PID option is active, the term "userid" is not used, replaced by "project name", and the password for the project is not used. Only person ids that are registered on a project are allowed to gain access to that project. The PID option also allows the system console operator to use the SECUR console verb to manually lock out the Person Profile corresponding to a registered person id. The PID option causes the person id to be used in place of the userid for the functions of the SCC option if the SCC option is active.

PIC -TRYS n1
-COM a1
-RANGE n2 n3
The PIC option turns on the PID and ACCESS options, and has the same arguments as the PID option. The PIC option requires a Personal Identification Code (PIC) on the \$ SECURITY (JCL) statement, along with the person_id, for all card reader, IMCV, and remote batch jobs.

ALL -TRYS n1
-COM a1
-MINLVL x
-MAXLVL y
-RANGE n2 n3
The ALL option provides a convenient method of turning on all of the Security options.

where:

- n1 - The number of unsuccessful logon attempts allowed before the remote line is disconnected and the project profile or person profile is locked. (0 to 63, default = 2)
- n2 - The minimum number of characters for PIC generation (4 to 11, default = 4).
- n3 - The maximum number of characters for PIC generation (4 to 11, default = 4).
- x - One character representing the minimum security level allowed to access the system (0 to 9, A to Z, no default).
- y - One character representing the maximum security level allowed to access the system (0 to 9, A to Z, no default).
- a1 - Comment string to be displayed by Startup. This string must be a protected string delimited by either quotes (") or apostrophes ('), with a maximum length of 55 characters, including delimiters. The null string is the default. If a delimiter must be displayed in the message, two adjacent delimiters will yield one delimiter in the output. For example,

```
-COM "AB"CD" yields AB"CD  
-COM "A"BCD"" yields A"BCD"
```

Another way to do the same thing is to delimit the protected strings using apostrophes: 'AB"CD' or 'A"BCD'.

A \$ SECURE statement option and associated argument(s) are separated from other options and associated argument(s) by a semicolon (;). For example:

```
1      8      1
      _____
$      SECURE  SCC -TRYS 4 -COM "ALLOW 4 LOGON ATTEMPTS"; PID -RANGE 5 6
```

The \$ SECURE statement can be continued to a \$ ETC statement by using an ampersand (&) at the end of a line to indicate the continuation. For example:

```
1      8      1
      _____
$      SECURE  SCC -TRYS 4 &
$      ETC     -COM "ALLOW 4 LOGON ATTEMPTS";&
$      ETC     PID -RANGE 5 6
```

\$ SHARED Statement

The \$ SHARED statement allows the site to define permanent mass storage devices to be shared with the Network Processor Supervisor (NPS).

If one or more \$ SHARED statements are included with the Startup job stream, the No In-memory Available Space Table (NIAST) option is activated for all mass storage devices configured on that system. (Refer to the NIAST parameter under "\$ INFO Statement" in this section.)

Devices described as removable (i.e., RMVBL) on the \$ INFO NIAST statement cannot be shared.

When identifying one or more permanent mass storage devices on a central system as common with NPS, the \$ SHARED statement defines the amount of mass storage space to initially reserve on each device for NPS use. The format for the \$ SHARED statement is:

```
1      8      1
      _____
$      SHARED  MPC-m/PRIMARY,ddd/LIMIT-xxxxx
```

where:

m - Number (0-63) of the MPC controlling the common storage devices.
Only one MPC can be shared with NPS.

PRIMARY - Must be specified to indicate mass storage devices are shared with NPS.

- ddd - Logical device name of the permanent mass storage device on MPC-m shared with NPS. If multiple devices are shared, the ddd/LIMIT-xxxxx fields must be specified for each device. A maximum of two devices can be shared with NPS and all must be configured on the same MPC.
- xxxxx - Number of llinks initially reserved on device ddd for GCOS 8 software allocation. As previously stated, if more than one device is specified by the ddd field, the /LIMIT-xxxxx field must be repeated for each device. Note that this value defines the amount of space initially allocated for GCOS 8 software. Additional space can be requested by and allocated to NPS as required for processing by the system.

The following example illustrates reserving a total of 6000 llinks of mass storage space for GCOS 8 use on permanent mass storage devices NP1 and NP2 (i.e., 3000 llinks are reserved for each device). Both devices are connected to MPC-0.

```

      1
1     8     6
-----
$     SHARED MPC-0/PRIMARY,NP1/LIMIT-3000,NP2/LIMIT-3000

```

\$ SYID Statement

The \$ SYID statement identifies the system being bootloaded. This statement frequently identifies the Software Release on which the system is operating. Data included on the \$ SYID statement is printed in the banner of all dumps and job output. (Refer to "Dump Banner" in Section 3.)

The format for the \$ SYID statement is:

```

      1
1     8     6
-----
$     SYID   nnnnnn

```

where:

nnnnnn - A maximum of six alphanumeric characters identifying the system being bootloaded. The name must be acceptable to the File Management System (FMS), as the Error Logging and Analysis System (ELAN) uses the system-id as part of its collection file name.

*

\$ TRACE Statement

The `$ TRACE` statement specifies which internal system trace entries to activate for the purpose of assisting in system failure analysis. The trace function provides a history of system operating events (that precede a malfunction). These events are recorded in a trace table, which is maintained as a circular list (i.e., the most recent trace entries overlay the oldest entries when the table fills). Table content can be written to magnetic tape and then printed to assist in debugging efforts.

Each bit position in the four control words (a...a, b...b, c...c, d...d) corresponds to a trace type. Setting a bit (=1) indicates that the corresponding trace function is not desired. (A common error is to set the bit to indicate that the trace is desired.) Each value specified in columns 16-64 of the `$ TRACE` statement is an octal number representing the bit configuration for the desired traces. For example, the octal number 7 (binary 111) indicates that none of the three traces represented by the bits is desired; the octal number 4 indicates that only the trace type represented by the first bit (1) is not desired. A `$ TRACE` statement containing all 7s in the four control words bypasses the trace routine.

The console entries `TRACE ON` and `TRACE OFF` override `$ TRACE` statement content for the duration of the current bootload. `$ TRACE` statement definitions are reinstated with the next bootload. The `TRACE ON` entry activates all system traces, while the entry `TRACE OFF` deactivates all system traces. Note that the `TRACE ON` entry is not effective unless at least one trace type was activated via the `$ TRACE` statement at System Startup.

The `$ TRACE` statement has no impact on Time Sharing System traces. All Time Sharing System traces are active when received with the Software Release unless changed via a site-option patch to the `.MTIMS` module at System Startup.

The format for the `$ TRACE` statement is:

		1
1	8	6

```
$ TRACE aaaaaaaaaa,bbbbbbbbbb,cccccccccc,dddddddddd
```

where:

- a...a - First control word, which defines trace types 0-35. At least one and as many as twelve octal characters must be specified.
- b...b - Second control word, which defines trace types 36-71. At least one and as many as twelve octal characters must be specified.
- c...c - Third control word, which defines trace types 72-107. At least one and as many as twelve octal characters must be specified.
- d...d - Fourth control word, which defines trace types 108-143. At least one and as many as twelve octal characters must be specified.

NOTE: Each of the control words is zero-filled (i.e., if a control word contains a single zero, all trace types for that control word are desired).

The \$ TRACE statement in the following example activates trace types 0-5 (represented by the two leading zeros in the first word), 36-71 (represented by all zeros in the second word), and 76 (represented by the octal number 6 in the third word).

```

1      8      1
-----
$      TRACE  007777777777,0,767777777777,777777777777

```

Table 5-6 defines each trace type and its associated trace number. The module that creates the trace entry is identified in parentheses.

Table 5-6. System Trace Types

Octal Trace Number	Trace Type Description
000	Exit a module and return through a 64-word safe-store frame. (.MDISP)
001	Call a module via .CALLX or .CALLY. (.MDISP)
002	Call a module from SSA/PRC via .CALL or .CALLA. (.MDISP)
003	Process switch and dispatch to a process. (.MDISP)
004	Not used. Was end of courtesy call.
005	Processing GPR, SWAP, or ABORT. (.MDISP)
006	Enable execution of a process. (.MDISP)
007	Exit a module and return to SSA or PRC. (.MDISP)
010	Occurrence of a fault other than a MME. (.MFALT)
011	Transfer (GOTO) to a module. (.MDISP)
012	The processor is idle. (.MDISP)
013	Master Mode Entry (MME) fault occurred. (.MFALT)
014	Memory parity error occurred. (.MFALT)
015	Privileged MME (PMME) fault request. (.MPMME)
016	Marks start of courtesy call. (.MDISP)
017	Identifies the start of a system event for exception processing, process swap, or process abort. (.MDISP)
020	Marks end of activity for a process or end of job. (.MBRT6)
021	T&D trace entry (COLTS on/off trace or TOLTS termination trace. (T&D)
022	Call an HCM module. (.MDISP)
023	Exit a module and return to HCM. (.MDISP)
024	Entry to domain exception processing. (.MFALT)
025	OCLIMB from domain exception processing. (.MFALT)
026-027	Not used.
030	OCLIMB type dispatch. (.MDISP)
031	LDP/TRA type dispatch. (.MDISP)
032-043	Not used.

Table 5-6 (cont). System Trace Types

Octal Trace Number	Trace Type Description
044	Execute CIOC to start I/O. (.MIOS0)
045	Connect to a specified Front-end Network Processor (FNP). (.MDNET)
046	A call was made to entry point 2 of the specified channel module. (.MIOS0)
047	The specified I/O status was sent to the Exception Processor. (.MGEPR)
050	Link a request in channel queue. (.MIOS0)
051	IOM fault occurred on a channel. (.MIOS0)
052	Not used. Was accept marker.
053	Interrupt other than a marker interrupt, special interrupt, or terminate interrupt was processed. (.MIOS0)
054	Process special interrupt. (.MIOS0)
055	Terminate interrupt or initiate interrupt was processed. (.MIOS0)
056	Relinquish broken for a process. (.MIOS0)
057	Roadblock broken for a process. (.MIOS0)
060	Accept special interrupt. (.MIOS0)
061	Start status return action. (.MIOS0)
062	A fault or marker interrupt occurred. (.MIOS0)
063	Terminate interrupt or initiate interrupt accepted. (.MIOS0)
064	MPC controller special interrupt. (.MIOS0)
065	An IOX interrupt (DPS 88) was accepted. (.MIOS0)
066	A Rapid Access Data System (RADS) data move occurred. (.MSDCB)
067-107	Not used.
110	Specified activity sent to memory allocator. (.MALC1)
111	Specified peripheral device could not be allocated. (.MALC1)
112	Completion of SYSOUT printing for specified job. (.MGEOT)
113	Start of SYSOUT printing for specified job. (.MGEOT)
114	Completion of SYSOUT punching for specified job. (.MGEOT)
115	Start of SYSOUT punching for specified job. (.MGEOT)
116	Job to Peripheral Allocator. (.MSCHD)
117	Process number assigned. (.MSCHD)
120	Start of FLINKER activity. (.MFLKR)
121	Start of GEIN. (.MGEIN)
122	End of FLINKER activity. (.MFLKR)
123	SYSOUT notified of end-of-job. (.MSYOT)
124	SCT type specific allocation. (.MALC5)
125	DEVICE type specific allocation. (.MALC6)
126	DEVICE space deallocation. (.MALC9)
127	PERM file space allocation. (.MASO6)
130	User trace entry.
131-153	Not used.
154	Start of swap operation. (.MPOP4)
155	Start a new process. (.MPOP5)
156	Process swap complete. (.MPOP3)
157-177	Not used.

\$ TRAINS Statement

The \$ TRAINS statement defines the site's standard printer belts (i.e., those that support the GCOS system character set, but which may differ in character sequence). The Startup program uses these parameters to initialize the Table of Print Train Standards, which resides in main memory and which is a catalog into the PRINTIMAGE file. (Refer to the GCOS 8 OS System Operating Techniques manual for character set and PRINTIMAGE file information.)

Multiple character sets can be defined on one \$ TRAINS statement or they can be continued on one or more \$ ETC statements. Note that the printer type, character set identification number, and character set name fields are considered a single entity and are separated by slashes. These three fields are separated from the next trio of character set parameters by a comma.

ASCII character set definitions must be preceded by the word LONG. Any ASCII character set definition must follow the last BCD character set definition.

If information provided in the three fields is incompatible (e.g., the character set identification number and the printer type are inconsistent), the printer is released and the console message:

```
TRAIN ID UNKNOWN TO STARTUP DEVICE icccdd RELEASED
```

is issued (where i = input/output controller number, ccc = channel number, and dd = device number).

The format for the \$ TRAINS statement is:

1	8	1
		6

```
$ TRAINS ppp/nnnn/tttttt,...,ppp/nnnn/tttttt,  
$ ETC LONG,ppp/nnnn/tttttt,...,ppp/nnnn/tttttt
```

where:

ppp - Printer type number:

4nn

where nn = any numerical value

nnnn - Standard print train identification number:

1130 - Standard ASCII character set

764 - Standard BCD character set

tttttt - Character set name:

GCOS - BCD character set (764)

ASCII4 - ASCII character set (1130)

LONG - Must precede definitions of long-character (i.e., nine-bit character) character sets to include in the Table of Print Train Standards. While this identifier can be appended to the BCD character set definitions on the \$ TRAINS statement, it often is less confusing to define ASCII character sets on a separate \$ ETC statement.

The following example defines one BCD (i.e., short-character) character set and one ASCII (i.e., long-character) character set.

```
      1  
1      8      6  
-----  
$      TRAINS 402/764/GCOS, LONG, 402/1130/ASCII4
```

\$ UNIT Statement

The \$ UNIT statement permits a switchable device or either of two separate devices to be referenced by the same logical name during Startup regardless of the controller in use. Any number of \$ UNIT statements can be included in the Startup job stream.

The format for the \$ UNIT statement is:

```
      1  
1      8      6  
-----  
$      UNIT   aaa,bbb,message
```

where:

aaa - A previously configured logical device name.

bbb - A previously configured logical device name on an input/output controller other than the one to which aaa is assigned.

message - Any user-specified message not exceeding 24 characters.

If device aaa is on a released input/output controller and device bbb is on an input/output controller that has not been released, the references to the two devices are interchanged and the "message" specified by the user in the control statement is given on the system console.

If device aaa is on an input/output controller that has not been released or if both devices aaa and bbb are on released input/output controllers, the control statement is ignored.

The following example indicates that devices TB2 and TB6 have been previously configured and that TB6 will assume the device name TB2 if the input/output controller for TB2 is released during Startup. The message TB6 NOW TB2 will be given on the system console when the input/output controller for TB2 is released.

```
1      8      1
        6
```

```
$      UNIT      TB2,TB6,TB6 NOW TB2
```

\$ URP Statement

The \$ URP statement defines each URP800n Unit Record Processor (URP0600 must be defined on the \$ MPC statement) and all active unit record peripherals controlled by that URP800n.

The format for the \$ URP statement is:

```
1      8      1
        6
```

```
$      URP-m      Iyy-i,[PORTS-p],{PUB-n}
                        {CH-n }
```

where:

- m - MPC/URP number (0-63). Each configured URP800n must be assigned a logical number and specified on the \$ URP statement. See the \$ MPC statement for specifications for the value of m.
- i - The number (0-3) of the input/output controller to which the URP800n is attached.
- p - The number of ports the URP800n controls. The value of p may be between 1 and 4.
- n - The input/output controller channel (CH/PUB) number of Port-0. A device must be configured on this channel.

The following example indicates that logical Unit Record Processor (URP) number 5 is configured in IOM-1, and its four ports, Port-0 is connected to IOM channel 24.

```
1      8      1
        6
```

```
$      URP-5      IOM-1,PORTS-4,CH-24
```

The following example is identical to the preceding example, except it is used with a system configured with an IOX:

```
1      8      1
        6
```

```
$      URP-5      IOX-1,PORTS-4,CH-24
```

\$ XBAR Statement

Component redundancy allows a site to employ the crossbarring technique, which is the physical and logical connecting of system components so that data can flow across channels through the system even though one or more components become inoperable. A channel is a data path between the peripheral device and the processor. Crossbarring configures data channels to provide two distinct paths. These pathways allow system software to route data along whichever channel is available without requiring reconfiguration of system components.

While hardware crossbarring considerations center on the physical interconnection (i.e., cabling) of components, software relationships between crossbarred input/output controllers and data channels (CH/PUBs) are defined via the \$ XBAR statement.

The \$ XBAR statement has two formats for each type of input/output controller. The first of the following formats is used to crossbar logical channels on the same input/output controller. The second format is used to crossbar logical channels from one input/output controller to another.

To crossbar logical channels on the same input/output controller:

```
      1
1      8      6
-----
```

```
      {PUB-a} {PUB-b}
$      XBAR      Iyy-m, {CH-a }, {CH-b }
```

where:

Iyy - IMU, IMX, IOM, IOP, or IOX.

m - Iyy number (0-3)

a,b - Channel number. Permissible values are:

```
      IMU      8-63
      IMX      0-127
      IOM      8-31
      IOP      8-63
      IOX      0-127
```

To crossbar logical channels from one input/output controller to another:

```
      1
1      8      6
-----
```

```
$      XBAR      Iyy-m, CH-a, Iyy-n, CH-b
```

where:

Iyy - IMU, IMX, IOM, IOP, or IOX.

m,n - Iyy number (0-3).

a - Channel number of Iyy-m. Permissible values are the same as a,b, above.

b - Channel number of Iyy-n. Permissible values are the same as a,b, above.

In each of the preceding formats, the first channel (CH) defined is the primary channel and the channel number following an Iyy field applies to the preceding Iyy number. (The \$ XBAR statement must follow the \$ Iyy statement describing the primary channel identified on the \$ XBAR statement.) A channel number cannot be defined on more than one \$ XBAR statement.

Multiple logical channels (CHs/PUBs) can be crossbarred on the same \$ XBAR statement. The sequence in which the channels are identified on the \$ XBAR statement reflects the sequence in which the channels will be serviced. For optimum service, logical channel identifications should be alternated from one input/output controller to the other. If two channels from the same input/output controller are identified in sequence, the second channel is not serviced until I/O has completed on the first channel.

The following examples indicate a variety of crossbarring techniques within one subsystem. (Two or more subsystems cannot be crossbarred to each other.)

1. This example defines a single cable (one PSIA) with two logical channels crossbarred.

```
1      8      1
      6
-----
$      XBAR   Iyy-0,PUB-12,PUB-13
or
$      XBAR   Iyy-0,CH-12,CH-13
```

2. This example defines dual cables (two PSIAs) with logical channels crossbarred. Logical channel identifications are alternated between the PSIAs to optimize service. Logical channels 12 and 13 are on one PSIA and 20 and 21 are on another PSIA.

```
1      8      1
      6
-----
$      XBAR   Iyy-0,PUB-12,PUB-20,
$      ETC    Iyy-0,PUB-13,PUB-21
or
$      XBAR   Iyy-0,CH-12,CH-20
$      ETC    Iyy-0,CH-13,CH-21
```

3. This example expands example 2 to include two input/output controllers.

1	8	1
\$	XBAR	Iyy-0,PUB-12,Iyy-1,PUB-20,
\$	ETC	Iyy-0,PUB-13,Iyy-1,PUB-21,
\$	ETC	Iyy-0,PUB-14,Iyy-1,PUB-22,
\$	ETC	Iyy-0,PUB-15,Iyy-1,PUB-23
or		
\$	XBAR	Iyy-0,CH-12,Iyy-1,CH-20,
\$	ETC	Iyy-0,CH-13,Iyy-1,CH-21,
\$	ETC	Iyy-0,CH-14,Iyy-1,CH-22,
\$	ETC	Iyy-0,CH-15,Iyy-1,CH-23

NOTE: XBARed devices cannot be channelled across two different subsystems.

\$INITIALIZE SECTION

The \$INITIALIZE section has four essential functions in the System Startup process. Each of these functions is peripheral device-oriented. (Refer to "*INITIALIZE? Question" in Section 2 for discussions of each of these functions.)

First, the \$INITIALIZE section identifies, via \$ INIT statements, the mass storage devices to be initialized. To accomplish the initialization, the operator must make a positive response to the *INITIALIZE? question during the bootload procedure. The first \$ INIT statement should name the device on which the AUTOLOAD file will reside.

Defective space existing on configured mass storage devices is identified in this section, via \$ DIRECT statements and related D, O, A, L, and Y statements. This information is written to each applicable disk or fixed device during the initialization process.

If a device is not defined on a \$ INIT statement, the device is not initialized. If the operator responds NO to the *INITIALIZE? question during the bootload procedure, the entire \$INITIALIZE section is ignored and no mass storage devices are initialized.

Second, the \$INITIALIZE section provides a facility for defining volume sets and their associated characteristics.

Third, the \$INITIALIZE section performs a rolcall function during which the peripheral device configuration is confirmed. Mass storage devices are verified; magnetic tape handlers are surveyed; character set images and VFC images are loaded.

Fourth, the \$INITIALIZE section is used to write firmware to the deckfile and to read firmware from that file for DPS 8 and DPS 8000 systems.

Importance Of Sequence In \$INITIALIZE Section

The following statements can be included in the \$INITIALIZE section:

```
$ DEKSAV  
$ DIRECT  
$ DKEND  
$ INIT  
$ OBJECT  
$ READIN  
$ VOPT  
$ VSET
```

Although the following descriptions are presented in alphabetic order, the actual sequence of statements in the \$INITIALIZE section of the Startup job stream must be as shown in Table 5-7 to ensure that it will be possible to start up a system

- o from a power-up condition (where no controller has firmware), or
- o with an INIT of the AUTOLOAD device, or
- o with the change of the AUTOLOAD device (causing the deckfile to become undefined), or
- o with the deckfile cleared to install a new revision of the Integrated Firmware And Diagnostic (IFAD) tape.

Any other sequence may lead to failure under some conditions.

With a production system bootload tape set up as defined in Table 5-7, successful controller initialization is always possible, except for hardware failure of a controller. A \$INITIALIZE section without the firmware decks can then be used to selectively initialize devices, or to add \$ DIRECT or D, O, A, L, or Y statements following a bootload with a REPL response to the *EDIT? question.

Table 5-7. Required Sequence In \$INITIALIZE Section

1	8	1 6
\$INITIALIZE		
\$	INIT	All \$ INIT statements to be processed.
\$	DIRECT	With related D, O, A, L, and Y statements to define defective space for the <u>device on which the AUTOLOAD file is configured.</u>
\$	OBJECT	MPCB program
\$	DEKSAV OFF	To prevent writing of firmware to the deckfile before the firmware to support that operation has been loaded.
\$	OBJECT	AUTOLOAD device controller firmware Caution: If the system configuration includes two or more mass storage controllers that require different firmware, each of those firmware decks should be put here to ensure that there will be firmware for the AUTOLOAD device, no matter which device is configured as the AUTOLOAD device.
\$	OBJECT	\$ READIN device controller firmware Caution: If the system configuration includes two or more tape controllers that require different firmware, each of those firmware decks should be put here to ensure that there will be firmware for the \$ READIN device, no matter which device is configured as the \$ READIN device.
\$	DEKSAV ON	To allow writing of subsequent firmware to the deckfile after firmware to support that operation has been loaded.
\$	READIN	
\$	DIRECT	With related D, O, A, L, and Y statements to define defective space for all remaining mass storage devices. The \$ DIRECT statements must be in the same sequence as the devices are configured on \$ Iyy statements in the \$CONFIG section.
\$	VSET	} For each volume set.
\$	VOPT	}
***EOF		

\$ DEKSAV Statement

The \$ DEKSAV statement allows an MPC firmware job stream to be saved on the job stream file, which resides on the AUTOLOAD device and which is created via a \$ DECKFIL statement. Two options are valid with the \$ DEKSAV statement:

- OFF - The firmware job stream(s) following this \$ DEKSAV OFF statement in the card reader is not to be written to the deckfile.
- ON - The firmware job stream(s) following this \$ DEKSAV ON statement in the card reader is to be written to the deckfile.

The OFF option remains in effect until a \$ DEKSAV ON statement is encountered. A \$ DEKSAV ON statement is needed only to turn off (reset) the OFF option and allow subsequent firmware job streams to be written to the job stream file. Therefore, two \$ DEKSAV statements must enclose a firmware job stream that is not to be saved.

The following example indicates that the first group of firmware deck images is not to be written to the deckfile, while the second group of firmware deck images is to be saved.

```
1      8      1
      _____
$      DEKSAV OFF
.
.      Firmware deck images that are not to be written to the
.      deckfile.
$      DEKSAV ON
.
.      Firmware deck images that are to be written to the deckfile.
```

\$ DIRECT Statement

The \$ DIRECT statement can be used for two purposes. Each function is related to disk pack defective space information contained in the defective llink directory and the defective space history table. Both the directory and the table reside in the pack header.

1. The \$ DIRECT statement identifies a mass storage device (ddd) and introduces a series of space-definition statements containing defective space information applicable to the device. Information from these statements, referred to as the D, O, A, L, and Y card images, is written to the defective llink directory and the defective space history table on device ddd.
2. The /CLEAR parameter can be included on the \$ DIRECT statement to clear the defective llink directory and the defective space history table of information.

Defective space, which is not available for allocation, normally is defined on a list provided by the manufacturer of the pack. This data must then be written to the defective llink directory and the defective space history table via the D, O, A, L, and Y card images before the pack is used.

As a result of encountering a \$ DIRECT.../CLEAR statement during disk pack initialization (after pack formatting has occurred), Startup issues the console message PROCESS DIRECTORY CARD FOR DEVICE ddd?, allowing the operator to clear or retain defective space in the pack header. If the operator responds YES, the defective llink directory and defective space history table are cleared.

To avoid accidental clearing of defective space information from a pack header, it is recommended that, following the initial system bootload, the \$ DIRECT and D, O, A, L, and Y card images be removed from the Startup job stream.

When a disk pack is moved from one device to another, a \$ DIRECT statement and its related space-definition statements must reflect this change. For example, if a disk pack is moved from device DS1 to device DS5, the \$ DIRECT statement must indicate that the pack (i.e., the defective space) is on DS5.

The \$ DIRECT statement for the AUTOLOAD device must always - regardless of the options included on the statement - precede the \$ OBJECT statement. In addition, the \$ DIRECT statements for all other devices must be in the same sequence that the devices are defined on \$ Iyy statements.

The format for the \$ DIRECT statement is:

		1
1	8	6

\$ DIRECT ddd[/CLEAR]

where:

ddd - Logical device name of the mass storage device on which the pack containing defective space resides.

/CLEAR - The pack header is cleared of defective space data, thereby indicating that all space on the pack is available for allocation. Defective space data can be reestablished via D, O, A, L, and Y card images.

If using the \$ DIRECT ddd/CLEAR option, a \$ DIRECT ddd statement specifying the same device must be included as the next statement, preceding any D, O, A, L, or Y card images of that device.

The D, O, A, L, and Y card images must immediately follow the \$ DIRECT ddd statement identifying the mass storage device for which they are defining defective space. (The space-definition statements must not immediately follow a \$ DIRECT.../CLEAP statement.) Each statement defines defective space in different quantities: cylinder/head, sectors, llinks, and links. The statement defining the contiguous defective space in the most efficient manner can be used. For example, if defective space occupies three contiguous llinks, the Y statement best defines the space.

The Defective Llink Directory Print (DLDP) program can be used to punch D, O, A, L, and Y card images from the defective llink directory for a specific device. Subsequently, these statements can be used to reestablish defective space information in the pack label. A listing of all tracks composing the defective llinks also is printed. (Refer to "Executing RSIP" in the GCOS 8 OS System Operating Techniques manual for a description of this program.)

The formats for the D, O, A, L, and Y card images are:

1

```
D0aaa00bb,ppppp,ttttt[,mddy][,zzzz]
000cccccc-00ddddd,ppppp,ttttt[,mddy][,zzzz]
Aeeeeeeee-ffffff,ppppp,ttttt[,mddy][,zzzz]
Lgggggggg-hhhhhhh,ppppp,ttttt[,mddy][,zzzz]
Yiiiiiii-jjjjjjj,ppppp,ttttt[,mddy][,zzzz]
```

where:

- aaa - Cylinder number (decimal).
- bb - Head number (decimal).
- c...d - Beginning (c) and ending (d) sector number (octal) in a series of contiguous defective sectors. If only one sector contains defective space, enter only 00cccccc.
- e...f - Beginning (e) and ending (f) word numbers (octal) of defective space within a sector or within a series of contiguous defective sectors.
- g...h - Beginning (g) link number (octal) and number (h) of links (octal) in a series of contiguous defective links. If only one link contains defective space, enter only gggggggg.
- i...j - Beginning (i) llink number (octal) and number (j) of llinks (octal) in a series of contiguous defective llinks. If only one llink contains defective space, enter only iiiiii.

ppppp - Pack serial number of the pack on which the defective space resides. (Logical device identifier if this is an MSU0500, MSU0501, MSU3380, MSU3381, or MSS8080 device.)

tttttt - Device type:

<u>Code</u>	<u>Description</u>	<u>Code</u>	<u>Description</u>
MS0400	MSU0400	MSC1B	MSU3380
MS0402	MSU0402	MSD1A	MSU3381
MS0450	MSU0451	MSD1B	MSU3381
MS0500	MSU0500	MSM1A	MSS8080
MS0501	MSU0501	MSM1B	MSS8080
MSC1A	MSU3380	MSM1E	MSS8080

mmddy - Optional field specifying today's date in the format month (mm), day (dd), and year (yy).

z...z - Optional field containing any desired comments.

The following example causes the defective llink directory and the defective space history table for the disk pack (pack serial number A1665) residing on MSU0451 mass storage device DS3 to be cleared of information (/CLEAR). Subsequently, the directory and table entries that define defective space in sectors 1253-1255 and 1271-1278 and in llinks 3560-3575 of pack A1665 are to be recreated from information included on the O and Y space-definition card images and written to the defective llink directory and defective space history table on device DS3.

```

1      8      1
        6
-----
$      DIRECT DS3/CLEAR

$      DIRECT DS3
000001253-00001255,A1665,MS0450
000001271-00001278,A1665,MS0450
Y00003560-00000015,A1665,MS0450

```

\$ INIT Statement

The \$ INIT statements identify the mass storage devices to be initialized during a bootload. (The statement does not apply to magnetic tape or unit record devices.) Any positive response (i.e., YES, TOTAL, or PARTIAL) to the *INITIALIZE? question during the Startup question-and-answer sequence may affect each device specified on a \$ INIT statement. (Refer to "*INITIALIZE? Question" in Section 2 for additional information.)

If a device is not defined on a \$ INIT statement or if the \$ INIT statement has been removed, a positive response to the *INITIALIZE? question has no effect on the device. Unless a purge of all files on all devices is intended, it is recommended that all \$ INIT statements be removed from the Startup job stream following the initial bootload (i.e., after the system has been installed).

It is recommended that all mass storage devices be defined on \$ INIT statements and initialized when performing a cold boot. This technique helps ensure that required pointers and tables are reestablished on each device.

Finally, it is recommended that all permanent mass storage devices be initialized if the device named ST1 and/or the device for which the SMCDUP parameter applies are initialized. (The SMCDUP parameter is specified via the \$ INFO statement.) Initializing in this manner also helps ensure that pointers and tables on all devices are synchronized. Failure to perform this type of initialization results in the warning message *ST1 AND SMCDUP INITED BUT NOT ALL OTHERS, FILE SPACE WILL BE LOST being issued to the system console. However, Startup does not abort.

All \$ INIT statements must immediately follow the section-identifier statement (\$INITIALIZE) and precede all other statements and job streams in this section. When Startup encounters a \$ INIT statement, allocation control information is written to the pack label portion of the device (ddd) defined on the statement.

The format for the \$ INIT statement is:

1	8	1
		6
<hr/>		
\$	INIT	ddd[,AU-a][,CAT]

where:

ddd - Logical device name of the mass storage device to be initialized.

AU-a - Number of llinks (a) per allocation unit (AU) for this device. This value can be 1, 2, 4, 8, 12, 24, 36, 48, or 60.

NOTE: If device ddd is shared with NPS, the AU value must be 12, otherwise, NPS aborts.

If the AU size is not specified on the \$ INIT statement, the size specified on the \$ Iyy statement or the default size for this device is written to the Available Space Table (AST) in main memory. If both statements define an AU size and the sizes differ, the smaller value is used. An error condition could result on a subsequent warm boot. The message:

CANNOT BUILD IN-CORE TABLE ON ddd DUE TO
TBLsiz s...s DEVICE RELEASED

is issued (where ddd = logical device name of the mass storage device on which the AST resides and s...s = status word). (Refer to the GCOS 8 OS System Operating Techniques manual for available space values for each mass storage device type. Refer to the \$ INFO statement in this section for a description of the No In-memory Available Space Table (NIAST) option.)

The \$ INIT statement initializes disk packs. Startup uses the AU value of the initialized pack to establish the size of allocation tables in memory. If a disk pack is not available at System Startup, Startup uses the AU size from the \$ Iyy statement to establish allocation table size. To help prevent overlap problems between disk pack and in-memory tables whereby the in-memory tables are overwritten with and destroyed by information from the device tables, either the AU values on the two statements must be the same or the AU size must be greater on the \$ INIT statement.

For any volume that is to be a member of a volume set, the AU size must be a multiple of eight if the volume is formatted in 512-word sectors.

CAT - Allows FMS to create catalogs on this device. This parameter can be specified for a maximum of 20 mass storage devices. If the parameter applies to more than 20 devices, the console message:

*ONLY 20 CATALOGABLE/SMC/SMCDUP DEVICES ALLOWED

is issued and Startup aborts.

If the CAT parameter is not specified for any device, Startup assigns the parameter to device ST1.

If the CATDUP parameter is specified on the \$ INFO statement, but the CAT parameter is not specified on the \$ INIT statement for the device, Startup assigns the duplicate catalogs to the device containing the duplicate SMC.

Startup aborts if the CAT parameter is specified on the \$ INIT statement for a device for which the NOFMS parameter was specified on the \$ Iyy statement. The following console message is issued:

CAN'T BE CAT AND NOFMS

The CAT option should not be specified for any volume that is configured as RMVBL. Catalog volumes for volume sets are specified via the \$ VOPT statement; a Structured RMVBL volume is always a catalog volume.

The following example indicates that FMS can create catalogs (CAT) on mass storage device DS5. Space is allocated on the device in one-link increments (AU-1).

1	8	1
		6

\$ INIT DS5,AU-1,CAT

Firmware Deck Images

As previously indicated, the \$INITIALIZE section for DPS 8 and DPS 8000 systems must contain the MPC Bootload (MPCB) job stream and the firmware data images for mass storage and magnetic tape MPCs. These are in object format and are provided as a package with each Software Release.

The MPCB and firmware data images are written to the deckfile, which resides on the same device as the AUTOLOAD file. Unless overridden by a bootload using punched cards or a firmware tape, MPC firmware is loaded from the job stream file during subsequent warm boots. (If an MPC firmware job stream is not to be written to the deckfile, a \$ DEKSAV statement containing the OFF parameter must precede the set of images. Refer to the \$ DEKSAV statement description in this section for additional information.)

Only one MPCB job stream, which permits loading of the firmware data decks, is required regardless of the number of firmware data images included in the \$INITIALIZE section.

One set of data images contains the firmware for the mass storage subsystem controller (MPC). A second set of data images contains the firmware for the magnetic tape subsystem controller (only required if processing a \$ READIN for tape). Neither the mass storage subsystem nor the magnetic tape subsystem is operational until the applicable MPC is bootloaded via MPCB and a set of data images.

If more than one type of mass storage subsystem is configured (e.g., an MSU0500 subsystem and an MSU0451 subsystem), the only required firmware data images are those for the subsystem on which the AUTOLOAD device is configured. Firmware for the remaining MPCs is loaded from the deckfile.

The format for each firmware deck is:

Content	Description
\$ OBJECT	
Preface statement	This statement is in standard relocatable format, with BOOT and DECK the primary SYMDEFs at location 0.
Data images	These images are in standard relocatable format and include MPC micro-instructions and data.
Identification block statement	This statement contains the following 10 words of data in standard relocatable format. This is the last binary data image. Word 0 - Name identifying type of firmware (e.g., unit record or mass storage firmware) 1 - Revision level 2 - Purpose of job stream 3 - Zeros 4 - Bits 0-17 contain the size of the first part of the job stream, which is the control store; bits 18-35 are unused. 5-8 - Zeros 9 - BCI constant MPCBOT

\$ DKEND

\$ OBJECT AND \$ DKEND STATEMENTS

Each firmware data deck is delimited by \$ OBJECT and \$ DKEND statements. While the data decks and the delimiter statements are provided with the Software Release, the formats for the \$ OBJECT and \$ DKEND statements are repeated here in case the card images are lost or damaged and must be re-created.

1	8	1	3	6	7
		6	5	7	3
\$	OBJECT	HMPCJ1	DAT	REV.rr	nnnn0000
\$	DKEND			REV.rr	nnnnssss

where:

rr - Revision level of the firmware, which differentiates between different versions of firmware. This level also must be defined on the \$ MPCFIG statement in the \$CONFIG section of the Startup job stream. The revision level is saved from the \$ MPCFIG statement in a change table on the deckfile and defines the firmware that is to bootload each MPC. It must also match the ID block data word 1.

nnnn - Level of the job stream

ssss - Deck sequence number. The \$ DKEND statement sequence should be the number of the last binary statement plus 1.

PATCHING MPCB AND FIRMWARE DATA IMAGES

The MPCB job stream and the firmware data images can be modified or extended via patching procedures. The following briefly defines these processes.

- o The MPCB job stream can be modified via OCTAL correction statements, which must immediately precede the \$ DKEND statement in the MPCB job stream. (Refer to "\$PATCH Section", later in this section, for the format of the OCTAL correction statement.)

NOTE: Patches to .MMPCB must be applied in this manner. They should not be included in the \$PATCH section or patch edited.

- o The firmware data images can be modified via CHEX (control store) and RHEX (read/write memory) correction statements, which must immediately precede the \$ DKEND statement in the firmware job stream. It is recommended that corrections to firmware data images be made under the direction of the site's CSD representative.

In each of the preceding cases, the operator must respond YES to the CLEAR AND OVERWRITE EXISTING DECKFILE? question to rebuild the MPCB or firmware data images on the deckfile for TOLTS subsystem usage. The entire MPCB job stream and firmware data job streams must be loaded via the card reader and the firmware tape must be mounted on the magnetic tape handler identified on the \$ READIN statement. (Refer to "CLEAR AND OVERWRITE EXISTING DECKFILE? Question" elsewhere in this manual for additional information.)

\$ READIN Statement (DPS 8 And DPS 8000 Only)

The \$ READIN statement directs the Startup program to read MPC firmware from the firmware tape. The tape and its contents are cataloged on the deckfile, residing on the AUTOLOAD device.

It is recommended that the \$ READIN statement be included in the Startup job stream only when a cold boot is performed, when the AUTOLOAD device is initialized, and when new firmware is written to the deckfile. When these functions are completed, remove the \$ READIN statement from the job stream. If the statement is left in the deck and the operator responds YES to the *INITIALIZE? question, Startup unsuccessfully attempts to read the firmware. To circumvent the problem, the operator must cause Startup to fail (i.e., enter BOOT via the system console) and remove the \$ READIN statement.

NOTE: The \$ READIN statement is not recognized on DPS 88 Systems. The firmware is loaded by SMAS. Refer to the DPS 88 System Maintainability Availability Software (SMAS) manual for SMAS procedures.

The format for the \$ READIN statement is:

```
1      8      1  
_____6
```

```
$ READIN ddd[,,,,tttt]
```

where:

ddd - Logical device name of the magnetic tape handler on which the firmware tape is mounted.

tttt - Density of the firmware tape:

DEN2 - 200 bpi	DEN16 - 1600 bpi
DEN5 - 556 bpi	DEN62 - 6250 bpi
DEN8 - 800 bpi	

This parameter is required only if the density of the firmware tape is different from the site's default high density, which is specified on the \$ INFO DENxx/DENyy statement. If no default high density has been specified, DEN16 is the default value.

The following example indicates that the firmware tape is mounted on magnetic tape handler 1T7 with a density of 556 bpi.

```
1      8      1  
_____6
```

```
$ READIN 1T7,,,,DEN5
```

\$ VOPT Statement

The \$ VOPT statement is used to specify the characteristics and options for a volume set. The \$ VOPT statement must immediately follow the \$ VSET statement which defines the volume set. Exactly one \$ VOPT statement is required for every \$ VSET statement.

The format for the \$ VOPT statement is:

```
1      8      1  
_____6
```

```
$ VOPT vs name,VSMC/pack1[,pack2]/[,CAT/packx[,packy[,...]]/][,  
$ ETC FDUP|NOFDUP]
```

where:

vs_name Volume set name. Must be the same as the vs_name on the immediately preceding \$ VSET statement.

VSMC Volume Set Master Catalog. The VSMC specification is required. One or two pack numbers (device labels) must be provided. The volumes must have been defined as members of the volume set via the preceding \$ VSET statement. If two volumes are specified, they must be on different physical units. The first will be used for the original VSMC; the second will be used for the duplicate VSMC.

If catalog duplication is elected (i.e., two volumes are specified with VSMC), the VSMC and all catalogs on the volume set will be duplicated. If one volume is specified, neither will be duplicated.

CAT The CAT option specifies the volumes on which catalogs are to be placed. The logical devices must be members of the volume set. If the CAT option is not specified, the VSMC volume(s) are used by default.

If catalog duplication is elected (i.e., two volumes are specified with VSMC), the number of catalog volumes must be evenly divisible by two and the list of catalog volumes must include more than one physical unit. (If this requirement is not met, then any attempt to create a catalog on the volume set will return the error message "NO SPACE FOR CATALOG ON DEVICE".)

A volume may appear only once in the list of CAT volumes. A VSMC volume may also be a CAT volume.

FDUP The files on the volume set may be duplicated. FDUP may be specified only if the volume set includes at least two physical units.

NOFDUP The files on the volume set may not be duplicated.

\$ VSET Statement

The \$ VSET statement is used to identify the members of a volume set. The \$ VSET statement must be immediately followed by the \$ VOPT statement for the same volume set. The volumes specified must all be mass storage, but may be of mixed types. The minimum number of volumes in a volume set is one; the maximum number is 100. All volumes in a volume set must be configured as RMVBL (see "\$ Iyy Format For Mass Storage Subsystems" earlier in this section).

The format for the \$ VSET statement is:

		1
1	8	6
<hr/>		
\$	VSET	vs_name,pack1[,pack2[,pack3...]]

where:

- vs_name Volume set name, 1-12 characters. Allowable characters are A-Z, 0-9, dash (-) and underscore (_). The first character must be from the set A-Z. The volume set name must be unique.
- pack1 (etc.) The alphanumeric device label of a member of the volume set. The order of the device labels is not important. A volume may not be a member of more than one volume set.

\$EDIT SECTION

The \$EDIT section establishes GCOS system files on the mass storage subsystem and is closely affiliated with the \$FILES and \$INITIALIZE sections.

- o The \$EDIT section establishes the content of all system files that the site may wish to use during the current and subsequent bootloads. The \$FILES section selectively identifies which of these files the site intends to use during the current bootstrap.
- o The \$INITIALIZE section recreates tables and pointers on each disk drive (i.e., disk pack) involved in the initialization procedure. (Initialization destroys existing tables and pointers on a disk pack, thereby rendering associated files inaccessible.) The \$EDIT section, along with the total system software tapes, permits restoration of the files that were destroyed during the initialization procedure.

The \$EDIT section also allows:

- o Creation of new system files. In addition, this section is the means by which these files are released and the space they occupied returned to the pool of available space.
- o Sites to edit data files for both site-options and JCL, rather than hard-coding them into memory, and provides default workstation JCL via the \$ DTFILE/\$ ENDTF statements.

If the content of a mass storage device that was initialized (i.e., the operator made a positive response to the *INITIALIZE? question) is to be restored, (1) the \$EDIT section must contain information pertaining to that file, (2) the total system software tape containing file data must be mounted, and (3) the operator must respond YES or PARTIAL to the *EDIT? question during the bootstrap procedure. (Refer to "*INITIALIZE? Question" and "*EDIT? Question" in Section 2 for additional information.)

If the operator responds TOTAL to the *INITIALIZE? question, Startup forces a YES answer to the *EDIT? question. No console entry is required. The \$EDIT section must be loaded via the card reader or magnetic tape and the total system software tapes must be mounted to effect the restoration.

If a file is not defined on a \$ FILDEF or \$ SSFILE statement, file content is not restored. If the operator responds NO to the *EDIT? question during the bootload procedure, the entire \$EDIT section is ignored and no files are restored.

Files established within the \$EDIT section cannot be dynamically modified via console entries. Modification must be performed during subsequent bootloads (e.g., manually changing statement content or adding and removing statements).

The following statements can be included in the \$EDIT section:

```
$ DTFILE
$ ENDTF
$ FILDEF
$ SSFILE
```

The \$ FILDEF and \$ SSFILE statements can be in any sequence, while the \$ DTFILE statement must always precede the \$ ENDTF statement, when used.

\$ DTFILE And \$ ENDTF Statements

The \$ DTFILE Startup statement is used with a \$ ENDTF Startup statement. Every card image enclosed between these statements is written to the Startup-defined file fffffff on device ddd. This file is a system standard format card image file with block control words (BCWs) and record control words (RCWs).

The advantages of using the \$ DTFILE Startup statement are:

- o Users are given the ability to edit data files for both site options and JCL, rather than hard-coding them into memory.
- o Default workstation initiation JCL is provided (under SYS_SOFTWARE).

The formats for the \$ DTFILE and \$ ENDTF statements are:

1	8	1
		6

```
$ DTFILE ddd,ffffff,sss[/0]
$ ENDTF [ffffff]
```

where:

- ddd - The device name of the mass storage device, named on the \$ GCOSFIL Startup statement, where the file is to be created and written.
- ffffff - File name (e.g., SYSPN). A maximum of 12 non-blank, alphanumeric characters.
- sss - Size, in llinks. (Code places 25 card images per llink.)
- /0 - Overwrite option recommended (letter 0).

The following sample Startup job stream uses the \$ DTFIELD and \$ ENDTF statements with sample SYSPN JCL for SHARD and CWS.

```
1      8      1
      6
-----
$      DTFIELD DT1,SYSPN,12/0
$      RUN      RUFIELD=SYSTEM,RUNAME=SYSPN,OPTION=DUMP,NJREST
$      RESOURC VSPACE=100K,SSDUMP
$      PRIVITY
$      DATA    I*
SPAWN -PATHNAME SYS SOFTWARE/nnnn/JCL/SHARD.SPWN -SNUMB SHARD
SPAWN -PATHNAME SYS SOFTWARE/nnnn/JCL/CMGROO.SPWN -SNUMB CMGRO
      .
      .
      .
$      ENDJOB
$      ENDTF    SYSPN
```

where: nnnn is the software release (i.e., 3000)

NOTE: For details on SYSPN and SYS SOFTWARE refer to the GCOS 8 OS System Operating Techniques manual.

\$ FILDEF Statement

The \$ FILDEF statement defines a GCOS system file and assigns it to a specific mass storage device. All GCOS system files must be defined via \$ FILDEF statements. The \$ FILDEF statement also defines the magnetic tape device from which the file is to be copied. A separate \$ FILDEF statement is required for each file.

The \$ FILDEF statement gives the site the opportunity to balance system files across permanent mass storage devices. Often, different combinations must be tried to determine which best fits the site's operating environment. The purpose of this effort is to balance assignment of high-use and low-use system files across all configured devices so that files can be accessed faster and more efficiently.

The System Master Catalog (SMC) always resides on device ST1. Because these are high-use system files, it is recommended that several low-use system files be assigned to ST1 and that other high-use system files be assigned to other devices (thereby reducing device contention on ST1). Among the low-use system files are System Scheduler files, the Time Sharing Subsystem Library, the AUTOLOAD file, the deckfile, the load file, the DUMPO and DUMP1-9 files, and the Integrated Firmware and Diagnostics (IFAD) file.

If the following files are not defined on a \$ FILDEF statement, Startup creates the files and assigns them to ST1. The file sizes can be increased via a \$ FILDEF statement and a device other than the default system device can be specified.

<u>File Name</u>	<u>Default Size (llinks)</u>	<u>Description</u>
DUMPO	100	Used by the Master Mode Dump (.MDUMP) program for storing the contents of the memory area used during swap operation. To enable .MDUMP program snaps, the size should be set to 200 llinks.
LUMP	24	Contains dump information and pushdown space.

The format for the \$ FILDEF statement is:

```

1      8      1
_____ 6
$      FILDEF ddd,fffff,sss[/O][,xxx][,ttt][,LABEL/nnnnn][,yyyy]

```

where:

* ddd - Logical device name of the mass storage device on which to create file fffff. This device must be defined on a \$ Iyy statement in the \$CONFIG section and must be a permanent mass storage device. If this device is a magnetic tape unit or is defined as a NOFMS or RMVBL device, Startup aborts and the console message:

```
*ddd fffff CAN'T BE xxxxx
```

is issued (where xxxxx = NOFMS, REMOVABLE, or NON-STORAGE). A maximum of 78 Startup files can be assigned to one device.

fffff - File name (1-12 alphanumeric characters). Note that use of the dump-to-disk feature requires that one or more files (DUMP1-DUMP9) be specified.

sss - File size (in llinks). If the file is not created large enough to accommodate the file that is being copied from magnetic tape handler ttt, Startup aborts. To correct the problem, re-edit the file from magnetic tape.

Special consideration must be given to the specification of the file size for .CRACF (accounting file), which must not exceed 16,383 llinks.

It is recommended that the DUMP1-DUMP9 files be created with an initial file size of 3500 llinks and then re-edited when dump requirements are known. Actual space used on these files is identified in the console message WROTE xxxxx LLINKS, which is issued following a dump. (Refer to the GCOS 8 OS System Operating Techniques manual for additional information on dumping to disk.)

/O - Filegrow (overwrite) option (letter O). If a file was defined for a previous boot and that file has since grown, the use of a new \$ FILDEF statement that includes the /O option and the new filesize requirement replaces the old file to accommodate the new, larger file.

xxx - Code indicating the format for writing file fffff on device ddd.

<u>Code</u>	<u>Description</u>
-------------	--------------------

SYS	Copy the file in system-loadable format. The file must be defined on a \$ SYSTEM statement in the \$FILES section.
-----	--

RDM	Copy the file in random format (i.e., not in system-loadable format). The file must be defined on a \$ LIBRARY statement in the \$FILES section.
-----	--

RUP	Copy the file in run unit update file format. The file must be defined on a \$ SYSTEM statement in the \$FILES section.
-----	---

SWI	Copy the file in Seed Workspace Image format. At least one such file must be defined on a \$ SYSTEM statement in the \$FILES section.
-----	---

ttt - Logical device name of the magnetic tape handler from which file fffff is to be copied. If ttt is not specified, file fffff will be created, but no data will be written to that file. When a magnetic tape device is specified on a preceding \$ FILDEF statement, that same device can be referred to in the field via an asterisk (*).

nnnnn - This field is required for tape label verification and must contain the name of the file being copied from magnetic tape to file fffff (if file name fffff is different from the file name in the tape label).

yyyy - Density of the MPC-driven magnetic tape handler ttt from which file fffff is being edited. This field is required if the density of device ttt is other than 800 bpi. DEN8 is the default density. (If this field is included for a device that is not MPC driven, Startup aborts.)

<u>Code</u>	<u>Description</u>
-------------	--------------------

DEN2	200 bpi
------	---------

DEN5	556 bpi
------	---------

DEN8	800 bpi
------	---------

DEN16	1600 bpi
-------	----------

DEN62	6250 bpi
-------	----------

The following example shows a 2000-llink file (DUMP1) being created on device ST1. No data is being written to the file from an existing file on magnetic tape. Instead, information is written by the system after file creation.

```
1      8      1  
      6
```

```
$      FILDEF  ST1,DUMP1,2000
```

The following example shows a 1400-llink file (GC1) being created on device ST1. This file overwrites (/O) any existing file named GC1 on device ST1. Information is being written to this file in system-loadable format (SYS) from a file named VS-PRIMARY (LABEL/Vs-PRIMARY), which exists on the 1600-bpi (DEN16) total system software tape that is mounted on magnetic tape handler 1T2.

```
1      8      1  
      6
```

```
$      FILDEF  ST1,GC1,1400/O,SYS,1T2,LABEL/Vs-PRIMARY,DEN16
```

\$ SSFILE Statement

The \$ SSFILE statement defines the size of each job class from which the System Scheduler program assigns work to the system. In addition, the \$ SSFILE statement performs two functions with respect to the System Scheduler program's SSFILE file that are similar to those performed by the \$ FILDEF statement for other system files.

- o The sum of the job class sizes specified on the \$ SSFILE statement is the amount of space that Startup assigns to the SSFILE file. Each job is cataloged in the SSFILE file by the System Scheduler.
- o The device on which the SSFILE file resides must be defined on the \$ SSFILE statement.

Definition of class sizes on the \$ SSFILE statement - as well as the parameters specified on the \$ SSLOAD statement in the \$FILES section - indicates the relative importance of each job class to the System Scheduler program. The number of llinks specified for each job class defines the number of jobs within the class that can be waiting for scheduling. Each llink of SSFILE file space can accommodate 39 jobs. (Each job requires an eight-word entry on the SSFILE.) Therefore, the number of jobs that can be cataloged for one class is derived by multiplying the number of llinks specified times 39.

Each job that is saved following execution (see \$ INFO SCHSAV) also occupies eight words of SSFILE file space. It is recommended that this be taken into account when defining the size of each class.

The \$ SSFILE statement must be present in the Startup job stream. If it is not present, Startup aborts. However, only one \$ SSFILE statement is permitted.

Three job classes must be defined. The required classes are .EXPRS, .HOLD, and .user. The site can specify any name for the .user class. (Frequently, .user is defined as .USER.) If these job classes are not specified, Startup aborts.

Based on any parameter that the site selects, the .user class can be expanded to multiple classes. A maximum of 49 (02-50) .user classes can be specified in the optional .userx field(s). Note that definition of more than one .user class requires a .MSCAN module to evaluate the site-specified parameters and to direct jobs into the various classes.

The site can specify any names for the optional .userx classes. All names assigned must be defined on both the \$ SSFILE and \$ SSLOAD statements. The names assigned to optional .userx classes have no significance in their sequence of processing (e.g., class .USER04 is not necessarily processed before class .USER05). Priority processing by class is controlled by the maximum number of jobs within a class that can be scheduled for processing at one time, which is specified on the \$ SSLOAD statement.

The special job classes .TASK and .TRANS should not be specified on the \$ SSFILE statement, even though they may be specified on the \$SSLOAD statement. Specification of these classes on the \$ SSFILE statement may cause erroneous incrementing of class numbers, resulting in processing problems. However, all other job classes specified on the \$ SSLOAD statement must also be specified on the \$ SSFILE statement.

The format for the \$ SSFILE statement follows. All classes must be defined in the specified sequence; otherwise, Startup aborts.

		1
1	8	6

\$ SSFILE ddd,.EXPRS/n,.HOLD/n,.user/n[, .userx/n]

where:

ddd - Logical device name of the mass storage device on which the SSFILE file resides.

n - Number of llinks assigned to this class.

.userx - Optional site-defined classes. A maximum of 49 classes can be specified.

The following example indicates that the SSFILE file resides on device ST1. The .EXPRS class is assigned seven llinks, the .HOLD class is assigned five llinks, and the required .user class (.USER1) is assigned three llinks. Five optional site-defined classes also are defined. These include .USER2 (three llinks), .USER3 (four llinks), .USER4 (one llink), .USER5 (one llink), and .USER6 (one llink). The .TS8 class is assigned two llinks. Based on these definitions, Startup will assign 30 llinks of space on ST1 to the SSFILE file, assuming ST1 has one llink per allocation unit (AU). (That is, five llinks more than the sum of the llinks specified for each job class. If the AU size is greater than 1, the SSFILE size is further adjusted upward to be evenly divisible by the AU size.)

		1
1	8	6

```

$   SSFILE ST1,.EXPRS/7,.HOLD/5,.USER1/3,.USER2/3,.USER3/4,.USER4/1,
$   ETC    .USER5/1,.USER6/1,.TS8/2

```

\$FILES SECTION

The \$FILES section identifies the system files to use throughout the duration of the current bootload. The \$FILES section is one of two sections required in the Startup job stream. Only system programs residing on files defined in this section are identified in main memory tables. Therefore, a system program is not available during system operation if the file on which it resides is not identified in this section.

Each file identified in the \$FILES section must be defined in the \$EDIT section. Identification of a file in the \$FILES section is a selective process. Some files identified in the \$EDIT section may not be required and, therefore, can be omitted from the \$FILES section.

For example, a total of 25 system files may be defined in the \$EDIT section and created on mass storage devices. However, if the site requires only 20 files, only those 20 need identification in the \$FILES section.

Two errors are commonly associated with the \$FILES section.

1. If a file is identified in the \$FILES section but not in the \$EDIT section, the console message *FILE fffff UNDEFINED is issued and Startup aborts (where fffff = file name).
2. Any references to system programs residing on files not defined in the \$FILES section result either in an error condition or in the request being ignored.

The following statements can be included in the \$FILES section. These statements can be in any sequence:

```
$ ACCBUF
$ ACCOUNT
$ DFILES
$ LIBRARY
$ PFILES
$ SAVE
$ SCFBUF
$ SCFDSP
$ SSLOAD
$ SYSOUT
$ SYSTEM
```

\$ ACCBUF Statement

The \$ ACCBUF statement is used to:

- o Specify those record types buffered before being written to the Statistical Collection File (SCF).
- o Specify those record types whose buffering disposition (i.e., buffer or delete) can be changed by operator request.
- o Identify the maximum record type buffered.

If the \$ ACCBUF statement is not present, record types 1-23 are buffered (by default) and can have their dispositions changed.

The format for the \$ ACCBUF statement is:

```
1      8      1  
-----  
1      8      6
```

```
$      ACCBUF  xxxxxxxxxxxxxx,yyyyyyyyyyyyyy,nn
```

where:

x...x - Twelve-character (octal) field identifying the record types to be buffered. Each bit corresponds to a record type (i.e., bit 0 defines record type 1, bit 1 defines record type 2, ... bit 22 defines record type 23). If a bit = 0, the record is buffered; if a bit = 1, the record is deleted.

The operator subsequently can enter ACCEPT nn to specify that record type nn is buffered and written to the Statistical Collection File (SCF). Conversely, the entry IGNORE nn specifies that record type nn is deleted and not written to the SCF.

y...y - Twelve-character (octal) field identifying the record types that cannot have their dispositions changed by operator request. If the bit is set (=1), the record's disposition cannot be changed. If the bit is not set (=0), the record's disposition can be changed.

nn - One-digit or two-digit number (0-36) specifying the maximum record type that can be buffered. The default value is 23. Any record specified in the x...x and y...y fields that exceeds the value nn is deleted and cannot have its disposition changed.

The following example indicates that all record types are to be buffered and that all record types can have their buffering dispositions changed. By default, record type 23 is the maximum record type that can be buffered (i.e., the nn field is null).

```

1      8      1
      6

```

```
$ ACCBUF 0,0
```

When more than 36 accounting types are required, the \$ SCFBUF and the \$ SCFDSP statements may be used in place of the \$ ACCBUF statement.

\$ ACCOUNT Statement

The \$ ACCOUNT statement defines the device on which the Statistical Collection File (SCF) is to reside.

```

1      8      1
      6

```

```
$ ACCOUNT {RDM,fffff,ggggg}
          {RMV,ddd[,DENxx]}[,IDS
```

```
$ ETC    [,BUFSIZ/sss][,RETENT/rrr][,CONCUR][,JMAP]]
```

where:

RDM - The SCF resides on a mass storage device. Note that the maximum accounting file size is 16,383 llinks. (Refer to the "\$ FILDEF Statement" definition, earlier in this section).

fffff - File name of the SCF.

ggggg - File name of the alternate SCF, used for data overflow.

RMV - The SCF resides on a magnetic tape device (ddd).

ddd - Logical device name of the magnetic tape unit on which the SCF resides.

DENxx - Tape density for magnetic tape units.

```

DEN2 - 200 bpi
DEN5 - 556 bpi
DEN8 - 800 bpi
DEN16 - 1600 bpi
DEN62 - 6250 bpi

```

The density must be the same as the density specified on the \$ Iyy statement for the device defined in the ddd field.

If a density is not specified, the system default high density is assumed (as specified on the \$ INFO DENxx/DENyy statement in the \$CONFIG section).

IDS - I-D-S/I journal is to be configured.

- sss - Buffer size. The minimum and maximum sizes are 320 and 1604 words respectively. The default is 320 words.
- rrr - Retention period (in days) for SCF records. The maximum retention period value is 999, indicating permanent retention. The default value is 0. The retention value is specified in decimal.
- CONCUR - Specified only if the SCF is to be concurrently accessed.
- JMAP - Specified only if a data base execution report is desired.

The following example shows the SCF residing on magnetic tape utilizing the maximum available buffer space available:

```

1      8      1
      6
-----
$      ACCOUNT RMV,1T1,DEN16,IDS,BUFSIZ/1604

```

The following example indicates that the files STATS and STATS1 are the SCF files, which reside on mass storage.

```

1      8      1
      6
-----
$      ACCOUNT RDM,STATS,STATS1

```

\$ DFILES Statement

The \$ DFILES statement causes the referenced file to be catalogued as a linked sequential file under SYS CAT. It allows GEIN to read \$ DFILE related JCL statements, as described in "\$ DFILE/\$ ENDTF Statements" earlier in this section.

The format for the \$ DFILES statement is:

```

1      8      1
      6
-----
$      DFILES fffffff

```

re:

References the file name of the DFILE described in the \$EDIT
 action (e.g., SYSPN).

\$ LIBRARY Statement

The \$ LIBRARY statement identifies one or two files to use as system libraries. They are searched by the General Loader program during program loading. One file defines the System Subroutine Library (L*); the second file is optional and defines the User Subroutine Library (*L), also referred to as the Secondary Subroutine Library.

The L* file contains high-use subroutines required for execution of major software packages. The *L file usually contains smaller, less frequently used subroutines. Consequently, the L* file normally is configured on a faster device than the *L file. If configured, the *L file is searched before the L* file.

File sizes and the device on which each file resides must be specified on the \$ FILDEF statement in the \$EDIT section. If the L* and *L files are configured, they must reside on the same type of storage medium (i.e., both files must reside on mass storage or both must reside on magnetic tape).

The format for the \$ LIBRARY statement is:

		1
1	8	6

\$ LIBRARY RDM,fffff[,RDM,ggggg]

where:

fffff - File name of the System Subroutine Library (L* file).

ggggg - File name of the optional User Subroutine Library (*L file).

RDM - Must precede the file name (fffff and ggggg) to identify the file as a random file.

The following example indicates that a one-link system subroutine library named SYSTEMLIB is to be created on mass storage device DS5. In addition, a one-link user library named USERLIB is created on mass storage device DS6.

		1
1	8	6

```
.  
. .  
$EDIT  
$ FILDEF DS5,SYSTEMLIB,1,RDM  
$ FILDEF DS6,USERLIB,1,RDM  
. .  
$FILES  
$ LIBRARY RDM,SYSTEMLIB,RDM,USERLIB  
. .  
.
```

\$ MODOPT Statement

The \$ MODOPT statement provides a means for specifying parameters for initialization of GCOS modules. The parameters from the \$ MODOPT statement(s) are passed to each designated module at module initialization time so that the module can verify the parameters and perform initialization according to the parameters.

The format for the \$ MODOPT statement is:

1	8	1	6
<hr/>			
\$	MODOPT	.Mxxxx{,keyword[={value	}] }
		{	[{(value,...)}]...}
		{/ {type	}
		{ {(type,name)}	}

where:

- .Mxxxx - The GECALL name of the module, used to generate the module number. The symbol .Mxxxx must have been previously defined by a system macro such as .MDEF.
- keyword - Keyword identifying a parameter to be initialized. The valid keywords, and associated values for each module are listed below.
- value - May have one of the following forms, and may be further limited by the module being initialized.
 - string - Any sequence of characters except space, quote ("), equal, left parenthesis, right parenthesis, or comma. Note: slash is allowed.
 - "D_Q_string" - Any sequence of characters. A quote (") may be contained within D_Q_string by using two successive quotes ("").

```

type - { 000000 }
      { [R][P]{HSSA|FSSA|SSSA|GHCM|SHCM} }
      { {NULL|R|P|RP|PR|APRG|NPRG|SPRG} }

```

000000 - Octal value for module entry information, SD.MDD bits
0-17

R - Required
P - Privileged
NULL - To reset required and privileged modes
HSSA - Half SSA (512 words)
FSSA - Full SSA (1024 words)
SSSA - Shared SSA
GHCM - Grouped HCM
SHCM - Segmenting HCM
APRG - GCOS-type program
NPRG - RU-type program
SPRG - Shared program

name - A new GECALL name to put in the GECALL name table instead of the macro generated name. If this option is used, no patch card or later \$ MODOPT references can be made to the old name; it will cease to exist as far as the system is concerned for accesses by module name. Note that any macro generated calls will have been assembled and will be executed by the module number and not the GECALL name.

INITIALIZATION PARAMETERS FOR .MDNET

```

1      8      1
-----
$      MODOPT .MDNET,{TRACE_TYPES|TRACE}={OFF|ON|bbbb|({OFF|ON}[ ,n...])}

```

where:

OFF - No trace. Memory for trace is released.

ON - Enable all trace types. Default.

bbbb - Disable trace types 1 thru 13 (i.e., 47204 bit mapped equals 100111010000100 which would disable trace types 1,4,5,6,8,13). (Format of the old patch card).

OFF,n[,n...] - Turn off trace type n, where n = 1 thru 13.

ON,n[,n...] - Turn on trace type n, where n = 1 thru 13.

\$ MODOPT .MDNET,{NUMBER_TRACE_ENTRIES | TRCSZ}=nnnn

where:

nnnn - Specifies the number of entries (decimal) in the trace table.
Default/Minimum = 80; Maximum = 1023. (If TRACE=OFF is used, there will be no trace table.)

\$ MODOPT .MDNET,{MAX_CONCURRENT_REMOTE_INQUIRIES | RMIQT}=nnn

where:

nnn - Specifies the number of entries (decimal) in the Remote Inquiry Name Table (N.AME). Default/Minimum = 40; Maximum = 255.

\$ MODOPT .MDNET,{MAX_GENERAL_STATUS_PROGRAMS | GENSTS}=nnn

where:

nnn - Specifies the number of entries (decimal) in the General Status Inquiry Table (GE.STS). Default = 40; Minimum = 0; Maximum = 255.

\$ MODOPT .MDNET,{RESERVE_MAILBOX_7 | RSMB7}={YES|NO}

where:

YES - Reserve mailbox #7 for Front-end Network Processor (FNP).

NO - Default.

\$ MODOPT .MDNET,{RECONNECT_TSS_AFTER_SLAVE_DISCONNECT |
RECDIS}={YES|NO}

where:

YES - Indicates that the automatic reconnect to TSS upon Disconnect Request (MME GEROUT 17) from a DAC process is desired. If the line originated from a TSS copy, an attempt will be made to return the line to that originating TSS copy and UST for continued service. If the originating copy is not available or if the line did not originate from TSS, the line will be disconnected.

NO - Disconnect the line when a DAC program issues a GEROUT 17. Default.

\$ MODOPT .MDNET,{TSS_LOAD_FACTOR | TSSLF}=n

where:

n - Specifies a value from 0-9 (decimal) representing the load factor that will cause additional users (i.e., logons) to be assigned to another executing copy of Time Sharing. The default value is 6.

A value of 0 indicates that users are to be assigned to all executing copies of Time Sharing on a round robin basis.

\$ MODOPT .MDNET,{CHECK_FOR_DNET_BUSY | CKBSY}={ON|OFF}

where:

ON - Enables scan of the line table for an FNP at the end of interrupt processing. Search is made for GS.DBS (DNET Busy Bit) left on any line on the FNP. If found, system will abort. USED FOR DIAGNOSTIC PURPOSES ONLY.

OFF - Default.

\$ MODOPT .MDNET,{I/O_TRACE | IOTRC}={OFF|ON}

where:

ON - Enables the trace of changes in .SRQCT, which is a count of I/O requests and requests in transmission for a process. USED FOR DIAGNOSTIC PURPOSES ONLY.

OFF - Default.

INITIALIZATION PARAMETERS FOR .MDSX6

		1
1	8	6

\$ MODOPT .MDSX6[,TMPFIL=(xxx,xxx[,xxx]...)[,SYSFIL=(xxx,xxx[,xxx]...)]

where:

xxx - Each element in the lists is a logical device name. Each device name may appear in one or both lists. All devices specified must be mass storage devices configured as PERM. None of the devices may be configured as RMVBL. At least two physical units must be included in each list.

TMPFIL - The devices in the TMPFIL list are used to satisfy requests for disk space for temporary files (\$ FILE or MME GEMORE), Test Mode collection space, Remote Job Input (RGIN) space, backing store files, swap files, and pushdown (\$S) files. If the TMPFIL list is specified, it must include at least two physical units. If the TMPFIL list is not specified, the TMPFIL pool will consist of all PERM devices.

SYSFIL - The devices in the SYSFIL list are used to satisfy requests for J* and *J files and for the GEIN \$ SELECT pushdown file (i.e., any request for temp space that originates from .MGEIN) plus the J\$ and \$J files, system recovery and cleanpoint files and System Scheduler Unpurge (SSUP) work space.

The devices in the SYSFIL list are also used during file grow. If a MME GEMORE to grow a permanent file requires crossing to another device (because the current device has insufficient unused llinks), AS06 allocates space from a device in the SYSFIL list selected by a round robin algorithm. SD.MSD contains an index to the next device to be tried for allocation. After each try, whether successful or not, the index is advanced to point to the next device in the list.

The catalog thresholds (\$ INFO FMSST, FMSCT, and FMSDT) are in effect only when a file is created or restored. During file grow these thresholds are ignored.

It is recommended that the devices in the SYSFIL list not be designated as \$ INFO CAT so that FMS will not build catalogs on those devices. The \$ IOM/IOX NOFMS option may be specified for devices in the SYSFIL list; thus those devices would contain temporary file space, but would not contain FMS catalog or permanent file structure.

If the SYSFIL list is specified, it must include at least two physical units. If the SYSFIL list is not specified, the SYSFIL pool will consist of all TMPFIL volumes.

The TMPFIL and SYSFIL pools may overlap; a PERM device may be in the TMPFIL pool, the SYSFIL pool, both, or neither.

A temporary file may be placed on a PERM device not in the TMPFIL pool by requesting that specific device on the \$ FILE JCL record.

\$ PFILES Statement

The \$ PFILES statement identifies Startup-created files to be cataloged by the File Management Supervisor (FMS) for subsequent access by users. The files are cataloged under the System Master Catalog (SMC) entry SYS CAT. Unless Startup-created files are identified on the \$ PFILES statement, they cannot be accessed. (Exceptions are all DUMP Files, which are automatically cataloged.)

A maximum of 79 files can be created by Startup via \$ PFILES statements. If an attempt is made to create more than 79 files, Startup aborts. The message:

```
*UNABLE TO PFILE (file name)
*MORE THAN 79 PFILES AND DFILES
```

or

```
*UNABLE TO AUTOMATICALLY PFILE DUMPn
*MORE THAN 79 PFILES AND DFILES
```

will be output when the main PFILE routine detects an overflow condition. The message:

FATAL ERROR IN \$FILES SECTION CARD BELOW CONTAINS AN ERROR NEAR COLUMN xx
is issued to the console (where xx = statement column number).

The format for the \$ PFILES statement is:

```
1      8      1
      6
-----
$      PFILES ffffff
```

where:

ffffff - File name.

The following example identifies dump files to be used in dump-to-disk operations.

```
1      8      1
      6
-----
$      PFILES DUMP1,DUMP2
```

\$ SAVE Statement

The \$ SAVE statement specifies the name of the file used by the GCOS system for dump control and pushdown purposes. This file frequently is referred to as the "save file," however, any file name can be assigned.

The logical device name of the mass storage device on which this file is to reside and the file size may be specified on the \$ FILDEF statement. This file must be allocated a minimum of 24 links.

The format for the \$ SAVE statement is:

		1
1	8	6

\$ SAVE fffffff

where:

ffffff - File name (one-six characters).

The \$ SAVE statement is needed only if the site wishes to move the save file from ST1 or increase the file size to more than 24 llinks.

\$ SCFBUF Statement

The \$ SCFBUF statement is used in lieu of the \$ ACCBUF statement and is found in the \$FILES section; this provides extended accounting capability. It defines which accounting record types to buffer. The \$ SCFBUF statement is followed by the \$ SCFDSP statement.

When operating under the Tape Management System (GTMS), up to 72 accounting type records may be specified, including tape mount trace records written to the SCF. This record is produced only when the privileged slave program \$GSYS is executing in debug mode. The record type created is 28 (octal 34).

The \$ SCFBUF statement format is:

		1
1	8	6

\$ SCFBUF nnn,ALL
or
\$ SCFBUF nnn,REC/X(1),X(2) - X(n)

where:

nnn - Three-digit number defining the maximum accounting record type for which buffering is done. The range of nnn is from 1-288.

ALL - Buffering for all record types (0-max.) has been selected.

REC - Selected accounting record types are to be provided buffering.
 X(1),...X(n) are the record types which have been selected and are to
 be stated in decimal. For example:

1	8	1
\$	SCFBUF	36,ALL
\$	SCFBUF	36,REC/1-10,12,14,17-19,21,30-36
\$	SCFBUF	288,ALL

\$ SCFDSP Statement

The \$ SCFDSP statement defines the accounting record types which can have their status changed from the console. The \$ SCFDSP statement should be immediately preceded by the \$ SCFBUF statement.

The formats for the \$ SCFDSP statement are:

1	8	1
\$	SCFDSP	nnn,ALL
or		
\$	SCFDSP	nnn,REC/X(1),X(2), - X(n)

where:

nnn - Three-digit number defining the maximum accounting record type whose status can be changed from the console. This must match nnn of the \$ SCFBUF statement.

ALL - All accounting record types can have their status changed via the console.

REC - Accounting record types X(1),...X(n) have been selected for console status change capability. X(1), etc., are decimal values. For example:

1	8	1
\$	SCFDSP	36,ALL
\$	SCFDSP	36,REC/2-8,14,17,21-30,32-36
\$	SCFDSP	288,ALL

\$ SSLOAD Statement

The \$ SSLOAD statement further defines the various System Scheduler program job classes initially introduced in the \$EDIT section on the \$ SSFILE statement. The \$ SSLOAD statement specifies the maximum number of jobs that can be scheduled from each class at one time. This statement also specifies the maximum and minimum number of jobs from all job classes that can compete for system resources (i.e., peripheral devices, memory, and processor time) at any one time.

The site can influence its processing workload and job scheduling through judicious use of \$ SSLOAD statement parameters. Values specified for these parameters are unique to each site. No one value can be suggested as a norm for each parameter and no default values are assigned by Startup. Two recommendations can help establish parameters that best apply to each site.

1. Site techniques personnel must have a good working knowledge of the site's processing profile.
2. Site techniques personnel can experiment with the three types of parameters (i.e., system maximum, system minimum, and class maximums) to determine the combination of values that provides optimum throughput. Manipulation of these values - especially manipulation of the system maximum value - can produce favorable results.

The format for the \$ SSLOAD statement follows. Note that definition of parameters is not required for the .HOLD class.

1	8	1
		6

```
$ SSLOAD MAX/xx,MIN/yy[,.TASK/nn][,.TRANS/nn],.EXPRS/nn,  
$ ETC .user/nn[,.cccc/nn],.TS8/nn
```

where:

- MAX/xx** - Maximum number (xx) of program numbers available for processing jobs from all classes at one time. This value specifies the number of jobs the System Scheduler program will pass to the Peripheral Allocator program to compete for resources at any one time.
- MIN/yy** - Minimum number (yy) of jobs that can be active before the System Scheduler program invokes individual class maximum values in the scheduling algorithm. If the total number of active jobs is less than this value, scheduling is based on the following:
1. Schedule any available job in the express class.
 2. If there is no available express class job, schedule a job - regardless of its user class - on a first-in, first-out basis.

3. Return to the express class to schedule any available job.

When establishing this value (yy), consider the following:

1. Do not set the value so high that if the number of large jobs available is equal to the system minimum value, all resources would be assigned to those jobs (thereby denying resources to any other jobs entering the system).
2. If the value is 0, the class maximums for all jobs are strictly enforced. There is no override of class maximums and only the number of jobs specified by the class maximum values are run.

`.TASK/nn` - Maximum number (nn) of jobs that can be assigned at any one time via DRL TASK directives in the Time Sharing System. This field is required only if the site has Time Sharing System capabilities.

`.TRANS/nn` - Maximum number (nn) of Transaction Processing Applications Programs (TPAPs) that the Transaction Processing Executive program can have spawned at any one time. This field is required only if the site has Transaction Processing capabilities.

`.EXPRS/nn` - Maximum number (nn) of jobs that can be active at any one time from the express class.

`.user/nn` - Maximum number (nn) of jobs that can be active at any one time from the required site-defined class (.user).

`.cccc/nn` - Maximum number (nn) of jobs that can be active at any one time from the optional site-defined class (.cccc). A maximum of 49 optional classes can be defined (on the \$ SSFILE statement). This field must be specified for each class defined on the \$ SSFILE statement.

`.TS8/nn` - Maximum number of jobs that can be active at any one time from the .TS8 class. The value nn should be the same as the value specified for the TS8 Initialization file directive MAXIMUM USERS.

The following example indicates that a maximum of 10 jobs (MAX/10) from all defined job classes can be scheduled (i.e., compete for system resources) at any one time. A minimum of five jobs (MIN/5) from all defined job classes can be active at any one time before the System Scheduler program invokes individual class maximum values in the scheduling algorithm. The maximum number of jobs that can be assigned from the various job classes are: .TASK (10); .TRANS (10); .EXPRS (5); required user class .USER1 (1); and optional user classes .USER2 (3), .USER3 (1), .USER4 (1), .USER5 (1), and .USER6 (1).

1	8	1
\$	SSLOAD	MAX/10,MIN/5,.TASK/10,.TRANS/10,.EXPRS/5,
\$	ETC	.USER1/1,.USER2/3,.USER3/1,.USER4/1,.USER5/1,.USER6/1

\$ SYSOUT Statement

The \$ SYSOUT statement specifies the names of files used for the collection (i.e., spooling) of system output on mass storage. A maximum of 64 files can be specified.

All files should be created the same size. The logical device name of the mass storage device on which the file is to reside and the file size are defined via the \$ FILDEF statement. If the sizes of all files named in the \$ SYSOUT statement are not the same, the smallest value specified on a \$ FILDEF statement is allocated on each device. For example, if 100 llinks are specified for all devices except one on which 50 llinks are specified, only 50 llinks are used on all devices.

Specification of SYSOUT collection space requirements allows site management to define its particular needs according to the site's processing environment.

The format for the \$ SYSOUT statement follows:

1	8	1
\$	SYSOUT	ffffff,ffffff, ... ,ffffff

where:

ffffff - File name (one-six characters). A maximum of 64 files can be identified for SYSOUT collection purposes. These are all defined in one \$ SYSOUT statement or a \$ ETC continuation of that statement.

\$ SYSTEM Statement

The \$ SYSTEM statement identifies each file containing system modules and system-shared software necessary for site operations. These file names are written to in-memory tables. The size of each file defined on the \$ SYSTEM statement and the device on which the file resides must be specified on a \$ FILDEF statement in the \$EDIT section. The RUP, SWI, or SYS parameter must be included on the \$ FILDEF statement for each of these system or shared software library files.

A maximum of 32 system files can be defined. If more than 32 files are specified, Startup aborts. While the \$ SYSTEM statement normally identifies the names of all files specified on a \$ FILDEF...SYS statement, this is not always the case. Some sites may have more than one version of system software. In these instances, \$ SYSTEM statement definitions may not include all files specified in the \$EDIT section.

Multiple file names can be specified on one \$ SYSTEM statement. The format for the \$ SYSTEM statement is:

		1
1	8	6

```
$      SYSTEM fffff
```

where:

fffff - System file name.

The \$ SYSTEM statement can also be used either to replace existing system modules, or to add system modules to the content of the existing system file by employing a technique called an insert-edit. This technique expediently updates one or more software modules resident on the system files and, because it is an alter only update, eliminates the need to re-edit the entire system. Although the number of program executions is no fewer than when performing a total edit, the selectivity of the insert-edit reduces the scope of the edit by minimizing the number of modules involved in the editing process.

A replacement file can have a unique file name, or it can retain the name of the file being replaced or modified. In addition, all other files containing system programs and remaining in effect must also be specified on the \$ SYSTEM statement for the insert-edit.

The sequence in which the new or replacement files and the existing files are defined on the \$ SYSTEM statement(s) is important so that Startup can identify and replace an existing file with the replacement file, or insert a new file. Systems statements defining new system files should appear first. Replacement file names should immediately precede the preexisting system file name being replaced. This allows site personnel to easily identify the system files involved in modification.

If it appears that the Startup program has not inserted a new file or replaced an old file following an insert-edit, check the order of appearance of system file names on the output list of the \$ SYSTEM statement(s). If improperly sequenced, rearrange them as required to produce the desired results and reboot.

In the following example, replacement file NEW-SOFT contains system programs that are to replace programs residing on existing file, VS-PRIMARY. Other files containing system programs that are not involved in the replacement procedure are identified on \$ ETC statements.

		1
1	8	6

```

$    SYSTEM  NEW-SOFT
$    SYSTEM  VS-PRIMARY
$    SYSTEM  TSS-SUB-SYS
$    SYSTEM  SOFTW-PART 1

```

\$PATCH SECTION

The \$PATCH section provides a means by which corrections can be applied to GCOS programs and to software programs that were edited by Startup onto the system. Corrections cannot be applied via the \$PATCH section to programs added to the system via a File Management Supervisor (FMS) restore function. (Refer to the GCOS 8 OS File Management Supervisor manual for a description of restore procedures.)

Four types of patch corrections can be applied via the \$PATCH section:

- o OCTAL correction statements to replace the contents of specific module locations
- o OCTAL correction statements to add to the contents of a module
- o OCTAL correction statements which are site-option patches. Site-option patches allow the site to select specific operating parameters for its system software modules and programs. Each of the valid site-option patches is described later in this section, under "Site-Option Patches".
- o PATCH RUN UNIT statements which are applied as corrections to run units that are part of the Seed Workspace Image (SWI)

Corrections applied via the \$PATCH section do not affect the content of the total system software tape. Patches can be edited onto an unpatched total system software tape via the Patch Editor (PAED) program. (Refer to the GCOS 8 OS Service Routines manual for PAED program procedures.)

Corrections to the Startup program and the Startup job stream content are not applied via the \$PATCH section. Among these types of corrections are:

- o MASK statements that correct the Startup module (.MINIT). (Refer to "Patching Startup Program" in Section 3)
- o OCTAL statements that correct the MPC Bootload module (.MMPCB). (Refer to "\$INITIALIZE Section" earlier in this section.)
- o HEX statements that correct firmware data decks. These statements are CHEX (control store) and RHEX (read/write memory) statements. (Refer to "\$INITIALIZE Section" earlier in this section.)
- o OCTAL statements that correct modules loaded via the \$LOAD section of the Startup job stream. (Refer to "\$LOAD Section" later in this section.)

Application of Patches

Patch corrections included in the \$PATCH section are written to a main memory table during system bootloading. This table is accessed each time a GCOS or software program/module, for which patches exist, is loaded into memory from system storage. All applicable patches are applied to the program/module while it is in memory.

Programs/modules eligible for patching via the \$PATCH section are identified in either the Module Directory Table or the Module Name Table. (These tables are pointed to by the SD.MDD and the SD.MNT segment descriptors, respectively.) Table information includes the address of the program/module loaded from system storage and an indicator denoting whether any patches exist in the patch table for the program/module.

The patch table is initialized each time the system is bootloaded. Only the content of the \$PATCH section for that bootload is written to the table. Therefore, only current corrections exist in the table. Also, any OCTAL correction statements or PATCH RUN UNIT statements that were removed from the \$PATCH section are eliminated from the table.

There is no limitation to the number of patches that this table can accommodate. However, it is recommended that the site consider the following when determining the number of patches to include in the \$PATCH section (i.e., in the patch table):

1. The entire patch table is scanned each time a system program is called into memory. An abundance of patches could impact system performance if a significant amount of time is required to complete this scan.
2. Each patch correction occupies two words of main memory.

Slave Service Area (SSA) modules are limited in size. This limitation must be considered when applying add-on patches that expand the size of the module. Each main memory (HCM) module contains space for patches and patches must not overflow this space, or an error condition may result (e.g., the module may not execute properly).

Note that if the job calling for a program/module includes a \$ EXTEND control statement in its job control language, patches from an E* file also must be applied while the program/module is in main memory. If patches for the same program/module location exist in both the \$PATCH section and on the E* file, the E* file patches override \$PATCH section corrections for that location. In addition, programs on a ** file can be patched only via the E* file. (Refer to the GCOS 8 OS Service Routines manual for procedures to create an E* file and for the E* file format.)

OCTAL Statement Format

The name of the program/module to be patched, the location at which to apply the correction, and the correcting data are specified on an OCTAL correction statement. Only the fields containing this information - as well as the field containing the OCTAL identifier - are recognized by Startup. While other information can be included on the statement, it is for documentation purposes only, and ignored by Startup.

The format for the OCTAL statement is:

1	8	1	3	7
		6	2	3
<hr/>				
aaaaaa	OCTAL	vvvvvvvvvvvv	cccccc	nnnnnn

where:

aaaaaa - Module/program address (octal) at which to apply this correction. This value must be left-justified and cannot exceed six digits. If more than six digits are specified, patch data may be applied to the wrong location.

Patches must be floatable. The address in field aaaaaa (as well as an address in field v...v) must not require relocation prior to execution of the module. For example, if patching location 12122 (the offset begins at location 12000), the address specified must be 12122 and not relative address 122.

v...v - Patch correction data (octal) to be applied at module/program location aaaaaa. A maximum of 12 digits can be specified. If more than 12 digits are specified, erroneous data may be applied at location aaaaaa.

A single OCTAL correction statement can contain more than one patch correction. However, each correction on the statement is counted as one patch occupying two words in main memory.

Inclusion of leading zeros in the above fields is optional.

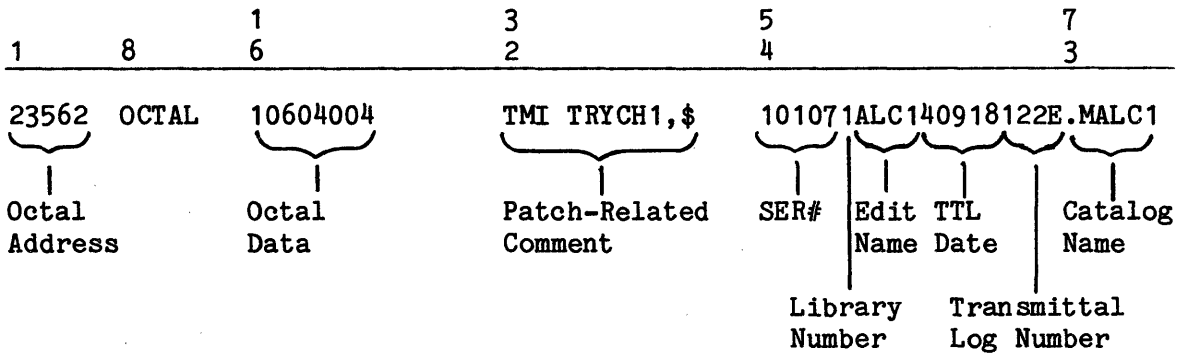
cccccc - Patch-related comments. These comments can extend from column 32 through column 72. Information often specified in this area includes comments describing the code or patch function, the number of the SER describing the error, the library number, the edit name of the module being corrected, the TTL date, and the number of the transmittal describing the correction.

nnnnnn - Program/module name. If this is a GCOS program/module, nnnnnn is the BCD catalog name in the format `.Mmmmm` (where `mmmm` = edit name of the module). For example, `.MALC1` defines the ALC1 (Peripheral Allocator program) module.

If this is not a GCOS program/module, nnnnnn is the MME GECALL name (e.g., a System program/module such as COBOL, GELOAD). The maximum length of this name is six characters.

In both cases, the name nnnnnn must be the same as the name used when the file containing the program/module was created in system-loadable format. (This name is specified in the CATALOG= field of the \$ SYSLD JCL statement for the System Library Editor to use when editing the program/module onto system storage.)

The following OCTAL correction statement defines patch information that is to be applied to location 23562 of the Peripheral Allocator program (.MALC1 module).



Four errors are commonly associated with use of the OCTAL correction statement:

1. Attempting to apply two OCTAL statements containing different patch information to the same program/module location. Startup ignores the second OCTAL statement encountered and issues the informational message:

*OVER-PATCH CARD BELOW IGNORED

to the system console. An image of the ignored statement follows the message.

2. Attempting to apply two OCTAL statements containing the same patch information to the same program/module location. Startup ignores the second OCTAL statement encountered and issues the informational message:

*DUPLICATED PATCH CARD BELOW IGNORED

to the system console. An image of the ignored statement follows the message.

3. Specifying a non-existing module name in either the Module Directory Table or in the Module Name Table. Startup ignores the statement and issues the informational message:

*PATCH CARD BELOW CONTAINS UNDEFINED PROGRAM NAME

to the system console. An image of the ignored statement follows the message.

4. Failing to begin the octal address or patch data in columns 1 and 16, respectively, or including non-octal data in these fields. Startup ignores the statement and issues the informational message:

*PATCH CARD BELOW CONTAINS ERROR NEAR COLUMN nn

to the system console (where nn = column in which the error begins). An image of the ignored statement follows the message.

Upon completion of \$PATCH section processing by Startup, if any errors are encountered, the operator is given the opportunity to either continue with or abort the bootload. The message:

*ANSWER YES TO CONTINUE WITHOUT ABOVE PATCHES

is issued to the console. If the operator responds YES, Startup ignores the statements in question and continues the bootload. If the operator responds NO, Startup aborts. Remove or correct the statements in question before reinitiating the bootload.

Another format of the OCTAL statement allows a contiguous sequence of data-words to be given on one statement; i.e.,

22 OCTAL 0,0,0,0

means patch four contiguous words starting at address 22.

PATCH_RUN_UNIT Statements

PATCH_RUN_UNIT (or PATCH_RU) statements in the Startup job stream are only valid if

1. The run unit to be patched is part of the Seed Workspace Image (SWI); and
2. A non-empty segment to contain these patches is provided via \$ INFO NPCHSZ/nnn.

Advantages And Disadvantages To \$PATCH Section Use

In addition to the \$PATCH section, patch corrections can be applied to GCOS programs and software programs via the Patch Editor (PAED) program. As previously indicated, the PAED program applies the patches to the total system software tape. The following summarizes some of the advantages and disadvantages to using the \$PATCH section rather than the PAED program. (Refer to the GCOS 8 OS Service Routines manual for PAED program procedures.)

ADVANTAGES OF USING \$PATCH SECTION

The advantages of applying patches via the \$PATCH section include its flexibility and compatibility features.

1. Patch corrections are easy to insert into and remove from the Startup job stream. For example, applicable patches can be manually inserted into or removed from the \$PATCH section to meet various configuration and operational requirements. Corrections that are applied via the PAED program are of a more permanent nature and, once applied, lose their immediate visibility.

Because patch corrections are easily inserted and removed, the \$PATCH section approach is a good method for validating new patches. Once validation is complete, the patches can be removed from the \$PATCH section and applied via the PAED program.

Temporary patches that are applied only once or for a short period of time usually are applied via the \$PATCH section. It also is recommended that local patches be applied via the \$PATCH section. Local patches are patches generated by a site and are neither Honeywell Bull-generated site-options nor officially released corrections.

2. All patches generated for use in the \$PATCH section are fully compatible with PAED program requirements (i.e., the patches are interchangeable). With few exceptions, the patching results are the same under each approach. (These exceptions are the specific programs/modules that cannot be patched via the PAED program. If an attempt to do so is made, the patches are rejected and the programs/modules are identified on a report generated by the PAED program. The patches must be removed from the PAED job stream and inserted into the \$PATCH section.)
3. Some patches, primarily those that cannot be edited onto the total system software tape via the PAED program, must be applied via the \$PATCH section. In addition, the \$PATCH section must be used to apply patches if the total system software tape has been patched. (The total system software tape can be patched only once and cannot be used as input to another PAED program edit.)

Also included among the patches that cannot be applied via the PAED program are add-on patches, which are applied below the Lower Address Limit (LAL) of the module being patched, and patches applied from a common patch area. Patches included in a common patch area are below the LAL of the individual modules.

Note that use of common patch space is more economical if the module defines one or more common patch areas in the main overlay at the lower-address end of memory. This common patch area can be in addition to patch space within each overlay. All other overlays also can use this space for needed add-on patches.

DISADVANTAGES OF USING \$PATCH SECTION

The disadvantages of applying patches via the \$PATCH section include the fact that they encourage oversights, are time consuming, and corrections may be misplaced.

1. Because this approach is easy to use, patch corrections often are not well-planned. Inefficiencies or errors can result.
2. Each time the affected program/module is loaded into main memory for execution, a series of events must occur before patches are applied. (The Module Directory Table and the Module Name Table are searched, a determination is made as to whether there are applicable patches, the patch table is searched for the applicable patches, and patches are applied to the program/module.) This consumes resources and increases load time.
3. Because patch corrections are incorporated into a card deck that is frequently used, cards often are lost, damaged, or inadvertently moved outside of the \$PATCH section. A patch residing outside the \$PATCH section may result in an error condition.

Changing PAED-Applied Patches Via \$PATCH Section

The \$PATCH section can be used to modify/add/delete an existing patch that was applied via the PAED program. It is recommended that this approach be used only as an emergency procedure and for testing purposes. If the \$PATCH section is used for this purpose, conflicts may arise between the patches in the \$PATCH section and in the PAED job stream. Therefore, tight control must be maintained and the replacement patches must be clearly defined.

The *C Editor (SCED) program provides an alternative to use of the \$PATCH section for the purpose of modifying/adding/deleting PAED-applied patches. (Refer to the GCOS 8 OS Service Routines manual for *C Editor program procedures.)

- o To modify an existing patch via the \$PATCH section, create an OCTAL correction statement containing the correct information and insert the statement into the \$PATCH section. The correcting patch will override the erroneous patch that was applied via the PAED program.
- o To delete an existing patch via the \$PATCH section, prepare an OCTAL correction statement for the affected location. (The original image can be obtained from the ORIG. CONTENTS field of the most recent PAED run report.) This statement resets the contents of the location to their value prior to the PAED run. Then, insert the OCTAL correction statement into the \$PATCH section.
- o To add a new patch via the \$PATCH section, create an OCTAL correction statement containing the desired patch information and insert the statement into the \$PATCH section.

Site-Option Patches

A site can selectively apply special operating system parameters via OCTAL correction statements. These statements and parameters are referred to as site-option patches and are applied to GCOS system programs (modules) via the \$PATCH section. Applicable OCTAL correction (patch) statements for site-option patches are defined below.

DISPATCHER OPTIONS

The site can manipulate certain parameters (factors) within the Dispatcher algorithm to help meet processing objectives. The following site-option patch, applied to location 100 of the .MDISP module, allows the site to adjust the job urgency and I/O priority parameters.

1	8	1 6	7 3
<hr/>			
100	OCTAL	w000xxy0000z	.MDISP

where:

w - Octal value that expands to:

Bit 0 =1, I/O ratio priority enabled
1 =1, Urgency priority control enabled

xx - Bits 14-17 specify the consecutive subdispatch count

y - Octal value that expands to:

Bit 18 =1, Class B priority enabled
19 =1, Class A priority enabled

z - Reserve an entry in the Dispatcher's queue (i.e., job priority table) for a job that is to be given Class A priority via the console entry APRIOR sssss (where sssss = SNUMB). The value z is the priority level that is to be assigned to job sssss and can range from 1-5. If the value specified is 0, the operator cannot assign Class A priority via the console.

Variations in the Dispatcher algorithm are:

1. Bits 0 and 1 can be varied to control dispatching.

<u>0</u>	<u>1</u>	<u>Description</u>
0	0	Dispatch according to the order in which programs are placed in the Dispatcher queue (i.e., first-in, first-out basis).
0	1	Dispatch according to the adjusted urgency value for each program, found in the process status (PST) segment.

0	1	Description
1	0	Dispatch according to the ratio of channel time to processor time.
1	1	Dispatch according to the adjusted urgency value, found in the process status (PST) segment, weighted by ratio of channel time to processor time.

- If bit 18 =1, Class B priority programs receive preference in main level dispatches, subject only to the number of nonpriority dispatches specified.
- If bit 19 =1, Class A priority programs are dispatched according to their priority level. The priority level ranges from 1-5 (1 is the highest). Class A programs are given preference in courtesy calls and main level dispatches. Total system throughput may be significantly slowed in that all other processing halts when this option is in effect. For this reason, it is recommended that Class A priority be used only for programs of extreme urgency.

Applying Class A Priority

A maximum of three Class A priority entries can be reserved in the Dispatcher queue for specific SNUMBs. To reserve an entry in this priority table, each program must be identified via separate patches to locations 104, 105, and 106, respectively, of the .MDISP module. The format for these patches is:

1	8	1	6	7	3
---	---	---	---	---	---

```

aaa   OCTAL   ssssssssssOp           .MDISP

```

where:

aaa - 104, 105, or 106.

s...s - SNUMB of the program being given Class A priority.

p - Priority level (1-5).

Inclusion of a SNUMB in locations 4-6 (OCTAL) of .MDISP does not necessarily invoke Priority A. The presence of a SNUMB only causes DISP initialization to include the job in the priority job table. Its position in the table is determined by the value of bits 30-35.

To assign Priority A, call "DISP,22" either through program initiation via .CALL, or by the operator issuing an APRIOR console verb. The APRIOR verb can only be used, however, if location 0 of .MDISP contains 01-05 (OCTAL) in bits 30-35. These bits should differ from the value of bits 30-35 in words 4-6, as this level indicates the position of the operator entry into the priority table, of which there is only one.

If a job with a SNUMB in locations 4-6 does not generate a .CALL DISP,22, an APRIOR console verb must be used to initiate Priority A, as APRIOR uses the reserved operator entry. Inclusion of a SNUMB in locations 4-6 is only necessary with TSS or TDS, neither of which call DISP,22.

NOTE: The APRIOR DELETE console verb only affects those jobs executing with A Priority as a result of the operator entering an APRIOR console verb. A job which calls DISP,22 cannot be removed via the APRIOR console verb. The call must be made within the job.

Applying Class B Priority

A maximum of three programs, which can include Transaction Driven System (TDS), Transaction Processing System (TPS), and Time Sharing System programs, can be given Class B priority. (The patch format for TSS and TDS applications is given below under "Assigning Class B Priority To Time Sharing Copies And TDS.") Each of these programs must be identified via separate patches to locations 101-103, respectively, of the .MDISP module. The format for the TPS patch is:

		1				7
1	8	6				3
aaa	OCTAL	sssssssssd				.MDISP

where:

aaa - 101, 102, or 103.

s...s - SNUMB of the program being given Class B priority.

d - Number of dispatches permitted to jobs without Class B status (between dispatches to jobs with Class B status). The default value is 7.

t - Time quantum (i.e., time slice), in 32-millisecond units, for each job with Class B status. If this value is 0, a standard time quantum is applied. The default value is 92 milliseconds.

Class B priority is given to a program only when that program calls entry point 21 of .MDISP. Time Sharing System, TPS, and TDS programs issue this call during their initialization.

Assigning Class B Priority To Time Sharing Copies And TDS

The following site-option patch can be used to assign Class B priority:

1. To all configured copies of Time Sharing and/or
2. To all Transaction Driven System (TDS) and DM-IV Transaction Processing programs. Separate patches are required if Class B priority is applied to Time Sharing as well as TDS and DM-IV Transaction Processing.

If multicopy Time Sharing is configured, this patch must be applied. Class B priority is assigned to all copies.

```
1      8      1      7
      6      6      3
-----
aaa    OCTAL  xxxxxx000000      .MDISP
```

where:

aaa - 101, 102, or 103.

xxxxxx - 632462 for TDS and 636262 for TSS.

WRAPUP CONTROL

The following site-option patch to the .MBRT1 module can be used to enable/disable a wrapup request after an abort caused by an SSA module:

```
1      8      1      7
      6      6      3
-----
44     OCTAL  n      .MBRT1
```

where:

n = Zero - Disable wrapup request if abort was caused by SSA (default).

n = Nonzero - Enable wrapup request if abort was caused by SSA.

NOTE: Enabling the wrapup request may make file-system-related sensitive information such as userids, passwords, etc., available to unauthorized slave processes.

PERIPHERAL ALLOCATOR OPTIONS

A site can alter the disposition of several Peripheral Allocator functions by applying the following site-option patch to the .MALC1 module:

1	8	1 6	7 3
100	OCTAL	nnnnnnnnnnnn	.MALC1

The nnnnnnnnnnn field is a 12-character octal code defining the following functions. If a bit is set (=1), the corresponding function is enabled:

Bits	Function
0	No GET message is issued to the system console for magnetic tapes.
1	No GET message is issued to the system console for local batch jobs.
2	No HOLD/LIMBO/REST/SIEVE messages are issued to the system console.
3	No OVERDUE message is issued to the system console.
4	No GET message is issued to the system console for a print train.
5	No activity restart is performed.
6	Nine-track magnetic tapes are standard.
7	No circular allocation of magnetic tape handlers is to be performed.
8	No job sieve limits are to be applied.
9	No BMC spinoff is to occur; BMC activities are run in sequence.
10	No print banners are to be printed on output generated on the device defined on a \$ PRINT statement.
11	Peripheral Allocator program debug mode. If the Peripheral Allocator initiates a fault, a system failure occurs and a master mode dump is taken.
12	No GET messages are issued to the system console for disk packs.
13	No automatic restart from checkpoints is to be performed.
14	No "GRANT" command required for privity job.
15	Used by GCOS for \$ SHRNM.
16	User wants "-n" appended to SYSPN SELECT filename, where n = system number.
17-25	Reserved for GCOS.
26-29	This field is used for information only. It contains the system high-density code for magnetic tape, obtained from .CROPT, which is initialized at System Startup (from \$ INFO DENxx). Any data included on the site-option patch in this field is ignored.
30-31	Reserved for GCOS.
32-35	This field is used for information only. It contains the system low-density code for magnetic tape, obtained from .CROPT, which is initialized at System Startup (from \$ INFO DENyy). Any data included on the site-option patch in this field is ignored.

The system density codes for magnetic tape are:

01 - 200 bpi (bits per inch)	11 - 1600 bpi
02 - 556 bpi	14 - 6250 bpi
04 - 800 bpi	

SUPPRESS CONSOLE MESSAGES AT REEL SWITCH TIME

If a multireel tape file is being written via GFRC and an alternate tape drive is in use, this option can suppress the "LOCATE SCRATCH..." and "VERIFY SCRATCH" messages, provided that the tape mounted on the alternate drive has a proper header label.

The format for this site-option patch is:

1	8	1 6	7 3
<hr/>			
1	OCTAL	777777625012	.GLLM0

NOTE: The use of this option will remove all operator interaction at reel switch time, provided that the tape mounted on the alternate drive has a readable header label. If the wrong tape was accidentally mounted, it will be overwritten unless it generates an "OHLR..." message for unexpired retention, etc.

RELEASE DISK SPACE

The site can check the Master Available Space Table (BIT MAP) for temporary space to be released or to release space on any descriptor, AST, or BIT MAP error with the following patch:

1	8	1 6	7 3
<hr/>			
7	OCTAL	uuuuuul11111	.MALC9

where:

uuuuuu - ≠ 0. Requests temporary BITMAP check. Temporary space is to be released providing it is not marked as permanent space in the Master Available Space Table (BIT MAP).

111111 - ≠ 0. ZOP any descriptor error, AST error, or BITMAP error.

FMS TABLE SPACE FOR DUPLICATED FILE OR TEST MODE ALLOCATIONS

The site can modify the default size (5K) of the table that is used for duplicate file control or test mode allocations by applying the following patch.

1	8	1 6	7 3
36	OCTAL	0000nn000000	.MFSEX

where:

nn - Number of 1K (1024 word) blocks of memory to be reserved. Requests for greater than 31K will be reduced to that value. In general, eight allocations can be made in each 1K block.

36 - Symbolic location CMBLK.

MEMORY ALLOCATOR OPTIONS

Several site-option patches can be applied to the .MPOPM module to control such functions as magnetic tape positioning, trace table size, mass storage device preference, or change the \$ IDENT, \$ SELECT, or \$ USERID images for console spawned jobs. These functions and the patch card formats are described below.

Magnetic Tape Disposition At .MPOPM Rollcall

The site can control the positioning of magnetic tapes during the .MPOPM module's rollcall function. If no site-option patch is applied, tapes are rewound and placed in a ready condition. If the following site-option patch is applied to location 27 of the .MPOPM module, tapes are rewound and placed in a standby condition:

1	8	1 6	7 3
27	OCTAL	720000020001	.MPOPM

Statistical Collection Tape Disposition At .MPOPM Rollcall

The site can control the positioning of the statistical collection tape (SCT) during the .MPOPM module's rollcall function. SCT positioning also may be dependent upon the operator's response to the *SCF CONTINUATION? question during Startup's question-and-answer sequence. The following optional approaches are available:

1. A response of NO to the *SCF CONTINUATION? question overrides any site-option patch to location 26 of .MPOPM. The SCT is rewound and left in a standby condition.

2. A response of YES to the *SCF CONTINUATION? question and application of the following site-option patch to location 26 of .MPOP results in the SCT being left in a ready condition and available to continue statistical collection. (Note that the tape is not rewound.)

		1	7
1	8	6	3
<hr/>			
26	OCTAL	400000020001	.MPOP

3. A response of NO to *SCF CONTINUATION? and no site-option patch to location 26 of .MPOP results in the SCT being rewound during the .MPOP rollcall function. The tape is left in a ready condition and is repositioned to continue statistical collection.

Trace Tables

A site can maintain both a primary and a secondary trace table. Each trace entry in these tables comprises four words.

The primary trace table by default accommodates 511 entries. The following site-option patch can be applied to modify the number of trace entries the table can accommodate:

		1	7
1	8	6	3
<hr/>			
24	OCTAL	0000000nnnnn	.MPOP

where:

nnnn - Number of entries the primary trace table can accommodate. A maximum of 4096 (10000 octal) entries can be specified.

A secondary trace table can be specified when trace entries are written to magnetic tape. By configuring two trace tables, a double-buffer effect results. While a trace entry is being written into one of the tables, another trace entry is being read from the other table and written to magnetic tape. Under these circumstances, both the primary and secondary tables must accommodate 1024 entries (i.e., a total of 2048 entries).

		1	7
1	8	6	3
<hr/>			
25	OCTAL	0000000nnnnn	.MPOP

where:

nnnn - Number of entries that the secondary trace table can accommodate. A maximum of 4096 (10000 octal) entries can be specified. The default value is 0 (zero).

Mass Storage Device Type Preference List

The following site-option patch, when applied to location 31 of the .MPOPM module, permits a site with multiple types of mass storage devices to specify its own preference list of device types for device allocation. The patch contains a preference-ordered list for allocating the different types of mass storage devices. (This list is similar to a user's device type request on a \$ FILE statement.)

The variable field can specify up to six device codes. The position of a device code in the variable field determines the order of preference (i.e., the most desirable device type is specified in field aa, followed by device types bb, cc, dd, ee, and ff). If fewer than six fields are used, unused fields (i.e., low-order fields) must be zero-filled.

1	8	1 6	7 3
31	OCTAL	aabbccddeeff	.MPOPM

where:

aa, bb, cc, dd, ee, ff - Device codes (octal).

Device Code	Device Type
64	MSU0400 or MSU0402
65	MSU0451
66	MSU0500
67	MSU0501
73	MSC1A (64-word sector format)
53	MSC1B (512-word sector format)
75	MSD1A (64-word sector format)
55	MSD1B (512-word sector format)
42	MSM1A (64-word sector format)
41	MSM1B (512-word sector format)
74	MSM1E (512-word sector format)

This patch to .MPOPM does not take effect unless round robin device allocation is bypassed via the following patch to .MALC6:

1	8	1 6	7 3
16	OCTAL	1	.MALC6

IDENT Image For Console Spawned Jobs

If the site needs to change the \$ IDENT image for console spawned jobs, patches are required to the location(s) described below, in the following format:

1	8	1 6	7 3
<hr/>			
aa	OCTAL	bbccddeeffgg	.MPOPM

where:

aa - 33-45 (OCTAL). At least one, and as many of these locations as required, may be specified.

bb...gg - The octal values representing the codes for the BCD characters of the \$ IDENT image desired, beginning with the data for card column 16. Note that the last statement should end with the octal value "20" (blank), as this position is ignored.

Maximum Number Of DRL TASK Jobs Allowed

The maximum number of DRL TASK jobs allowed by default is 10 (decimal). This site-option patch can change that default value.

1	8	1 6	7 3
<hr/>			
47	OCTAL	0000000nnnn	.MPOPM

where:

nnnn - The maximum number (octal) of DRL TASK jobs permitted.

USERID Image For Console Spawned Jobs

If the site needs to change the \$ USERID image for console spawned jobs, patches are required to the location(s) described below, in the following format:

1	8	1 6	7 3
aa	OCTAL	bbccddeeffgg	.MPOPM

where:

aa - 50-62 (octal). At least one, and as many of these locations as required, may be specified.

bb...gg - The octal values representing the codes for the BCD characters of the \$ USERID image desired, beginning with that data for card column 16. The image must be in the form: userid\$password. Note that the last statement should end with the octal value "20" (blank), as this position is ignored.

USERID Image Of Select File For Console Spawned Jobs

If the site needs to change the \$ SELECT image for console spawned jobs, patches are required to the location(s) described below, in the following format:

1	8	1 6	7 3
aa	OCTAL	bbccddeeffgg	.MPOPM

where:

aa - 64-76 (octal) at least one, and as many of these locations as required, may be specified.

bb...gg - The octal values representing the codes for the BCD characters of the \$ SELECT image desired, beginning with the data for card column 16. The image must be in the format: userid.

Note that the last statement should end with the octal value "6120" (slash blank).

Bypass Post-Mortem Data

The site can elect to bypass the recovery of Post-Mortem data in module .MPOPM for Restart, SYSOUT Recovery, and Phase-1 Recovery processing. Cleanpoint data must be used when this patch is applied to ensure that Restart, SYSOUT Recovery, and Phase-1 Recovery processing do not fail.

The format for this patch is:

1	8	1 6	7 3
<hr/>			
101	OCTAL	n	.MPOP

where:

n - Any non-zero octal value.

Urgency Assignment

This site-option patch can be applied to define the maximum urgency available to an operator through the URG verb. The maximum urgency permitted is 63 (77 octal). The default is 40 (50 octal).

1	8	1 6	7 3
<hr/>			
20	OCTAL	nn	.MPOP

where:

nn - Any non-zero octal value up to 77.

MEMORY RELEASE OPTION

This site-option patch is applicable to DPS 8 and DPS 8000 only. It specifies the limit for the number of MEMREL spawns when attempting to release memory. If the requested release has not been accomplished when this limit is reached, POR5 is notified to shut down the memory release process and to return any memory already released back to the system.

1	8	1 6	7 3
<hr/>			
121	OCTAL	00000n000000	.MRASE

where:

n - Retry value (default = 3).

VIRTUAL MODE MEMORY MANAGEMENT PARAMETER

This virtual mode memory management parameter designates the initial value for the target page fault rate. It is used in conjunction with the other native mode memory management parameters supplied via \$ INFO statements. Refer to the GCOS 8 OS System Operating Techniques manual for more information about native mode memory management parameters. The default value is 31 (25 decimal).

1	8	1 6	7 3
<hr/>			
23	OCTAL	nn	.MDMM1

FAULT PROCESSING OPTIONS

The site can control several fault processing functions by applying the following site-option patches to the .MFALT module. A patch containing all zeros is ignored; only a patch that contains a nonzero value is accepted.

Abort On Master Mode Faults

The following site-option patch causes a system abort on all master mode faults except MME, Timer Runout, Connect, Overflow, and Divide Check.

1	8	1 6	7 3
<hr/>			
100	OCTAL	7	.MFALT

Disable Instruction Retry

The following site-option patch disables the Instruction Retry function and releases the memory (approximately 1/2 K) allocated to this feature.

1	8	1 6	7 3
<hr/>			
107	OCTAL	7	.MFALT

Abort On Faults Outside MME GELBAR Limits

The following site-option patch causes a system abort if any system program (program numbers 1-10) faults in slave mode outside of MME GELBAR limits (except MME, Timer Runout, Connect, Overflow, and Divide Check faults).

1	8	1 6	7 3
<hr/>			
102	OCTAL	7	.MFALT

Processor Error Record Buffers

The following site-option patch specifies the number of processor error record buffers to allocate:

1	8	1 6	7 3
<hr/>			
103	OCTAL	n	.MFALT

where:

n - Number of processor error record buffers desired. The default value is 2 or the number of processors configured plus 1 (whichever value is greater). If the value specified on this statement is less than the default value, the default is applied. A maximum of seven buffers can be specified.

One buffer is required for processing each fault that locks a history register.

System Lockup Fault Control Value

The following site-option patch can be applied to override the standard system lockup fault control value. The value must be specified in bits 34 and 35.

1	8	1 6	7 3
<hr/>			
106	OCTAL	n	.MFALT

where:

n - Fault control value (1, 2, 3, or 4). The value 4 indicates that 0 is desired (a zero value is rejected). The default value is 3.

EXCEPTION PROCESSING STATISTICS COLLECTION

Inhibit Automatic Start Of ECOL

The following site-option patch inhibits the automatic start of ECOL during Startup.

1	8	1 6	3 2	7 3
<hr/>				
121	OCTAL	0	DON'T START ECOL	.MSCHD

ECOL Communications Words

The default parameters in the ECOL communications words can be modified by applying the following site-option patches to the .MFALT module:

		1		7
1	8	6		3
<hr/>				
111	OCTAL	Ottttti000cc		.MFALT

where:

ttttt - MOS error message time threshold (in minutes, expressed in octal). Right-justify this value in bits 4-17. The default is 10 minutes.

i - Bits used to permit/inhibit fault logging and reporting functions.

BIT

18 must be zero

19 = 1, inhibit logging of memory faults. The default is to permit this function (i.e., bit 19 =0).

20 = 1, inhibit logging of illegal procedure (IPR) faults. The default permits this function (i.e., bit 20 =0).

cc - MOS error message count threshold. Right-justify this value in bits 31-35. The default value is 25.

		1		7
1	8	6		3
<hr/>				
112	OCTAL	ppppeeee000t		.MFALT

where:

pppp - MPC sample period in 0.1-minute increments (expressed in octal). This value can range from 0-4095. If the value is 0, sampling is disabled. The default value is 600 (60 minutes). Right-justify this value in bits 0-11.

eeee - MPC error threshold in 0.01 percent increments (expressed in octal). This value can range from 1-4095. The default value is 1 (0.01 percent). If the value is 0, the error threshold message reporting function is disabled. Right-justify this value in bits 12-23.

t - If bit 33 =1, inhibit monitoring of the magnetic tape MPC threshold. The default permits monitoring (i.e., bit 33 =0).

		1		7
1	8	6		3
<hr/>				
113	OCTAL	000000ggss00		.MFALT

where:

gg - ECOL MME GEWAKE time in 0.1-minute increments. This value can range from 0-77 octal (0-6.3 minutes). The default value is 50 decimal (5 minutes). Right-justify this value in bits 18-23.

ss - Automatic retry summary logging period in 0.1-hour increments. This value can range from 0-77 octal. If the value is 0, automatic retry summary logging is inhibited. The default value is 10 decimal (1.0 hour). Right-justify this value in bits 24-29.

		1		7
1	8	6		3
<hr/>				
114	OCTAL	1		.MFALT

The patch above disables the logging of exception processing records. The default is to log these records.

CACHE MEMORY CONTROL OPTIONS

By default, the ECOL module assumes control of cache memory when it is enabled, unless the following site-option patch is used to place cache memory under operating system control. (Details on cache control and any associated console verbs are described in the GCOS 8 OS Distributed Maintenance Services Tools Reference Manual.)

		1		7
1	8	6		3
<hr/>				
105	OCTAL	1		.MFALT

The following patch, optionally, directs GCOS to control cache memory until ECOL is enabled. If the ECOL program is subsequently enabled, it assumes control of cache memory.

		1		7
1	8	6		3
<hr/>				
105	OCTAL	2		.MFALT

ECFILE Creation Patch

The Error Collection File (ECFILE) size is set to 1200 llinks for both minimum and default when created by the ECOL module, unless a file size value is entered at site-patch location 257 (octal) of the ECOL program.

The file size range that can be requested is 1200 to 262143 llinks (i.e., 2260 - 777777 octal). A request outside of this range results in the display of one of the following messages upon the console:

*FYI ECOL - FILE SIZE REQUEST > 262143, WILL ATTEMPT TO GET 1200 LLINKS

*FYI ECOL - FILE SIZE REQUEST WAS nnnn LLINKS, WILL ATTEMPT TO USE 1200 LLINKS

A request for file space in excess of 12000 llinks results in issuance of the following message:

*FYI ECOL - REQUESTED COLLECTOR FILE SIZE OF nnnnnn LLINKS IS VERY LARGE

The requested file space (either by request or by default) can be denied by the system if not enough space is available. When this occurs, ECOL generates a request for 100 llinks of space less than the requested amount, and continues to decrement the file space request by 100 llinks until either the file space request is accepted by the system, or the file space requested is smaller than 800 llinks, which causes ECOL to abort with an HU MME GEBORT. One of the following messages is issued in either case:

*FYI ECOL - COULD NOT OBTAIN AT LEAST 800 LLINKS PERM FILE SPACE, PLEASE RESTART ECOL WHEN ADEQUATE SPACE IS AVAILABLE

*FYI ECOL - PERM FILE SPACE NEEDED WAS nnnnnn LLINKS, SPACE OBTAINED WAS nnnnnn LLINKS

The file is created as a sequential file with read and write concurrency permitted. Specific read permission is given to SY_ELAN userid for ELAN report production. The format for this patch is:

		1		7
1	8	6		3
257	OCTAL	00000nnnnnn		.MECOL

where:

nnnnnn - 2260-777777 (octal). This value specifies the number of llinks requested to execute ECOL. This value must be right-justified.

Shared Controller/Device I/O Statistics Collection

Because of the differences in the collection processes of controller or device I/O statistics between ECOL and its predecessor, the HEALS program, ELAN I/O methods will not accurately collect statistics when devices are shared between two systems with different releases, unless the older HEALS module does the collection. The site option patch, described below, defines these circumstances for ECOL and allows the HEALS module to assume the task of statistical collection for shared devices between systems. Non-standard device statistics collection is performed normally for each of the other devices on each of the systems involved.

Site-option patch location 261 (octal) of .MECOL (bit 31) is used to control access of shared device statistics. Setting bit 31 to 1 in this location initializes bit 31 of .CREC1. (The default value is zero for both bits.) After initializing .CREC1, ECOL checks for one of the following conditions:

1. If bit 19 of the channel data within that entry of the Controller Information Table (pointed to by .CRCST) is 1, then the devices on this channel are considered shared. (Details of the Controller Information Table are described in the GCOS 8 OS System Tables manual.)
2. If bit 19 is set (as in step 1) and bit 31 of .CREC1 is 1 (per ECOL initialization, above), ECOL collects statistics for all devices on this channel.
3. If bit 19 is set (as in step 1) and bit 31 of .CREC1 = 0 (per ECOL initialization, above), ECOL does not collect statistics for any device on this channel.
4. If bit 19 is not set (as in step 1), this channel is considered unshared and no consideration is given to the content of bit 31 of .CREC1. Statistics are collected for all devices on this channel.

The format for this patch is:

1	8	1 6	7 3
<hr style="border: 0.5px solid black;"/>			
261	OCTAL	000000000n0	.MECOL

where:

n - 2 or 0 (the default is 0). The status of n determines the control access to shared device statistics and is checked by ECOL. If n = 2, a bit is set in a communication region cell for the MPCD program to check. MPCD uses the same criteria used by ECOL to determine whether to read firmware statistics or not.

NOTE: MPCD also checks bit 31 of .CREC1 to determine the status of ECOL statistics collection on the system shared devices. If bit 31 = 1, ECOL and MPCD assume that ECOL will collect statistics for all configured shared (and non-shared) devices. If bit 31 = 0, any statistical collecting between shared devices on one channel is done by the other system, and any statistical collecting between unshared devices or channels is done by the ECOL module in this system.

ECS Error Thresholds

The site-option patch for location 267 (octal) can be used to set ECS processor time and/or ECS error count thresholds. The format for this patch is:

1	8	1 6	7 3
<hr/>			
267	OCTAL	Ommmmmm000ccc	.MECOL

where:

mmmmmm - 0 to 37777 (octal). This is the ECS error threshold time interval. The default value is 12 (octal).

ccc - 0 to 777 (octal). This is the ECS error count threshold. The default value is 31 (octal).

SYSTEM INPUT OPTIONS

Site-option patches can be applied to the .MGEIN module to modify and/or control several System Input program functions. The patches described below can be applied to the locations specified.

J And J File Space Allocation

The following patch can be applied to the .MGEIN module to modify the number of 320-word llinks initially allocated for *J subfiles and the J* file.

1	8	1 6	7 3
<hr/>			
114	OCTAL	xxxxxyyyyyyy	.MGEIN

where:

xxxxxx - Number of llinks, expressed in octal, initially requested for *J subfiles. The default initial allocation size is 144 llinks.

yyyyyy - Number of llinks (modulo 12), expressed in octal, initially requested for the J* file for each job. The default initial allocation size is 12 llinks.

JCL Statement Examination And Modification

Several patches can be applied to the .MGEIN module to define the extent of the .MSCN1 module's responsibilities when examining and/or modifying JCL statements encountered during program execution. The .MGEIN module can be patched to specify examination and/or modification of JCL statements as defined by Figure 5-2. One bit is set for each JCL statement that the .MSCN1 module is to examine and/or modify.

For Resource Control Words statement types:

1	8	1 6	7 3
116	OCTAL	nnnnnnnnnnnn	.MGEIN
117	OCTAL	nnnnnnnnnnnn	.MGEIN

where:

n...n - Octal value to expand to a binary value. A set bit (=1) specifies examining and/or modifying the corresponding JCL statement type from the Resource Control Words 1 and 2 list by .MSCN1.

For Activity Control Word 1 statement types:

1	8	1 6	7 3
120	OCTAL	nnnnnnnnnnnn	.MGEIN

where:

n...n - Octal value to expand to a binary value. A set bit (=1) specifies examine and/or modify the corresponding JCL statement type from the Activity Control Word 1 statement list by .MSCN1.

For Activity Control Word 2 statement types:

1	8	1 6	7 3
121	OCTAL	nnnnnnnnnnnn	.MGEIN

Same as Activity Control Word 1 except Activity Control Word 2 list is applicable.

For Activity Control Word 3 statement types:

1	8	1 6	7 3
<hr/>			
123	OCTAL	nnnnnnnnnn	.MGEIN

Same as Activity Control Word 1 except Activity Control Word 3 list is applicable.

Stranger Statement Examination And Modification

The following site-option patch can be applied to the .MGEIN module to examine and/or modify JCL statements other than those listed in Figure 5-2. Each of a maximum of ten locations of the .MGEIN module can be patched with a six-character BCD representation of the statement type to be examined or modified and can be applied to either standard or site-unique statements. One card type can be identified in each of these locations. Further discussion of stranger options is included in the GCOS 8 OS System Programming Guide.

1	8	1 6	7 3
<hr/>			
aaa	OCTAL	xxxxxxxxxxxx	.MGEIN

where:

aaa - Location (124-135 octal) in the System Input program to be patched. Addresses cannot be duplicated.

x...x - 12-character octal representation of the BCD statement type.

Bit Definitions for:

Resource Control Word 1 (RESOR1)

Resource Control Word 2 (RESOR2)

Patch Location 116

Patch Location 117

<u>Bit(s)</u>	<u>JCL Statement</u>
0	Reserved for GCOS
1	\$ FORM
2	\$ FFILE
3	\$ FILE
4	\$ PPS
5	\$ PRINT
6	\$ DATA
7	\$ PUNCH
8	\$ READ
9	\$ CONSL
10	\$ CONSLA
11	\$ TYPE
12	\$ SYSOUT
13	\$ REMOTE
14	\$ REPORT
15	\$ REPTL
16	\$ REPTR
17	\$ PRMFL
18	\$ DAC
19	\$ TAPE
20	\$ TAPE9
21	\$ NTAPE
22	\$ A1APK
23	\$ A2APK
24	\$ A1BPK
25	\$ A2BPK
26	\$ FILGP
27	\$ GENFIL
28	\$ 190PK
29	\$ TAPE7
30	\$ 191PK
31	Reserved for GCOS
32	\$ 400PK
33	\$ TAPE27
34	\$ TAPE29
35	\$ 450PK

<u>Bit(s)</u>	<u>JCL Statement</u>
36	\$ DBASE
37	Reserved for GCOS
38	Reserved for GCOS
39	Reserved for GCOS
40	Reserved for GCOS
41	Reserved for GCOS
42	Reserved for GCOS
43	Reserved for GCOS
44	Reserved for GCOS
45	Reserved for GCOS
46	Reserved for GCOS
47	Reserved for GCOS
48	Reserved for GCOS
49	Reserved for GCOS
50	Reserved for GCOS
51	Reserved for GCOS
52	Reserved for GCOS
53	Reserved for GCOS
54	Reserved for GCOS
55	Reserved for GCOS
56	Reserved for GCOS
57	Reserved for GCOS
58	Reserved for GCOS
59	Reserved for GCOS
60	Reserved for GCOS
61	Reserved for GCOS
62	Reserved for GCOS
63	Reserved for GCOS
64	Reserved for GCOS
65	Reserved for GCOS
66	Reserved for GCOS
67	Reserved for GCOS
68	Reserved for GCOS
69	Reserved for GCOS
70	Reserved for GCOS
71	Reserved for GCOS

Figure 5-2. .MSCN1 Function Words

Bit Definitions for:

Activity Control Word 1 (ACTIV1)

Activity Control Word 2 (ACTIV2)

Patch Location 120

Patch Location 121

<u>Bit(s)</u>	<u>JCL Statement</u>
0	Reserved for GCOS
1	\$ FORTY
2	\$ GMAP
3	\$ COBOL
4	\$ ADA
5	\$ PL6
6	\$ IDS
7	\$ PSM
8	\$ CONVER
9	\$ UTILITY
10	\$ RUN
11	\$ RERUN
12	\$ SYSEDIT
13	\$ EXTEDIT
14	\$ S2PROG
15	\$ FILEDIT
16	\$ FILSYS
17	\$ GMAPV
18	\$ ADLIB
19	\$ 355MAP
20	\$ 355SIM
21	\$ PROGRAM
22	\$ EXECUTE
23	\$ PL1
24	\$ CBL74
25	\$ LINKER
26	\$ GENSYS
27	\$ UTL2
28	\$ CBL68
29	\$ IDS2
30	\$ CBL85
31	\$ SRCLIB
32	\$ LODLIB
33	\$ OBJLIB
34	\$ RPG2
35	\$ FORTRA

<u>Bit(s)</u>	<u>JCL Statement</u>
36	\$ FORT77
37	\$ F77V
38	\$ GMAP66
39	\$ FORTV
40	\$ LKED
41	\$ SHRUE
42	\$ UTL8
43	Reserved for GCOS
44	Reserved for GCOS
45	Reserved for GCOS
46	Reserved for GCOS
47	Reserved for GCOS
48	Reserved for GCOS
49	Reserved for GCOS
50	Reserved for GCOS
51	Reserved for GCOS
52	Reserved for GCOS
53	Reserved for GCOS
54	Reserved for GCOS
55	Reserved for GCOS
56	Reserved for GCOS
57	Reserved for GCOS
58	Reserved for GCOS
59	Reserved for GCOS
60	Reserved for GCOS
61	Reserved for GCOS
62	Reserved for GCOS
63	Reserved for GCOS
64	Reserved for GCOS
65	Reserved for GCOS
66	Reserved for GCOS
67	Reserved for GCOS
68	Reserved for GCOS
69	Reserved for GCOS
70	Reserved for GCOS
71	Reserved for GCOS

Figure 5-2 (cont). .MSCN1 Function Words

Activity Control Word 3 (ACTIV3)

Patch Location 123

<u>Bit(s)</u>	<u>JCL Statement</u>	<u>Bit(s)</u>	<u>JCL Statement</u>
0	\$ IDENT	28	\$ STRANGER #3
1	\$ SNUMB	29	\$ STRANGER #4
2	\$ LIMITS	30	\$ STRANGER #5
3	\$ NEED	31	\$ STRANGER #6
4	\$ PRIVITY	32	\$ STRANGER #7
5	\$ RESOURC	33	\$ STRANGER #8
6-25	Reserved for GCOS	34	\$ STRANGER #9
26	\$ STRANGER #1	35	\$ STRANGER \$10
27	\$ STRANGER #2		

Figure 5-2 (cont). .MSCN1 Function Words

Execution Report Message File

Site-option patches can be applied to the .MGEIN module to help control access to and security for the site-defined Execution Report message file. (Unless modified, the name of this file is MSG.)

The following patches can be applied to .MGEIN to change the default user identification.

	1	8	1	7
			6	3
136	OCTAL	xxxxxxxxxxxxxx		.MGEIN
137	OCTAL	xxxxxxxxxxxxxx		.MGEIN

where:

x...x - Octal codes for six BCD characters of the user identification (i.e., catalog name) for the MSG file. A maximum of 12 BCD characters can be specified (i.e., if the identifier is more than six characters, the excess is specified in the second location). The default user identification is OPNSUTIL.

The following patch can be applied to .MGEIN to define a new name for the Execution Report message file.

1	8	1	7
1	8	6	3
<hr/>			
140	OCTAL	yyyyyyyyyyyy	.MGEIN

where:

y...y - Octal codes for six BCD characters of the name of the file that contains the Execution Report message. A maximum of six BCD characters can be specified. The default file name is MSG.

The following patch can be applied to .MGEIN to suppress the GEIN SPAWN... console message.

1	8	1	7
1	8	6	3
<hr/>			
141	OCTAL	n	.MGEIN

where:

n - Any non-zero octal value

DEBUG OPTIONS AND SPECIAL ACTIONS

Location 144 of .MGEIN is reserved for special actions, and is patched as follows:

1	8	1	7
1	8	6	3
<hr/>			
144	OCTAL	n	.MGEIN

where:

n - A binary value such that a set bit (=1) implies a special action is to take place.

- Bits 0-33 = currently unused
- Bit 34 = force scan of all jobs
- Bit 35 = abort the system

FLUSHING SYSOUT COLLECTION SPACE

Refer to \$ INFO SYBRT/n parameter for flushing of SYSOUT collection space.

INPUT/OUTPUT SUPERVISOR (IOS) OPTION

The following site-option patch can be applied to significantly reduce the overhead associated with I/O interrupt processing. The patch ensures a return to an interrupted program whenever an I/O interrupt occurs (unless the terminating I/O operation requested a courtesy call and the interrupted program is executing at main level). Without this patch, the interrupted program is removed from execution to allow redispaching of the processor following interrupt processing.

1	8	1 6	7 3
<hr/>			
60	OCTAL	0	.MIOS

TEMPORARY DISK FILE GROWTH

The amount of disk space is calculated by the system for a GROW request for a temporary file if the amount of space requested is 0(zero). The calculation is made as follows:

$$\text{Growth amount} = (\text{current file size} / \text{ddd}) + \text{aaa}$$

where ddd is a constant divisor and aaa is a constant adder, both expressed in octal. The default value for ddd is 4 and for aaa is 8. The default values may be changed via the following site-option patches:

1	8	1 6	7 3
<hr/>			
12	OCTAL	ddd	.MMORE
13	OCTAL	aaa	.MMORE
14	OCTAL	fff	.MMORE

If fff is non-zero, the number of links in the GROW request is ignored and the system calculates the growth amount as above. The default value for fff is zero.

MME GEMORE RETRIES

If a MME GEMORE request is denied for an internal GCOS Operating System reason, i.e., .RBRT or some other appropriate bit is set in the .SRQST or .STATE words, this site-option patch allows the site to determine the number of times the request is to be retried (default is 20) before returning the denial status code to the process.

		1		7
1	8	6		3
<hr/>				
50	OCTAL	nnnnnn000000		.MPMME

where:

nnnnnn - Octal value of the number of retries to be attempted before taking the denial return.

NOTE: Each retry results in a .CALLX to .MDISP entry point 16, which takes the process out of execution and puts it back in the dispatcher queue to wait for the next dispatch. On a busy system this could result in enough delay (even with the default value of 20) to allow the condition to be cleared by GCOS and allow the MME GEMORE request to continue. During periods when the system is relatively idle, each retry will be almost instantaneous. Thus the Site Administrator should use discretion in choosing the value for nnnnnn.

MME GESNUM AND PMME GENSNB OPTIONS

This site-option patch allows the range of SNUMBs generated by MME GESNUM and PMME GENSNB to be extended by using a selected sequence of characters of the English alphabet (excluding A, E, I, O, U, Y, and non-alphanumeric characters) in character position 1 and/or in character positions 2 - 4 of the generated SNUMB.

		1		7
1	8	6		3
<hr/>				
47	OCTAL	0000mm0000nn		.MPMME

where:

mm - Octal value in the range 01 - 36, representing (see below) the last character to be used in character position 1 of the generated SNUMB (default mm = 12).

nn - Octal value in the range 01 - 36, representing (see below) the last character to be used in character positions 2 - 4 of the generated SNUMB (default nn = 12).

0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3			
1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6
<hr/>																													
0	1	2	3	4	5	6	7	8	9	B	C	D	F	G	H	J	K	L	M	N	P	Q	R	S	T	V	W	X	Z

For example, 000012000013 would allow a B to be generated in character positions 2 - 4 of the generated SNUMBs in addition to the normal numerics.

NOTE: SNUMBs of site-spawned jobs should be considered when setting the above values, since there is a possibility of duplicate SNUMBs.

TIME SHARING SYSTEM OPTIONS

Several Time Sharing System functions can be controlled via site-option patches to the Time Sharing Executive program (.MTIMS). These functions and their patch formats are defined below. Note that the absolute location specified in the format is equated to a symbolic location.

Processor Time For DRL TASK Job

The following patch specifies the maximum allowable time for DRL TASK jobs:

1	8	1	7
		6	3

113
OCTAL
nnnnnnnnnnnn
.MTIMS

where:

n...n - Maximum processor time (octal), in increments of 1/64 millisecond, for a job using DRL TASK

113 - Symbolic location .TTPRC.

Maximum Number Of Keyboard-Display Terminals

The following site-option patch specifies the maximum number of keyboard display terminals (VIP type) permitted on the Time Sharing System at any one time.

1	8	1	7
		6	3

116 OCTAL 000mmm00nnnn .MTIMS

where:

mmm - Maximum number (octal) of keyboard-display terminals permitted at any one time. This value cannot exceed the number of Time Sharing System users. The default value is 0.

nnnn - The size of the input buffer which a VIP type terminal is allocated. The default value is 512 (1000 octal) words.

116 - Symbolic location .T760

Maximum Number Of Terminals

The following site-option patch specifies the maximum number of terminals allowed on the system (including keyboard-display terminals and the statistical record (TSRI) accounting file):

1	8	1 6	7 3
117	OCTAL	00000000nnn	.MTIMS

where:

nnn - Maximum number of terminals permitted (octal value, right-justified).
The default value is 18 (decimal).

117 - Symbolic location .TFMAX.

Time Interval For TSRI Data Issue To SCF

The following patch changes the time interval for writing Time Sharing accounting data to the Statistical Collection File (SCF). If the Time Sharing System Statistical Record (TSRI) accounting records are required, this patch must be applied. If there is no patch to this location, no TSRI data is written to the SCF.

1	8	1 6	7 3
120	OCTAL	00000nnnnnn	.MTIMS

where:

nnnnnn - Number of seconds (octal) in the interval between data issues to the SCF. This value is right-justified in the variable field.

120 - Symbolic location .TSTAT.

Memory Allocation For DRL TASK Job

The following patch specifies the amount of memory that can be allocated to a batch job using a DRL TASK.

1	8	1 6	7 3
<hr/>			
127	OCTAL	nnnnnn000000	.MTIMS

where:

nnnnnn - Number (octal) of words of memory desired plus one additional word. The default value is $(64*1024)+1$.

127 - Symbolic location .TTCOR.

Urgency For DRL TASK Job

The following patch specifies the maximum urgency permitted for batch jobs using a DRL TASK:

1	8	1 6	7 3
<hr/>			
130	OCTAL	00000nn0000	.MTIMS

where:

nn - Maximum urgency (octal) for a job using a DRL TASK. The default value is 51 (octal).

130 - Symbolic location .TTURG.

DRL T.CMOV Users

The following patch identifies the type of Time Sharing System users that can examine portions of GCOS memory via a DRL T.CMOV.

1	8	1 6	7 3
<hr/>			
131	OCTAL	0000n000000	.MTIMS

where:

n - Numeric code identifying the category of users that can examine portions of GCOS memory. The following codes are valid:

- 1 - All users
- 2 - Master users (the default)
- 3 - Master users or users with LODS permission

131 - Symbolic location .TCMOV.

Permanent File User Identifier

The following patches specify the user identifier employed when allocating a permanent deferred queue file, primary or secondary file or swap file:

1	8	1 6	7 3
132	OCTAL	XXXXXXXXXXXX	.MTIMS
133	OCTAL	XXXXXXXXXXXX	.MTIMS

where:

x...x - User identifier (octal code for six BCD characters). A maximum of 12 characters can be specified (left-justified with trailing blanks). The default user identifier is SYS_CAT

132 - Symbolic location .TUSER.

133 - Symbolic location .TUSER+1.

Master User Identification

The following patches identify the userid for master users:

1	8	1 6	7 3
134	OCTAL	XXXXXXXXXXXX	.MTIMS
135	OCTAL	XXXXXXXXXXXX	.MTIMS

where:

x...x - Master user identifier (octal code for six BCD characters). The default identifier is MASTER. A maximum of 12 characters can be specified (left-justified with trailing blanks).

134 - Symbolic location .TMAST.

135 - Symbolic location .TMAST+1.

Status Message Time Interval

The following patch changes the frequency of Time Sharing System status messages issued to the system console:

1	8	1 6	7 3
<hr/>			
160	OCTAL	nnnnnnnnnnnn	.MTIMS

where:

n...n - Time interval, in 1/64-millisecond increments (octal) between status message outputs. The default value is 15 minutes.

160 - Symbolic location .TATYI.

Class B Priority Dispatches

Use of the Class B priority feature (GCOS priority dispatching and control) by the Time Sharing System permits the system to control the number of dispatches permitted to jobs without Class B priority between dispatches to Class B priority jobs. The following patch allows the site to control the frequency of these dispatches as well as their duration. (Refer to "Dispatcher Options" in this section for a discussion of Class B priority and for a discussion of Dispatcher options that apply to multicopy Time Sharing operations.)

1	8	1 6	7 3
<hr/>			
176	OCTAL	0000xx0000yy	.MTIMS

where:

xx - Number (octal) of 32-millisecond quanta per dispatch. The default value is 4.

yy - Number (octal) of non-Time Sharing System dispatches between dispatches to the Time Sharing System. The default value is 1.

176 - Symbolic location .TAGPP.

Maximum Memory Size

The following patch can be applied to modify the default maximum amount of memory allocated to the Time Sharing System. If this size must be changed while the system is operational, the TSS SIZE nnn console entry can be used.

1	8	1 6	7 3
<hr/>			
200	OCTAL	000nnn000000	.MTIMS

where:

nnn - Maximum number (octal) of 1K blocks of memory to be allocated to the Time Sharing System (1K = 1024 words). The default value is 80K.

200 - Symbolic location .TAMMS.

Minimum Memory Size

When the Time Sharing System is lightly loaded and no longer needs all of the memory allocated to it for loading subsystems, memory can be released to GCOS until the default minimum of 40K is reached. The following patch can be applied to modify this default minimum:

1	8	1 6	7 3
<hr/>			
201	OCTAL	nnnnnn000000	.MTIMS

where:

n...n - Minimum amount of memory allocated to Time Sharing for loading time sharing subsystems. This value (octal) is specified in pages (1K increments).

201 - Symbolic location .TASMS.

Memory Allocation Delays

Large jobs, whose memory requirements exceed the default limitation of 36K, frequently must wait four times as long as smaller jobs for memory allocation. The following patch modifies this default priority threshold value:

1	8	1 6	7 3
202	OCTAL	000nnn000000	.MTIMS

where:

nnn - Memory-requirement level at which a job is assigned a low-priority classification by the Time Sharing System. This value (octal) is expressed in terms of 1K blocks.

202 - Symbolic location .TAMIS.

Request And Release Memory

The Time Sharing System automatically requests and releases memory in minimum increments of 7K and 5K, respectively. The following patches adjust these default values.

1	8	1 6	7 3
203	OCTAL	0000xx000000	.MTIMS
204	OCTAL	0000yy000000	.MTIMS

where:

xx - Minimum number (octal) of 1K pages of memory to be requested. The default value is 7.

yy - Minimum number (octal) of pages of memory to be released. The default value is 5.

203 - Symbolic location .TAMII.

204 - Symbolic location .TASRI.

Memory Reserved for Urgent Jobs

When the Time Sharing System is heavily loaded, the delay in memory allocation for a job may exceed the time limit parameter. As a result, the job is given an "urgent" status. When urgent jobs exist, the memory allocation algorithm favors those jobs that have awaited allocation for the longest time by reserving a portion of available memory for exclusive use by the jobs. The following patch controls the amount of memory reserved for exclusive use by urgent jobs.

1	8	1 6	7 3
213	OCTAL	0000000000n	.MTIMS

where:

n - Reserve the amount of memory equal to the result of the algorithm x/y (where x = total space available and y = a value greater than 1). The default value for n is 2. If n is specified as 0, only memory required by the urgent job(s) that has waited the longest for allocation is reserved.

213 - Symbolic location A.URMD.

Deferred Processing Parameters

The following three patches control the maximum number of scheduled and active DRUNs, processor time limit, and preferred execution time for deferred processing.

Maximum scheduled and active DRUNs:

1	8	1 6	7 3
271	OCTAL	xxxxxyyyyyy	.MTIMS

where:

xxxxxx - Maximum number (octal) of deferred sessions that can be scheduled at any one time. When this value is zero (0) or exceeds the limit imposed by the size of the deferred queue file, DRUN permits scheduling of as many sessions as possible.

yyyyyy - Maximum number (octal) of combined online and deferred-session users that can be active at any one time. When this maximum is reached, no additional deferred sessions are initiated. When this field is zero, deferred processing is disabled. The default value is 264 (octal).

271 - Symbolic location .TSDMX

Deferred processing time limit:

1	8	1 6	7 3
<hr/>			
272	OCTAL	nnnnnnnnnnn	.MTIMS

where:

n...n - Octal value specifying maximum amount of processor time (in 1/64-millisecond increments) allowed for a single deferred session. The default value is zero, which indicates there is no time limit.

272 - Symbolic location .TSDPT.

Preferred time-of-day to run deferred job:

1	8	1 6	7 3
<hr/>			
273	OCTAL	nnnnnnnnnnn	.MTIMS

where:

n...n - Octal value specifying the preferred time-of-day (in 1/64-millisecond increments past midnight) to initiate deferred sessions that do not request a specific start time. The default value is zero, which indicates that these sessions will be initiated as soon as possible.

273 - Symbolic location .TSDDT.

Line-Hold Interval Following Disconnect

When a terminal disconnects for any reason other than the BYE sequence, the Time Sharing System holds that line for a short time to give the terminal an opportunity to reconnect. The following patch modifies the hold interval:

1	8	1 6	7 3
<hr/>			
326	OCTAL	000nnnnnnnnn	.MTIMS

where:

n...n - Octal value specifying the amount of time (in 1/64-millisecond intervals) that a line is held before it is released following a terminal disconnect. The default value is equivalent to two minutes.

326 - Symbolic location .TIMER.

Memory Limit

A maximum memory limitation can be established for Time Sharing subsystems via the following site-option patch. If the object program exceeds this limitation, the subsystem aborts.

1	8	1 6	7 3
<hr/>			
367	OCTAL	nnnnnn	.MTIMS

where:

nnnnnn - Memory limitation in pages (octal, left-justified). There is no default value.

367 - Symbolic location .TASSZ.

Processor Time Limit

A maximum processor time limit can be established for Time Sharing subsystems via the following site-option patch. If the object program exceeds this limitation, the subsystem aborts.

1	8	1 6	7 3
<hr/>			
370	OCTAL	nnnn	.MTIMS

where:

nnnn - Processor time limit in 1/64-millisecond increments (octal). There is no default value.

370 - Symbolic location .TASTM.

Enable Measurement Record

The following site-option patch enables the Time Sharing System measurement record (SCF record type 19), used primarily in system tests and measurements.

1	8	1 6	7 3
<hr/>			
377	OCTAL	0000000000n	.MTIMS

where:

n - Enable the measurement record if this value is nonzero.

377 - Symbolic location .TSSAS.

Swap File Parameters

A series of patches can modify or establish parameters for Time Sharing System swap files. The following three patches can be used to:

- o Modify the default number of swap files allocated at System Startup.
- o Identify the growth factor to use when the swap files are created too small or too large. File sizes are dynamically adjusted by this factor.
- o Define the size of the swap files.

Minimum swap file size:

1	8	1 6	7 3
<hr/>			
402	OCTAL	000000nnnnnn	.MTIMS

where:

nnnnnn - Swap file size (octal) in llinks. To determine this size, multiply the growth factor from the patch to symbolic location .TSGRW by 48.

402 - Symbolic location .TSFS.

Swap file growth factor:

1	8	1 6	7 3
<hr/>			
403	OCTAL	nnnnnn000000	.MTIMS

where:

nnnnnn - Minimum number (octal) of llinks to be requested or released to adjust the file size. This value can be determined via the formula $(u*3s)/f$ (where u = maximum number of users configured, s = file size (in llinks), and f = number of swap files configured).

403 - Symbolic location .TSGRW.

Number of active swap files:

1	8	1 6	7 3
<hr/>			
404	OCTAL	00000000000n	.MTIMS

where:

n - Number (octal) of swap files to be active. The maximum number of swap files is 16. Default allocation values are:

<u>Number of users</u>	<u>Number of files</u>
1-31	2
32-47	3
48-180	4

404 - Symbolic location .TSSF.

Permanent File Identification

The following patches can be applied for two purposes.

- o The site can define file names for the deferred queue file, primary and secondary program files, and swap files (if the swap files are permanent files). In this case, the specified file is created on a system-assigned mass storage device.
- o The site can selectively assign these files to specific mass storage devices. Because these files are heavily used by the Time Sharing System, system performance is often improved via the device-assignment technique.

1	8	1 6	7 3
aaa	OCTAL	b00000nnnnnn	.MTIMS

where:

- aaa - Absolute octal address of the location in .MTIMS containing either the file name or the device name specified in the nnnnnn field. The addresses, corresponding symbolic identifications, and file identifications are described in Table 5-8.
- b - Flag indicating whether nnnnnn is a file name or a logical device name. If bit 0 in this field =0, field nnnnnn contains the logical device name (in BCD) of the mass storage unit on which the file resides. If bit 0 in this field =1, field nnnnnn contains the file name (in BCD) of the permanent file defined at this location.
- nnnnnn - Logical device name of the mass storage device on which this file resides, or the file name (1-3 characters) of this file. (nnnnnn is the octal code for three BCD characters.)

NOTE: If bit 17 is set in the #D allocation patch, and multicopy Time Sharing is configured, a common deferred queue file is used.

Table 5-8. Permanent File Address Descriptions

<u>Octal Address (aaa)</u>	<u>Symbolic Identification</u>	<u>File Code</u>	<u>File Description</u>
405	.TSFDV	#D	Deferred Queue
406	.TSFDV+1	#P	Primary Program
407	.TSFDV+2	#Q	Secondary Program
412	.TSFDV+5	#S	Swap
413	.TSFDV+6	#T	Swap
414	.TSFDV+7	#U	Swap
415	.TSFDV+8	#V	Swap
416	.TSFDV+9	#W	Swap
417	.TSFDV+10	#X	Swap
420	.TSFDV+11	#Y	Swap
421	.TSFDV+12	#Z	Swap
422	.TSFDV+13	+S	Swap
423	.TSFDV+14	+T	Swap
424	.TSFDV+15	+U	Swap
425	.TSFDV+16	+V	Swap
426	.TSFDV+17	+W	Swap
427	.TSFDV+18	+X	Swap
430	.TSFDV+19	+Y	Swap
431	.TSFDV+20	+Z	Swap

Program Logic Error Processing

The following patch can be applied to control the manner in which the Time Sharing System performs program logic error processing. If bits 0-17 contain a nonzero value, Time Sharing error recovery is attempted; if bits 0-17 are zero, error recovery is not attempted. If recovery is not attempted or is unsuccessful, bits 18-35 are inspected to determine how to terminate the Time Sharing System. If bits 18-35 are zero, the GCOS system aborts; if bits 18-35 contain a nonzero value, only the Time Sharing System aborts.

1	8	1 6	7 3
1124	OCTAL	00000x00000y	.MTIMS

where:

- x - If zero, error recovery is not attempted. If nonzero, error recovery is attempted on the basis of error counts, timer data, and macro expansions.
- y - If zero, the GCOS system aborts when recovery is not attempted or fails. If nonzero, the Time Sharing System aborts with a reason code of 74.

1124 - Symbolic location .TPLES

Time Sharing Processors

The following patch specifies the number of processors that can execute subdispatch processes.

1	8	1 6	7 3
---	---	--------	--------

1744 OCTAL 00000n000000 .MTIMS

where:

n - Number of processors on which Time Sharing subsystems can execute. The default value is 6.

1744 - Symbolic location .QPROC.

Dispatching Time Slice

The following patch specifies the dispatching quantum (i.e., time slice) for one Time Sharing subsystem subdispatch.

1	8	1 6	7 3
---	---	--------	--------

1746 OCTAL 000000nnnnnn .MTIMS

where:

nnnnnn - Dispatch quantum expressed in 1/64-millisecond increments. The default value is 20 milliseconds (002400 octal).

1746 - Symbolic location .QTM

Additional PAT Space For Time Sharing

If the number of Time Sharing System users exceeds 90, the .MPOPA module must be patched to provide additional Peripheral Assignment Table (PAT) space for the Time Sharing System. One additional page is required for every 18 users over 90 (e.g., 105 users requires one additional page). Apply one patch for each copy of Time Sharing in a multicopy Time Sharing environment. The format for this patch is:

1	8	1 6	7 3
---	---	--------	--------

aa OCTAL 562xxx756yyy .MPOPA

where:

aa - Address to apply this patch. The following addresses are associated with the various copies of Time Sharing:

- 25 - The first, or only, copy of Time Sharing (TS1)
- 30 - The second copy of Time Sharing (TS2)
- 33 - The third copy of Time Sharing (TS3)
- 36 - The fourth copy of Time Sharing (TS4)

562 - Module number of .MTIMS, containing related Time Sharing System patches.

xxx - Number (octal) of 1024-word pages allocated for the Time Sharing Executive program. The default is 69 decimal (105 octal) pages.

75 - Urgency level (octal) of the Time Sharing Executive program.

6 - The Time Sharing System is a privileged slave program and is in accommodation mode.

yyy - Peripheral Assignment Table (PAT) segment size (in 512-word pages, expressed in octal). The default is 6.

.MDNET OPTIONS

Use of octal patches as the means for selecting site options in .MDNET has been eliminated. See "\$ MODOPT Statement" in the \$FILES Section.

*

MULTICOPY TIME SHARING CLASS B PRIORITY

A site-option patch must be applied to the .MDISP module to activate Class B priority in a multicopy Time Sharing environment. Refer to "Apply Class A and Class B Priorities" for a discussion of this patch.

TIME SHARING LOGON MESSAGE

Three site-option patches can be applied to the .TSNEW subsystem of the Time Sharing System to provide system resource information in the logon message.

Display System Identifier

The following patch includes the system identifier in the logon message. (The system identifier is specified on a \$ SYID statement in the \$CONFIG section.)

1	8	1 6	7 3
<hr/>			
152	OCTAL	n	.TSNEW

where:

n - Any nonzero value places the system identifier at the beginning of the logon message. The default value is 0.

152 - Symbolic location NEWSID.

Identify Remaining File Space

The following site-option patch issues a logon message identifying the amount of file space remaining for the user.

1	8	1 6	7 3
<hr/>			
153	OCTAL	n	.TSNEW

where:

n - Any positive, nonzero value activates the message; any negative, nonzero value suppresses the message. The default value is 0, which results in issuance of the message:

nn LLINKS AVAILABLE

when more than 85% of the user's maximum file space is occupied (where nn = number of llinks available).

153 - Symbolic location NEWBLK

Activate Logon LOAD Message

The following site-option patch activates the logon LOAD message, which displays the current number of users, the amount of memory allocated to the Time Sharing System, the percentage of Time Sharing System memory in use, the number of users waiting for memory allocation, and the total amount of memory required by all waiting users.

1	8	1 6	7 3
<hr/>			
154	OCTAL	n	.TSNEW

where:

- n - Any nonzero value activates the LOAD message. The default value is 0.
- 154 - Symbolic location NEWL0D.

Logon Security

This site-option patch can invoke an optional security feature, whereby, password changes are required the first time a user logs on following implementation of this option and, thereafter, every n days from the last change date.

1	8	1 6	7 3
<hr/>			
303	OCTAL	yyyddd000nnn	.TSNEW

where:

- yyy - The three-digit octal equivalent of the year in which the password change becomes a requirement.
- ddd - The three-digit octal equivalent of the day of the year in which the password becomes a requirement.
- nnn - The three-digit octal equivalent of the number of days between required password changes (must be less than 365 decimal).

TIME SHARING ACCOUNTING

A site can specify unique accounting parameters by applying site-option patches to locations 176-210 (octal) of the .TSLOG subsystem. Note that the values included on patches to locations 176-206 can be specified as floating-point numbers.

Elapsed Time Charge Rate

The following patch changes the hourly charge rate for elapsed time:

1	8	1 6	7 3
176	OCTAL	000000nnnnnn	.TSLOG

where:

nnnnnn - Elapsed time hourly rate. This value represents cents per hour and is expressed in octal. The default value is 600 (octal).

176 - Symbolic location ELPPR.

Memory-Usage Rate

The following patch changes the hourly rate per 512-word block of memory used:

1	8	1 6	7 3
177	OCTAL	000000nnnnnn	.TSLOG

where:

nnnnnn - Hourly rate for each 512-word block of memory used. This value represents cents per block per hour and is expressed in octal. The default value is 1000.

177 - Symbolic location PPH

Mass Storage File I/O Rate

The following patch modifies the charge rate for mass storage file I/O:

1	8	1 6	7 3
<hr/>			
200	OCTAL	000000nnnnnn	.TSLOG

where:

nnnnnn - Hourly rate for mass storage file I/O. This value represents cents and is expressed in octal. The default value is 2400.

200 - Symbolic location DISCPR.

Keyboard I/O Rate

The following patch modifies the charge rate per page for keyboard I/O (typewriter or keyboard-display terminals).

1	8	1 6	7 3
<hr/>			
201	OCTAL	0000000000nn	.TSLOG

where:

nn - Cents per page for mass storage file I/O. This value is expressed in octal. The default value is 02.

201 - Symbolic location PPP

Service Rate Factor

The following patch changes the multiplication factor that varies the rate for services:

1	8	1 6	7 3
<hr/>			
202	OCTAL	0000000000nn	.TSLOG

where:

nn - Multiplication factor (octal). The default value is 1.

202 - Symbolic location K5

Average Disk I/O Time Value

The following patch changes the average disk I/O time value used for calculating disk I/O charges.

1	8	1 6	7 3
<hr/>			
203	OCTAL	00000000000n	.TSLOG

where:

n - Average disk I/O time (octal) in 1/10-second increments. The default value is 3.

203 - Symbolic location AVDIO

Keyboard I/O Characters Per Page

The following patch changes the average number of characters per page of keyboard I/O:

1	8	1 6	7 3
<hr/>			
204	OCTAL	000000nnnnnn	.TSLOG

where:

nnnnnn - Average number (octal) of characters per page of keyboard I/O. The default value is 3720.

204 - Symbolic location AVNOCR.

Deferred Session Rate

In some cases, deferred sessions may be charged at a reduced rate when the sessions begin within a specified time frame. The following patch can be applied to specify the reduced rate, which is expressed as a percentage of the normal rate.

1	8	1 6	7 3
<hr/>			
205	OCTAL	00000000nnn	.TSLOG

where:

nnn - Percentage (octal) of the normal rate that defines the reduced rate.
For example, 120 defines 80% of the normal rate. The default value is 144, which is 100% of the normal rate.

205 - Symbolic location RR

Deferred Session Elapsed Time Rate

The following patch specifies the hourly rate for elapsed time of deferred sessions:

1	8	1 6	7 3
<hr/>			
206	OCTAL	00000nnnnnn	.TSLOG

where:

nnnnnn - Hourly rate for elapsed time of a deferred session. This value represents cents per hour and is expressed in octal. The default value is 600.

206 - Symbolic location DELPR

Starting And Ending Times For Reduced Rates

The following patches specify the times of day at which the reduced rates for deferred sessions begin and end.

1	8	1 6	7 3
<hr/>			
207	OCTAL	nnnnnnnnnnnn	.TSLOG
210	OCTAL	<u>nnnnnnnnnnnn</u>	.TSLOG

where:

n...n - Starting time (in 1/64-millisecond increments, expressed in octal) of the reduced-rate period. The default value is -1, which indicates there is no reduced rate.

m...m - Ending time (in 1/64-millisecond increments, expressed in octal) of the reduced-rate period. The default value is 0, which indicates there is no reduced rate.

207 - Symbolic location RRLI

210 - Symbolic location RRUP

Additional Control Over Save Dumps (.MBRT8)

The site's use of \$ INFO SAVDMP and/or the use of the SAVDMP= option on the user's \$ DMPOPT JCL statement may cause save dumps (information dumped to system-controlled space when a user dump is taken) to be placed on the SCF. Though not recommended (for security reasons), it is possible for the site to cause save dumps to go to the user's P* file instead of the SCF.

The format for this site-option patch is:

1	8	1 6	7 3
<hr/>			
6	OCTAL	n	.MBRT8

where:

n = 0 - Direct Save Dumps to the SCF when specified in JCL (by \$ DMPOPT SAVDMP= option) or by \$ INFO SAVDMP option.

2 - Direct Save Dumps to P* when specified in JCL (by \$ DMPOPT SAVDMP= option) or by \$ INFO SAVDMP option.

Time Sharing Initialization File

The Time Sharing initialization file is described in detail in the GCOS 8 OS Time Sharing Administration Guide. Following is a general description to state its purpose.

A site can establish parameter data on an initialization file during Time Sharing initialization in lieu of applying site-option patches to the Time Sharing System. Use of this technique is optional. However, if the initialization file is allocated, the following requirements apply:

- o One initialization file must be created for each copy of Time Sharing. The file name must be that of the corresponding SNUMB (i.e., TS1-TS4) so that the file can be attached.
- o The file is cataloged as a quick-access file with no password and is subordinate to the user identification specified in .TUSER cells within the TSSA communication region.
- o The file may be created in either ASCII or BCD format. Several different subsystems can be used to create the file (e.g., EDITOR, \$CONVER, or TSCONV).
- o The file is composed of logical records. Each logical record comprises one parameter.

Parameters (i.e., logical records) are defined in either the \$INFO section or the \$PATCH section of the Time Sharing initialization file. These sections perform essentially the same functions as their counterparts (of the same names) in the GCOS Startup deck. The following describes use of the two sections.

\$INFO SECTION

The purpose of the \$INFO section of the Time Sharing initialization file is to eliminate the need for a site to use site-option patches to invoke various time sharing options. The \$INFO section makes it much easier for site personnel to activate the options. Because of the impact of file-activated options, it is recommended that this feature be used only by site personnel who are familiar with the format and content of Time Sharing site-option patches.

\$PATCH SECTION

The \$PATCH section of the Time Sharing initialization file can include Time Sharing System Executive or subsystem patches for application during Time Sharing initialization. With few exceptions, the \$PATCH section of the initialization file is the same as the \$PATCH section of the GCOS Startup job stream. However, the initialization file section allows a site to modify the Time Sharing System without rebooting GCOS.

\$LOAD SECTION

The \$LOAD section of the Time Sharing initialization file provides a mechanism for loading site modified TSS subsystems and editing the subsystems into the program descriptors, command list, and primitives. The user subsystems must be built in H* format and be loaded for access by the executive in one of two places:

1. Subordinate to the Master userid or
2. Subordinate to the CMDLIB userid

\$LOAD SECTION

The \$LOAD section of the Startup job stream can be used to load modules into main memory for execution without affecting total system software tape contents. Any module loaded via this section overrides (until the next bootload) the version of the module existing on the total system software tape.

The \$LOAD section can prove beneficial under several circumstances. For example, it provides a way to:

- o Load modules not contained on the total system software tape into memory.
- o Test new or corrected modules - especially those with extensive modifications - before they are edited onto the total system software tape.
- o Load object decks of any Slave Service Area (SSA) modules that are site-prepared. Among these modules are .MSCAN, .MGNAT, and .MSCN1. (These types of modules can also be loaded via an insert edit.)

Use of the \$LOAD section is optional. If there are no modules requiring loading in this manner, the \$LOAD section can be excluded from the Startup job stream. If the \$LOAD section is not included, insert the *****EOF** statement that marks the end of the Startup job stream after the *****EOF** statement that marks the end of the \$PATCH section.

Each module included in the \$LOAD section must be an object deck in binary format and must be delimited by \$ OBJECT and \$ DKEND control statements. Any relocation references within the code are ignored. Each module must specify a primary SYMDEF. If a primary SYMDEF is not included, the module is ignored and not written to the \$LOAD file. In addition, if more than one copy of a module is included in the \$LOAD section, only the first copy encountered is written to the \$LOAD file; all other copies are ignored.

NOTE: Some modules cannot be loaded via the \$LOAD section. Among these are non-system software (e.g., applications programs) and GCOS system modules that are assembled as programs (e.g., the System Input program).

As the \$LOAD section is entered via magnetic tape during a cold boot, the Startup program writes each module included in the section to the load file on mass storage. This file and the mass storage device on which it resides must be defined on the \$LOADFIL statement in the \$CONFIG section.

Any change in \$LOAD section content (i.e., modifying existing module content, adding to an existing module, deleting an existing module, or adding an entire new module) requires that the entire \$LOAD section be entered via the card reader. The operator must respond YES to the *REPLACE? question or REPL to the *BOOT SOURCE: AUTO OR REPL? question during the bootload sequence. Existing load file contents are replaced by the current \$LOAD section.

If patched modules are loaded via the \$LOAD section, all OCTAL correction statements must immediately precede the \$DKEND statement of the module. Patches contained in the \$PATCH section of the Startup job stream are not applied to modules included in the \$LOAD section.

Modules modified via alter corrections can be loaded via the \$LOAD section by (1) generating a compressed deck (COMDK) of the module; (2) using the COMDK and all applicable alters to compile the module; and (3) inserting the resulting binary deck (delimited by \$OBJECT and \$DKEND statements) into the \$LOAD section.

Because \$LOAD section modules are resident in main memory during system operation until the next bootload, it is recommended that discretion be used when specifying a module to be included in this section. A block of memory equal to the size of the module is dedicated to module storage.

\$ GHCM And \$ SHCM Statements

Most GCOS 8 system modules are shared modules and are loaded into the Segmented Hard Core Monitor (SHCM) portion of memory. Each shared module is assigned its own segment in the HCM.

Shared modules include those which are identified as Segmented HCM (SHCM) and Shared Slave Service Area (SSSA) modules. When loading SHCM and SSSA modules via the \$LOAD section, the modules must be preceded by a \$ SHCM statement.

The format for the \$ SHCM statement is:

```
1      8
-----
$      SHCM
```

Some system modules are not shared modules and must co-exist with other modules. These modules must be loaded into that portion of memory known as the Grouped Hard Core Monitor (GHCM).

Nonshared modules include those which are categorized as Grouped HCM (GHCM), Full SSA (FSSA), and Half SSA (HSSA). When loading GHCM, FSSA, and HSSA modules via the \$LOAD section, the modules must be preceded by a \$ GHCM statement.

The format for the \$ GHCM statement is:

```
1      8  
-----  
$      GHCM
```

If Startup encounters a module erroneously situated following a \$ SHCM or \$ GHCM statement, the message:

```
*OBJECT DECK CARD nnnnmmmm IS NOT hhhh TYPE, DECK SKIPPED
```

(where nnnn = statement number, mmmm = module name, and hhhh = SHCM or GHCM) is issued.

NOTE: Modules loaded into GHCM via the \$LOAD section are loaded and initialized in the order in which they appear in the \$LOAD section, and before any other modules that would normally reside in GHCM. DNET and ROUT both reside in GHCM, and it is a system requirement that DNET be initialized before ROUT. Therefore, ROUT must not be placed in the \$LOAD section unless DNET is also placed there, and DNET must come first. If only ROUT is to be replaced, use the \$ FILDEF and \$ SYSTEM statements, not the \$LOAD section.

APPENDIX A

STARTUP JOB STREAM EXAMPLE

The Startup job stream in this appendix is for example purposes only and is not to be construed as a working job stream. Comments regarding statement formats and specific data on individual statements are minimized. Refer to Section 5 for a complete description of the statement formats and for annotated examples.

```
1      8      1
      6
-----
$CONFIG "SYS-C1 SR3000 OSI TEST SYSTEM"
$      SYID      SYC1
$      BASE      IOM-4,DN-8
$      ANSWER     RETCONFIG/NO
$      ANSWER     INITIALIZE/NO,EDIT/NO,SSCLEAR/YES
$      ANSWER     RESTART/NO,SYSOTRCVY/NO,SCF/NO,TIME/NO
$      ANSWER     DUMPON/TAPE,DUMP/ALL
$      ANSWER     PROCERROR/YES
$      INFO      SCHSAV
$      INFO      LOGON
$      INFO      TS8
$      INFO      SAVDMP/ANY
$      INFO      FNP/2
$      INFO      RLSPT
$      INFO      ACALL/1
$      INFO      ACALL/2
$      INFO      ASCII
$      INFO      ACALL/TS1
$      INFO      CATFNC/5000
$      INFO      CATDUP,SMCDUP/ST2
$      INFO      CCACHE/30
$      INFO      CHKSUM
$      INFO      CLENPT
$      INFO      DEN16/DEN16
$      INFO      DPSE
$      INFO      EXTTDS/12,230
$      INFO      EXTTSS/61,512,1
$      INFO      EXTTSS/61,512,2
$      INFO      EXTTSS/61,512,3
$      INFO      EXTTSS/61,512,4
$      INFO      PSUM/487
$      INFO      FMSCT/100
$      INFO      FMSTAT
$      INFO      GEOTRC/777777
```

INFO HEX/ON
INFO INTERRUPT/ALL
INFO LIMITS
INFO MCPTSS/4
INFO MEMORY/240
INFO MODULE/.MSDCB
INFO MIXED
INFO NDFMAP
INFO NIAST/RMVBL
INFO PSHWSN/15
INFO PT1SIZ/2048
INFO RESVID/PPSONL,P1,P2,P3/
INFO RESVID/PPSONL,P4,P5,P6,P7,P8,P9/
INFO RESVID/FORMS,F1,F2,F3,F4,F5,F6,F7,F8,F9/
INFO SLINKS/4000
INFO SSAOVL/16
INFO SYBRT/200
INFO SYJOT/5000
INFO SYSOUT/50000
INFO SYSTEMMAP/NO
INFO TAPDEN/DE
INFO TIMEZ/MST
TRACE 0,0,0,0
MCT-0 4096,PORT-3,IOM-0,PORT-2,IMU-1,PORT-4,PRO-0,PORT-5,PRO-1
IOM-0 PUB-30,CS66,TY1,TY2,TY3,TY4
IMU-1 CH-30,CS66,TY5
IOM-0 PUB-31,RMC66,TR1
IOM-0 PUB-12,MS0450,UNITS-08,NONSEQ,
ETC UNIT-11,ST1,S-H304,AU-1,
ETC UNIT-12,ST2,S-C413,AU-1,
ETC UNIT-13,ST3,S-C443,AU-1,
ETC UNIT-14,ST4,S-C730,AU-1,
ETC UNIT-15,ST5,S-C885,AU-1,NOFMS,
ETC UNIT-16,RP1,S-C544,RMVBL,
ETC UNIT-17,RP2,RMVBL,
ETC UNIT-18,RP3,RMVBL
IOM-0 PUB-14,MS0501,UNITS-04,NONSEQ,
ETC UNIT-57,NM1,S-S543,
ETC UNIT-58,NM2,S-S544,
ETC UNIT-59,NM3,NOFMS,S-S545,
ETC UNIT-60,NM4,NOFMS,S-S546
IMU-1 CH-44,MSC1B,UNITS-10,NONSEQ,
ETC UNIT-1.0,DP1,AU-1,
ETC UNIT-1.1,DP2,NOFMS,AU-1,
ETC UNIT-2.0,DP3,
ETC UNIT-2.1,DP4,
ETC UNIT-16.0,ET1,MSD1B,
ETC UNIT-16.1,ET2,MSD1B,NOFMS,
ETC UNIT-16.2,ET3,MSD1B,
ETC UNIT-17.0,ET4,MSD1B,

1 8 1
6

\$ ETC UNIT-17.1,ET5,MSD1B,RMVBL,
\$ ETC UNIT-17.2,ET6,MSD1B,RMVBL
\$ IOM-0 PUB-18,TAPE*610*9,CD,S2000,UNITS-08,NONSEQ,
\$ ETC UNIT-01,DE9,1T1,CLASS-3,
\$ ETC UNIT-02,DE9,1T2,CLASS-3,
\$ ETC UNIT-03,DE9,1T3,CLASS-3,
\$ ETC UNIT-04,CD9,1T4,CLASS-2,
\$ ETC UNIT-05,BCD9,1T5,
\$ ETC UNIT-06,BC7,1T6,
\$ ETC UNIT-07,BC7,1T7,
\$ ETC UNIT-08,DE9,1T8,CLASS-3
\$ IOM-0 PUB-24,PR1600,UNITS-1,UNIT-1,TRAIN-0764,136,PR3,DEDICATED
\$ IMU-1 PUB-24,CR1050,UNITS-1,UNIT-1,CR2,51OPT
\$ IMU-1 PUB-25,PC0120,UNITS-1,UNIT-1,PU2
\$ IOM-0 PUB-28,6632-0,LINES-200 DN8#9911 DI0C00 NODENAME=SYC1
\$ IOM-0 PUB-29,6632-1,LINES-200 DN8#0365 DIOA80 NODENAME=SC1S
\$ IMU-1 PUB-29,UNCP,FE2 DN8#0365 DI0C00 NODENAME=SC1X
\$ IMU-1 PUB-16,PR1600,UNITS-1,UNIT-1,TRAIN-1130,136,PR1
\$ IMU-1 CH-32,PR1201,UNITS-1,UNIT-1,TRAIN-1130,136,PR2,DEDICATED
\$ IMU-1 PUB-52,TAPE*FIPS*9,DE,UNITS-6,NONSEQ,
\$ ETC UNIT-00,DE9,2T0,CLASS-3,
\$ ETC UNIT-01,DE9,2T1,CLASS-3,
\$ ETC UNIT-02,CD9,2T2,CLASS-2,
\$ ETC UNIT-03,DE9,2T3,CLASS-2,
\$ ETC UNIT-04,CD9,2T4,CLASS-2,
\$ ETC UNIT-05,DE9,2T5,CLASS-2
\$ XBAR IOM-0,PUB-14,PUB-15
\$ XBAR IOM-0,PUB-12,IMU-1,PUB-40,PUB-41,IOM-0,PUB-13
\$ XBAR IOM-0,PUB-18,IMU-1,PUB-20,PUB-21,IOM-0,PUB-19
\$ XBAR IMU-1,CH-44,CH-45,CH-46,CH-47
\$ GROUP IMU-1,CH-44-47
\$ XBAR IMU-1,CH-52,CH-53,CH-54,CH-55
\$ GROUP IMU-1,CH-52-55
\$ MPC-0 SIZE-4,PSI-0,IOM-0,PUB-12,PUB-13,
\$ ETC PSI-2,IMU-1,PUB-40,PUB-41
\$ MPC-1 SIZE-16,PSI-0,IOM-0,PUB-14,PUB-15
\$ MPC-2 SIZE-4,PSI-0,IOM-0,PUB-18,PUB-19,
\$ ETC PSI-3,IMU-1,PUB-20,PUB-21 MTP610 3252
\$ URP-4 IMU-1,PORTS-2,PUB-16
\$ URP-5 IOM-0,PORTS-2,PUB-24
\$ URP-7 IMU-1,PORTS-2,CH-32
\$ URP-8 IMU-1,PORTS-2,CH-24
\$ TRAINS 402/764/GCOS,LONG,402/1130/ASCII4
\$ FILCREA FASTBT,ST2,FASTBOOT
\$ AUTOLD ST1,800 LLINKS
\$ LOADFIL ST3,SR2LOAD,500
\$ DECKFIL DECKFILE,1900/0
\$ GCOSFIL ST1,ST2,ST3,ST4,NM1,ET1,DP1

***EOF

1 8 1
6

```
$INITIALIZE "SR3000 INITIALIZE"  
$ INIT ST1,CAT,ST2,CAT,ST3,CAT,ST4,CAT,ST5  
$ INIT NM1,CAT,NM2,CAT,NM3,NM4  
$ INIT ET1,CAT,ET2,ET3,CAT,ET4,ET5,ET6  
$ INIT DP1,CAT,DP2,DP3,DP4  
$ INIT RP1  
$ OBJECT HTND DU MPCB CON G 861028MPCB0000  
$ DKEND 15.330102886MPCB0107  
$ READIN 2T0,,,,DEN16
```

***EOF

```
$EDIT "SR3000 S8.19 / G8.20 / N8.17"  
$ FILDEF ST2,SYSLIB,1500/0,RDM,1T2,DEN16,LABEL/SOFTW-SYSLIB  
$ FILDEF ST3,VS-PRIMARY,8000/0,SYS,*,LABEL/VS-PRIMARY  
$ FILDEF ST4,TSS,1200/0,SYS,*,LABEL/TSS-SUB-SYS  
$ FILDEF NM1,SOFTW-P1,2000/0,SYS,*,LABEL/SOFTW-PART 1  
$ FILDEF ET1,SOFTW-P2,2800/0,SYS,*,LABEL/SOFTW-PART 2  
$ FILDEF DP1,SOFTW-P3,2100/0,SYS,*,LABEL/SOFTW-PART 3  
$ FILDEF NM1,SWI-30,4700/0,SWI,1T3,DEN16,LABEL/SWI-3000  
$ DTFILE ST1,SYSPN 3000,15/0
```

M SYSPNC.SPWN ***SYSTEM SPAWN FILE FOR - SYSPN (COLD BOOT)

C MODULE: SYSPNC.SPWN

FILSYS DUMP
PRIVITY

USERID SYS SOFTWARE

RESTORE SYS SOFTWARE,RESET/DEVICE/,RESET/RFILES/,RESET/DENIED/

CM SYS SOFTWARE,MODIFY/OPNSUTIL,SYS_CAT/

```
$ _SYSOUT ER  
$ TAPE9 PR,P1D,,99999,,SYS_SAVES  
$ MSG2 1,PLEASE MOUNT THE LATEST SYS_SOFTWARE SAVE TAPE.  
$ BREAK  
$ UTILITY  
$ FUTIL IN,OT,REW/IN,OT/,COPY/1F/  
$ PRMFL IN,Q,L,SYS_SOFTWARE/3000USERDATA/SYSPN.PRE  
$ PRMFL OT,W,L,SYS_SOFTWARE/3000USERDATA/SYSPN.DIRECT  
$ RUN RUFIL=SYSTEM,RUNAME=SYSPN,OPTIONS=DUMP,SSDUMP,NJREST  
$ PRIVITY  
$ LIMITS 10  
$ RESOURC RSPACE=100K  
$ PRMFL I*,R,S,SYS_SOFTWARE/3000/DATA/SYSPN.COLD  
$ ENDJOB  
$ ENDTF  
$ DTFILE ST2,SYS MEMREL,2/0  
$ IDENT P23GFA,MC DONALD,STA-AX  
$ PROGRAM MEMREL,DUMP,NJREST  
$ LIMITS 10,100K  
$ PRIVITY  
$ ENDJOB  
$ ENDTF
```

1 8 1
6

```
$ FILDEF DP1,BRT7-3000,20/O,SYS,1T3,DEN16,LABEL/BRT7-3000
$ FILDEF ST3,ASC-SOFTW,2700/O,SYS,1T1,DEN16 "56702"
$ FILDEF ST1,COBOL-74,1100/O,SYS,1T8,DEN62 42701
$ FILDEF ST4,PDQ,10/O,SYS,*
$ FILDEF NM1,IDS2,3500/O,SYS,*
$ FILDEF ST1,8DS2.2-SOFTW,300/O,SYS,*
$ FILDEF ST4,8FT2.1-SOFTW,700/O,SYS,*
$ FILDEF ST4,8F77-SOFTW,1000/O,SYS,*
$ FILDEF ST2,DMS-SOFTW,1800/O,SYS,*
$ FILDEF ST2,MENU,50/O,SYS,*
$ FILDEF ST4,PCF-SOFTW,200/O,SYS,*
$ FILDEF DP1,8PL3.3,1500/O,SYS,*
$ FILDEF ST3,PDQ-SYS,5300/O,SYS,*
$ FILDEF ST1,RPG2,200/O,SYS,*
$ FILDEF ST1,PSPSW-SYSLIB,1300/O,RDM,*
$ FILDEF ST2,IFAD,1000/O,SYS,1T4,DEN16,LABEL/30-IFAD-QS06
$ FILDEF ST2,ELAN,1200/O,SYS,1T2,DEN16,LABEL/W2ELN0830040
$ FILDEF ST3,8FM3.0,400/O,SYS,1T3,LABEL/8FM3.0 TAPE# 37390
$ FILDEF NM1,ACCNT0,1200
$ FILDEF ET1,ACCNT1,1200
$ FILDEF ST2,LUMPO,150
$ FILDEF ST1,DUMPO,1000/O
$ FILDEF ET1,DUMP1,26500/O
$ FILDEF ET1,PRINTIMAGE,85
$ FILDEF ET1,SYSOUT0,19000
$ FILDEF DP1,SYSOUT1,19000
$ FILDEF ET1,SYSOUT2,19000
$ FILDEF DP1,SYSOUT3,19000
$ FILDEF ST2,TANDFILE,7000
$ SSFILE ST1,.EXPRS/100,.HOLD/O9,.NORM/100,
$ ETC .IMCV/100,.NNNNT/100,.NNNNZ/100
***EOF
$FILES "SR3000 FILES"
$ SYSTEM SWI-30
$ PFILES SWI-30
$ DFILES SYSPN 3000
$ DFILES SYS MEMREL
$ LIBRARY RDM,SYSLIB,RDM,PSPSW-SYSLIB
$ SYSTEM ELAN
$ PFILES ELAN
$ SYSTEM VS-PRIMARY
$ PFILES VS-PRIMARY
$ SYSTEM TSS
$ PFILES TSS
$ SYSTEM SOFTW-P1
$ PFILES SOFTW-P1
$ SYSTEM SOFTW-P2
$ PFILES SOFTW-P2
$ SYSTEM SOFTW-P3
$ PFILES SOFTW-P3
```

1 8 1
 6

```
$ SYSTEM BRT7-3000
$ SYSTEM IFAD
$ PFILES IFAD
$ SYSTEM 8FM3.0
$ SYSTEM PCF-SOFTW
$ SYSTEM PDQ-SYS
$ SYSTEM COBOL-74
$ SYSTEM 8PL3.3
$ SYSTEM PDQ
$ SYSTEM IDS2
$ SYSTEM 8DS2.2-SOFTW
$ SYSTEM 8FT2.1-SOFTW
$ SYSTEM 8F77-SOFTW
$ SYSTEM ASC-SOFTW
$ SYSTEM DMS-SOFTW
$ SYSTEM MENU
$ SYSTEM RPG2
$ PFILES AUTOLOAD
$ PFILES DECKFILE
$ PFILES TANDFILE
$ SAVE LUMPO
$ PFILES DUMPO
$ PFILES DUMP1
$ PFILES PRINTIMAGE
$ ACCOUNT RDM,ACCNT0,ACCNT1,IDS
$ SCFDSP 288,ALL
$ SCFBUF 288,ALL
$ SYSOUT SYSOUT0,SYSOUT1,SYSOUT2,SYSOUT3
$ SSLOAD MAX/400,MIN/5,.TASK/10,.EXPRS/50,.NORM/40,.IMCV/5,
$ ETC .NNNNT/20,.NNNNZ/20
```

```
***EOF
$PATCH "PATCH SECTION"
.
. OCTAL patch corrections
.
```

```
***EOF
$LOAD "SR3000 LOAD SECTION"
$ SHCM
.
. Modules that are loaded into Shared HCM
.
$ GHCM
.
. Modules that are loaded into Grouped HCM
```

```
***EOF
***EOF
```


APPENDIX B

FUNCTIONAL CHECKLISTS

The purpose of this appendix is to provide a series of quick-reference, functional checklists that should be reviewed when installing a new system or whenever Startup job stream modification is required. For example, the checklist of statement and operator procedures should be reviewed when re-creating the AUTOLOAD file.

So that the checklist or "cookbook" concept is maintained, detailed statement formats and operator procedures are not included in this appendix. Refer to Section 5 for statement formats and for descriptions of individual statements and to Section 2 for detailed operator procedures.

STARTUP JOB STREAM - NEW INSTALLATION

The following discussion concentrates on statements that either are required in or should be considered for inclusion in the Startup job stream when installing a new system.

<u>Startup Statements</u>	<u>Discussion</u>
\$CONFIG Section	Reflects the site's gross software and hardware configuration.
\$ SYID	Can be used to specify the system name that is to print in the dump banner. This is helpful if the site has multiple systems. In addition, identification of the Software Release is useful when the site is communicating with offsite Honeywell Bull personnel.
\$ TRACE	All system traces normally are active when installing a new system. This assists in isolating initialization problems. However, this statement can be used to selectively deactivate traces that are not to be used.

Startup Statements

Discussion

\$ ANSWER

Messages that otherwise are issued to the system console and that require an operator response can be pre-answered. It is recommended that the following responses be included on the \$ ANSWER statement at this time. Additional responses (e.g., dump-related responses) can be included at site discretion.

TIME/NO
EDIT/NO
INITIALIZE/NO
SCF/YES
SSCLEAR/NO
RESTART/YES

It is recommended that a system map be printed during system installation to assist in problem analysis. Thereafter, the SYSTEMMAP/NO response can be included on the \$ ANSWER statement to forego printing of the system map.

\$ INFO

It is recommended that the following parameters be specified. Additional parameters can be included at site discretion.

SMCDUP - Provides a duplicate System Master Catalog (SMC).

DENxx/DENyy - Defines the default high and low densities of an MPC-driven magnetic tape subsystem.

It is recommended that the NDFMAP parameter not be included during initial installation procedures (i.e., that a deckfile map be printed to assist in problem analysis). Thereafter, the NDFMAP parameter can be included on the \$ INFO statement to forego printing of the deckfile map.

The FNP/n parameter or the \$ BASE statement is required if any Network Processors (DNET/ROUT mode) are configured.

The GENSYS parameter is required if the system is to execute the Generalized Tape Management System.

The MIGRAT parameter is required to migrate a 4/JS3 system to execute under GCOS 8.

When a Page Processing System is configured into the system, either the RESVID/PPSOFL,id1[id2...]/ or the RESVID/PPSONL,id1[,id2...]/ parameter must be specified - but not both. A maximum of 64 ids can be specified.

The NIAST ALL option is implied for all shared systems.

Startup Statements

Discussion

The EXTTSS/xxx,yyy,zzz option must be specified for all Time Sharing systems.

The OWNID/xxxxxxxxxxxxx option must be specified when processing FIPS-79 tape labels.

PROEXT must be specified when the six processor functionality is to be utilized.

\$ BASE

Can define the maximum site mainframe configuration (i.e., number of input/output controllers, network processors (DNET/ROUT mode)) and the maximum amount of space allocated to memory-resident tables (e.g., ASTs). The \$ BASE statement must precede any \$ Iyy or \$ MCT statements.

\$ MCT

Defines the memory-processor-input/output controller configuration and connectability relationships for DPS 8 and DPS 90.

\$ CIU

Defines the memory-processor-input/output controller configuration and connectability relationships for DPS 88 and DPS 8000.

\$ Iyy

A series of input/output controller statements must be included to define the system's peripheral and communications configuration: mass storage subsystem, magnetic tape subsystem, unit record devices, consoles, and remote processors.

\$ URP

Define each Unit Record Processor (URP800n) and all active unit record peripherals controlled by that URP800n. Unit record devices can also be specified on \$ Iyy statements.

\$ MPC

Defines the physical configuration of the MPC (i.e., the physical connection of the MPC and PSI channel to the input/output controller (Iyy) channel). Consult with the site's CSD representative for the exact physical relationship of these components.

There is a direct relationship between the \$ Iyy and \$ MPC statements. Each input/output controller channel (CH/PUB) number specified on \$ Iyy statements must also be identified on \$ MPC statements. The following example defines IOM channel 8.

Startup Statements

Discussion

	1	8	1
	\$	IOM-0	PUB-8,MS0450,UNITS-4
	.		
	.		
	.		
	\$	MPC-1	SIZE-4,PSI-0,IOM-0,PUB-8
\$ CHAN			A tool which allows channel switching for devices during the Startup process. No limit is set on the number of \$ CHAN statements that can be used in a Startup job stream.
\$ UNIT			Allows a switchable device or either of two separate devices to be referenced by the same logical name during startup. Any number of \$ UNIT statements are permissible.
\$ GCOSFIL			Identifies devices on which files that are defined in the \$EDIT section can reside.
\$ XBAR			Defines the crossbar configuration (i.e., multichannel access) of the mass storage and/or magnetic tape subsystems.
\$ LOADFIL			Identifies the mass storage device on which the \$LOAD section of the Startup job stream (i.e., the load file) is to reside.
\$ IMAGE			Defines the character set to replace the default character set. If used, the \$ IMAGE statement must precede the \$ TRAINS statement and must be continued by using successive \$ IMAGE statements (i.e., \$ ETC statements are not permitted). If the conditions are not adhered to, Startup aborts.
\$ TRAINS			Defines the character sets that are available on high-speed printers.
\$ SHARED			Defines permanent mass storage devices on a specific system to be shared with the Network Processor Supervisor (NPS). Removable devices cannot be shared. The NIAST option of the \$ INFO statement is automatically activated when \$ SHARED is specified.
\$ AUTOLD			Defines the size of the AUTOLOAD file, which accommodates the Startup program and job stream and is used when rebooting the system, and the mass storage device on which the file resides.

Startup Statements

Discussion

\$ DECKFIL	Identifies the size of the deckfile (which resides on the AUTOLOAD device).
\$ MPCFIG	Should be included to identify the firmware revision level that is to be bootloaded to a specific MPC. Consult with the site's CSD representative for the correct firmware revision identifier.
\$INITIALIZE Section	Provides the basis for mass storage device initialization and is the means by which firmware is written to and read from the deckfile.
\$ INIT	<p>Identifies each mass storage device to be initialized (i.e., existing pointers and tables on the device are cleared and rebuilt). Any special parameters associated with a device (e.g., allocation unit size or device availability for FMS catalogs) also must be included.</p> <p>It is recommended that \$ INIT statements be removed from the Startup job stream after the system is initialized. Removal prevents accidental initialization of mass storage devices (i.e., an operator response of YES to the *INITIALIZE? question). The statements can be replaced in the Startup job stream when initialization is desired.</p>
MPCB Deck	Bootloads the MPC firmware.
Mass Storage Firmware	Bootloads the mass storage controller. (This deck enables mass storage initialization.)
Magnetic Tape Firmware	Bootloads the magnetic tape controller. (This deck enables reading of the tape that contains MPC firmware.)
\$ READIN	Defines the device on which the firmware tape is mounted.
D, O, A, L, Y	<p>Space-definition statements that are used to identify defective space on mass storage devices. If these statements are included in the Startup job stream, also include \$ DIRECT.../CLEAR and \$ DIRECT statements. D, O, A, L, and Y statements define defective space on the following bases.</p> <ul style="list-style-type: none">D - Cylinder and head numbersO - Beginning and ending sector numbers (octal)A - Beginning and ending word numbers (octal)L - Beginning link and number of links (octal)Y - Beginning llink and number of llinks (octal)

Startup Statements

Discussion

\$EDIT Section

Each device identified in this section also must be defined on a \$ Iyy statement in the \$CONFIG section.

\$ FILDEF

Defines all system files and the devices on which the files are to reside. Some specific files must be created. (Note that the files for which the RDM option is included must be identified on a \$ LIBRARY statement in the \$FILES section and files for which the SYS option is included must be identified on a \$ SYSTEM statement in the \$FILES section.)

DUMPO - This file is used by .MDUMP to store overlays and swapped memory. If DUMPO is 200 llinks it will also be used to store an error snap of .MDUMP. This file can be created on a specific device or can be assigned to a device by Startup.

DUMP1-DUMP9 - Used to store dump information. From one to nine files can be defined.

*
SYSOUT Files - Files to which system output is spooled. The device on which each file resides must also be specified. It is recommended that each file be assigned to a different device, and - to avoid further contention problems - that no SYSOUT files be assigned to device ST1.

All SYSOUT files must be the same size. If the files have different sizes, the smallest size specified is assigned by default to all files.

All SYSOUT files also must be identified on \$ SYSOUT statements in the \$FILES section.

PRINTIMAGE - Startup writes all printer character set and VFC images to this file, which is used to reload and re-create these images during subsequent bootloads.

*
SCF - Define the mass storage device to which the Statistical Collection File (SCF) is assigned. The file also must be defined on the \$ ACCOUNT statement in the \$FILES section.

<u>Startup Statements</u>	<u>Discussion</u>
\$ SSFILE	Defines System Scheduler job classes and class sizes. Additional parameters are specified on the \$ SSLOAD statement in the \$FILES section.
\$ DTFILE/\$ ENDTF	The \$ DTFILE cues Startup that the statements following it are user-oriented directives. The directives that follow give users the ability to edit files for both site options and JCL, rather than hard-coding them into memory. This feature also provides default workstation initiation JCL for SYS SOFTWARE. The \$ ENDTF statement is required to terminate this function.
\$FILES Section	Identifies files that are to be used for the duration of the current bootload. Each of these files also must be identified in the \$EDIT section.
\$ ACCOUNT	Identifies the device on which the Statistical Collection File (SCF) resides and specifies file-related characteristics (e.g., buffer size).
\$ ACCBUF	Specifies record types buffered before being written to the SCF, whose buffering disposition can be changed via an operator request, and identifies the maximum record type buffered. The \$ ACCBUF statement cannot be used when more than 36 accounting record type are required (use \$ SCFBUF instead).
\$ SCFBUF	Provides extended processing capabilities for a maximum of 288 accounting record types (compare to \$ ACCBUF statement). This statement must be used when operating under the Tape Management System (GTMS) and must precede any \$ SCFDSP statement.
\$ SCFDSP	Defines the accounting record types which can have their status changed from the console. The \$ SCFDSP statement must be preceded by a \$ SCFBUF statement.
\$ SYSTEM	Identifies files containing system programs that are necessary to site operations. A maximum of 32 files can be defined. File sizes and the device on which each file resides must be specified on \$ FILDEF statements in the \$EDIT section. (The \$ FILDEF statements must include the SYS option.)
\$ LIBRARY	Identifies a maximum of two random program files that also were specified on \$ FILDEF statements in the \$EDIT section. (The \$ FILDEF statements must include the RDM option.)

<u>Startup Statements</u>	<u>Discussion</u>
\$ SSLOAD	Defines System Scheduler job class parameters (e.g., maximum number of jobs that can be scheduled from one job class).
\$ SAVE	Defines the Save file (i.e., a file named LUMP).
\$ SYSOUT	Defines all SYSOUT collection files.
\$ DFILES	Causes the referenced file to be cataloged as a linked sequential file under SYS CAT and allows GEIN to read \$ DTFILE related JCL statements.
\$ PFILES	Identifies Startup-created files that are to be cataloged by FMS for subsequent access by users.
\$PATCH Section	Contains OCTAL correction statements that are to be applied to GCOS programs and to software programs that were edited by Startup onto the system.
\$LOAD Section	Allows object deck images of modules to be loaded directly into main memory. Each module included in this section also is written to the load file on mass storage. This section often is used to add new or to replace existing operating system programs.

Refer to "Bootload Phases" in Section 2 for operator procedures to bootload the system.

MASS STORAGE SUBSYSTEM - INITIAL CONFIGURATION

The following statements require special attention when initially configuring the site's mass storage subsystem.

<u>Startup Statements</u>	<u>Discussion</u>
---------------------------	-------------------

\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX	Defines each mass storage device and its physical and logical relationship to other components in the subsystem. The following fields deserve particular attention.
--	---

UNITS - The number of units specified in this field must equal the combined number of mass storage units defined in the UNIT fields.

AU - The default AU value is 1 for all devices except MSU0501, MSC1B, and MSD1B, which have a default value of 8.

RMVBL - There are two advantages to defining several mass storage devices as removable (RMVBL). First, only permanent (PERM) devices must be initialized during a total system initialization. Second, the procedure for redefining a mass storage device is much easier when changing the definition from RMVBL to PERM than from PERM to RMVBL. (Refer to "Redefining A Mass Storage Device" in this appendix for additional information.)

The RMVBL parameter cannot be used for a device defined as shared.

Logical Device Name - Each device must be uniquely identified by a logical device name. One mass storage device must be named ST1.

CH/PUB - The CH/PUB number must agree on \$ Iyy, \$ MPC, and \$ XBAR statements. If multiple device types (e.g., MSU0402 and MSU0451) are configured on the same PSI, each CH/PUB (string) is defined on a separate \$ Iyy statement.

\$ MPC

All CH/PUB numbers that are included on \$ Iyy statements must be defined on \$ MPC statements.

The first PSI specified on this statement is the PSI over which bootloading occurs.

\$ XBAR

If the mass storage subsystem is crossbarred, all Iyy channel (CH/PUB) numbers that are identified on \$ MPC statements must be included on \$ XBAR statements. The PUB or CH number included on the \$ Iyy statement must be the first defined on the associated \$ XBAR statement.

Startup Statements

Discussion

A CH/PUB number cannot be defined on more than one \$ XBAR statement.

The following example reflects the relationship among \$ IOM, \$ MPC, and \$ XBAR statements.

	1	6
\$ IOM-0	8	PUB-8,MSO400, ...
\$ IOM-0		PUB-9,MSO450, ...
\$ MPC		SIZE-4,IOM-0,PUB-8,PUB-9,PUB-10,PUB-11
\$ XBAR		IOM-0,PUB-8,PUB-10
\$ XBAR		IOM-0,PUB-9,PUB-11

\$ INIT

A \$ INIT statement must be included in the Startup job stream for each configured mass storage device during initial installation. The following fields deserve particular attention.

CAT - FMS catalogs can be created on this device. It is recommended that several devices be made available for this purpose. This approach allows expansion of the FMS catalog structure. In addition, if FMS catalogs are not allowed on any devices, catalogs are restricted to device ST1. This practice can impact system efficiency.

AU - The default AU value is 1 for all devices except MSU0501, MSC1B, and MSD1B, which have a default value of 8.

\$ INFO

A configured mass storage device can be released via the RLSDSK option (e.g., the device must be released for maintenance).

MAGNETIC TAPE SUBSYSTEM - INITIAL CONFIGURATION

The following statements require special attention when initially configuring the site's magnetic tape subsystem.

Startup Statements Discussion

\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX Define each magnetic tape device and its physical and logical relationship to other components in the subsystem. The following fields deserve particular attention.

CH/PUB - The Iyy channel number must agree on \$ Iyy, \$ MPC, and \$ XBAR statements.

Logical Device Name - Each device must be uniquely identified by a logical device name.

UNITS - The number of units specified in this field must equal the combined number of magnetic tape units defined in the UNIT fields.

Subsystem Component Characteristics - Three fields (device type, density code, and magnetic tape characteristics) combine to define the physical characteristics of magnetic tape subsystem components.

The device type and density fields define characteristics of most of the devices in the subsystem. The magnetic tape characteristics field defines individual magnetic tape units that are exceptions to information specified in the other two fields.

For example, if six MTS0500 units have nine-track and 800/1600 bpi capabilities and two MTS0500 units have seven-track and 556/800 bpi capabilities, the following fields must be included on a \$ Iyy statement.

```
TAPE*500*9,CD
UNIT-5,BC7
UNIT-6,BC7
```

\$ MPC All CH/PUB numbers included on \$ Iyy statements must be defined on \$ MPC statements.

\$ XBAR If the magnetic tape subsystem is crossbarred, all Iyy channel (CH/PUB) numbers that are identified on \$ MPC statements must be included on \$ XBAR statements. The CH/PUB number included on the \$ Iyy statement must be the first defined on the associated \$ XBAR statement.

A CH/PUB number cannot be defined on more than one \$ XBAR statement.

UNIT RECORD DEVICES - INITIAL CONFIGURATION

The following statements require special attention when initially configuring the site's unit record devices.

Startup Statements Discussion

\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX Defines each unit record device (i.e., printers, card punches, and card readers) and its physical and logical relationship to other components in the configuration. One \$ Iyy statement is required for each device. The following fields deserve particular attention.

Logical Device Name - Each device must be uniquely identified by a logical device name.

CH/PUB - The Iyy channel number must agree on \$ Iyy and \$ MPC statements.

TRAIN - When defining a printer, the character set code must be identified in this field and on a \$ TRAINS statement.

No more than three device types (with differing characteristics) can be defined for one MPC. A maximum of eight devices can be defined. The following combination of devices is valid for one MPC.

One CRU1050 card reader
One PCU0120 card punch
Two PRU1100 printers

However, the following combination of devices is invalid for one MPC because there are more than three device types with differing characteristics.

One CRU1050 card reader
One PCU0120 card punch
One PRU1100 printer
One PRU1600 printer

\$ MPC Iyy channel (CH/PUB) numbers must be sequentially identified (e.g., PUB-21, PUB-22, PUB-23, PUB-24 and not PUB-21, PUB-22, PUB-24).

Startup Statements Discussion

\$ TRAINS This is a list of all print trains that embrace the site's standard printed character set. The sequence of the characters on the printer belt is not significant as long as it contains all the characters in the set. Any of the BCD belts listed on this statement may be substituted for the Startup defined BCD standard belt when the only printer allocation requirement is for a BCD standard printer. Standard ASCII belts may also be substituted for the Startup-defined ASCII standard belt.

\$ XBAR Crossbarring of unit record devices is not permitted.

DATANET NETWORK PROCESSORS - INITIAL CONFIGURATION

The following input/output controller statement considerations require special attention when initially configuring the site's DATANET Network Processors.

1. DATANET Network Processors must be numbered sequentially (i.e., 0, 1, 2 and not 0, 2, 3).
2. \$ Iyy statements must sequentially define DATANET Network Processors in the Startup job stream. For example,

```
1      8      6
```

```
$ IOM-1    PUB-p,6620-0  
$ IOM-1    PUB-p,6620-1  
$ IOM-1    PUB-p,6620-2
```

and not

```
1      8      1  
1      8      6
```

```
$ IOM-1    PUB-p,6620-2  
$ IOM-1    PUB-p,6620-0  
$ IOM-1    PUB-p,6620-1
```

However, channel (PUB-p) numbers do not have to be in sequence.

3. The value specified in the LINES-x field defines the maximum number of users that can be connected at any one time.

Therefore, if the value x is less than the number of lines configured and available, the undefined lines are not available for use. For example, if 50 lines are configured but LINES-20 is specified on the \$ Iyy statement, only 20 users can be connected at one time.

If the value x is greater than the number of lines configured and available, no more lines than are configured can be used. For example, if 50 lines are configured but LINES-60 is specified on the \$ Iyy statement, only 50 users can be connected at one time.

MODIFY/ADD SYSTEM FILE

The following statements should be reviewed and operator procedures followed when modifying an existing system file (e.g., increasing the file size) or when adding a new system file.

<u>Startup Statements</u>	<u>Discussion</u>
\$ FILDEF	<p>If a new file is being added, the file name and size and the device on which the file is to reside must be identified.</p> <p>If the size of an existing file is being increased, it is recommended that a new file name be assigned and that the file size be increased. (In addition, the appropriate changes on the \$ SYSTEM and \$ LIBRARY statements must be made. Note that the replaced file continues to exist after the new file is created.)</p> <p>If the file merely is being assigned to a different device, identify the device in the logical device name field. Retain the same file size and name.</p>
\$ GCOSFIL	<p>Identify the device to which the file is being assigned. Startup searches devices in the sequence in which they appear on the \$ GCOSFIL statement.</p>
\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX	<p>Verify that the mass storage device to which the file is assigned is defined.</p>
\$ SYSTEM	<p>If a new file is being added, the file must be identified on a \$ SYSTEM statement. Files are searched in the order in which \$ SYSTEM statements are encountered. Therefore, if the file is to override the content of an existing file, the \$ SYSTEM statement that identifies the new file must precede the \$ SYSTEM statement that identifies the existing file.</p>

The operator must edit the system file. Respond PARTIAL to the *EDIT? question that is issued to the system console and respond YES to the *EDIT fffff? question (where fffff = name of the system file).

AUTOLOAD FILE AND DECKFILE MODIFICATION

The following statements should be reviewed and operator procedures followed when modifying either the AUTOLOAD file or the deckfile (e.g., increasing the size of the deckfile).

Although the AUTOLOAD file and deckfile are not directly related in function, the deckfile is always created on the same device as the AUTOLOAD file. Therefore, moving either of the files from one device to another affects both files.

<u>Startup Statements</u>	<u>Discussion</u>
\$ AUTOLD	The size of the AUTOLOAD file normally will not require modification (i.e., the default size of 600 llinks is sufficient). However, moving the AUTOLOAD file from one device to another automatically moves the deckfile from one device to another. The new device must be identified on the \$ DECKFIL statement.
\$ DECKFIL	Changing the size of the deckfile requires that either the file be assigned to another device or the file remain on the same device and be renamed. If the deckfile is moved to another device, the AUTOLOAD file also must be assigned to the new device. As a result of redefining the two files, space that previously was assigned to the files is lost to the system.
\$ GCOSFIL	Identifies the device to which the files are being assigned.
\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX	Verifies that the mass storage device to which the files are assigned is defined.
\$ READIN	To re-edit the deckfile, a \$ READIN statement is included in the \$INITIALIZE section of the Startup job stream.

The operator must re-edit the deckfile. Respond PARTIAL to the *INITIALIZE? question that is issued to the system console. Then, respond YES to the CLEAR AND OVERWRITE EXISTING DECKFILE? question and YES to the *PROCESS \$ READIN? question.

LOAD FILE MODIFICATION

MODIFICATION WITHIN THE SAME DEVICE

The following statements should be reviewed when modifying the load file (e.g., moving the file to another device). No re-editing is required. Therefore, operator intervention is not necessary.

Startup Statements Discussion

- \$ LOADFIL** Changing the size of the load file requires that either the file be assigned to another device or the file remain on the same device and be renamed. The device on the \$ LOADFIL statement must be specified. As a result of redefining the file, space that previously was assigned to the file is lost to the system.
- \$ GCOSFIL** Identifies the device to which the file is being assigned.
- \$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX** Verifies that the mass storage device to which the file is assigned is defined.

SAVE FILE MODIFICATION

The following statements should be reviewed and operator procedures followed when modifying the Save file (e.g., increasing the file size). (The Save file frequently is referred to as the LUMP file. However, any file name can be assigned to the file.)

Startup Statements Discussion

- \$ FILDEF** If the size of the existing file is being increased, the file (with the same file name) should be assigned to a different device. The new device on the \$ GCOSFIL statement must be identified before identifying the device on which the file currently resides. This creates a new file of the same name. However, the space that is assigned to the current file is lost to the system.
- If the file merely is being assigned to a different device, the device is identified in the logical device name field. The same file size and name is retained.
- \$ GCOSFIL** Identifies the device to which the file is being assigned.
- \$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX** Verifies that the mass storage device to which the file is assigned is defined.
- \$ SAVE** If the file name is being changed, the file is identified on the \$ SAVE statement.

The operator must edit the save file. Respond PARTIAL to the *EDIT? question that is issued to the system console and respond YES to the *EDIT fffff? question (where fffff = name of the save file).

MODIFY/ADD SYSOUT FILE

The following statements should be reviewed and operator procedures followed when modifying an existing SYSOUT file (e.g., increasing the file size) or when adding another SYSOUT file.

Startup Statements Discussion

\$ FILDEF

If a new file is being added, the file name and size and the device on which the file is to reside is identified. To avoid device contention, it is recommended that SYSOUT files be assigned to separate devices.

If the size of an existing file is being increased, the file (with the same file name) should be assigned to a different device. The new device on the \$ GCOSFIL statement must be identified before identifying the device on which the file currently resides. This creates a new file of the same name. However, the space that is assigned to the current file is lost to the system.

If one SYSOUT file size is changed, all SYSOUT files should be changed. If SYSOUT files are not the same size, the usable space of all SYSOUT files is reduced to the size of the smallest.

If the file merely is being assigned to a different device, the device in the logical device name field. The same file size and name is retained.

\$ GCOSFIL

Identifies the device to which the file is being assigned.

\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX Verifies that the mass storage device to which the file is assigned is defined.

\$ SYSOUT

If a new file is being added, the file must be identified on a \$ SYSOUT statement.

The operator must edit the SYSOUT file. Respond PARTIAL to the *EDIT? question that is issued to the system console and respond YES to the *EDIT fffff? question (where fffff = name of the SYSOUT file). In addition, respond NO to the *RESTART? question and YES to the *SYSTEM SCHEDULER CLEAR? question.

CONFIGURING A SYSTEM COMPONENT

The following procedure is recommended when adding a new hardware component (e.g., mass storage device, magnetic tape unit, processor, or input/output controller) to the system configuration.

1. Complete all jobs in process. Adding a new hardware component to the system configuration modifies the Hard Core Monitor (HCM) layout. Therefore, all existing references to jobs in process would change.

2. Enter BOOT or DUMP via the system console to render the system inoperable.
3. Insert a \$ Iyy statement into the Startup job stream to define the component that is being added to the configuration.
4. If the new component is involved in a crossbarring scheme, modify \$ XBAR statements to reflect the new component.
5. Review the \$ MPC statements to ensure that all existing Iyy channel (CH/PUB) numbers are defined.
6. Review the \$ MCT or \$ CIU statement (as applicable) if either a processor or an input/output controller is being added to the configuration to ensure that the new component is identified.

When rebooting the system, the operator must respond NO to the *RESTART? question and YES to the *SYSTEM SCHEDULER CLEAR? question.

DECONFIGURING A SYSTEM COMPONENT

The following procedure is recommended when deleting a hardware component (e.g., magnetic tape unit, processor, or input/output controller) from the system configuration.

1. Complete all jobs in process. Deleting a component from the system configuration modifies the Hard Core Monitor (HCM) layout. Therefore, all existing references to jobs in process would change.
2. Remove from the Startup job stream the \$ Iyy statement defining the component being deleted from the system configuration.

Note, however, that this must not be done to deconfigure a mass storage device. The device must remain configured, but can be logically released from the system via the following procedure.

The device can be physically disconnected from the system, but the \$ Iyy statement defining the device must be included in the Startup job stream. During Startup's mass storage device verification procedure, the console message:

```
*DISK PACK ERROR icccdd EOM TO CONTINUE--
  'RLSE' TO RELEASE THE DEVICE
```

is issued when Startup determines that the device is not physically connected. The operator then can logically release the device from the configuration via the console entry RLSE.

Alternatively, the preceding console message can be pre-answered by including the RLSDSK option on the \$ INFO statement.

3. If the deconfigured component is involved in a crossbar scheme, modify \$ XBAR statements to reflect the deletion.
4. Review the \$ MPC statements to ensure that only existing Iyy channel (CH/PUB) numbers are defined.
5. Review the \$ MCT or \$ CIU statement (as applicable) if either a processor or an input/output controller is being deleted from the configuration to ensure that the component is not identified.

During the bootload process, the operator must respond NO to the *RESTART? question and YES to the *SYSTEM SCHEDULER CLEAR? question.

REDEFINING A MASS STORAGE DEVICE

The following procedure must be used to change the definition of a mass storage device from removable (RMVBL) to permanent (PERM).

1. Remove the RMVBL parameter from the applicable \$ Iyy statement.
2. Respond YES to the console message *ddd PRIOR DEVICE STATUS WAS RMVBL CHANGED TO PERM YES TO CONTINUE.

The following procedure can be used to change the definition of a mass storage device from permanent (PERM) to removable (RMVBL).

1. Include the RMVBL parameter on the applicable \$ Iyy statement.
2. Respond YES or TOTAL to the *INITIALIZE? question that is issued to the system console and YES to the *EDIT? question.

MODIFY/ADD PRINTER CHARACTER SET

The following statements should be reviewed and operator procedures followed when modifying an existing printer character set or when adding a new character set.

<u>Startup Statements</u>	<u>Discussion</u>
\$ IMAGE	Defines the character set. All \$ IMAGE statements must precede the \$ TRAINS statements.
\$ TRAINS	Identifies the character set.
\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX	Determines whether the name (nnnnn) in the TRAIN-nnnnn field is to be modified.

The operator must re-edit the PRINTIMAGE file. Include a \$ FILDEF statement in the Startup job stream to identify the PRINTIMAGE file. Respond PARTIAL to the *EDIT? question that is issued to the system console and respond YES to the *EDIT PRINTIMAGE? question.

REDEFINING SYSTEM SCHEDULER PARAMETERS

The following statements should be reviewed and operator procedures followed when moving the SSFILE file from one device to another or when changing System Scheduler job class parameters.

<u>Startup Statements</u>	<u>Discussion</u>
\$ SSFILE	If the file is being assigned to a different device, the device is identified in the logical device name field. If job class parameters are being changed, only those parameters to be changed need modification.
\$ SSLOAD	Modifies job class parameters as required or adds/deletes job classes.
\$ GCOSFIL	If the file is being assigned to a different device, the device to which the file is being assigned is identified. The new device name must appear in the \$ GCOSFIL card before the old device name.
\$ IMU, \$ IMX, \$ IOM, \$ IOP, or \$ IOX	Verifies that the mass storage device to which the file is assigned is defined.

The operator must edit the SSFILE file. Respond PARTIAL to the *EDIT? question that is issued to the system console. Then, respond YES to the question *PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR? so that the \$ SSFILE statement is read.

APPENDIX C

SUMMARY OF \$ INFO PARAMETERS

See Section 5 for detailed descriptions.

<u>\$ INFO Parameter</u>	<u>Brief Description</u>
ACALL/ {nn } {TSS} {TPE} {TSx}	Automatically execute ACALL following fast boot restart. Reconnect network processor nn, and/or restart TPE or TSS.
ASCII	An ASCII printer is configured.
CATDUP	Duplicate all File Management Supervisor (FMS) catalogs.
CATFNC/n	Catalog fence. Allocate Startup files above llink n.
CCACHE/nnn	Memory buffers are reserved for FMS catalog cache.
CHKSUM	Checksum all modules during the module-load process.
CLENPT	Enable the cleanpoint function for system restart.
CNTDCW	Include # of words transferred via disk I/O in SCF data.
DENxx/DENyy	Default high and low densities for MPC tapes.
DPSE	Must be present if DPS 8/50 or 8/70 is configured.
ENCRYP	Encrypt SMC passwords.
EXTTDS/xxx,yyy	Amount of memory available to TDS or DM-IV/TP.
EXTTSS/xxx,yyy[,zzz]	Amount of memory available to TSS.
FASTBT	Enable fast boot for automatic system restart.
FMSCT/n	Max % of FMS catalog area that may be used for files.
FMSDT/n	Max number of descriptors for selected disk device.
FMSST/n	Max % of space on selected device.
FMSTAT	Accumulate statistics for FMS.

<u>\$ INFO Parameter</u>	<u>Brief Description</u>
FNP/n	Number of network processors for DNET/ROUT.
GENSYS	Enable Generalized Tape Management System (GTMS).
GEOTRC[/n]	Enable GEOT trace for SYSOUT delivery trouble analysis.
HEX/ {ON } {OFF}	Controls acceptance of MME GMODES requests for setting HEX floating point mode.
INTERRUPT/xxx	Type of interrupt processing for multiprocessor systems.
KLPTH/n	Native mode memory management parameter.
KLMIW/ssss	Native mode memory management parameter.
KLMWP/ssss	Native mode memory management parameter.
KLMWS/ssss	Native mode memory management parameter.
KLWPR/xxxx	Native mode memory management parameter.
KLWSW/xxxx	Native mode memory management parameter.
LIMITS	Operator control when program exceeds SYSOUT or time limit.
LINES/n	The maximum number of lines per page of printer output.
LOGON	Sets flags to recognize that LOGON may be operational.
MCPTSS/n	The number of Time Sharing copies.
MEMORY/n	Sieve limit for maximum memory size.
MIGRAT	Migrate SR 4/JS3 Startup-defined files to GCOS 8.
MIXED	CPL and NPL peripheral device types coexist.
MODULE/.mmmmmm	Modules specified to reside in main memory.
NDFMAP	The deckfile map is not to be printed.
NIAS ^T / {ALL/n } {RMVBL/n}	<u>N</u> o <u>I</u> n-memory <u>A</u> vailable <u>S</u> pace <u>T</u> able.
NPCHSZ/nnn	Enables the application of virtual mode patches.
NPRINT	No printer is available to the Startup program.
NPUNCH	No card punch is configured for local punch output.

<u>\$ INFO Parameter</u>	<u>Brief Description</u>
NSYASC	<u>No SYOT ASCII Space Compression.</u>
NSYBSC	<u>No SYOT BCD Space Compression.</u>
NSYSAV	<u>No SYOT Seek Address Validation.</u>
NSYTRC	<u>No SYOT TRaCe.</u>
OWNID/xxxxxxxxxxxxx	Default owner-id for FIPS-79 UFAS tape labels.
PASSWD/nnn	Password expiration interval.
PROEXT	Enable the six-processor functionality.
PSUM/nnn	The maximum number of processes allowed in the system.
PT1SIZ/nnnn	The size of the page table for working space 1.
PTCHSZ/nnn	The maximum number of patches allowed in \$PATCH section.
RESVID/{FORMS },id1[,id2,...,idn]/ {PPSOFL},id1[,id2,...,idn]/ {PPSONL}	Reserve station ids for collection of special output.
RLSDSK	Startup is to release offline mass storage devices.
RLSPNT	Startup is to release offline printers.
ROLLCALL/ddd	Direct Startup rolldall messages to printer.
SAVDMP/list	Defines default options for save dumps.
SCFPRG	The SCF purge-to-disk option is enabled.
SCHSAV	Save all job input for System Scheduler.
SDCOL/n	Number of <u>additional</u> pages for type 3 GEPR records.
SLAVE/n	Maximum size of slave instruction segment.
SLINKS/n	Sieve limit for temporary file mass storage llinks.
SLTAPE/n	Sieve limit for number of magnetic tape files.
SLTIME/hhmm	Sieve limit for processor time.
SMCDUP/ddd	Duplicate System Master Catalog (SMC).
SPN,umc_1[/cat-or-file-1],umc_2[/cat-or-file-2]	System path name replacement.
SSAOVL/n	Number of real pages allocated to SSA cache.

\$ INFO Parameter	Brief Description
SYBDI/n	Size of backdoor information segment.
SYBRT/n	GEOT blink release threshold.
SYJOS/n	Size of job output special segment.
SYJOT/n	Size of job output table segment (SNUML).
SYSOUT/n	Sieve limit for maximum number of SYSOUT records.
SYSTEMMAP/NO	Do not print the map of the GCOS file structure.
TAPDEN/xxxx	Identifies the configured tape densities.
TIMEZ/zzz	Specifies local time zone.
TS8	Requires that TS8 module .MTSVC be edited.
USRDMP/list	Default options for user dumps.
WSSIZE/2,s2,b2 WSSIZE/3,s3,b3	Set virtual sizes and backing store file coverage of system shared workspaces.

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DH18-03

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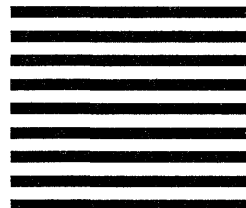


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System Operator Messages**

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LARGE SYSTEMS
GCOS 8 OS
SYSTEM OPERATOR MESSAGES

SUBJECT

System Console Conventions, and Operator Input and System Output Messages

SPECIAL INSTRUCTIONS

This document supersedes the previous edition, DH13-03, dated December 1985. Refer to the Software Release Bulletin (SRB) for this product release for a synopsis of technical changes.

SOFTWARE SUPPORTED

GCOS 8 OS Software Release 3000

ORDER NUMBER

DH13-04

September 1987

Honeywell Bull

PREFACE

This manual contains the operator input and system output messages that apply to the system console. It also contains supporting material necessary in interpreting many of the messages.

Due to changes in Honeywell Bull support policies, the terms "field engineer", "field engineering", "Honeywell representative", etc., used in this manual refer to the "Honeywell Bull Response Center".

All material contained in this manual is applicable to all Honeywell Bull large systems.

Section 1 contains introductory matter.

Section 2 contains INPUT messages arranged in alphabetical order.

Sections 3-27 contain OUTPUT messages arranged in alphabetical order.

Messages contained herein include the actual message line as given at the console, a description, comments regarding conditions pertinent to message issuance, and recommended operator action.

The information and specifications in this document are subject to change without notice. Consult your Honeywell Bull Marketing Representative for product or service availability.

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DH13-04

In this document, multiple vertical braces and brackets should be assumed to be a single brace or bracket; for example:

$\left\{ \begin{array}{l} \{ \} \\ \{ \} \\ \{ \} \end{array} \right\}$ represent $\left\{ \right\}$ and $\left[\begin{array}{l} [] \\ [] \\ [] \end{array} \right]$ represent $\left[\right]$

CORRECTING MANUALS VIA PASS

Required corrections to this version of the manual will be entered on the Problem Analysis Solution System (PASS) data base. Query PASS periodically via the procedures described in the Problem Analysis Solution System (PASS) manual, Order Number DW95. Corrections documented on PASS, if applicable to the next release of the software, will be incorporated into the next update of the manual.

LISTING OF MANUALS

A list of large system software manuals is available to all Honeywell Bull users with access to an ASCII terminal. The manuals list is updated regularly to facilitate the ordering of manuals. Manual ordering instructions are printed on the listing. Use the following instructions to obtain a listing.

1. Dial the appropriate telephone number to connect your terminal to the Multics system in Phoenix.

<u>300-baud & 1200-baud</u>	<u>150-baud</u>
(602) 249-5356 249-6430	249-7554

Multics will respond with a computer system identification banner.

2. Enter the login command "login Sam" (without the quote marks). Press the carriage return key.

Multics will respond with a request for the password.

3. Enter the password "Multics" (without the quote marks) and press the carriage return key.

Multics will respond with a welcome message followed by a ready message.

Example: Welcome to the Multics system
For services available online type:
:list
r1111.7 Thu (ready message)

4. Enter ":list" (without the quote marks) to obtain a list of commands. Press the carriage return key.

Multics will list the commands available for specific topics and then display the ready message.

5. Enter the command selected and press the carriage return key.

6. Enter "logout" (without the quote marks) and press the carriage return key to log off the Multics system.

Multics will respond with a logout message.

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SECTION 1

INTRODUCTION

This manual is provided as an operating aid for console operators and for programmers of Honeywell Bull Large Information Processing Systems.

Messages are generated on the system console to inform the operator of one of the following conditions.

1. The system has performed some action of which the operator should be aware.
2. A specific action is to be performed by the operator to allow further processing. (Refer to the GCOS 8 OS System Startup manual.)

Every message that can appear on the system console while operating in a GCOS 8 environment is included; although it is possible that, at a particular site, some of the messages may never occur.

Three types of messages are produced at the console.

- o Operator input to the system
- o System output messages for information only
- o System output messages requiring operator action

Section 2 contains descriptions of operator input messages and possible system replies. Section 3 presents general information concerning conventions followed in the construction and formatting of output messages. The output messages, contained in alphabetical order, beginning with Section 4 through 27.

When a message begins with a variable (job sequence number, device name, etc.), the message is sequenced according to the first fixed element of the message.

Messages are output at the console in accordance with the following conventions.

- o All messages from the system are displayed in uppercase characters on all consoles including CRTs. Operator input is in uppercase on the CRT consoles and in lowercase on all others.
- o The maximum line length is 80 characters.
- o Most output messages that require a response from the operator terminate without a carriage return. This allows the response to appear on the same line as the original message.

DEVICE TYPES

Descriptions of the device types as coded in several system messages are listed in Appendix C.

VARIABLES

Variable values for both operator input and system output messages are shown in the messages as lowercase alphabetic characters. Nonstandard variable designators are defined in the explanation of the applicable message. Standard variable designators are defined in the following list and are not defined with individual messages.

<u>Abbreviation</u>	<u>Meaning</u>
aa	Activity Number
ccc or cc	Channel (PUB) Number
dd	Device Number
dd	Day
fc	File Code
i	Input/output controller number
id	Identification
mm	Month
rrrr or rrrrr	Reel Number
sssss	Job Sequence Number (SNUMB)
sid	Station Identification
tt:tt	Time in Hours and Minutes
tt.ttt	Time in Hours and Thousandths of an Hour
ttt	Time in Thousandths of an Hour
ttt,t.tt, or tt.tt	Time in Hours and Hundredths of an Hour
uuu	Job Urgency
xyyzz	Alternate iccdd
yy	Year
FNP-n	Front-End Network Processor Number

STANDARD ABBREVIATIONS

The following abbreviations are used in various messages throughout the manual.

<u>Abbreviation</u>	<u>Meaning</u>
ATT	Attention Major Status
BSY	Channel Busy Major Status
CH	Channel
CIU	Character Interface Unit
CP	Card Punch
CR	Card Reader
DLT	Deleted
DMT	Dismount
DP	Disk Pack Subsystem
DS	Disk Subsystem
FMS	File Management Supervisor
FYI	For Your Information
IOM	Input/Output Multiplexer: includes (i.e., IMX, IMU, IOM, IOX, IOP, CBU, CAU)
IOS	Input/Output Supervisor
KPX	Known Process Index
LRT	Data Alert Major Status
MNT	Mount
MT	Magnetic Tape Subsystem
PN	Card Punch
PR	Printer Subsystem
PRC	Processor
PRLC	Print Train Sector Loader
PUB	Peripheral Unit Buffer
RDY	Ready
SCC	System Control Center
SCT	System Configuration Table
TPAP	Transaction Processing Application Program
TPE	Transaction Processing Executive
TSS	Time Sharing System
TY	Console



SECTION 2

OPERATOR INPUT MESSAGES

Operator input messages to the system are initiated by pressing the request button on the console. The system replies with three question marks (???) , after which one of the messages described in this section may be entered.

The one-character optional operator replies to system initiated messages are preceded by a single question mark. The option is to be entered without a space before the entry. These system messages will be repeated every 30 seconds until a reply is made.

The procedure for operator reply and input is as follows:

1. Once the operator has initiated a request or the system has issued a message requiring a response, a programmed READ command is issued to the console and the keyboard is enabled.
2. The operator enters the input verb or required response, then presses the end-of-message button. The console is then disabled for operator input.
3. To correct an incorrect input to the console before pressing the end-of-message button, the operator presses the operator error button, then enters the correct response, followed by an end-of-message.

If the operator presses end-of-message before detecting an incorrect reply and the reply is acceptable to the system, it will be interpreted by the system as being a valid response.

- NOTES:
1. The request button on the CSU6001/6002 consoles is labeled REQ. The request function on the CSU6601 console is the carriage return key.
 2. The end-of-message button on the CSU6001/6002 consoles is labeled EOM. The end-of-message function on the CSU6601 console is the carriage return key.
 3. The operator error button on the CSU6601/6602 consoles is labeled OPR ERR. The operator error function on the CSU6601 console is enabled by pressing Control X.

SYSTEM VERBS

A significant element of each Input Message is the VERB. This verb can be modified by certain "arguments", "control fields", and "options". A list which contains current system verbs as well as those that have been recently replaced is as follows:

ABORT	FASTBT	LOOK	STMPVL
ACALL	FMS	LSTAL	SYSOP
ACCEPT		LSTCR	SYSOUT
ACCNT	GENSYS	LSTCT	
ACHNL	GRANT	LSTPR	TAPFG
ACSTAT		LSTQ	TCALL
ADDVL		LSTRT	TCLASS
APRIOR	HAPS		TEST
ASGN	HIST	MASFG	TIME
ASGNC	HISTRE	MC	TOGCOL
ASGNI	HOLD	MOVE	TP
ASGNP		MSG	TRACE
AUDIT		MVALL	TSS
	IDENT		TS8
	IGNORE	NAME	TYPFG
BOOT	IMCV	NCALL	
BPRIOR	IMCV7	NOI	UDTAPE
	IMCV9	NOPRO	ULSAC
			UNAME
CANCL	JCHGCY	PPS	UNED
CHANGE	JCLASS	PSTATS	UNJOUT
CHANGF	JCLGEN	PTRAIN	URGC
COPY	JDELCY	PURGE	
CSTATS	JEND		VFC
	JLIST		VIDEO
	JLSTCY	REDRC	VOCAB
DATE	JORDER	REMOV	VOCABU
DCHNL	JOUST	REPRO	VOID
DDTAPE	JPURGE	RLSE	
DEDCAT	JRERUN	RLSEC	
DELETE	JRUN	RLSEI	WORKST
DELEVL	JSCHED	RLSEP	
DLINK	JSTRT	RMIST	
DUMP		RUN	
DUPBAD			
DUPER	LAUTO	SECUR	
	LDTAPE	SNAP	
	LIMIT	SNUMB	
ECOL	LINES	SPAWN	
ELAN	LIST	SRM	
ESTATS	LISVL	SSA	
EXCHG	LISVS	STATS	
	LKRMT		
	LKSAC		

REMOTE MAINTENANCE CONSOLE VERBS

A designated remote maintenance console is restricted to the use of only the following verbs. All other verbs in this section are limited to the "local" console.

CSTATS	LSTCR	SNUMB
DLINK	LSTCT	STATS
ESTATS	LSTPR	SYSOUT
HIST	LSTQ	TAPFG
JLIST	LSTRE	TEST
LINES	LSTRT	TYPFG
LIST	LSTWT	VOCAB
LOOK	MASFG	VOCABU

All other console verbs entered from a remote console channel will be rejected with the message:

DOES NOT APPLY TO THE SYSTEM REMOTE MAINTENANCE CONSOLE

The remote console may use the restricted verbs (other than the above) after the local console issues the #RELinquit verb. The #REL verb is described in this section.

Console Verbs Limitations

A number of console verbs related to remote maintenance which are intercepted by and responded to the console channel adapter. These verbs all begin with the pound sign (#) character, are found in the Operator Input Message, and are listed alphabetically by the first character following the # sign. All operator output messages relative to remote maintenance input messages are prefixed and appended with the same # sign in order to distinguish them from GCOS messages. These verbs are not seen by GCOS and are not valid on either DPS 88 or DPS 90 systems.

A
INPUT MESSAGES

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INPUT MESSAGES

ABORT sssss option

GPOP Message. Operator requests that a specific job be terminated, in accordance with the specific option specified. The "option" entry can be one of the following.

<u>Option</u>	<u>Meaning</u>
DUMP or D	Produce a slave dump, regardless of user-specified options. The dump will not be made if the job is waiting for memory in a new activity.
NODUMP or ND	No dump required
NOSYOT or NS	No dump required <u>and</u> no SYSOUT to be produced.
SCHED or S	Release job from System Scheduler. If the job was already executed and has a finished or save status, or if job is already in execution, it will not be terminated.
icddd	The input/output controller, channel, and device numbers are entered to terminate a particular IMCV job. This option is valid only if the sssss entry is \$IMCV.
<i>WK</i> 6	Produce a slave dump according to the option specified on the \$ EXECUTE statement.
TYPE2 or T2	Abort a job even if it is executing in a TYPE-2 critical section. This option may be used only in extreme cases, as it may cause GCOS crashes or process disasters.

- NOTES: 1. Use the verb PPS TERM when aborting the Page Processing System.
2. If the sssss value is \$IMCV, the only option available is icddd. For ABORT \$IMCV icddd, the following error messages are possible:

ILLEGAL IOM # i
ILLEGAL CHANNEL # cc
NO SET FOR icddd
ILLEGAL DEVICE # dd
icddd NOT IMCVs
\$IMCV NOT KNOWN

3. If sssss is blank, a tutorial message is issued.

A

INPUT MESSAGES

A

INPUT MESSAGES

System Replies Possible:

S#sssss NOT IN QUEUE
SYSTEM IS BUSY, PLEASE RETRY { NO DUMP }
*ABT sssss-aa tt.ttt OPER REQ ABORT { DUMP }
 { blank }

*DLT S#sssss (X1)
INVALID SNUMB
ILLEGAL OPTION
sssss NOT FOUND
sssss IS SHARED SOFTWARE - CAN'T T2

Also, refer to verb NOPRO.

ACALL { FNP-n }
 { blank }

n - FNP number (0-7)

GPOP Message. Operator requests that previous NCALL or TCALL entries be cancelled and that Front-end Network Processor (FNP) n start accepting calls. If FNP-n is not specified, all processors configured are affected.

System Replies Possible:

FNP NOT AVAILABLE

BMX BUSY, TRY AGAIN

{A}
CORRECT FORM OF REQUEST IS "{N} CALL FNP-# #<n OR TCALL SID OR TCALL TID"
 {T}

n = total number of FNPs configured on the system.

INVALID LINE#

FNP-n RELEASED

NOTE: If an FNP bootload is in progress at the time the request is entered and the request applies to the FNP, or the FNP-n is not specified, the bootload terminates immediately.

A

INPUT MESSAGES

A

INPUT MESSAGES

ACCEPT nn

IOS Message. Operator requests that record type nn be buffered and written to the statistical collection file.

nn - A one- or two-digit decimal number corresponding to a statistical collection record type.

System Replies Possible:

nn INPUT ILLEGAL (ILLEGAL RECORD TYPE)
nn DISPOSITION CAN'T BE CHANGED

ACCNT

GPOP Message. Operator requests that statistical collection tapes be exchanged. The old statistical collection file is to be closed and a new one opened, which causes an end-of-reel (EOR) label to be written on the current tape and Beginning Tape Label on an alternate reel.

System Replies Possible:

ALTERNATE ACCT FILEn PURGE NOT COMPLETED, ACCNT REQUEST DENIED
S#Assss ACCOUNTING FILE PURGE SUCCESSFUL/UNSUCCESSFUL
*ACCT FILE COMPLETED....
*ALTERNATE ACCT FILEn PURGE NOT COMPLETED, WAIT OR IGNORE

ACHNL icc

IOS Message. Operator requests activation of a channel (PUB) previously deactivated. (Refer to DCHNL icc.)

System Replies Possible: If reactivation cannot be effected, one of the following denial responses will be output at the console.

*RE ACHNL icc FNP CHANNEL - INVALID INPUT
Operator requested reactivation of a PUB that is on an FNP device.

*RE ACHNL icc INVALID REQUEST DENIED
Operator requested reactivation of a PUB that was not configured.

*RE ACHNL icc SUSPENDED REQUEST DENIED
Operator requested reactivation of a PUB that was suspended.

A
INPUT MESSAGES

A
INPUT MESSAGES

When a reactivation request was successfully executed, the system prints the following reply.

*RE ACHNL icc REACTIVATED AT tt.ttt

ADDVL

File Management Supervisor Message. This allows the console operator to add a volume to a volume set.

ADDVL volset name -SER volume id

Rules:

1. The volume to be added must be a structured RMVBL volume, and may not have a Pack Master Catalog. (A Pack Master Catalog can be deleted by initializing the volume.)
2. VSMC or catalog volumes can not be added to a volume set.

System Possible Replies: None.

ACSTAT

GPOP Message. Operator requests that the present disposition for all statistical collection file record types be displayed on the system console.

System Replies Possible: *ACCNT STATUS*, followed by the current disposition for each record type.

nn - Statistical collection record type
A - Record is currently being buffered
I - Record is currently not being buffered
CHG - Present disposition can be changed
NCHG - Present disposition cannot be changed

A
INPUT MESSAGES

A
INPUT MESSAGES

#ALLOW MAINTENANCE (#ALL MAI)

Remote Maintenance Interface Command. This command verb can only be entered at the local console and must be entered prior to a request from a remote console for #ENA MAI, ESC,CNT-F, or ESC,CNT-R, and in the case of the IMU, #ENA MCA.

System Replies Possible:

#INVALID COMMAND# Transmitted to the local console if the ELS DPU is not operational.

APRIOR sssss

GPOP Message. Operator requests that a class A priority be assigned to the indicated job.

System Replies Possible: None.

APRIOR DELET sssss

GPOP Message. Operator requests that the class A priority be removed from the specified job.

System Replies Possible: None.

{device name}
ASGN {icdd } [-INIT]

GPOP Message. Operator requests assignment of a peripheral device to the specified input/output controller channel.

The -INIT option provides for a secondary initialization of a permanent disk device without having to boot the system.

System Replies Possible:

- o If the printer is available at the time the ASGN is requested, it is assigned.

A

INPUT MESSAGES

A

INPUT MESSAGES

- o If assigning a PRT303, the SCT is checked for a train identifier and, if it is present, an attempt is made to have the image of that train loaded. If a train identifier is not present in the SCT, the operator is notified that a train image must be loaded via the "PTRAIN" verb before the printer can be assigned.
- o If the ASGN request is for a PRT401/402 or PRU1100/1200/1600, an attempt is made to load the train image that matches the train currently mounted on the printer. If the train image is successfully loaded, the operator is asked which "VFC" image is to be loaded.

*icddd VFC?

Respond with one of the following replies.

EOM - the standard GCOS VFC image will be loaded.

NONE - If a VFC image was already loaded in the printer, no action will be taken. If a VFC image is not currently loaded, the VFC standard bit and the VFC sector field in the SCT will be cleared, which will force the next user of the printer to load the appropriate VFC image. Printer will be assigned.

NAME - Loading of the specified VFC will be attempted.

The following system error messages are possible.

```
{ IOM# INVLD }
{ IOM RLSL  }
{ CH# INVLD } Applicable to all devices
{ DEV# INVLD }
CH NOT CONFIGURED
CANT ASGN - CANT BLD TABLE
PTRAIN THEN ASGN
IL VFC NAME
```

A
INPUT MESSAGES

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INPUT MESSAGES

```
*{ iccdd }          { TRAIN } { name      }
  { sssss } RLSED  CHECKSUM ERROR  { VFC   } { identifier }
                                     { block no. }

*{ iccdd }          { identifier }
  { sssss } RLSED  { name          } NOT ON CATALOG

*{ iccdd }
  { sssss } RLSED  SECTOR# nnnnnn  INVALID

*{ iccdd }
  { sssss } RLSED  NAME NOT FOUND

*{ iccdd }
  { sssss } RLSED  BUSY-DEV RLS

*{ iccdd }
  { sssss } RLSED  USE ACHNL-THEN ASGN

*{ iccdd }
  { sssss } RLSED  DEVICE ALREADY ASSIGNED

*{ iccdd }
  { sssss } RLSED  CANT ASSIGN THIS DEVICE TYPE

*{ iccdd }
  { sssss } RLSED  CANT ASGN-CHNL IS SUSPENDED

*{ iccdd }
  { sssss } RLSED  CANT ASGN-CNTLER

*{ iccdd }
  { sssss } RLSED  SUBUNIT INVALID OR NOT SPECIFIED (for SR3000 only)

*{ iccdd }
  { sssss } RLSED  DEVICE ASSIGN

*{ iccdd }          { TRAIN }
  { sssss } RLSED  { VFC   } ILLEGAL REQUEST FOR THIS PRINTER
                                     TYPE

*{ iccdd }          { name      }
  { sssss } RLSED  { identifier } I/O ERROR ON CATALOG/IMAGE
                                     FILE
```

A
INPUT MESSAGES

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INPUT MESSAGES

```
*{ iccdd }           { TRAIN }  
{ sssss } RLSED   ERROR ON { VFC   } LOAD
```

```
*{ iccdd }  
{ sssss } RLSED   TRAIN MOUNTED IS xxxxxx REQUESTED ID WAS  
          yyyyyy
```

```
*{ iccdd }  
{ sssss } RLSED   I/O ERROR ON READ STATUS COMMAND  
          xxxxxx - Train identification mounted on this device  
          yyyyyy - Identification requested for the device iccdd
```

If an error occurs while the operator attempts to assign a structured mass storage device, the system outputs the following message.

POP2 > CANT ASGN - xxxxxx ERROR IN BLDG TABLE

xxxxxx - Error condition as follows:

- NOTNPS - The pack label and the SCT do not agree that the device is an NPS-shared device.
- SEEKAD - An invalid seek address was generated during available space table initialization.
- STATUS - An input/output error was encountered.
- CHKSUM - A bad checksum occurred on either the pack label or the device's available space table.
- TBLSIZ - The amount of memory reserved for the available space table was inadequate; normally because the pack allocation unit size was smaller than the size defined on the \$ IOM statement.
- NSTRUC - A non-structured pack is mounted on a spindle configured as permanent.

A

INPUT MESSAGES

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INPUT MESSAGES

ASTIM - The available space table image on a device has a bad checksum. A secondary initialization is required.

The -INIT option will be denied and the device left released if any temporary space is currently in use on the device. In this case, the following console message is issued:

```
POP2>{ xxx }CAN'T 2ND INIT, BUSY TEMP FILES
      {icddd}
```

xxx = device name

In a NIAST or CFF environment, the following console message indicates ALCD has denied the request because temporary space descriptors are present in the Temporary Descriptor Table (TDT):

```
POP2>{ xxx }CAN'T ASGN- BZ TMP ERR IN BLDG TABLE
      {icddd}
```

xxx = device name

Additional console messages that may be issued are as follows:

```
POP2>{ xxx } option - INVALID OPTION
      {icddd}
```

where:

xxx = device name
option = invalid option entry (i.e., misspelled -INIT)

If the device being assigned is an MTS500, MTU0400/MTU0500, or MTU0600, this entry results in the device density capability being obtained from the drive via a REQUEST DEVICE STATUS command (50 - octal). If the density capability cannot be obtained, the tape drive is not assigned and one of the following messages is displayed.

```
INOP - TAPE DEVICE IS INOPERABLE
icddd DEN MISMATCH - DEV RLSD
DEV # INVLD
```

A
INPUT MESSAGES

A
INPUT MESSAGES

If the tape drive is configured but not physically connected to the MPC, powered off, or has channel/IOP errors, the following message will be displayed.

```
POP2> xxxxxx CAN'T ASGN-DEVICE INOPERABLE S=ssssssssssss
where xxxxxx is the device address/name and ssssssssssss is
the status of the device returned via a REQS command.
```

ASGNC nnnnn bbbbb

GPOP Message. The operator requests the assignment of memory space to GCOS from TOLTS or memory previously released by the operator.

```
nnnnn - Starting address (modulo-1000 octal and must be even)
bbbbbb - Number of 512 decimal word (1000 octal must be even) blocks to be
         released
```

System Replies Possible: If the memory-assign mechanism is busy at the time of the request, the following message is printed:

```
RE ASGNC BUSY --TRY AGAIN
```

If each of the variable fields (nnnnn bbbbb) is not followed by a blank, the following message is printed:

```
RE ASGNC INVALID FORM
```

A
INPUT MESSAGES

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INPUT MESSAGES

If either of the variable fields is an odd number, the following message is printed:

RE ASGNC INVALID-MUST BE EVEN

If any of the variables (nnnnn bbbbb) are not octal digits, the following message is printed:

RE ASGNC INVALID-MUST BE OCTAL

If the last block of memory described in a ASGNC request is outside of configured memory, the following message is printed:

RE ASGNC INVALID-NOT CONFIGURED

If the above error conditions are passed, an attempt is made to satisfy the request. Regardless of the success of the attempt, the system will print to the console the same formatted data given by the ASGNC LIST verb to indicate which portion of the request was satisfied.

When pages have been given to memory test program and is not returned the following message is printed:

POP3-ASGNC REQUEST CONTAINED MAINTENANCE PAGES

When pages are not available to the operating system the following message is printed:

POP3-ASGNC REQUEST CONTAINED NON-EXISTENT PAGES

nnnnn - Non-existent pages. The ASGNC request contains pages not configured during Startup

ASGNC LIST

GPOP Message. This verb allows the operator to determine which areas of memory have been released.

System Replies Possible:

RE RLSEC - JOB CAN'T SWAP
RE RLSEC - SWAP IN PROGRESS
RE RLSEC - WS #1 PAGE IN RANGE

A
INPUT MESSAGES

A
INPUT MESSAGES

(followed by)

```
RLSEC LIST
(HCM) 00000 0xxxx
RLSEC xxxxx xxxxx
"      "      "
"      "      "
```

```
RLSEC LIST -CONTINUED-
RLSEC xxxxx xxxxx
```

where:

- JOB CAN'T SWAP - This memory area belongs to a job that cannot swap. This may be a temporary condition.
 - SWAP IN PROGRESS - This memory area is currently occupied by a program and an unsatisfied RLSEC request is waiting for this program to swap out so that release processing can continue.
 - WS #1 PAGE IN RANGE - Indicates this memory page belongs to Working Space Quarter #1 (HCM, I/O buffer, hardware parameter stack, etc.) and cannot swap. This may be a temporary condition.
- xxxxx - Memory address (modulo-512 decimal)
- (HCM) - Memory is in use by GCOS
- RLSEC - Released memory range

ASGNI n

n - 0, 1, 2, or 3

IOS Message. Operator requests logical assignment of input/output controller n to the system.

A

INPUT MESSAGES

A

INPUT MESSAGES

For information concerning operator actions necessary before assigning components to the system, refer to one of the following manuals:

GCOS 8 OS System Reconfiguration Guide For DPS 90
GCOS 8 OS System Reconfiguration Guide For DPS 88
GCOS 8 OS System Reconfiguration Guide For DPS 8

System Replies Possible: If the request can be honored, the following message is output:

*IOM n IS ASSIGNED

If the request cannot be honored, one of the following replies is made:

CAN'T ASGNI n -- NOT CONFIGURED (IOM n was not configured in Startup)
CAN'T ASGNI n -- INPUT INVALID (IOM n is not in 0--3 range)
CAN'T ASGNI n -- SCU IN MANUAL
CAN'T ASGNI n -- ALREADY ACTIVE

ASGNP p

GPOP Message. Operator requests that processor be assigned to the system.

p - To simplify processing, the ASGNP/RLSEP console verbs may specify either a processor number or a port number, providing no ambiguity exists between the processor number and a port number. The ASGNP/RLSEP module (IOS2) first examines the configuration for a port that matches the input argument to which a processor is connected. If one is found, the argument is assumed to be a port number. If no such port is located, the configuration is examined for a processor number matching the argument. If found, the argument is assumed to be a processor number. If neither a port number nor a processor number matches the assignment, an error response is displayed on the console.

For information concerning operator actions necessary before assigning components to the system, refer to one of the following manuals:

GCOS 8 OS System Reconfiguration Guide For DPS 90
GCOS 8 OS System Reconfiguration Guide For DPS 88
GCOS 8 OS System Reconfiguration Guide For DPS 8

A
INPUT MESSAGES

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INPUT MESSAGES

System Replies Possible: If the request can be honored, the following message will be printed:

*PROC p IS ASSIGNED

If the request cannot be honored, one of the following replies will be made:

- *CANT ASGNP p -ALREADY DONE - The processor was not released.
- *CANT ASGNP p -BUSY - The processor is unassignable or an ASGNP/RLSEP request is being executed.
- *CANT ASGNP p -INPUT INVALID - The assign request contained an error.
- *CANT ASGNP p NOT CONFIGURED - The specified processor is not configured in the system.
- *CANT ASGNP p -REQUEST ACTIV - Duplicate previous request outstanding.
- *CANT ASGNP p -SCU IN MANUAL - The SCU Program/Manual switch is in manual mode.
- *CANT ASGNP p -UNRESPONSIVE - The processor does not respond to requests.
- *PROC p NO RESPONSE - The processor port is inactive; possibly released at startup time.

ASGNP p TEST

p - Port assignment of processor to be assigned.

GPOP Message. Operator requests that a processor, which was offline, be assigned for online testing.

NOTE: The "TEST" request does not apply to DPS 88 processors.

Before making the ASGNP p TEST request, and ensuring that the processor power is on, the operator must take the following steps:

1. Push the INITIALIZE/CLEAR button on that processor's configuration panel.
2. Turn on the PORT ENABLE and INITIALIZE ENABLE switches on that processor.

A

INPUT MESSAGES

A

INPUT MESSAGES

3. Ensure that the processor number switches agree with the \$ MCT statement.

Following the ASGNP p TEST request, dispatches of that processor will be restricted to the T&D processor test programs.

When the online testing was completed, the processor can be restored to full usage via the ASGNP p request, or it can be released for additional maintenance via the RLSEP p request.

System Replies Possible: If the request can be honored, the following message will be output:

*PROC p IS ASSIGNED

If the request cannot be honored, one of the following replies will be made:

*CANT ASGNP p -INPUT INVALID - The assign request contained an error.

*CANT ASGNP p NOT CONFIGURED - The specified processor is not configured in the system.

*CANT ASGNP p -REQUEST ACTIV - Duplicate previous request outstanding.

*PROC p NO RESPONSE - The processor port is inactive; possibly released at startup time.

AUDIT

Statistical Collection File (SCF) Message. Provides installations with an audit trail, maintained on the system SCF, of significant events that reflect system status and performance (e.g., hardware malfunctions). A type 12 record is created on the SCF.

System Replies Possible: When ready for input, * ENTER DATA is entered on the console. The operator can then enter SCF record (72 characters maximum). Input text is written verbatim to the system SCF.

B
INPUT MESSAGES

B
INPUT MESSAGES

BOOT

Startup Message. Operator requests a reboot of the system when GCOS is in memory. If initialization is successful and a \$ AUTOLD statement was in the Startup deck from the previous boot, a BOOT SOURCE: CARDS, AUTO OR REPL? is issued. If no \$ AUTOLD statement is used, the Startup deck must be read into reboot.

NOTE: No other text is permitted with this verb; if text is encountered, the following message is issued:

BOOT: NO INPUT OPTIONS ALLOWED.

BOOT SOURCE: AUTO OR REPL?

Startup Message. Following a system abort (and dump) the operator is asked to specify whether the source for rebooting the system is to be from the AUTOLOAD file or whether sections of the startup job stream are to be selectively replaced.

NOTE: This message does not apply to DPS 88 systems.

Operator Action:

Enter AUTO - The Startup program residing on the AUTOLOAD file is to be used to effect the bootload.

Enter REPL - The operator can selectively replace one or more sections of the Startup program that exists on the AUTOLOAD file. The section(s) must be entered in their entirety via the card reader. The entire section is written to the AUTOLD file to overlay (replace) the existing section. (Refer to the GCOS 8 OS System Startup manual for additional information.)

If, during the restart procedure, an error occurs that prevents rebooting the system from the Startup program and job stream that reside on the AUTOLOAD file, an informational message is issued to the console. The message directs the operator to reboot the system using the storage medium on which the Startup program and job stream originally resided.

- o If the Startup program originally resided on magnetic tape, the console message AUTOLOAD ABORT, BOOT FROM TAPE is issued.

B
INPUT MESSAGES

B
INPUT MESSAGES

BPRIOR DELET sssss

GPOP Message. Operator requests removal of the B priority status from the specified job. The B priority status can be restored by changing the frequency ratio only or the frequency ratio and the time quantum.

System Replies Possible: If the indicated SNUMB does not exist or if the specified job was not assigned a class B priority at startup, the following message is printed.

*BPRIOR (text repeated) REQUESTED DENIED

BPRIOR sssss TnnRmm

GPOP Message. Operator requests change in both time and ratio for a priority B job. (Refer to messages BPRIOR sssss Tnn and BPRIOR sssss Rmm.)

BPRIOR sssss Tnn

GPOP Message. Operator requests a change in the time quantum in the timer for priority B job sssss. One unit of time is 32 milliseconds.

nn - One or two digits indicating the number of time units (32 milliseconds each) for the time quantum desired.

System Replies Possible: If the indicated SNUMB does not exist or if the specified job was not assigned a class B priority at startup, the following message is printed.

*BPRIOR (text repeated) REQUEST DENIED

When the SNUMB is known but the SSA may not be accessed due to system activity, the following message will be printed.

*BPRIOR (text repeated) request denied SSA busy - try again.

B
INPUT MESSAGES

B
INPUT MESSAGES

BPRIOR sssss Rmm

GPOP Message. Operator requests a change in the dispatch ratio for a class B priority job. The dispatch ratio is the number of dispatches to nonpriority jobs for each time quantum used by the priority B job. A dispatch ratio of 1 is the highest possible dispatch frequency for a priority B job.

mm - One or two digits indicating the requested dispatch ratio.

System Replies Possible: If the indicated SNUMB does not exist or if the specified job was not assigned a class B priority at startup, the following message is printed.

*BPRIOR (text repeated) REQUEST DENIED

When the SNUMB is known but the SSA may not be accessed due to system activity, the following message will be printed.

*BPRIOR (text repeated) request denied SSA busy - try again.

C
INPUT MESSAGES

C
INPUT MESSAGES

CANCL

SYSOUT Message. The CANCL verb deletes an entry from the Job Output Specials Table. CANCL has no effect on jobs to which the "special" was already applied. This verb must precede the verbs COPY, NOPRO, PURGE, REDRC, and REPRO. These secondary verbs may be followed with the entry of certain control fields and options.

If the sequence of verbs "CANCL COPY" or "CANCL PURGE" is used without a control field, the system interprets this as a request to dismount the current copy or purge tape. If the COPY or PURGE verb being cancelled did not contain a control field, the COPY or PURGE will continue on a new reel.

An example of the CANCL verb usage is:

CANCL NOPRO ONLPNC

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MPOPF INFO (001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE REENTER
MPOPF INFO (002) - ERROR DELETING CREATED SEGMENT
MPOPF INFO (003) - ILLEGAL CANCL REQUEST - PLEASE REENTER
MPOPF INFO (005) - ILLEGAL OPTION IN FIRST CONTROL FIELD
MPOPF INFO (007) - CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MPOPF INFO (008) - ILLEGAL SYSOUT VERB ENCOUNTERED
MPOPF INFO (012) - GEOT QUEUE FULL, PLEASE TRY LATER
xxxxxx REQUEST ALREADY OUTSTANDING FROM THIS CONSOLE

Control field for output types are:

ALL - All print and punch
APR - ASCII print
APN - ASCII punch
BPR - BCD print
BPN - BCD punch
PRT - All print
PNC - All punch
ASC - All ASCII print and punch
BCD - All BCD print and punch

C
INPUT MESSAGES

C
INPUT MESSAGES

A syntactical display of valid combinations is shown in Figure 2-1.

The destination portion of the control field may be:

Txx - Remote ID
RMT - All remote
ONL - All online

-BLANKET or -B used to indicate all jobs in SYSOUT.

C
INPUT MESSAGES

C
INPUT MESSAGES

<u>VERB</u>	<u>VERB</u>	<u>OLD FIELD</u> <u>TYPE DEST</u>	<u>NEW FIELD</u> <u>TYPE DEST</u>
[[CANCLØ]] [[REMOVØ]]	REDRCØ	[[{APR}]] [[{Iid}]] [[{BPR}]] [[{RMT}]]Ø { [[{ONL}]] } { DEVdev }	[[{APR}]] [[{Iid}]] [[{SNB=SSSS}]] [[{BPR}]] [[{ONL}]] [[{SID=sid }]] { } [[{-BLANKET }]] { DEVdev }
[[CANCLØ]] [[REMOVØ]]	REDRCØ	[[{APN}]] [[{Iid}]] [[{BPN}]] [[{RMT}]]Ø { [[{ONL}]] } { DEVdev }	[[{APN}]] [[{Iid}]] [[{BPN}]] [[{ONL}]] [[{SNB=sssss}]] { } [[{SID=sid }]] { DEVdev } [[{-BLANKET }]]
[[CANCLØ]] [[REMOVØ]]	REDRCØ	[[{PRT}]] } [[{PNC}]] [[{Iid}]] [[{ASC}]] [[{RMT}]]Ø [[{BCD}]] [[{ONL}]] { } { DEVdev }	{ [[{Iid}]] } { [[{ONL}]] } [[{SNB=sssss}]] { } [[{SID=sid }]] { DEVdev } [[{-BLANKET }]]
[[CANCLØ]] [[REMOVØ]]	{COPY } {PURGE } Ø {REPRO } {NOPRO }	[[{ALL}]] } [[{APR}]] } [[{APN}]] } [[{BPR}]] [[{Iid}]] [[{BPN}]] [[{RMT}]] [[{PRT}]] [[{ONL}]] [[{PNC}]] } [[{ASC}]] } [[{BCD}]] } { } { DEVdev }	[[{SNB=sssss}]] [[{SID=sid }]] [[{-BLANKET }]]
		[optional] {select one}	

SNB/SID FIELD IS NOT VALID WITH CANCL

REPRO VERB IS NOT VALID WITH CANCL

VALID COMBINATIONS, VERBS/CONTROL FIELDS/OPTIONS FOR SYSOUT VERBS

Ø SPACE REQUIRED, ALL OTHERS CAN BE RUN TOGETHER

Figure 2-1. CANCL Syntactical Displays

C
INPUT MESSAGES

C
INPUT MESSAGES

CHANGE

Operator Interface Message. This verb modifies the contents of a specified location after a validity check of the contents was made.

CHANGE: ENTER (PXXX SSS, MXXX, H6XXX) OFFSET OLDVAL NEWVAL

where:

P - Process
M - Module
H6 - HCM segment
XXX - Process number (three digit maximum)
- Module number (identified via .ENTRY macro)
- Segment identification as defined in system linkage segment
SSS - Within the process PUSH segment, the index of the descriptor of the segment that is to be modified
OFFSET - Location within the segment or module that is to be modified
OLDVAL - Expected contents of OFFSET location
NEWVAL - New contents to replace OLDVAL

System Replies Possible:

**ILLEGAL P#, M#, OR H#
OFFSET FIELD MUST BE 6 CHAR OR LESS
**ILLEGAL OLD VALUE
**ILLEGAL NEW VALUE
**NOT IN CORE/SYSTEM
**INSUFFICIENT ARGUMENTS
OFFSET IS OUTSIDE SEGMENT
BAD DESCRIPTOR
ILLEGAL SEGMENT SELECTED

C
INPUT MESSAGES

C
INPUT MESSAGES

CHANGF

Operator Interface Message. This verb modifies the contents of a specified location. No content validity check is made.

CHANGF: ENTER (PXXX SSS, MXXX, H6XXX) OFFSET NEWVAL

where:

P - Process
M - Module
H6 - HCM segment
XXX - Process number (three digit maximum)
- Module number (identified via .ENTRY macro)
- Segment identification as defined in system linkage segment
SSS - Within the process PUSH segment, the index of the descriptor of the segment that is to be modified
OFFSET - Location within the segment or module that is to be modified
NEWVAL - New contents to replace previous contents

System Replies Possible:

**ILLEGAL P#, M#, or H#
OFFSET FIELD MUST BE 6 CHAR OR LESS
**ILLEGAL NEW VALUE
**NOT IN CORE/SYSTEM
**INSUFFICIENT ARGUMENTS
OFFSET IS OUTSIDE SEGMENT
BAD DESCRIPTOR
NOT ENOUGH ROOM IN PATCH TABLE
ILLEGAL SEGMENT SELECTED

C
INPUT MESSAGES

C
INPUT MESSAGES

COPY (cnt) (SNB=snumb or SID=nnnnnn)

SYSOUT Message. In this format the "cnt" represents the control field which specifies the output type and/or the destination. The COPY is not applied to any report that had a previous Special Request (e.g., REDRC, PURGE, COPY by ID or SNUMB, or JOUT DIRECT command).

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
ERROR RETRIEVING CONSOLE TEXT - PLEASE REENTER
ERROR DELETING CREATED SEGMENT
ILLEGAL OPTION IN FIRST CONTROL FIELD
CONFLICTING OPTIONS IN FIRST CONTROL FIELD
GEOT QUEUE FULL, PLEASE TRY LATER
ILLEGAL KEYWORD ON LAST OPTION
INVALID NUMBER
xxxxxx REQUEST ALREADY OUTSTANDING FROM THIS CONSOLE

NOTE: Refer to the syntactical display in Figure 2-1 for valid combinations.

CSTATS icc

GPOP Message. Operator requests status of a particular PUB (channel).

System Replies Possible:

*CHicc @tt.ttt #CON=nnnnnn #ERR=nnnnnn
bbbbbb (XBAR)(PSIA) (STPD)(RSRVD-T&D) (ITR)
*CHicc IOM INVALID
*CHicc CH# INVALID Error Messages
*CHicc NOT CONFIGURED

bbbbbb - BCI device type
#CON - Number of connects to this channel since last boot
#ERR - Number of errors on the channel since last boot
XBAR - Channel cross-barred
PSIA - PSIA channel
STPD - Channel stopped
RSRVD - T&D - Channel reserved for T&D
ITR - Online isolation test routines in progress

D
INPUT MESSAGES

D
INPUT MESSAGES

DATE mmddyy

GPOP Message. Operator sets the GCOS date (which can be different from System Controller Clock date).

System Replies Possible. No system reply occurs unless an error is detected.

DCHNL icc

IOS Message. Operator requests that the specified PUB (channel) be deactivated. (Refer to ACHNL icc.) This message is used by the operator when a crossbarred PUB is experiencing a high error rate, and the operator wants offline T&D performed on the PUB.

System Replies Possible: If deactivation cannot or should not be effected, the system replies with one of the following messages.

- *RE DCHNL icc FNP CHANNEL - INVALID INPUT
Operator requested deactivation of a PUB that is on an FNP device. Refer to RLSEI #4.
- *RE DCHNL icc INVALID REQUEST DENIED
Operator requested deactivation of a PUB that was not configured.
- *RE DCHNL icc NO XBAR EXISTS REQUEST DENIED
Operator requested deactivation of a non-crossbarred PUB.
- *RE DCHNL icc NO XBAR AVAILABLE REQUEST DENIED
Operator requested deactivation of a channel that is the last physical path remaining in the crossbarred configuration to a peripheral subsystem.
- *RE DCHNL icc SUSPENDED REQUEST DENIED
Operator requested deactivation of a PUB that was suspended.
- *RE DCHNL iccc SHARED ACCESS REQUESTED DENIED
Operator requested deactivation of a channel to a shared device/MPC.
- *RE DCHNL iccc IOM IS RELEASED REQUESTED DENIED
Operator requested deactivation of a channel on an input/output controller (IOM) that is released.
- *RE DCHNL iccc ALREADY INACTIVE, REQUEST DENIED
Operator requested deactivation of a channel already deactivated.

D
INPUT MESSAGES

D
INPUT MESSAGES

When a deactivation request was successfully executed, the system outputs the following reply.

*RE DCHNL icc DEACTIVATED AT tt.ttt

DDTAPE sssss ddd fc

Operator Interface Message. Operator requests that the magnetic tape device named ddd be assigned to the SNUMB sssss for the given file code (fc). Three constraints apply:

- ✓ 1. The device may not be assigned for files which request an alternate device in the program's \$ TAPE control statement.
- ✓ 2. The maximum number of tape devices that can be assigned at any one time is 30.
- ✓ 3. The device may be assigned only to jobs in execution.

System Replies Possible:

DDTAPE: SNUMB NOT FOUND

The snumb which was entered is incorrect or the job is not in execution.

DDTAPE: WRONG DEVICE NAME

The device name entered is not correct.

DDTAPE: DEVICE UNAVAILABLE

The device which was requested is not currently available.

DDTAPE: DEVICE NAME NOT FOUND

The device name table does not contain the device name entered with the DDTAPE verb.

DDTAPE: TABLE SIZE EXCEEDED

The table size of 30 entries was reached.

D
INPUT MESSAGES

D
INPUT MESSAGES

DDTAPE: ILLEGAL FORMAT - S/B SNUMB DEV-NAME FC

The system recognized an improper format; the format must be as indicated by the above message (snumb, device name, file code).

DDTAPE: INVALID FILE CODE

The system recognized an improper file code. This is commonly caused by a file code entry which was left blank or made zero.

DEDCAT xxx

Peripheral Allocator Message. Operator dedicates a peripheral device (xxx - device name).

System Replies Possible: No system reply occurs unless an error is detected. Appearance of one of the following messages indicates an error in the request, or that the request cannot be granted immediately.

MPOPE ERROR(102) - xxx NAME NOT FOUND
MPOPE ERROR(103) - xxx MULT. NAMED CANT DEDCAT

DELETE S#n

Common Files Facility (CFF) Message. In the multiple system cluster of a CFF environment, one or more of the systems may suffer a catastrophic failure (i.e., go down with out a terminating series of messages ending with the BOOT SOURCE: AUTO OR REPL? message). If at least one system remains up, the mass storage controller must not be rebooted, but the mass storage controller lock bytes must be reset for each of the systems that went down. Reset the lock bytes for a down system, whose system number is n, by issuing a DELETE S#n console message from the console of a surviving system. Issue this message before attempting startup for the down system.

System Replies Possible: None.

D
INPUT MESSAGES

D
INPUT MESSAGES

DELEVL

File Management Supervisor Message. This allows the console operator to delete a volume from a volume set.

DELEVL volset name -SER volume id

Rules:

1. VSMC or catalog volumes can not be deleted from a volume set.
2. This command does not check for the existence of files on the volume. It is the site's responsibility to ensure the volume is empty before deleting it from the volume set.

System Replies Possible: None.

#DISABLE INITIALIZE (#DIS INI)

Remote Maintenance Interface Command. This command verb can be entered only at the local console and will prevent an Initialize (ESC,CNT-I) and Boot (ESC,CNT-B) command from being entered at the remote console.

System Replies Possible: None.

#DISABLE MD (#DIS MD)

Remote Maintenance Interface Command. This command verb can be entered at the local console only and will cause the console, if it is a multi-drop master, to cease polling and revert to a "normal" (non multi-drop master) console. The multi-drop master console controls the maintenance interface of the Maintenance MCAs. This command must be entered at the current multi-drop master console prior to entering #ENA MD at the new multi-drop master console.

System Replies Possible:

MULTIDROP DISABLED # - Transmitted to the local console.

D
INPUT MESSAGES

D
INPUT MESSAGES

#DISABLE MONITOR (#DIS MON)

Remote Maintenance Interface Command. This command verb can be entered from the local console only, and is valid only when the channel adapter is configured for two channels. Local console monitoring of block data transfers (e.g., dumps, patches) to the remote console is disabled. Input from the remote console will continue to be sent to the local console.

System Replies Possible: None.

#DISABLE PRINTER (#DIS PRI)

This command verb can be entered at the local console only and is used to disable the slave printer from the local console.

System Replies Possible:

#PRINTER DISABLED# - Transmitted to the local console when the slave printer is disabled.

#DISABLE REMOTE (#DIS REM)

Remote Maintenance Interface Message. This command verb can be input from either the local or remote console. Any transaction that was in process on the remote channel is aborted.

System Replies Possible:

#REMOTE DISCONNECT# - Transmitted to both local and remote consoles.

DLINK iccdd

GPOP Message. Operator requests a console listing of the directory of unavailable llinks for the specified mass storage device.

System Replies Possible:

IOM INVALID
CH# INVALID
DEV INVALID
INPUT INVALID

D
INPUT MESSAGES

D
INPUT MESSAGES

DEVICE RLSED
NON-STRUCTURED DEVICE
CANT READ LLINK DIRECTORY
NO ENTRIES IN DIRECTORY

If any llinks are unavailable the following message is output:

LLINK# nnnnnn #LLINKS xxxxxx

In the message, nnnnnn is the starting llink number marked unavailable and xxxxxx is the number of llinks in the string. The maximum number of llink strings unavailable is 62 (decimal).

Mass Storage Responses:

AVAIL/nnnnn - Number of llinks available
-RESV/nnnnn - Number of llinks reserved
-DLINK/nnnnn- Number of llinks marked unavailable for allocation in the device llink directory
-DLINK/CLR - Directory cleared because at system rollcall time an error was encountered while processing the device llink directory
#PLS/nnnnn - Usage count

DUMP

Dump Message. Operator requests system to perform a master mode dump.

System Replies Possible:

***DUMP (O)PTION/(D)EFAULT/(N)ONE?
DUMP: NO OPTIONS ALLOWED

Enter O or EOM - permits the operator to select the various DUMP device options.

Enter D - indicates the .MDUMP module is to take the default options entered on the \$ ANSWER statement(s).

Enter N - discontinues the dump and allows the startup program to be read into the system.

D
INPUT MESSAGES

D
INPUT MESSAGES

DUPBAD iccdd

Mirrored Disk Message. The operator may choose to set one device of mirrored pair BAD. This may be done because of excessive transient errors or for any reason which suggests that device repair may be in order. The device is set BAD by the DUPBAD console verb.

iccdd = The device address of the specific device to be set BAD. A device can only be set BAD if both devices of the pair are currently GOOD and ASGN'd and not currently under repair (mirrored device copy utility) or busy with exception processing.

Following a successful DUPBAD, an automatic PSTATS is done on the device to show the current state of both devices.

The following console dialog may occur during DUPBAD processing.

Operator Input: DUPBAD iccdd

Console Replies (if device set BAD):

D#iccdd device type- device name(s)- status info
MIRRORED DEVICE nnn xxxxx (sss) - yyyy (ttt)

where: nnn - device name
xxxxx - Input/output controller/channel/device of Primary
yyyyy - Input/output controller/channel/device of Secondary
sss, ttt - GD for remaining good device
BAD for device set bad

NOTE: This is an automatic PSTATS of the device.

Console Replies: (if DUPBAD processing is denied):

iccdd NOT MIRRORED
iccdd ALREADY BAD
iccdd ALT DEVICE ALREADY BAD
iccdd BUSY, CANNOT SET BAD
iccdd ALT DEVICE BUSY, CAN'T SET BAD
iccdd MIRRORED DEVICE RELEASED

D
INPUT MESSAGES

D
INPUT MESSAGES

DUPER

Mirrored Disk Message. This command is used to invoke the copy/compare utility MDUPR. Once the utility is started, a series of console questions and answers is used to identify the task to be performed and certain characteristics of the run. The .MDUPR program cannot be invoked if mirrored devices are not currently configured.

The following console dialog may occur during a "device copy" execution of this utility.

Operator Input: DUPER

The console replies:

```
DUPER - NO MIRRORED DEVICES CONFIGURED
or
**** nnnnD **** *SRT nnnnD-01 @hh.hhh DUPR KPX kkk
**** nnnnD **** ENTER DUPER COMMAND:
```

Operator Input: COPY ddd -T t

The console replies:

```
**** nnnnD **** ENTER SOURCE DEVICE ICCDD :
```

Operator Input: iccdd

E
INPUT MESSAGES

E
INPUT MESSAGES

ECOL CSHSTS

ECOL Message. Operator queries processors to determine status of cache.

System Replies Possible: The status of the assigned processors is displayed and followed by a message as shown.

Example of display and message:

```
PRO # - 1 PORT 6 CSH1-ON, CSH2-ON, LUF-3 MR = 744003
PRO # - 0 PORT 7 CSH1-ON, CSH2-ON, LUF-3 MR = 744003
```

```
MR - Cache mode register (bits 18-35)
LUF - Lockup fault timer register
```

CACHE MONITORING BY - (ECOL or GCOS Operating System)

ECOL CSHMOF

ECOL Message. This verb allows the operator to disable the cache informative message:

```
*CACHE ERROR, FLT REG BITS 32-46 = xxxxxx, PORT n.
```

NOTE: ECOL default has this message disabled.

System Replies Possible:

```
ECOL REQUEST DENIED; INVALID
```

ECOL CSHMON

ECOL Message. This verb allows the operator to enable the cache informative message:

```
*CACHE ERROR, FLT REG BITS 32-46 = xxxxxx, PORT n.
```

NOTE: ECOL default has this message disabled.

E
INPUT MESSAGES

E
INPUT MESSAGES

System Replies Possible:

ECOL REQUEST DENIED; INVALID

NOTE: If the CSHON or CSHOF verb is entered when ECOL is not in execution, the status bits in .CRCMM+3 are altered without further action by ECOL. When ECOL is placed in execution, the cache status is then set to the requested status. (Refer to use of ECOL CSHSTS verb to obtain current status of cache memory.)

ECOL CSHOFn

n - 0-7

ECOL Message. This input allows the operator to disable cache on a specific processor port on SCU-0.

System Replies Possible: If the requested action was successfully completed, the following message is output:

****CACHE STATUS****

If cache is already disabled, the system responds with:

ECOL REQUEST DENIED; CSH DISABLED

If the request was improperly entered, the system responds with:

ECOL REQUEST DENIED; INVALID

NOTE: If the CSHON or CSHOF verb is entered when ECOL is not in execution, the status bits in .CRCMM+3 are altered without further action by ECOL. When ECOL is placed in execution, the cache status is then set to the requested status. (Refer to the use of ECOL CSHSTS verb to obtain current status of cache memory.)

E
INPUT MESSAGES

E
INPUT MESSAGES

ECOL CSHONn

n - 0-7

ECOL Message. This input allows the operator to enable cache on a specific processor port on SCU-0.

System Replies Possible: If the requested action was successfully completed, the following message is printed:

****CACHE STATUS****

If cache is already enabled, or partially enabled, the system responds with:

ECOL REQUEST DENIED; CSH ENABLED

To fully enable a partially enabled Cache:

1. Disable cache (ECOL CSHOFn)
2. Enable cache (ECOL CSHONn)

If the request was improperly entered, the system responds with:

ECOL REQUEST DENIED; INVALID

ECOL CSHSTS

ECOL Message. This verb allows the operator to determine if cache memory is enabled or disabled.

System Replies Possible: None.

ECOL DLYxx

ECOL Message. Allows installations to change the MME GEWAKE delay in ECOL, which governs the frequency of execution.

xx - One or two decimal digits that specify the delay in 0.1-minute increments

- 0 = Continuous execution with no delay
- 50 = Execute every 5 minutes (default)
- 63 = Execute every 6.3 minutes (maximum)

E
INPUT MESSAGES

E
INPUT MESSAGES

ECOL GPR (option)

ECOL Message. Operator requests system to take a specific action pertaining to Exception Processing records.

System Replies Possible:

option - L - Log Exception Processing records to the ECOL file.

DL - Disable logging of Exception Processing records, except for extended status records as defined by bits 15-17 of the Exception Processing communication word.

ECOL MPC ETxxxx

ECOL Message. Operator sets the ECOL MPC error threshold (also called abnormal statistics threshold).

xxxx - One to four decimal digits that specify the error threshold in 0.01 percent increments (range - 0001 to 4095).

- 0 - Disable all threshold reporting
- 1 - Enter threshold message if abnormal statistics rate is at least 0.01 percent (default)
- 4095 - Enter threshold message if abnormal statistics rate is at least 40.95 percent (maximum)

System Replies Possible: If no reply, the requested action was performed. If the request was improperly entered, the system responds with ECOL REQUEST DENIED, and the error threshold remains unchanged.

E
INPUT MESSAGES

E
INPUT MESSAGES

ECOL MPC SPxxxx

ECOL Message. Operator sets the ECOL MPC statistics sample period.

xxxx - One to four decimal digits that specify the sample period in 0.1-minute increments.

- 0 - Disable periodic sampling
- 600 - Sample every 60 minutes (default)
- 4095 - Sample every 6.8 hours (maximum)

To disable MPC statistics sampling, the operator enters ECOL MPC SP0.

To resume MPC statistics logging, the operator enters ECOL MPC SPxxxx.

To temporarily suspend MPC statistics sampling, the operator enters ECOL MPC SP0 after the ECOL program has started.

System Replies Possible: If no reply, the requested action was performed. If the request was input improperly formatted, the system responds ECOL REQUEST DENIED, and the sample period remains unchanged.

ECOL PTLOFn

n - 0 to 3

ECOL Message. This input allows the operator to disable PATROL on a specific processor (DPS 8/20 and 8/44 systems only).

System Replies Possible: If the requested action was successfully completed, the system responds with:

*PATROL DISABLED, PRC# n PORT# n

If PATROL is already disabled, the system responds with:

ECOL REQUEST DENIED; PTL DISABLED

E
INPUT MESSAGES

E
INPUT MESSAGES

If the request was improperly entered, the system responds with:

ECOL REQUEST DENIED; INVALID

NOTE: If the PTLONn or PTLOFn verb is entered when ECOL is not in execution, the status bits in .CRCMM are altered without further action by ECOL. When ECOL is placed in execution, the PATROL status is then set to the requested status.

ECOL PTLONc

n - 0 to 3

ECOL Message. This input allows the operator to enable PATROL on a specific processor (DPS 8/20 and 8/44 systems only).

System Replies Possible: If the requested action was successfully completed, the system will respond with:

*PATROL ENABLED, PRC# n PORT# n

If PATROL is already enabled, the system responds with:

ECOL REQUEST DENIED; PTL ENABLED

If the request was improperly entered, the system responds with:

ECOL REQUEST DENIED; INVALID

NOTE: If the PTLONn or PTLOFn verb is entered when ECOL is not in execution, the status bits in .CRCMM are altered without further action by ECOL. When ECOL is placed in execution, the PATROL status is then set to the requested status.

ECOL START

ECOL Message. Operator requests to start ECOL on a system that has the ECOL automatic start inhibited.

System Replies Possible: If there is no system reply, the requested action was performed. If no system problems occur, an informative ECOL executing message is issued.

E
INPUT MESSAGES

E
INPUT MESSAGES

If the ECOL Program is already in execution, the system responds:

ECOL REQUEST DENIED; IN EXECUTION

If the request was entered improperly, the system responds:

ECOL REQUEST DENIED; INVALID

ECOL STOP

ECOL Message. Operator requests to stop ECOL.

ECOL TCOMM

ECOL Message. Operator requests to see the ECOL communication region words.

System Replies Possible: When the requested action was completed, the system responds:

.CRCMM - xxxxxxxxxxxx x...x x...x x...x (octal)
.CREC1 - xxxxxxxxxxxx x...x x...x x...x (octal)

If the request was improperly entered, the system responds:

ECOL REQUEST DENIED; INVALID

ELAN

The ELAN verb invokes the Error Logging and Analysis (ELAN) report program which produces diagnostic reports on system operating conditions. If ELAN is present on the system, the following reports are output on the system printer:

- o System Summary Report - Overall view of system performance startup (i.e., system aborts, cache and other faults; processor System Control Unit (SCU) and memory faults; Exception Processing type 3 I/O data errors; tape and disk MPC statistical error counts).

E
INPUT MESSAGES

E
INPUT MESSAGES

- o Detailed Error Report - In depth report including failing elements definitions down to ORU level in some cases.

System Replies Possible:

ELAN NOT AVAILABLE - ELAN has not been installed.

ELAN REQUESTS PRIVITY - A normal privity request where \$ELAN rather than a numeric statement is given as the SNUMB. This message will be issued by the system upon start of ELAN report/analysis program. The operator response should be to RUN the program.

#ENABLE CHANNEL (#ENA CHA)

Remote Maintenance Interface Command. This command verb can be entered from either the local or remote console and is valid only when the channel adapter is configured for two channels and the #RELINQUISH command has been executed. This command returns the system to two channel operation. The #ENable Initialize state will be disabled if enabled.

System Replies Possible: None.

#ENABLE CONSOLE (#ENA CON)

Remote Maintenance Interface Command. This command verb can be entered from either the local or remote console and results in the Maintenance or Text mode of operation being disabled and a return to the normal operational state.

System Replies Possible:

TEXT DISABLED # - Transmitted to the local or remote console (when command entered at remote console) when exiting from Text Mode.

CONSOLE ENABLED # - Transmitted to the local or remote console (when command entered at remote console) when exiting from Maintenance Mode.

E
INPUT MESSAGES

E
INPUT MESSAGES

#ENABLE INITIALIZE (#ENA INI)

Remote Maintenance Interface Command. This command verb can be entered at the local console only and is required to permit an Initialize (ESC,CNT-I) and Boot (ESC,CNT-B) command from a remote console. The command will not be acknowledged unless the console is in Relinquish mode.

System Replies Possible:

#ILLEGAL COMMAND# - Transmitted to the local console if Relinquish mode not active.

#CMD REJECTED# - Transmitted to the remote console if an attempt to enter an ESC, CNT-I or ESC, CNT-B from the remote console is made without #Enable Initialize true.

#ENABLE MAINTENANCE (#ENA MAI)

Remote Maintenance Interface Command. This command verb can be entered from either the local or remote console. If #ALLOW MAIntenance permission was not granted by entering #ALL MAI at the local console or if the ELS/DPU is not operational, the command from the remote console will be rejected with a #ILLEGAL COMMAND# message. It places the channel in Maintenance Mode which provides Remote Maintenance Interface control of maintenance, diagnostic, test, and operator panels. Any system commands are executed between operator and Diagnostic Processor Unit (DPU) messages. Maintenance Mode is maintained until an #ENABLE CONSOLE command is sent from either the local or remote console.

System Replies Possible:

#ILLEGAL COMMAND# - Transmitted to the console through which the #ENABLE MAINTENANCE command was entered if the Diagnostic Processor Unit (DPU) is not operational

OR

- Transmitted to the remote console (when the command is entered from the remote console) if #ALLOW MAIntenance permission was not granted.

E
INPUT MESSAGES

E
INPUT MESSAGES

#ENABLE MCA # (#ENA MCA#)

Remote Maintenance Interface Command. This command verb may be entered at either the local or remote console and is the same as the #ENA MCA command except that the console will be "dedicated" to a specific MCA rather than "shared" with the rest of the console duties. This mode should be used only when conversing with the MCA(s) and the operating system is NOT running. If a connect I/O is received from the Operating System while in MCA dedicated mode, the console will revert to MCA "shared" mode.

System Replies Possible:

All messages as specified for #ENA MCA as well as the following:

MCAXX DEDICATED MODE # - Transmitted to either the local or remote console (if command entered at remote console) when entering dedicated mode. (xx is the MCA addressed).

#MCAXX NOT RESPONDING #
CONSOLE ENABLED # - Transmitted to either the local or remote console (if command entered at remote console) if MCAXX is not answering.

#ENABLE MCA (#ENA MCA)

Remote Maintenance Interface Command - This command verb may be entered at either the local or remote console and is used to establish a maintenance mode with the MCA(s). The command will be rejected when requested from a remote console and #ALL MAI permission was not granted at the local console. When the MCA is enabled, the console will be in a "shared" mode with the rest of the console duties. That is, the normal conversation with the Operating System (OS) will continue, with messages between the MCA and console, and the OS and console all being displayed. If necessary, the messages will be interleaved on the console display on a line-by-line basis. The OS may prevent the operator from entering messages to the MCA(s) with a "lock" command. The MCA(s) will remain "locked" until an 'unlock' command is received from the OS. This command is applicable to consoles configured on IMUs only.

E
INPUT MESSAGES

E
INPUT MESSAGES

System Replies Possible:

- # ILLEGAL COMMAND # - Transmitted to either the local or remote console (when command entered at the remote console) when it is not the master console or the MCA addressed is not valid.
- # MCA ACTIVE # - Transmitted to either the local or remote console (when command entered from the remote console) when enabled.
- # MCAxx NOT RESPONDING # - Transmitted to either the local or remote console (when command entered from the remote console) if the MCA is not answering.

#ENABLE MD (#ENA MD)

Remote Maintenance Interface Command. This command verb can be entered at the local console only and is used to establish the console at which it is entered as the multi-drop master console. (The multi-drop master console controls the maintenance interface of the MCA(s).) This command would be used when moving the multi-drop master from one console to another or if, for some reason, the MCA had not established a master multi-drop console.

A #DIS MD command must have been previously entered at the console that was the multi-drop master if one had been established. This command is applicable to consoles configured on IMUs only.

System Replies Possible:

- # MULTIDROP ENABLED # - Transmitted to local console when it has been made the multi-drop master.
- # MULTIDROP ACTIVE # - Transmitted to local console when the multi-drop is already active.
- <ENTER LOWEST MCA NUMBER> - Transmitted to local console when console not already configured by the MCA.
- <ENTER TOTAL NUMBER OF MCAs> - Transmitted to local console when console not already configured by the MCA.

E
INPUT MESSAGES

E
INPUT MESSAGES

- # MCAxx NOT RESPONDING #** - Transmitted periodically to local console if a configured MCA does not respond to the polling of the multi-drop master console. (xx is the address of the MCA.)

#ENABLE MONITOR (#ENA MON)

Remote Maintenance Interface Command. This command verb can be entered through the local console only, and is valid only when the channel adapter is configured for two channels. All traffic to and from the remote console is monitored on the local console.

System Replies Possible: None.

#ENABLE PRINTER (#ENA PRI)

This command verb can be entered at the local console only and is used to enable the slave printer on the local console in the event that it becomes inoperative.

System Replies Possible:

- # PRINTER ENABLED #** - Transmitted to the local console when the slave printer is enabled.

E
INPUT MESSAGES

E
INPUT MESSAGES

#ENABLE REMOTE (#ENA REM)

Remote Maintenance Interface Command. This command verb can only be input from the local console. It enables the remote console to allow operator input.

NOTE: On DPS 8/20 and 8/44 systems, once enabled, the remote console controls the system.

The message #RELINQUISH MODE REQUESTED# -- OK? (Y/N), requiring an operator response of Y or N, will be displayed when Remote permission is granted and the console is in single channel mode. .

System Replies Possible:

#REMOTE CONNECTED# - Transmitted to both local and remote consoles if the remote console is ready.

#REMOTE DISCONNECT# - Transmitted to the local console if the remote console or its channel is not ready.

#ENABLE TEXT (#ENA TEX)

Remote Maintenance Interface Command. This command verb can be entered from either the local or remote console, and provides console-to-console dialog between the local and remote consoles without affecting system operation. During text input, system output messages are held until carriage return, or until 10 seconds elapse with no input keystrokes. A right parenthesis ")" is output to both local and remote consoles indicating Remote Maintenance Interface readiness to accept input. At this point, and for each subsequent line of input, the ")" is located in column 1 if the local console is in control and column 2 if the remote console is in control.

System Replies Possible: None.

E
INPUT MESSAGES

E
INPUT MESSAGES

ESTATS {icddd }
ESTATS {device name}

GPOP Message. Operator requests an account of the various numbers of different types of errors the device has encountered.

System Replies Possible:

icddd device-type device-names (plus any other applicable status information in the following list)

#CON=cc - Number of connects to the device since it was last allocated

#ERR=ee - Number of errors on device since it was last allocated

ER=nn/64 - Number of errors in last 64 connects

#FLS=uu - Usage count

DLINK=ddd - Number of defective llinks

If the request cannot be honored because of an error condition, one of the following error messages is displayed at the console.

IOM# INVLD

CH# INVLD

DEV# INVLD

NAME NOT FOUND

E
INPUT MESSAGES

E
INPUT MESSAGES

EXCHG iccdd

GPOP Message. Operator requests that the specified device be exchanged for any other free device of the same type, and in the case of a tape handler exchange, the same density capabilities. A shared device cannot be exchanged.

System Replies Possible:

IOM INVALID
CH# INVALID
DEV INVALID
DEVICE NOT ASSIGNED
EXCHG NOT ALLOWED ON DEVICE
EXCHG REQUEST ALREADY ACTIVE
*UNABLE TO EXCHANGE iccdd
*UNABLE TO EX TRAIN iccdd

The following message appears when the actual exchange is performed.

*EXCHANGING xyyzz FOR iccdd, MOVE MEDIA

F
INPUT MESSAGES

F
INPUT MESSAGES

FASTBT {ON}
 {OFF}

GPOP Message. Operator requests that the automatic restart capability be turned either on or off. Once FASTBT is turned on it remains on (unless explicitly turned off) across an abort/reboot sequence. However, if a second system abort occurs within eight minutes of the first, FASTBT is turned off and the automatic fastboot will not occur.

System Replies Possible: If the request is accepted, no reply is made. If an error is encountered, a tutorial message is typed.

FMS ASG

File Management Supervisor (FMS) Message. The operator instructs FMS to update internal boot sequence numbers (.CRASN) for a specific system in a cluster. This function should be performed for each system in the cluster after a system starts up, fails, or any other copy of TSS is started or terminated.

FMS CT n

File Management Supervisor (FMS) Message. The n specifies how much (in %) of the FMS catalog area of a CAT disk device may be used for file content in FMS file create and restore.

n = 0 to 100.

System Replies Possible: None.

FMS DI

File Management Supervisor (FMS) Message. Displays the CT, DI, and ST thresholds.

System Replies Possible: None.

F
INPUT MESSAGES

F
INPUT MESSAGES

FMS DT n

File Management Supervisor (FMS) Message. The n specifies a descriptor threshold (maximum number of space descriptors) for a selected disk device in FMS file create and restore. When the threshold is exceeded, a different device is selected.

n = 0 to 127 (0 indicates unlimited number of descriptors)

FMS HIST

File Management Supervisor (FMS) Message. When catalog cache is enabled, this verb causes the following message to be printed on the console:

xxxxxx READS yyyyyy WRITES zzzzzz CACHE HITS

where:

xxxxxx - Number of physical catalog reads performed by FMS
yyyyyy - Number of physical catalog writes performed by FMS
zzzzzz - Number of physical reads that have been saved by having catalog cache configured.

System Replies Possible: None.

FMS HISTRE

File Management Supervisor (FMS) Message. This verb causes the same information that is produced by the FMS HIST verb to be output at the console. In addition, the FMS HISTRE verb zeros the three counters.

System Replies Possible: None.

FMS ST n

File Management Supervisor (FMS) Message. The n specifies a space threshold (% of size of selected device) for file content in FMS file create and restore. When the threshold is exceeded a different device is selected.

n = 1 to 100

System Replies Possible: None.

F
INPUT MESSAGES

F
INPUT MESSAGES

FMS S(TATS)

File Management Supervisor (FMS) Message. Operator requests a report of the status of files currently allocated by the FMS Executive (SNUMB-\$FSYS).

System Replies Possible:

FMS STATUS - \$FSYS NOT IN SYSTEM
FMS STATUS - \$FSYS SWAPPED
FMS STATUS - \$FSYS WAITING
FMS STATUS - \$FSYS TABLES NOT INTACT
FMS STATUS - # FILES # ALLOCATIONS

FMS TSN

File Management Supervisor (FMS) Message. Operator causes the boot sequence numbers for all systems and/or copies of TSS to be displayed, as shown in the following examples.

SYS# 0=52 TSS# 1=00 2=00 3=00 4=00
SYS# 1=15 TSS# 1=00 2=00 3=00 4=00

G
INPUT MESSAGES

G
INPUT MESSAGES

GRANT sssss

GPOP Message. Operator requests running of a specified privity job.

sssss - Job SNUMB

H
INPUT MESSAGES

H
INPUT MESSAGES

HIST

GPOP Message. Operator requests a list of the system counter totals on the console. The system issues a list of the system totals.

System Replies Possible: The system message is as follows:

SUMMARY AT 15.688 ON 08/04/83

62 # NEW JBS	5 REMOTE JBS	80 ACTIVITIES	
5294 MME GSYOT	1027 SYOT WRTS	990 GEOT RDS	1467 GEOT WRTS
26844 ONL LINES	0 ONL CARDS	0 RMT LINES	0 RMT CARDS
399 NO. SWAPS	4064 GCALL/LOD	390 JBS SWPED	
0 CKSUM ERR	66753 DSPATCHES	3882 TIMES IDL	8480 CRTESY CL
29996 CONNECTS	30106 INTERUPTS	64 GEPR CALL	0 TRAN TMNG

SYSTEM SUMMARY CONT.

8 LOST INT	44 RU PAG-IN	1 BS PAG-IN	0 PAGE-OUT
46 PAGE FLTS			

HIST system information.

- # NEW JBS - System counter of the total number of new jobs that have entered the system since the last Startup, or since the last operator use of the HISTRE console command.
- REMOTE JBS - System counter of the total number of remote jobs entered into the system since the last HISTRE command or system boot.
- ACTIVITIES - Total number of activities completed since the last HISTRE command or system boot.
- MME GSYOT - Number of user interfaces with GCOS master mode to transmit output records to the SYSOUT collector media for subsequent printing or punching.
- SYOT WRTS - Number of disk writes that were performed by the collector to SYSOUT.
- GEOT RDS - Number of disk reads that were performed by the SYSOUT disperser.
- GEOT WRTS - Number of printer, punch, or remote writes performed by the SYSOUT disperser.

H
INPUT MESSAGES

H
INPUT MESSAGES

- ONL LINES - Total number of ONLINE records printed since the last boot or use of the HISTRE command.
- ONL CARDS - Total number of ONLINE records punched since the last boot or use of the HISTRE command.
- RMT LINES - Total numbers of REMOTE records printed since the last boot or use of the HISTRE command.
- RMT CARDS - Total number of REMOTE records punched since the last boot or use of the HISTRE command.
- NO. SWAPS - Number of movements of jobs in and out of memory by GCOS to make room for higher priority jobs.
- GCALL/LOD - Number of requests for, and loads of, GCOS modules, SSAs, and slave programs, etc.
- JBS SWPED - Number of jobs swapped in and out of memory due to higher priority jobs.
- CKSUM ERR - Number of checksum errors detected since the last HISTRE or boot of the system.
- DSPATCHES - Number of selections of the highest priority programs that could make the most effective and immediate use of a processor and/or peripheral subsystem.
- TIMES IDL - Number of times any processor went idle.
- CRTESY CL - Number of courtesy calls (dispatches to user routines for more efficient I/O device servicing) since last HISTRE or boot of the system.
- CONNECTS - Number of processor requests to the input/output controller since the last HISTRE or boot of the system.
- INTERUPTS - Number of interrupts (signals from the input/output controller to the processor indicating a status change) since the last HISTRE or boot of the system.
- GEPR CALL - Number of calls by the Exception Processor to GEPR to handle peripheral error recovery.

H
INPUT MESSAGES

H
INPUT MESSAGES

- TRAN TMNG - Number of transfer timing alerts since the last HISTRE or boot of the system.
- LOST INT - Number of lost interrupts since the last HISTRE or boot of the system.
- RU PAG-IN - Number of Page In's from the original Run Unit.
- BS PAG-IN - Number of Page In's from Backing Store.
- PAGE-OUT - Number of Page Out's to Backing Store.
- PAGE-FLTS - Number of Page Faults (attempts to access a page not in memory during the processing of this program).

HISTRE

GPOP Message. Operator requests a list of the system counter totals on the console. System prints out a list of the system counter totals.

The system information provided is the same as that provided by the HIST verb. In addition, all the counters are reset to zero.

HOLD sssss

GPOP Message. Operator requests that a job not be run. The job is to be held in the system schedules until the operator requests that the job be deleted.

System Replies Possible:

- *S#sssss NOT IN QUEUE
- *S#sssss IS IN HOLD @tt.ttt

I
INPUT MESSAGES

I
INPUT MESSAGES

IDENT sssss

Operator Interface Message. Operator requests that the identification information from the \$ IDENT statement of the job with SNUMB sssss be printed at the console. The job must currently be in memory. The information is preceded by the heading: IDENT sssss

System Replies Possible:

SNUMB sssss NOT IN MEMORY - If the job is not known or not in memory.
INVALID SNUMB - If sssss is omitted or is all zeros.

IGNORE nn

IOS Message. Operator requests that record type nn not be written to the statistical collection file.

nn - A one- or two-digit decimal number corresponding to an accounting record type.

System Replies Possible:

nn INPUT ILLEGAL (ILLEGAL RECORD TYPE)
nn DISPOSITION CANT BE CHANGED

IMCV xxx
IMCV7 xxx
IMCV9 xxx

GPOP Message. Operator requests that an IMCV program be started. If neither name nor 7 or 9 is specified, the program may be started on any tape. A 9 indicates that a 9-track tape is required. A 7 indicates that a 7-track tape is required.

xxx - Device name

System Replies Possible: If the request is granted, the system responds:

*TAPES - IMCV MNT i-cc-dd
*OPTIONS

Mount the IMCV tape on the specified handler.

I
INPUT MESSAGES

I
INPUT MESSAGES

One of the following options is entered after the tape has been mounted:

- ALL System Input accepts all jobs on the IMCV.
- TAKEØsssssØsssssØ....sssssØ System Input accepts only those job SNUMBs
(sssss) indicated for execution. One to five
SNUMBs are allowed.
- STARTØsssssØ Beginning with the indicated SNUMB, System
Input accepts all SNUMBs to EOF.
- STARTØsssssØsssssØ Beginning with the first SNUMB, System Input
accepts all SNUMBs to, but not including, the
second.
- DELETEØsssssØsssssØ....sssssØ System Input accepts all job SNUMB (sssss) for
execution except those indicated. One to five
SNUMBs are allowed.

One of the following messages indicates an error in the request, or that the request cannot be granted immediately.

- *IMCV TAPE NOT AVAILABLE, TRY LATER
- *IMCV TAPE -DEVICE TYPE NOT TAPE
- *IMCV DEVICE INOPERABLE

J
INPUT MESSAGES

J
INPUT MESSAGES

JCHGCY sssss

System Scheduler Message. Operator wants the system to change the original cyclic job parameters for job sssss.

System Replies Possible:

sssss JCHGCY INPUT PARAMETERS (START DATE/TIME, TI, END DATE/TIME)?

The operator then enters the new parameters, in the same format as used on the \$ MSG3 statement. The parameter TI is equal to Time Interval.

The system validates the parameters and, if they are valid, changes the parameters for the job. If there are any invalid parameters (e.g., a date earlier than the current date, a 32 indicated for a date of the month), one of the following messages is output.

JCHGCY sssss HAS A BAD DATE

or

JCHGCY sssss HAS A BAD TI

The operator must then reenter the desired parameters correctly. If job sssss is in execution when the JCHGCY request is entered, the system replies:

CANNOT JCHGCY OR JDELCY A CYCLIC JOB IN EXECUTION

JCLASS {.NAME } xxx
 {nn }
 {MAX }
 {MIN }

System Scheduler Message. Operator informs the System Scheduler to change the maximum number of jobs that can be run for a particular class.

.NAME - Class name
nn - Class number
MAX - Changes (MAX or MIN) number of jobs set up on the
MIN \$ SSLOAD statement in the Startup program
xxx - Number of jobs. Cannot be greater than the numbers established by
the PSUM statement in the Startup program.

J
INPUT MESSAGES

J
INPUT MESSAGES

JCLGEN

File Management Supervisor Message. This verb will invoke the Batch Console Editor.

Operator Action: None.

JDELCY sssss

System Scheduler Message. Operator requests system to delete cyclic job sssss.

System Replies Possible: If job sssss is in execution when the JDELCY request is entered, the system replies:

CANNOT JCHGCV OR JDELCY A CYCLIC JOB IN EXECUTION

JEND {ALL }
 {.NAMES}
 {xx }

System Scheduler Message. Operator informs the System Scheduler to terminate scheduling activity for the job class as indicated by the option until a JSTRT request is received. A blank option is considered illegal and the operator is notified.

ALL - Stop all scheduling activity
.NAME - Stop scheduling jobs in class name .NAME
xx - Stop scheduling jobs in class number xx

JLIST class status

System Scheduler Message. Operator requests a list of jobs known to the System Scheduler.

class - Can be specified either by the name or the number of the class
name - Class by name (e.g., .EXPRS, .HOLD, .USER1, and .USER2)
number - Class by number (e.g., 00, 01, 02, ... nn)
blank - All classes are listed

NOTE: Only one class can be specified per message.

J
INPUT MESSAGES

J
INPUT MESSAGES

- status F - List all jobs in the specified class that are in a finished state
- S - List all jobs in the specified class that are in the saved state
- A - List all jobs in the specified class that are active
- blank - List all jobs in the specified class

System Replies Possible: The following output is issued for each job found in the specified class and status.

S#sssss pp m (id)

where:

pp - Priority
m - Status

F - finished
S - saved
A - active
C - cyclic

(id) - Remote station identification. This entry is blank if the job is not from a remote station.

If no jobs were found in the specified class and status, the following message is printed.

NO JOBS FOUND

If the operator input request was in improper format, the following message is output.

INPUT INVLD

J
INPUT MESSAGES

J
INPUT MESSAGES

JLSTCY {ALL }
 {sssss}

System Scheduler Message. Operator requests the system to list the cyclic parameters either for all the cyclic jobs in HOLD or for a specific job, sssss.

System Replies Possible: The parameters are output in a format identical to the one on the \$ MSG3 statement, as follows:

sssss yymmdd/xx.xx,iitt,yymmdd/xx.xx

where:

ALL - All cyclic jobs in HOLD
sssss - Job sequence number
(first) yymmdd - Year, month, and day of starting date
(first) xx.xx - Starting-time in hours
 ii - Amount of the cyclic interval
 tt - Type of cyclic interval
(second) yymmdd - Year, month, and day of the termination date
(second) xx.xx - Termination time in hours

If JLSTCY sssss is requested and the job either cannot be found in the .HOLD class or is not a cyclic job, the following message is output.

SNUMB NOT FOUND IN .HOLD CLASS

If there are no cyclic jobs in the .HOLD class, the following message is output.

NO CYCLIC JOBS FOUND IN .HOLD CLASS

JORDER sssss pp

System Scheduler Message. Operator informs the System Scheduler to reorder SNUMB sssss within its job class as indicated by the priority pp. If priority is not indicated, the maximum priority is assumed.

J
INPUT MESSAGES

J
INPUT MESSAGES

JOUST sssss

System Scheduler Message. Operator instructs the system to release a completed saved job. The J* and *J files space is returned to the system and the job's entry is removed from the System Scheduler catalog. Job sssss cannot be a cyclic job.

{ALL }
{ONL }
{sid }
JPURGE {sssss}
{.NAME}
{nn }
{ACT }
{SAV }

System Scheduler Message. Operator requests the system to prepare to purge job or jobs from the System Scheduler in accordance with the selected option. Cyclic jobs are not purged.

- ALL - Purge all jobs currently cataloged by the System Scheduler
- ONL - Purge all online jobs currently cataloged by the System
- sid - Purge all jobs originating at remote station id that are currently cataloged by the System Scheduler
- sssss - Purge a particular job currently cataloged by the System Scheduler
- .NAME - Purge all jobs currently cataloged in class .NAME
- nn - Purge all jobs currently cataloged under class number nn
- ACT - Purge all active jobs (jobs that are candidates for execution, but not in saved category).
- SAV - Purge all completed saved jobs

System Replies Possible:

JPURGE (option) READY

J
INPUT MESSAGES

J
INPUT MESSAGES

JPURGE (option) CANCL

System Scheduler Message. Operator instructs system to cancel the purge option specified. This message should not be entered after purge has begun executing.

System Replies Possible:

JPURGE (option) CANCL READY

JPURGE RUN

or

JPURGE (option) RUN

System Scheduler Message. Operator instructs system to execute purge specified in the previous JPURGE (option) message. This message is in reply to the System's JPURGE (option) READY message.

JRERUN sssss

System Scheduler Message. Operator instructs the system to remove job sssss from the completed saved status and make it a candidate for scheduling in its original class. The job sssss cannot be a cyclic job.

System Replies Possible: If the SAVE option was not implemented or if the job is not found in the completed, saved status in the Startup program, the system returns the following message:

*SNUMB NOT FOUND

JRUN .HOLD

System Scheduler Message. Operator informs the System Scheduler to start normal scheduling of all jobs in the System Scheduler's Hold queue.

JRUN REST

System Scheduler Message. Operator informs the System Scheduler to restart normal scheduling of all jobs. This message is entered after a boot with System Scheduler restart.

J
INPUT MESSAGES

J
INPUT MESSAGES

JSCHED sssss pp

System Scheduler Message. Operator informs the System Scheduler to place SNUMB sssss in the EXPRESS class to be scheduled according to the priority (pp) indicated. If priority is not indicated, an implied priority of 50 is assumed.

JSTRT {ALL }
{.NAME}
{xx }

System Scheduler Message. Informs the System Scheduler to resume scheduling activity for the job class as indicated by the option. A blank option is considered illegal and the operator is notified.

- ALL - Resume scheduling all JOB classes
- .NAME - Resume scheduling jobs in class name .NAME
- xx - Resume scheduling jobs in class number xx

K
INPUT MESSAGES

K
INPUT MESSAGES

There are no input messages beginning with the letter K.

L
INPUT MESSAGES

L
INPUT MESSAGES

LAUTO

Operator Interface Message. Operator requests that a list of the BCD cards in the AUTOLOAD file be printed on PR2; PR2 must be assigned and dedicated.

The list is similar to that found on the end of a master mode dump, with possible minor format differences. The order of the various startup sections (\$CONFIG, \$EDIT, etc.) is not always the same as found in the actual startup program.

The printer button interface (REVERSE REWIND, FORWARD SPACE, etc.) is not active while this list is being produced. Any manual halt to the printer produces unspecified results, possibly a line being printed twice.

System Replies Possible:

- LAUTO: PR2 MUST BE ASGN AND DED - A printer named PR2 is not configured, assigned, or dedicated.
- LAUTO: NO BCD FOUND ON AUTOLOAD - Software error.
- LAUTO: NO ROOM TO BUILD PAT - Software error.
- LAUTO: AUTOLOAD READ ERROR - Hardware error.
- LAUTO: STOPPED, BAD SYSOUT DEV - Software detected a bad status from the printer.

LDTAPE

Operator Interface Message. Operator requests that a list be printed on the console of all tape devices currently assigned by the DDTAPE console verb.

System Replies Possible: The list will be in the following format:

LDTAPE MT-DEVICE ddd ASGN TO SNUMB # sssss FC fc

where:

- ddd - device name
- sssss - SNUMB
- fc - file code

L
INPUT MESSAGES

L
INPUT MESSAGES

At the end of the list, the following message is printed, showing the number of free table entries in LDTAPE:

LDTAPE: ZZ MORE TAPES CAN BE DEDICATED

where:

ZZ - the number or available entries

System Replies Possible:

LDTAPE: SCT POINTER NOT FOUND

The SCT pointer is not in the device name table.

LIMIT LINKS {nnnnnn}
{NONE }

GPOP Message. Operator establishes the sieve limit for the number of mass storage links requested by any one temporary file.

nnnnnn - Number of links
NONE - Limit removed

System Replies Possible:

MPOPE ERROR(101) -nnnnnn ILLEGAL INPUT

LIMIT NONE

GPOP Message. Operator removes all sieve limits established by startup statements or by operator input messages. Default limits are applied where they exist.

L
INPUT MESSAGES

L
INPUT MESSAGES

LIMIT SIZE {nnnnnn} (K)
{NONE }

GPOP Message. Operator establishes the sieve limit for the maximum program memory size allowed for any one activity in a job.

nnnnnn - Number of words

K - nnnnnn to be multiplied by 1024. For example, 32K limits the size to 32768 words (optional).

NONE - Limit reverts to default limit of 511K.

System Replies Possible:

MPOPE ERROR(101) -nnnnnn ILLEGAL INPUT

NOTE: A size greater than 511K defaults to 511K.

LIMIT SYOT {nnnnnn} (K)
{NONE }

GPOP Message. Operator establishes the sieve limit for the maximum SYSOUT records allowed for the job. Only the job \$ LIMITS statement is considered, when present. Otherwise, the value considered is the sum of the limits specified for the individual activities by an activity \$ LIMITS statement, when present, or by the default value for the activity type.

nnnnnn - Number of lines

K - Activity to be multiplied by 1024 (optional).

NONE - Limit removed

System Replies Possible:

MPOPE ERROR(101) -nnnnnn ILLEGAL INPUT

L
INPUT MESSAGES

L
INPUT MESSAGES

LIMIT TAPE {nnn }
 {NONE}

GPOP Message. Operator establishes the sieve limit for the number of tape files requested by any one activity.

nnn - Number of tapes
NONE - Limit removed

System Replies Possible:

MPOPE ERROR(101) -nnnnnn ILLEGAL INPUT

LIMIT TIME {ttt }
 {tt.tttt}
 {NONE }

GPOP Message. Operator establishes the sieve limit for the maximum amount of processor time that a slave job can request.

tttt - Time in hours with implied two decimal places (tt.tt)
tt.tttt - Time in hours with explicit decimal point in any position
NONE - Limit reverts to the default limit of 99.99 hours.

Only the job \$ LIMITS statement is considered if it is present. Otherwise, the value considered is the sum of the limits specified for the individual activities by an activity \$ LIMITS statement, when present, or by the default value for the activity type.

The maximum value that can be specified is 99.99 hours.

System Replies Possible:

MPOPE ERROR(101) -nnnnnn ILLEGAL INPUT

L
INPUT MESSAGES

L
INPUT MESSAGES

LINEs {FNP-n}

n - FNP number (0-7)

GPOP Message. Operator requests the status of remote lines connected to the Front-End Network Processors.

System Replies Possible:

IOM i CH cc

LINEs IDL L1 L2.....Ln (Idle)
DAC L1 L2.....Ln (Direct Program Access)
OUT L1 L2.....Ln (Remote SYSOUT)
INP L1 L2.....Ln (Remote System Input)
TSS L1 L2.....Ln (Time Sharing)
CTS L1 L2.....Ln (Connect to Slave)

*FNP NOT AVAILABLE
*NOT REMOTE
*IS BUSY
FNP-n ALL LINEs DISCONNECTED
NO DNET FOUND

LINEs TOTAL

GPOP Message. Operator requests a summary listing of the lines connected to all Front-End Processors (FNP/FEPs). System replies with a report similar to the following (handled by D55A).

?LINEs TOTAL

FNP#	TOTAL	REL	TSS	TS8	DAC	CTS	OUT	SCH	INP	IDL	T&D	TRM
0	3		2		1							
1	15		10	3	1	1						
2	1									1		
TOTAL	19		12	3	2	1				1		

where:

REL - Released
TSS - Time Sharing
DAC - Direct Program Access
CTS - Connect to Slave

L
INPUT MESSAGES

L
INPUT MESSAGES

OUT - Remote SYSOUT
SCH - Scheduler
INP - Computer Input
IDL - Idle
T&D - Test and Diagnostics
TRM - PALC Termination

LIST {LIMITS}
 {NAME }
 {RLSED }

GPOP Message. Operator requests a list of the following:

LIMITS - Sieve parameters
NAME - All named devices
RLSED - All released devices

System Reply to LIST LIMITS is:

SIZE: NONE or nnnK SYOT: NONE or nnnnnnnnnnK TIME: NONE or tt.tt
TIME: NONE or nnnn LINKS: NONE or nnnnnn

LIST SCHED

System Scheduler Message. If the list requested is not for the LIMITS, NAME, or RLSED option, and it is not blank, the System Scheduler displays the desired information.

SCHED - List information concerning current scheduling parameters for all classes, e.g.,

- (1) Class
- (2) Maximum number of jobs that can be run for this class
- (3) Number of jobs currently available to be run in this class

L
INPUT MESSAGES

L
INPUT MESSAGES

LIST SCHED xx - List information concerning current scheduling parameters for class xx only. The xx can be either numeric or .NAME (class name).

NOTE: HOLD option was deleted. Refer to JLIST message.

System Replies Possible:

MAX JOBS = nnn MIN = nnn GEIN = nnn

.NAME RUNnnn/nnn CATnnn/nnn (If followed by *, JEND is in force for that class; if followed by REST, JREST is in force for that class.)

nnn - Numeric value representing number of jobs
MAX - Maximum jobs allowed in the system by the System Scheduler
MIN - Minimum jobs allowed in the system by the System Scheduler
GEIN - Number of GEIN jobs running out of the .EXPRS class
.NAME - Class name
RUNnnn/nnn - Maximum jobs allowed to be run at any one time for that class, followed by the number currently running. (For the .EXPRS class, the number currently running may exceed the maximum allowed. Though Disk/Drum GEIN jobs are counted in .EXPRS, their number has no effect on the limit.)
CATnnn/nnn - Maximum number of jobs that the System Scheduler can catalog for that class, followed by the number currently available to be run

LISVS

Disk Media Management System Message. This verb lists information about online volume sets.

Format:

LISVS [volset_name] [--SHORT]

Rules:

1. If no volume set name is given, then information for all online volume sets will be returned.

L
INPUT MESSAGES

L
INPUT MESSAGES

Output Format:

volset name,mmm,ttt,volset flags	
volume ser# = volume id	Volume Information
device name = device name	Repeated for each
SCT Address = SCT address	volume in volset.
volume flags	Suppressed by -SHORT.

where:

mmm = number of mounted volumes
ttt = total number of volumes in the volume set

Volset flags:

VSMC - contains the original VSMC
VSMCDUP - contains the duplicate VSMC
CAT - catalog volume

System Replies Possible: None.

LISVL

Disk Media Management System Message. This verb lists information about online volumes.

Format:

```
          {-SER volume id ... }  
LISVL {-SCT sct address ...}  
          {-DEV device name ...}
```

Rules:

1. At least one volume specification must be supplied.
2. Multiple volume specifications may be given in a single request.

System Replies Possible: None.

L
INPUT MESSAGES

L
INPUT MESSAGES

LKRMT

Operator Interface Message. Allows the operator to terminate a specified remote work session and lock the SAC that owns the remote work session. The locked SAC is displayed on the system console.

LKSAC

Operator Interface Message. Allows the operator to manually lock a specific SAC. All remote work sessions owned by the SAC may be immediately terminated.

LOOK

Operator Interface Message. Allows the operator to generate a dump at the system console of a process, module, or segment.

System Replies Possible: The following messages may be output:

LOOK: ENTER (PXXX SSS,MXXX,H6XXX) OFFSET NUM(OCTAL)

where:

- P - Dump a process
- M - Dump a module
- H6 - Dump an HCM segment
- XXX - Process number to be dumped (three-digit maximum)
- Module number to be dumped (identified via .ENTRY macro)
- Segment identification as defined in system linkage segment.
- SSS - Within the process PUSH segment, the index of the descriptor of the segment that is to be dumped. In addition to a numeric value, a coded value of the following type may be used:
 - S - SSA data segment
 - P - PAT segment
 - U - Main user segment
- OFFSET - Location within the segment or module where dumping is to begin.
- NUM(OCTAL) - Number of locations to be dumped, beginning with the OFFSET value.

L
INPUT MESSAGES

L
INPUT MESSAGES

System Replies Possible to the "LOOK: ENTER..." console entry:

**ILLEGAL P#, M# OR H#
OFFSET FIELD MUST BE 6 CHAR OR LESS
**NOT IN MEMORY/SYSTEM
**INSUFFICIENT ARGUMENTS
OFFSET IS OUTSIDE SEGMENT
BAD DESCRIPTOR

LOOK MEM(ORY)

Operator Interface Message. Generates a console message that identifies the size of real memory.

System Replies Possible:

nnnnK

where:

nnnn - 1K-word increments

LSTAL

GPOP Message. Operator requests a list of all the jobs in the system.

System Replies Possible:

CARD GEIN READING sssss Uuu IDxx
IMCV GEIN READING sssss Uuu IDxx
REMOTE PHASE ONE sssss Uuu IDxx
REMOTE PHASE TWO sssss Uuu IDxx
WAITING FOR ALLOC sssss Uuu IDxx
WAITING FOR PERIPH sssss Uuu IDxx
WAITING FOR CORE sssss Uuu IDxx
IN HOLD sssss Uuu IDxx
IN LIMBO sssss Uuu IDxx
IN EXECUTION sssss Uuu IDxx
SWAPPED OUT sssss Uuu IDxx
IN SIEVE sssss Uuu IDxx
TERMINATING sssss Uuu IDxx
WAITING MEDIA sssss Uuu IDxx

L
INPUT MESSAGES

L
INPUT MESSAGES

ALLOCATION OVERDUE sssss Uuu IDss
NO JOBS IN SYSTEM
JOBS IN RESTART sssss Uuu IDxx

LSTCR

GPOP Message. Operator requests a numerical map of memory.

System Replies Possible:

```
xxxxxx K TOTAL MEMORY   yyyyyy K AVAILABLE MEMORY
SNUMB TOTAL K   SNUMB TOTAL K   SNUMB TOTAL K   SNUMB TOTAL K
(HCM) tttttt K   $CALC tttttt K   $PALC tttttt K   $GEOT tttttt K
:
:                       :                       :
TSn$  aaaaaa K   :                       :
:                       :                       :
:                       :                       :
ssssss K TOTAL SHARED MEMORY  cccccc K STATUS CHANGING
dddddd K DEFECTIVE rrrrrr K RESERVED MEMORY
```

where:

- xxxxxx - The total amount of configured memory available to GCOS 8.
 - yyyyyy - The total amount of memory available for use at that time.
 - tttttt - The total amount of memory being used by that process.
 - aaaaaa - The total amount of memory allocated to an extended memory process. Including extended memory pool pages.
 - ssssss - The total amount of memory allocated to all the shared working spaces in the system.
 - ccccc - The total amount of memory not accounted for during this snapshot of system memory allocation. This number will occur because no system gates are closed during tabulation of memory allocation.
 - dddddd - The amount of memory marked defective.
 - rrrrrr - The amount of memory reserved for hardware usage.
- *** On the DPS 90, Reserved Memory is marked defective. The number of pages marked defective for reserved memory can be calculated as follows:

$$8+ \# \text{ megs} * 1/\text{meg}$$

L
INPUT MESSAGES

L
INPUT MESSAGES

Example: On a four-megaword system, Reserved Memory = 12. The total configured that is available to GCOS 8 does not reflect the total amount physically configured. The difference between these two numbers is the amount of Reserved Memory and the amount of memory used by GCOS 8 hardcore page tables. The amount of memory used by GCOS 8 hardcore page tables is accounted for in the HCM memory usage.

LSTCT

GPOP Message. Operator requests a list of the number of jobs in execution, the number of jobs waiting to execute, and the number of jobs waiting for SYSOUT.

System Replies Possible:

```
*LSTCT @ tt.ttt *EXEC nnn *WTNG nnn
*BPRONL nnn *BPNONL nnn *APRONL nnn *APNONL nnn
*JOUT nnn
*BPRRMT nnn *BPNRMT nnn *APRRMT nnn *APNRMT nnn
```

EXEC nnn - Number of Jobs in Execution and in Termination
WTNG nnn - Number of Jobs Waiting for Peripheral Allocation and Swapped
BPRONL nnn - Number of BCD PRINT Jobs for ONLINE
BPNONL nnn - Number of BCD PUNCH Jobs for ONLINE
APRONL nnn - Number of ASCII PRINT Jobs for ONLINE
APNONL nnn - Number of ASCII PUNCH Jobs for ONLINE
JOUT nnn - Number of Jobs Waiting for JOUT
BPRRMT nnn - Number of BCD PRINT Jobs for REMOTE
BPNRMT nnn - Number of BCD PUNCH Jobs for REMOTE
APRRMT nnn - Number of ASCII PRINT Jobs for REMOTE
APNRMT nnn - Number of ASCII PUNCH Jobs for REMOTE

Additionally, if there are any remote jobs, a list by remote identifier will be produced. For example:

```
*LSTCT BY ID:
BB:nn CC-nn
```

NOTE: If any nnn or nn field is *** or **, the max count (999 or 99) exceeded.

L
INPUT MESSAGES

L
INPUT MESSAGES

LSTPR

Peripheral Allocator Message. Operator requests a list of jobs with status pertaining to the Peripheral Allocator.

System Replies Possible:

REMOTE PHASE ONE
CARD GEIN READING
IMCV GEIN READING
REMOTE PHASE TWO
WAITING FOR ALLOC
WAITING FOR PERIPH
WAITING FOR CORE
JOBS IN HOLD
JOBS IN LIMBO
JOBS IN EXECUTION
JOBS SWAPPED OUT
WAITING MEDIA
JOBS IN SIEVE
ALLOCATION OVER DUE
JOBS IN RESTART
NO JOB FOR LSTPR

LSTQ

GPOP Message. Operator requests a listing of all the jobs in the Peripheral Allocator's first in/first out (FIFO) queue, along with the status of each job. If a job is awaiting a peripheral device, the list includes the device type and number required.

L
INPUT MESSAGES

L
INPUT MESSAGES

System Replies Possible:

STATUS OF ALC'S QUEUE tt.ttt (time of day)

```
          { REST (job in restart)
          { TERM (job in termination)
          { HOLD (job in hold, or hold request was made
          {       after allocation was completed)
          { LIMBO (needs Run request to be allocated)
          { DELAY (fifty activities for other programs
          {       have been allocated since this job
sss-aa-Uuu {       became eligible for allocation)
          { CMPLT (allocation complete)
          { MEDIA (waiting for operator to RDY/MNT
          {       TAPE/DKPK)
          { NJOB (new job for allocation)
          { NACT (new activity for allocation)
          { SIEVE (exceeds system sieve parameters)
          { SAVES (job saves tapes across activities)
          { PRMFL BUSY
          { CQF (memory queue full)
```

MPOPL INFO (004) - ALLOCATOR QUEUE FULL - TRY AGAIN LATER
MPOPL INFO (007) - NO ARGUMENTS ALLOWED FOR LSTQ

If a program is waiting for a peripheral device, its status contains the following:

WTNG - nn dddd

where:

nn - number of devices needed
dddd - type of device needed (refer to Appendix C for device descriptions).

L
INPUT MESSAGES

L
INPUT MESSAGES

LSTRT

GPOP Message. Operator requests a list of all remote jobs known to the system.

System Replies Possible:

NO JOBS IN SYSTEM
REMOTE PHASE ONE sssss Uuu IDxx
REMOTE PHASE TWO sssss Uuu IDxx
WAITING FOR ALLOC sssss Uuu IDxx
WAITING FOR PERIPH sssss Uuu IDxx
IN HOLD sssss Uuu IDxx
IN LIMBO sssss Uuu IDxx
IN EXECUTION sssss Uuu IDxx
SWAPPED OUT sssss Uuu IDxx
WAITING MEDIA sssss Uuu IDxx
IN SIEVE sssss Uuu IDxx
ALLOCATION OVERDUE sssss Uuu IDxx
JOBS IN RESTART sssss Uuu IDxx
TERMINATING sssss Uuu IDxx
NO JOBS FOR LSTRT

M
INPUT MESSAGES

M
INPUT MESSAGES

MASFG

GPOP Message. Allows the operator to list system mass storage resources on the console. Similar to TAPFG and TYPFG. The system lists mass storage resources according to input/output controller and PUB numbers.

Mass Storage Responses:

- PACK*-nnnn - Assigned pack number
- AVAIL-nnnnn - Number of llinks available
- DLINK-nnnnn - Number of llinks marked unavailable for allocation in the device llink directory
- DLINK/CLR - Directory cleared because, at system rollcall time an error was encountered while processing the device llink directory.
- USAGE-nn - Number of programs currently accessing the pack.

MC

MC command object unit-id [-option] Modify Configuration as specified.

	COMMAND	OBJECT	UNIT ID	OPTION
MC	ASSIGN/RELEASE	SCU	u	
		EPU	u	-TEST
		CPU	u	-TEST
		IOP	u	-FORCE
		IOX	u	
		IOM	u	
		IOC	u	
		CHANNEL	icc/iccc	
		TAPE	icccd/icccd/devnam	NOTE
		DISK	icccd/icccd/devnam	NOTE
		PRINTER	icccd/icccd/devnam	NOTE
		READER	icccd/icccd/devnam	NOTE
		PUNCH	icccd/icccd/devnam	NOTE

(cont)

M
INPUT MESSAGES

M
INPUT MESSAGES

COMMAND	OBJECT	UNIT ID	OPTION
	HYPER-CHAN MEMORY	icc/iccc sssss nnnnn	
DEDICATE/UNDEDICATE	TAPE DISK PRINTER READER PUNCH	devnam devnam devnam devnam devnam	

u = Unit number - one character in length (numeric)
 The option "-TEST" may also be used with the CPU/EPU object
 The option "-FORCE" may also be used with IOP object group

icc = IOP/CHANNEL - three characters in length (numeric)
i = one-character IOP number
cc = two-character channel number

iccc = IOP/CHANNEL - four characters in length (numeric)
i = one-character IOP number
ccc = three-character channel number

icccd = IOP/CHANNEL/DEV - five characters in length (numeric)
i = one-character IOP number
cc = two-character channel number
dd = two-character device number

icccdd = IOP/CHANNEL/DEV - six characters in length (numeric)
i = one-character IOP number
ccc = three-character channel number
dd = two-character device number

NOTE: **.s** = Logical device (Disk Sub-unit)
 values .0, .1, .2, or .*

M
INPUT MESSAGES

M
INPUT MESSAGES

devnam = nnn - three characters in length (alpha/numeric)
n(1) = one-character alpha/numeric
n(2) = one-character alphabetic
n(3) = one-character alpha/numeric

ssssss nnnnnn = memory pages (octal)
sssssx = starting page no.
If x = s - six char max (512 word units)
If x = k - five char max (1024 word units)
If x = m - five char max (1048576 word units)
s = numeric character value (0-7)
k = alphabetic character value (k)
m = alphabetic character value (m)
nnnnnn = number of contiguous pages
If x = s - six char max (512 word units)
If x = k - five char max (1024 word units)
If x = m - five char max (1048576 word units)

Only one unit pair may be specified per entry.

{xxx iccdd }
MOVE {iccdd xyyzz}

GPOP Message. The xxx iccdd option allows the operator to reallocate the named device (xxx) to address iccdd. The iccdd xyyzz option can be used to move only the system console from iccdd to xyyzz.

System Replies Possible: No system reply occurs unless an error is detected. One of the following replies indicates an error in the request, and the move request will be ignored by the system.

IOM INVALID
CH# INVALID
DEV INVALID
NAME ILL.
NAME NOT FOUND
CANT MOVE TO DED DEVICE
VIDEO HAS TY5
DEV TYPES MUST BE SAME
TRN/VFC DIFFERENT

TY1 = main console or I/O

2

3

4

TY5 = VIDEO

M
INPUT MESSAGES

M
INPUT MESSAGES

160/136 OPT ERROR
LEGAL ON CONSOLE ONLY
CANT MOVE MASS STR
MOVE CONSOLE WORKSTATION ACTIVE - USE "MSM"

MSC [Option]

Statistical Instrumentation Facility 8 (SIF8) message. Statistical Instrumentation Facility 8 (SIF8) verb used to disable, enable or list available classes.

This verb has the following syntax:

MSC (Option]

where:

Option = -ON	Parameter [...Parameter]*	Turn on
-OFF	parameter [...Parameter]*	Turn off
-LIST	[Parameter]*	Display status

where:

Parameter =

ALL			
PROCESSOR	PROC	PRO	PRC
MEMORY	MEM	MRY	
IOM			
CHANNEL	CHA	CNL	
DISK	DIS	DSK	
TAPE	TAP	TPE	
PRINTER	PRINT	PNTR	PRI
	PTR		
FNP			
PROCESS	SNUMB	SNB	KPX
TSS			
SCHEDULER	SCHEDULE	SCHED	SCHD
	SDLR	SCD	SDR
SYSTEM	SYS	STM	
FAULT	FAU	FLT	
MME			
PMME	PMM	PME	
TS8			
OPTIONAL	OPTION	OPT	

M
INPUT MESSAGES

M
INPUT MESSAGES

The following messages are possible:

1. MPERF INFO(101)--ILLEGAL OPTION (y) - PLEASE REENTER
2. MPERF INFO(102)--NO PARAMETERS FOR OPTION -y - PLEASE REENTER
3. MPERF INFO(10m)--ILLEGAL PARAMETERS (x) FOR OPTION -y - PLEASE REENTER
4. MPERF INFO(201)--ERROR RETRIEVING CONSOLE TEXT - PLEASE REENTER
5. MPERF INFO(202)--ERROR DELETING CREATED SEGMENT - (z)
6. MPERF INFO(203)--ERROR WITH SPECIFIC CLASS DATA - PLEASE REENTER
7. MPERF INFO(301)--PROPER FORM - MSC OPTION [ADDITIONAL OPTIONS]

*WHERE OPTION = -ON -OFF -LIST [PARAMETER [ADDITIONAL OPTIONS]

*WHERE PARAMETER =

PRC MEM IOM CHA DIS TAP PRI FNP KPX TSS

SCD SYS FLT MME PMM DMI WOR TS8 OPT ALL

8. MPERF INFO(001)--MODIFY STATISTICAL COLLECTION CLASS STATUS

(01)PROCESSOR	-0nn	(02)MEMORY	-0nn	(03)IOM	-0nn
(04)CHANNEL	-0nn	(05)DISK	-0nn	(06)TAPE	-0nn
(07)PRINTER	-0nn	(08)FNP	-0nn	(09)PROCESS	-0nn
(10)TSS	-0nn	(11)SCHEDULER	-0nn	(12)SYSTEM	-0nn
(13)FAULT	-0nn	(14)MME	-0nn	(15)PMME	-0nn
(16)DMIVTP	-0nn	(17)WORKSTATION	-0nn	(18)TS8	-0nn
(19)OPTIONAL	-0nn				

M
INPUT MESSAGES

M
INPUT MESSAGES

9. MPERF INFO(002)--MSC CLASS STATUS (pp) s -0nn

where:

nn = FF | N
pp = 1 - 19
s = Class name
x = Parameter entered following option
y = Option entered
z = Segment name used to pass text entered

System Replies Possible: None.

{OFF}
MSG {ON }

GPOP Message. Operator either enables (ON) OPNSUTIL/MSG feature, causing a prespecified message to be printed on all execution reports, or disables (OFF) OPNSUTIL/MSG, discontinuing this feature.

System Replies Possible: If the system does not recognize the message (the word ON or OFF is misspelled), the following message is output at the console.

*MSG xxxxx INVLD

MVALL n,sssss

SYSOUT Message. Operator requests that the output indicated be handled by system n (both printer and card punch output).

sssss - Job sequence number (SNUMB) if output for a particular job is only affected. A null field is acceptable for sssss.

The operator can cancel this move request by entering the following console instruction:

VOID MVALL

M
INPUT MESSAGES

M
INPUT MESSAGES

The instruction to void cannot be applied to a move message that includes a SNUMB.

System Replies Possible:

MPOPF INFO (004) - REQUIRES CONTROL FIELD NOT SUPPLIED
MPOPF INFO (005) - ILLEGAL OPTION IN FIRST CONTROL FIELD
MPOPF INFO (006) - ILLEGAL OPTION IN SECOND CONTROL FIELD
MPOPF INFO (018) - ILLEGAL REQUEST IN A NONSHARED SYSTEM

N
INPUT MESSAGES

N
INPUT MESSAGES

NAME iccdd xxx

GPOP Message. Operator names a device. Mass storage devices cannot be named.

xxx - Device name. May be any characters, except that the second character must not be numeric.

System Replies Possible: No system reply occurs unless an error is detected. One of the following messages indicates an error in the request, and the request is ignored.

IOM INVALID
CH# INVALID
DEV INVALID
NAME INVLD
NAME TABLE FULL
NAME ALREADY USED
CANT NAME DED DEV
CANT NAME/UNAME MASS ST

NCALL {FNP-n}

GPOP Message. Operator requests that no further calls be accepted from the remote terminals connected to a specific FNP (FNP-n). All FNPs are affected if icc or FNP-n is not specified.

System Replies Possible:

FNP NOT AVAILABLE

BMX BUSY, TRY AGAIN

CORRECT FORM OF REQUEST IS "{A} CALL FNP-# #<n OR TCALL SID OR TCALL TID"
{T}

A = Allows the users to connect to the system
N = Does not allow any new users to the system
T = Disconnects all users from the system
n = Total number of FNPs configured on the system.

N
INPUT MESSAGES

N
INPUT MESSAGES

INVALID LINE#

FNP-n RELEASED

NOTE: If an FNP bootload is in progress at the time the request is entered and is applied to that FNP, or the FNP-n is not specified, the bootload terminates immediately.

```
{DPSY}                                {-FORCE }
NOI {LDSY} CH:name -FILE(pathname){-NOFORCE}
    {UPCH}
                                {DISABLED (DSBL)}
                                -STATE {ENABLED (ENBL) }
                                {LOCKED (LOCK) }
                                {SHUTDOWN (SHUT)}
```

Node Operator Interface command. Operator requests that the indicated Node Operator Interface (NOI) command be performed in conjunction with Distributed System Architecture (DSA) software to affect the state of or collect information about a DSA channel. "CH:" is optional in all cases.

DPSY - The dump system command allows the operator to dump the UNCP attached to a channel. The following parameters apply:

name - Required parameter. The name of the channel whose UNCP is to be affected, as defined on the Startup IOM-UNCP statement.

-FILE(pathname) - Optional parameter. Enter the pathname so the specified file required to dump or boot the UNCP can be located. This parameter takes the form userid/subcatalog/subcatalog/... and is provided by the appropriate site techniques personnel. This parameter must follow the "name" parameter. If the -FILE parameter is not specified, the pathname from the WD file is used by default.

-FORCE or -NOFORCE - Optional parameter. Used to turn a flag on and off specifying whether to affect (i.e., dump or boot) a UNCP that appears operational. Unless -FORCE is indicated, operational UNCPs are not affected. -FORCE and -NOFORCE are mutually exclusive; neither or either parameter may be given, but not both. -F and -NF are acceptable format. The default is -NF.

N
INPUT MESSAGES

N
INPUT MESSAGES

LDSY - The load system command allows the operator to boot the UNCP attached to a channel. The following parameters apply:

name - Required parameter. See above.

-FILE(pathname) - Optional parameter. See above.

-FORCE or -NOFORCE - Optional parameter. See above.

-STATE(ENABLED/DISABLED) - Optional parameter. DSA software places the specified channel in the indicated state. An enabled channel is fully operational and logical connections using it may be created. A disabled channel is unavailable for use. Disabled is the default state. This parameter must follow the "name" parameter.

UPCH - The update channel command allows the operator to change the state of a channel (i.e., disable, enable). The following parameters apply:

name - Required parameter. See above. In addition, if a "*" is given, all channels are affected.

-STATE(DISABLED/ENABLED/LOCKED/SHUTDOWN) - Required parameter. Refer to the above. Additionally, a shutdown channel is fully operational but no new logical connections may use it. Locked channels are also unavailable for use. However, a locked channel can be allocated to T&D.

System Replies Possible: The non-error response to the DPSY, LDSY, and UPCH commands takes the following form:

```
NOI-MSG: SYS = sys-id {TIME = HH:MM:SS NETW-MOD XXXX-RESPONSE
NOI-MSG: CH:name ST = {SHUTDOWN
                      {ENABLED
                      {DISABLED
                      {LOCKED
```

where:

sys-id - Name of the GCOS 8 node as given in the workstation control data base.

TIME - Time of day

N
INPUT MESSAGES

N
INPUT MESSAGES

NETW-MOD - Administrative domain and power of the command being responded to.

XXXX - Command entered.

name - Name of the channel.

ST - Current state of the channel.

The error response to the DPSY, LDSY, and UPCH commands takes the following form:

NOI-MSG: SYS = sys-id TIME = HH:MM:SS NETW-MOD XXXX-RESPONSE
NOI-MSG: CH:name *****CMD-ERROR = (code and error text)

Explanations for the message fields are given above. Refer to Section 3 for error code explanations.

NOPRO (cnt) (SNB=snumb or SID=nnnnnn)

SYSOUT Message. This NOPRO (no process) verb is used to prevent delivery of output for completed jobs already in SYSOUT.

In this verb's usage, the "cnt" represents the control field which specifies the output type and/or the destination.

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx of .MPOP7
ERROR RETRIEVING CONSOLE TEXT - PLEASE REENTER
ERROR DELETING CREATED SEGMENT
ILLEGAL OPTION IN FIRST CONTROL FIELD
CONFLICTING OPTIONS IN FIRST CONTROL FIELD
GEOT QUEUE FULL, PLEASE TRY LATER
ILLEGAL KEYWORD ON LAST OPTION
INVALID NUMBER
REQUIRED CONTROL FIELD NOT SUPPLIED
xxxxxx REQUEST ALREADY OUTSTANDING FROM THIS CONSOLE

NOTE: Refer to the syntactical display for CANCL verb in Figure 2-1 for valid combinations.

0
INPUT MESSAGES

0
INPUT MESSAGES

There are no input messages beginning with the letter O.

P
INPUT MESSAGES

P
INPUT MESSAGES

PPS STATS

Page Processing System Executive Message. Operator requests \$PPSE task status. The number and types of tasks currently active are displayed: TAPE (offline), DATA (online or remote), and ACCT (accounting).

System Replies Possible:

MPOPI INFO(001) -
ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER
MPOPI INFO(002) - ERROR DELETING CONSOLE TEXT SEGMENT
MPOPI INFO(004) - INVALID CONTROL FIELD - PLEASE RE-ENTER
MPOPI INFO(006) - \$PPSE NOT IN SYSTEM
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(013) - \$PPSE QUEUE FULL, TRY LATER

PPS STOP {Iid} {SNB=SNUMB}
{ALL} {SID=sid }

Page Processing System Executive Message. Operator requests that a previous corresponding PPS TAPE verb input be cancelled.

Iid - PPS Reserved id
ALL - All PPS reserved id's

PPS STOP with no parameters requests that the present reel of PPS output be closed, rewound, and dismounted after processing of the current job is completed. The device remains assigned to \$PPSE. A second consecutive PPS STOP entry with no parameters releases the device back to the system. PPS STOP with parameters stops the designated ID/SID, ID/SNUMB, ID, or ALL IDs from spooling.

System Replies Possible:

MPOPI INFO(001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER
MPOPI INFO(002) - ERROR DELETING CONSOLE TEXT SEGMENT
MPOPI INFO(004) - INVALID CONTROL FIELD - PLEASE RE-ENTER
MPOPI INFO(006) - \$PPSE NOT IN SYSTEM
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(013) - \$PPSE QUEUE FULL, TRY LATER

P
INPUT MESSAGES

P
INPUT MESSAGES

PPS STRT

Page Processing System Executive Message. This verb brings the Page Processing System Executive into execution with the snumb \$PPSE. Once initialized, \$PPSE remains inactive until one of the following occurs:

- o The PPS TAPE verb is entered.
- o A Level 6 requests via DAC for online or remote transfer of PPS output to the Level 6.
- o A Level 6 requests via DAC for online or remote transfer of PPS accounting records from the Level 6.

System Replies Possible:

MPOPI INFO(001) -
ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER
MPOPI INFO(002) -
ERROR DELETING CONSOLE TEXT SEGMENT
MPOPI INFO(003) -
\$PPSE IS ALREADY STARTED
MPOPI INFO(004) -
INVALID CONTROL FIELD - PLEASE RE-ENTER
MPOPI INFO(005) -
NO PGM NO. AVAILABLE - TRY LATER
MPOPI INFO(008) -
PPS NOT CONFIGURED

PPS TAPE {Iid} {SNB=SNUMB}
{ALL} {SID=sid }

Page Processing System Executive Message. Operator requests that the indicated PPS output be spooled from SYSOUT space to a PPS-formatted magnetic tape. A 9-track tape is allocated and labeled for this purpose, and is used for offline input to the Page Printer. All requested output is spooled to the same tape (or set of tapes) until the verb PPS STOP is entered.

Iid - PPS reserved id
ALL - All PPS reserved id's

PPS TAPE with no parameters requests only that a tape be allocated and labeled for PPS spooling. PPE will then return to an inactive state until spooling parameters have been supplied by a subsequent PPS TAPE message.

P
INPUT MESSAGES

P
INPUT MESSAGES

An ID/SID request is attempted only once; an ID/SNUMB request is retained until one occurrence of the SNUMB has been spooled; and ID or all request is retained and the designated output spooled until the request is cancelled (PPS STOP...). A backdoor SID is not allowed.

System Replies Possible:

MPOPI INFO(001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER.
MPOPI INFO(002) - ERROR DELETING CONSOLE TEXT SEGMENT.
MPOPI INFO(004) - INVALID CONTROL FIELD - PLEASE RE-ENTER.
MPOPI INFO(006) - \$PPSE NOT IN SYSTEM
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(013) - \$PPSE QUEUE FULL, TRY LATER

PPS TERM

Page Processing System Executive Message. Operator requests that \$PPSE terminate execution as soon as all tasks become idle. \$PPSE will not start any new tasks once PPS TERM was entered.

System Replies Possible:

MPOPI INFO(001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER
MPOPI INFO(002) - ERROR DELETING CONSOLE TEXT SEGMENT
MPOPI INFO(004) - INVALID CONTROL FIELD - PLEASE RE-ENTER
MPOPI INFO(006) - \$PPSE NOT IN SYSTEM
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(013) - \$PPSE QUEUE FULL, TRY LATER

PPS TPREQ

Page Processing System Executive Message. Operator requests that \$PPSE list on the console all outstanding PPS TAPE requests waiting to be acted upon.

System Replies Possible:

MPOPI INFO(001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER
MPOPI INFO(002) - ERROR DELETING CONSOLE TEXT SEGMENT
MPOPI INFO(004) - INVALID CONTROL FIELD - PLEASE RE-ENTER
MPOPI INFO(006) - \$PPSE NOT IN SYSTEM
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(013) - \$PPSE QUEUE FULL, TRY LATER

P
INPUT MESSAGES

P
INPUT MESSAGES

PPS WAIT Iid

Page Processing System Executive Message. Operator requests that \$PPSE discontinue waiting for a disconnected Level 6 Page Processing System to reconnect.

Iid - Level 6 logon station ID of the Page Processing system disconnected during online data transfer.

This verb entry eliminates the following message from printing at the console every five minutes.

\$PPSE INFO--WAITING RECONNECT TO id

System Replies Possible:

MPOPI INFO(001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE RE-ENTER
MPOPI INFO(002) - ERROR DELETING CONSOLE TEXT SEGMENT
MPOPI INFO(004) - INVALID CONTROL FIELD - PLEASE RE-ENTER
MPOPI INFO(006) - \$PPSE NOT IN SYSTEM
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(009) - REQUIRED CONTROL FIELD MISSING - PLEASE RE-ENTER
MPOPI INFO(010) - ON-LINE PPS NOT CONFIGURED
MPOPI INFO(013) - \$PPSE QUEUE FULL, TRY LATER

PSTATS {icdd }
{device name}

GPOP Message. Operator requests the current status of a peripheral device.

System Replies Possible:

icdd device-type device-names (plus any other applicable status information in the following list)

ASND/S#sssss Assigned to program SNUMB sssss

RLSD - Device released

DED - Device dedicated

P
INPUT MESSAGES

P
INPUT MESSAGES

GSPEC - A GESPECed I/O entry is linked to this device

NSVFC or NOVFC - Nonstandard or no VFC

ID=jjjj - Train identification (jjjj - identification of last train image loaded)

NPS - Device shared with NPS

PRM or RMVBL - Device permanent or removable

MODS - Number of modules in memory (mass store only)

P#xxxx - Mass storage pack number

AVAIL=yyyyy - Number of llinks available

CLS#z - Tape handler class number

DENS=DDD - Tape handler density capability

If the request cannot be honored because of an error condition, one of the following error messages is displayed at the console.

IOM# INVLD
CH# INVLD
DEV# INVLD
NAME NOT FOUND

NOTE: To obtain the error status for a device, refer to the ESTATS message.

P
INPUT MESSAGES

P
INPUT MESSAGES

PTRAIN iccdd {name}
{id }

GPOP Message. Allows the operator to change print trains on a train-type printer.

name - Train image name three to six characters long. The first character must be alphabetic and no special characters are allowed.

id - Train identification in octal, not greater than 1777.

System Replies Possible:

IOM INVALID
CH# INVALID
DEV INVALID
INVLD VFC/PTRAIN FORMAT
NOT TRN PRTR
ASGND CANT LD BFR

* {iccdd} RLSED CHECKSUM ERROR {TRAIN} {name }
{sssss} {VFC } {block no. }

{iccdd} {identifier}
{sssss} RLSED {name } NOT ON CATALOG

{iccdd}
{sssss} RLSED SECTOR# nnnnnn INVALID

{iccdd} {TRAIN}
{sssss} RLSED {VFC } ILLEGAL REQUEST FOR THIS PRINTER TYPE

* {iccdd} {name }
{sssss} RLSED {identifier} I/O ERROR ON CATALOG/IMAGE FILE
{sssss} {block no. }

* {iccdd} {TRAIN }
{sssss} RLSED ERROR ON {VFC LOAD}

* {iccdd}
{sssss} RLSED TRAIN MOUNTED IS xxxxxx REQUEST ID WAS yyyyyy

* {iccdd}
{sssss} RLSED I/O ERROR ON READ STATUS COMMAND

P
INPUT MESSAGES

P
INPUT MESSAGES

PURGE (cnt) (SNB=snumb or SID=nnnnn)

SYSOUT message. In this verb's usage, the "cnt" represents the control field which specifies the output type and/or destination.

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MPOPF INFO(001) --ERROR RETRIEVING CONSOLE TEXT-PLEASE REENTER
MPOPF INFO(002) --ERROR DELETING CREATED SEGMENT
MPOPF INFO(004) --REQUIRED CONTROL FIELD NOT SUPPLIED
MPOPF INFO(005) --ILLEGAL OPTION IN FIRST CONTROL FIELD
MPOPF INFO(007) --CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MPOPF INFO(011) --REQUIRED CONTROL FIELD NOT SUPPLIED
MPOPF INFO(012) --GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(014) --INVALID NUMBER
MPOPF INFO(015) --ILLEGAL KEYWORD ON LAST OPTION

Refer to the syntactical display in Figure 2-1 for valid combinations.

R
INPUT MESSAGES

R
INPUT MESSAGES

REDRC (cnt) (cnt) (SNB=snumb or SID=nnnnnn)

SYSDOUT Message: In this verb's usage, the "cnt" represents the control field which specifies the output type and/or destination.

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MPOPF INFO(001) --ERROR RETRIEVING CONSOLE TEXT--PLEASE REENTER
MPOPF INFO(002) --ERROR DELETING CREATED SEGMENT
MPOPF INFO(004) --REQUIRED CONTROL FIELD NOT SUPPLIED
MPOPF INFO(005) --ILLEGAL OPTION IN FIRST CONTROL FIELD
MPOPF INFO(006) --ILLEGAL OPTION IN SECOND CONTROL FIELD
MPOPF INFO(007) --CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MPOPF INFO(008) --CONFLICTING OPTIONS IN SECOND CONTROL FIELD
MPOPF INFO(010) --REQUIRED CONTROL FIELD NOT SUPPLIED
MPOPF INFO(011) --GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(014) --INVALID NUMBER
MPOPF INFO(015) --ILLEGAL KEYWORD ON LAST OPTION
MPOPF INFO(016) --CONFLICTING CONTROL FIELD
MPOPF INFO(017) --ILLEGAL REQUEST FORMAT

Refer to the syntactical display in Figure 2-1 for valid combinations.

#RELINQUISH (#REL)

Remote Maintenance Interface Command. This command verb can only be entered from the local console and is valid only when the channel adapter is configured for two channels. Receipt of this command results in a logical override of the two channel configuration switches. All console traffic is transmitted to both console channels. A connect to the remote channel will result in a device attention when in the Relinquish mode.

System Replies Possible: None.

R
INPUT MESSAGES

R
INPUT MESSAGES

REMOV

SYSOUT Message. This verb must precede the verbs COPY, NOPRO, PURGE, REDRC, and REPRO. These secondary verbs must be followed with the entry of certain control fields and options.

The REMOV verb will remove a "special" from the job(s) to which it was applied with no effect on the Job Output Specials Table.

An example of the REMOV verb usage is:

```
REMOV REDRC BPR IAA IBB SNB=1234T
```

System replies possible:

```
CAN'T DO (verb):  SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MPOPF INFO(001)  --ERROR RETRIEVING CONSOLE TEXT--PLEASE REENTER
MPOPF INFO(002)  --ERROR DELETING CREATED SEGMENT
MPOPF INFO(005)  --ILLEGAL OPTION IN FIRST CONTROL FIELD
MPOPF INFO(007)  --CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MPOPF INFO(009)  --ILLEGAL SYSOUT VERB ENCOUNTERED
MPOPF INFO(012)  --GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(013)  --ILLEGAL REMOV REQUEST, PLEASE REENTER
MPOPF INFO(014)  --INVALID NUMBER
MPOPF INFO(015)  --ILLEGAL KEYWORD ON LAST OPTION
```

Refer to syntactical display of valid combinations shown in Figure 2-1.

REPRO (cnt) (SNB=snumb or SID=nnnnnn)

SYSOUT Message. This verb replaces the former verbs REPNC and REPNT.

In this verb's usage, the "cnt" represents the control field which specifies the output type and/or destination.

System Replies Possible:

```
CAN'T DO (verb):  SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MPOPF INFO(001)  --ERROR RETRIEVING CONSOLE TEXT--PLEASE REENTER
MPOPF INFO(002)  --ERROR DELETING CREATED SEGMENT
MPOPF INFO(005)  --ILLEGAL OPTION IN FIRST CONTROL FIELD
```

R
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R
INPUT MESSAGES

MPOPF INFO(007) --CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MPOPF INFO(012) --GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(014) --INVALID NUMBER
MPOPF INFO(015) --ILLEGAL KEYWORD ON LAST OPTION

Refer to syntactical display in Figure 2-1 for valid combinations.

RLSE {icddd }
{device name}

GPOP Message. Operator requests release of the peripheral device from the system.

System Replies Possible: Any one of the following messages indicates either an error in the request, or the request cannot be granted immediately.

IOM INVALID
CH# INVALID
* DEV icddd ASGN icddd RLSE
DEV INVALID
IS BUSY
*S#sssss ON CP icc TO BE CONTINUED ON xyy
*S#sssss ON PR icc TO BE CONTINUED ON xyy
*RE RLSE sssss, SYSOUT CANT

If release of one or both logical devices of an MSU0500 subsystem is requested and the two devices are in different statuses, the following message is returned to the console.

MS0500 icddd ASGN icddd RLSE

NOTE: This procedure is not applicable to releasing ST1.

R
INPUT MESSAGES

R
INPUT MESSAGES

RLSEC nnnnnn bbbbbb

GPOP Message. Operator requests release of memory space from GCOS.

nnnnnn - Starting address (modulo 1000 octal and must be even)

bbbbbb - Number of 512 decimal (1000 octal and must be even) word blocks to
be released

System Replies Possible: If the memory release mechanism is busy at the time
of request, the following message is printed:

RE RLSEC BUSY--TRY AGAIN

If each of the variable fields (nnnnn bbbbbb) is not followed by a blank, the
following message is printed:

RE RLSEC INVALID FORM

If either of the variable fields is an odd number, the following message is
printed:

RE RLSEC INVALID-MUST BE EVEN

If any of the variables (nnnnn bbbbbb) are not octal digits, the following
message is printed:

RE RLSEC INVALID-MUST BE OCTAL

If the last block of memory described in a RLSEC request is outside of
configured memory, the following message is printed:

RE RLSEC INVALID-NOT CONFIGURED

If the variable bbbbbb = 0, the following message is printed:

RE RLSEC-NOT RELEASABLE

If the above error conditions are passed, an attempt is made to satisfy the
request. Regardless of the success of the attempt, the system will print to
the console the same formatted data given by the RLSEC LIST verb to indicate
which portion of the request was satisfied.

R
INPUT MESSAGES

R
INPUT MESSAGES

RLSEC LIST

GPOP Message. This verb allows the operator to determine which areas of memory was released.

System Replies Possible:

RE RLSEC - JOB CAN'T SWAP
RE RLSEC - SWAP IN PROGRESS
RE RLSEC - WS #1 PAGE IN RANGE

(followed by)

RLSEC LIST
(HCM) 00000 0xxxx
RLSEC xxxxx xxxxx
" " "
" " "

RLSEC LIST -CONTINUED-
RLSEC xxxxx xxxxx

where:

- JOB CAN'T SWAP - This memory area belongs to a job that cannot swap. This may be a temporary condition.
- SWAP IN PROGRESS - This memory area is currently occupied by a program and an unsatisfied RLSEC request is waiting for this program to swap out so that release processing can continue.
- WS #1 PAGE IN RANGE - This memory page belongs to Working Space Quarter #1 (HCM, I/O buffer, hardware parameter stack, etc.) and cannot swap. This may be a temporary condition.

xxxxxxx - Memory address (modulo 512 decimal)
(HCM) - Memory is in use by GCOS
RLSEC - Released memory range

R
INPUT MESSAGES

R
INPUT MESSAGES

RLSEI n (Not valid on DPS 88 - GCOS 8 SR3000 and beyond)

IOS Message. Operator requests logical release of input/output controller #n (n = 0, 1, 2, 3) from the system. Before entering this message, however, the operator must make the following logical adjustments.

1. Move any logical console functions from the IOM being released to an IOM that is remaining in the system.
2. Release or move any unit record devices assigned to an executing program from the IOM being released to an IOM that is remaining in the system.
3. Move any PR1 printer functions from the IOM being released to an IOM that is remaining in the system.

NOTE: These moves are logical moves and involve no hardware switch or cable changes. Unit record device changes will probably be effected with the RLSE or EXCHG verbs, and the console moves will be made using the MOVE verb.

4. Use a TCALL to disconnect all Front-End Network Processors (FNPs) configured on the input/output controller being released.

This procedure prepares the input/output controller for release. It is assumed that disk and tape channels are crossbarred across input/output controllers so that when one input/output controller is deconfigured, all I/O is automatically diverted to another input/output controller.

System Replies Possible: If the request can be honored, the following message is output:

*IOM n IS RELEASED

If the request cannot be honored, one of the following replies is made:

- CAN'T RLSEI n -- SINGLE IOM - Release cannot be done because only one input/output controller is configured.
- CAN'T RLSEI n -- NOT CONFIGURED - The specified input/output controller is not configured on the system.
- CAN'T RLSEI n -- INPUT INVALID - The release request contained an error.
- CAN'T RLSEI n -- LAST IOM AVAIL - Multiple input/output controller configured yet only one available.

R
INPUT MESSAGES

R
INPUT MESSAGES

RLSEP p (Not valid on DPS 88 - GCOS 8 SR3000 and beyond)

GPOP Message. Operator requests release of processor p from the system.

where:

- p - To simplify processing, the ASGNP/RLSEP console verbs may specify either a processor number or a port number, providing no ambiguity exists between the processor number and a port number. The ASGNP/RLSEP module (IOS2) first examines the configuration for a port that matches the input argument to which a processor is connected. If one is found, the argument is assumed to be a port number. If no such port is located, the configuration is examined for a processor number matching the argument. If found, the argument is assumed to be a processor number. If neither a port number nor a processor number matches the assignment, an error response is displayed on the console.

System Replies Possible: If the request can be honored, the following message will be output:

*PROC m IS RELEASED

If the request cannot be honored, one of the following replies will be made:

- *CANT RLSEP p - ALREADY DONE - The processor was already released.
- *CANT RLSEP p - BUSY - The processor could not be released or an ASGNP/RLSEP request was being executed.
- *CANT RLSEP p - INPUT INVALID - The release request contained an error.
- *CANT RLSEP p - NOT CONFIGURED - The specified processor is not configured in the system.
- *CANT RLSEP p - PORT INACTIVE - The processor was released at startup.
- *CANT RLSEP p - REQUEST ACTIV - Duplicate previous request outstanding.
- *CANT RLSEP p - SCU IN MANUAL - The SCU is in manual mode.
- *CANT RLSEP p - UNIPROCESSOR - This processor remains the only assigned processor on the system.
- *CANT RLSEP p - WON'T PARK - The processor did not accept the request to be released.

R
INPUT MESSAGES

R
INPUT MESSAGES

RLSEP p TEST (Not valid for DPS 88 - GCOS 8 SR3000 and beyond)

GPOP Message. Operator requests that processor p be released for online testing. (NOTE: the "TEST" request does not apply to DPS 88 processors.)

p - Port assignment of processor to be tested

No manual intervention (switch setting) is required.

The processor on port p is now ready for T&D testing.

System Replies Possible: If the request can be honored, the following message will be output:

*PROC m IS RELEASED

If the request cannot be honored, one of the following replies will be made:

*CANT RLSEP p - INPUT INVALID - The release request contained an error.

*CANT RLSEP p - NOT CONFIGURED - The specified processor is not configured in the system.

*CANT RLSEP p - PORT INACTIVE - The processor was released at startup.

*CANT RLSEP p - REQUEST ACTIV - Duplicate previous request outstanding.

*CANT RLSEP p - UNIPROCESSOR - This processor remains the only assigned processor on the system.

RMIST

Reports the status of the specified remote work session, including the userid and SAC that owns the work session.

R
INPUT MESSAGES

R
INPUT MESSAGES

RUN sssss

GPOP Message. Operator requests running of a non-privy job that was in HOLD, LIMBO, or SIEVE status. Job sssss cannot be a cyclic job.

sssss - Job SNUMB

System Replies Possible:

sssss INVALID SNUMB

RUN REST

Peripheral Allocator Message. Allows the operator to start job allocation of jobs after a restart.

S
INPUT MESSAGES

S
INPUT MESSAGES

SECUR

This new verb may be used when any of the security options have been selected. The format for the SECUR verb is described below.

SECUR <option>

The following are SECUR options that may be selected:

STATUS
CHANGE
LOCK
UNLOCK
USER

System Replies Possible: None.

SNAP {Ssssss,nnnnnn|(nK)}
{Pppp }
{Pppp,nnnnnn|(nK) }
{Mmmm,nnnnnn|(nK) }
{H6hhh }
{H6hhh,nnnnnn|(nK) }
{Ww }
{Ww,oooooo,kk }
{LINES }

GPOP Message. Allows the operator to initiate a snapshot dump from the system console. If PR2 is assigned, dedicated, and not allocated, the dump is printed to this printer; otherwise, the dump is written to the Statistical Collection File.

sssss - SNUMB
ppp - Process number (0-511)
nnnnnn - Number of words (decimal)
mmm - Module number
6hhh - Segment identification
w - Working-space number (0-511)
o - Offset location (decimal words)
nk - Number of 1K blocks of words
k - Number of 1K pages

SNAP Pppp - Dump process number ppp in its entirety, including its control segments and registers.

S
INPUT MESSAGES

S
INPUT MESSAGES

SNAP LINES - Snap DNET internal lines table

NOTE: 1. The SNAP request may be terminated through the use of the "A" option in response to any related line printer GEPR message.

SNAP ERROR: TOO MANY INPUT CHARS. (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: FIELD MUST BE OCTAL (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: FIELD MUST BE NUMERIC (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: NON-NUMERIC K FIELD (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: TOO MUCH INPUT (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: TOO MANY FIELDS (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: MISPLACED COMMA (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: LAST FIELD TOO LONG (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: MUST GIVE P## (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: PROG # TOO BIG (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: ILLEGAL MODULE # (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: MODULE NOT LOADED (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: MUST SAY # LOCS (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: # LOCS TOO BIG (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: SEGID TOO BIG (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: CAN'T SNAP SD.SSM (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: SEGID MUST BE 6XXX (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: SEG DESC. NOT TYPE 0 OR 1 (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: NULL SEGMENT (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: MISSING SEGMENT (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: WSR NOT 0 OR 1 (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: NO SUCH WSN (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: NOT DIRECTORY F TYPE (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: STARTING OFFSET ILLEGAL (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: PROGRAM BUSY (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: START WITH H,P,N,W, OR S (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: JOB BUSY - TRY AGAIN (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: JOB OUT OF MEMORY (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: JOB UNKNOWN (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: SYSTEM ERROR-NOTIFY FED (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: INVALID WS QTR # (Lxxxxxxx Dxxxxxxx)
SNAP ERROR: SNUMB IS NOT IN SYSTEM (Lxxxxxxx Dxxxxxxx)

The L and D fields are for use by the field engineers where further diagnosis is necessary. All replies indicate an error in the request and the request is ignored.

S
INPUT MESSAGES

S
INPUT MESSAGES

SNUMB sssss - see STATS

 { filename }
SPAWN { filename,uu }

GPOP Message. Operator requests that a spawn job be entered into the system. The job must have already been placed on a permanent file, as described in GCOS 8 OS System Operating Techniques manual.

 filename - Five-character name that was used in the FCREAT directive
 uu - Urgency level (decimal) of the job (1-60)

System Replies Possible: If the file cannot be spawned, or if errors exist, the following message is output:

*SPAWN ABT reason

 { OFF }
SRM { }
 { ON }

IOS Message. Operator requests the status return modifier to be turned OFF/ON.

System Replies Possible:

*SRM xxx INVLD

SSA

Operator Interface Message. Operator requests a console display of information concerning SSA (Slave Service Area) module activity.

System Replies Possible:

*SSA: xx PAGES, xxxxx FINDS, xxxxx LOADS, xxxxx RELOADS, xx% HIT RATIO

S
INPUT MESSAGES

S
INPUT MESSAGES

STATS snumb

The "STATS sssss" reports the first occurrence of a sssss SNUMB, while searching the execution, SYSOUT and Scheduler tables, in that order. If a multiple occurrence of the SNUMB is found, the operator is informed of that fact with the message

*sssss-DUPLICATES FOUND - USE -ALL TO PRINT ALL

following the normal STATS output for the job. The operator input of "STATS sssss -All" forces the display of all jobs with that SNUMB that are found in those tables.

Example:

```
???STATS SHARD
*SHARD-1/0 U05 PRCSS#17 V EXEC
PROC(TU-00.000 TR-00.0490 ELP-00.041 USERID=SYS SOFTWARE
CORE (PF#-45 WS-003K) STATE-000000101200 09.957
*SHARD-DUPLICATES FOUND - USE -ALL TO PRINT ALL
???STATS SHARD -ALL
*SHARD-1/0 U05 PRCSS#17 V EXEC
PROC(TU00.000 TR-00.049) ELP-00.044 USERID=SYS SOFTWARE
CORE (PF#-45 WS-003K) STATE-000000101200 09.960
*SHARD IN SYSOUT @ 09.960 URG=62 SID=11 LLINKS=63
ELP=00.041 FLAGS=.R..... USERID=SYS SOFTWARE
      BPRIXX      ....D....
```

If the status is in SYSOUT, the following two lines will appear:

```
*sssss IN SYSOUT @ HH.TTT Uuu SID BLINKS=BBBBB
ELP = HH.TTT FLAGS = FF.FFF USERID = iiiiiiiiii
```

where:

```
SID - SNUMBs unique system ID
BBBBBB - SYSOUT BLINK space
FF.FFF - SYSOUT status
```

*sssss-aa/nn uu PRCSS#kkk m xxx....xxx

S
INPUT MESSAGES

S
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where:

aa - current activity number
nn - number of remaining activities
uu - urgency
kkk - KPX (Known Process Index)
m - mode - R is real (accommodation) and V is virtual (native)
SID - SNUMBs unique system ID
bbbb - SYSOUT BLINK space
FF.FFF - SYSOUT status
xxx....xxx - any of the following:

REMOTE PHASE ONE
CARD GEIN READING
INCV GEIN READING
REMOTE PHASE TWO
WAITING ALLOC
HOLD
LIMBO
EXEC
SWAPPED
WAITING MEDIA
SIEVE
REST
TERMINATION

The following interim message may be issued:

sssss STATUS CHANGING

If the status is SWAPPED or WAITING CORE, and if core is being requested, the following is appended to the initial response message:

CORE REQ ccck

where:

ccc - the amount of core requested.

k representing thousands.

S
INPUT MESSAGES

S
INPUT MESSAGES

If the status is not EXEC nor TERMINATION, the initial response message is appended with one of the following:

HH.TTT
or
DDD+HH.TTT

where:

HH.TTT - The time in hours and thousandths of hours
DDD - The number of days (only displayed if DDD>1)

If the status is EXEC or TERMINATION, a second line is added which appears as:

PROC (DDD+TU-DDD+HH.TTT TR-DDD+HH.TTT)
ELP-DDD+HH.TTT USERID = iiiiiiiiiiiii

where:

HH.TTT - The time in hours and thousandths of hours
DDD - The number of days (only displayed if DDD>1)
iiiiiiiiiiiiii - The 12-character user id

Also, a third line is appended to the initial message formatted as follows:

CORE (PF#-xxxxxx WS-kkkK) STATE-ssssssssss

where:

xxxxxx - The number of page faults
kkk - The current workspace size
ssssssssss - The octal representation of .STATE word

If the value kkk is followed by an asterisk, it is an extended memory job.

If any I/O requests are outstanding, the third line (above) is appended with:

IQ(REQ-nnn TRN-xxx CCALL-yyy)

where:

nnn - total request count
xxx - number in transmission
yyy - number of courtesy calls

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Then, the third line is ended with:

HH.TTT

where:

HH.TTT - The time in hours and thousandths of hours

*sssss-aa Uuu KPX#kkk xxx...xxx

where:

all above are previously defined in this message's description and
xxx...xxx - one of the following:

JUST STARTED, RE-ENT STATS
STATUS CHANGING, RE-ENT STATS

or any indicated combination of the following:

-HOLD REQ.
 {PRMFL BUSY }
 [-DELAY][-SAVES] {WING nnn ddddd [LINKS]}
 [FLNK PASS-01]
-CWF [-SAVES]
-NACT [-SAVES]

where:

dddddd - one of the following:

DSS190	DSS191
MS0400	MS0450
MS0500	MS0501
TAPE	TAPE7
TAPE9	MPC7
MPC9	READER
	CCU401
CPZ200	PRT300
CONSLE	SCC
CPZ300	READER
PRT303	PRT401
PRT203	CSS
MSU3380	FIPS*TAPE7
FIPS*TAPE9	

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Following any messages to the system console by GPOP, the System Scheduler is queried as to the SNUMBs status within the Scheduler's catalogues.

System Replies Possible:

sssss NOT FOUND - specified SNUMB not known to Scheduler
sssss - SAVED JOB - specified SNUMB has been sent to Peripheral Allocator
sssss (id) IS IN .class WAITING TO BE PURGED
sssss (id) IS IN .class WAITING FOR RUN .IDS
sssss (id) IS IN .HOLD WILL ENTER .class,Pxx ON mm/dd/yy AT hh.mm
sssss (id) IS IN .HOLD WILL ENTER .class,Pxx ON mm/dd/yy AT hh.mm (CYCLIC JOB)

Where:

sssss - Specified snumb
id - Two character remote station identification
.class - Scheduler class name
Pxx - Two digit priority code
mm/dd/yy - Month, Day, Year
hh.mm - Hour, Minutes

The following special definitions apply to System Scheduler messages:

- o Active job - Job in the System Scheduler that has not been given to the Peripheral Allocator for execution.
- o Saved job - Job that's given to the Peripheral Allocator for execution.
- o Finished Job - Job for which the Peripheral Allocator has given an End-of-Job (EOJ) to the System Scheduler.

#STATUS

This command may be entered through the local or remote console. In response to this command, the channel adapter will print the current console status to the requesting device. This command is applicable to consoles configured on IMUs only.

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SYSOP

GPOP Message. This verb requests current state of "system operational bit". Possible system replies are:

*** SYSOP: SYS_OP BIT NOW ON
*** SYSOP: SYS_OP BIT NOW OFF

SYSOP OFF

GPOP Message. This verb requests that the SYS-OP bit be reset. This prevents further scheduling of jobs by the System Scheduler until the system is rebooted or the SYSOP ON and JRUN verbs are used to resume normal scheduling.

System Replies Possible:

*** SYSOP: SYS-OP BIT NOW OFF
*** SYSOP: ILLEGAL ARGUMENT
*** SYSOP: CAN'T SWITCH - TRY LATER

SYSOP ON

SYSOUT Message. This verb requests that the SYS-OP bit be set. This verb in conjunction with the JRUN verb will allow the System Scheduler to resume normal job scheduling.

System Replies Possible:

*** SYSOP: SYS-OP BIT NOW ON
*** SYSOP: ILLEGAL ARGUMENT
*** SYSOP: CAN'T SWITCH - TRY LATER

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SYSOUT {BLINKS}
 {cnt }
 {FORMS }
 {JOUT }
 {PPS }
 {RSVID }
 {SPEC }
 {TOTAL }

SYSOUT Message. This verb replaces the former **LSTRE** and **LSTWT** verbs. When it is entered with no following modifier, the system provides online help.

SYSOUT BLINKS - Reports **SYSOUT** blink space.

SYSOUT cnt - Displays jobs for specified set; "cnt" represents control field and must specify an output type and/or destination.

Control fields for Output Types are:

ALL - All print and punch
APR - ASCII print
APN - ASCII print
BPR - BCD print
BPN - BCD punch
PRT - All print
PNC - All punch
ASC - All ASCII print and punch
BCD - All BCD print and punch

The destination portion of the control field may be:

Ixx - Remote ID
RMT - All remote
ONL - All online

SYSOUT FORMS - Lists jobs which require forms.

SYSOUT JOUT - Displays jobs waiting for JOUT.

SYSOUT PPS - Lists jobs destined for PPS.

SYSOUT RSVID - Lists jobs on reserved IDS.

SYSOUT SPEC - Displays Job Output Specials in effect.

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SYSOUT TOTAL - Displays BLINKS, SPEC, JOUT, and a control field specifying ALL.

System Replies Possible:

MPOPJ INFO(001) - ERROR <xxxxxxx> RETRIEVING CONSOLE TEXT; RE-ENTER
MPOPJ INFO(002) - ERROR <xxxxxxx> DELETING CONSOLE TEXT SEGMENT; RE-ENTER
MPOPI INFO(007) - NO RESERVED IDs CONFIGURED
MPOPI INFO(008) - PPS NOT CONFIGURED
MPOPI INFO(012) - JOB OUTPUT TABLE BUSY
MPOPJ INFO(014) - CONTROL FIELD TOO LONG
MPOPJ INFO(015) - UNKNOWN OPTION
MPOPJ INFO(016) - ILLEGAL OPTION COMBINATION
MPOPJ INFO(017) - TOO MANY CONTROL FIELDS
MPOPJ INFO(019) - INVALID SPECIAL
MPOPJ INFO(020) - JOB OUTPUT TABLE BUSY

CAN'T DO (verb): SYSTEM ERROR xxxxxxx AT LOC. xxxxxxx OF .MPOP7
xxxxxxx REQUEST ALREADY OUTSTANDING FROM THIS CONSOLE

Also, the following system responses will occur, if requested:

*BLINKS: nnnnn UNFINISHED, nnnnn FINISHED, nnnnn FREE, nnnnn ERRORS

*JOUT:

sssss

** NO JOBS WAITING FOR DELIVERY

sssss (online) sssss/ID (remote)

*sssss (online tape) *sssss/ID (remote tape)

** NO JOBS WAITING FOR FORMS

** NO JOBS WAITING FOR JOUT

** NO JOBS WAITING FOR PPS

** NO SPECIALS CURRENTLY IN EFFECT

*SPECIALS:

vvvvv 1st FIELD 2nd FIELD

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TAPFG

GPOP Message. Operator requests a listing of the current tape configuration of the system, along with the status of each tape device. Crossbarring is indicated.

System Replies Possible: Output is a list in the following format:

```
IOM NO.  i
PUB-cc      TAPES

(Device #)  (type)-(status)
.           .           .
.           .           .
.           .           .
PUB-cc X-BARRED WITH PRIM. PUB-cc. IOM-n
```

```
TCALL {FNP-n }
      {Sid  }
      {Tid  }
      {blank }
```

GPOP Message. Operator requests that calls from the Front-end Network Processor (FNP) specified be terminated. If FNP-n, Sid (stations identifier), or Tid (terminal identifier) is not specified, all FNPs configured are affected.

S is followed by a two-character terminal id.

T must be followed by the octal equivalent of the Terminal id.

Where:

n - FNP number (0-7)

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System Replies Possible:

FNP NOT AVAILABLE

BMX BUSY, TRY AGAIN

CORRECT FORM OF REQUEST IS "{A} CALL FNP-# #<n OR TCALL SID OR TCALL TID"
{T}

A = Allows the users to connect to the system
N = Total number of FNPs configured on the system.
T = Does not allow any user on the system

INVALID LINE#

FNP-n RELEASED

NOTE: If an FNP bootload is in progress at the time the request is entered and the request applies in any way to the FNP (e.g., a line number, station identification, terminal identifications, or omission of any specification), the bootload terminates immediately.

TCLASS icodd n

GPOP Message. Operator requests the system to change the class number assigned to a specific tape handler.

n - Desired class number (0-3)

System Replies Possible: If the request is accepted, no system reply is made. If an error is encountered, the request is denied and one of the following replies is returned.

IOM# INVLD
CH# INVLD
DEV# INVLD
INPUT INVLD

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TEST sxxxxxxxxx

TOLTS Message. Operator requests a test of certain equipment identified by sxxxxxxxxx. The TOLTS Reference Manual must be used to interpret messages initiated by the test system.

- s - M - MOLTS
- C - COLTS
- P - POLTS (Not applicable to DPS 90)
- B - COLTS driving BOS-355
- S - SOLTS (NOT APPLICABLE TO DPS 88 or DPS 90)
- \$ - SLTA/PACT AUTOCALL (Not applicable to DPS 90)
- W - ALL (Wrapup) ?
- L - ALL (LSTAL)

System Replies Possible:

QUEUE FULL - TRY TEST LATER
\$ TOLTS WRAPPING UP

TEXT

Startup Message. This causes the Startup Console Editor to be called.

Operator Action: None.

TIME hhhh or hh:mm

GPOP Message. Operator sets time of day when either hhhh or hh:mm is input.

where:

hhhh - hours
hh:mm - time expressed in hours (h) and minutes (m).

System Replies Possible:

INPUT ILLEGAL - (Time entered was greater than 24 hours, or a non-numeric character was entered.)

*mmddy tt.tt or tttt

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(For midnight, use either 00:00 or 0000)

NOTE: Resetting time of day following system startup can impact system functions which query the time for accounting and other purposes (i.e., Time Sharing users may be charged incorrectly). One preferred method to correct time of day on an operational system is via reboot, rather than trying to reset the time while the system is running.

TOGCOL (ON,OFF) (<class name>)

The TOGgle COLlection verb is used to change .MPERF to reflect ON,OFF setting of one of following classes <class name>:

- 1 = PRO
- 2 = MEM
- 3 = IOM (input/output controller)
- 4 = DISK
- 5 = TAPE
- 6 = PRINT
- 7 = FNP
- 8 = PROCES
- 9 = TSS
- 10 = SCHD
- 11 = SYSTEM
- 12 = FAULT
- 13 = MME
- 14 = PMME
- 15 = DMIVTP
- 16 = WORK
- 17 = TS8
- 18 = OPTION

TP BOMB { ON }
 { }
 { OFF }

TPE Message. Operator requests the system to set/reset the indicator to print (ON) or not print (OFF) the aborted transaction numbers (and reasons) at the operator's console. The format and reasons are as follows:

```
** TRAX # iiii LINE SWITCH ERR*
                TPAP ABORT ERR*
                TOO MNY LID ERR*
                INVLD ***MSG ERR*
```

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OUTBUF HDR ERR*
OUTPUT SIZE ERR*
INPT TRNSLT ERR*
OTPT TRNSLT ERR*
RETRVE JI ERR*
RETRVE JO ERR*
INTERACT MSG ERR*

TP DETL

TPE Message. Operator requests a detailed report of activities to date, and issues a list of all active or used TPAPs and the transaction that was accepted and completed for each.

TP MESS

TPE Message. Operator informs the TPE to send an all-points bulletin to all associated remote terminals. When ready for input, TP MESS? is output on the console. This message is sent to all current and future terminal users until it is nullified by a new message or until the operator responds to TP MESS? by pressing the End-of-Message (EOM) control button.

TP NEW

TPE Message. Operator informs the TPE to start accepting new transaction requests. This message is used to cancel a previous TP NONEW request.

TP NONEW

TPE Message. Operator informs the TPE not to accept any new transaction requests. The TPE continues processing requests that are already in the queue, and any terminal that is already connected is not disconnected.

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TP OUT {lid}
 {ALL} (hhxx)

TPE Message. Operator requests that the output specified by lid (logical identification) or ALL be formatted, identified, and output at the central site printer. An optional time can be specified, but it must be expressed in hours and hundredths of hours (hhxx), and must be preceded by a blank.

System Replies Possible:

TPE - INVALID REQUEST. OUTPUT DISENABLED
TPE - DUPLICATE OUTPUT REQUEST
TPE - OUTPUT REQUEST TABLE FULL
TPE - NO OUTPUT PER REQUEST
TPE - INVALID TIME FORMAT
TPE: NO OUTPUT FOR LID=xxx

TP REDI fff+++

TPE Message. Operator informs the TPE to redirect output from the first to the second logical terminal.

fff - First logical terminal
+++ - Second logical terminal

TP REST {id }
 {***}

TPE Message. Operator informs the TPE to respawn the TPAP as indicated by the option, and to start accepting transaction requests for that slave. This message is used to cancel a previous TP TERM request. Option *** spawns all TPAPs with appropriate flags and sends a *** STRT message to each.

TP SICT

TPE Message. Operator requests the printing of a report of the counts of threshold error conditions. Refer to *TPE THRSILD... output message for system replies.

TP STAF

TPE Message. Operator requests that statistics be written to the statistical collection file.

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TP STAT

TPE Message. Operator informs the TPE to display a brief summary of transaction activities to date. The summary includes the following:

- Number of transactions accepted
- Number of transactions rejected
- Number of transactions completed
- Number of physical terminals allowed and connected
- Number of physical terminals rejected
- Number of logical terminals in use

TP STAT id

TPE message. Operator requests the status of a specific TPAP identified in the id field. The report includes:

- Program number
- Number of transactions completed and accepted
- Number of spawns
- Program flags

TP STRT

TPE Message. Operator requests that the TPE be started.

TP TERM

TPE Message. Operator informs the TPE not to accept any new transaction requests, but to continue processing those that are already in the queue. As Transaction Processing Application Programs (TPAPs) become inactive, they are to be terminated. When all TPAPs have been terminated, all terminals are to be disconnected and the TPE is to be terminated.

TP TERM {***}
{id }

TPE Message. Operator informs the TPE to terminate the TPAP, as indicated by the option, as soon as the current transaction is complete. Option *** causes a ***TERM to be sent to each TPAP that has the appropriate flags set.

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TRACE {ON }
{OFF}

GPOP Message. Operator requests that the system trace be turned on or off.

System Replies Possible:

TRACE NOT CONFIG
INPUT INVLD

TS8 ABORT

Time Sharing 8 Message. The operator requests TS8 to abort the TS8 Administrative Program (SNUMB of TS8AD) and all TS8 processes. The following output is produced:

- o A dump of the TS8 Administrative Program to SYSOUT.
- o A dump to SYSOUT for each TS8 process. This dump includes the last five commands executed and an interpretive dump of the last 100-word trace.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR ABORT
VERB NOT FOUND FOR (text entered)
UNABLE TO ABORT (number of) PROCESSES
*END \$TS8-01 @tt.ttt

TS8 CANCEL

Time Sharing 8 Message. The operator requests TS8 to cancel all messages in the message buffers.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR CANCEL
VERB NOT FOUND FOR (text entered)

T
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TS8 DEBUG (ON OFF)

Time Sharing 8 Message. The operator requests that the TS8 debug switch be turned on or off. When this switch is on, it is possible to debug portions of the TS8 System. After the necessary debugging has been performed, the operator must turn the switch off.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR DEBUG
VERB NOT FOUND FOR (text entered)
INVALID SETTING FOR TS8 DEBUG

TS8 LAST

Time Sharing 8 Message. The operator requests TS8 to print at the console the last set of messages that were issued to all TS8 users. (A set of messages consists of the last six messages sent to TS8 users via the TS8 MESS console verb. If less than six messages have been sent, only those messages are printed.) Messages are printed starting with the most recently issued.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR LAST
VERB NOT FOUND FOR (text entered)

TS8 MASTER (ON OFF TIME)

Time Sharing 8 Messages. The operator requests an override of the TS8 master user logon time interval. This verb is disabled, partially enabled, or fully enabled by the TS8 Initialization file directive MASTER TIME OVERRIDE. (Refer the GCOS 8 OS Time Sharing 8 Administrator's Guide for additional information on this directive.)

When the verb is disabled (i.e., MASTER TIME OVERRIDE=DISABALE), the master user logon time interval cannot be overridden. Entering the TS8 MASTER verb with any option produces the following system response:

MASTER VERB DISABLED FOR TS8 MASTER (ON OFF TIME)

When the verb is partially enabled (i.e., MASTER TIME OVERRIDE=ENABLE), the master user logon time may be overridden. TS8 MASTER ON allows the master user to log on, and TS8 MASTER OFF prohibits the master user from logging on.

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TS8 MASTER TIME is the default value of the verb. This value turns off the override, allowing the master user to log on only during the master user logon time interval.

Abbreviated forms of this verb include TS8 MSON for TS8 MASTER ON and TS8 MSOF for TS8 MASTER OFF.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR MASTER
VERB NOT FOUND FOR (text entered)
MASTER VERB DISABLED FOR TS8 MASTER (ON OFF TIME)

TS8 MESS

Time Sharing 8 Message. The operator requests TS8 to prompt for a message which will be sent to all TS8 users. When the system is ready for operator input, the following message is output to the system console:

TS8 MESS--

The operator then enters the message. It will be sent to all current and future TS8 users until it is nullified by a new message or the TS8 CANCEL verb.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR MESS
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 QUEUE FULL, TRY LATER

TS8 NEW

Time Sharing 8 Message. The operator requests that TS8 accept new users. This command is used to cancel a previous TS8 NONEW request, as well as to accept new users if the TS8 Initialization file directive AUTOMATIC NEW does not contain the default value "YES".

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR NEW
TS8 - VERB NOT FOUND FOR (verb entered)

T
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TS8 NONEW

Time Sharing 8 Message. The operator requests that TS8 not accept new users. (The status of current users is not affected.)

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR NONEW
TS8 - VERB NOT FOUND FOR (verb entered)

TS8 RESTRT

Time Sharing 8 Message. The operator requests TS8 to restart the TS8 System. This verb is appropriate for use after the entry of TS8 TERM or TS8 STOP console verbs to terminate TS8 processing (without an intervening system failure and no change desired to TS8 parameterization, as established via the TS8 Initialization file). Following a failure of the GCOS 8 System or TS8 shared software, TS8 START must be used to reinitiate TS8 processing.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR RESTRT
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 INITIALIZATION BYPASSED
TS8 HAS ALREADY BEEN STARTED
TS8 IS OPERATIONAL AT hh:mm:ss PROC nnn

TS8 SNAP xx

Time Sharing 8 Message. The operator requests that a snapshot dump of the applicable TS8 common data areas. The dump is output to dedicated printer PR2, if it was configured; otherwise, the dump is written to the Statistical Collection File (SCF). Values for xx are COM (C) for the TS8 Common Data Segment and PRG (P) for the TS8 Program Descriptors. If a value is not specified (default), a snapshot of both common data areas is produced.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR SNAP
TS8 - VERB NOT FOUND FOR (verb entered)

T
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TS8 START (TS8 STRT)

Time Sharing 8 Message. The operator requests initiation of the TS8 System and/or the TS8 Administrative Program.

The abbreviated form of this verb is TS8 STRT.

System Replies Possible:

TS8 IS OPERATIONAL AT hh:mm:ss PROC nnn
TS8 HAS ALREADY BEEN STARTED
TS8 - 256K IS MAX S/S CACHE SIZE
TS8 - BAD STATUS DURING SUBSYSTEM LOADING FC=xx
TS8 - CANNOT ACCESS INIT FILE (SMC BUSY) - START TS8 AGAIN
TS8 - COMMENT LOG FILE WRITE ERROR-
TS8 - ERROR DURING GEMORE ATTACH OF \$LOAD FILE ppp xxx
TS8 - ERROR DURING GERSTR OF \$LOAD FILE ppp - CHECK FILE FORMAT
TS8 - FILE: xx - MODE NOT RANDOM
TS8 - FILE SPACE GEMORE DENIED DURING SUBSYSTEM LOADING FC=xx
TS8 - FMS UNABLE TO ATTACH INIT FILE - FMS STATUS=xxx
TS8 - FMS UNABLE TO ATTACH xx FILE: FMS STATUS =xxx
TS8 - FORMAT ERROR FOR PATCH CONTAINED IN INIT FILE (rrr)
TS8 - GEMORE MEMORY REQUEST DENIED DURING LOAD OF ROUTINE ppp
TS8 - I/O ERROR DURING READ OF INIT FILE
TS8 - INIT FILE BLOCK SERIAL NUMBER ERROR
TS8 - INIT FILE CONTENTS NOT ASCII OR BCD
TS8 - INIT FILE NOT PRESENT
TS8 - INIT FILE REQUIRED SECTION LABEL NOT PRESENT
TS8 - INIT FILE TOO MANY SUBSYSTEM PATCHES, NONE APPLIED
TS8 - INIT FILE \$INFO ARGUMENT LENGTH BAD
TS8 - INIT FILE \$INFO ARGUMENT INVALID
TS8 - INIT FILE \$INFO ARGUMENT OUT OF RANGE
TS8 - INIT FILE \$INFO DIRECTIVE NOT SUPPORTED
TS8 - INIT FILE \$INFO ERROR ON CACHE SET/RESET FOR (sss)
TS8 - INIT FILE \$INFO TABLE FULL FOR {GENERAL ACCESS USERID/TS8 RESTRICTED
USERID}
TS8 - INIT FILE \$INFO TEXT DOES NOT CONTAIN "="
TS8 - INIT FILE \$INFO TEXT LENGTH IN ERROR
TS8 - INIT FILE \$LOAD CMDLIB NAME DUPLICATED ppp
TS8 - INIT FILE \$LOAD CMDLIB SYNTAX ERROR FOR- ppp CHECK LENGTH/CONTENT
TS8 - INIT FILE \$LOAD FILE NAME NOT FOUND IN DESCRIPTORS ppp
TS8 - INIT FILE \$LOAD FILE NAME SYNTAX ERROR ppp
TS8 - INIT FILE \$LOAD NAME HAS ILLEGAL PERMISSIONS ppp
TS8 - INIT FILE \$LOAD PROCESSING, NO DESCRIPTOR SPACE FOR ppp
TS8 - INIT FILE \$LOAD SECTION HAS TOO MANY ELEMENTS

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TS8 - INIT IMAGE FILE WRITE ERROR
TS8 - NEED AT LEAST 6K OF S/S CACHE
TS8 - SUBSYSTEMS NOT LOADED
TS8 - SUBSYSTEM xxx TOO LARGE TO LOAD
TS8 - UNABLE TO ACCESS COMMON DATA SEGMENT: STATUS=ssssss
TS8 - UNABLE TO ACCESS SERVICES RU INIT ENTRY: STATUS=ssssss
TS8 - UNABLE TO ACCESS PROGRAM DESCRIPTOR SEGMENT: STATUS=ssssss
TS8 - UNABLE TO CREATE TEMP FILE
TS8 - UNABLE TO LINK SUBSYSTEM CACHE SEGMENT: STATUS=ssssss
TS8 - UNABLE TO RELEASE START-UP MEMORY
TS8 - UNABLE TO WIRE SUBSYSTEM CACHE SEGMENT
TS8 - VERB NOT FOUND FOR (verb entered)

Explanation of these system replies may be found in the GCOS 8 OS Time Sharing 8 Administrator's Guide.

TS8 STAT

Time Sharing 8 Message. The operator requests that the status of the TS8 System be displayed on the console.

The TS8 status message printed is as follows:

```
*TS8 yy-mm-dd hh-mm-ss nn users
  Swaps:          pp Processes
  Memory:        cc Current
  Processor:     hh:mm:ss subsystem, hh:mm:ss executive
```

where:

yy-mm-dd - Date expressed in year (yy), month (mm), and day (dd)

hh-mm-ss - Time expressed in hours (hh), minutes (mm), and seconds (ss).
The first occurrence of this field represents the current time (i.e., time of the status message). The second occurrence (i.e., hh:mm:ss subsystem) represents the total processor time used by all subsystems since TS8 was last started. The third occurrence (i.e., hh:mm:ss executive) is the total processor time for the TS8 Command Executive since TS8 was last started.

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nn - Total number of users who are currently logged on

pp - Total number of processes that have been swapped since TS8 was last started

cc - Amount of TS8 process local memory (in K words) currently in use

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR STAT
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 QUEUE FULL, TRY LATER

TS8 STOP (TS8 TERM)

Time Sharing 8 Message. The operator requests that the TS8 System be terminated. All TS8 processes and the TS8 Administrative Program (SNUMB of TS8AD) are aborted with the NDUMP option (i.e., no snapshot dump of TS8 to SYSOUT will occur).

System Replies Possible:

TS8 TIMESHARING SYSTEM TERMINATED
TS8 - TIMESHARING SYSTEM NOT UP FOR TERM/STOP
TS8 - VERB NOT FOUND FOR (verb entered)

TS8 TERM (TS8 STOP)

Time Sharing 8 Message. The operator requests that the TS8 System be terminated. All TS8 processes and the TS8 Administrative Program (SNUMB of TS8AD) are aborted with the NDUMP option (i.e., no snapshot dump of TS8 to SYSOUT will occur).

System Replies Possible:

TS8 TIMESHARING SYSTEM TERMINATED
TS8 - TIMESHARING SYSTEM NOT UP FOR TERM/STOP
TS8 - VERB NOT FOUND FOR (verb entered)

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TS8 TRACE (ON OFF)

Time Sharing 8 Message. The operator requests that the TS8 terminal traces be turned on or off. When this switch is on, the TS8 commands TDRL and TCMD can be entered at the terminal to enable a trace of TS8 derails and TS8 Command Executive events, respectively. (Refer to the GCOS 8 OS Time Sharing 8 Administrator's Guide for more information on the TDRL and TCMD commands.) After the necessary tracing has been performed, the operator should turn the switch off.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR TRACE
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 - INVALID SETTING FOR TS8 TRACE

TS8 TYPE26 (ON OFF)

Time Sharing 8 Message. The operator requests that the Statistical Collection File (SCF) type 26 record collection switch be turned on or off. When this switch is turned on, an SCF type 26 record is written each time a TS8 subsystem terminates. When the switch is turned off, no type 26 records are written. (The value for the TS8 Initialization file directive SUBSYSTEM ACCOUNTING determines whether the SCF type 26 record collection switch is on or off when TS8 is started.)

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR TYPE26
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 - INVALID SETTING FOR TS8 TYPE26

TS8 VOCAB

Time Sharing 8 Message. The operator requests a list of all TS8 input verbs (messages). A list of all TS8 input verbs is printed at the console.

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR VOCAB
TS8 - VERB NOT FOUND FOR (verb entered)
(List of all TS8 verbs)

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INPUT MESSAGES

TS8 WARN tt.ttt

Time Sharing 8 Message. The operator requests TS8 to issue a message to all users that the TS8 System will be down at tt.ttt (where tt.ttt = time in hours and thousandths of an hour). (If tt.ttt=0 is input, the previous warning message is nullified.)

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR WARN
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 QUEUE FULL, TRY LATER

TS8 WHO

Time Sharing 8 Message. The operator requests TS8 to list the status of all TS8 processes at the console. For each TS8 process, the following is provided:

uuuuu dddd ssss yymmdd hh:mm:ss zzzzz xxx ccc

where:

uuuuu - User identifier (up to 12 characters)
dddd - Station identifier (BCD)
ssss - Subsystem being executed
yymmdd - Login-date expressed in year (yy), month (mm), and day (dd)
hh:mm:ss - Login-time expressed in hours (hh), minutes (mm), and seconds (ss).
zzzzz - SNUMB of process
xxx - Known Process Index (KPX)
ccc - Current subsystem

System Replies Possible:

TS8 - TIMESHARING SYSTEM NOT UP FOR WHO
TS8 - VERB NOT FOUND FOR (verb entered)
TS8 QUEUE FULL, TRY LATER
TS8 - NO USERS

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn EXTEND nn

Time Sharing System Message. When a line connected to TSS is disconnected in any manner other than typing "BYE" or "LOGOFF", TSS will hold the User Status Table (UST) (preserve the state of the user's session) for a site-defined length of time in anticipation of a reconnect request. This value defaults to 2 minutes, but can be changed via the INIT file. Use of this verb increments the UST preservation time, for all USTs which are currently in hold, by nn minutes (note that it does not change the global preservation time). The generic usage scenario addressed by this verb is one in which most or all of the lines connected to TSS are disconnected abruptly (e.g., an FNP failure followed by an FNP reboot) and operations needs to override the existing UST preservation time parameter to permit the affected users to log back in and reconnect.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution

TSn 190N
190FF

Time Sharing System Message. These options control the generation of type 19 TSS statistical records. This switch can be set via the INIT file as well.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution

TSn KILL

Time Sharing System Message. Operator requests that the Time Sharing System be terminated. TSn is snapped to the Accounting File or PR2, if dedicated.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution

System Replies Possible:

TSS PRGM NOT FOUND FOR KILL

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn LAST

Time Sharing System Message. Operator requests that the message being sent to all Time Sharing System users at log-on time be output on the console.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - S All copies of Time Sharing in execution

TSn MESS

Time Sharing System Message. Operator requests an interrupt of the Time Sharing System so that a message may be sent to the remote terminals.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - S All copies of Time Sharing in execution

System Replies Possible:

TSS QUEUE FULL
TSS TEXT ERR, error TRY AGAIN

When ready for input, TSn MESS-- is output on the console. Enter the message to be sent. The message is sent to all current and future terminal users until it is nullified by a new message or until the operator responds to TSn MESS-- by pressing the END OF MESSAGE control.

TSn MIN s

Time Sharing System Message. Operator sets the minimum size of the Time Sharing Subsystem Space to s times 1024 words.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - s All copies of Time Sharing in execution

System Replies Possible:

TSS QUEUE FULL
TSS TEXT ERR, error TRY AGAIN

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn MSON

Time Sharing System Message. The operator requests TSS to permit the master user identifier to log on.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing

System Replies Possible:

- TSS QUEUE FULL
- TSS TEXT ERR, error TRY AGAIN

TSn MSOF

Time Sharing System Message. The operator requests TSS to deny the master user identifier permission to log on.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing

System Replies Possible:

- TSS QUEUE FULL
- TSS TEXT ERR, error TRY AGAIN

TSn NEW

Time Sharing System Message. Operator requests the Time Sharing System (TSS) to accept new users. It is used only to cancel a previous TSS NONEW request.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing

System Replies Possible:

- TSS QUEUE FULL
- TSS TEXT ERR, error TRY AGAIN

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn NONEW

Time Sharing System Message. Operator specifies that the Time Sharing System will not accept new users. The status of current users is not affected.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing

System Replies Possible:

- TSS QUEUE FULL
- TSS TEXT ERR, error TRY AGAIN

TSn - NO PGM NUMBERS AVAILABLE

Time Sharing System. An attempt has been made to start a copy of TSS. However, there are no KPX numbers available. The startup of TSS will not be attempted.

- n - 1 Standard Time Sharing
- n = 1,2,3, or 4 Multicopy Time Sharing

TSn SIZE s

Time Sharing System Message. Operator sets the maximum size of the Time Sharing Subsystem Space to s times 1024 words. If s is not specified, a status message of the TSS copy is output.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - s All copies of Time Sharing in execution

System Replies Possible:

- TSS QUEUE FULL
- TSS TEXT ERR, error TRY AGAIN

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn SPEC

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution.

Time Sharing System Message. The operator requests an interrupt of the Time Sharing system so that a message can be sent to a specific user or station. When Time Sharing interrupt is made, and the system is ready for operator input, the system outputs the following message at the console.

TSn SPEC

The operator then enters one of the following messages.

```
uuuuu\message
=dddd\message
=cc\message
(EOM)
```

where:

- message - Specific message to be sent
- uuuuu - User identifier (up to 12 characters)
- =dddd - Station identifier (octal)
- =cc - Station identifier (BCD)
- (EOM) - EOM key, used to nullify sending of previous SPEC message

The message is sent to all terminal users with the specified user or station identification until it is nullified by the operator with either a new specific message or by entering this message with the EOM option.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time sharing in execution

System Replies Possible:

```
TSS QUEUE FULL
TSS TEXT ERR, error TRY AGAIN
specific text ERR
```

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn STAT

Time Sharing System Message. Operator requests that the Time Sharing System (TSS) be displayed on the master console.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - S All copies of Time Sharing in execution

System Replies Possible:

*T/S QUEUE FULL, TRY LATER PLEASE
*T/S TEXT ERR error TRY AGAIN
*TSn mmdyy tt.ttt uuu USERS
*TSn MEMORY SIZES cccK=CUR.nnnK=CHG. mmmK=MAX.sssK=SWAP.1111K=LGST.
*TSn URGENT USERS xxx=URG. iiii STA.ID. www=SEC. yyyK=SIZE
*TSn USAGES tt.tt=PROC TIME qqqqK NEEDED BY zzz USERS aaa=%USED

(Refer to Output Messages for explanation of *T/S... and *TSn mmdyy....)

TSn STRT

Time Sharing System Message. Operator requests initiation of the Time Sharing System.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - S All copies of Time Sharing configured (via \$ INFO MCPTSS/n)

System Replies Possible:

TSn -TSS B-PRIORITY NOT DEFINED
TSn -SUBSYSTEMS NOT LOADED
TSn -TSS MAXIMUM #USERS SET TO 999
TSn -DEFERRED CATALOG INITIALIZED
TSn -DEFERRED CATALOG CHECKSUM ERROR - (A)BT, (C)ONT, OR (I)NIT
TSn -DEFERRED CATALOG FORMAT ERROR - (A)BT OR (I)NIT
TSn -DEFERRED CATALOG I/O ERROR
TSn -DEFERRED FILE SPECIFIES INVALID DEVICE TYPE
TSn -UNABLE TO INITIALIZE SUB-DISPATCH QUEUE
TSn -FMS UNABLE TO ATTACH PRMFL-xxx FMS STATUS=yy
TSn -FILE SPACE DENIED FOR SY** FILES
TSn -FILE SPACE DENIED FOR FILE - xx
TSn -TSS FILE (xx) WON'T FIT ON UNIT(yyy) WILL USE (zzz)

T
INPUT MESSAGES

T
INPUT MESSAGES

TSn -SUBSYSTEM xxx TOO LARGE TO LOAD
TSn -NO PGM NUMBERS AVAILABLE
TSn -.MPOPM QUEUE FULL
TSn -* NO FNP AVAILABLE CHECK CONFIG
TSn -BAD STATUS DURING SUBSYSTEM LOADING FC=xx
TSn -FILE SPACE GEMORE DENIED DURING SUBSYSTEM LOADING FC=xx
TSn -FMS UNABLE TO ATTACH INIT FILE-FMS STATUS=xx
TSn -FORMAT ERROR FOR PATCH CONTAINED IN INIT FILE (rrr)
TSn -I/O ERROR DURING READ OF INIT FILE
TSn -INIT FILE NOT PRESENT
TSn -INIT FILE REQUIRED SECTION LABEL NOT PRESENT
TSn -INIT FILE CONTENTS NOT ASCII OR BCD
TSn -INIT FILE \$INFO TEXT DOES NOT CONTAIN "-"
TSn -INIT FILE \$INFO TEXT LENGTH IN ERROR
TSn -INIT FILE \$INFO TEXT ERROR
TSn -INIT FILE \$INFO PARAMETER LENGTH ERROR
TSn -INIT FILE BLOCK SERIAL NUMBER ERROR
TSn -INIT FILE TOO MANY SUBSYSTEM PATCHES, NONE APPLIED
TSn -INIT \$INFO "FILE" SYNTAX BAD - xxxxxx

Explanation of these system replies may be found in Section 3 of this manual.

TSn TCAL

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - S All copies of Time sharing in execution

Time Sharing System Message. The operator requests an interrupt of the Time Sharing System so that a user or users can be terminated. When the interrupt has been made, the system asks the operator to identify the user(s) to be terminated by outputting the following message:

TSn TCAL --

to which, the operator responds with one of the following options:

uuu...u the user identifiers to be terminated
=dddd octal station identifier of user to be terminated
=cc BCD station identifier of user to be terminated
*ALL terminates all users

T
INPUT MESSAGES

T
INPUT MESSAGES

A station code of =2020 or =~~00~~ is ignored.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution

System Replies Possible:

TSS PRGM NOT FOUND FOR TCAL
TSS QUEUE FULL
TCALL BUSY TRY LATER
TCALL TEXT ERR

TSn TERM

Time Sharing System Message. Operator requests that the Time Sharing System be terminated. No snap of TSn to the Accounting File or dedicated PR2 will occur.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution

System Replies Possible:

TSS PRGM NOT FOUND FOR TERM

TSn WARN tt.ttt

Time Sharing System Message. Operator warns Time Sharing System users that the system will go off the air at tt.ttt. A tt.ttt=0 input nullifies any previous warning message.

- n - 1 Standard Time Sharing
- n - 1,2,3, or 4 Multicopy Time Sharing
- n - S All copies of Time Sharing in execution

System Replies Possible:

TSS QUEUE FULL
TSS TEXT ERR, error TRY AGAIN

T
INPUT MESSAGES

T
INPUT MESSAGES

TYPFG

GPOP Message. Operator requests a listing of the current configuration of the system, along with the status of each peripheral unit. Crossbarring is indicated and the number of available llinks for each mass storage device is shown. There is one entry for each PUB used.

System Replies Possible: Output is a list in the following format:

T-Y-P-F-G

xxxx-K 1-PRC

1-08-14	MS0450	PACK#-C155	AVAIL-73895	DLINK-8	USAGE-40
1-08-15	MS0450	PACK#-H612	AVAIL-86157	DLINK-9	USAGE-34
	.				
	.				
1-09	X-BARRED	WITH PRIMARY	1-08		
1-10	X-BARRED	WITH PRIMARY	1-08		
1-28-01	MPC9	CLS-0	DENS-DE		
1-30-00	SCC	ASGN-	VIDEO		
	.				
	.				
1-60-01	PRT401				
1-61-01	PRT401				
1-62-01	CRZ301				
1-63-01	CP300	RELEASED			

U
INPUT MESSAGES

U
INPUT MESSAGES

UDTAPE ddd

Operator Interface Message. Operator requests that magnetic tape device ddd, previously assigned to a program by the DDTAPE verb, be released back to the system.

System Replies Possible:

UDTAPE: DEVICE NAME NOT ASSIGNED

The activity has already terminated.

UDTAPE: DEVICE NAME NOT FOUND

The device name table does not contain the device named with the UDTAPE verb.

ULSAC

Allows the console operator to unlock the specified SAC.

System Replies Possible: None.

UNAME xxx

GPOP Message. Operator requests that a name be removed from the name table. TY1 - TY4 cannot be removed and permanent mass-storage devices cannot be removed.

xxx - Device name

System Replies Possible:

NAME INVLD
NAME NOT FOUND
CANT NAME/UNAME MASS ST

U
INPUT MESSAGES

U
INPUT MESSAGES

UNDED xxx

GPOP Message. Operator undedicates the named device so that it may be reassigned by device type as well as by name.

xxx - Device name

System Replies Possible:

MPOPE ERROR(102) -xxx NAME NOT FOUND

{SNB=sssss}
UNJOUT {SID=sid }

SYSOUT Message. Operator requests that a job in SYSOUT, being held for JOUT, no longer be held for JOUT.

System Replies Possible:

MPOPF INFO(001) - ERROR RETRIEVING CONSOLE TEXT - PLEASE
REENTER
MPOPF INFO(002) - ERROR DELETING CREATED SEGMENT
MPOPF INFO(012) - GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(014) - INVALID NUMBER
MPOPF INFO(017) - ILLEGAL REQUEST FORMAT

URGC sssss uu aa

GPOP Message. Operator requests to either change the urgency or display the existing urgency.

uu - The new urgency desired, in decimal. If the uu value is greater than 40, the urgency is reset to 40. Urgencies greater than 40 are possible only through the application of a site option patch.

aa - Current activity number, in decimal. If the activity field contains an S, the SNUMB field contains the SID of a SNUMB in SYSOUT.

U

INPUT MESSAGES

U

INPUT MESSAGES

To change the urgency for the current activity only, the operator uses the entire message. If the activity number of the job agrees with the activity number input by the operator, the urgency is changed for the activity only and the old urgency applies for each activity after the current one. If the activity number of the job differs from the one input by the operator, the request is denied and the operator is notified.

To change the urgency of the entire job, the operator inputs the message, leaving the activity number blank.

To request a display of the existing urgency of a job, the operator inputs the message, leaving both the urgency and the activity fields blank. If the job is in the .CRSNB table, or in SYSOUT the system returns the following informative message.

URGC sssss aa

System Replies Possible:

*URGC sssss uu	- Statement of existing urgency of job
sssss uu aa ACT # INVLD	- Invalid activity number
sssss uu aa SNUMB INVLD	- Invalid Job sequence number
sssss uu aa URGCV INVLD	- Invalid urgency
sssss uu aa SID INVALID	- Invalid SYSOUT request
sssss CANT FIND SNUMB	- Job not found in .CRSNB table
URGC REQUEST APPLIED TO	- Job found in SYSOUT and there were nnnn
nnnn JOBS	undelivered jobs with SNUMB sssss

NOTE: For a job in SYSOUT, an urgency of 00 means "hold this job". The job will not be delivered until it is given a non-zero urgency.

V
INPUT MESSAGES

V
INPUT MESSAGES

VFC iccdd name

GPOP Message. Allows the operator to load a specific VFC image.

name - three- to six-character VFC image name. The first character must be alphabetic and special characters are not allowed.

System Replies Possible:

IOM INVALID
CH# INVALID
DEV INVALID
INVLD VFC/PTRAIN FORMAT
VFC REQ FOR 300/303 ILLEGAL
NOT TRN PRTR
ASGND CANT LD BFR

{name }
*{iccdd} RLSED CHECKSUM ERROR {TRAIN} {identifier}
{sssss} {VFC } {block no. }

*{iccdd} {identifier}
{sssss} RLSED {name } NOT ON CATALOG

*{iccdd}
{sssss} RLSED SECTOR# nnnnnn INVALID

*{iccdd} RLSED {TRAIN} ILLEGAL REQUEST FOR THIS PRINTER TYPE
{sssss} {VFC }

{name }
*{iccdd} RLSED {identifier} I/O ERROR ON CATALOG/IMAGE FILE
{sssss} {block no. }

*{iccdd} {TRAIN}
{sssss} RLSED ERROR ON {VFC } LOAD

*{iccdd}
{sssss} RLSED TRAIN MOUNTED xxxxxx REQUESTED ID WAS yyyyyy

*{iccdd}
{sssss} RLSED I/O ERROR ON READ STATUS COMMAND

V
INPUT MESSAGES

V
INPUT MESSAGES

VIDEO

GPOP Message. Operator restores VIDEO program display after the TY5 has been returned to the VIDEO mode. Data display appears on the screen. This applies only if VIDEO was previously running on TY5, then TY5 temporarily used as an operator console.

System Replies Possible:

VIDEO CANT START - NO TY5 OR DUP SCT ADDR

VOCAB

GPOP Message. Operator requests a list of all input system messages (except those which are suppressed). A list of all input system messages known to the system is typed out on the console.

VOCABU

GPOP Message. Operator requests a list of all user input messages. A list of all input messages that were implemented by the user is printed on the console. If none have been implemented the following message is printed:

NO USER VERBS.

VOID xxxxx

GEOT Message. Operator on one system requests that VERB xxxxx be voided on another system. The systems must be running full Common File Facility or be shared.

System Replies Possible:

MPOPF INFO(012) - GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(018) - ILLEGAL REQUEST IN A NONSHARED SYSTEM

W
INPUT MESSAGES

W
INPUT MESSAGES

	{	blank	}	}
	{LIST	{ALL	}	}
<u>WORKST</u>	{	workstation name}	}	}
	{		}	}
	{ABORT	{ALL	}	{T2 }
	{	WORKSTATION NAME}	}	{TYPE2}}

Operator Interface Message. Operator requests to list or abort known workstations in the system. The first option must be either LIST or ABORT. If LIST is requested, the second option may be:

- blank - List the names of all workstations in the system
- ALL - List the names of all workstations in the system
- workstation name - List all the SNUMBs in the specified workstation

If ABORT is requested, the second option may be:

- ALL - All workstations in the system are aborted.
- workstation name - Only the specified workstation is aborted.

If ABORT is requested, the third option may be:

- T2 or TYPE2 - Normally, an abort request is not honored for a process executing in a TYPE2 critical section. This option allows the operator to override this constraint. This option can only be used in extreme cases, as it may cause GCOS crashes or process disasters.

NOTES: 1. The second and third options may be reversed.

- 2. "ALL" is a keyword in the WORKST command syntax and must not be used as a workstation name.

System Replies Possible:

For LIST - KNOWN WORKSTATIONS: w...w

or

- SNUMBs FOR WORKSTATION w...w: sssss

W
INPUT MESSAGES

W
INPUT MESSAGES

Error Messages:

1ST WORKST OPTION MUST BE LIST OR ABORT
xxxxxxx IS AN ILLEGAL OPTION FOR WORKST
xxxxxx DUPLICATE OPTION
CAN'T DO WORKST: SYSTEM ERROR nnnn AT LOC. 111 OF .MPOWS
WORKST OPTION FIELDS MUST NOT EXCEED 12 CHAR
WORKST: SHARED SOFTWARE VERSION vvvv ISN'T LOADED - STATUS sssss WORKST NAME
TABLE FULL, SOME WILL NOT BE LISTED
WORKST - MUST GIVE WS NAME OR "ALL"
w.....w IS NOT A KNOWN WORKSTATION
NO WORKSTATIONS ARE KNOWN
WORKSTATION w..w NOT STARTED
xxxxxxx REQUEST ALREADY OUTSTANDING FROM THIS CONSOLE
WORKST - BUSY WORKSTATION, PLEASE TRY AGAIN

SECTION 3

GENERAL INFORMATION ON OUTPUT MESSAGES

MESSAGES OF RECORD

The format for activity progress messages of record is as follows:

```
*xxx sssss-aa @tt.ttt eeeee KPX nnn
*xxx sssss-aa @tt.ttt reason
*xxx sssss-aa @tt.ttt * USER xx MME GEBORT
*xxx sssss-aa @tt.ttt * USER xx PMME ABORT
```

where:

* - A system output message; however, not all system messages begin with the asterisks.

xxx - The nature of the message. The possible substitutions for xxx are:

SRT = Job initiation

EOJ = Normal job termination

ABT = Abortion of the activity in execution and possibly the entire job

DLT = Deletion of job from the system job control stack after completion of job input media conversion

END = Termination of job because of execution deletion, inability to allocate, or control card error.

sssss - The job sequence number

aa - The activity sequence number within the job

tt.ttt - Time of day in hours and thousandths of hours

eeeeee - Activity type (General Loader, GMAP, etc.)

reason - Reason code for the abnormal termination (applies to ABT and DLT)

nnn - Known process number

These messages are indented 22 spaces from the beginning of the line for readability.

PERIPHERAL DEVICE AND INPUT/OUTPUT CONTROLLER MESSAGES

Messages relating to peripheral devices and the input/output controllers (refer to Iyy below) may or may not require operator reply. For both cases, and for all peripheral devices, the general message formats appearing at the console are:

```
*xxx y ssxx    pp i-ccc-dd MASTR g
*xxx y ssxx    pp i-ccc-dd sssss g
*xxx y ssxx    pp i-ccc-dd sssss RDY
*LST  xx       pp i-ccc sssss
*Mmm y ssxx    pp i-ccc-dd sssss
```

where:

* - This indicates an error occurred on a user I/O.

Mmm - Octal value of the illegal major status detected.

xxx - One of six legal major status conditions or an IOM error, as follows:

ATT = Operator attention required at the device

LRT = Data alert so, operator action usually required

REJ = Instruction rejected; operator action may be required at the device

POF = Peripheral power must be turned on or the device properly connected to the system

Iyy = Input/output controller and/or memory-detected errors as well as other peripheral interface devices (where Iyy = IMX for DPS 8000, IMU or IOM for DPS 8, IOX for DPS 88, or IOP for DPS 90)

EOF = End of the file reached on disk

LST - Lost interrupt was detected. Operator action is required, for example, to allow rewind on tape, let punch cycle out of Standby, or correct printer status.

y - I for input/output initiation condition or T for a termination condition

ss - Peripheral substatus condition or IOM/memory errors identified by means of a two-digit number (Octal Substatus Code)

xx - Two-digit peripheral instruction code (refer to Appendix A)

pp - One of the following device types:

CP = Card punch
CR = Card reader
DP = Removable disk pack
DS = Disk
MT = Magnetic tape
PR = Printer
TY = Console

i - Input/output controller number

ccc - Channel (PUB) number

dd - Device number

g - One or more designators representing operator options, one of which the operator enters. There are two types of response options, implicit and explicit.

Implicit Options

Implicit options are standard for specific devices, but are not printed as a part of the system console message. The options are listed as follows according to the priority of processing.

D = Set the device "unassignable". This option must be accompanied by one of the program options R, B, U, A, Z, S, or P.
T = Call the test routine for this device.
X = Exchange this device for another device. This option must be accompanied by one of the program options R, B, U, A, Z, S, or P.
A = Abort the current activity.
Z = Roll back the program to the last user checkpoint or restart the activity.
L = Set Low density.
H = Set High density.
S = Print the seek address.
K = Deactivate a channel. This reply is processed exactly the same as the DCHNL iccc input message. Possible system replies may be found under that message description. This reply should be used only when a channel fault is involved.

Explicit Options

Explicit options are listed following the applicable system console output message. These options are processed after the implicit options have been processed.

- R = Retry I/O.
- U = Return the status to the user program for action. If further operator action is required, the user program will issue an instruction message.
- B = Manually backspace the device and retry I/O.
- P = Position the device and retry I/O.
- M = Move all messages from a failing console to an alternate console.
- V = Find an alternate track on the disk pack to continue processing. This option should only be entered at the request of the user, since some of the original data on the defective track may be unrecoverable. It is not available for temporary files. Refer to the NOTE below.
- W = Remove a bad track area encountered while processing a temporary or PERM file. The bad area will be isolated to the allocation unit affected, marked no longer available in the in-memory table, and recorded as bad in the directory on the device. The slave program is aborted or status is returned to the user. This option should only be used at the direction of site techniques personnel.

NOTE: Use of the V and W options is limited as follows:

1. DSS180 Subsystem - The V option can be selected only under the following conditions:
 - a. A Data Alert status, Check Character Alert substatus is present.
 - b. A Write command was given.
 - c. The device is a permanent file

The W option can be selected only under the following conditions:

- a. A Data Alert status, Check Character Alert substatus is present.
- b. The device is a structured permanent file.
- c. The failing I/O is not SYSOUT I/O.

2. MSU0400/0402/0450/0500/0501 with DSS181/190/191 - both options are offered if the conditions indicated for the DSS180 subsystem are present. In addition, the options are offered when the following statuses are present:

MPC Device Data Alert (13 octal major status, 23 octal substatus)

MPC Device Data Alert (13 octal major status, 24 octal substatus)

MPC Device Data Alert (13 octal major status, 25 octal substatus)

MPC Device Data Alert (13 octal major status, 26 octal substatus)

MPC Device Data Alert (13 octal major status, 42 octal substatus)

3. FIPS devices - The V option is offered for all the above status conditions. In addition, it is offered on Read commands and for temporary files. All data which is physically recoverable is retained.

When replying to a Exception Processor message, a combination of program and device options may be given. The Exception Processor validates the options and performs the device options followed by the program options.

When the V option has been selected for a FIPS mass storage device, the operator is informed when the status of the affected data changes by a message of the form:

```
ddd i-ccc-dd ccc/hh status
```

where:

```
ddd - Device name
  i - Input/output controller number
ccc - Channel (PUB) number
  dd - Device number
ccc - Cylinder number
  hh - Head number
```

and status is one of the following:

MOVED TO TEMP ALTERNATE

Data was moved from the defective track to a temporary alternate.

FTAR STATUS INVALID

The sector Lock Table entry for this track contains an unrecognized FTAR status.

DATA ALL VALID, RUN FTAR 5

Data which could not be read from the defective track when the temporary alternate was assigned, has all been rewritten. FTAR Test 5 should be run to repair the defective track or assign a permanent alternate.

NO ALTERNATE AVAILABLE

All permanent alternate tracks on the device have been used. Data will remain on temporary alternate.

NOT REPAIRABLE BY FTAR

FTAR could not repair the defective track. Data will remain on the temporary alternate.

MOVE TO ALT/ORG FAILED

The data could not be moved from the temporary alternate to the repaired original (or permanent alternate). Data will remain on the temporary alternate.

MOVED TO PERMANENT TRACK

The data was moved from the temporary alternate to a permanent track (alternate or repaired original).

CAN'T RELEASE TEMP ALTERNATE

Space used for the temporary alternate track cannot be returned to the Available Space Table. The data is intact on the permanent track.

SECTION 4

OUTPUT MESSAGES BEGINNING WITH THE LETTER A

ABNORMAL TERMINATION sssss-aa DO NOT SAVE OUTPUT TAPES

Source and Object Library Editor Message. Fatal errors were encountered in activity aa, and nothing was written to any output tape. The message applies only to the current activity.

Operator Action: None.

ABORT BOOT FROM TAPE

Startup Message. The bootload tape could not be read, and bootload is being aborted.

Operator Action: None.

ABORT BY GFRC ROUTINE .GXLIT CODE x FILE CODE yy

File and Record Control Message. A GF abort occurred as a result of a transliteration error.

- x - 1 - Inconsistent file description
- 2 - Illegal file code
- 3 - Invalid option on the card
- 4 - Too many transliterated files
- 5 - I/O error; no recovery attempted
- 6 - Illegal transliterated device
- 7 - Block size too large
- 8 - User buffer too small
- 9 - Parameter request not currently implemented

yy - File code of file in error

Operator Action: None.

A

OUTPUT MESSAGES

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OUTPUT MESSAGES

(A)BORT, (C)ONTINUE, COPY#, (I)GNORE AND CONTINUE

Save/Restore Message. Message is always preceded by a specific error message, describing an existing error condition.

Operator Action: Respond with the desired option. Enter A to abort. Enter C to continue restore activity. If the COPY# option is output, the copy tape number can be entered if one exists.

If the (I)GNORE AND CONTINUE option is printed, enter C response bypass the erroneous record; I continue the restore activity as if the error never occurred.

CAUTION

The I option can cause further errors (e.g., a record with a checksum error can possibly be processed, but it can also precipitate a condition that makes it impossible to proceed).

<<<ABORT ISSUED FOR SHARD DUE TO SYSTEM SCHEDULER CLEAR.
SHARD WILL BE SPAWNED>>>

Peripheral Allocator Message. Protected file recovery was provided, but SHARD will be spawned again to refresh its entry in the system scheduler file because the scheduler was cleared.

Operator Action: None.

*ABT sssss-aa @tt.ttt (abort reason)

Termination Message. Activity aa was aborted by the system for the reason stated. Further explanation concerning the abort reason may be found by referencing the GCOS 8 OS Programmer Messages And Abort Codes manual.

Operator Action: None.

A

OUTPUT MESSAGES

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OUTPUT MESSAGES

*ABT sssss-aa @tt.ttt (abort reason)
ROLLBACK?

Termination Message. An abnormal termination condition exists that affects job sssss, and the JROLL option was specified in the JCL. Operator is asked if a rollback to the nearest checkpoint is desired.

Operator Action: Enter YES to affect the rollback if the abort reason code indicates the error condition is operational in nature (i.e., hardware problems, operator error), as opposed to programming errors.

Enter NO to continue termination activities. The message is repeated without the "ROLLBACK?" to verify the termination of the activity. Any other response causes the message to be repeated every 30 seconds until a YES or NO entry is made.

\$ ACCBUF CARD WAS REJECTED-ASSUME DEFAULT

Startup Message. The \$ ACCBUF statement was rejected for one or more of the following reasons:

1. Nonoctal digits in the first two numeric fields
2. Nondecimal characters in the third field
3. Field not proper size

The same default values that are used when no \$ ACCBUF statement is present will be assumed.

Operator Action: None.

ACCNTG CONTIN PROCESSING BAD

GPOP Message. Statistical accounting continuation could not be done.

Operator Action: None.

A

OUTPUT MESSAGES

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OUTPUT MESSAGES

*ACCOUNTING FILE FATAL ERROR

Rollcall Message. An unrecoverable I/O error occurred on the accounting file.

Operator Action: If tape accounting is being used, reboot, using a different tape and/or tape unit. If disk accounting is being used re-edit the accounting files to a different location.

*ACCT FILE COMPLETED {DMT i ccc dd}
{RDY i ccc dd}

***ERROR ON OLD ACCT FILE-~~nnnnnnnn~~ GOOD RECORDS (yyy) (optional)

GPOP Message. An accounting tape switch identified a completed tape and notifies the operator of any errors.

~~nnnnnnnn~~ - Number of good records on the file
yyy - Type of trailer label attempted when error occurred (EOR or EOF)

Operator Action: Save completed tape for accounting function.

*ACCT FILE COMPLETED-FILE1(name1), STARTING S#sssss CURRENT-FILE2(name2)
***ERROR ON OLD ACCT FILE-~~nnnnnn~~ GOOD RECORDS. (optional)

GPOP Message. A disk system statistical collection file was closed. The SNUMB of the automatically generated purge job to dump the completed file is identified.

name1 - 12-character BCD name as shown on \$ ACCOUNT statement.
name2 - 12-character BCD secondary name as shown on \$ ACCOUNT statement.
nnnnnn - Number (decimal) of good records. Block serial number if error encountered.

Operator Action: When the SNUMB identified asks for privity, respond RUN sssss.

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* ACCTNG BUF SZ TOO BIG

Startup Message. The buffer size on the \$ ACCOUNT statement is greater than 1604 words.

Operator Action: Correct the \$ ACCOUNT statement and continue.

*ACTIVE BOOTLOAD TAPE SPECIFIED ON FOLLOWING CARD

Startup Message. The bootload tape device cannot be specified because it is used during all of the startup operation.

Operator Action: None.

*ACTIVE READING TAPE SPECIFIED ON FOLLOWING CARD

Startup Message. The reading tape device is reserved during startup operation.

Operator Action: None.

ADDITIONAL OPTIONS: ALL, HCM, SOFT, SLV, W/XX, P/XX, REAL, NPURE, NONE
DEVICE, DUMPO, (-)SD.XXX, .MXXXX, PH.XXX, PSH, SSF,
HIS, TRC, COM, PTW, ONLY, EXEC, FLTKPX, CACHE, SDC,
AUTO, PAED, RES, END

Dump Message. If the DATA CAPTURE OPTION is ALL, the additional options selected override the ALL option; otherwise, it is used to supplement the DCAF option.

- (U)SE causes DUMP to use the options specified on the \$ANSWER statement.
- (N)ONE should be used if a dump should not be taken.

The following list of options affect the amount of data written to the dump device, and should be used when dumping to tape, disk, or printer. Options which have changed are preceded by a single asterisk (*); new options are preceded by a double asterisk (**).

ALL - Dumps all known workspaces from 1 to 777.

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- HCM - Dumps workspace 1.
- SOFT - Dumps all workspaces from 4 to 27.
- SLV - Dumps all workspaces from 30 to 777.
- *W/xx - Dumps workspace xx.
- *W/xx-yy - Dumps workspaces xx through yy.
- *P/xx - Dumps KPX xx (DUMP internally converts the KPX number to a workspace number).
- **FLTKPX - Dumps the faulting KPX or program at the time of the system interruption.
- **EXEC - Dumps all the KPXs in execution on an active processor at the time of the system interruption. The number of programs selected should range from one to six, depending upon the number of processors in use.
- NONE - Display the SELECT DEVICE: message.
- DEVICE - Display the SELECT DEVICE: message.
- END - Causes dump to go to restart.
- ONLY - Only dumps the option specified.

The following options can be used to print a portion of selected working spaces, and should be used when the amount of data to be captured is small enough to be printed quickly on any configured printer, such as PR1. Several of the options may be preceded by a hyphen to indicate "not". For example, HCM -SD.CR would dump all of HCM, except the CR segment; -PH.SSA would dump all the known workspaces without the SSA segment.

NOTE: These options can ONLY be used for dumping to printer.

- REAL - Prints real memory pages only.
- NPURE - Prints the modified real memory pages
- **DUMPO - Prints the .MDUMP abort snap contained in file DUMPO.

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- (-)SD.xxx - Prints the specified GCOS 8 system segment.
- (-)Mxxx - Prints the specified GCOS 8 module.
- (-)PH.xxx - Prints the specified segment for one or more workspaces.
- PSH - Prints all the process control segments for all selected workspaces.
- SSF - Prints information about all programs known to the system.
- (-)HIS - Prints the formatted history register segment, SD.HDP.
- (-)TRC - Prints the formatted system trace segments, SD.TT0 and SD.TT1.
- COM - Prints the system communications segment, SD.COM.
- PTW - Prints the page table segment (PH.PT0) for all selected workspaces.
- CACHE - Prints the contents of CACHE memory for the DPS 8 or the DPS 8000.
- SDC - Prints the contents of various RADS (Rapid Access Data System) segments (SD.CCH, etc.)
- (-)AUTO - Prints the contents of the system AUTOLOAD file.
- (-)PAED - Prints the contents of the .GPAED portion of all \$SYSTEM files used for the current boot.
- (-)RES - Prints the contents of the reserved memory for the DPS 88 or DPS 90 processors.

The default options, which are underscored, are automatically printed when options other than NON are selected from the console. They can be specifically excluded by the delete feature (-) or by the ONLY option. Except for exclusions, they need not be entered on the console.

A line ending with a comma indicates that a continuation line is requested.

If the operator enters an invalid option name (either an invalid name or a misspelled name), .MDUMP will issue the following message to the console:

```
INVALID OPTION "OPTION"  
INPUT ERROR, RE-INPUT
```

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The operator must then reenter response.

When the options specified for the dump have been executed, the following message is issued on the console:

ADDITIONAL OPTIONS:

The operator can respond with any of the valid options for the dump message. This allows the operator to specify additional dump options. A response of END or EOM (End of Message) causes .MDUMP to proceed to the Restart Operation.

The \$ ANSWER statement in the System Startup job stream can be used to pre-answer the .MDUMP options message for a dump to printer operation. In preparing the Startup statements, the options that can be entered from the console can be specified on \$ ANSWER statements. When these are specified, the options message will not be issued to the console. The specified options will be invoked automatically when a dump to the printer is requested. Note that the default options need not be specified unless they are to be deleted from the dump.

***ADDRESS TO BE PATCHED IS TOO HIGH ON CARD**

Startup Message. The address of the program to be patched, shown in columns 1-6 of the OCTAL statement, is above the limits of the program.

Operator Action: Correct the OCTAL statement and resubmit.

AFTER COMPLETION OF GESEP, RETURN INPUT TAPES TO OPERATIONS FOR DISPOSITION

Summary Edit Program Message. After Summary Edit Program has finished return the tapes to operations.

Operator Action: Return the tapes.

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***AGAIN message**

Peripheral Allocator Message. The "MNT", "RDY", and "RNG" forms of the *MEDIA message are reissued, after two minutes if the operator has not performed the requested action. When reissued, the meaning and the requested action are the same, but the *MEDIA is replaced with *AGAIN.

***** sssss: ALL BUT ONE PROCESSOR IS CURRENTLY RELEASED**

Memory Release Message. MEMREL program spawned by RELSEC request. The MEMREL program normally temporarily releases all except one active processor; in this case, there were multiple processors configured, but only one was active.

Operator Action: None.

***** sssss: ALL BUT ONE PROCESSOR WILL BE TEMPORARILY RELEASED
AND REACTIVATED WHEN MEMORY RELEASE IS COMPLETED**

Memory Release Message. MEMREL program spawned by RLSEC request. This message is informative and occurs when there are multiple active processors at the time of the RLSEC request.

Operator Action: None.

ALL WILL BE USED AS DUMP OPTION.

Dump Message. A DCAF error has occurred. The ALL option will overwrite the default DCAF option.

Operator Action: None.

ALLOCATION IMPOSSIBLE - device name

Peripheral Allocator Message. An attempt was made to allocate more devices than are configured, or more space on a device than allowed.

Operator Action: Refer to Appendix C for device descriptions.

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*ALTERNATE ACCT FILEn PURGE NOT COMPLETED, ACCT REQUEST DENIED

GPOP Message. The ACCNT request was denied because purge is already in progress.

n - number of the file now being purged

Operator Action: Try ACCNT when current purge is complete.

*ALTERNATE ACCT FILEn PURGE NOT COMPLETED, WAIT OR IGNORE..W/I?

GPOP Message. The previous purge was not completed, but a second purge forced. The operator must inform the system whether to wait (losing incoming statistical collection data until purge completes) or to ignore the switch files (possibly destroying the first purge data).

n - number of the file already purging

W - wait

I - ignore

Operator Action:

Enter W - Statistical collection data will be lost until current purge is completed.

Enter I - Data will be collected but it will be written in current purge file, possibly destroying the currently purging file.

*ALTERNATE TRACK TABLE CHECKSUM ERROR

Startup Message. A bad checksum was found while the alternate track table was being read.

Operator Action: None.

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***ALTERNATE TRACKS ASSIGNED ON DEVICE SPECIFIED ON FOLLOWING EDIT CARD**

Startup Message. The Removable Store Initialization Program (RSIP) assigned alternate tracks on the device specified on the indicated \$ EDIT statement. Startup does not edit such devices.

Operator Action: Either reformat the pack through Startup or process a new pack.

***ATT I/T ssxx pp icccdd sssss (s.a. = ssssssssssss fc= nn)/(pppppppppppp dn)**
(operator response)?

Exception Processor Message. An Attention status, with a substatus of ss, occurred on the specified device pp during attempt to execute the instruction indicated by the code xx.

where:

I = INITIATE INTERRUPT
T = TERMINATE INTERRUPT

- I/T - Status was returned on an Initiate/Terminate interrupt.
- ss - Octal substatus code (refer to Appendix D).
- xx - Instruction code (refer to Appendix A).
- pp - Indicates one of the following device types:
 - CP = Card Punch
 - CR = Card Reader
 - DP = Disk Pack
 - DS = Disk
 - MT = Magnetic Tape
 - PR = Printer
 - TY = Console
- i - Input/output controller number
- ccc - Channel (PUB) number
- dd - Device number
- sssss - SNUMB
- dn - Magnetic tape density from word 0 of the SCT
- p...p - Magnetic tape position data from word 1 of the SCT

Operator Action: One or more of the following explicit responses may be available. These are punctuated with a question mark (?) and the keyboard is enabled to allow operator input.

R - Retry I/O.

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- U - Return status to the user.
- B - Manually backspace the device and retry I/O.
- S - Type the disk seek address. The Attention message will then be repeated.
- M - Move all messages from the failing device to an alternate console.

The following implicit options are not printed on the console by the Exception Processor, but are always available:

- A - Abort the job.
- X - Exchange the device for another device (may be combined with the R or B option).

If the message is not punctuated by a question mark (?) the keyboard will not be enabled. In this case, an interrupt from the device is required after correcting the existing condition. The following options may be seen:

- RDY - Ready the device.
- BSP - Manually backspace and then ready the device.
- U - Status is sent to the user program. Ready the device.

A variety of conditions may have caused the Attention message to be printed, depending on the device type. The activity required before responding at the console may involve various attempts to power on, ready devices, correct device malfunctions, or respond to device empty conditions.

EXAMPLE: *ATT T 4025 DP 0-08-26 1304Z RU?

An Attention condition exists on a terminate interrupt to the disk pack on IOM-0, channel 08, device 26, while running SNUMB 1304Z. While executing a write-continuous (25) instruction, the system found the device to be offline (40). After correcting any malfunction, if possible, the device should be placed online and in a ready condition. The options available are to retry the I/O (R), let the user program try to recover (U), abort the job (A), or switch to another device if device 26 is inoperable (X).

***ATTEMPTED ACCESS BEYOND FILE LIMITS**

Startup Message. Access was attempted at a location beyond the file limit.

Operator Action: Increase the file size for this file.

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{ACCNT}
ATTN {DUMP } TAPE 1-ccc-dd, EOM FOR RETRY, 0 FOR OPTIONS
{JRNL }

Dump Message. An Attention status was detected on a I/O operation involving the device to which the tape accounting or the dump is directed.

Operator Action: Ready the device and press EOM or enter 0 and DUMP will repeat the Dump device option message:

SELECT DEVICE:

*AUTOBOOT NOT POSSIBLE, LOADFILE NOT DEFINED

Startup Message. The \$LOAD section is not acceptable.

Operator Action: Replace the \$LOAD section from the card reader.

*AUTOLOAD ABORT, BOOT { FM CARD READER }
{ FROM TAPE }

Dump Message. The attempt to load Startup card images from the device indicated on the \$ AUTOLOAD statement was unsuccessful.

- o If the Startup program originally resided on punched cards, the console message AUTOLOAD ABORT, and BOOT FM CARD READER is issued.
- o If the Startup program originally resided on magnetic tape, the console message AUTOLOAD ABORT, and BOOT FROM TAPE is issued.

Operator Action: Determine whether a hardware problem exists. If not, boot from the original storage medium.

A

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***AUTOLOAD DEVICE UNDEFINED NO SUITABLE DEFAULT**

Startup Message. The autoloader device was not defined on the \$ IOM statement and there is no suitable alternate device.

Operator Action: Change the \$ IOM statement to define autoloader device.

***AUTOLOAD FILE DEVICE NOT SUITABLE**

Startup Message. Device selected by user is not usable, or startup cannot find a usable device, for autoloader file on a FIPS disk device. The autoloader file device, if a FIPS mass storage device, must be the name of the device with the lowest logical device of the physical device. The device name must also be specified on a \$ GCOSFIL record.

Operator Action: Change \$CONFIG section to follow the above criteria and reboot.

***AUTOLOAD/LOADFILE MUST BE ON GCOSFILE DEVICE**

Startup Message. The autoloader and/or loadfile device was not indicated on the \$ GCOSFILE statement.

Operator Action: Change the \$ GCOSFILE statement and reboot.

SECTION 5

OUTPUT MESSAGES BEGINNING WITH THE LETTER B

*BAD BLOCK 0 ON SSFILE. MUST EDIT SSFILE CARD AGAIN

GPOP Message. An error occurred when Startup processed the \$ SSFILE statement, causing an invalid block 0 on the System Scheduler file.

Operator Action: Check the \$ SSFILE statement for errors. Revise the statement, if necessary, and reboot.

*BAD CARD TYPE ERROR: BACKSPACE TO RETRY OR END MESSAGE TO IGNORE

Startup Message. A BCD statement other than EOF, OCTAL correction, OBJECT, or DKEND was in the \$LOAD section; or the next statement read after \$ OBJECT was not \$ DKEND.

Operator Action: Determine the situation; then remove, correct, or reorder the statements as required. Enter B. Press EOM to ignore.

*BAD CLASS HEADERS ON SSFILE. MUST EDIT SSFILE CARD AGAIN

GPOP Message. An error occurred when Startup processed the \$ SSFILE statement, causing invalid class headers on the System Scheduler file.

Operator Action: Check the \$ SSFILE statement for errors. Revise the statement, if necessary, and reboot.

*BAD DATA FORMAT ON IMCV TAPE

System Input Message. The magnetic tape is a bad tape or was created with a wrong format.

Operator Action: None.

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OUTPUT MESSAGES

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***BAD DECK OR AUTOLOAD**

Startup Message. If booting is from cards, the bootload deck used in Startup is not the same version as Startup itself. If booting is from Autoboot, there is a Startup error in memory.

Operator Action: Reboot.

***BAD DECKFILE BCD CARD CHECKSUM**

Startup Message. The job stream file was destroyed.

Operator Action: Reinitialize the job stream file by one of the four following methods. Always answer PARTIAL to INITIALIZE and YES to PROCESS \$ READIN.

- o Change the file name on the \$ DECKFILE statement in the \$CONFIG section.
- o Change the autoload device.
- o Initialize the autoload device.
- o Answer YES to CLEAR AND OVERWRITE EXISTING DECKFILE.

***BAD J* DATA FOR sssss - CAN'T RELEASE SPACE**

System Scheduler Message. Scheduler found a zero device name on J* record for job sssss and must bypass space release invocation. Informative message only.

Operator Action: None.

***BAD NAME ON SSLOAD, ONLY THE FOLLOWING ALLOWED:**

Startup Message. The \$ SSLOAD statement contains an illegal entry.

Operator Action: Revise the \$ SSLOAD statement in accordance with allowable entries, and reboot.

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BAD STATUS READING MCA
STATUS WAS: xxxxxxxxxxxx xxxxxxxxxxxx
yyyyyyyyyyyyyy
zzzzzzzzzzzzzz

Startup Message. Startup reads the MCA configuration files for all IMU/IMXs. An error was encountered reading this file over channel 3. The xxxx field will be the octal status return and DCW residue from the I/O.

The yyyy field will be one of the following interpreted status messages:

CHANNEL POWER OFF,
LOST INTERRUPT,
ILLEGAL,
CHANNEL READY, NORMAL TERMINATION
CHANNEL READY, ADAPTER FAILURE
CHANNEL READY, ILLEGAL
ATTENTION (DISKETTE), WRITE INHIBIT
ATTENTION (DISKETTE), SEEK INCOMPLETE
ATTENTION (DISKETTE), DEVICE NOT PRESENT
ATTENTION (DISKETTE), DEVICE INOPERABLE
ATTENTION (DISKETTE), DEVICE IN STANDBY (DOOR OPEN)
ATTENTION (DISKETTE), ILLEGAL
DATA ALERT, TRANSMISSION PARITY ALERT
DATA ALERT, CHECK CHARACTER ALERT
DATA ALERT, ILLEGAL
COMMAND REJECT, INVALID OPERATION CODE
COMMAND REJECT, ILLEGAL
ATTENTION (MCA), MCA EXECUTIVE F/W ERROR
ATTENTION (MCA), MCA OVERLAY F/W ERROR
ATTENTION (MCA), CONNECT TIME OUT
ATTENTION (MCA), ILLEGAL
DATA ALERT (MCA), DATA OVERFLOW ON LOAD
DATA ALERT (MCA), DATA UNDERFLOW ON LOAD
DATA ALERT (MCA), ILLEGAL
COMMAND REJECT (MCA), INVALID SEQUENCE
COMMAND REJECT (MCA), INVALID PATH NAME
COMMAND REJECT (MCA), INVALID REQUEST FORMAT
COMMAND REJECT (MCA), CONTINUE BIT ERROR
COMMAND REJECT (MCA), INVALID BLOCK HEADER
COMMAND REJECT (MCA), ILLEGAL
UNEXPECTED MAINT. SESSION CONTINUATION
UNEXPECTED MCA RESPONSE DATA
MISMATCHED MCA BYTE COUNT

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UNEXPECTED MAINT. SESSION NORMAL TERM.
UNEXPECTED MAINT. SESSION ABNORMAL TERM.
UNEXPECTED IOM STATUS xx

where the xx field is the octal IMU/IMX central or channel status error code.

UNEXPECTED DCW RESIDUE
UNEXPECTED SERVICE PROCESSOR STATUS:
ssssssssssss

where the s field is a message in the form of:

<<xxxx>> IMU OR SERVICE PROCESSOR INFORMATIVE MESSAGE

where the xxxx field is defined by the IMU/IMX or DPS 8000 service processor. If no IMU/IMX or service processor status is received when expected, then the following status message is substituted:

<<9999>> NO SERVICE PROCESSOR STATUS RETURNED

The only acceptable service processor status value (xxxx) is the one for "READY" - "0000", otherwise it is treated as an error.

The zzzz field is a retry question in one of the following forms depending on whether a diskette was being used as a result of the command:

RETRY, ABORT/RETRY, EXCHANGE DRIVE/RETRY, QUIT (RAXQ)?
RETRY, ABORT/RETRY, QUIT, (RAQ)?

Operator Action: NOTE: A command to the MCA may require more than one I/O to complete.

Enter R to indicate a retry of the current I/O which may have encountered an error.

A to indicate a retry of the entire command sequence and not just the I/O entry.

Q to indicate that Startup should not try to continue with this MCA command but return an error status to the calling routine which may or may not be acceptable (the calling routine will indicate with an appropriate message if Startup will continue with the error or abort).

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X to indicate a desire to change the drive in which the MCA PHX or PRO diskette is being read. Startup will wait for the "Y" before continuing (i.e., when the operator responds with "Y" then Startup will abort the current MCA command and retry the entire command using the alternate drive) and issue the following message:

EXCHANGE DISKETTE DRIVES, RESPOND Y WHEN READY

***BAD TAPE LABEL**

Startup Message. A labeled edit tape has an invalid or missing label between files.

Operator Action: Retry with a correctly labeled edit tape.

***\$ BASE CARD MUST PRECEED \$ MCT/\$ CIU CARDS**

Startup Message. Misplaced \$ BASE statement.

Operator Action: Correct the \$ BASE card placement and reboot Starup.

***BCR MT i-ccc-dd sssss-aa L=,F=, CEA**

File and Record Control Message. The block count in the trailer label does not agree with the block count in the file control block.

L - Trailer label block count
F - File control block count

Operator Action: Enter C to continue execution, ignoring the label check; enter E to force an end-of-file condition; enter A to abort the job.

***BCR sssss-aa MT i-ccc-dd L=nnnn F=mmmm CEA**

Standard COBOL-68 I/O System Message. The block count in the trailer label of an input reel does not agree with the block count of the blocks processed.

nnnn - Block count from trailer label
mmmm - Block count from file's programmed block counter

Operator Action: Enter C to continue execution; Enter E to force the end-of-file condition for this file; enter A to terminate the activity.

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***** sssss: BEGINNING MEMORY RELEASE PROGRAM**

Memory Release Message. MEMREL program spawned by RLSEC request. This message is informative and identifies the memory release program SNUMB.

Operator Action: None.

***BINARY CARD IN PATCH SECTION**

Startup Message. There is a binary statement in the octal patch section.

Operator Action: Remove the statement and reboot.

***BINARY DECK TOO BIG**

Startup Message. A binary program or program combination (job stream followed by the data file) input to the Startup \$INITIALIZE section is too big for the buffer area assigned. This situation is very improbable.

Operator Action: Delete the deck combination.

****BLOCK SERIAL NO. ERROR, TAPE BSN xxxxxx SHOULD BE yyyyyy
(A)BORT, (C)ONTINUE**

Restore Message. While reading a save file, the restore program found block serial number = xxxxxx and expected block serial number = yyyyyy.

Operator Action: Enter A to abort the program or C to continue. The C option will cause the program to accept the BSN xxxxxx and continue.

***i-ccc-dd: BLOCK SERIAL NUMBER ERROR**

Startup Message. An error occurred on the tape during processing of the \$ READIN statement.

Operator Action: Correct tape, then restart.

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OUTPUT MESSAGES

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OUTPUT MESSAGES

***BOTH SCU'S ARE CONFIGURED AS LOW MEMORY**

Startup Message. the DPS 8000 SCU configuration registers were read and both SCUs appear to contain low memory.

Operator Action: Correct the DPS 8000 service processor configuration file and reboot from switches.

***BOOT IOP RELEASED, CAN NOT CONTINUE**

Startup Message. This pertains to DPS 90 systems only. The boot IOP has been released; therefore, Startup cannot issue an I/O. The \$ MCT statement has specified an incorrect port assignment for the boot IOP.

Operator Action: Correct the \$ MCT statement and reboot.

***BOOTLOAD DEVICE ERROR i-ccc-dd eeeee**
FIX TYPE GO

Startup Message. A read device error occurred and the device may not be capable of continued operation without operator intervention.

eeee - Error status

Operator Action: Fix the device; enter GO.

***BOOTLOAD DEVICE ERROR i-ccc-dd: eeeee**
OPERATE WHEN READY

Startup Message. A read was attempted on a device that is not in Ready status.

eeee - Error status

Operator Action: Correct the error condition and ready the device.

***BOOTLOAD DEVICE NOT CONFIGURED ON \$ IOM**

Startup Message. The device currently being used for bootloading was not configured on the \$ IOM statement.

Operator Action: Correct the \$ IOM statement and reboot.

B

OUTPUT MESSAGES

B

OUTPUT MESSAGES

BOOTLOAD FROM PUSHBUTTONS

Dump Message. A unrecoverable error was detected while reading Startup from disk to memory. The Startup program is on tape, not cards.

Operator Action: Bootload from the console by pressing INIT, then BOOTLOAD.

BOOT SOURCE: AUTO OR REPL?

Startup Message. Following a system abort (and dump) the operator is asked to specify whether the source for rebooting the system is to be from the AUTOLOAD file or whether sections of the startup job stream are to be selectively replaced.

NOTE: This message does not apply to DPS 88 systems.

Operator Action:

Enter AUTO - The Startup program residing on the AUTOLOAD file is to be used to effect the bootload.

Enter REPL - The operator can selectively replace one or more sections of the Startup program that exists on the AUTOLOAD file. The section(s) must be entered in their entirety via the card reader. The entire section is written to the AUTOLOAD file to overlay (replace) the existing section. (Refer to the GCOS 8 OS System Startup manual for additional information.)

If, during the restart procedure, an error occurs that prevents rebooting the system from the Startup program and job stream that reside on the AUTOLOAD file, an informational message is issued to the console. The message directs the operator to reboot the system using the storage medium on which the Startup program and job stream originally resided.

- o If the Startup program originally resided on punched cards, the console message AUTOLOAD ABORT, BOOT FM CARD READER is issued.
- o If the Startup program originally resided on magnetic tape, the console message AUTOLOAD ABORT, BOOT FROM TAPE is issued.

B
OUTPUT MESSAGES

B
OUTPUT MESSAGES

BOOT SOURCE: TAPE, DISK, AUTO OR REPL?

Startup Message. Following a system abort (and dump), the operator is asked to specify whether the source for rebooting the system is to be from tape, disk, the AUTOLOAD file, or whether sections of the startup job stream are to be selectively replaced.

Operator Action:

Enter TAPE - Permissible only on DPS 8000 and DPS 88 systems and causes the following message to be issued:

***READY BOOT TAPE ON icccdd, TYPE GO WHEN READY**

i - IOX number
ccc - Channel number
dd - Device number

Mount the boot tape and enter "GO" when ready.

Enter DISK - The Startup program residing on the AUTOLOAD file is to be used to effect the bootload. (A new image is read into memory.)

Enter AUTO - The Startup program is re-initialized from the memory image of the AUTOLOAD file.

Enter REPL - The operator can selectively replace one or more sections of the Startup program existing on the AUTOLOAD file. The section(s) must be entered in their entirety via the card reader. The entire section is written to the AUTOLOAD file to overlay (replace) the existing section. (Refer to the GCOS 8 OS System Startup manual for additional information.)

If, during the restart procedure, an error occurs that prevents rebooting the system from the Startup program and job stream that reside on the AUTOLOAD file, an informational message is issued to the console. The message directs the operator to reboot the system using the storage medium on which the Startup program and job stream originally resided.

- o If the Startup program originally resided on magnetic tape, the console message AUTOLOAD ABORT, and BOOT FROM TAPE is issued.

B
OUTPUT MESSAGES

B
OUTPUT MESSAGES

***BOOT SOURCE MUST BE CARDS**

Startup Message. The bootload must be done from the card reader.

Operator Action: Load the bootload deck into the card reader and reboot.

***BPRIOR (input text) REQUEST DENIED**

GPOP Message. A BPRIOR verb request is rejected. May be caused by one of the following:

- o Specified SNUMB not in execution
- o Format of parameters in error
- o Specified SNUMB not a class B priority process
- o Class B priority option not specified

Operator Action: Correct the condition.

***BRING DEVICE ON CARD BELOW ONLINE FOR TAPE SURVEY**
END MESSAGE WHEN READY

Startup Message. An MTS500, MTU0400/0500, or MTU0600 tape device was specified on the indicated \$ READIN, \$ FILDEF, or \$ ACCOUNT statement, and it was either in an offline condition or powered off during tape survey.

Operator Action: Bring the device online or power it up so that survey can be done; or abort Startup, select another device on the card, and restart Startup.

*** BRT6 { .CRSLQ } CLEANPOINT ERROR FDR sssss**
{SD.SBT}

Termination Message. An error occurred when termination attempted to cleanpoint a system table for the specified cell or segment.

NOTE: This message only occurs when the CLENPT option is specified on the \$ INFO statement of the Startup program.

Operator Action: Notify the Honeywell Bull Response Center.

B
OUTPUT MESSAGES

B
OUTPUT MESSAGES

*BSY I/T ssxx ppp i ccc dd sssss seek address (disk only)
(operator response) (?)

Exception Processor Message. A channel or device busy status, with a substatus of ss, occurred on the device ppp during an attempt to execute the instruction indicated by the code xx.

I/T - Status returned on an Initiate/Terminate interrupt.
ss - Octal substatus code (refer to Appendix D)
xx - Instruction code (refer to Appendix A)
ppp - Indicates one of the following device types:
 CP - Card Punch
 CR - Card Reader
 DP - Disk Pack
 DS - Disk
 MT - Magnetic Tape
 PR - Printer
 TY - Console
i - Input/output controller number
ccc - Channel (PUB) number
dd - Device number
sssss - SNUMB

Operator Action: One or more of the following explicit responses may be available. These are punctuated with a question mark (?) and the keyboard is enabled to allow operator input.

Enter R - Retry I/O. Clear or reset the device before responding.
Enter U - Returns status to the user program.
Enter S - Type the seek address (disk only). The message will then be repeated.

The implicit option A is available to abort the program as a last resort.

EXAMPLE: *BSY I 0025 DP 0 08 026 5840Z RUS?

A channel busy status exists on an initiate interrupt to the disk pack on IOM-0, channel 08, device 26, while running SNUMB 5840Z. While executing a write-continuous (25) instruction the system found the device to be hung in a channel busy condition (00). The device should be reset and placed in a ready state. Check the data in the disk location where the device was hung by entering S. After the message is repeated, the options are to retry the I/O (R), let the user program try to recover (U), or abort the job (A).

B
OUTPUT MESSAGES

B
OUTPUT MESSAGES

*BTIH MF i ccc dd sssss-aa NA

File and Record Control Message. A tape file was opened as input and the first physical record read is either blank tape or not a label.

BTIH - Blank tape on input header
NA - Operator reply

Operator Action:

Enter N to try a new reel. The I/O system will dismount the present reel to facilitate mounting another reel.

Enter A to abort the activity.

*BTIH sssss-aa MF i ccc dd NA

Standard COBOL-68 I/O System Message. A blank tape was encountered when the system attempted to read an input header label.

Operator Action:

Enter N to try a new reel (the I/O system will dismount the present reel to facilitate mounting another reel).

Enter A to abort the activity.

*BTIT MF i ccc dd sssss-aa E

File and Record Control Message. The input trailer label was blank, invalid, or unrecognizable.

BTIT - Blank tape on input trailer
E - End-of-file condition

Operator Action: None.

B
OUTPUT MESSAGES

B
OUTPUT MESSAGES

***BTIT sssss-aa MT i ccc dd E**

Standard COBOL-68 I/O System Message. A blank tape was encountered when the system attempted to read an input trailer label. The file is considered to be at the end, and end-of-file processing takes place.

Operator Action: None.

BUFFER IS TOO BIG IN WD FOR DDIA, SET AS 128K

Session Control Message. Informative Message. This is issued each time the HNAD workstation is executed if a -BUFFER_SIZE value of 256,000 (128K) is explicitly defined via the workstation control language command CREATE CHANNEL. (System software assigns a default -BUFFER_SIZE value of 133,072 (128K)).

Operator Action: None.

BUFFER IS TOO SMALL IN WD FOR DDIA, SET AS 32K

Session Control Message. Informative Message. This is issued each time the HNAD workstation is executed if a -BUFFER_SIZE value of 32,768 (32K) or more is not explicitly defined via the workstation control language command CREATE CHANNEL. (System software assigns a default -BUFFER_SIZE value of 32,768).

Operator Action: None.

***BURST OF SI ON i ccc NOTIFY MAINTENANCE**

Interrupt Handler Message. A burst of special interrupts (SI) was encountered on a peripheral device.

Operator Action: Contact the Honeywell Bull Response Center.



SECTION 6

OUTPUT MESSAGES BEGINNING WITH THE LETTER C

*CACHE ERROR, FLT REG BITS 32-46 = xxxxx, PORT n

ECOL Message. ECOL detected cache associated error(s) conditions reflected in bits xxxxx octal.

Operator Action: None. This message is normally disabled, but will occur upon error-detection following a previously entered input message: ECOL CSHMON. Information in this message may be used by the Honeywell Bull Response Center to note unexpectedly high cache error incidents or to note a pattern of errors that could lead to high cache error incidents.

*CACHE ERROR, PORT-xx, CORE=cccccccccccc, cache=bbbbbbbbbbbb ADDRESS=aaaaa

ECOL Message. ECOL detected a difference between the comparative contents of cache and core memory. This is a serious error and ECOL has disabled cache.

xx - System Controller port to which the erring processor is
connected
cccccccccccc - Core contents in octal
bbbbbbbbbbbb - Cache contents in octal
aaaaa - Octal core address of data being compared

Operator Action: Contact supervisory personnel to determine if system availability necessitates continuing to run without Cache. If not, two options are available. The operator can dynamically release the malfunctioning processor (if multi-processing) and notify the Honeywell Bull Response Center of its availability for repair. A second option involves placing the processor briefly in a STEP condition, disabling the Cache switches, and manually cycling the processor back into operating mode. This should be done only by Honeywell Bull Response Center personnel. This process may be reversed following removal, repair, and replacement of bad Cache boards. ECOL will reassign good Cache Memory automatically upon discovering its availability.

C

OUTPUT MESSAGES

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OUTPUT MESSAGES

*CACHE READ FAILED CPU-#x

Dump Message. Processor x failed to complete the reading of the hardware cache in the allowed time and that the cache from processor x will not be saved by Dump.

Operator Action: None.

*CALCULATED BAD SEEK ADDRESS FOR GPAED

Startup Message. When reading one of the files containing patch-edited patches, Startup received a seek address error.

Operator Action: None. The patch listing on a dump may not be correct.

sssss CAN NOT BE RUN NOW. CYCLIC JOB

System Scheduler Message. Insufficient catalog space was available to allow a cyclic job to be a candidate for allocation. The job will be moved to a normal class, for allocation, when space becomes available.

Operator Action: None.

CANNOT BUILD IN-CORE TABLE ON ddd DUE TO rrrrrr ssssssssssss
DEVICE RELEASED

GPOP Message. The .MALCD module returned an error condition to .MPOPM when attempting to initialize the in-memory AST image on device ddd.

rrrrrr - Error condition as follows:

NOTNPS - The pack label and the SCT do not agree that the device is a NPS-shared device.

AST IM - Bad in core AST image. AST image on a shared device has a bad checksum. A secondary INIT of the device is required.

NOTNPS - The pack label and the SCT do not agree that the device is a NPS-shared device.

C
OUTPUT MESSAGES

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- SEEKAD - An invalid seek address was generated during available space table initialization.
- STATUS - An input/output error was encountered.
- CHKSUM - A bad checksum occurred on either the pack label or the device's available space table.
- BZ TMP - A temporary space descriptor is currently busy in another system. The other system needs to be inactive and a secondary init of the device performed.
- TBLSIZ - The amount of memory reserved for the available space table was inadequate because the pack allocation unit size was different from the AU size defined on the \$ IOM statement.
- NSTRUC - A non-structured pack is mounted on a spindle configured as permanent.

ssssssssss - The Q register indicated STATUS, which is stored in the A register. This entry shows contents of the A register in octal.

Operator Action: None.

*CANNOT CREATE THE SMC WITHIN BOUNDS ON ddd

Startup Message. There is insufficient space to create the system master catalog with a block address containable in 17 bits.

Operator Action: Initialize the pack.

C

OUTPUT MESSAGES

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OUTPUT MESSAGES

*CANNOT DETERMINE MCA NUMBER ON IMU-x, MCA RELEASED

Startup Message. The MCA configuration files for all IMUs/IMXs are read by startup for all IMUs/IMXs. These files reflect the MCA numbers (internal board mounted switch) which result in the identification of the MCA on the maintenance console log and in other journalized logs (the character string #00> on the console reflects MCA number 00, #01> MCA number 01, etc.) These MCA numbers ***MUST*** be unique if the MCAs are to be connected together via the MDI interface, and ***SHOULD*** be unique to correctly identify which MCA detected and logged an error if they are not connected together via the MDI interface. Startup was unable to read the configuration file from the specified MCA and thus the MCA will be released until its configuration can be verified. This is an FYI message.

Operator Action: Correct the problem encountered (documented via a message preceeding this one) so that the MCA config file can be read to verify the MCA number field.

CANNOT EXCHG SYSTEM I/O MASS STORE

Exception Processor Message. An X response was made to a previous mass store system I/O error message. The X response is not allowed. This message is followed immediately by the original illegal major status message.

Operator Action: Enter an allowable response to the repeat of the original message.

CANNOT FIND DCAF DATA FOR THIS FAULT
ALL WILL BE USED AS DUMP OPTION

Dump Message. A DCAF error has occurred. The ALL option will overwrite the default DCAF options.

Operator Action: None.

C

OUTPUT MESSAGES

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OUTPUT MESSAGES

***CANNOT IDENTIFY MPC DATA DECK**

MPC Subsystem Startup Message. The MPC subsystem data deck does not contain expected device description information.

Operator Action: Check the data deck and reboot Startup. If the message recurs, a new data deck should be created.

sssss CANNOT JCHGCY OR JDELCY A CYCLIC JOB IN EXECUTION

System Scheduler Message. The operator made a request either to change cyclic parameters or to delete a specific cyclic job, but the job was in execution. The request is ignored.

Operator Action: Resubmit the original request after the job has completed execution.

***CANNOT MOVE - BPM**

Exception Processing Message. The label that was read after the disk pack exchange was not the one expected or could not be read at all.

BPM - A bad pack was mounted

Operator Action: Put the original pack on the primary device to continue operation. The original error message follows this message. With the original pack mounted, enter R to continue operation. A special interrupt is required to read the label and return to normal operation.

***CANNOT MOVE - NUA**

Exception Processing Message. No PERM or RMVBL device is available. This message is followed by the original error message.

NUA - No units available

Operator Action: Put the original pack on the primary device to continue operation. Enter R to the second error message to retry the device command.

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

**CANNOT PROCEED OVERLAY I/O ERROR

Dump Message. The Dump program was unable to read one of its three program overlays.

Operator Action: Reboot the system from cards or tape.

CAN'T ACCESS SYS RECOVERY/RESTART STATUS xx

Rollcall Message. During a restart, the permanent file used to communicate restart data from POPM to ALC1 could not be allocated. (xx = error status returned by FILSYS.)

Operator Action: Contact the Honeywell Bull Response Center.

*** CAN'T ALLOCATE \$S SPACE FOR RESTART ***

Peripheral Allocator Message. The system is being restarted, and the Peripheral Allocator was denied the file space it requested to build to swap file for a phase 1 recovery process that it attempts to start.

Operator Action: None.

CAN'T ASGNI m - NOT CONFIGURED

IOS message. The input/output controller specified in the request is not configured.

Operator Action: Move or enter correct input/output controller designator.

*CAN'T ASGNI m - INPUT INVALID

IOS Message. The request format contained an error.

Operator Action: Enter correct format.

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

*xxx CAN'T CHANGE DEVICE STATUS FROM {PERM }
 {CATALOGABLE }
 {FMS }
 {NPS }

 {RVBL }
 {NON CATALOGABLE }
TO {NON FMS }
 {NON FMS }

Startup Message. The status of device xxx could not be changed. Startup aborts.

Operator Action: Make Startup configuration change to correct the error and reboot the system.

*CAN'T CHANGE TO SMCDUP WITHOUT INIT

Startup Message. The system status was changed from non-SMCDUP to SMCDUP. Startup aborts.

Operator Action: To effect the change to SMCDUP, perform a complete initialize; otherwise, remove the \$ INFO SMCDUP/xxx statement.

CAN'T FIND TAPE DRIVE: (drive)

Dump Message. The tape drive was not specified correctly, and should be entered again.

Operator Action: Enter (DDD/Tape#,Density)

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

sssss CAN'T GET A TAPE DRIVE FOR aaaaa

NEED {ONE} { 800} BPI DRIVE(S)
{TWO} {1600}
{6250}

{PREFER } DRIVE(S) FROM POOL: { name1,name2,...,name8 }
{REQUIRE} {(name1,name2)...(name7,name8)}

[TRY-TIME LEFT = nnnnn MINUTE(S)]

Where:

- sssss - SNUMB of Integrated Software.
- aaaaa - Journal name.
- nnnnn - Product of TRYCOUNT and SLEEPTIME values, in minutes.
- name1...8 - Name of a tape device used in a \$ IOM statement in the Startup job stream.

Integrated Software Message. A tape drive is not available for allocation for:

- o The mounting of a tape volume for collection of data base images.
- o The save/restore operation associated with a DDBA or RFWD command.
- o The mounting of the first tape volume associated with a RBCK or RFWD command.

The message is issued before SLEEPTIME is invoked, and is repeated TRYCOUNT times at SLEEPTIME intervals if a "drive not available" status is returned by the operating system in response to a tape allocation request. Only the first line of the message is produced when the product of TRYCOUNT and SLEEPTIME values is zero.

The second line of the message indicates whether one or two tape drives is required, depending upon whether the FLIPFLOP option has been specified for the journal.

NOTE: A separate allocation is attempted when a duplicate journal is being maintained. The specified tape density (DENSITY option) is also indicated in the message.

C

OUTPUT MESSAGES

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The third line of the message is produced only when any "device list" type options (i.e., DEVLST, DEVLST REQ, DEVSET, and DEVSET REQ) have been specified for the journal. DEVLST and DEVLST REQ are used when the FLIPFLOP option is not specified. DEVSET and DEVSET REQ options support the FLIPFLOP allocation, which allocates tape drives in pairs. DEVLST and DEVSET specify preferred tape drives (PREFER appears in the message), and DEVLST REQ and DEVSET REQ indicates required tape drives (REQUIRE appears in the message).

The values following "POOL:" in the third line of the message are the "pool" of tape drives to be used for journaling as indicated for the device list options. Up to eight tape drives can be specified for a device list option. If either the DEVSET or DEVSET REQ option has been specified, the tape drives specified will be coupled within parentheses.

The fourth line indicates the total time available within which a tape drive allocation can be made. Otherwise, an allocation denial is returned to the calling process.

Operator Action: None. Informational message only.

***sssss CAN'T GET A TRACE COLLECTION TAPE**

Trace Analyzer Message. The Trace Analyzer trace collector program was unable to GEMORE a tape.

sssss - Job identifier (SNUMB) of the trace collector program

Operator Action: Rerun trace collector program when a tape drive becomes available.

***CAN'T HAVE CATDUP WITHOUT SMCDUP**

Startup Message. The Startup program contains a \$ INFO statement with the CATDUP option, but does not contain a \$ INFO statement with the SMCDUP option. Startup aborts.

Operator Action: Insert a \$ INFO SMCDUP/xxx statement and reboot.

C

OUTPUT MESSAGES

C

OUTPUT MESSAGES

*CAN'T MARK DEFECTIVE SPACE UNAVAILABLE ON i:ccc:dd

Startup Message. An error has occurred while an entry contained in the DEFECTIVE LLINK DIRECTORY was being converted to a space descriptor for the startup program to use to mark the allocation units describing a defective track unavailable in the available space table.

Operator Action: This message is activated when a \$ BUGON statement is included in the \$INITIALIZE section of the system description deck. Such an inclusion is made by the site administrator or at the request of the Technical Assistance Center (TAC). An ALL startup dump should be taken for analysis by the party requesting inclusions of the bugon. The error may be recoverable by MTARing the failing MSU and assigning alternate tracks.

*CAN'T MOVE CONSOLE EMULATOR

Startup Message. A \$ CHAN statement was rejected. The console emulator is logically connected to channel 31 of IOX-0 and cannot be moved.

Operator Action: Delete the conflicting statement.

* CAN'T RECOVER PROTECTED FILES FOR PROCESS(ES):

* ssss0 [ssss1 [ssss2 [ssss3 [ssss4]]]]
[* ssss5 [ssss6 [ssss7 [ssss8 [ssss9]]]]]

GPOP Message. Protected file rollback cannot be provided to the SNUMBs listed, because they were not in execution when the system went down.

ssss[0...9] - SNUMB of process requiring deferred recovery

Operator Action: Execute deferred recovery to rollback files and release the protection structure.

NOTE: Items within the brackets [] may or may not appear.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

* CAN'T RECOVER PROTECTED FILES S#sssss W/ACTY nn (xx)
[>> file system error message <<]

Peripheral Allocator Message. A phase 1 cannot proceed to a successful conclusion.

The second line of the message is present only for error codes PF and PT.

xx - Error code, as follows:

AS The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is ACTIVE, which is invalid for the circumstances. The process (sssss) is SHARD.

This indicates a system error. Contact the Honeywell Bull Response Center.

BJ Either (1) no J* file was present for the process, (2) an I/O error occurred while the J* file was being read, (3) the SNUMB in the J* record did not match a SNUMB in the .CRSNB table, (4) the J* Peripheral Assignment Table (PAT) contains an erroneous System Configuration Table (SCT) address, or (5) an I/O error occurred while the restart file was being read. Restart is not permitted in any of these instances.

C1 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) Because a SHARD restart error occurred, SHARD was unavailable to release Integrity Management structure. Restart is not permitted.

The process (sssss) is neither SHARD nor a Transaction Processing snumb (TDS or DM-IV/TP).

C2 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) Because SHARD was not present for restart, it is not permitted.

The process (sssss) is neither SHARD nor a Transaction Processing snumb (TDS or DM-IV/TP).

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

- C3 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) Because a SHARD restart error occurred, SHARD was unavailable to release Integrity Management structure. Restart is not permitted.

The process (sssss) is a Transaction Processing snumb (TDS or DM-IV/TP).

- C4 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) Because SHARD was not present for restart, Integrity Management structure was not released. Restart is not permitted.

The process (sssss) is a Transaction Processing snumb (TDS or DM-IV/TP).

- CN The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) An error was returned by the IM00 domain when it attempted to release Integrity Management structure. Protected file recovery is not needed and the recovery structure can be released. If the deferred recovery utility is run, it will release any remaining structure if it exists. Restart is not permitted.

Since the protected file deallocations may or may not have been done before the system interruption, busy spurious counts may still exist.

The process (sssss) is neither SHARD nor a Transaction Processing snumb (TDS or DM-IV/TP).

- CS The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA, which is invalid for the circumstances. The process (sssss) is SHARD.

This indicates a system error. Contact the Honeywell Bull Response Center.

C
OUTPUT MESSAGES

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CT The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) An error was returned by the IM00 domain when it attempted to release Integrity Management structure. Protected file recovery is not needed and the recovery structure can be released. If the deferred recovery utility is run, it will release any remaining structure if it exists. Restart is not permitted.

Since the protected file deallocations may or may not have been done before the system interruption, busy spurious counts may still exist.

The process (sssss) is a Transaction Processing snumb (TDS or DM-IV/TP).

DN An error was encountered while attempting to convert a device name to an SCT address. The job is deleted.

ER The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is ERROR IN DEFERRED RECOVERY. (ERROR IN DEFERRED RECOVERY indicates rollback was unsuccessful during a previous deferred recovery operation.)

Attempt deferred recovery again.

ET The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is ERROR IN TERMINATION. (ERROR IN TERMINATION indicates a commitment unit remained open at the end of process termination and file rollback failed.)

NJ Either no restart record was present or an attempt to write to the J* file failed. Neither system recovery nor restart is possible.

P2 Either an I/O error occurred during an attempt to read the Peripheral Assignment Table (PAT) file or a segment with an invalid size was read from the PAT file. The process was deleted.

PF A cataloged file could not be reallocated. The identity of the file (file code) and the reason for unsuccessful allocation immediately follow the *CAN'T RECOVER message.

PT An unsuccessful attempt was made to reallocate the Peripheral Assignment Table (PAT) file. The process (sssss) was deleted.

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

RD An I/O error occurred while the control file was being read. The process was deleted.

S0 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is 0 (zero), which is invalid for the circumstances. Recovery cannot complete and the process is deleted.

This indicates a system error. Contact the Honeywell Bull Response Center.

S1 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP. (SETUP indicates that the recovery structure was in the process of being established, and there is no danger to data base integrity because the files were not accessed. However, spurious busy counts may exist.) Because a SHARD restart error occurred, SHARD was unable to release Integrity Management structure. Restart is not permitted.

The process (sssss) is a Transaction Processing snumb (TDS or DM-IV/TP).

S2 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP. (SETUP indicates that the recovery structure was in the process of being established, and there is no danger to data base integrity because the files were not accessed. However, spurious busy counts may exist.) Because SHARD was not present for restart, Integrity Management structure was not released. Restart is not permitted.

The process (sssss) is neither SHARD nor a Transaction Processing.

S3 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP. (SETUP indicates that the recovery structure was in the process of being established, and there is no danger to data base integrity because the files were not accessed. However, spurious busy counts may exist.) Because a SHARD restart error occurred, SHARD was unable to release Integrity Management structure. Restart is not permitted.

The process (sssss) is a Transaction Processing Executive snumb (TDS DM-IV/TP).

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

S4 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP. (SETUP indicates that the recovery structure was in the process of being established, and there is no danger to data base integrity because the files were not accessed. However, spurious busy counts may exist.) Because SHARD was not present for restart, Integrity Management structure was not released. Restart is not permitted.

The process (sssss) is a Transaction Processing snumb (TDS DM-IV/TP).

S5 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is ACTIVE. (ACTIVE indicates that the process was executing and may or may not have written to data base files.) Because a SHARDs restart error occurred, SHARD was unavailable to release Integrity Management structure. Restart is not permitted.

The process (sssss) is a Transaction Processing snumb (TDS or DM-IV/TP).

S6 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is ACTIVE. (ACTIVE indicates that the process was executing and may or may not have written to data base files.) Because SHARD was not present for restart, Integrity Management structure was not released. Restart is not permitted.

The process (sssss) is a Transaction Processing.

SE The status of the Integrity Management structure for the process in question is invalid (i.e., the recovery structure state value exceeds the largest valid value).

This indicates a system error. Contact the Honeywell Bull Response Center.

C
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C
OUTPUT MESSAGES

SN The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP. (SETUP indicates that the recovery structure is in the process of being established, and there is no danger to data base integrity because the files were not accessed. However, spurious busy counts may exist.) An error was returned by the IM00 domain when it attempted to release Integrity Management structure for the data base. Protected file recovery is not needed and the recovery structure can be released. If the deferred recovery utility is run, it will release any remaining structure if it exists. Restart is not permitted.

The process (sssss) is neither SHARD nor a Transaction Processing.

SS The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP, which is invalid for the circumstances. The process (sssss) is SHARD.

This indicates a system error. Contact the Honeywell Bull Response Center.

ST The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is SETUP. (SETUP indicates that the recovery structure is in the process of being established, and there is no danger to data base integrity because the files were not accessed. However, spurious busy counts may exist.) An error was returned by the IM00 domain when it attempted to release Integrity Management structure for the data base. Protected file recovery is not needed and the recovery structure can be released. If the deferred recovery utility is run, it will release any remaining structure if it exists. Restart is not permitted.

The process (sssss) is a Transaction Processing snumb (TDS or DM-IV/TP).

C

OUTPUT MESSAGES

C

OUTPUT MESSAGES

UN The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is unuseable. This state is entered when a process before journal fills, but the process before journal protected files are also protected by archived before journal. The protected files must be recovered via the RBCK utility. (Refer to GCOS 8 OS Integrity Control manual).

Operation Action: To recover, correct the error, run a Deferred Recovery, and either rerun the job or perform a deferred restart.

*CAN'T RESTART S#sssss W/ACTY aa (xx)

[>> file system error message <<]

Peripheral Allocator Message. A phase 2 restart cannot proceed to a successful conclusion.

The second line of the message is present for error codes CK, PF, and PT.

xx - Error code, as follows:

AJ Phase 1 recovery was requested for the process. However, system software determined that the process either had not executed or had previously terminated. Consequently, phase 1 recovery is unnecessary.

AN The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.)

A system interruption occurred while the process was terminating, but before the process recovery structure could be released. Phase 1 recovery released the structure since protected file recovery was not needed.

Since the protected file deallocations may or may not have been done before the system interruption, busy spurious counts may still exist.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

A1 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) While attempting restart at either the beginning of the process or at the beginning of the activity, Integrity Management structure could not be released for the data base because a SHARD restart error occurred. Restart is not permitted.

Attempt deferred recovery for the process (sssss).

A2 The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) is EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.) While attempting restart at either the beginning of the process or at the beginning of the activity, Integrity Management structure could not be released because SHARD was not present for restart. Restart is not permitted.

Attempt deferred recovery for the process (sssss).

BJ No J* file was present for the process, an I/O error occurred while reading the J* file, or the SNUMB in J* record did not match SNUMB in the .CRSNB table.

BZ Device requested for this process (to assign data files) was released or allocated to another process.

CB Checksum error occurred after the commitment control block was read or the SNUMB or user identification in the control block is different from that in the J* file.

CK Commitment file cannot be allocated by FMS.

CN The status of the Integrity Management structure for the process in question (i.e., the recovery structure state) was EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.)

A system interruption occurred while the process was terminating before the process recovery structure could be released. Phase 1 recovery released the structure since protected file recovery was not needed.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

Since the protected file deallocations may or may not have been done before the system interruption, busy spurious counts may still exist.

The process is neither SHARD nor a Transaction Processing snumb (TDS or DM-IV/TP).

Attempt deferred recovery for the process (sssss).

CP Commitment is unreadable.

CT The status of the Integrity Management structure for the process in question (i.e., the recovery structure status) was EOA. (EOA indicates the end of an activity whereby the commitment unit for the data base has been closed.)

A system interruption occurred while the process was terminating before the process recovery structure could be released. Phase 1 recovery released the structure since protected file recovery was not needed.

Since the protected file deallocations may or may not have been done before the system interruption, busy spurious counts may still exist.

Attempt deferred recovery for the process (TP).

DJ An error occurred while attempting input/output to/from the \$J or J* file.

DN An error was encountered while attempting to convert a device name to an SCT address. The job is deleted.

ER The status of the Integrity Management structure for the process in question (i.e., the recovery structure status) is ERROR IN DEFERRED RECOVERY. (ERROR IN DEFERRED RECOVERY indicates that rollback was unsuccessful during the previous deferred recovery operation.)

Attempt deferred recovery again.

ET The status of the Integrity Management structure for the process in question (i.e., the recovery structure status) is ERROR IN TERMINATION. (ERROR IN TERMINATION indicates that a commitment unit remained open at the end of process termination and file rollback failed.)

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

The process is neither SHARD nor a Transaction Processing.

Attempt deferred recovery for the process (sssss).

- JD An error occurred while attempting input/output to/from the J\$ file (possibly as the result of an invalid Peripheral Assignment Table (PAT) for the J\$ file).
- MS Requested file space or mass storage is unavailable or an attempt was made to reallocate a nonstructured or stranger disk pack. (A stranger pack is a disk pack that is unknown to system software. The pack may or may not contain a label and/or permanent file catalog structure.)
- NR The aborted program did not request process restart (i.e., the job stream included the NJREST or NREST option).
- NJ No restart record was found.
- NS System software failed to locate the applicable System Configuration Table (SCT) entry while attempting to set the density for a tape during restart from a commitment point.
- OP Operator responded A (abort) to an MNT (mount tape) message.
- P2 An input/output error occurred while the Peripheral Assignment Table (PAT) file was being accessed; or a PAT sequent with an invalid size was read from the PAT file. The process is deleted. Deferred recovery must be performed for the process.
- PF Unsuccessful attempt was made to reallocate a permanent data file.
- PT Unsuccessful attempt was made to reallocate the Peripheral Assignment Table (PAT) file for this SNUMB (i.e., process). Deferred recovery is required.
- RD Attempt to read J* file was unsuccessful.
- TP Magnetic tape repositioning information was lost.
- UD Attempt was made to allocate a file to a card reader, card punch, printer, or removable mass storage device.
- WS An error return was taken following a call to the Workstation Management Domain (WMAN) during phase 1 recovery.

C

OUTPUT MESSAGES

C

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The job is terminated and either OPERATOR TERM REQUEST or OPERATOR KILL REQUEST is printed on the user's execution report.

Operator Action: To recover, correct the error and either rerun the job or perform a deferred restart.

***CAN'T RESTART SYSTEM**

Dump Message. An error occurred that prevents a subsequent system restart. This is an informational message.

Operator Action: None.

***CAN'T RLSEI m - SINGLE IOM**

IOS Message. Release cannot be done because only one IOM is configured.

Operator Action: None.

CAN'T RLSEI m - NOT CONFIGURED

IOS Message. The specified input/output controller is not configured in the system.

Operator Action: Enter the correct input/output controller designation.

***CAN'T RLSEI m - INVALID INPUT**

IOS Message. The release request contained an error (e.g., incorrect format).

Operator Action: Enter the correct format.

i occ dd CAN'T ASGN/RLSE THIS DEVICE TYPE

GPOP Message. The operator attempted to assign or release a device type that cannot be assigned or released via the console verbs ASGN or RLSE.

Operator Action: The device status is not affected by the failure of the assign/release attempt. The NOI console verbs should be used to functionally assign or release (enable or disable) a UNCP device type.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

*CAN'T SAVE MASK CARD BELOW SO CAN'T APPLY

Startup Message. The MASK statement indicated that it could not be processed; therefore, Startup cannot make the correction indicated on that statement.

Operator Action: Either resubmit a new MASK statement or run Startup without the correction indicated on the MASK statement.

*CAN'T SET TABS ON SCC

Startup Message. The system cannot set the tabs on the system console.

Operator Action: Either fix the problem or reconfigure without the failing device until it is fixed.

*CARD AT xxxxxx HAS CHECKSUM ERROR

Startup Message. The control statement indicated has a checksum error.

Operator Action: Correct the statement and restart.

*CARD AT xxxxxx SKIPPED DUE TO CHECKSUM ERROR

Startup Message. The control statement indicated was skipped because of a checksum error.

Operator Action: Check the statement for errors; correct if necessary, and restart.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

*** xxxxxx CARD BELOW CONTAINS ERROR NEAR COLUMN nn**

Startup Message. The Startup configuration card indicated is either incorrectly punched or contains invalid data at or near the card column nn. If the card pertains to hardware required for successful startups, the system aborts.

xxxxxx - Startup job stream section:

CONFIG
INITIALIZE
EDIT
FILES
PATCH
LOAD

Operator Action: Respond to the *BOOT SOURCE: CARDS, AUTO, REPL, FILE? question. Startup must be restarted at least from the beginning of the section which contained the card in error.

***CARD BELOW IS OUT OF ORDER**

Startup Message. The control statement indicated is in the wrong position in the program.

Operator Action: Correct the statement sequence and retry. Refer to GCOS 8 OS System Startup manual for sequence requirements.

***CARD BELOW SPECIFIED REMOVABLE DEVICE**

Startup Message. Startup attempted to edit a file on a removable disk device.

Operator Action: Either assign the file to a PERM device, or reconfigure the device as a PERM device and initialize the disk pack.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

*CARD CHAR ILLEGAL, 1 ccc dd: BACKSPACE, OPERATE WHEN READY

Startup Message. An illegal character was sensed by the card reader.

Operator Action: Remove the last card from the output stacker, place it in the input hopper, and press OPERATE/RESET. If the message is repeated, correct or replace the incorrect card, backspace, and press OPERATE/RESET.

{PUNCH }
*CARD {READER} 1-ccc RELEASED

GPOP Message. The specified device could not be assigned by Startup because either the power is off or the device is in an offline condition.

Operator Action: Either run the system without the device or ready the specified device and enter an ASGN request. The device may not be assigned while the system is running, if assignment requires initializing the catalogs.

CATALOG COMPRESSION ERROR
(A)BORT, (C)ONTINUE

Save/Restore Message. An illegal type continuation catalog was found on the save tape. The user is identified.

Operator Action: Check the save tape and/or the MASLIST/CLIST reports for discrepancies. Enter A to abort or C to continue the restore. If the C option is used, restore activity will continue with the next user identifier.

CATALOG RELOCATION ERROR
(A)BORT, (C)ONTINUE

Save/Restore Message. An error occurred on catalog relocation.

Operator Action: Enter A to abort or C to continue. If the continue option is selected, restore continues with the next user, and a message is output on the printer identifying that the user was not restored.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

*** CATALOG RESTORE COMPLETE FROM DEVICE SAVE ST1 ***

File Management Supervisor Message. If a restore is to be performed from multiple device saves, the catalogs must be restored from the ST1 device saves before other restores can be initiated.

Operator Action: None.

CATALOG SPACE TABLES OVERFLOWED
(A)BORT, (C)ONTINUE

Save/Restore Message. The disk packs are fragmented (more than 20 descriptors to map the user catalog structure).

Operator Action: Enter A to abort or C to continue. If the continue option is selected, restore continues with the next user, and a message is output on the printer, identifying that the user was not restored.

C.DIR ABT BLK# xxxxxx ON yy

GPOP Message. An I/O failure occurred on the cleanpoint directory. Bootloading terminates.

Operator Action: Contact the Honeywell Bull Response Center.

CH# INVALID

GPOP Message. The operator entered an illegal channel (PUB) number (not 8-31). The channel is not configured or the channel has been released.

Operator Action: Reenter the input message if it is incorrect. If the channel was not configured, insert the correct \$ IOM statement in the configuration program and restart the program. When the channel is released by a console message, enter an ASGN message.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

CHANGE?

Startup Message. System asks the operator if the options listed on the \$ ANSWER statement(s) are to be ignored.

Operator Action: Enter YES to ignore options. Enter NO or press EOM to have system perform the options.

*CHANGE > 5 MIN, YES TO ACCEPT?

Startup Message. Permits reentry of the time if the operator attempted to change time by more than five minutes.

Operator Action: Enter time change. If "NO" is entered in reply to the "ENTER TIME" question, it will be repeated.

*CHANGE DATE?

Startup Message. Issued when the "CHANGE?" question is answered "YES".

Operator Action: Enter YES to change the date and time.

*CHANGE SYSTEM CONTROLLER CLOCK?

Startup Message. Asks if the system controller clock setting is to be changed. A NO response will cause normal Startup console display to continue and no change will be made in the system controller clock setting. A YES response will cause the *DATE? and *TIME? messages to occur which permits the operator to change the system controller clock setting.

*CHANGE TIME?

Startup Message. Issued when the "CHANGE?" question is answered "YES" and always follows the "CHANGE DATE?" message.

Operator Action: Enter YES to change the time.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

***CHANNEL ALREADY DEFINED**

Startup Message. Second channel on \$ CHAN statement was previously defined.

Operator Action: Correct \$ CHAN statement or remove I/O controller statement for applicable channel and reboot.

***CHANNEL ALREADY DEFINED ON \$ MPC-N CARD**

Startup Message. One channel can be connected to only one MPC.

Operator Action: Correct the \$ MPC statement and reboot.

CHANNEL NOT DEFINED AS MPC DEVICE ON \$ IOM-n, \$ IMU-n, OR \$ XBAR

Startup Message. A channel named on a \$ MPC statement was not previously defined on a \$ IOM, \$ IMU, or \$ XBAR statement.

Operator Action: Correct the \$ MPC statement or add the \$ IOM, \$ IMU, or \$ XBAR statement.

***CHANNEL NOT DEFINED AS URMPC DEVICE ON \$ IOM-n OR \$ IMU-n**

Startup Message. When special URMPC port assignments were being defined, a channel specified that a URMPC device type was not defined.

Operator Action: Correct the \$ MPC statement and reboot.

***CHANNEL NUMBERS OUT OF ORDER**

Startup Message. The channel numbers specified are not consecutive.

Operator Action: Correct \$ MPC statement and reboot.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

***CHANNEL ccc ON IOX-n RELEASED, NOT CONFIGURED ON SSF**

Startup Message. Startup read a \$ IOX statement that attempted to configure a channel that is not listed in the System Support Facility (SSF) configuration file.

Operator Action: Correct error using one of the following alternatives:

- o Use System Maintainability Availability Software (SMAS) Interactive Configuration (ICON) facility to configure the channel.
- o Delete the conflicting statement.
- o Use the \$ CHAN statement to move the devices to another channel.

***CHANNEL - nnn ON {IMU} {IOM} NOT DEFINED ON MPC-n {IOX}**

Startup Message. The MPC-n statement is missing for the specified channel.

Operator Action: Add the missing MPC statement and reboot.

***CHECK STEM COLLECTOR sssss-aa ON i-ccc-dd**

STEM (PERSUE-8) Message. Tape drive i-ccc-dd is in check status.

Operator Action: Ready the device or exchange for another.

*****CHECKSUM ERROR*****
(A)BORT, (C)ONTINUE

Save/Restore Message. A checksum error occurred during an SMC llink read activity.

Operator Action: Enter A to abort or C to continue restore.

C

OUTPUT MESSAGES

C

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***CHECKSUM ERROR, FILE filename, CANNOT PROCEED**

Startup Message. The header block on one of the programs, in a file described by a \$ SYSTEM statement, contains a checksum error.

Operator Action: Reboot and re-edit the file indicated on the \$ SYSTEM statement.

#CHECKSUM ERROR, FILE PRINTIMAGE
#ANSWER YES TO IGNORE ERROR AND CONTINUE
#ANSWER NO TO ABORT, & THEN EDIT PRINTIMAGE

Startup Message. Startup detected that the presence of \$ IMAGE statements, in the \$CONFIG section, caused a checksum error. If the TVIM program was running while the system was operational, a difference in content causes the checksum error.

Operator Action: Enter YES to use the existing images. Enter NO (or CR) to abort startup. Edit the printimage on the next boot.

CHECKSUM ERROR IN MPC BOOT DECK

MPC Bootload Program Message. The MPC bootload program that was loaded contains a checksum error. A misspunched or missing statement could cause the problem.

Operator Action: Check The bootload program and reboot Startup. If the message recurs, a new bootload program should be created.

CHECKSUM ERROR IN SMC LLINK
CLASS nn CIT?

Save/Restore Message. A checksum error occurred on the SMC llink during save operation.

Operator Action: Enter C to continue, in which case this class will be bypassed and the save function will continue with the next class; or, enter I to ignore, in which case the save function will continue as if the error never occurred (which can, however, lead to further problems, depending on the condition of the SMC llink); or enter T to terminate the save function operation.

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

*CHECKSUM ERROR, MODULE name, CANNOT PROCEED

Startup Message. The module control block or the file itself contains a checksum error.

Operator Action: Reboot and re-edit the file indicated on the \$ SYSTEM statement.

*CHECKSUM ERROR ON SSFILE, MUST EDIT SSFILE AGAIN

Startup Message. The \$ SSFILE statement used for autoload was not valid when read from mass storage.

Operator Action: Reboot from \$FILES.

*CHECKSUM ERRORS LISTED ON PRINTER, SAVE THEM

Startup Message. Checksum of Part A of Startup (main body of code) failed. A list of the changed Startup locations will appear on the printer. Startup may or may not continue to run normally.

Operator Action: Notify site techniques personnel who should initiate a System Technical Action Request (STAR).

*i ccc dd: CHG PACK #nnnnn?

Startup Message. Startup wrote and rechecked the disk pack label information requested. At this point the operator may approve or change the label.

nnnnn - Pack number now in the pack label

Operator Action: If the label is correct, enter NO or EOM to complete initialization. If not, enter a new pack number to change the label.

CKSUM ERROR, BKSP 2 CARDS sssss-aa

Source/Object Library Editor Message. An illegal checksum was encountered while reading *C assigned to an online card reader.

Operation Action: None.

C

OUTPUT MESSAGES

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OUTPUT MESSAGES

CKSUM ERROR CARD READER i ccc SNUMB sssss
TO REREAD-BACKSPACE n CARDS AND TYPE B
TO CONTINUE WITH NO FURTHER CKSUMMING-TYPE C

Bulk Media Conversion Message. BMC encountered a checksum error on a binary card in the input data deck.

Operator Action: Reposition in the input hopper the last one or two cards read and enter either B or C.

*CKSUM ERROR IN READING xxxxxxxx xxxxxxxx CANNOT PROCEED

Startup Message. The system file xxxxxxxx xxxxxxxx cannot be read.

Operator Action: Re-edit the file.

*** CLASS xx ***

Restore Message. This message follows the SMC error message "***READ DISC ERROR ***", where xx is the class indicated during a device restore of the substructure. This is an informative message.

Operator Action: None.

*CLEAR AND OVERWRITE EXISTING DECKFILE?

Startup Message. A \$ DECKFIL statement was read in from the card reader, other than at Autoload, specifying an overwrite option after the size (1600/0). An existing deckfile was found during the \$INITIALIZE section processing (after the controller for the AUTOLOAD device was booted) and decks are to be saved (even if found on the existing deckfile). This message allows the operator to clear the existing deckfile such that new firmware can be written in correct order if there are ITR or MDR revisions. The ITRs and MTRs must be in the correct order such that MOLTS can run successfully.

Operator Action: Enter YES to clear the deckfile. Enter NO or EOM if the deck file is not to be cleared. To inhibit this message, remove the /0 from the \$ DECKFIL statement.

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

CLN PT. DISABLED DUE TO SET UP ERROR(S)

GPOP Message. Errors occurred, either while attempting to establish file space for passing restart levels to FMS, or while attempting to clear cleanpoint entries resulting from cessation of cleanpointing. The system has disabled cleanpointing.

Operator Action: Correct the cause of cleanpoint warning messages. If cleanpoint is desired, then schedule a system reboot after the errors have been corrected.

{SD.INJ}
{SD.SBT}
{SD.JOT}
* {SD.BDI} CLN PT. INIT & WRITE ENTRY .MRCV5,1 ER nn
- {SD.JOS}
{SD.SCA}
{.CRSLQ}

Rollcall Message. The specified segment or data encountered an error while attempting to establish cleanpoint information.

- nn - 26 Unknown SCT address or device name
- 27 Requested cleanpoint data not found
- 28 Cleanpoint recovery table full
- 29 Cannot obtain file space
- 30 Cleanpointing not in effect
- 31 Wrong SNUMB accessing entry
- 32 DCW problem
- 33 Data checksum error
- 34 Recovery table I/O error
- 35 Device ST1 I/O error

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

CLN PT. RESTART TBL.SET UP .MRCV5,3 ER nn

GPOP Message. An error occurred, either while attempting to establish file space for passing restart levels to FMS, or while attempting to clear cleanpoint entries resulting from cessation of cleanpointing.

- nn - 26 Unknown SCT address or device name
- 27 Requested cleanpoint data not found
- 28 Cleanpoint recovery table full
- 29 Cannot obtain file space
- 30 Cleanpointing not in effect
- 31 Wrong SNUMB accessing entry
- 32 DCW problem
- 33 Data checksum error
- 34 Recovery table I/O error
- 35 Device STI I/O error

Operator Action: Correct the cause of cleanpoint warning message.

*CLOSING SCF R#rrrrr/F#fffff-sss BLOCKS = bbbb

SCF/Dump Message. Issued based on data in the statistical collection file when an SCF tape was dismounted by .MACTS during a reel switch that resulted from an end-of-file condition, an I/O error, or an ACCNT message. Message is issued by .MDUMP when .MDUMP closes tape accounting. The message is directed to TY2.

- rrrrr - reel serial number
- fffff - file serial number
- sss - reel sequence number
- bbbb - number of blocks written

Operator Action: None.

#CMD REJECTED#

Remote Maintenance Interface Message. Transmitted to the remote console if an attempt to enter an ESC,CNT-I or ESC, CNT-B from the remote is made without #Enable Initialize true.

Operator Action: None.

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

*COMMA NOT FOLLOWED BY AN ETC CARD NEAR: (Card Image)

Startup Message. A statement in the Startup program ended with a comma and was not followed by an \$ ETC statement. The message is output with the statement image.

Operator Action: Check the statement that was printed and the previous statement. Either add the missing \$ ETC statement or repunch the faulty statement without an ending comma. Then enter GO.

CONCATENATED file-name SMC-userid BUSY

File and Record Control. In the process of concatenating the file file-name, the PRMFL was found to be busy. The system retries the access every minute until the access is successful. The busy message is printed every five minutes.

Operator Action: None.

*CONFIG CARD BELOW CONTAINS UNDEFINED PRIMARY CHANNEL

Startup Message. The primary channel (i.e., the first channel on the \$ XBAR statement) described by the \$ XBAR statement was not previously defined on a \$ IOM statement. The contents of the erroneous statement are output following the message.

Operator Action: Correct the \$ XBAR statement or define the primary channel.

*CONFIG CARD BELOW SPECIFIES DUPLICATION

Startup Message. The channel crossbar arrangement described involves a secondary channel which was previously configured. The contents of the statement are output following the message.

Operator Action: Correct the \$ XBAR statement.

C
OUTPUT MESSAGES

C
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*\$CONFIG NOT FIRST CARD

Startup Message. An EOF statement or some other BCD statement appears before the \$ CONFIG statement.

Operator Action: Correct the job stream and enter GO.

*CONFIG_MAP FILE NOT FOUND, YES TO CONTINUE?

Startup message. Startup cannot find the configuration map to verify that the proper packs are mounted.

Operator Action: Enter YES which causes Startup to create a new configuration map file. Enter NO or EOM to abort.

*CONFIG_MAP WRITTEN TO DEVICE ddd

Startup Message. This message is sent every time that a new CONFIG_MAP file is written. Device ddd can be any GCOSFILE device.

Operator Action: None.

CONFIGURED xxx PRINTER FOUND yyy PRINTER ON icdd
FIX \$CONFIG SECTION PRINTER DEFINITION

Where:

xxx = MPC	or	xxx = URP	i = Iyy input/output controller number
yyy = URP		yyy = MPC	cc = Channel number
			dd = Device number

Startup Message. A configured printer was found to be defined via the wrong type statement for the MPC type (\$ MPC-n or \$ URP-n). Startup will correct the internal tables; however, this can only be detected if the printer is online and ready. If released the error would propagate to the operating system where it could not be corrected thus the \$ MPC-n or \$ URP-n statement should be corrected.

C

OUTPUT MESSAGES

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NOTE: This could inadvertently result if Startup aborts during \$CONFIG section processing when a default printer is found and used (assumed to be an MPC) but the \$ URP-n card has not yet been processed. Ignore the message under these conditions.

Operator Action: Correct the statement.

***CONTROL CPU NOT DEFINED ON \$ MCT/\$ CIU**

Startup Message. Startup is executing in a CPU that is not defined on a \$ CIU or \$ MCT statement.

Operator Action: Correct the \$ CIU or \$ MCT statement or correct the SCU MASK PORT SELECT SWITCH and reboot from switches to cause a defined CPU to start executing.

***CONTROL CPU PORT TURNED OFF**

Startup Message. The \$ MCT statement specified the option OFF for the port for the currently executing control CPU.

Operator Action: Correct the \$ MCT statement or change the SCU MASK PORT ASSIGNMENT SWITCH on the control SCU and reboot from switches to cause the new CPU to start executing as the control CPU.

***CONTROL CPU WAS MARKED RELEASED IN PRIOR BOOT
ENTER YES TO CONTINUE WITH CURRENT CONTROL CPU**

Startup Message. An auto boot was performed, but the DPS-8 SCU MASK PORT ASSIGNMENT SWITCH was changed to cause the reboot to execute on a CPU which was marked released on the prior boot.

Operator Action: Enter YES to cause startup to continue - the current control CPU will not be marked release and NO to cause the output of the REBOOT USING NEW CONTROL CPU message. None if the answer is YES, otherwise change the SCU MASK PORT ASSIGNMENT SWITCH on the control SCU and reboot from switches to cause the new CPU to start executing as the control CPU.

C

OUTPUT MESSAGES

C

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CONTROL PROCESSOR PORT IS INCORRECT

Startup Message. The wrong SCU port is specified on the MCT-0 statement for the control processor. This message is followed immediately by the "#CONFIG CARD BELOW CONTAINS AN ERROR NEAR COLUMN nn" message.

Operator Action: Correct the appropriate statement and bootload.

#CONSOLE ENABLED#

Remote Maintenance Interface. Transmitted to the local or remote console (when the #ENABLE CONSOLE command is entered at the remote console) when exiting from the Maintenance Mode.

Operator Action: None.

#CPU-x ACCESSED WRONG SCU-x
WRONG PORT POSSIBLY ENABLED

Startup Message. Prior to surveying each slave CPU, startup writes the beginning byte address of each SCU into the beginning word of each SCU. Each slave CPU will read the beginning address of each SCU from the beginning word of each SCU (and one's complement the beginning byte address and write it back). When the control CPU detects that the slave CPU has finished and has parked itself, the control CPU reads back the first word in each SCU expecting to find the one's complement of the starting byte address of the SCU. This was not found. The slave CPU found that the word read from an SCU matched the expected value but the slave CPU was accessing an SCU that is not even switched on for the control CPU.

Operator Action: Correct the port assignment switches for the appropriate CPU (the control CPU could be the incorrect one) and re-boot from switches.

C

OUTPUT MESSAGES

C

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***CPU-x PORT-y ACCESSED LOCATION LLLLLL000 AT ADDRESS AAAAAA000,
PORT ASSIGNMENTS POSSIBLY WRONG**

Startup Message. Prior to surveying each slave CPU, Startup writes the beginning byte address of each SCU into the beginning word of each SCU. Each slave CPU will read the beginning address of each SCU from the beginning word of each SCU (and one's complement the beginning byte address and write it back). The slave CPU detected that the word read from the SCU did not match the expected value. Either the slave CPU is accessing secondary SCU's in an opposite order from the control CPU (if the low SCU was incorrectly accessed then the slave CPU would probably not even respond) or possibly accessing a SCU that is not even switched on for the control CPU.

Operator Action: Correct the CPU port assignment switches or port enable switches and re-boot from switches.

***CPU-x CANNOT ACCESS SCU-y
PORT POSSIBLY NOT ENABLED**

Startup Message. The control CPU did the memory survey and it is known how many SCU's the control CPU could access. The slave CPU did not have a port enabled for the specified control CPU accessible SCU.

Operator Action: Turn on the port enable switches for the slave CPU so it can access the specified SCU or turn off the associated control CPU port enable switches such that it does not access the specified SCU.

***CPU-w PORT-x CONFIGURED ON SCU PORT-y, FOUND ON SCU PORT-z,
PORT DEFINITION ON \$ MCT/\$ CIU POSSIBLY WRONG**

Startup Message. Each CPU reads the SCU configuration register from each SCU and verifies that the SCU port through which the CPU is accessing the SCU matches the defined port on the \$ MCT statement.

Operator Action: Correct the port definition on the \$ MCT statement (that is not caused by incorrect switch settings, the port cables are actually wrong).

C

OUTPUT MESSAGES

C

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*CPU-n CACHE CONTROL (BITS 54-62) WAS www, SHOULD BE sss

Startup Message. Cache may not be fully enabled and system performance may be degraded. This is informative message only. Startup will not abort.

n = CPU number
www = was value
sss = should be value

Operator Action: Check the cache enable switches or call the Honeywell Bull Response Center.

*CPU n DID NOT RESPOND
THE FOLLOWING MUST BE PERFORMED:
TERM OS
DETACH CPU
BOOT FROM MAINTENANCE CONSOLE

Startup Message. A second CPU did not respond to the Startup connect.

Operator Action: As directed.

*CPU-x PORT-y ENABLED FOR NON-ENABLED SCU,
PORT ENABLE SWITCH POSSIBLY WRONG

Startup Message. Startup memory survey for DPS-8 terminated because of memory error. This occurred before reaching the SCU selected by the CPU port switches (if this is the control CPU, then the CPU port switch could be enabled but not the SCU port switch). This indicates potential problems since the SCU is assumed to be released but could still send a CONNECT to the CPU.

Operator Action: Either set the CPU port enable switch OFF, or the SCU port enable switch ON, or correct the problem which caused the memory survey to terminate early (CPU port size incorrect on prior SCU or MSU switched off line or prior SCU Non-Existant Address switches set wrong etc.) then reboot startup from switches.

C

OUTPUT MESSAGES

C

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***CPU-x PORT-y, ERROR ACCESSING SCU-z
SCU PORT POSSIBLY NOT ENABLED**

Startup Message. The control CPU did the memory survey and is known how many SCU's the control CPU could access. The slave CPU had a port enabled for the specified SCU but encountered a fault while accessing the SCU. The SCU may have the port enable switch turned OFF, the CPU may be getting errors accessing the SCU (port logic failure), or the wrong SCU may be enabled for the slave CPU.

Operator Action: Correct the appropriate switches, or have CSD fix the faulty hardware, or switch off the SCU from the control CPU (to come up without the memory defined, also advisable to remove the \$ MCT statement for the SCU to prevent later re-assigning of the memory with resultant memory errors from the slave CPU), or select the correct SCU (could be the control CPU incorrectly set up in switches).

***CPU n HALTED (AND AUTOMATICALLY RELEASED) UNDER KPX mmmmm sssss**

Dispatcher/FALT/POQ3 Message. A CPU's process has stopped due to a malfunction or due to the detection of a maintenance stop condition. The process in execution will be moved to another processor, aborted, or left "hanging". The processor is marked released.

- n - number of the halted processor
- mmmmm - KPX number of the process
- sssss - SNUMB of the process

A second line is usually printed. It will be one of the following major status messages:

RELIEF OF THE FAULTING CPU COMPLETE

A second CPU completed the process that the released CPU was executing when it failed.

RELIEF PROCESSING NOT POSSIBLE

The process could not be retried in a second CPU.

C
OUTPUT MESSAGES

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CPU WOULD NOT RESPOND TO CONNECT REQUEST.

FALT/SD.GTW automatically released a CPU that would not respond to a connect within a one-minute period (for all hardware platforms except DPSE, which is allowed to delay its response up to four minutes).

A concise, detailed explanation of the CPU's minor status is normally provided. It may be one or more of the following messages:

NO PROGRAM IN EXECUTION
TSS SUBDISPATCH WAS IN PROGRESS
NO PROCESSOR AVAILABLE TO CONTINUE EXECUTION
SYSTEM PROCESS WAS RUNNING
.STATE BITS PRECLUDE ABORTING PROCESS
PROCESS WAS IN TYPE 2 CRITICAL SECTION
SAFESTORE STACK OVERFLOWED ON THE FAULT
RELIEF OF THE FAULTING CPU COMPLETE

The following instruction may be added if the halted CPU is a DPS 8:

PLS COPY HALTED CPU'S REGISTERS IC,IR,ISR,ETC

This information cannot be gathered automatically on a DPS 8; however, it is required by maintenance personnel when investigating the problem.

The following information may be added if the halted CPU is a DPS 8000:

SP TO SAVE THE CPU STATE AND RUN NFT TESTS

If the RAQ queue is full, prohibiting the DPS 8000 automatic information retrieval process, the following message will be printed:

RAQ FULL - COULD NOT START THE SAVE OR NFTS (POQ3)

The following information will be printed if the processor release fails:

AUTO REQUEST RELEASE OF THE CPU.
PLEASE REQUEST RELEASE OF THE CPU.

An attempt to release the CPU using the RLSEP verb is in order. If the RLSEP command fails, then a message indicating the nature of the failure will be printed on the console.

C
OUTPUT MESSAGES

C
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If the process was left hung, then the following warning message will be printed:

***** PROCEED WITH CAUTION - NOTIFY TAC *****

Operator Action: Having a process left hung could produce negative consequences. It is of upmost importance that a qualified expert evaluate the failure. In some cases, the process may be aborted after resetting its execution bit (PS.EXC) in the PST. Other cases may require that the system be rebooted to clear the failure.

***CPU-x NO CONNECTABILITY FOUND**
EITHER THE CPU WAS NOT CONFIGURED IN THE SERVICE PROCESSOR CONFIG FILE
OR MAY HAVE BEEN RELEASED/DETACHED BY THE SERVICE PROCESSOR.
TYPE YES TO RELEASE AND CONTINUE; NO TO TERMINATE:

Startup Message. The \$ CIU statement specified a CPU for which no connectability was found from the DPS-88 CIU or DPS-8000 SCU.

Operator Action: To continue without the specified CPU, enter YES and startup will mark the CPU as released, otherwise correct the DPS-88 ICON file or the DPS-8000 service processor config file to assign the CPU and then reboot from switches.

***CPU n NOT FOUND, CHECK \$ MCT CARD**

Startup Message. There is a lapse in the CPU configuration. The \$ MCT statement must define CPU-0 and all defined CPUs must be contiguous.

n - Processor (CPU) number

Operator Action: Check the \$ MCT statements in the startup program for inconsistencies.

***CPU-x PORT-y SCU-z PORT SIZE MISMATCH**
PORT SIZE SETTING POSSIBLY WRONG

Startup Message. The CPU port size switches do not reflect the SCU size as defined on the \$ MCT statement.

Operator Action: Correct the \$ MCT statement or correct the CPU port size switches and re-boot Startup from switches.

C
OUTPUT MESSAGES

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*CPU-n RELEASED, NOT CONFIGURED ON SSF

Startup Message. Startup detected a Central Processing Unit (CPU) that is configured in the GCOS system but not in the System Support Facility (SSF). Startup will not abort.

Operator Action: Use the System Maintainability Availability Software (SMAS) Integrated Firmware and Diagnostics (IFAD) facility to configure the CPU or delete the CPU from the \$ CIU statement.

*.CRMTP RCVRY ERR-LOST-SIEVE LIMITS SET FROM
CONSOLE IN PRIOR BOOT

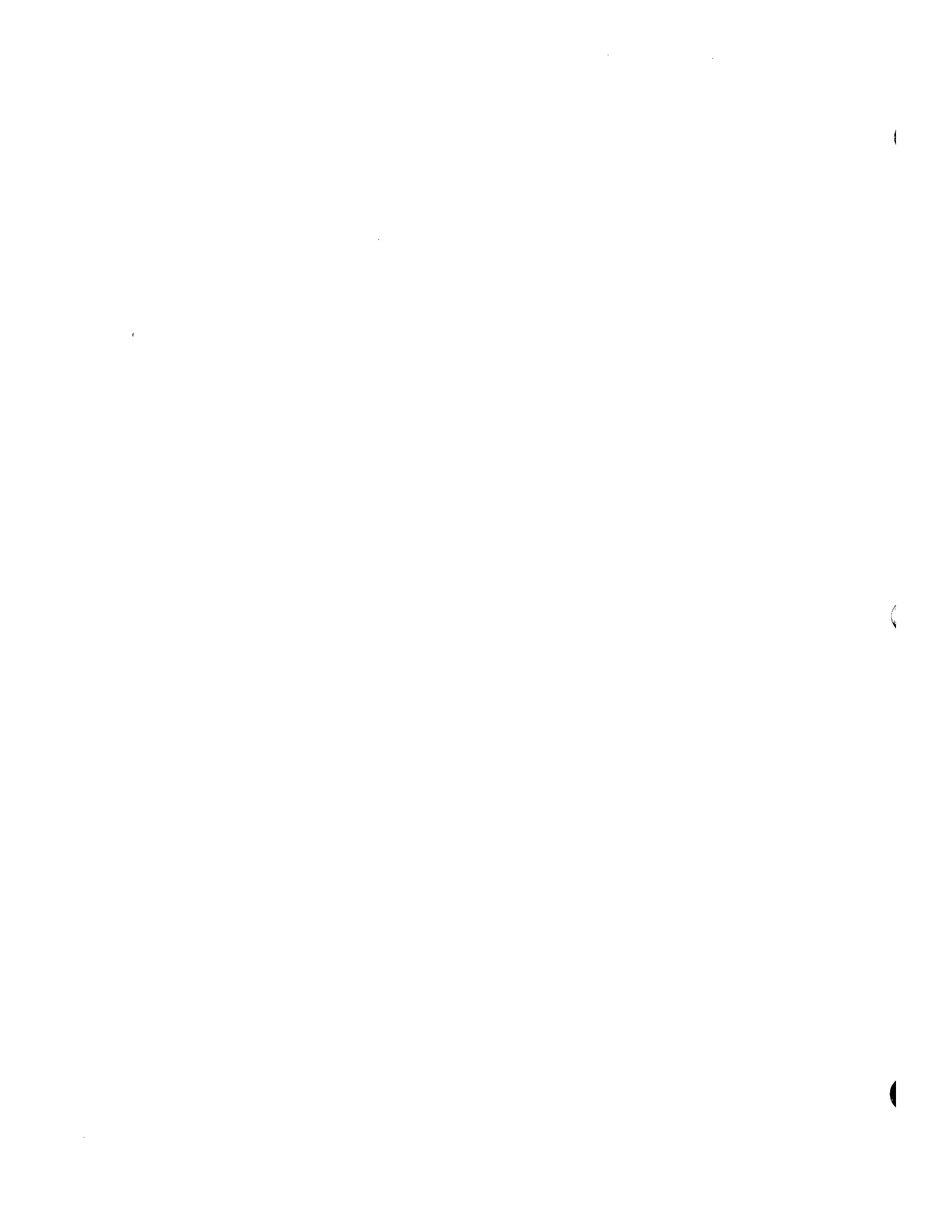
Rollcall Message. SIEVE LIMIT data could not be recovered. The SIEVE LIMITS will be set to the system defaults or to those provided via \$ INFO data.

Operator Action: Reenter the SIEVE LIMITS that had been set via the console.

CROSS COPY QUEUE ENTRY ERROR FOR LINES xx=>yy

Time Sharing Message. One copy of TSS received a queue entry to switch terminal line xx to UST with line id yy. TSS was unable to accomplish the switch.

Operator Action: None.



SECTION 7

OUTPUT MESSAGES BEGINNING WITH THE LETTER D

DATA CAPTURE OPTIONS: option(s)
ENTER [(O)PTION], (U)SE \$ ANSWER, OR (N)ONE.

Dump Message. The system operator must choose between the default options displayed by the DATA CAPTURE OPTIONS: message, and those options set in the \$CONFIG section on a \$ANSWER DUMP card.

Operator Action:

- o (O)PTION or EOM will cause DUMP to display the following list of additional options.
- o (U)SE causes DUMP to use the options specified on the \$ ANSWER statement.
- o (N)ONE should be used if dump should not be taken.

***DATE?**

Startup Message. Startup detected a value not within the limits indicated.

Operator Action: Enter correct date.

***DATE mmddy TIME hh.mmm** ***CHANGE SYSTEM CONTROLLER CLOCK?**

Startup Message. Inform the operator of the current setting of the System Controller Clock date and time, and allows the operator to specify whether or not to change it. The message is displayed when the response to "CHANGE?" was "YES".

mm = month
dd = day of the month
yy = year
hh = hours (24 hour clock)
.mmm = millihours

Operator Action: None.

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* DBC DEVICES MUST BE SEQUENTIAL EVEN/ODD PAIRS

Startup Message. A pair of DBC devices were not configured as an even/odd (EVEN,EVEN+1) pair of devices.

Operator Action: Correct the card and reboot.

***dd1 AND dd2 ARE BOTH CAT DEVICES. USER xxxxxxxx ***

Save/Restore Message. User xxxxxxxx has original and duplicate catalogs on devices dd1 and dd2 for which a device restore is attempted. Restore skips to the next user.

Operator Action: None.

DDTAPE: DEVICE NAME NOT FOUND

Operator Interface Message. The device name table does not contain the device name entered with the DDTAPE verb.

Operator Action: Select an appropriately named device.

DDTAPE: DEVICE UNAVAILABLE

Operator Interface Message. The device which was requested with the DDTAPE verb is not currently available.

Operator Action: Request a different device which is currently available or wait until the requested device is available.

DDTAPE: ILLEGAL FORMAT - S/B SNUMB DEV-NAME,FC

Operator Interface Message. The system recognized an improper format; the format must be: SNUMB Device Name File Code.

Operator Action: Enter the SNUMB, device name, and file code correctly when using the DDTAPE verb.

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DDTAPE: INVALID FILE CODE

Operator Interface Message. The system recognized an improper file code. This is commonly caused by a file code entry which was left blank or made zero.

Operator Action: Enter the correct file code with the DDTAPE verb.

DDTAPE: SNUMB NOT FOUND

Operator Interface Message. The SNUMB which was entered with the DDTAPE verb is incorrect, or the job is not in execution.

Operator Action: Enter correct SNUMB or establish job execution.

DDTAPE: TABLE SIZE EXCEEDED

Operator Interface Message. The table size of 30 entries was reached.

Operator Action: Wait until entries are free or use DDTAPE verb to remove unneeded devices.

DDTAPE: WRONG DEVICE NAME

Operator Interface Message. The device name entered with the DDTAPE verb is incorrect.

Operator Action: Enter correct device name with the DDTAPE verb.

DEAD IC xxxxxx PGM # ppp sssss AT tt.ttt
IC+I aaaaaa bbbb PRC c WSR d WS# eee MOD fff
ISR BASE gggggggggggg EI hhhhhhhhhhhh OI iiiiiiiiiiiii

Dump Message. Program number ppp (SNUMB sssss) called .MBRT1 from location xxxxxx to cause a system dump. (Fast bootload is not active.) No fault occurred. An informative message only.

- aaaaaa - Instruction counter
- bbbb - Indicator register
- c - Processor number
- d - Working space register number
- eee - Working space number

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fff - Module number
EEEEEEEEEEEE - Base of instruction segment (words)
hhhhhhhhhhhh - Even instruction
iiiiiiiiiii - Odd instruction

Operator Action: None.

*DECK TO BE SAVED HAS ALL ZERO DATA

Startup Message. A binary deck input to the Startup \$INITIALIZE section was invalid for the reason specified. This situation is very improbable.

Operator Action: Reassemble data deck and reboot.

*DECK TO BE SAVED HAS ZERO SIZE

Startup Message. A binary deck input to the Startup \$INITIALIZE section was invalid for the reason specified. This situation is very improbable.

Operator Action: Reassemble data deck and reboot.

*DECKFILE {CATALOG CHECKSUM ERROR}
{FILE SIZE ERROR }
{BLOCK NUMBER ERROR }
{NO. OF ENTRIES ERROR }
{ENTRY DATA ERROR }
{EXTENSION FILE ERROR }

Startup Message. An existing program file was found, but the catalog is bad for the reason specified.

Operator Action: Verify that the disk pack containing the DECKFILE is mounted on the proper spindle and is correctly defined in the \$CONFIG section. If it is, the existing deck file must be purged to eliminate the error.

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*DEF TRACK HIST TABLE {FULL }
 {I/O ERROR } dv i-ccc-dd
 {CKSUM ERROR}

TRACK tttttt SW1-ssssssssssss (I/O Error only)

Exception Processor Message. The update of the defective track history table was unsuccessful, because of either an error condition or exhausted table.

dv - Device type
tttttt - Defective track address (octal) that would have been inserted
s...s - Status word 1

Operator Action: None.

<<< S#sssss DEFERRED RECOVERY DIRECTIVES STARTING >>>

Integrated Software Message. Printed when the deferred recovery process begins execution.

sssss - Deferred recovery process SNUMB

Operator Action: None.

<<< S#sssss DEFERRED RECOVERY DIRECTIVES COMPLETE >>>

Integrated Software Message. The deferred recovery utility (processing LIST, RECOVER, and/or ANALYZE directives) terminated, and no apparent error exists.

sssss - Deferred recovery process SNUMB

Operator Action: Examine the deferred recovery reports for more information.

<<< S#sssss *** nnnnn DEFERRED RECOVERIES FAILED (see listing) *** >>>

Integrated System Message. Deferred recovery was not successful for one or more processes. The listing indicates which deferred recoveries failed and the reason for the failure.

sssss - Deferred recovery process SNUMB

Operator Action: Examine the deferred recovery reports for error information.

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The following 'DEFERRED RECOVERY' console messages are suppressed when
-SUPPRESS_MESSAGES {YES} option is specified for the RECOVER directive.

```
<<< S#sssss DEFERRED RECOVERY { xxxxx }  
                                { wsname }  
NO PROTECT FILE TO RECOVER >>>
```

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. One of two conditions exists:

1. The system aborted during a deferred recovery run after protected files were recovered but before recovery structure was released. A subsequent deferred recovery run will generate this message. The structure is released at this time.
2. The system aborted or a process "disaster" occurred immediately after a commitment unit was opened and before any before images were written to the journal.

Operator Action: None.

```
<<< S#sssss DEFERRED RECOVERY { xxxxx }  
                                { wsname }  
NOT ELIGIBLE - IT IS ACTIVE >>>
```

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. File structure for active batch or workstation processes is not a candidate for recovery.

Operator Action: None.

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<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
NOT RECOVERED - BAD PAT FILE >>>

sssss - deferred recovery process SNUMB
xxxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. The PAT image file for the process was not usable.

Operator Action: Check the summary report (SYSOUT report code 01) to determine why recovery was not complete.

<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
NOT RECOVERED - NO STRUCTURE >>>

sssss - deferred recovery process SNUMB
xxxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. No recovery structure exists or there is an incomplete structure on SYS_RECOVERY/JOURNAL for the batch process or workstation.

Operator Action: None.

<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
NOT SUCCESSFULLY RECOVERED >>>

sssss - deferred recovery process SNUMB
xxxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. The file structure was not successfully recovered to its most recent known state (i.e., commitment).

Operator Action: Refer to the summary report (SYSOUT report code 01) to determine why recovery was not complete.

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<<< S#sssss DEFERRED RECOVERY xxxxx PROBLEM IN DEFERRED RECOVERY >>>

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted

Integrated Software Message. An undetermined error occurred.

Operator Action: Check the summary report (i.e., SYSOUT report code 01) to determine what problems exists.

<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
SKIPPED PER USER DIRECTIVE >>>

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. The option -CLEANUP ONLY {YES} was specified for the RECOVER directive. As a result, no deferred recovery is performed for the batch process or workstation indicated.

Operator Action: None.

<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
RECOVERY NOT NEEDED >>>

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. File structure for this batch process or workstation reached a known state (i.e., commitment) before the failure occurred.

Operator Action: None.

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<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
RECOVERY NOT NEEDED - LOCKS?

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. The recovery structure is in a setup or end-of-activity state. Because either (1) protected files were not updated or (2) protected file updates were complete, no recovery action is required. However, protected files allocated to the process may not have been deallocated. Consequently, spurious abort locks or busy counts may exist.

Operator Action: Check the detailed file name list in report code 01 to see if any files remain abort locked.

<<< S#sssss DEFERRED RECOVERY { xxxxx }
 { wsname }
SUCCESSFULLY RECOVERED >>>

sssss - deferred recovery process SNUMB
xxxxx - batch process SNUMB for which deferred recovery is attempted
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. The file structure was successfully recovered to its most recent known state (i.e., commitment).

Operator Action: None.

<<< S#sssss DEFERRED RECOVERY wsname WORKSTATION NOT RECOVERED >>>

sssss - deferred recovery process SNUMB
wsname - workstation name for which deferred recovery is attempted

Integrated Software Message. All processes associated with the workstation indicated were not recovered.

Operator Action: Refer to the summary report (SYSOUT report code 01) to determine why recovery was not completed.

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*DENSITY IS dddd sssss i ccc dd ***

IOS Message. Indicates density of the MTS500/600 or MTU0400/MTU0500 tape unit on the specified inp channel.

dddd - Density (6250, 1600, 800, 556, or 200 bpi)

Operator Action: None.

DEV BSY and RLSED

GPOP Message. System reply to an operator RLSE message. The device for which release was requested is busy and cannot be released at that time. System releases device after its use is finished.

Operator Action: None.

DEV INVALID

Peripheral Allocator Message. The operator entered an illegal device number; the device is not configured; or the device has been released.

Operator Action: Reenter the input message if it was incorrect. If the device was not configured, insert a correct \$ IOM statement in the configuration deck, reboot and restart the program. When the device has been released by a console message, enter an ASGN message.

i ccc dd DEVICE ALREADY ASSIGNED

GPOP Message. The operator attempted to assign the specified device but the operating system determined that this device is already assigned.

Operator Action: No further action is required. The operator may continue normal operations on this device.

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DEVICE xxx CONTAINS NON-STRUCTURED REMOVABLE PACK - REQUEST IGNORED

Disk Space User Report Message. The removable device named by DSUR option xxx contains a non-structured removable pack. Any SECTOR entries for this device will be ignored.

Operator Action: DSUR cannot search for space on a non-structured removable pack. Enter the correct device name if the non-structured device name was entered in error.

DEVICE DIRECTORY CHECKSUM ERROR

(A)BORT, (C)ONTINUE

Save/Restore Message. A checksum error occurred on the device directory being read.

Operator Action: Enter A to abort or C to continue restore. If the continue option is selected, restore continues with the next user, and a message is printed identifying the user that was not restored.

DEVICE x MISMATCH ON i-ccc-dd

CONFIG = y, IPC = z

DEVICE RELEASED

Startup Message. The FIPS disk device specified in the startup configuration section does not match the IPC configuration table. In the message forms below, type is used to specify a FIPS disk device type (e.g., MSC1A).

x	y	z
a NUMBER	dd	UNDEF
b TYPE	type	type
		UNKNWN
c FORMAT	type	UNFMTD
d STATUS	type	NOTONL

Message form a appears when the device number in \$CONFIG is not found in the IPC CONFIG.

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Message form b appears when \$CONFIG device does not match IPC CONFIG device (e.g., CONFIG=MSC1A, IPC=MSC1B). Startup aborts at the end of section processing unless IPC=UNKNWN appears.

Message form c appears for unformatted FIPS device. If the device is removable, it will be changed to a stranger device. If it is not marked removable, the message

UNFORMATTED DEVICE MUST BE "RMVBL"

appears. Startup aborts at the end of section processing.

Message form d appears if the device is not online (i.e., powered off).

Operator Action: If Startup aborts at the end of section processing, correct the error and reboot the system.

*** DEVICE i-ccc-dd NON-ALLOCATABLE BY \$PALC STATUS=ssssss, RELEASED

Peripheral Allocator Message: While attempting to allocate device i-ccc-dd the Peripheral Allocator attempted an I/O to the device and received the exception status "ssssss". It then released the device.

ssssss - Upper half of I/O status word 1

Operator Action: After exception condition has been corrected, assign the device.

*DEVICE ddd NOT DEFINED

Startup Message. The device indicated was not defined on the \$ IOM statement.

Operator Action: Correct the \$ IOM statement and restart.

DEVICE xxx NOT FOUND

Disk Space User Report Message. The DSUR DEVICE name input (xxx) could not be found in the System Configuration Name Table. Any SECTOR entries for this device will be ignored.

Operator Action: Enter a valid device name.

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***DEVICE dd NOT SYSTEM STORAGE**

Startup Message. The device indicated is not a system storage device. If the device field (dd) is RES, there is no \$ SAVE statement for the storage file for Startup and Dump (i.e., DUMP file).

Operator Action: Assign the device to system storage and retry.

***DIRECT/CLEAR WILL FORMAT ALL TRACKS GOOD, YES TO CONTINUE**

Startup Message. A user's or manufacturer's pack is being initialized for the first time, and a \$ DIRECT CLEAR statement is also in the job stream for this pack. This condition will result in the loss of all pack-resident information about the user's or manufacturer's known bad areas.

Operator Action: Remove \$ DIRECT CLEAR statement and reboot, unless the situation described is desired. If situation is desired, enter YES.

***DIRECTORY FULL, DEVICE ddd**

Startup Message. The maximum of 62 entries was made in the bad llink directory. The directory statement listed on the console following this message is ignored and the next statement processed. When the next End-Of-File (EOF) is encountered, Startup aborts.

Operator Action: Advise the site techniques personnel of the situation. Possible action may involve replacing the pack or releasing the device (if it is not required) which may necessitate a Startup deck change. In addition, the Honeywell Bull Response Center may need to repair the device.

***DISC ERROR i ccc dd eeeeeee CANNOT PROCEED**

Startup Message. One of the following statuses exists: Instruction Rejected, Device Busy, Invalid Control Character, or an Illegal Status.

eeeeee - Error status

Operator Action: If the disk is not an online device, as described in the Configuration section, correct the condition.

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*DISC ERROR, i ccc dd eeeeee END MESSAGE WHEN READY

Startup Message. An Attention status was detected.

eeeeee - Error status

Operator Action: The disk is not online. Correct the condition and press EOM at the console.

*DISC i-ccc-dd RELEASED--CAN'T BUILD AST--yyyyyy

Peripheral Allocator Message. An error occurred when the Peripheral Allocator attempted to build the AST for the specified (non-physically removable) structured removable pack. The drive has been released.

yyyyyy - Reason code for the error. May be of the form STATUS xxxxxxxxxxxxxx where xxxxxxxxxxxxxx is the status.

Operator Action: Refer to your own Site Administrator for further questions.

*DISC i-ccc-dd RELEASED--CAN'T READ LABEL--STATUS=xxxxxxxxxxxx

Peripheral Allocator Message. An I/O error occurred when Peripheral Allocator attempted to read the label of the specified (non-physically removable) removable pack. The pack has been released.

xxxxxxxxxxxx - I/O Status returned word

Operator Action: Refer to your own Site Administrator for further questions.

*DISC i-ccc-dd RELEASED-LABEL INFO DESTROYED.

Peripheral Allocator Message. The label of the (non-physically removable) removable pack is not formatted properly. The drive has been released.

Operator Action: Notify techniques.

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DISC PACK ERROR i ccc dd eeeeee END MESSAGE WHEN READY

Startup Message. A Device Attention status exists on a disk device.

eeeeee - Error status

Operator Action: Correct the problem and press EOM. The I/O will be repeated.

DISC PACK ERROR i ccc dd eeeeee ILLEGAL STATUS
CANNOT PROCEED

Startup Message. An illegal status occurred on the specified disk device.
Startup aborts.

eeeeee - Error status

Operator Action: Correct the problem (perhaps requiring a call to the Honeywell Bull Response Center) and reboot.

*DISC PACK SELECT ADDRESS ERROR

Startup Message. A seek address error exists on a disk device.

Operator Action: Retry.

*DISC SCF CLOSED OK

DUMP Message. The contents of the Statistical Collection File (SCF) buffers at the time of the call to .MDUMP were written onto the SCF and an EOF was written on the file. This message is applicable when disk accounting is defined.

Operator Action: YES to the SCF CONTINUATION? message on next boot to save the data for automatic purge to tape.

*DISC SEEK ADDRESS ERROR, i ccc dd CANNOT PROCEED

Startup Message. The Seek address calculation routine was given a nonexistent link or llink number, a nonconfigured device, or illegal arm positioning.

Operator Action: Check CONFIG and EDIT cards for accuracy. Physical configuration of the system should be compared to that described on the cards.

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*****DISK CACHE CAN'T GET BACKDOOR SPACE*****

Rapid Access Data System Message. The control program attempted to create a temporary file for printing statistics using the SYSOUT backdoor feature and was denied file space. The statistics are lost if the CLEAR parameter is specified for the STATS option. If the CLEAR parameter is not specified, the statistics are accumulated until the next reporting period.

Operator Action: None.

*****DISK CACHE HAS BEEN SHUT DOWN AT mmddy hh:mm:ss**

Rapid Access Data System Message. The Rapid Access Data System (RADS) is shut off and the RADS memory is released starting at the month, day, year, hour, minute, and second indicated.

Operator Action: None.

***** DISK CACHE HAS "CACHE OFF" FOR ALL DISKS**

Rapid Access Data System Message. The options specified on the I* option file for Rapid Access Data System (RADS) prevent RADS from caching any data. RADS will continue to run, accumulate statistics, and print its reports.

Operator Action: None, if RADS is being run just to accumulate statistics and print reports. Otherwise, ABORT the control program, change the DEVICE parameters on the I* option file to specify which disks to cache, and start the control program again.

*****DISK CACHE OPERATIONAL AT mmddy hh:mm:ss**

Rapid Access Data System Message. The Rapid Access Data System (RADS) is turned on and the RADS memory is assigned at the month, day, year, hour, minute, and second indicated.

Operator Action: None.

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D
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*****DISK CACHE OPTION FILE NOT PRESENT - DEFAULTS WILL BE USED**

Rapid Access Data System Message. An option file is not referenced by either a \$ DATA I* file or a \$ PRMFL I* file, or it is not under the default OPNSUTIL/DISCACHE catalog/file string (no JCL reference needed).

Operator Action: Provide the default OPNSUTIL/DISCACHE file or the I* option file and its JCL statement unless all the default values of the SDC parameters are not acceptable.

***** DISK CACHE SET LOCK WRITE THRU BECAUSE OF COMMON FILES ENVIRONMENT**

Rapid Access Data System Message. The "lock write thru" option was forced because all RADS writes are "write thru" rather than "write into" on a common file system.

Operator Action: None.

DISK FILES FULL, OVERWRITE (Y OR N)?

Dump Message. When attempting to dump to disk, all dump files (DUMP1-DUMP9) contain data. The operator must determine whether or not to overwrite existing data with the new dump.

Operator Action: The following responses are available:

Enter NO (EOM or N) - The dump will not be written to a disk file, and the dump question will be repeated to allow the operator to select tape or printer output.

Enter YES(Y) - The disk file with the oldest date/time will be overwritten by the dump.

NOTE: If the FASTBOOT option is specified for restart, the YES response to the overwrite question is implicit. Any condition that prevents the completion of the dump to disk turns off the FASTBOOT option (e.g., no dump file defined, dump file too small, etc.)

D
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DISK FILES NOT CONFIGURED

Dump Message. The system attempted to write a dump to a disk file (i.e., to DUMP1-DUMP9). However, the file was not defined at system startup on a \$ FILDEF statement.

Operator Action: The message ENTER [(O)PTION, (U)SE \$ANSWER, OR (N)ONE is issued to the console. The operator may enter:

- D - Dumps memory to the output device specified on the \$ ANSWER statement in the Startup job stream.
- N - Discontinues the dump.
- O - Allows the operator to select the dump device by the SELECT DEVICE:.. Subsequently, mass storage files can be defined in the Startup job stream for dump purposes and the system can be rebooted.

DISK PACK ERROR i ccc dd: TRACK ZERO BAD

Startup Message. Startup cannot format track 0 or it was found to be bad using the "TEST" option.

Operator Action: This pack cannot be used in this condition. Notify the Honeywell Bull Response Center.

*DISK PACK ERROR; ccc-dd (status)
*FN TYPE "GO", OR TYPE "STOP"

Startup Message. An unrecoverable error was detected while trying to read or write a disk pack. Status is the 12-digits octal for the first status return word (refer to GCOS 8 OS I/O Programming manual for the specific meaning of this status).

Operator Action: Correct the condition causing the status and enter GO. If the condition is uncorrectable, enter STOP, replace the failing unit, and reboot.

D
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*DLT sssss xxxxx

Peripheral Allocator Message. The Peripheral Allocator has deleted the job for the reason specified.

xxxxx - Reason:

PRMFL ERROR	STRING ERROR	ILLEGAL FC	EXCESS " LUD
NO SUCH NAME	EXCESS DATA	RMC JCL ERR	PACK DROUTH
NO CKPT FILE	NO RU FILE	FC/LUD ERROR	
LIMITS ERROR	BAD PASSWORD	NO ACTIVITY	
NO PUNCH	NO FILECODE	NEED PPS ID	
MULTI-READER	PERMS DENIED	NO FILENAME	
FILE SIZE	NO DEVICE	NO ENDJOB	
TAPE CATALOG	NO PACK #	NTAPE EXCESS	
NO \$ PRODUCT	FORMAT ERROR	NEED USERID	
NEED \$IDENT	MISSED LUD	FG ERROR	
CORE DROUTH	SCC INVALID	BAD J* FORM	
00 FILE CODE	MULTI-PRINTER	INVALID DISP	

Operator Action: None.

*DLT sssss xxxxx

Scheduler Message. The System Scheduler has deleted the job for the reason specified.

xxxxx - Reason:

BAD J* FORM SYS SCHED
I/O ERROR

Operator Action. None.

D
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*DLT S#sssss-aa xxxxx

Scheduler Message. The System Scheduler has deleted the job for the reason specified.

OPERATOR DELETE
CLASS CATALOG EXHAUSTED
M-S-L I/O ERROR
\$ MSG3 CARD -- BAD DATE
\$ MSG3 CARD -- BAD TIME INTERVAL
TRANSPORT JOB HAS BEEN DELETED

Operator Action. None.

*DLT S#sssss CANT READ J# FILE

Peripheral Allocator Message. There is a mismatch in the SNUMB as it appears on the J# file with the SNUMB as it appears in the JCT in ALC1 or as it appears in the SD.SNB segment.

Operator Action: None.

*DLT S#sssss-aa IMPROPER CONTROL CARDS

Peripheral Allocator Message. The job control statements contain a fatal error. Details concerning the error will appear on the job execution report.

Operator Action: None. The system will delete the job.

*DLT S#sssss fc I/O ERROR IN \$PALC

Peripheral Allocator Message. An I/O error occurred while the Peripheral Allocator was doing an I/O on the file indicated.

fc - File code of the file on which the I/O error occurred.

Operator Action: None.

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*DLT S#sssss (X1)

Peripheral Allocator Message. A job was deleted as the result of an ABORT sssss option request by the operator or a JABT sssss request from TSS.

Operator Action: None.

*DMT i-ccc-dd REEL #nnnnn S#sssss-aa TO xxxxx B-M-C

Peripheral Allocator Message. The specified magnetic tape is to be dismantled and to be used as the input tape to the \$ CONVER activity which was spun off as job xxxxx from job sssss.

Operator Action: Dismount the specified tape and retain it pending running job xxxxx.

*DMT TAPE-S#sssss (i-ccc-dd) (fc)

Allocation/Termination Message. The specified file was released by the program.

Operator Action: Dismount and save the tape.

*DMT UNIT-S#sssss i-ccc-dd(fc)[, i-ccc-dd(fc)]

Peripheral Allocator Message. Requests the operator to dismount the specified tape unit(s).

fc - File code of the file on the specified unit

Multiple files may be included in one *DMT UNIT message. If enough files are included, the message occupies more than one line.

Operator Action: Dismount the tape(s) from the specified unit(s).

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*DOES sssss-aa MT i ccc dd (fc) file-name HAVE A VOL:nnnnn YN

Standard COBOL-68 I/O System Message. An unlabeled or user-labeled file reached the end of an input reel. The operator must determine whether to treat this reel as the end of file or attempt a reel swap.

file-name - 12-character file identifier supplied by the file assignment statement (will be suppressed if not present)
nnnnn - Reel sequence number within file

Operator Action: Enter Y if there is another input reel. Processing continues.
Enter N if another input reel is not present. The current reel will be treated as the end of the file.

*D,O,L,Y DEVICE TYPE WRONG - FIX, HIT EOM

Startup Message. The named device on a D, O, L, Y, or A card is not the same type as the device type specified on the \$ DIRECT statement.

Operator Action: Correct the card and press EOM.

DON'T UNDERSTAND
PLEASE ENTER ONE OF THE FOLLOWING:
PRINT OR EOM
PR#
(EG PR1 PR2)
DISK
DRIVE-NAME/TAPE#, DENSITY
(EG 1T4/12345, 1600)

Dump Message. The operator has made a mistake in selecting a device.

Operator Action: The device selection should be input again.

DRCPC HAS BEEN REPLACED - PLEASE USE REDRC

GPOP Message. The verb DRCPC was replaced with the verb REDRC.

Operator Action: Use the correct verb, REDRC.

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sssss DSUR OPTIONS = (D XXX OR S NNNNNNN,MMM)
XX = DEVICE NAME
NNNNNNN = STARTING SECTOR NUMBER IN OCTAL
MMM = NUMBER OF CONSECUTIVE SECTORS IN OCTAL
sssss ENTER ONE OPTION -

Disk Space User Report Message. An input I* file for the DSUR program is not present. The operator is asked to input the appropriate disk address via the console. The ENTER ONE OPTION line may be separated from the first four lines by other console traffic. This line of output leaves the keyboard unlocked for operator entry.

Operator Action: Enter the device and sector information (one entry per line) in the following format:

```
(D)EVICE XXX          (EOM or Return key)
followed by,
(S)ECTOR NNNNNNN,MMM  (EOM or Return key)
.
.
.
(S)ECTOR NNNNNNN,MMM  (EOM or Return key)
```

where:

- XXX - The name of a disk device that contains a permanent disk or a structured removable pack
- NNNNNNN - An octal sector address (1-7 digits)
- MMM - A one- to three-digit octal number of consecutive sector addresses (two-digits maximum for MSU0501 devices)

At least one device parameter followed by one sector parameter must be present. Up to 100 input sector parameters are accepted. Multiple sector ranges are placed one range to a SECTOR entry following the appropriate (D)EVICE entry. All sector ranges pertain to the last device encountered on a (D)EVICE entry.

When the last entry has been made, press the End-of-Message or Return key, or enter DONE or EOM (without entering a device name or sector address).

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*DUAL BOT MT i-ccc-dd sssss ABT / FIX+RDY AF?

Exception Processor Message. Multiple BOT (beginning-of-tape) marks exist on the designated device media. The tape reel is not usable in this condition. The tape will be unloaded automatically.

Operator Action: Enter A - Abort the job.
Enter F - Fix the tape reel by removing the second BOT mark and remounting the reel. GCOS will reposition the tape and retry the original command.

DUMPN I/O ERROR STATUS sssss

Dump Message. An error occurred while the dump was being written to mass storage. The status of the error is defined by sssss.

Operator Action: The message ***DUMP (O)PTION/(D)EFAULT/(N)ONE is issued to the console. To continue the dump operation, the operator can enter the O option, causing the PRINT TAPE/#, DENSITY DISK OR NONE? message to be issued. The operator can then choose another dump device. D causes the dump to be sent to the device specified on the \$ ANSWER statement. N causes no dump to be taken.

DUMP TAPE FULL ENTER TAPE/NEXT REEL #

Dump Message. The current reel is full, and DUMP is requesting an additional tape handler and reel.

Operator Action: Enter (DDD/tape#).

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*****DUMP (O)PTION/(D)EFAULT/(N)ONE?**

Dump Message. In response to the console entry of the DUMP verb, an unrecoverable system error, or a manual fault executed from the processor. The operator can continue or discontinue the dump operation.

Operator Action:

Enter D - Dump memory to the output device specified on the \$ ANSWER statement in the startup job stream.

Enter N - Discontinue the dump.

Enter O - Allows the operator to select the dump device. The following message is issued:

PRINT TAPE/#, DENSITY DISK OR NONE?

where:

PRINT - Dump to printer (PR1) and causes the

"DUMP: ALL, HCM, SOFT, SLV, Wxxx-yyy, PPP,
REAL, NPURE, NON, OPTS(-)SD.xxx, .Mxxxx,
PH.xxx, PSH, SSF, HIS, TRC, COM, PTW, ONLY"

message to be printed at the console. If PR1 is not available, the message "*SELECT PRINTER DEVICE" is issued. The operator can:

- o Enter the logical device name of another online printer or,
- o Press EOM, whereupon the "DUMP (O)PTION/(D)EFAULT/(N)ONE?" message is again output.

TAPE/#, DENSITY - Dump to the tape identified by tape device name, reel number, and density (if other than system default).

DISK - Dump to available disk dump file (DUMP1-DUMP9). If no dump files are allocated this message will be repeated to allow printer or tape selection.

NONE - Discontinue the dump.

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DUMP WROTE xxxxxx LLINKS ON DUMPn

Dump Message. A dump to the disk file is completed. The number of LLINKS (xxxxxx) occupied on the dump file (DUMP1-DUMP9) is defined. An informative message.

Operator Action: None.

*DUMP WRITTEN TO DUMPn

Startup Message. The operator replied "DISK" to the "PICK ONE DUMP" message. Following successful completion of the dump writeout, Startup informs the operator that the dump was written to the DUMP file (DUMP1 through DUMP9).

Operator Action: None.

*DUPLICATE FILE CARD BELOW IGNORED

Startup Message. There is more than one of the following card types in the deck: \$ LIBRARY, \$ ACCOUNT, \$ SAVE, \$ SYSTEM, and \$ SYSOUT. The contents of the duplicated card are output following the message.

Operator Action: Remove the duplicate card. Startup will use the information contained on the first card read.

SECTION 8

OUTPUT MESSAGES BEGINNING WITH THE LETTER E

*ECOL FOUND A SLOW CACHE ON PORT n

ECOL Message. The Cache timing test found a slow cache on the processor configured on SCU-0 Port n. (There is less than 13% improvement between cache enabled and cache disabled.) This indicates that cache may be malfunctioning.

Operator Action: Contact supervisory personnel to determine if system availability necessitates continuing to run with slow cache. If not, two options are available. The operator can dynamically release the malfunctioning processor (if multi-processing) and notify the field engineers of its availability for repair. A second option involves disabling cache via the console input message ECOL CSHOFn (n = 0-7, processor connected to SCU-0 port).

ECOL REQUEST DENIED; CPU OFF LINE

ECOL Message. The operator action was denied. If the CPU specified in the request was not a DPS 88, the following message is displayed:

ECOL REQUEST DENIED; INVALID FOR THIS CPU

Operator Action: None.

ECOL REQUEST DENIED; CSH DISABLED

ECOL Message. In response to the operator input ECOL CSHOFn, and system communication region cache status bit (in .CRCMM+3, bits 0 to 7) for the port indicates that the cache memory on the port is already disabled (DPS 8/20 & 8/44 systems only).

Operator Action: None.

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ECOL REQUEST DENIED; CSH ENABLED

ECOL Message. In response to the operator input ECOL CSHONn, and when system communication region cache status bit (in .CRCMM+3, bits 0 to 7) for the port indicates that the cache memory on the port is already enabled. (DPS 8/20 & 8/44 systems only).

Operator Action: None.

ECOL REQUEST DENIED; IN EXECUTION

ECOL Message. In response to the operator input ECOL START, and with the ECOL program is already in execution.

Operator Action: None.

ECOL REQUEST DENIED; INVALID

ECOL Message. An ECOL verb and its options are entered or formatted improperly at the system console. The action requested has been ignored.

Operator Action: Reenter the message in the proper format.

ECOL REQUEST DENIED; NO PROCESSOR

ECOL Message. The processor specified was not configured.

Operator Action: Enter correct designation of configured processor.

ECOL REQUEST DENIED; PTL DISABLED

ECOL Message. In response to the operator input ECOL PTLOFn, and when system communication region status bits (in .CRCMM, bits 24 to 30) for the port indicate that PATROL is already disabled for the processor. (DPS 8/20 & 8/44 systems only.)

Operator Action: None.

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ECOL REQUEST DENIED; PTL ENABLED

ECOL Message. In response to the operator input ECOL PTLONn, and when system communication region status bits (in .CRCMM, bits 24 to 30) for the port indicate that PATROL is already enabled for the processor (DPS 8/20 & 8/44 systems only).

Operator Action: None.

*EDIT?

Startup Message. Asks whether to process the statements between \$EDIT and the following ***EOF.

Operator Action: Enter YES, NO, EOM, or PARTIAL. A YES answer causes all files to be edited automatically. A PARTIAL answer causes a separate question to be asked for each statement or statement type in the \$EDIT section to determine if that statement should be processed. The following questions are asked:

EDIT FILENAME?
PROCESS SSFILE CARD?

If more detailed information is required, refer to GCOS 8 OS System Startup manual.

*EDIT CARD BELOW CONTAINS ERROR NEAR COLUMN nn

Startup Message. A statement format error exists. The contents of the statement are output on the console following the message.

nn - Column number

Operator Action: Replace the erroneous statement with a corrected statement.

*EDIT CARD BELOW SPECIFIES FILE IN UNKNOWN FORMAT

Startup Message. The file being edited is in the wrong format.

Operator Action: Verify the format field on the \$ FILDEF statement listed, either SYS or RDM. If this field is in error, correct the statement and re-edit. If that is not the case, a new tape is required or the edit tape is in the wrong density.

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*EDIT CARD BELOW SPECIFIED FILE WITH BAD CHECKSUM

Startup Message. The data on the tape file is bad.

Operator Action: Get a new edit tape or do not edit this file.

*EDIT CARD BELOW SPECIFIES TOO FEW LLINKS

Startup Message. While SYS or RDM copy function defined on a FILDEF statement is being processed, the file being copied is found to be longer than the size indicated. The contents of the statement are output following the message.

Operator Action: Check that the tape being copied is the proper one, and correct the size field on the FILDEF statement.

EDIT CATALOG/FILENAME?

Startup Message. When EDIT is answered with PARTIAL, this question is asked with every \$ FILDEF statement.

Operator Action: Answer YES if this FILDEF statement is to be processed.

EDITOR sssss-aa ENTER: language FOR: routine name AT: tt.ttt

Source Library Editor Message. A special trace of routines is being assembled by the Source Library Editor.

Operator Action: None.

*END

Startup Message. The Startup dump is completed.

Operator Action: None. This message will be followed by another question.

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END sssss-aa @ tt.ttt (abort reason)

Termination Message. The specified activity was aborted by the system for the reason stated. Further explanation of the abort reason can be found in the GCOS 8 OS Programmer Messages And Abort Codes manual.

sssss - Job
aa - Last activity of job
tt.ttt - Time of day

The job was terminated by peripheral allocation for one of the following reasons:

- o Fatal errors occurred during compilation.
- o A \$ GOTO or \$ IF JCL statement caused a skip to a label and the label either does not exist or does not have an activity following it.
- o A \$ GOTO or \$ IF JCL statement caused a skip to ENDJOB and the latest activity of the job aborted.

Operation Action: None.

*END sssss-aa @ tt.ttt * (abort reason)ROLLBACK?

Termination Message. An abnormal termination condition exists that affects job sssss, and the JROLL option has been specified in the JCL. The operator is asked if a rollback to the nearest checkpoint is desired. Further information of the "abort reason" can be found in the GCOS 8 OS Programmer Messages And Abort Codes manual.

Operator Action: Respond YES to affect the rollback if the abort reason code indicates the error condition is operational in nature (i.e., hardware problems, operator error), as opposed to programming errors.

Respond NO to continue termination activities. The message is repeated without the "ROLLBACK?" to verify the termination of the activity.

Any other response causes the message to be repeated every 30 seconds until a YES or NO entry is made.

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***END sssss-aa tt.ttt ACTY DELETE**

Peripheral Allocator Message. The job was terminated by peripheral allocation because of fatal errors during compilation or because the last activity in the job which went into execution aborted, but that activity has at least one other activity following it in the JCL.

Operator Action: None.

***END OF TAPE ENTER FILE NAME**

Startup Message. During an edit, FIND was given as an option to a label check message. The requested file does not exist on this tape. A list of all files on the tape is output after this message.

Operator Action: Reply with one of the file names on the tape, or enter a new name and mount a new tape.

ENTER GESEP OPTIONS, EOM WILL GIVE ALL

Summary Edit Program Message. This message provides for input of options through the console. (Refer to GCOS 8 OS Accounting manual.)

Operator Action: Enter one of the following:

- A or EOM - Prints all records and summary.
- E - Forces termination of Summary Edit Program.
- O - Retypes options message and disregards previous option entries.
- S - Prints only the summary report and type 9 and 12 records.
- n, ..., n - Prints selected record types (1-7) and (14-18).

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ENTER THE NUMBER OF THE FNP TO BE DUMPED

DATANET 355/6600 Dump Program (855D) Message. Requests the operator to enter the number of the DATANET 355/6600 processor to be dumped.

Operator Action: Enter 0-7. System will reply with one of the following messages.

*FNP #n NOT CONFIGURED
*FNP #n DUMPED SUCCESSFULLY
*FNP #n NOT DUMPED - (reason)
*NOT ENOUGH MEMORY ASSIGNED TO 355 DUMP PROGRAM - INCREASE LIMITS AND RUN AGAIN

***ENTER TIME OR ENTER A CORRECTION FACTOR?**

Startup Message. This message is issued when the "CHANGE TIME?" question is answered "YES".

Purpose: To allow the operator to change System Controller Clock time, which is independent of GCOS time.

Operator Action: The response can be one of the following:

- o Enter time in normal manner.
- o Enter a correction factor in the same format used to answer the "TIME?" question preceded by a plus (+) or minus (-) sign.

Example: +01:20

In this example, one hour and 20 minutes will be added to the value of the system controller clock.

***EOJ sssss-aa tt.ttt**

Termination Message. The job was terminated by normal termination of the last activity of the job, or the job was terminated by peripheral allocation when a \$ GOTO or \$ IF JCL statement caused a skip to ENDJOB and the latest activity of the job underwent normal termination.

Operator Action: None.

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*EOJ PGM nn tt.ttt

Termination Message. A job that was not input through System Input has terminated. Does not have a control stack or J* file.

Operator Action: None.

*EOT sssss-aa MT i ccc dd

Standard COBOL-68 I/O System Message. The program attempted to perform a reel swap on a multiple file reel. Since COBOL rules do not permit the multiple file/multiple reel configuration, the program is aborted.

Operation Action: None.

*sssss ERR IN BLDG AST FOR ppppp ON i-ccc-dd STATUS xxxxxxxxxxxx

Peripheral Allocator Message. An error occurred when the Peripheral Allocator attempted to build an AST for the structured removable pack.

ppppp - Pack number
xxxxxxxxxxxx - Error status

Operator Action: None if the error is transient. But if the error cannot be recovered use the ABORT sssss reply to abort the job.

***ERR
***ERR WORK SPACE 1 PAGE TABLE IS TOO SMALL.
***ERR USE \$ INFO PT1SIZ/nnnn AND REBOOT.
***ERR

nnnn = size of page table for working space 1

POPM Message. The default size of the page table is not sufficient. Default size is 2048 words.

Operator Action: Boot using the \$ AUTOLOAD file for input, and using the Startup console editor to add the \$ INFO PT1SIZ/nnnn.

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ERROR ACCESSING DCAF VECTOR TO SPT
ERROR ACCESSING DCAF V-BLDOCK
ERROR ACCESSING DCAF IN-MEM MESSAGE DATA
ERROR ACCESSING DCAF IN-MEM OPTION DATA

ALL WILL BE USED AS DUMP OPTION.

Dump Message. A DCAF error has occurred. The ALL option will overwrite the default DCAF option.

Operator Action: None.

ERROR IN CREATING RESTART FILE
>> file system error message <<

Peripheral Allocator Message. During restart processing the Peripheral Allocator attempted to create the restart file and received an error from the file system other than non-unique name.

Operator Action: Abort the system.

<<< S#sssss *** ERROR IN DEFERRED RECOVERY - See output listing. *** >>>

Integrated Software Message. The listing indicates the error encountered. Refer to the appropriate table for error explanations.

sssss - Deferred recovery process SNUMB

Operator Action: Examine the deferred recovery reports for error information.

*** ERROR IN RELEASED DESCR LIST ***
(A)BORT, (C)ONTINUE

Restore Message. This message can occur when releasing existing catalog and file space at the beginning of a Restoremast operation. The descriptor list could not be sorted properly for the optimal mass storage allocator operation.

Operator Action: Enter A to abort the program or C to continue the restore. Appropriate personnel should be notified if the situation persists as this can result in lost mass storage space.

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***ERROR ON OLD ACCTG FILE, nnnnnn GOOD RECORDS**

ACTS Message. A bad status was returned when trying to write an end of record to the accounting file.

nnnnnn - number of good records on the file

Operator Action: None.

******ERROR ON OLD ACCT FILE-~~mmmmmm~~ GOOD RECORDS (yyy) (optional)**

GPOP Message. An accounting tape switch identifies a completed tape and notifies the operator of any errors.

mmmmmm - Number of good records on the file

yyy - Type of trailer label attempted when error occurred (EOR or EOF)

Operator Action: Save completed tape for accounting function.

**ERROR READING THE SYS ERROR CODE FILE
STAT = (status)**

ALL WILL BE USED AS DUMP OPTION.

Dump Message. A DCAF error has occurred. The ALL option will overwrite the default DCAF options.

Operator Action: None.

***** ERROR SPLITTING DESCRIPTORS FOR ABOVE FILE ***
(A)BORT, (C)ONTINUE**

FMS Message. Caused by the Replace Directive. While trying to replace defective disk space more defective descriptors were to be replaced than there were descriptors for the file.

Operator Action: Enter A to abort the restore, if desired, or C to continue. The continue option skips to the next file to be replaced.

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***** ERROR WHILE TRYING TO GEMORE RECVYINFO FILE *****
(R)ETRY, (C)ONTINUE?

Restore Message. An attempt to GEMORE the FMS recovery file RECVYINFO was unsuccessful.

Operator Action: If possible, wait for a brief period, then respond R to retry the GEMORE. Try several times. If unsuccessful, contact the appropriate site personnel before responding C, which will continue processing after ignoring the GEMORE.

EVEN IDENTIFICATION: message
(message describing what occurred)
DATA CAPTURE OPTION: (options that will be dumped)

Dump Message. If the reason for the system to abort was due to the special DCAF zero opcode, the default set of options will be extracted from the faulting module or program. These messages will vary, depending upon the module in which the ZOP occurred.

Operator Action: None.

***EXCHANGING i ccc dd FOR x yyy zz, MOVE MEDIA**

Exception Processor Message. The operator chose the X option or entered EXCHG, and device i ccc dd is replacing device x yyy zz.

Operator Action: Move the medium (cards, tape, or disk pack) to the new device, x yyy zz, and make it ready.

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***** nnnnn EXECUTIVE VERSION wwwwww OFF xxxxxx AT tt.tt P.T.zzzzzzzzzzzz**

TOLTS Message. The designated subsystem has terminated normally, not as a result of wrapup or abort valid for the COLTS, MOLTS, or POLTS subsystems. MOLTS Termination follows F6 abort memory testing.

{ COLTS
nnnnn - { MOLTS
 { POLTS
wwwwww - TTL statement in mmddy
xxxxxx - Current date in mmddy
zzzzzzzzzzz - Processor time used in milliseconds

Operator Action: Following MOLTS testing, assign all good memory back to GCOS, using the ASGNC verb. Assign operational communications or peripheral equipment back to GCOS via the ASGN verb, following successful COLTS or POLTS testing.

*** nnnnn EXECUTIVE VERSION xxxxxx ON yyyyyy AT tt.tt**

TOLTS Message. COLTS, MOLTS, or POLTS was loaded into memory to initiate testing of communications equipment, memory associated with a slave F6 abort, or peripheral equipment.

{ COLTS
nnnnn - { MOLTS
 { POLTS
xxxxxx - TTL statement in mmddy
yyyyyy - Current date in mmddy
tt.tt - Time in hours and hundredths of hours

Operator Action: Monitor testing until completion.

***EXPECT \$ DKEND**

Startup Message. A \$ DKEND was not the first statement read after a \$ OBJECT statement.

Operator Action: Correct job stream and continue by pressing EOM.

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*EXPECT \$ DKEND BUT READ

Startup Message. The \$ DKEND statement was not found in the object file.

Operator Action: Correct the object file and restart.

*EXPECT EOF BUT READ xxxxxxxx
ANSWER YES TO CONTINUE TO FILE LOADER

Startup Message. A ***EOF statement was expected, but a binary statement was read.

Operator Action: Enter YES to cause Startup to skip the read operation and go to the system file loader. Enter NO to cause Startup to abort; then correct the source file and reboot.

*EXPECT EOF BUT READ BINARY CARD

Startup Message. Statements in the Startup job stream are out of order.

Operator Action: Correct the job stream and retry.

```
        {$INITIALIZE}
        {$EDIT      }
*EXPECT {$FILES    }
        {$LOAD     }
        {$PATCH   }
```

Startup Message. The statement following ***EOF of the last section was not the expected section or another ***EOF.

Operator Action: Check the startup program sequence and make the necessary corrections, then enter GO. Enter STOP if the booting process is to be halted.

E

OUTPUT MESSAGES

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*EXPECT INITIALIZE CONTROL DECK

Startup Message. An object program input to the \$INITIALIZE section was not identified as a control statement file (CON did not appear in columns 28-30 or 35-37 of the \$ OBJECT statement).

Operator Action: Put the correct control statement file in front of the data file (DAT in columns 28-30 or 35-37 of the \$ OBJECT statement), or correct the \$ OBJECT statement and continue.

*EXPECT INITIALIZE DATA DECK

Startup Message. A data file (DAT in columns 28-30 or 35-37 of the \$ OBJECT statement) did not immediately follow a control statement file (CON in columns 28-30 or 35-37 of the \$ OBJECT statement) input to the \$INITIALIZE section of Startup.

Operator Action: Supply the data deck and continue.

*EXPECT MASK CARD OR BINARY TRANSFER CARD

Startup Message. A MASK or a binary transfer statement did not immediately follow the Startup job stream.

Operator Action: Supply the necessary statement(s) and continue.

*EXPECT OBJECT DECK OR ***EOF

Startup Message. The \$LOAD section of the Startup job stream contains something other than object programs.

Operator Action: Correct job stream and reboot.

E
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*EXPECT \$ OBJECT OR ***EOF BUT READ

Startup Message. A \$ OBJECT statement or ***EOF was expected, but the statement indicated was read.

Operator Action: Correct the job stream and continue.

*EXPECTED COMMA AFTER "xxxxxx"

Dump Message. Syntax error. The option "xxxxxx" was not followed by a comma separating it from the next option.

Operator Action: Reenter the options line correctly.

*lccdd EXPECTED PACK NAME yyy FOUND zzz
*YES TO ACCEPT CHANGE

Startup Message. The pack name in the device label (llink 0) is not the same name that was there on the last bootload.

yyy - Device name on previous bootload
zzz - Device name found on pack

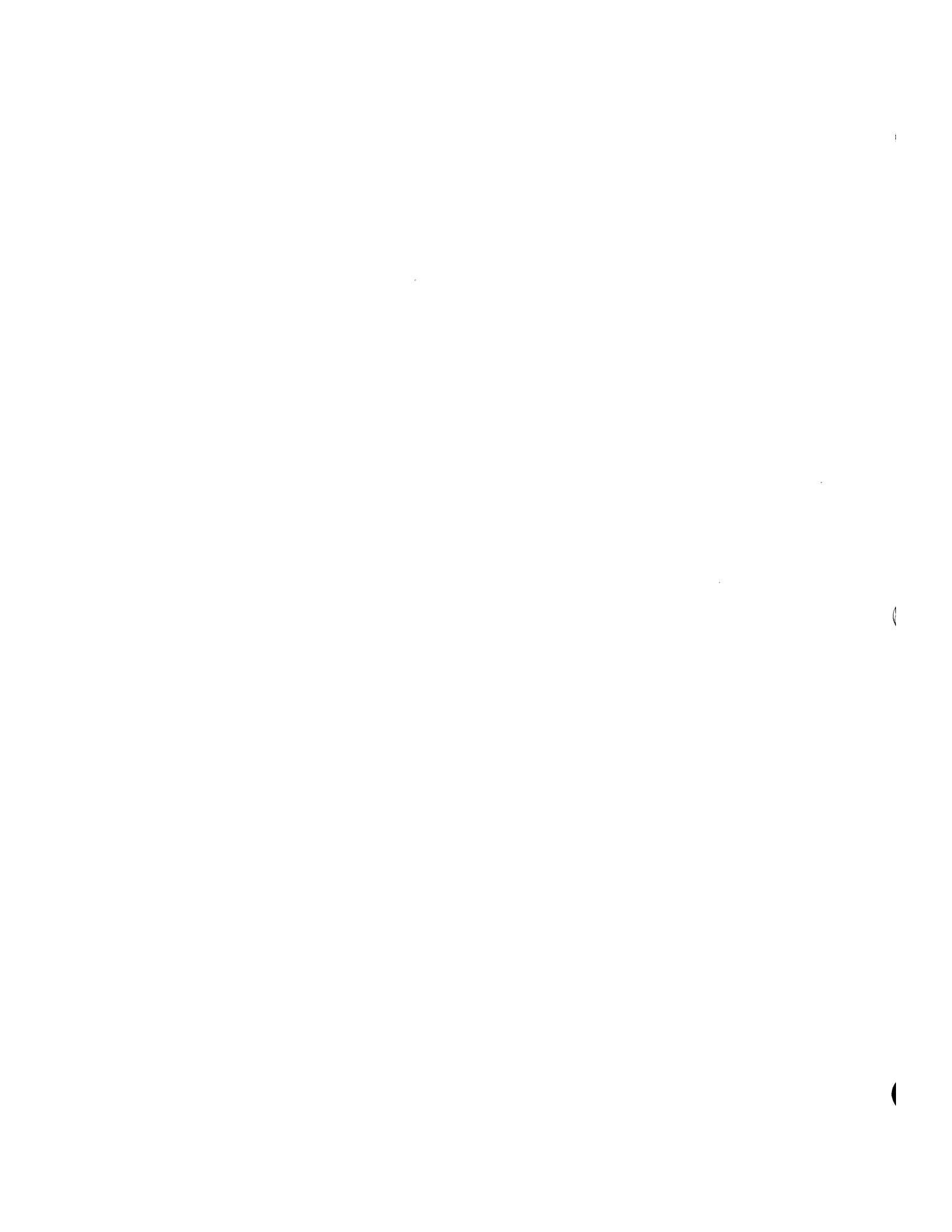
Operator Action: Respond YES to accept change. Any other response causes Startup to abort.

*xxx EXPECTED PACK NUMBER yyyyyy FOUND zzzzzz
*YES TO ACCEPT CHANGE

Startup Message. The pack number in the device label (llink 0) is not the same number that was there on the last bootload.

xxx - Device name
yyyyyy - Device number on previous bootload
zzzzzz - Device number found on pack

Operator Action: Respond YES to accept change. Any other response causes Startup to abort.



SECTION 9

OUTPUT MESSAGES BEGINNING WITH THE LETTER F

```

      {CONFIG   }
      {EDIT     }
*FATAL {FILE     } SECTION ERROR, STARTUP ABORTED
      {INITIALIZE}
      {PATCH   }
      {LOAD     }
```

Startup Message. A previously described error occurred, which makes continuation of Startup impossible.

Operator Action: Perform the actions specified on previous error messages.

*FATAL ERROR RETURN FROM CONTROL DECK

Startup Message. This message should be preceded by a message from the control statement file in the \$INITIALIZE section of the Startup program.

Operator Action: Correct Startup program and reboot.

*ffffffffffff FAULT AT nnnnnnnn, CANNOT PROCEED

Startup Message. A major system fault occurred.

ff...f - Fault identification:

SYSTEM	- System fault
MEMORY	- Memory fault
MME	- Master Mode Entry fault
FAULT TAG	- Fault Tag fault
TIMER	- Timer Run Out fault
COMMAND	- Command fault
DERAIL	- Derail fault
LOCKUP	- Lockup fault
CONNECT	- Connect fault
PARITY	- Parity fault

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ILL OP CODE - Illegal Procedure fault
OP NOT COMP - Operation Not Complete fault
STARTUP - Startup fault
OVERFLOW - Overflow fault
DIV CHECK - Divide Check fault
EXECUTE - Execute fault
SECURITY 1 - NSA hardware detected fault
DYNAMIC LINK - Dynamic linking fault
MISSING SEG - Missing Segment fault
MISSING WS - Missing Work Space fault
MISSING PAGE - Missing Page fault
SECURITY 2 - NSA hardware detected fault
MULTIPLE - Fault outside Fault type table

nnnnnnnn - Instruction counter

Operator Action: Check the Startup job stream and physical configuration.
Another message should follow.

*ffffffffffff FAULT AT aaaaaa

Dump Message. A fault occurred during the dump process.

ffffffffffff - Type of fault
aaaaaa - Location of fault

Operator Action: Select another device or dump option.

*FAULT CHANNEL INTERRUPT i ccc

Startup Message. The input/output controller reported a fault condition.

Operator Action: Check the hardware, then reboot.

* FAULT IN SYS SHARED KPX=kkk DOMAIN ID=dddd

Integrated Software Message. Indicates an error may have occurred in the Integrated software.

kkk - KPX of process
dddd - domain id

Operator Action: None.

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{ ON }
{ PA } FAULT, RETRY SUCCESSFUL, KPX#xxx, SNUMBssssss,PORT Y
{ IPR }

ECOL Message. RETRY SUCCESSFUL indicates recovery from a transient processor/memory hardware error condition by the Instruction Retry feature in the GCOS Fault Processor module.

Operator Action: None.

***FCH m ffxx device i ccc dd sssss RU

Exception Processor Message. A fault channel error occurred.

m - I for I/O fault
- S for System Controller fault
ff - Fault code from system fault word
xx - Instruction code (refer to Appendix A)
RU - Possible operator replies

I/O Faults

(Octal)

00 Fault with no code
01 Illegal channel number
02 Illegal service request
03 Parity error, scratch pad read
04 256K overflow (OVF)
05 LPW tally runout, connect channel
06 Not PCW on connect channel
07 Control port field all ones
10 Character position/size Descripancy
11 No System Control Unit (SCU) response
12 Parity between modules
13 Illegal tally control
14 Page Table Pointer (PTP) fault
15 Page Table Word (PTW) flag fault
16 Mode position switch software incorrect
17 No port selected

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System Controller Faults

(Octal)

02	Nonexistent address
03	Fault as condition
05	Data parity, store to System Controller
06	Data parity, in store
07	Data parity, store to System Controller and in store unit
10	Not control port
11	Port not enabled
12	Illegal instruction
13	Store not ready
14	ZAC parity, active module to System Controller
15	Data parity, active module to System Controller
16	ZAC parity, System Controller to store unit
17	Data parity, System Controller to store unit

Operator Action: Enter R to retry, U returns the status to the user program, and A to abort the program .

***FCH u fff ttt xx device i ccc dd sssss seek address (disk only) RU

Exception Processor Message. A fault channel error occurred. (This message is issued only on DPS 88 systems.)

u - Unit
fff - Fault status
ttt - Transaction
xx - Instruction code
RU - Possible operator replies

Channel Faults (u = 0)

fff = 400 Central parity error in channel
= 200 Status parity error in channel
= 100 DCW fault
= 040 Data fault

CIU Access Control Faults (u = 1)

fff = 400 Hyperdata switch parity error
= 200 Hypertable parity error
= 100 Transfer error
= 040 Buffer parity error

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Channel Service Processor Faults (u = 2)

fff = 040 DI channel address error
= 020 Buffer parity error
= 010 SPM parity error
= 004 Transaction faults
= 002 Data parity error
= 001 Control parity error

Control Word Processor Faults (u = 4)

fff = 002 ALU parity error
= 001 SPM data parity error

Read Register Faults (u = 6)

fff = 001 SPM data/address parity error

System Support Facility Faults (u = 7)

fff = 777 Control swap

Operator Action: Enter R to retry, U returns the status to the user program, and A to abort the program.

*FCHufffffTTTT xx device i ccc dd sssss seek address (disk only) RU

Exception Processor Message. A fault channel error occurred. (This message is issued only on DPS 88 systems.)

u - Unit (u=3 - FIPS Channel fault; u=5 - IOXA fault)
fffff - Octal representations of bits 3-17 of the Fault Channel Status Word
TTTT - Octal representation of bits 24-35 of the Fault Channel Status Word
xx - Instruction code (refer to Appendix A)
RU - Possible operator replies

Operator Action: Enter R to retry, U to return to the user program, A to abort the program, or contact Field Engineering for an analysis.

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*****FD EQUATE LIST ERROR*****
(A)BORT, (C)ONTINUE

Save/Restore Message. An FD equate list error occurred during restore.

Operator Action: Enter A to abort the job or C to continue. If the continue option is selected, restore continues with the next user, and a message is output on the printer, identifying the user that was not restored.

***FILE CARD BELOW CONTAINS ERROR NEAR COLUMN nn**

Startup Message. The statement format is incorrect; too many file names or errors in punctuation. The contents of the statement are output following the message.

nn - Column number

Operator Action: Correct the statement.

FILE xxxxxxxxxxxx EXISTS ON DEVICE dd AND WILL BE ACCESSED INCORRECTLY

Startup Message. File xxxxxxxxxxxx was located on several devices, and Startup is not sure which file is supposed to be accessed.

Operator Action: None.

FILE xxxxxxxxxxxx IS NOT ON A GCOSFIL DEVICE AND CANNOT BE ACCESSED IN \$FILES

Startup Message. A file is being created on a device that was not defined on the \$ GCOSFIL statement. Startup will not be able to access the file.

Operator Action: If access to the file is required for completion of startup activities, resubmit \$CONFIG section with corrected \$ GCOSFIL statement. If file access is not required, no action is necessary.

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***FILE IS xxxxxxxxxxxx SHOULD BE xxxxxxxxxxxx SCFR?**
(S)TOP, (C)ONTINUE, (F)IND, (R)EWIND

Startup Message. The 12-character label on the total system tape which was written by the system editor does not match the filename on the \$ FILDEF statement.

Operator Action: Respond with one of the following:

- S - Startup will stop and start over.
- C - File will be accepted and edited.
- F - Tape will be searched for the file specified.
- R - Tape will be rewound. Another tape can be mounted before giving this response.

***FILE filename UNDEFINED**

Startup Message. Either a file described in the \$FILES section was not previously defined; or a file that is identified in the \$CONFIG section or the \$EDIT section resides on a device that was not included on the \$ GCOSFIL statement. In the case of the \$FILES section error, it will be followed by a "*FATAL FILE DEFINITION ERROR" message and Startup will abort.

Operator Action: Make the necessary corrections to the \$ GCOSFIL statement or to statements in the \$EDIT or \$FILE sections and reboot.

***FILES DESCRIBED BELOW ARE NOT ON SAME TYPE DEVICE**

Startup Message. The multiple files described on a \$ SYSOUT statement are not on the same device type. The contents of the statement are output following the message.

Operator Action: Delete the file(s) and/or redefine the file descriptions on the \$ FILDEF statements so that files are on the same device.

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*FILES FOR DISC ACCOUNTING MUST BE AT LEAST 2 LLINKS

Startup Message. The \$ ACCOUNT statement does not specify enough space for the disk SCF.

Operator Action: Correct the \$ ACCOUNT statement and restart.

*FIRMWARE ID BLOCK REVISION WAS xxxxxx DOESN'T MATCH \$ DKEND
BELOW

Startup Message. The firmware revision levels are not in agreement.

Operator Action: Get a new copy of the subject firmware.

FLT xxxxxxxxxxxx PGM # ppp sssss AT tt.tt
IC+I aaaaaa bbbb PRC c WSR d WS# eee MOD fff
ISR BASE ~~xxxxxxxxxx~~ EI hhhhhhhhhhhh OI jjjjjjjjjjj

Dump Message. A fault occurred that caused a system abort.

xxxxxxxxxxxx - Type of fault as follows:

- SYSTEM - System fault
- MEMORY - Memory fault
- MME - Master Mode Entry fault
- FAULT TAG - Fault Tag fault
- TIMER - Timer Run Out fault
- COMMAND - Command fault
- DERAIL - Derail fault
- LOCKUP - Lockup fault
- CONNECT - Connect fault
- PARITY - Parity fault
- ILL OP CODE - Illegal Procedure fault
- OP NOT COMP - Operation Not Complete fault
- STARTUP - Startup fault
- OVERFLOW - Overflow fault
- DIV CHECK - Divide Check fault
- EXECUTE - Execute fault

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SECURITY 1 - NSA hardware detected fault
DYNAMIC LINK - Dynamic linking fault
MISSING SEG - Missing Segment fault
MISSING WS - Missing Work Space fault
MISSING PAGE - Missing Page fault
SECURITY 2 - NSA hardware detected fault
MULTIPLE - Fault outside fault type table

ppp - Program number of aborting program
sssss - SNUMB of aborting program
aaaaaa - Instruction counter
bbbb - Indicator register
c - Processor number
d - Working space register number
eee - Working space number
fff - Module number
gggggggggg - Base of instruction segment (words)
hhhhhhhhhhh - Even instruction
iiiiiiiiiii - Odd instruction

Operator Action: None. Wait for the *****DUMP (O)PTION / (D)EFAULT / (N)ONE** message.

FMS - CAN'T CREATE CACHE SEGMENT - CODE=nnnnnn

FS35 Message. Denial from memory management while trying to create the Catalog Cache segment.

nnnnnn - The error code returned from the PMME CRSEG process. Error code 000004 indicates that there is insufficient real memory to create the cache segment. Reduce the number of buffers and retry. Any other status indicates a system problem.

Operator Action: None.

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FMS- nnn - DEVICE MUST BE RESTORED

File Management Supervisor (FMS) Initialization Message. Device nnn was initialized during system startup. This message appears once for each device that is initialized.

Operator Action: When the system is operational, restore the device using the DEVICE option on an FMS RESTOREMAST directive. Journalized files on the device might also require updating via Integrated Software and/or a TDS RCVY function.

FMS- x nnn DEVICE NOT ON LINE

File Management Supervisor (FMS) Initialization Message. An error occurred during a read attempt of the disk pack label for configuration crosschecking. Crosschecking for device nnn cannot be accomplished.

x - Type of error, as follows:

- R - Released
- O - Offline
- P - Power off
- S - Seek error

Operator Action: None.

FMS- ** DEVICE TABLE OVERFLOW

File Management Supervisor (FMS) Initialization Message. An internal table in FMS initialization overflowed. The maximum number of devices that can be initialized at one time is 32, unless a total initialization is performed.

Operator Action: Reboot. Either initialize all permanent devices or boot several times, initializing \leq 32 devices at a time, allowing FLIP to complete its Restore Lock scan on each boot.

F
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FMS- DO MASTER RESTORE - SMCS INITED

File Management Supervisor (FMS) Initialization Message. The SMC and SMCDUP devices were initialized during system startup.

Operator Action: When the system is operational, perform a RESTOREMAST, using the latest save file. When this message is received, the operator does not respond to the nnn - DEVICE MUST BE RESTORED message.

{ COPYA }

FMS-DUP FILE ERROR { COPYB } FILE xxxxxxxxxxxx USER yyyyyyyyyyy

File Management Supervisor (FMS) Initialization Message. An I/O error occurred on a duplicated file (either Copy A or Copy B) with file name xxxxxxxxxxxx and user name yyyyyyyyyyy.

Operator Action: None.

FMS- ERROR xxxxyy CATALOGING SYSTEM FILES

File Management Supervisor (FMS) Initialization Message. FMS error xxxx occurred during processing of the \$ PFILES entries. Refer to the GCOS 8 OS File Management Supervisor manual for error code and error message definitions.

yy - Function that encountered the error, as follows:

- 04 - Query GCOS 8 system master catalog
- 05 - Create GCOS 8 system master catalog
- 07 - Create GCOS 8 user master catalog
- 13 - Error in \$ PFILES entry
- 20 - Attempting to locate a currently existing file
- 21 - Creating a GCOS 8 file
- 31 - Unable to unlock device directory lock during configuration crosschecking

Operator Action: None.

F

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FMS- ERROR IN CONFIGURATION MAP

File Management Supervisor (FMS) Initialization Message. The device(s) named as SMC and/or SMCDUP in the FMS device directory do not agree with those in the FMS configuration mapping information. This message is for information only and is a result of changes in the \$CONFIG and/or \$INIT section of the system description section of the Startup program. The devices specified in the device directory will continue to be used as the SMC and/or SMCDUP device.

Operator Action: None.

FMS- ** ERROR MODIFYING FILE xxxxxxxxxxxxxx

File Management Supervisor (FMS) Initialization Message. During FMS initialization, when all files defined during startup as "DTFILES" should be modified to give USERID "SYS_SOFTWARE" specific write permission. The procedure failed.

Operator Action: Execute a privileged FILSYS activity to assign the appropriate permissions.

FMS - FLIP ** SMC SIZE NOT UPDATED FOR xxxxxxxxxxxxxx/yyyyyyyyyyyy

File Management Supervisor. The System Master Catalog (SMC) size was not updated for the specified userid/filename.

Operator Action: Notify site techniques group of inaccurate SMC entry.

FMS - FLIP ** SMC SIZE UPDATED BUT DMC SIZE NOT UPDATED FOR
xxxxxxxxxxxx/yyyyyyyyyyyy

File Management Supervisor Message. The System Master Catalog (SMC) size was updated but the Duplicate Master Catalog (DMC) size was not updated for the specified userid/filename.

Operator Action: Notify site techniques group of inaccurate DMC entry.

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FMS- GECAL ERROR LOADING RESTORE PROGRAM

File Management Supervisor (FMS) Initialization Message. After a partial INIT, FMS attempts to restore-lock the structure for any files that were on affected devices. The restore overlay could not be loaded.

Operator Action: Reboot the system. Probably, the restore overlays and/or GECALL processors will have to be re-edited.

FMS- GESAVE ERROR ON FILE SR

File Management Supervisor (FMS) Initialization Message. FMS initialization was unable to GESAVE in order to call restore overlays after a partial INIT.

Operator Action: None.

***FMS- INVALID INPUT**

File Management Supervisor (FMS) Message. The operator entered an unrecognizable message or an invalid parameter.

Operator Action: Enter the correct message.

FMS - KEY MODULE INVALID - CATALOG CACHE

File Maintenance Supervisor (FMS) Message. Initialization of catalog cache failed due to a bad KEY3 module. Delete the \$ INFO CCACHE JCL statement until the KEY3 module is replaced.

Operator Action: None.

F

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FMS- NO CAT. SPACE ON DEV xxx

File Management Supervisor (FMS) Initialization Message. After initialization of the SMC (ST1) or SMCDUP device, when FMS attempted to rebuild the affected system master catalog from the remaining copy, an attempt to obtain space for an extension of a SMC section was denied by the mass store allocator.

Operator Action: Reboot the system, initialize the device, and allow enough space on the affected device either by moving part of the startup files or by increasing the "\$ INFO CATFNC" value.

FMS- PACK= { 111 ppppp } MAP = nnn mmmmm
{ UNDEFINED }

File Management Supervisor (FMS) Initialization Message. The disk pack currently mounted on the permanent device nnn does not agree with the system configuration mapping information. The configuration map indicates that pack, serial number mmmmm, should be in the device. However, disk pack, serial number ppppp mounted in device named 111, as determined from the disk pack label, is currently mounted. This message usually appears on a system reboot following a disk pack swap. The configuration map is not changed. If the word "UNDEFINED" appears, the FMS device is no longer configured in the system, or the device name was removed from the \$CONFIG section of the Startup program.

Operator Action: Change the \$CONFIG section in the Startup program and reboot the system. If the word "UNDEFINED" appears and if the device was previously marked catalogable, do the total system saves followed by an INIT edit and the total restores. Otherwise, FMS will not be able to do file creates or restores. If the device was not marked catalogable, then FMS will not be able to process files residing on the device.

FMS- ** RESTORE ARGLIST OVERFLOW

File Management Supervisor (FMS) Message. A failure occurred after a partial INIT, when an attempt was made to set up a task block to restore the initialized devices.

Operator Action: Reboot the system, reinitialize all affected devices, and retry.

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FMS- STARTING SUBSTRUCTURE RESTORE LOCKS

File Management Supervisor (FMS) Message. This informative message is issued after a partial INIT, when FMS calls restore logic to set restore-locks for all affected files.

Operator Action: None.

***FMS STATUS- \$FSYS NOT IN SYSTEM**

File Management Supervisor (FMS) Message. The operator entered a request for status of the FMS Executive (SNUMB - \$FSYS), but \$FSYS is not in the system.

Operator Action: None.

FMS- SUBSTRUCTURE RESTORE LOCKS COMPLETE

File Management Supervisor (FMS) Message. This informative message is issued, when processing of FMS structures is completed after a partial INIT.

Operator Action: None.

***FMS SWAPPED - TRY AGAIN**

File Management Supervisor (FMS) Message. The operator entered a FMS console request message, but the FMS Executive (SNUMB - \$FSYS) had been swapped out.

Operator Action: Reenter original FMS request; \$FSYS has been swapped back in.

FMS- ** UNABLE TO GEMORE MORE MEMORY

File Management Supervisor (FMS) Message. Initialization was denied five times, when an attempt was made to obtain additional memory to call restore for initialized devices.

Operator Action: This is a system fault. While FMS initialization is in progress no other processes must be active.

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FMS-** UNABLE TO GEMORE P* FILE
FMS-** UNABLE TO GEMORE SR FILE

File Management Supervisor (FMS) Message. FMS was denied temporary space for a restore report (P*) or a GESAVE file after a partial INIT.

Operator Action: This is a system fault. Reboot the system and retry. Since one or more devices were initialized, space should be obtainable.

FMS- UNMATCHED DESCRIPTOR ON SYSTEM FILE - nnnnnnnnnnnn

File Management Supervisor (FMS) Initialization Message. The file space for file nnnnnnnnnnnn changed across bootloads, and FMS was unable to use the new space for the file. This message can result from changing a \$ FILDEF statement whose file-name can also appear on a \$ PFILES statement on a device initialize.

Operator Action: None.

FMS- WRITE ERROR USER xxxxxxxxxxxxxx

File Management Supervisor (FMS) Message. A write error occurred, when an attempt was made to update the FMS substructure for a system USERID (SYS_PREFIX). This results during FMS initialization, when an attempt is made to restore-lock files on the affected devices after a partial INIT. The affected file definition could not be rewritten.

Operator Action: This error was caused, probably, by a hardware failure. Reboot the system; if the error recurs, notify the Honeywell Bull Response Center.

*i ccc dd: FMT PACK # nnnnn?

Startup Message. This message always follows the *i ccc dd:CHG PACK #nnnnn? message during system startup. The operator is asked if PACK #nnnnn should be formatted.

Operator Action: Enter NO - Do not format the pack. EOM is equivalent.
Enter YES - Format the pack. Startup tests for bad tracks and redefines defective llink directories and alternate track tables.

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***FMT v MC w SD xx DEV y SC zzzz i-ccc-dd**

Exception Processing Message for MSU3380. This message precedes the standard exception processing message for all errors encountered on these mass storage devices. This new message reflects the sense-byte information, represented in hexadecimal, which is returned in the extended status from the I/O error.

v = Format code from byte 7 bits 0 - 3 of extended status
w = Message code from byte 7 bits 4 - 7 of extended status
xx = Storage Director Physical ID from byte 21 bits 0 - 7 of extended status
y = Device Number from byte 4 bits 4 - 7 of extended status
zzzz = Symptom code from bytes 22 & 23 of extended status
i = I/O controller number in decimal
ccc = Channel number in decimal
dd = Device Number in decimal

The icccdd information is given for correlation with the subsequent standard exception processing message.

On these devices a format code of E indicates a status of Storage Director Off Line has occurred. When this occurs, the subsequent GEPR message will indicate a major status of 12 and a substatus of 16.

Operator Action: It is recommended that the operator enter the K option (request to deactivate a channel) to enable the operating system to route all further I/O for these devices to another channel.

***FNP #n APPEARS OPERATIONAL - ABORT FNP BEFORE
DUMPING (YES) OR TERMINATE DUMP REQUEST (NO)?**

DATANET 355/6600 Dump Program (FDMP) Message. Operator attempted to dump a DATANET 355/6600 processor that has been bootloaded and is operational.

Operator Action: Respond NO to void the dump command. Just before the Dump program terminates, the following message is output to the operator.

***FNP #n NOT DUMPED - AT OPERATOR'S REQUEST**

Enter YES to cause an abort by the DATANET 355/6600 processor to be dumped.

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If one second elapses after the abort command is sent to the DATANET 355/6600 processor and the Dump program does not receive acknowledgement of the command from the processor, the following message is printed to the operator.

***FNP #n NOT DUMPED - NO RESPONSE FROM ABORT REQUEST SENT TO FNP**

When the abort command is acknowledged by the processor, the Dump program waits for a completion of the processor abort wrapup procedures. If, after 30 seconds, the DATANET 355/6600 processor has not completed the abort process, the following message is printed to the operator.

***FNP #n NOT DUMPED - ABORT OP ACKNOWLEDGED BUT NO ABORT OCCURRED**

If abort occurs within 30 seconds, the dump process continues.

*** FNP #n BOOTLOAD COMPLETED**

DATANET 355/6600 Bootload Program Message. This appears on the console when no errors (fatal/non-fatal) are detected during the bootload process.

Operator Action: None.

*** FNP #n BOOTLOADED WITH DIRECT LOADER**

DATANET 355/6600 Bootload Program Message. Bootload (of FDL) is successful.

Operator Action: None.

***FNP #n BOOTLOADED WITH INITIALIZATION ERRORS - CHECK EXECUTION REPORT**

GRTS II Bootload Program (FDBL) Message. Although the DATANET 355/6600 processor was bootloaded successfully, there were errors in initialization as a result of inconsistencies, either in the configuration statements or in hardware configuration.

Operator Action: Check the Execution report to determine what problems were encountered during initialization.

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*** FNP #n BOOTLOADED WITH m WARNING FLAGS**

DATANET 355/6600 Bootload Program Message. This appears on the console when the loading finishes with no fatal errors, but one or more non-fatal errors are detected.

m - number of non-fatal errors detected

If a fatal error is detected during the bootload process, then

1. The error is printed on the load map
2. The following message appears on the host console:

***FNP #n NOT BOOTLOADED - FATAL ERROR ENCOUNTERED DURING LOAD**

The bootload program is terminated with a user 03 MME GEBORT

Operator Action: None.

***FNP DUMP PROGRAM NOT LOWLOADED RUN AGAIN WITH \$ LOWLOAD CARD**

DATANET 355/6600 Dump Program (FDMP) Message. The \$ LOWLOAD statement was omitted from the job stream which is used to run the 855D dump program.

Operator Action: Rerun with the \$ LOWLOAD statement.

***FNP INITIALIZATION ERROR IOM-m, CHANNEL-ccc**

Rollcall Message. FNP configuration data is invalid to Rollcall. The FNP is marked released and should not be assigned or bootloaded.

Operator Action: Verify the system configuration and reboot if the FNP is required.

*** FNP #n INITIALIZED SUCCESSFULLY**

GRTS II System Initialization Message. This appears on the console when FNP initializes successfully.

Operator Action: None.

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* FNP #n INITIALIZED WITH ERRORS

This appears on the console when initialization errors occurred during system initialization.

**** FATAL INITIALIZATION ERROR - xx ON Cyy

where:

xx - fatal error code

yy - input/output controller channel

This occurs when DIA failed to initialize successfully.

*** FATAL INITIALIZATION ERROR - ELAPSED TIMER DISABLED

This appears on the console when when the elapsed timer is disabled.

When this occurs, the elapsed timer should be enabled on the DATANET maintenance panel and the bootload retried.

Operator Action: None.

FNP. INPT. TERM. STA. ID xx TYP yy
DISC/DRUM ERRORS

RGIN Message. Disk errors occurred while remote input from the specified station was being collected.

xx - Remote station identification

yy - Terminal type

03 - Remote computer

Operator Action: None.

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FNP. INPT. TERM. STA. ID xx TYP yy
DUPLICATE SNUMBS

RGIN Message. A duplicate SNUMB was found and the input from the specified station terminated.

xx - Remote station identification
yy - Terminal type
03 - Remote computer

Operator Action: None.

FNP. INPT. TERM. STA. ID xx TYP yy
JOB SOURCE TOO LONG

RGIN Message. The job being collected from the specified station is larger than the maximum size allowed.

xx - Remote station identification
yy - Terminal type
03 - Remote computer

Operator Action: None.

FNP. INPT. TERM. STA. ID xx TYP yy
MISSING \$ SNUMB

RGIN Message. A \$ SNUMB statement is missing from the specified station.

xx - Remote station identification
yy - Terminal type
03 - Remote computer

Operator Action: None.

F
OUTPUT MESSAGES

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OUTPUT MESSAGES

FNP. INPT. TERM. STA. ID xx TYP yy
NO AVAIL. PGM. NUMBER

RGIN Message. Input from the specified station has been terminated because all program numbers have been assigned.

xx - Remote station identification
yy - Terminal type
03 - Remote computer

Operator Action: None.

FNP. INPT. TERM. STA. ID xx TYP yy
NO MORE LINKS

RGIN Message. Input from the specified station has been terminated because all available links have been used.

xx - Remote station identification
yy - Terminal type
03 - Remote computer

Operator Action: None.

FNP IOM FAULT icccdd

* FNP-n IS DOWN *
* PLEASE INVESTIGATE *

RGIN Message. The DATANET 355/6600 processor, number n, is not in operation.

Operator Action: Check for the cause of the processor failure.

F
OUTPUT MESSAGES

F
OUTPUT MESSAGES

S#sssss-aa FNP#n NOT BOOTLOADED - (reason)

DATANET 355/6600 Bootload Program Message. The fourth or greater attempt to bootload DATANET 355/6600 processor-n was unsuccessful for one of the following reasons:

Reason - NO RESPONSE FROM FNP

The operator should check for the specified host system mailbox base address on the DATANET FNP maintenance panel. If the address is different from the one shown in message "SHOULD BOOTLOAD BE ATTEMPTED AGAIN?", the host system should be bootloaded as soon as possible. The location specified by the switches has been reset to zero and inconsistent operation of the host software may result from any incorrect switch setting.

Reason - DIA FAULT ON IOM

A channel fault exists on the DIA channel. When this is encountered, the bootload should be retried. If this error persists, notify the Honeywell Bull Response Center.

Reason - UNABLE TO LOCATE DIA MAILBOX

The DIA mailbox is set to a value less than 500 (octal) or greater than 1000 (octal).

Reason - INVALID DNET CALLING PARAMETERS

The host software detects an error in the bootload calling sequence.

Reason - DNET INTERFACE BUSY

The host software determines that the host interface adapter interface is busy after several retries.

Reason - PROCESSOR FAULT IN FNP AT LOC mmmmm

mmmmm - location of processor fault

A processor fault has occurred during bootload verification.

F
OUTPUT MESSAGES

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OUTPUT MESSAGES

Reason - DIA STATUS ERROR mmmmm

mmmmmm - lower 21 bits of status returned by host interface adapter

A bad status has been returned on the host interface adapter by the bootload command.

Reason - ILLEGAL STATUS FROM FNP

This indicates a status code has been returned to the host system privileged slave program that is currently not recognized.

When this occurs, the bootload operation should be retried after pressing the initialize button on the DATANET FNP maintenance panel. If this persists, a dump should be taken of the FNP.

During the bootload process, fatal errors are detected by both FDBL and FDL and printed on the load map.

*FNP-n NOT RESPONDING

Rollcall Message. FNP #n did not respond to a Rollcall connect. The FNP is marked released.

Operator Action: Bootload FNP #n when the system is operational.

*FNP ON iccc RELEASED

GPOP Message. The specified front-end network processor (FNP-n) could not be assigned by Startup because either the power is off or the device is in an offline condition.

Operator Action: Either run the system without the processor or ready the specified processor and enter an ASGN request. The processor cannot be assigned while the system is running if assignment requires initializing the catalogs.

F
OUTPUT MESSAGES

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OUTPUT MESSAGES

S#sssss-aa FNP#n NO RESPONSE SHOULD BOOTLOAD BE ATTEMPTED AGAIN?

DATANET 355/6600 Bootload Program Message. Bootload on DATANET 355/6600 processor-n was unsuccessful.

Operator Action: Enter NO, the bootload is not attempted again and the program terminates. If YES is entered, the bootload is attempted once again. If the DATANET FNP still does not respond, the same question is output to the operator. In no case, however, is the bootload tried more than three times. After the third unsuccessful attempt to bootload the DATANET processor, the program automatically prints the error message: S#sssss-aa FNP#n NOT BOOTLOADED - (reason).

*FORMAT i ccc dd?

Startup Message. Requests the operator to check whether the disk pack should be formatted.

Operator Action: Enter YES if formatting is required.

*FORMAT/LABEL QUESTIONS?

Startup Message. This question is asked only once. It allows the operator to have all the pack label verification and format questions typed. A YES response to this message results in the following response from the system.

FORMAT i ccc dd?

Operator Action: Enter YES if formatting or label checking is required; otherwise, enter NO or press EOM.

If the pack number is 00000, the following message is given regardless of the response to the above message:

*icccdd: ENTER PACK #nnnnn?

The operator responds by entering the desired pack number.

F

OUTPUT MESSAGES

F

OUTPUT MESSAGES

If the response to the *FORMAT/LABEL QUESTIONS? message was YES, the following messages are issued:

- *icccdd: CHG PACK A#nnnn?
- *icccdd: FMT PACK #nnnnn? (except MSS0500/501)
- *icccdd: TEST PACK #nnnnn? (MSS0500/501 only)

The operator responds to the *icccdd: CHG PACK #nnnnn? message as follows:

NO - Pack number is not changed

nnnnn - New pack number

Operator Action: respond to the *icccdd: FMT PACK #nnnnn? message as follows:

NO - No formatting will be done

YES - Startup attempts to format (write track headers on) all tracks, except those in the defective space history table, as GOOD. Those tracks in the history table as well as those which cannot be formatted GOOD are formatted DEFECTIVE/NO ALTERNATE and entered into the defective llink directory.

RTHDRS - Startup issues a "read track header" command to all tracks on the disk. Tracks with track indicator (TI) bits specifying DEFECTIVE/NO ALTERNATE and tracks that cannot be successfully read are entered into the defective llink directory. Tracks with TI bits specifying DEFECTIVE/ALTERNATE ASSIGNED are entered into the alternate track table.

Respond to the *icccdd: TEST PACK #nnnnn? message as follows:

NO - No testing will be done

YES - Startup issues a "read track header" command to all tracks on the disk. Tracks with track indicator (TI) bits specifying DEFECTIVE/NO ALTERNATE and tracks that cannot be successfully read are entered into the defective llink directory. Tracks with TI bits specifying DEFECTIVE/ALTERNATE ASSIGNED are entered into the alternate track table. MSS0500/501 disks do not have alternate track tables; therefore, tracks marked DEFECTIVE/ALTERNATE ASSIGNED are treated as if they were marked GOOD.

F
OUTPUT MESSAGES

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OUTPUT MESSAGES

*FPT TAPE-S#sssss i-ccc-dd (i-ccc-dd) fc filename

Termination Message. Requests operator action at the specified tape unit.

Operator Action: Dismount the tape, remove the write-permit ring, and remount it on the same handler.

*FYI CACHE FLT REG CNT = xxxx @ tt.ttt, PORT n

ECOL Message. The ECOL program detected an abnormally high error occurrence in cache fault register bits 41-46. ECOL error threshold of a summation of bits 41-46 has reached a count of 200 within a 36-hour period.

Operator Action: Notify the Honeywell Bull Response Center that this situation requires analysis, and that corrective action should be taken at the first opportunity. (Also, refer to the output message:

*CACHE ERROR, FLT REG BITS 32-46 = XXXXX, PORT n.)

*FYI ECOL - CACHE DISABLED, PRO#-n PORT n

ECOL Message. Cache memory was disabled on the indicated processor port on SCU-0. This message appears after initial startup of the ECOL program, if the known state of the cache memory is off, a cache memory error is detected, or a request to disable cache memory is encountered. In either case, cache memory has been disabled to provide an error-free operational environment.

Operator Action: None.

F
OUTPUT MESSAGES

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OUTPUT MESSAGES

*FYI ECOL - CACHE ENABLED, PRO#-n PORT n

ECOL Message. Cache memory was enabled on the indicated processor port on SCU-0. This message normally occurs either when the ECOL program enables cache memory initially, if certain fault types have locked the processor history register and ECOL re-enables cache memory, or after a request to enable cache memory.

Operator Action: None.

*FYI ECOL - CACHE STATUS

ECOL Message. This message is issued in response to (1) the ECOL CSHSTS verb, (2) a detected processor online reconfiguration, or (3) ECOL processing of a cache memory parity error.

In response to the CSHSTS verb or to processor reconfiguration, a cache memory status line is displayed for each currently assigned processor. In response to an ECOL-detected cache parity error, status is displayed only for the cache memory applicable to the error reported.

Operator Action: Determine cache control from the value found in site patch location 105 in FALT module (default is ECOL control).

FYI ECOL COULD NOT LOG SYSTEM CONFIGURATION; ERROR nn

ECOL Message. Informative message. Job will have to be resubmitted.

- nn - 00, Program error
- 01, Unable to find \$CONFIG
- 02, Bad I/O status on read
- 03, Invalid seek address calculation
- 04, Did not find ***EOF or slew data

Operator Action: None.

F
OUTPUT MESSAGES

F
OUTPUT MESSAGES

***FYI ECOL - ENCOUNTERED ERROR, SNAP TAKEN.
RETURN ACCTG FILE SNAPS TO DEVELOPER IN PHOENIX.**

ECOL Message. An invalid record size was detected by ECOL and a snapshot was taken. Part of the buffer is bypassed and processing continues.

Operator Action: Submit System Technical Action Request (STAR) with snapshot.

***FYI ECOL - ERROR RATE ON i-ccc-dd EXCEEDS THRESHOLD**

ECOL Message. The calculated percentage is equal to or greater than the current error threshold percentage (default value = 0.01%).

Operator Action: Alter threshold percentage by entering ECOL MPC ETxxx verb or applying a site patch to location 112 (octal) of the FALT module.

*****FYI ECOL EXECUTING; TTL DATE yymmdd, ASSEMBLY DATE mmddyy**

ECOL Message. This message is issued each time the ECOL module starts its initialization routine.

Operator Action: None.

***FYI ECOL IS CREATING STATISTICS FILES**

ECOL Message. ECOL is creating its statistics gathering files.

Operator Action: None.

***FYI ECOL IS NOT SERVICING CACHE**

ECOL Message. The system contains one or more cache processors, and a patch to the .MFALT module has set option 5 to specify cache service by GCOS hard-core cache service routines only.

Operator Action: None.

F
OUTPUT MESSAGES

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OUTPUT MESSAGES

*FYI ECOL - STATUS ERROR ON i-ccc-dd ssssssssssss

ECOL Message. An error was encountered on a statistics sampling I/O command.

i - Port number of I/O controller
ccc - Channel number
dd - Device

Operator Action: None.

*FYI ECOL - SY EC FILE ERROR 4000001;
*FYI ECOL - COLLECTOR FILE NOT CREATED.
* RELEASE SY EC FILE & DO ECOL START.

ECOL Message. The numeric value in the first line represents an error code for the condition described in the second line of the message. This message is followed by a HU MME GEBORT. A collector file was not created due to an invalid status return when an attempt was made to create a file with a MME GEFSYE.

Operator Action: Release ECOL data files and enter ECOL start verb on the console.

*FYI ECOL - SY EC FILE ERROR 4000002;
*FYI ECOL - ERROR ON GEMORE OF EC "EC"

ECOL Message. The error condition which caused this message is described in the second line of the message. The numeric sequence in the message's first line is the specific error code. This message is followed by a HU MME GEBORT.

Operator Action. Seek next level of technical support.

*FYI ECOL - SY EC FILE ERROR 4000003;
*FYI ECOL - FILE CODE NOT IN ECOL PAT

ECOL Message. The number sequence in the message's first line is the specific error code for the condition described in the second line of the message. This message is followed by a HU MME GEBORT.

Operator Action. Seek next level of technical support.

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OUTPUT MESSAGES

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OUTPUT MESSAGES

*FYI ECOL - SY EC FILE ERROR 4000004;
*FYI ECOL - FILE BLOCK SIZE NOT 64 WORDS

ECOL Message. File block size (which should be 64 words) is incorrect. The numeric sequence in the first line of the message is the specific error code for this condition. This message is followed by a HU MME GEBORT.

Operator Action: Seek next level of technical support.

*FYI ECOL - SY EC FILE ERROR 4000005;
*FYI ECOL - COLLECTOR FILE CONTROL BLOCK ERROR
* RELEASE SY EC FILE & DO ECOL START.

ECOL Message. Some error exists in the control block of the collector file. The numeric sequence in the first line of the message is the unique error code for this condition. The message is followed by a HU MME GEBORT.

Operator Action: Run appropriate report program version, then release the SY EC file and enter ECOL START verb on console.

*FYI ECOL - SY EC FILE ERROR 4000006;
*FYI ECOL - CALLERS RECORD TYPE ILLEGAL.

ECOL Message. An illegal record type was encountered. The numeric sequence in the message's first line is the specific error code for this condition. The message is followed by a HU MME GEBORT.

Operator Action: Seek next level of technical support.

*FYI ECOL - SY EC FILE ERROR 4000007;
*FYI ECOL - CALLED WITH ILLEGAL RECORD SIZE.

ECOL Message. An illegal record size was encountered. The numeric sequence in the message's first line is the unique error code for this condition. The message is followed by a HU MME GEBORT.

Operator Action: Seek next level of technical support.

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OUTPUT MESSAGES

*FYI ECOL - SY EC FILE ERROR 4000010;
*FYI ECOL - COLLECTOR BUSY TRY LATER.

ECOL Message. The attempt to access the collector was unsuccessful due to its busy status. The numeric sequence in the first line of this message is its unique error code. The message is followed by a HU MME GEBORT.

Operator Action: Seek next level of technical support.

*FYI ECOL - SY EC FILE ERROR 4000011;
*FYI ECOL - FILES WERE CREATED BY xxxxxx; YOUR SYSTEM ID IS yyyyyy.
* RELEASE SY EC FILE & DO ECOL START.

ECOL Message. In the first line of the message, the numeric sequence is the specific error code for this condition. In the message text, xxxxxx represents a variable which is the system ID found in the file by ECOL and yyyyyy describes the current ID. This message is followed by a HU MME GEBORT.

Operator Action: Determine if the files are correctly loaded; if not, either load the files properly, or if system ID was changed, release SY EC file and allow ECOL to recreate file by entering ECOL START verb on console.

*FYI ECOL - SY EC FILE ERROR 4000012;
*FYI ECOL - YOUR SY EC FILE WAS CREATED PRIOR TO yymmdd.
CURRENT FILE FORMAT INCONSISTENT; TTL DATE OF ECOL IS yymmdd.
RELEASE SY EC FILE & DO ECOL START.

ECOL Message. The numeric sequence in the message's first line is the unique error code for this condition. The first occurrence of "yymmdd" is the file format revision date while the second occurrence represents the current TTL date of ECOL. This message is followed by a HU MME GEBORT

Operator Action: Ensure that proper files exist, release SY EC files and enter ECOL START verb on console.

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OUTPUT MESSAGES

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*FYI ECOL - SY EC FILE ERROR 400013;
*FYI ECOL - COULD NOT OBTAIN AT LEAST 800 LLINKS PERMFILE
SPACE, PLEASE RESTART ECOL WHEN ADEQUATE
SPACE IS AVAILABLE

ECOL Message. A minimum of 800 llinks of permanent file space was unobtainable and ECOL aborted.

Operator Action: Seek next level of technical support.

*FYI ECOL - SY EC FILE ERROR 400014;
*FYI ECOL - EC FILE IS RESTORE LOCKED
COMPLETE RESTORE OR RELEASE COLLECTOR FILE
AND RESTART ECOL

ECOL Message. A restore lock condition was encountered and ECOL aborted.

Operator Action: Complete the restore and ECOL START verb or call next level of technical support if no restore of the SY_EC SMC is in progress.

*FYI ECOL - SY EC FILE ERROR 400015;
ECOL SYMBOL REVISION DOES NOT AGREE WITH
THE REVISION OF THE COLLECTOR FILE
DO ECOL STOP & RELEASE THE SY_EC SMC &
THEN DO ECOL START

ECOL Message: The symbol revision does not agree with the revision level contained in the collector file, and the ECOL aborted.

Operator Action: Run the appropriate report program version, then release the SY_EC file and enter ECOL start verb.

*FYI ECS ECC CNT ON PRC# n = xxxx @ tt.ttt

ECOL Message. ECOL program detected ECS ECC errors on the indicated processor (DPS 8/20 & 8/44 systems only).

xxxx - total number of ECS ECC errors.

Operator Action: None.

F
OUTPUT MESSAGES

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FYI nnnnn FAULT CHANNEL IGNORED

IOS Message. A non-fatal fault channel error was detected and ignored. The number nnnnn refers to either a system controller or an I/O fault.

FYI (mm/64) HUNG BUSY ON i ccc dd

IOS Message. The magnetic tape handler dd on i ccc did not return a ready condition in a reasonable time. If a magnetic tape handler, the rewind may not have completed properly. If a shared disk device, the alternate channel may have locked us out.

Operator Action: Check the device. If rewinding is complete, ready the device.

**FYI LB-xxx THRESHOLD

FMS Message. FMS, in this system, is waiting on a lock byte shut by another system. This message is repeated every few minutes while the lock byte is shut; if this condition persists, the system will hang.

Operator Action: If message persists and the system hangs resulting in a dump, gather all information from all common files systems associated with this system.

FYI MOS EDAC CNT = xxxx tt.ttt

ECOL Message. ECOL program detected EDAC-corrected errors.

xxxx - Total number of EDAC errors

Operator Action: None.

*FYI MPC CH NOT SAMPLED ON icccdd, RESERVED FOR T&D

ECOL Message. ECOL was unable to sample MPC statistics on the designated channel because it was reserved for T&D.

Operator Action: If the designated channel is not supposed to be reserved for T&D, investigate the reason. The "Reserved for T&D" bit could have been set by GCOS as a result of errors on the PUB (channel). The T&D bit can be reset by running T&D on any device on the PUB (channel).

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***FYI MPC CH NOT SAMPLED ON icccdd, STATUS: xxxxxxxxxxxxxx**

ECOL Message. MPC statistics were not sampled on the designated channel because a status error occurred on the I/O operation issued by ECOL to read MPC statistics counters.

Operator Action: Contact the Honeywell Bull Response Center. A probable MPC hardware malfunction exists.

***FYI MPC CH NOT SAMPLED ON icccdd, TEMPORARILY STOPPED**

ECOL Message. ECOL was unable to sample MPC statistics on the designated channel because it was temporarily stopped (under control of the Exception Processor).

Operator Action: If this message occurs on successive sampling attempts, investigate.

***FYI PARS8 HAS DETERMINED CPU x CACHE OR ASSOCIATIVE MEMORY IS OFF OR DISABLED. PLEASE INFORM "CSD" OF PROBLEM.**

PARS8 Messages. The PARS8 Collector determines if the processor cache and/or associative memory is off or disabled, or the cache is being continuously flushed. This message is issued if this condition persists for more than 60 seconds. This test is based on two internal program timing loops. One loop times each processor executing a series of instructions in cache. The other times each processor executing a series of instructions which do not use cache except for instruction look-ahead. Both instruction loops are timed based on the system clock which has a 1-microsecond resolution. This test is considered TRUE when the cache timing is equal to or greater than the non-cache timing.

Operator Action: Nofity CSD of this problem.

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***FYI PARS8 HAS DETERMINED CPU x IS NOT AVAILABLE FOR DISPATCH INFORM "CSD" OF PROBLEM.**

PARS8 Message. The PARS8 Collector tries to determine if all available processors have been coming back from a dispatch. This message is issued if the collector determines a problem in this area. The test for this condition is to check if .CRIDT and .CROVH have been changed during the last sample interval. If the values remain unchanged for two sample intervals, the message is issued.

Operator Action: Nofity CSD of this problem.

***FYI PARS8 INTERFACE FILE [D1 or D2] IS FULL. PROBLEM WITH [PARSE OR PARSO] HISTORY UPDATE PROGRAM.**

PARS8 Message. This occurs when either file fills completely with data. One or both of the PARS8 history file update programs have been unsuccessful in emptying in the interface file(s). Inspect the PARSE or PARSO execution report to determine the cause of the problem. The operator must spawn either PARSE or PARSO. This enables the default value of BUSY and the history file is updated. This is the only time an operator should manually spawn PARSE or PARSO.

Operator Action: Notify the person responsible for PARS8 SPAWN [PARSE or PARSO] to correct this problem. Save execution reports for analysis.

*** FYI S# xxxxx PARS8 MONITOR ABORTING -- <reason>**

PARS8 Message.

<reason> = NEEDS & PRIVITY TO RUN	D1 ABORT
WRONG SNUMB -- USE S#xxxxx	D6 ABORT
MUST LOAD VIA \$ PROGRAM	D7 ABORT
CANNOT OBTAIN MEMORY NEEDED	D9 ABORT
UNKNOWN SOFTWARE RELEASE	DA ABORT
INTERNAL CALL LIMITS BAD	DB ABORT
UNEXPECTED I/O ERROR ON CALL	DC ABORT
NO PAT FOR ** FILE	DD ABORT
BAD DEVICE CALL	DE ABORT

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NONRANDOM ** FILE	DF ABORT
CHECKSUM ERROR IN **	DH ABORT
CANNOT FIND MONITOR IN **	DK ABORT
CALL OUT OF FILE SPAN	DL ABORT
IMPROPER CALL	DM ABORT
NEEDS \$ LOWLOAD	DS ABORT

Operator Action: Report abort to person responsible for PARS8.

* FYI S#xxxxx PARS8 MONITOR VER yyyyy zzzzz

PARS8 Message. This is describing the software release and GECALL name of the PARS8 collector being selected by the PARS8 loader. It is enabled by the \$ SET 35 JCL statement in the PARS8 spawn JCL.

.
xxxxx - SNUMB
yyyyy - Software Release (e.g., 2300, 2500 or 3000)
zzzzz - GECALL NAME (e.g., N230C, N250C, and N300C)

Operator Action: None.

*FYI PARS8 RECORD CNT vvvvv SYSTEM-ID MM/DD/YY HH:MM:SS
KPX BUSY wwwww KPX BYPASS xxxxx
INLD PAT yyyyy INVLD IOQ zzzzz.

Where:

- vvvvv - The number of program loops since the start of the program. This number should increment by approximately 20 for each 10-minute interval, providing the "TIME=xx" option is set to default ("TIME=30" or "TIME").
- wwwww - The number of times another process was being accessed via .MMISC and was found to be busy.
- xxxxx - The number of processes that were bypassed due to being busy. A total of 40 attempts are made before a process is bypassed.

NOTE: If a process is bypassed, this means access to a process via the .MMISC module was denied and that data from the SSA, PAT, and user program area could not be obtained. PARS8 marks this job as swapped.

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yyyyy - A count of the SCT pointers within a user PAT segment that contain addresses exceeding SD.CR upper limits.

zzzzz - A count of the SCT pointers within the SD.IOQ segment that contain addresses exceeding SD.CR upper limits. These fields should always be zero.

PARS8 Message. This message is provided to try and detect why data gaps occur in the collected data. The \$ SET 35 option will produce this console message every 10 minutes.

Operator Action If the message is not being printed, obtain a snap or dump of the program PARS8. If the message is being printed, yet data gaps are noted on the output report, try to determine what significant events might have caused the data gap.

*FYI S#sssss KPX nnn EXTENDED MEMORY PROCESS IS WAITING FOR nnk CONTIGUOUS MEMORY HH.nnn

Extend Memory (EXTM) Message. EXTM cannot get the necessary amount of memory to build the 'big' page-table.

Operator Action: Do not start new jobs; try to make memory available.

*FYI SCPR 06 STORED ZEROS FROM MODE REG BITS 54-71 PORT n

ECOL Message. A failure occurred in the SCPR instruction in the indicated processor connected to SCU-0 port n.

Operator Action: Notify the Honeywell Bull Response Center that this situation requires immediate analysis, and that corrective action should be taken at the first opportunity.

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FYI SHLIBBSn REQUIRES nnnn LLINKS

Startup Message. This is an informative message intended to provide the user with the size of the backing store associated with the SHRLIB that is being edited.

n - WSR of the SHRLIB
nnnn - Decimal size of the backing store in llinks.

Operator Action: None required.

*FYI (mm/64) THRESHOLD ON i ccc dd

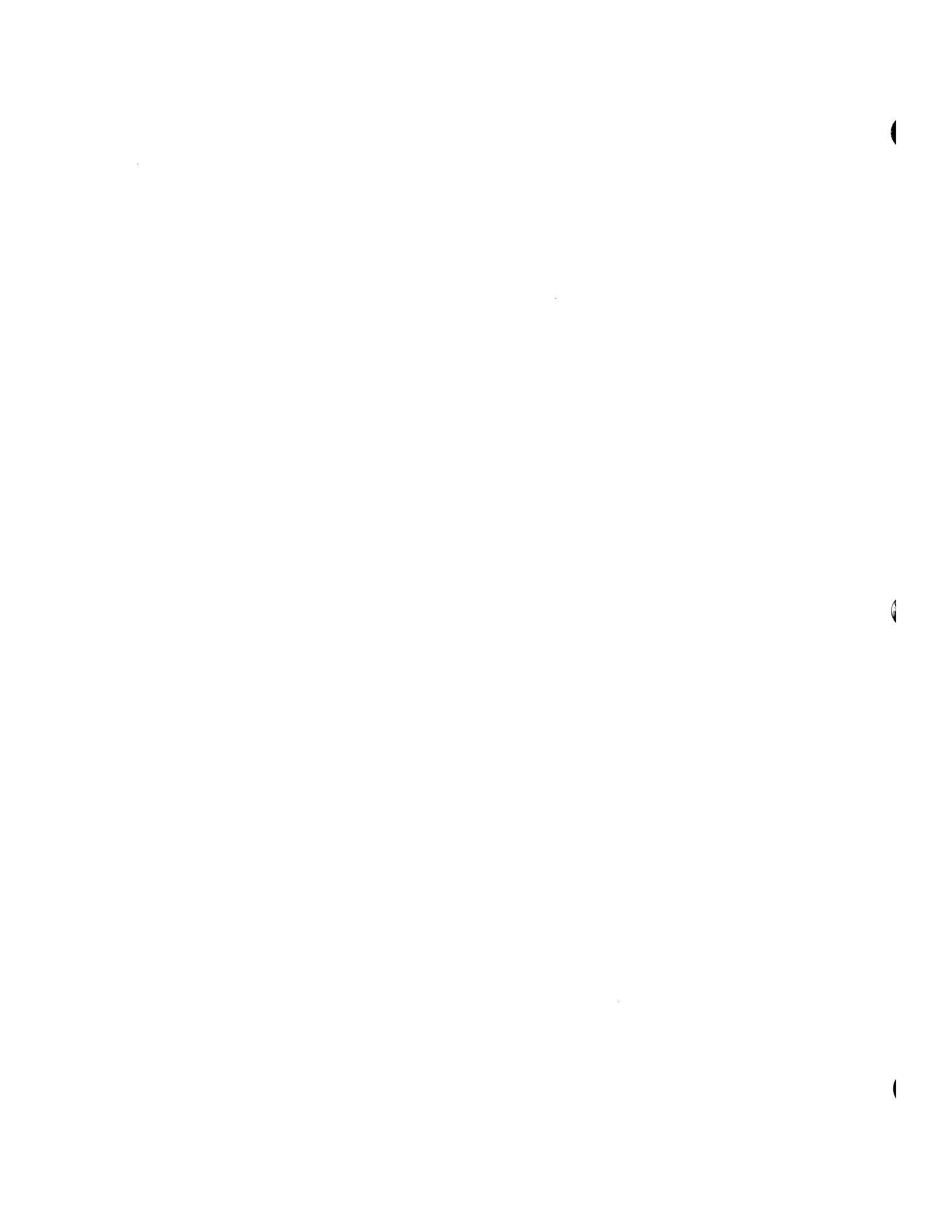
Exception Processor Message. Informs the operator of the local error rate on the device.

Operator Action: When a device gives repeated threshold messages with high error rates, it should be released.

FYI WS XXX - VA XXXXXX000 NOT READ DUE TO RU
FILE FRAGMENTATION
FYI BS/RU READ ERROR

Dump Message. DUMP could not read the backing store and/or run unit pages.

Operator Action: None.



SECTION 10

OUTPUT MESSAGES BEGINNING WITH THE LETTER G

GCOS 8 FILE SYSTEM FATAL ERROR ON DEVICE xxx

xxx - Three-character BCD device name

Startup Message. This message is followed by one of these entries:

Operator Action:

*NOT ENOUGH SPACE FOR MASTER CATALOG

Device does not have any available llinks. Use a different device.

*NOT ENOUGH SPACE FOR FILE REQUEST

Device does not have enough contiguous llinks for this file. Use a different device.

*BAD BLOCK ZERO

Block zero has been destroyed. Initialize the device.

*BAD MASTER CATALOG

The Startup master catalog has been destroyed. Initialize the device or remove this name from the \$ GCOSFIL statement.

*CHECKSUM ERROR ON AU TABLE

The available llink table does not checksum. Initialize the device.

*TOO MANY STARTUP FILES

More than 79 Startup files are trying to be built on a device. Additional Startup files will have to be edited on some other device.

(Continued on next page)

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*CANNOT GET FILSYS SMC'S

Operator Action:

There are not 38 contiguous llinks available for the System Master Catalog (SMC) or duplicate.

*BAD IN-CORE AVAILABLE SPACE TABLE IMAGE

The in-memory available space table image is bad. Perform a secondary initialization of the device.

*IN-CORE AVAILABLE SPACE TABLE IMAGE OVERFLOW

The in-memory available space table is too large. Perform a secondary initialization of the device.

*ILLEGAL FILE NAME

The file name cannot be found in the master catalog.

*CANNOT CREATE THE SMC WITHIN BOUNDS

Cannot create the SMC within system bounds. Initialize the device.

*BAD BOOT SEQUENCE NUMBER BLOCK

A checksum error occurred on the bootload sequence number block. Re-initialize with correct sequence number.

*NPS PACK VS DEVICE ERROR

An NPS pack was configured for a non-NPS system or a non-NPS pack was configured for an NPS system. Perform an initialization of the device.

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*\$ GCOSFIL CARD IS MISSING

Startup Message. There is no \$ GCOSFIL statement in the \$CONFIG section of the Startup program.

Operator Action: Put a \$ GCOSFIL statement in the \$CONFIG section of the Startup program and reboot.

***GECALL NAME TABLE FULL

Startup Message. Files on \$ SYSTEM statement call for too many modules.

Operator Action: Check to see that the files described on \$ SYSTEM statement are correct. Reboot.

***GEIN CAN'T INIT: BAD SIZE PATCH AT 114

System Input Message. The site option patch applied to location 114 of GEIN is invalid. The upper half of the word must be within the range 1 to 4095 and the lower half of the word must be modulo 12 and within the same range. Note that no job will be processed until the patch is corrected.

Operator Action: Notify the site techniques personnel or correct the patch and reboot the system.

***GEIN CAN'T MARK J*/*J PERM FOR S#nnnnn

System Input Message. A GEIN request for permanent assignment (during duration of job) of J* or *J space to job identifier (SNUMB) number nnnnn was denied by mass store allocator. Cause of denial may vary and is not necessarily a system fault, but if condition persists notify the Honeywell Bull Response Center.

Operator Action: Rerun the job with specified identifier. This message is followed by the message:

GEIN IN ABORT STATUS

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GEIN CR i ccc, CKS ERR, BACKUP nn CARDS BA

System Input Message. A checksum error occurred.

GEIN - System Input
CKS - Checksum
nn - Number of statements
BA - Operator reply

Operator Action: To recover, enter B and backspace the number of statements specified. To delete the job, enter A.

GEIN CR i ccc, RESTART w/#SNUMB AFTER sssss

System Input Message. The job just read cannot be run.

GEIN - System Input

Operator Action: Restart the card reader, beginning with the job next in the deck.

GEIN CR i ccc, RESTART w/SNUMB = sssss

System Input Message. An I/O error was encountered.

GEIN - System Input

Operator Action: Restart the specified job or start another job.

GEIN CR i ccc, SNUMB MISSING, RESTART

System Input Message. The job was loaded without a \$ SNUMB statement.

GEIN - System Input

Operator Action: Place a \$ SNUMB statement in front of the job stream and reload.

G
OUTPUT MESSAGES

G
OUTPUT MESSAGES

GEIN GECALL CAN'T LOAD xxxx STATUS = nnnnnn

System Input Message. The System Input program was unsuccessful in calling one of the overlay routines.

xxxx - Module called (GENA, GENB, or GENC)
nnnnnn - Return error status (octal)

Operator Action: Contact the designated site personnel.

*GEIN IN ABORT STATUS RERUN OF SNUMB sssss NECESSARY

System Input Message. The System Input program aborted.

Operator Action: Rerun job sssss.

GEIN AT i ccc dd IMCV READ ERROR CA

System Input Message. An unrecoverable error was detected while reading input from an IMCV tape.

GEIN - System Input

Operator Action: Enter C to continue with next job on the tape. Enter A to discontinue reading the tape.

GEIN AT i ccc dd, TYPE IN REEL# OF IMCV

System Input Message. System Input determined that a label exists on the IMCV tape.

Operator Action: If no comparison is desired enter EOM. If the label is to be checked, enter the reel number of the tape to be processed. If reel numbers do not agree, the following message is an output at the console.

GEIN AT i ccc dd, REEL#S DO NOT AGREE CA

Enter C to continue or A to abort.

G
OUTPUT MESSAGES

G
OUTPUT MESSAGES

GEIN xxxxxx READ ERROR ON SNUMB, RESTART

System Input Message. System Input read an error on the \$ SNUMB statement of the last job submitted.

xxxxxxx - Input device being used to read job

Operator Action: Resubmit the last job.

GEIN xxxxxx, SNUMB sssss <text>

System Input Message. System input encountered an error condition in the specified job.

xxxxxxx - Origin of the job: CD RDR
TSS
SPAWN
REMOTE
MT

sssss - SNUMB of the job

<text> - Brief message describing the error condition

Operator Action: None specifically required as the message is also an output on the execution report of the job.

GEIN xxxxxx, SNUMB sssss JOB DELETED

System Input Message. System Input deleted this job for the reason specified on the execution report.

xxxxxxx - Input device used to read job

Operator Action: None.

G
OUTPUT MESSAGES

G
OUTPUT MESSAGES

***** \$GEOT DISASTER - YOU HAVE 5 MINUTES *****
***** FOR AN ORDERLY SHUT DOWN & DUMP *****
***** OTHERWISE \$GEOT WILL TAKE IT DOWN *****

Disaster Message. Generally the result of either an unplanned error (memory fault, IPR, etc.) or a planned disaster after a message with the attribute set to abort GEOT. Upon completion of the message, all GEOT processing ceases, including queue processing.

Operator Action: Warn all TSS users to prepare for system shut down. Wrapup journal tapes and perform other acts which allow a shut down without data loss.

*GEPOP QUEUE FULL, TRY GEIN LATER

GPOP Message. The Memory Allocator queue is full and temporarily cannot accept a request to bring card reader System Input into memory.

GEPOP - Memory allocation program
GEIN - System Input

Operator Action: Wait until Memory Allocator can accept a request to bring card reader System Input into memory.

sssss-a GET REEL#rrrrr FOR MT 1 ccc dd
(filename, file Ser.#Reel seg.#)

Sort/Merge Message. Identifies the next reel to be used as input to the file named in the message. The message occurs only in the case of multiple-reel collation output in the immediately preceding Sort phase.

Operator Action: Mount the reel as specified.

G

OUTPUT MESSAGES

G

OUTPUT MESSAGES

*GET S# sssss FORM identification

Peripheral Allocator Message. The form(s) specified is required in order to run this job. The form identification is that provided on the \$ FORM JCL statement in the job.

NOTE: This message is simply one variation of the "*GET" message which includes the PACK#, TAPE#, and TRAIN variations as well. The *GET message can be a multi-line message. When more than one line is used only one entry is placed on each line with the header (i.e., "*GET S# sssss") being printed only on the first line. More than one type of entry (i.e., form/PACK/TAPE/TRAIN) may occur in one *GET message.

Operator Action: If the forms are available, enter a RUN sssss reply. If the forms are not available, enter an ABORT sssss option reply. Responding RUN LIMBO causes all jobs with this status to be released for allocation.

*GET S# sssss PACK#nnnnn [filename]

Peripheral Allocator Message. The pack serial number(s) specified is required in order to run this job.

nnnnn - Pack serial number

NOTE: This message is simply one variation of the "*GET" message which includes the form, TAPE#, and TRAIN variations as well. The *GET message can be a multi-line message. When more than one line is used only one entry is placed on each line with the header (i.e., "*GET S# sssss") being printed only on the first line. More than one type of entry (i.e., form/PACK/TAPE/TRAIN) may occur in one *GET message.

Operator Action: If the packs are available, enter a RUN sssss reply. If the packs are not available, enter an ABORT sssss option reply. Responding RUN LIMBO causes all jobs with this status to be released for allocation.

G

OUTPUT MESSAGES

G

OUTPUT MESSAGES

*GET S# sssss TAPE#nnnnn [filename]

Peripheral Allocator Message. The file serial number(s) specified are required in order to run this job.

nnnnn - File serial number

NOTE: This message is simply one variation of the "*GET" message which includes the form, PACK# and TRAIN variations as well. The *GET message can be a multi-line message. When more than one line is used only one entry is placed on each line with the header (i.e., "*GET S# sssss") being printed only on the first line. More than one type of entry (i.e., form/PACK/TAPE/TRAIN) may occur in one *GET message.

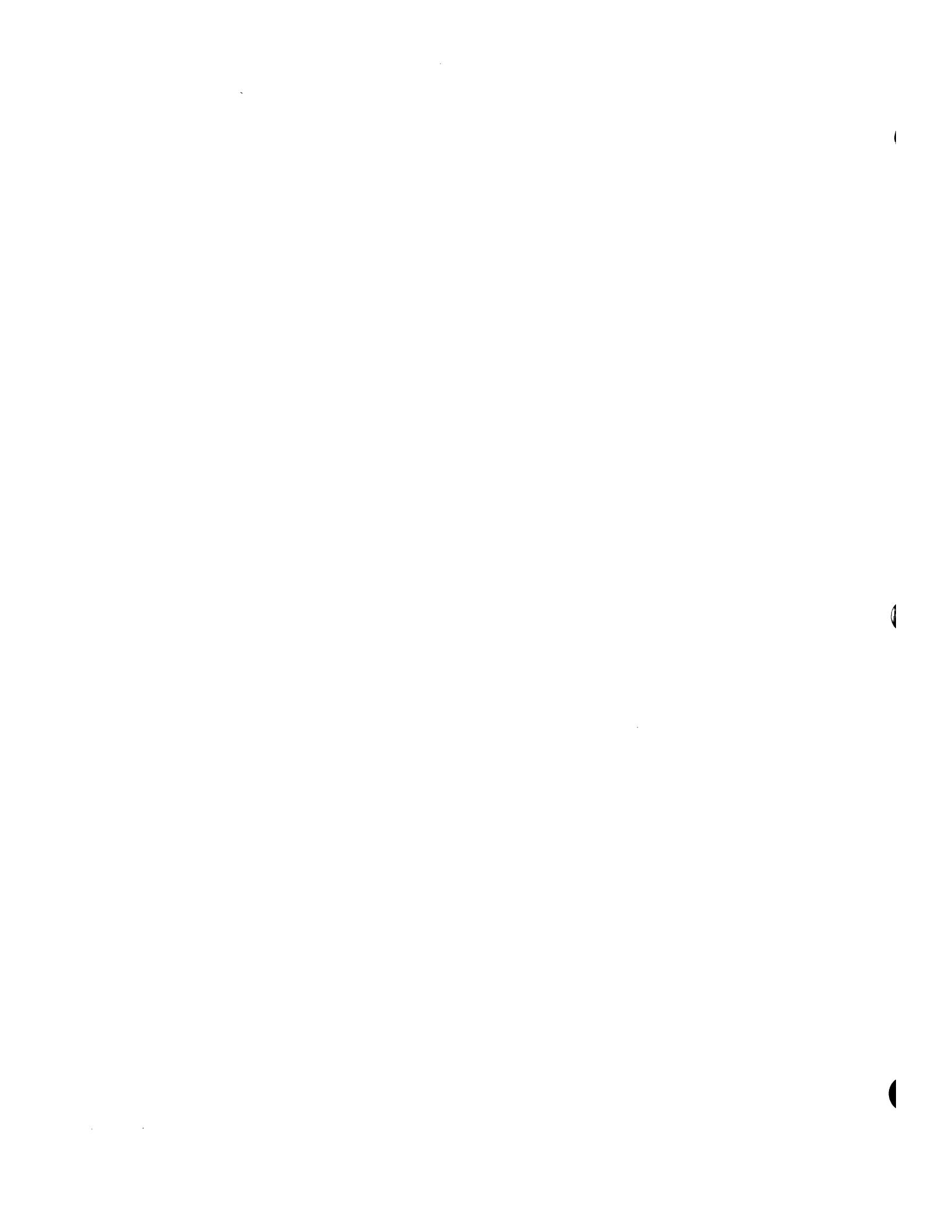
Operator Action: If tapes are available, enter a RUN sssss reply. If the packs are not available, enter an ABORT sssss option reply. Responding RUN LIMBO causes all jobs with this status to be released for allocation.

*GET S# sssss TRAIN xxxxx

Peripheral Allocator Message. xxxxx = TRAIN ID/NAME. A specific train id/name was indicated on the \$ PRINT statement. Job will not be run until the operator issues the RUN command.

NOTE: This message is simply one variation off the "*GET" message which includes the form, PACK#, and TAPE# variations as well. The *GET message can be a multi-line message. When more than one line is used only one entry is placed on each line with the header (i.e., "*GET S# sssss") being printed only on the first line. More than one type of entry (i.e., form/PACK/TAPE/TRAIN) may occur in one *GET message.

Operator Action: If the specified train is not currently mounted, mount it before giving the RUN command.



SECTION 11

OUTPUT MESSAGES BEGINNING WITH THE LETTER H

*sssss HAD UNRECOVERABLE I/O ERROR

Trace Analyzer Message. The Trace Analyzer trace collector program encountered an unrecoverable I/O error while writing the current system trace segment to the collector tape.

sssss - Job identifier (SNUMB) of the trace collector program

Operator Action: Dismount and save the collector tape in order to process the trace data collected before the error occurred. Resubmit the trace collector program.

HCM STARTUP OVERLAP

Startup Message. Main memory area was extended too far into Startup. Startup is loaded at the top of the first 256K segment and grows toward Startup. The message occurs when modules from the \$LOAD section occupy so much memory that they cannot be loaded without overlaying Startup.

Operator Action: Examine \$CONFIG section for excessive values on \$ INFO SYJOT, \$ INFO SYJOS, or \$ INFO SYBDI. An alternative action is to remove modules from \$LOAD section and reboot.

*HEX MODE ENABLED

Startup Message. Startup processed a \$ INFO HEX/ON statement and found that all online processors were DPS 8/52 and 8/70 CPUs. HEX mode was enabled.

Operator Action: None.

*HOPPER/STACKER ALERT, icccdd: ATT T 000/ BACK SPACE IF STACKER, OPERATE WHEN READY

Startup Message. The card reader returned an ATTENTION status with a HOPPER/STACKER ALERT substatus.

Operator Action: If the alert was caused by a throat jam, correct its cause and ready the reader. If the alert was caused by the stacker, backspace and ready the reader.

1

2

SECTION 12

OUTPUT MESSAGES BEGINNING WITH THE LETTER I

*IDENTIFY SCRATCH FOR STEM COLLECTOR sssss-aa ON i-ccc-dd; (n#)

STEM (PERSUE-8) Message. The tape serial number for the tape mounted on handler i-ccc-dd for STEM is required. (Even tapes with existing labels must be identified for STEM.) An identify message is always followed by a STEM Verify message.

Operator Action: Enter the tape serial number. Respond with "N" if the mounted tape is not being used and amount another in its place.

*IHLR DS i ccc dd sssss-aa

LABEL IS (information from input file label)

USER EXPECTS (information from File Information Block) AC

UFAS Mass Store Label Message. The information on the file label does not agree with that of the File Information Block (FIB).

Operator Action: Enter A to abort the program or enter C to continue execution ignoring the label check.

*IHLR sssss-aa FOR FILE ON DS i ccc dd

LABEL IS: first 10 words of label

SHOULD BE: first 10 words of label image in program ACI

Standard COBOL-68 I/O System Message. The actual content of the input mass storage file header label does not match the program parameters for that content. The two values are given in alignment. The complete label is printed if it is less than ten words.

Operator Action: Enter A to terminate the activity.
Enter C to continue execution using the present mass storage file.
Enter I to continue execution using the present mass storage file and, also, to ignore any additional label discrepancies on this file.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*IHLR sssss-aa MT i ccc dd
LABEL IS: first 10 words of tape label
SHOULD BE: first 10 words of label image in program NACI

Standard COBOL-68 I/O System Message. The actual content of an input tape header label does not match the program parameters for that content. The two values are given in alignment. The complete label is printed if it is less than ten words.

Operator Action: Enter N to try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.
Enter A to terminate the activity.
Enter C to continue execution using the present reel.
Enter I to continue execution using the present reel, and also, to ignore any additional label discrepancies on this file.

*IHLR MT i ccc dd sssss
LABEL IS File Ser#,RL Seq#,Filename, Instl Id,RI Ser#
LABEL IS File Ser#, RL Seq#, Filename NACI

File and Record Control Message. An error exists on the input header label. The information on the tape label does not agree with that in the control block.

IHLR - Input header label error
Line 2 - Information from file control block
Line 3 File Ser# - Number from EOR label of previous tape or literal SEQ#
NACI - Operator reply

Operator Action: Enter N if the tape is to be dismounted. Mount a new tape and continue processing.
Enter A to abort the program.
Enter C to ignore the label check and continue execution.
Enter I to ignore any future IHLR processing.

#ILLEGAL COMMAND#

Remote Maintenance Interface Message. Transmitted to the local console if Relinquish mode not is active.

Operator Action: Refer to "Operator Input Messages" in Section 2 for commands #ENA CON#, #ENA INI#, and #ENA MAI# for examples.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

ILLEGAL DEVICE ASSIGNMENT ON URP

Startup Message. A PR0901/PR1201 is assigned on Port 0 or Port 2.

Operator Action: Reassign.

```
          {MASK      }  
          {CONFIG    }  
          {INITIALIZE}  
*ILLEGAL {EDIT      } CARD BELOW IGNORED  
          {FILE      }  
          {PATCH    }
```

Startup Message. The *****EOF** statement at the end of the specified section was not read and an illegal statement is in the job stream. The contents of the illegal statement are typed following this message.

Operator Action: Remove faulty statement, put statements in correct order or insert the *****EOF** statement if it is missing.

*ILLEGAL EOF ON TAPE, CANNOT PROCEED

Startup Message. While a \$ FILDEF statement was being processed, an EOF condition was read before the actual end of file was reached.

Operator Action: Verify that the correct tape is being read.

*ILLEGAL MODULE NO. CALLED BY HCM INITIALIZATION

Startup Message. The HCM loader calls for an illegal or undefined module to be loaded.

Operator Action: Check modules in \$LOAD section for the appropriate modules. Reboot.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*ILLEGAL OR OUT OF PLACE CARD, FIX TYPE GO

Startup Message. Startup could not use the last statement read.

Operator Action: Correct the last statement and enter GO.

*ILLEGAL SNUMB sssss DELETED

System Input Message. The field in column 16 of the \$ SNUMB statement is incorrect (more than five characters, illegal characters, etc.).

Operator Action: Correct the \$ SNUMB statement and rerun the job.

*ILLEGAL USER SSFILE DESCRIPTION

Startup Message. Bad data on the \$ SSFILE statement.

Operator Action: Correct the description of the user classes.

*IMU-x CANNOT ACCESS SCU-y

Startup Message. Startup reads the MCA configuration files for all IMU/IMXs. The control CPU has surveyed the memory; therefore, it is known how many SCUs can be accessed by the control CPU. A port of the specified IMU/IMX was not enabled for the SCU that could be accessed by the control CPU.

Operator Action: The port enable field of the MCA configuration file (i.e., for the IMU/IMX) must be corrected such that the IMU/IMX can:

1. access the specified SCU, or
2. turn off the associated control CPU port-enable switches such that it (the control CPU) does not access the specified SCU.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*IMU-x AND IMU-y HAVE DUPLICATE MCA NUMBERS (zz)

Startup Message. Startup reads MCA configuration files for all IMUs/IMXs. These files reflect the MCA numbers (internal board mounted switch) which result in the identification of the MCA on the maintenance console log and in other journalized logs (the character string #00> on the console reflects MCA number 00, #01> MCA number 01, etc.). These MCA numbers ***MUST*** be unique if the MCAs are to be connected together via the MDI interface, and ***SHOULD*** be unique to correctly identify which MCA detected and logged an error if they are not connected together via the MDI interface. This is an FYI message to indicate two specified MCAs share a common MCA number zz (not connected together via MDI which would cause IMU/IMX internal hardware errors).

Operator Action: Have CSD change the internal MCA switches to make all MCAs on the system unique and change all the IMU/IMX configuration files for the changed IMUs/IMXs.

NOTE: This is not the IMU/IMX number that needs to be changed, but the MCA number.

*IMU-x, PORT-y SIZE DOES NOT MATCH CONFIG

Startup Message. The MCA configuration files for all IMUs/IMXs are read by startup for all IMUs/IMXs. The specified port definition field is incorrect in the IMU/IMX configuration file and does not match the size that the CPU can access.

Operator Action: Correct the IMU/IMX configuration file port definition field for the specified port and reboot startup from an INIT of the IMU/IMX.

\$ INFO DPSE - NOT AVAILABLE ON ELS SYSTEM

Startup Message. Startup does not check for system type, if a \$ INFO DPSE statement appears in the \$CONFIG section and, if the system is an ELS, it will abort with a missing page fault error and issue this message.

Operator Action: Remove the \$ INFO DPSE statement and reboot the system.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*** \$ INFO FNP DEFINED dd FNP'S, ff FNP'S WERE FOUND**

Startup Message. If the number of FNPs found (ff) by the startup program exceeds the number of FNPs defined (dd), startup will abort. The \$ INFO FNP statement tells Startup how much space to reserve for FNP mailboxes. If too little space is reserved, the mailboxes will intrude into the communications region, which is a fatal Startup error.

If the number of FNPs found is less than the number defined, startup will not abort. However, the message is issued to inform the operator that hard core space is being wasted on too large of an FNP mailbox area.

Operator Action: When rebooting the system, define the correct number of configured FNP's on the \$ INFO statement.

IN/PROCESS S#sssss LOST CODEn

GPOP Message. Restart processing of job sssss failed, and the job is then deleted from the system. Processing of other jobs continues.

- n - 1, No such name
- 2, Released Device
- 3, Status failure
- 4, SSFIL SNUMB \neq J# SNUMB
- 5, Program number invalid or not assigned
- 6, BLINK zero error
- 7, No BLINKS recovered
- 8, BLINK not assigned
- 9, BLINK recovered or BLINK NO. G.R.R MAX, allowed.

Operator Action: To run job sssss, resubmit it.

sssss-aa INCORRECT COLLATION INPUT TAPE

GET REEL # rrrrr FOR MT i ccc dd
(File name, File Ser#/Reel Seq#)

Sort/Merge Message. The wrong reel was placed on the handler designated. The handler is placed in standby to facilitate reel changing. When the handler is ready, Sort checks the label without further operator action.

Operator Action: None.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*INIT CARD NOT ALLOWED AFTER ANY STRUCTURING

Startup Message. The \$ INIT statement cannot follow any statement that causes structuring.

Operator Action: Place all \$ INIT statements first in the \$INITIALIZE section.

*INIT DEVICE ddd?

Startup Message. The \$ INIT Startup statement for the named permanent mass storage device was read and the operator is asked if an initialization or a secondary initialization must be performed on the device.

Operator Action: Enter NO or EOM to cause the initialization of this device to be skipped. A YES response causes the process to continue with the following output message at the console:

*FORMAT/LABEL QUESTIONS?

This message is discussed in Section 9.

A third possible reply is SECONDARY. Enter SECONDARY to rebuild the available space table (AST) on the device from the Device Allocation Unit Table (DAUT) on the device and to rebuild an empty Temporary Descriptor Table (TDT). This secondary initialization does not release any permanent file space, but does release all temporary file space back to the system. Under normal circumstances a secondary initialization is performed automatically whenever needed. The system provides the opportunity for the SECONDARY response in case any unusual circumstances require a secondary initialization. During a system boot specifying the NIAST mode, a secondary initialization is automatically performed for each permanent device whose last mode of operation was non-NIAST. (For more information refer to the "Operator Controls During Initialization" and the \$ INFO statement for the NIAST parameter description in the GCOS 8 OS System Startup manual.)

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

INIT RMVBL DEVICE ddd?

Startup Message. The \$ INIT startup statement for the named removable mass storage device was read and the operator is asked if an initialization or a secondary initialization should be performed on this device.

Operator Action: Enter NO or EOM to cause the initialization of this device to be skipped. A YES response causes the process to continue with the following message to be printed at the console:

*FORMAT/LABEL QUESTIONS?

This message is discussed in Section 9.

A third possible reply is SECONDARY. Enter SECONDARY to rebuild the available space table (AST) on the device from the device allocation unit table (DAUT) on the device. This secondary initialization does not release any permanent file space. Under normal circumstances a secondary initialization is performed automatically whenever needed. The system provides the opportunity for the SECONDARY response in case any unusual circumstances require a secondary initialization. For removable mass storage devices in the NIAST mode, a secondary initialization is automatically performed whenever a structured disk pack is already mounted during Startup or is later mounted during system operation. (For more information refer to the "Operator Controls During Initialization" and the \$ INFO statement for the NIAST parameter description in the GCOS 8 OS System Startup manual.)

*INIT SHARED DEVICE ddd?

Startup Message. The \$ INIT Startup statement for the named permanent mass storage device, that is shared by one or more other systems, was read and the operator is asked if an initialization or a secondary initialization can be performed.

NOTE: In a CFF environment, each permanent device is shared by all the configured systems. An initialization or secondary initialization affects all the systems in the configuration. Therefore, an initialization or secondary initialization must be performed on the device only when all other systems in the configuration are down.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

Operator Action: Enter NO or End of Message to cause the initialization of this device to be skipped. A YES response causes the process to continue with the following message to be printed at the console:

***FORMAT/LABEL QUESTIONS?**

This message is discussed in Section 9.

A third possible reply is SECONDARY. Enter SECONDARY to rebuild the available space table (AST) on the device from the device allocation unit table (DAUT) on the device. This secondary initialization does not release any permanent file space. Under normal circumstances a secondary initialization is performed automatically whenever needed. The system provides the opportunity for the SECONDARY response in case any unusual circumstances require a secondary initialization. During a system boot specifying the NIAST mode, a secondary initialization is automatically performed for each permanent device whose last mode of operation was non-NIAST. In accordance with the above note, make sure all other systems in the CFF configuration are down whenever a forced secondary initialization occurs. (Refer to "Operator Controls During Initialization" and the \$ INFO NIAST Startup statement description in the GCOS 8 OS System Startup manual for additional information.)

***INITIALIZATION FOR NEXT POST-MORTEM RCVRY FAILS**

Rollcall Message. A restart after the next system failure is prevented due to an error return from RCV4,EP1.

Operator Action: Reboot the system as soon as practical. If the condition recurs, notify the Honeywell Bull Response Center.

***INITIALIZATION?**

Startup Message. The operator is asked whether to process all statements in the \$INITIALIZE section of the Startup program.

Operator Action: Answer YES to initialize all devices on the \$ INIT statements. However, a YES response causes the following system response.

***YES TO INITIALIZE COULD DESTROY THE SHARED DATA BASE, ANSWER YES TO CONTINUE**

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

A YES answer to this subsequent system response causes an automatic YES answer to the following system questions unless an \$ ANSWER statement in the \$CONFIG section specified otherwise.

(The message versions in parentheses are used in the Common File Facility environment).

*INIT DEVICE ddd (INIT SHARED DEVICE ddd)
*INIT RMVBL DEVICE ddd
*MPC iccc BOOTLOAD?
(*SHARED DSKMPC ON iccc APPEARS OK, BOOTLOAD)
*PROCESS DIRECTORY CARD FOR DEVICE ddd?

Answer NO to either the original *INITIALIZE? question or to the subsequent *YES...CONTINUE question for no initialization. Statements in the \$INITIALIZE section will not be processed. A NO response will also pre-answer the BOOTLOAD question and the MPC question, unless a \$ ANSWER statement in the \$CONFIG section specified otherwise.

Answer TOTAL for automatic edit on all devices, without further operator communication.

In a Common File Facility environment, this response is invalid and results in another opportunity for the operator to respond to the *INITIALIZE? question.

Answer PARTIAL to receive separate console messages for each function.

*INITIALIZE CARD BELOW CONTAINS ERROR NEAR COLUMN nn

Startup Message. An error was encountered while processing the statement, in the \$INITIALIZE section, listed after the above message.

nn - Statement column of the beginning of the field in error.

Operator Action: Correct statement and reboot.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

INPUT ERROR, RE-INPUT

Dump Message. An invalid or misspelled option name was entered.

Operator Action: Enter correct option name. A correct response causes the system to output the message:

MORE?

INPUT INVALID

GPOP Message. The console entry MSG ON or MSG OFF is not recognized (i.e., is misspelled).

Operator Action: Reenter message.

*INPUT NEW TAPE/#, DENSITY

Dump Message. An end-of-tape was encountered before the system has completed dumping to that tape.

Operator Action: To continue the dump, mount a new tape and then enter the logical device name of the magnetic tape unit on which the tape was mounted, the tape reel number, and the tape density: ddd/rrrrr,DENS.

*** INSUFFICIENT REAL MEMORY FOR DISK CACHE
*** ASKING FOR aaaaaK HAVE RECEIVED rrrrrK
*** DO YOU WANT TO RETRY OR ABORT RA

Software Disk Cache Buffer Message. Enough real memory is not available to satisfy the CSIZE option.

Where:

aaaaa = is the amount of real memory requested
rrrrr = is the amount of real memory that has been acquired to this point.

Operator Action: Enter an R to retry the request or A to abort the control program to verify that the CSIZE option is not too long.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*INTERRUPT BUT NO STATUS
*IOX-n, CHAN-ccc,DEV-dd

Startup Message. The Startup program read an IOX interrupt queue entry and went into a loop waiting for status to be written to the mailbox. The IOX did not write status to the mailbox in time to prevent the lockup fault from occurring.

n - IOX number
ccc - Channel number
dd - Device number

Operator Action: None.

#INVALID COMMAND#

Remote Maintenance Interface Message. This message is issued to the console device upon which an #ENABLE MAINTENANCE command verb was entered, if the diagnostic processor interface is not operational. Remote Maintenance Interface entries do not affect system operation.

Operator Action: If onsite diagnostic processor interface is available, the Honeywell Bull Response Center can be notified of the failure.

*INVALID FIELD ON \$ DIRECT - EOM SKIPS THIS CARD

Startup Message. An invalid field was used on the \$ DIRECT statement.

Operator Action: Press EOM to ignore the statement. Otherwise, correct and replace the statement.

INVALID TP REQUEST

TPE Message. TPE was configured to reject the request entered by the system console operator.

Operator Action: None.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*INVALID TPAP-ID

TPE Message. The system console operator specified an unknown TPAP identifier in a TERM or REST command.

Operator Action: Specify a known TPAP identifier.

I/O ERROR SR= xx/xx/xx CM= xxxx

IOS Message. This message informs the operator of an I/O error on the specified drive.

SR= xx/xx/xx - the MAJOR/SUB/IOM status of the error

CM= xxxx - the command generating the error

Operator Action: None.

IOM INVALID

GPOP Message. The operator entered an illegal input/output controller number.

Operator Action: Enter the correct message.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*IOM I/T ssxx pp i-ccc-dd sssss seek address (disk only) { B }
 { R/U }
 { RS }

Exception Processor Message. An input/output controller (IOM) or memory related error exists.

- IOM - Input/output controller central or channel error
- I - Status was returned on an initiate/terminate interrupt
- ss - Octal substatus code. The first s denotes channel error codes and the second s denotes central error codes. Values are shown below:

<u>Channel Error Codes</u>	<u>Central Error Codes</u>
0 No error	0 No error
1 Unexpected Peripheral Control Word (PCW)	1 LPW tally runout
2 Illegal instruction to channel in PCW	2 Two TDCWs
3 Incorrect DCW	3 Boundary error
4 Incomplete instruction sequence	4 Not used
5 Incorrect peripheral action	5 IDCW in restricted mode
6 Parity error to channel from peripheral (CPI or Peripheral Subsystem Interface (PSI))	6 Character position/size discrepancy
7 Parity error, I/O bus, data to channel	7 Parity error, I/O bus, data from channel

xx - Instruction code (refer to Appendix A)

Operator Action:

B - Before giving this response the operator should:

Card punch - Manually cycle the transport three times, discard the last two cards from the stacker, and press OPERATE/RESET. (Or, press RUNOUT, backspace the last card into the input hopper, and press START.)

Card reader - Reenter the last card in the card reader and press OPERATE/RESET.

R(U) - Enter R to retry or, if the option is given, U to return to the user program.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

RS - Respond S if the Seek address is desired, then enter R to
retry (several times if necessary).

In all cases, if the condition persists, enter A to abort the program. If
the condition recurs, call the Honeywell Bull Response Center.

*IOM m IS ASSIGNED

IOS Message. The input/output controller numbered m was successfully assigned
to the system and is available for use.

Operator Action: None.

*IOM m IS RELEASED

IOS Message. The input/output controller numbered m was successfully released
from system availability.

Operator Action: None.

*IOPMPS REJECTED {device code}
{channel }

Startup Message. GCOS 8 Startup issues a rolldown connect from the \$ IOP
statement processing routine. IOPMPS responds to the rolldown connect with one
of the following statuses:

- o verified good
- o wrong device code
- o channel released

GCOS 8 Startup issues the "wrong device code" or "channel rejected" messages in
response to those statuses and then rejects the \$ IOP statement that contained
the erroneous device description.

Operator Action: None.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*** IOP -n FOUND HUNG AND AUTOMATICALLY RELEASED FROM GCOS
RELEASE AND ASIGN IOP FROM MSOS TO CLEAR**

n - 0, 1, 2, 3

IOS Message. Should GCOS 8 detect an anomaly during I/O processing, an IOP may be released automatically from GCOS 8. This is an attempt to avoid a system interrupt. The preceding message is displayed at the console.

Operator Action: Use the MSOS command LOOK to dump the IOP that was released. The Honeywell Bull Response Center can then be notified to analyze the information gathered.

If you release (RELE IOP#n) and assign (ASSIGN IOP#n) the failed IOP, the system will continue in a fully operational mode. The release will cause an IOPMPS reboot of the IOP, which clears the problem and allows the IOP to be assigned back to the active system.

******filename IS ALREADY DEFINED ON xxx FOR nnnn LLINKS
MUST BE AT LEAST mmmm LLINKS LONG**

Startup Message. Either there is a file on system storage with the same file name described on a \$ FILDEF statement; (the function indicated is ignored and the next statement is read), or the existing file is too small.

xxx - Device name
nnnn - Number of existing llinks
mmmm - Number of required llinks
filename - The name of the file on the \$ FILDEF which already exists

Operator Action: If the existing file on system storage is to be overridden, change the \$ FILDEF statement such that the size field is followed by 0. If the file is too small, move it to a different device defined on a previous \$ GCOSFIL statement or do an INIT on the device on which the file is defined.

***** sssss: nnnn IS LOWEST ADDRESS THAT CAN BE RELEASED**

Memory Release Message. MEMREL program was spawned by RLSEC request. The value nnnn is the lowest 512-word block number that can be released and the input request was for a lower value. Blocks 0 through nnnn are in use for hard core segments, and MEMREL will release blocks nnnn+1 through mmmm where mmmm is the end of the range given in the request.

Operator Action: None.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

 {IS }
sssss {IS NOT} A CYCLIC JOB IN .HOLD CLASS,

 {STANDARD}
CAN'T USE {CYCLIC } VERBS

System Scheduler Message. The operator input a status-type request message for a job in the .HOLD class, but used the wrong message form. If the job is a cyclic job, a cyclic message form must be used as follows:

JCHGCY sssss
JDELCY sssss
JLSTCY sssss

If the job is a standard job, one of the following standard forms must be used.

JPURGE sssss
JRERUN sssss
JSCHED sssss
ABORT sssss { S }
 { SCHED }

Operator Action: Reply with the correct message.

* xxx IS NOT ACTIVE, S#sssss IS IN HOLD

Peripheral Allocator Message. The named device is required for execution of the job, but was released by the operator or by system rolldown at Startup.

xxx - Device name

Operator Action: To run the job, enter an ASGN i ccc dd then a RUN sssss request. If the device cannot be assigned to this job, enter ABORT sssss.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*ITDE - S# sssss - aa i-ccc-dd (fc)-INCOMPATIBLE DENSITY -NACW

UFAS Message. This message is only produced as a result of a failure to verify both the recording density of the input volume and (if present) the explicitly stated \$TAPE entry tape reel serial number.

ITDE - Input Tape Density Error
sssss - SNUMB
aa - Activity number
i - Input/output controller number
ccc - Channel
dd - Device number
fc - File code

Operator action: Enter:

- N - Dismount tape and mount new tape to continue processing.
- A - Abort the activity. This resolution produces an Execution Report message "*** FATAL ERROR - MODULE LMF1.1 CODE = 14 IC = nnnnnn ***" where nnnnnn is the zero relative address of the error encountered in module LMF1.1.
- C - Accept the current input volume and continue processing. This resolution produces an Execution Report message "*** WARNING - S#sssss-aa i-ccc-dd - TRUE DENSITY IS nnn BPI FOR FILE CODE fc ***".
- W - This option forces a five-minute wait; the activity is delayed for five minutes in order to provide operations time to attempt to resolve the "*ITDE" problem. The "*ITDE" message is automatically redirected to the console following the wait period.

ITLR sssss-aa FOR FILE ON DS i ccc dd
LABEL IS: first 10 words of label
SHOULD BE: first 10 words of label image in program CEA

Standard COBOL-68 I/O System Message. The actual content of an input mass storage file trailer label does not match the program parameters for that content. The two values are given in alignment. The complete label is printed if it is less than ten words.

Operator Action: Enter C to continue execution using the present file.
Enter E to force the end-of-file condition on the input file.
Enter A to terminate the activity.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*ITLR sssss-aa MT i ccc dd
LABEL IS: first 10 words of tape trailer label
SHOULD BE: first 10 words of label image in program CEA

Standard COBOL-68 I/O System Message. The actual content of an input tape trailer label does not match the program parameters for that content. The two values are given in alignment. The complete label is printed if it is less than ten words.

Operator Action: Enter C to continue execution using the present reel.
Enter E to force the end-of-file condition on the input file.
Enter A to terminate the activity.

ITUL - S# sssss - aa i-ccc-dd (fc) - UNRECOGNIZABLE LABEL - NAW

Tape Label Processor. The ITUL console message is produced when a tape was successfully read, but the label type expected is not present. For example, if a labelled GFRC tape was specified by the program, and the literal "GE BTL" is not found, the "*ITUL" message is given.

ITUL - Input Tape Unrecognizable Label
sssss - SNUMB
aa - activity number
i - Input/output controller number
ccc - channel
dd - device
fc - file code

Operator Actions:

Enter N to dismount tape and mount new tape to continue processing.
Enter A to abort the job.
Enter W to forces a five-minute wait. The activity is delayed for 5 minutes in order to provide the operator with time to attempt to resolve the "*ITUL" problem. The "*ITUL" message is automatically redirected to the console after the wait period.

I
OUTPUT MESSAGES

I
OUTPUT MESSAGES

*IVR MT i occ dd sssss-aa NA#

Standard COBOL-68 I/O System Message. The I/O system was unable to read the scratch tape mounted on the tape handler and could not check the reel for an internal label.

Operator Action:

Enter N to try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.

Enter A to terminate the activity.

Type xxxxx (a 5-character identifier for reel number) to continue processing using the present reel. The existing content is overwritten with a label containing this identifier (do not enter the number sign (#) character).

*IVR sssss-aa MT i occ dd NA#

File and Record Control Message. An invalid reel exists. The label on the tape file opened as output cannot be read.

NA# - Operator reply

Operator Action: Enter N to dismount tape, mount new tape and continue; enter A to abort the program; or, if the # option is used, enter the reel number of the tape being accepted, not the character #.

SECTION 13

OUTPUT MESSAGES BEGINNING WITH THE LETTER J

JOB DELETED ssss ERROR EXIT

GPOP Message. This job could not be restarted.

Operator Action: None.

JOB ENDED, R TABLE OVERFLOW

GPOP Message. Too many object programs/loader statements caused the R* description table to overflow.

Operator Action: None.

xx JOBS IN .HOLD

System Scheduler Message. Jobs are cataloged in the .HOLD class that will not be started automatically at a specific DATE/TIME.

xx - Number of jobs affected

Operator Action: Release jobs from .HOLD class when possible.

JOBS THAT SYS SCHED CANNOT RECOVER ARE

System Scheduler Message. Batch jobs completed the input phase, but were not yet cataloged on the SSFILE at the time of the restart.

sssss

.

.

.

sssss

Operator Action: To run any affected jobs during the currently-bootloaded system operation, resubmit the jobs.

J

OUTPUT MESSAGES

J

OUTPUT MESSAGES

JPURGE {ALL }
 {ONL }
 {sid }
 {sssss} READY
 {.NAME}
 {nn }
 {ACT }
 {SAV }

System Scheduler Message. The system is ready to execute the requested purge upon operator request.

- ALL - Purge all jobs currently cataloged by the System Scheduler
- ONL - Purge all online jobs currently cataloged by the System Scheduler
- sid - Purge all jobs originating at remote station identifier that are currently cataloged by the System Scheduler
- sssss - Purge a particular job currently cataloged by the System Scheduler
- .NAME - Purge all jobs currently cataloged in class .NAME
- nn - Purge all jobs currently cataloged under class number nn
- ACT - Purge all jobs currently cataloged in ACTIVE status
- SAV - Purge all jobs currently cataloged in SAVED status

Operator Action: Reply JPURGE RUN, JPURGE (option) RUN, or JPURGE (option) CANCL.

JRNL-MSG: sssss HAS { nn% } MORE COLLECTION SPACE FOR aa...a @ tt.ttt
 { NO }

Integrated Software Message. The warning-fence is reached. It is then re-issued each time the available collection space is halved. The final warning message is issued when one percent of the collection space remains.

Where:

- sssss - snumb of SHARD
- aa...a - the journal's name
- nn - the percentage of Journal collection space let
- tt.ttt - the time in hours and thousandths of an hour

Operator Action: None.

J

OUTPUT MESSAGES

J

OUTPUT MESSAGES

JRNL-MSG: sssss COULD NOT ALLOCATE SYSTEM JOURNAL FILE @ tt.ttt
CATALOG = cc...c FILENAME = bb...b
BECAUSE { OF BAD CAT/FILE STRING }
{ DEVICE xxx IS NOT ONLINE }

Integrated Software Message. A file cannot be opened for collection because the device on which it is located is not available or because the file does not exist.

sssss - the snumb of the job attempting the allocation
cc...c - the name of the level-1 catalog under which the file is located
bb...b - the filename of the file
xxx - the name of the logical device that is unavailable
tt.ttt - the time in hours and thousandths of an hour

Operator Action: No response for the bad CAT/FILE string. DEVICE xxx will have to be assigned.

JRNL-MSG: sssss { OPENED } FILE FOR aa...a @ tt.ttt
{ CREATED }
CATALOG = cc...c FILENAME = bb...b

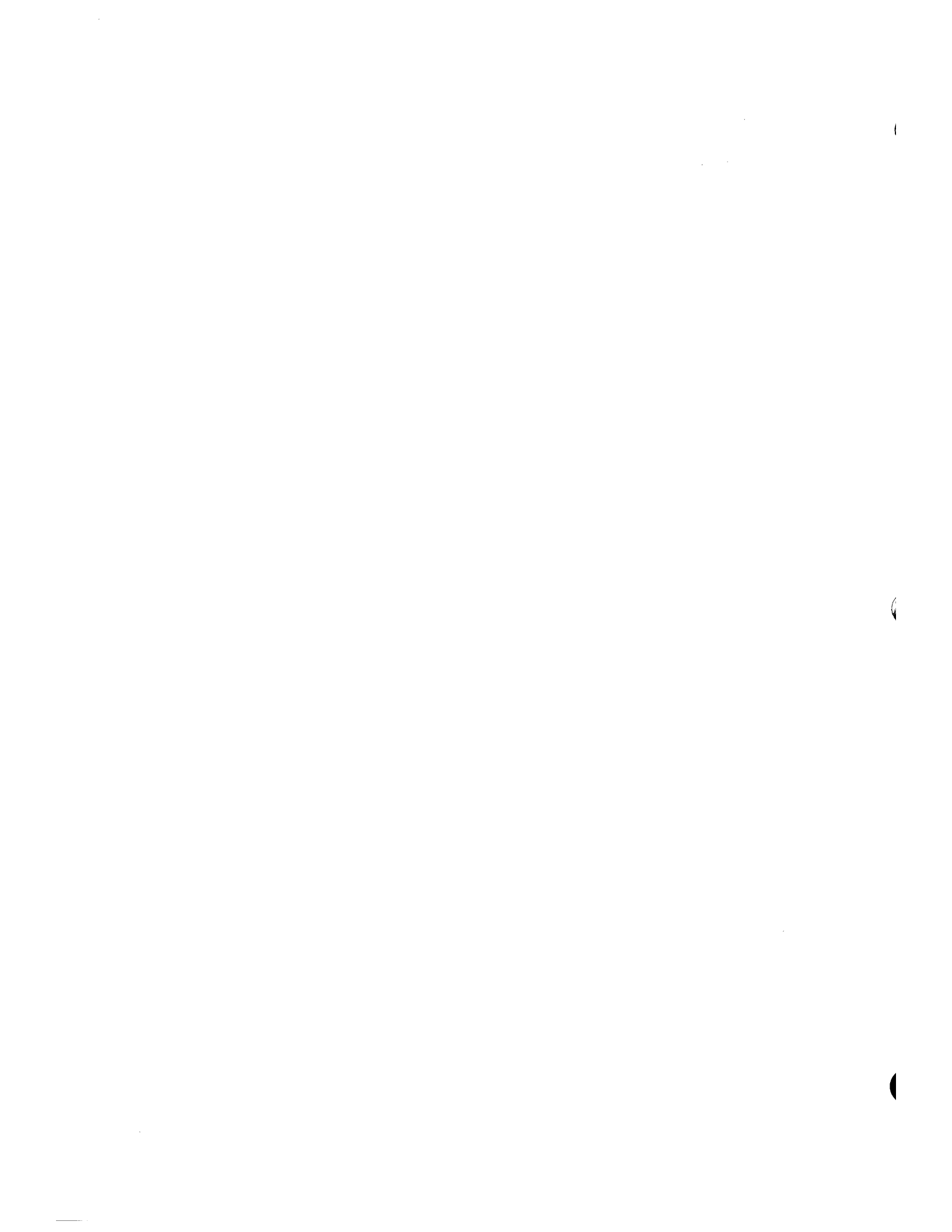
Integrated Software Message. The "created" message is issued each time a collection file is automatically created by journal software. Such creation occurs only when collection space is exhausted and only if the AUTO_CREATE option is in effect.

sssss - the snumb of the process performing the file open/create
aa...a - the journal's name
bb...b - the filename of the file
cc...c - the name of the level-1 catalog under which the file is located
tt.ttt - the time in hours and thousandths of an hour

The "opened" message is issued each time a collection file is opened. A file is opened when:

1. a volume swap occurs, or
2. a journal itself is opened (i.e., a journal is put into use after a period of inactivity during which the resources (buffers, etc.) required for journaling are not obtained or held).

Operator Action: None.



SECTION 14

OUTPUT MESSAGES BEGINNING WITH THE LETTER K

There are no output messages beginning with the letter K in this release.

SECTION 15

OUTPUT MESSAGES BEGINNING WITH THE LETTER L

*sssss-aa LABEL ERR *nn...nn cc...cc NO
LOAD CORRECT DECK, TYPE RD

Bulk Media Conversion and UTL2 Message. Label checking was requested on a \$ INPUT statement (BMC) or the \$ FOPT statement (UTL2) and the label on the first statement in the reader did not match.

nn...nn - Label specified on \$ INPUT statement or \$ FOPT statement
cc...cc - Label found on first statement of data files

Operator Action: Place the correct deck in the reader and enter RD to repeat the label check.

LABEL FMS SAVE TAPE # xxxxx bbbbb

Integrated Software Message. This is produced as the result of an execution of a DDBA command. It is issued when the first FMS save tape is mounted.

Where:

xxxxx - Reel number of the tape volume
bbbbbb - Label of the tape volume

Operator Action: None; informational message only.

LABEL JOURNAL TAPE # xxxxx aaaaa

Integrated Software Message. This indicates the header label processing for a new tape volume of a journal was performed successfully.

xxxxx - Tape number
aaaaa - Label of the tape volume

Operator Action: None; informational message only.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

*LABEL MT i ccc dd sssss-aa (ic) xxxxx

File and Record Control Message. An output tape has retention or an output tape is unlabeled.

xxxxx - Reel number

Operator Action: None.

*LABEL sssss-aa MT i ccc dd (fc) VOL:mmm nnnnn

Standard COBOL-68 I/O System Message. The I/O system has completed the opening procedure for an output file that is unlabeled, has a user-defined label, or has a nonzero retention period. It indicates that the reel may be labeled with an external label, if necessary.

mmm - Reel sequence number within file

nnnnn - Reel serial number of file to be labeled

Operator Action: Prepare an external label, if necessary.

*LBL i ccc dd filename

UFAS Message. The reel on the specified tape unit is to be labeled.

Operator Action: None.

XXXXX LBL MT D#icccdd sssss-aa rrrr

File and Record Control Message. The H2000 output tape is unlabeled.

Operator Action: None.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

LDTAPE: MT-DEVICE nnn ASGN TO SNUMB xxxxxx FC fc

Operator Interface Message. Displays all tape devices that are currently assigned by the DDTAPE verb.

nnn - device name
xxxxx - SNUMB number
fc - file code

Following the list of assigned tape devices a message is issued that shows the number of free table entries. The message appears as:

LDTAPE: zz MORE TAPES CAN BE DEDICATED

zz - the number of available entries.

Operator Action: None.

LDTAPE: SCT POINTER NOT FOUND

Operator Interface Message. The SCT pointer is not in the device name table.

Operator Action: None.

<<< S#sssss nnn LIST_ nnn RECOVER_ nnn ANALYZE >>>

Integrated Software Message. Presents a summary of the deferred recovery directives processed.

sssss - Deferred recovery process SNUMB
nnn - Totals for LIST, RECOVER, and ANALYZE directives

Operator Action: None.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

*LINK WORD SYNC BIT = 0
*IOX-a, CHAN-b, DEV-c

Startup Message. An I/O to the above device terminated without setting the mailbox link word sync bit (bit 27). This causes Startup to abort with a linkage fault.

- a - IOX number
- b - channel number
- c - device number

Operator Action: Notify the site administrator to check the SMAS ICON to determine if the device indicated is properly configured. If it is, contact Honeywell Bull Response Center.

*LLINK # TOO BIG ON D,O,L,Y - EOM SKIPS THE CARD

Startup Message. An invalid area is specified on the \$ DIRECT statement.

Operator Action: Correct the \$ DIRECT statement and press EOM.

*xxx LINK ZERO BAD, DIRECTORY CLEARED MUST RESTORE HISTORY TABLE

Startup Message. The device named had its tables destroyed and all device headers must be read to rebuild the tables.

Operator Action: None.

sssss-aa LOAD CARD READER i ccc

Bulk Media Conversion, UTL2 and Source/Object Library Editor Message. The operator is requested to load the job input specified in the previous build message:

sssss HAS RDR i ccc.

Operator Action: Load the card input for the specified job into the card reader.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

*LOADFIL NOT VALID, MUST REPLACE \$LOAD NEXT TIME

Startup Message. An error occurred on the last boot in the \$LOAD section, and it could not be corrected during LOADFILE.

Operator Action: Correct the \$LOAD section and reboot.

*LOADFIL TOO SMALL

Startup Message. Insufficient file space was allocated for the GCOS files.

Operator Action: Allocate more file space and retry.

*LOC. 0 = nnnnnnnnnnnn nnnnnnnnnnnn

*LOC. 0 = RESTORED, YES TO CONTINUE

Startup Message. The absolute location 0 or 1 in memory was corrupted. Upon detection of this error, Startup restores location 0 and 1 and gives the operator the choice of continuing or aborting.

n - Octal contents of locations 0 and 1

Operator Action: Enter YES to continue. Any other response, including EOM, will abort Startup.

*LOC. 0 = nnnnnnnnnnnn nnnnnnnnnnnn AFTER INIT OF .Mnnnnnn

*LOC. 0 = RESTORED, YES TO CONTINUE

Startup Message. Absolute location 0 in memory was corrupted during initialization of module .Mnnnnnn. Startup will restore location 0 and give the operator the choice of continuing or aborting Startup.

n - Octal contents of location 0 and 1
nnnnnn - Module name

Operator Action: Enter YES to continue. Any other response, including EOM, will abort Startup.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

*LOCATE SCRATCH FOR STEM COLLECTOR sssss-aa
ON i-ccc-dd SEQ qq; ENTER #

STEM (PERSUE-8) Message. A tape mounted for STEM is to be continued. This message requests the serial number of the next tape to be mounted on handler i-ccc-dd such that trailer label can be constructed. The Locate message is followed by a STEM Verify message.

Operator Action: Enter the serial number of the next tape to be used.

*LOCATE SCRATCH sssss-aa SEQ# rrr FOR MT i ccc dd AND ENTER #

or

*LOCATE SCRATCH sssss-aa SEQ# rrr FOR MT i ccc dd (i ccc dd) ENTER #

File and Record Control Message. An end-of-reel label is required on a multi-reel file.

rrr - Reel sequence number

Operator Action: Enter the next sequential reel number for i ccc dd, which must not contain leading or embedded blanks or special characters.

*LOG STEM COLLECTOR sssss-aa ON i-ccc-dd;
REEL nnnnn SEQ qq DENdddd NEXT nnnnn

STEM (PERSUE-8) Message. STEM has filled a tape, written a trailer label, and issued the dismount command.

Operator Action: Prepare any site documentation (sticky label, etc.) for the dismounted tape.

LOOK: ENTER (PXXX SSS, MXXX, H6XXX) OFFSET NUM(OCTAL)

Operator Interface Message. Output on the system console in response to the operator entered verb LOOK.

Operator Action: Enter one of the following values:

- P - Dump a process
- M - Dump a module
- H6 - Dump an HCM segment
- XXX - Process number to be dumped (three digit maximum)
- Module number to be dumped (identified via .ENTRY macro)
- Segment identification as defined in system linkage segment.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

SSS - Index of the descriptor of the segment that is to be dumped.
OFFSET - Location within the segment/module where dumping is to begin.
NUM(OCTAL) - Number of locations to be dumped, beginning with the OFFSET value.

NOTE: If dumping a module and the module is not in memory, the following message is issued:

*NOT IN CORE/SYSTEM

*LOST SIEVE LIMITS IF SET FROM CONSOLE IN PRIOR BOOT

POPM Message. Sieve limits that were changed via entry of the LIMIT console verb are normally carried across system bootloads. If the system initialization and/or recovery error occur during the restart process, this message may be issued.

Operator Action: Following successful system reboot, reenter the sieve limit changes via the LIMIT console verb.

*LRT I/T ssxx ppp icccdd sssss (pppppppppppp dn) (operator response)?

Exception Processor Message. A Data Alert, with a substatus of ss, occurred on the specified device ppp while trying to execute the instruction indicated by the code xx.

I/T - Status was returned on an Initiate/Terminate interrupt.
ss - Octal substatus code (Refer to Appendix D). Substatus codes may be combined. For example, *LRT T 30xx MT... is a combination of both lateral and longitudinal parity alerts.
xx - Instruction code (refer to Appendix A).
ppp - One of the following device types:

CP - Card Punch
CR - Card Reader
DP - Disk Pack
DS - Disk
MT - Magnetic Tape
PR - Printer (refer to the NOTE)
TY - Console

L

OUTPUT MESSAGES

L

OUTPUT MESSAGES

NOTE: In the event of an interface error on the PRU1200/PRU1600 (i.e., major status 12 and substatus 02) it is necessary to execute a stop/start sequence at the printer even though the printer appears to be ready (i.e., the ready lamp is lit). This interrupt procedure must be executed prior to any further operator intervention such as a retry request.

i - Input/output controller number
ccc - Channel number
dd - Device number
sssss - SNUMB number

Operator Action: One or more of the following explicit responses may be available. These are punctuated with a question mark (?) and the keyboard is enabled to allow operator input.

R - Retry I/O.
U - Return status to the user program.
B - Card Punch - Manually cycle three cards and ready the device before responding.
 Card Reader - Remove the last card from the stacker, reposition it in the input hopper and ready the device before responding.
P - Rewind and reposition the magnetic tape.
S - Type the disk seek address. The Data Alert message will be repeated.
M - Move all messages from the failing device to an alternate console.
V - Select an alternate track.
W - Deallocate defective space and abort the program.

The following implicit options are not printed on the console by the Exception Processor, but are available:

A - Abort the job.
X - Exchange the device for another device (may be combined with the R or B option).

If the message is not punctuated by a question mark (?), the keyboard will not be enabled. In this case, an interrupt from the device is required after correcting the existing condition. The following options may be seen:

RDY - Ready the device.
BSP - Manually backspace and then ready the device.
U - Status is sent to the user program. Ready the device.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

A variety of conditions may have caused the Data Alert message to be printed depending on the device type. Before responding at the console, the operator may attempt to manipulate punched cards, replace VFU's, move console names, etc.

EXAMPLE: *LRT T 2015 MT 0 12 10 5840Z RUP?

A Data Alert exists on a terminate interrupt from the magnetic tape device 10 on IOM-0, channel 12, while running SNUMB 5840Z. While executing a write tape binary (15) instruction the system encountered a longitudinal parity (20). The operator can retry I/O (R) several times or to try to reposition the tape (P). If not successful, enter a "U" to allow the user a chance to recover. The next step is to enter "X" and try the tape on a different handler. Finally, if all else fails, enter "A" to abort the program.

***LST xx pp i-ccc-dd sssss seek address (disk only) (operator response)?

Exception Processor Message. An instruction, coded xx, was issued to the device pp, but no termination interrupt was received.

LST - Lost interrupt
xx - Instruction code (refer to Appendix A)
pp - Indicates one of the following device types:

CP - Card Punch
CR - Card Reader
DP - Disk Pack
DS - Disk
MT - Magnetic tape
PR - Printer
TY - Console

i - Input/output controller number
ccc - Channel number
dd - Device number
sssss - SNUMB number

Operator Action: One or more of the following explicit responses may be available. These are punctuated with a question mark (?) and the keyboard is enabled to allow the operator to respond.

R - Retry I/O.
U - Return status to the user.
S - Type the disk Seek address. The Lost Interrupt message is repeated.

L
OUTPUT MESSAGES

L
OUTPUT MESSAGES

The implicit "A" option is not always printed on the console by the Exception Processor, but it is always available for aborting the job.

A variety of conditions may have caused the Lost Interrupt to occur. Before responding at the console, the operator may attempt to clear or reset the device or its MPC, power on or ready devices, or correct other device malfunctions.

EXAMPLE: ***LST 31 DP 0 08 26 6837Z RUS?

A write disk-continuous instruction was issued to the disk pack on IOM-0, channel 08, device 26, while running SNUMB 6837Z. No termination interrupt was received back from the device. After correcting any malfunction, if possible, the device should be placed on-line and in a ready condition. The options available are to (S) check the disk Seek address (the original message is repeated), (R) retry the I/O, (U) let the user program try to recover, or (A) abort the job.

LSTRE HAS BEEN REPLACED - PLEASE USE SYSOUT

SYSOUT Message. The verb LSTRE was replaced with the verb SYSOUT.

Operator Action: Use the correct verb, SYSOUT.

LSTWT HAS BEEN REPLACED - PLEASE USE SYSOUT

SYSOUT Message. This message indicates that the verb LSTWT was replaced with the verb SYSOUT.

Operator Action: Use the correct verb, SYSOUT.

SECTION 16

OUTPUT MESSAGES BEGINNING WITH THE LETTER M

*Mmm I/T ssxx pp i-ccc-dd sssss (p...p) (operator response)?

Exception Processor Message. A major status error occurred on device pp. The problem may be coded in the major status itself (mm) or in the substatus (ss).

- * - Indicates an error on a user I/O
- *** - Indicates an error on GCOS 8 system I/O
- mm - Two-character major status code (octal):

Hardware Initiated

- 00 - Channel Ready
- 01 - Device Busy
- 02 - Attention (with substatus code)
- 03 - Data Alert
- 04 - End of File
- 05 - Instruction Reject/Command Reject
- 12 - MPC Device Attention (see to Appendix B)
- 13 - MPC Device Data Alert (see to Appendix B)
- 15 - MPC Command Reject (see to Appendix B)

Software Initiated

- 02 - PAT Refresh On PERM File (No substatus code)
- 07 - PAT Contains Linkage Descriptor Error Or Seek Address Error
- 11 - Lost Interrupt
- 14 - Invalid Seek Address (substatus code 76 octal)
- 14 - Inoperative Channel (substatus code 77 octal)
- 16 - Missing Sync Bit
- 17 - Fault Channel Interrupt (if no substatus code returned)
- 17 - Logical EOF (if substatus code 55 (octal) returned)

For more information about software-initiated statuses, refer to Section 5 of the GCOS 8 OS I/O Programming manual.

- I/T - Status was returned on an Initiate/Terminate interrupt.
- ss - Octal Substatus code (refer to Appendix D).
- xx - Instruction code (refer to Appendix A).
- pp - Indicates one of the following device types:

- | | |
|------------------|--------------------|
| CP - Card Punch | MT - Magnetic Tape |
| CR - Card Reader | PR - Printer |
| DP - Disk Pack | TY - Console |
| DS - Disk | |

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

i - Input/output controller number
ccc - Channel number
dd - Device number
sssss - SNUMB
p...p - Optional; one of the following:

If device (pp) is Magnetic Tape (MT) then p...p is equal to position and density.

If device (pp) is Disk Pack (DP) or Disk (DS) the p...p is equal to SA (seek address).

Operator Action: A variety of conditions may have caused the Major Status message to occur. In each case, the device must be reset and readied before any operator response is input.

One or more of the following explicit responses may be available. These are punctuated with a question mark (?) and the keyboard is enabled to allow the operator to respond.

R - Clear and ready device and retry I/O.
U - Return status to the user program.
S - Type the disk seek address. The major status message will be repeated.

The implicit A (abort) option is not always printed on the console by the Exception Processor, but it is always available for aborting the job as a last resort. If recovery is not possible contact Honeywell Bull Response Center.

EXAMPLE 1: *M02 I 0246 MT 0-08-01 MDUMP 001604454001 0 R?

The system has detected a major status 02 (Attention) while trying to process a terminate Initiate (I) from the magnetic tape (MT) on IOM-0, channel 08, device 01. More specifically, the system detected a substatus code of 02 (No Such Tape Unit) at seek address (SA=001604454001 0). The operator should clear the device, read it, and enter R to retry.

EXAMPLE 2: *M01 I 2031 DP 1-44-16 6181T SA=2240 03054140 RA?

The system has detected a major status M01 (Device Busy) while trying to process a Initiate interrupt (I) from a disk pack (DP). More specifically, the system detected a substatus code of 20 (storage directory busy; alternate channel in control) at seek address (SA) 2240 03054140. The operator should clear the device, ready it, and enter R to retry via on the alternate channel. If the problem persists, enter A to abort the job.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MASS STORE ERROR AT nnnnnn STATUS ssssss

An error status (ssssss) was returned during performance of function at nnnnnn. The Dump program attempts to continue with the next operation.

Operator Action: None.

***MASS STORAGE ALLOCATOR DENIAL ***

(A)BORT, (C)ONTINUE

Save/Restore Message. One of the following circumstances occurred.

- o When releasing an existing catalog and file space at the beginning of a Restoremast operation, the mass store allocator found that some of the space was already marked as being available because of a previously aborted restore (aborted before some of the catalog or file space was marked unavailable) or because one or more disk packs (but not all) containing files (but not the catalog) were utilized by the installation prior to the Restoremast.
- o No space was available on any catalog devices for the user's structure. Restore is terminated.
- o A request was made to the Mass Storage Allocator to obtain space for an overflow SMC link, and the request was denied because no space was available on the disk.

Operator Action: Enter A to abort or C to continue restore.

MC: <mirror of input message>
<error message> [=>unit_id in error]

The MC: (Modify Configuration) output messages are listed in the following order:

1. Error messages denoting errors in input message syntax.
2. Error messages denoting errors during DEDICATE processing.
3. Error messages denoting errors during UNDEDICATE processing.
4. Error messages denoting errors during ASSIGN, ASSIGN CPU, ASSIGN MEM, ASSIGN SCU, and ASSIGN IOP processing.

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5. Error messages denoting errors during RELEASE, RELEASE CPU, RELEASE MEM, RELEASE SCU, and RELEASE IOP processing.
6. Error messages denoting errors during HELP processing.
7. Error messages denoting errors of a general nature (i.e., not unique to one of the categories above).

On the MC Level

MC: <input message>

The messages shown below, are all produced as errors prior to any checking of the command.

System Replies possible:

MC: <input message repeated>
PLACEMENT OF HELP COMMAND NOT VALID

The command "HELP" is not at either the beginning or the end of the request, therefore the message is ABORTED.

MC: <input message repeated>
THE REQUESTED OPTION IS NOT VALID

The option specified is not in the table of valid options.

OPTION = -FORCE used with input/output controller
-TEST used with CPU/EPU

MC:
MESSAGE DOES NOT CONTAIN A COMMAND

This probably will not happen very often but if it does, the message will be displayed and aborted since there obviously is not anything to process.

MC: <input message repeated>
MC IS NOT A VALID CLASS CODE FOR THIS COMMAND

The command is not a Modify Configuration command but is a List Configuration command. Therefore, the construction of this message is illegal and will be aborted.

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**MC: MESSAGE CONTAINS "NON BCD" CHARACTER
INPUT MESSAGE REJECTED**

The message contains a "BACKSLASH" meaning that the character "/" was entered or an ASCII character which would not translate (also producing a "\") was detected. This character is used by the scanning routines as the terminator character for the message processing and cannot contain any other "\" characters in the string. Therefore the message is aborted.

On the MC <command> Level

MC: <input message>

The message shown below is produced when something is found to be invalid with the command.

System Replies Possible:

**MC: <input message repeated>
INVALID COMMAND**

No match was found in the table of valid commands. The message is aborted.

On the MC <object> Level

MC: <input message>

The messages shown below, are all produced as errors during checking of the object.

System Replies Possible:

**MC: <input message repeated>
INVALID OBJECT**

The object entered at the operators console is invalid. A match could not be made when the check was made for validation against the object table. Therefore, the message is aborted.

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MC: <input message repeated>
MESSAGE DOES NOT CONTAIN AN OBJECT

The message was not completed and therefore when the scan for an object took place, a "null" token was returned. The message is aborted.

On the MC <unit_id> Level

MC: <input message>

The messages shown below are all produced as errors during checking of the unit_id. The unit_id can be any valid unit. There are a number of checks made upon each unit_id submitted, (thru a unit_id profile) based upon the object that was supplied along with the unit.

System Replies Possible:

MC: <input message repeated>
UNIT ID REQUIRED FOR THIS COMMAND

The message was not completed and therefore when the scan for a unit_id took place, a "null" token was returned. However, supplying unit_id(s) does not mean they can be processed. It only means they are syntactically correct. At process reconfiguration time, the requested unit_id might not be configured on the system and would be rejected at that time.

MC: <input message repeated>
ILLEGAL DEVICE# => <unit_id>

The unit_id did not conform to the structure guidelines set down for it within its unit_id profile. The procedure for determining the syntactical correctness is this; the object that was matched in the object table points to the unit_id table which has the various forms that are allowed (icdd/icdd/devnam etc.). If a match cannot be made against a unit_id profile or if the unit_id construction does not fit the profile description, the unit_id is rejected with the reason for rejection.

MC: <input message repeated>
UNIT ID. CONTAINS INVALID ALPHA CHARACTER => <unit_id>

The unit_id does not follow the rules for inputting that unit_id's format. All characters must be alpha/numeric (A-Z) and (0-9). Multiple unit_id(s) will be accepted if they meet syntax rules and will be queued for processing.

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MC: <input message repeated>
UNIT ID NOT NUMERIC => <unit_id>

The unit_id did not follow the syntax rules for the unit_id profile. The unit_id must be numeric.

MC: <input message repeated>
UNIT ID NOT OCTAL => <unit_id>

This unit_id check is performed only upon a memory request. The unit_id contains a number which is not octal, therefore, aborting the request.

MC: <input message repeated>
PARAMETER FOR # OF PAGES MISSING

The MEMORY unit_id token consists of two parts, the starting page number and the number of pages. Actually, two tokens are parsed and checked. When one of those tokens is missing, the message is rejected. The parser will ignore anything more than one pair of tokens.

MC: <input message repeated>
INVALID REQUEST - MEMORY NOT CONFIGURED

The starting MEMORY page number is too large. The message is rejected after the starting page number is checked.

MC: <input message repeated>
INVALID REQUEST - MUST BE EVEN

When MEMORY pages and numbers of pages are entered, they must be even numbers (0, 2, 4, 6) in the unit position. The message is rejected after finding that error.

PROC Processing Level

There is no common entry point into this module. The RASE dispatcher dispatches to one of several entry points depending upon a function code provided it from the input processing routine. These function codes provide entry points to the following:

DEDICATE Processor
UNDEDICATE Processor
ASSIGN Processor
RELEASE Processor
CLOCK Processor (as result of above assign/release)
HELP Processor

DEDICATE Processing

The "DEDICATE" processor uses "POPE" entry point 4 as its processing routine.

System Replies Possible:

MC: DEDICATE <object> <unit_id>
COMMAND -NO- MATCH DEDICATE REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: DEDICATE <object> <unit_id>
ICCCDD FORMAT NOT IMPLEMENTED - USE DEVICE NAME

This error is produced when the unit_id is found to be anything but a three character unit.

Operator Action: Re-enter the request using only device name.

MC: <message text>
COMMAND -NO- MATCH DEDICATE REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

UNDEDICATE Processing

The "UNDEDICATE" processor uses "POPE" entry point 3 as its processing routine.

System Replies Possible:

MC: UNDEDICATE <object> <unit_id>
COMMAND -NO- MATCH UNDEDICATE REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contract the Honeywell Bull Response Center.

MC: UNDEDICATE <object> <unit_id>
ICCCDD FORMAT NOT IMPLEMENTED - USE DEVICE NAME

This error is produced when the unit_id is found to be anything but a three character unit.

Operator Action: Re-enter the request using only the device name.

MC: <message text>
COMMAND -NO- MATCH UNDEDICATE REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

ASSIGN Processing

The "ASSIGN" processor determines which of its subprocessors will handle the request and calls that routine.

System Replies Possible:

MC: ASSIGN <object> <unit_id>
COMMAND -NO- MATCH ASSIGN REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contract the Honeywell Bull Response Center.

MC: ASSIGN <object> <unit_id>
ASGN EXT. CMD. -NO- MATCH ON TABLE (SYSERR)

The extended command code (object) does not match anything in the table that is assignable. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <message text>
COMMAND -NO- MATCH ASSIGN REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <message text>
ASGN EXT. CMD. -NO- MATCH ON TABLE (SYSERR)

The extended command code (object) does not match anything in the table that is assignable. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

ASSIGN CPU Errors

This processor calls ".MRAS2" Entry Point 1 to make the assignment request for a "CPU". The routine "RAS2" is a "RAS8" module and uses the "RASE" message format. A status code is returned for processing and is checked against the "CPU" message table for selection of the proper message. If the status is not in the table, another error message is produced (see General Errors (All Levels - System Error)).

System Replies Possible:

MC: CPU <unit_id> ASSIGNED

This response is returned if the request was successful. No other information will be given.

Operator Action: None.

MC: ASSIGN CPU <unit_id>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN CPU <unit_id>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN CPU <unit_id>
CPU FAILED TO RESPOND

An attempt was made to assign a CPU which did not respond to the connect. The message is rejected.

Operator Action: Check the status of the CPU being assigned. Check switches and configuration. If acceptable, notify the Honeywell Bull Response Center.

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MC: ASSIGN CPU <unit id>
RELIEF/WARP PROCESSING IN PROGRESS

The assign command was issued while a processor is in the RELIEF/WARP state.

Operator Action: Retry the message when the RELIEF/WARP is over.

MC: ASSIGN CPU <unit id>
HARDWARE PLATFORM UNKNOWN

The configuration information is invalid and this CPU cannot be determined to be valid.

Operator Action: Correct the system configuration.

MC: ASSIGN CPU <unit id>
CPU SWITCH SETTING INCORRECT

The CPU switch settings do not match its type on configuration.

Operator Action: Check switch settings and/or configuration for correction.

MC: ASSIGN CPU <unit id>
2K CACHE IS NO LONGER SUPPORTED

A processor that is no longer supported is requested to be assigned to the system.

Operator Action: Check the system configuration for CPU configuration.

MC: ASSIGN CPU <unit id>
LEVEL 66 CPU IS NOT SUPPORTED

A processor that is no longer supported is requested to be assigned to the system.

Operator Action: Check the system configuration for CPU configuration.

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MC: ASSIGN CPU <unit id>
BAD/OLD ELS FIRMWARE

The CPU firmware is either not up to date or is bad.

Operator Action: Reload the correct firmware for the CPU.

MC: ASSIGN CPU <unit id>
INVALID CPU (RANGE > 5 OR < 0)

The CPU request is not unit numbers 0 thru 5. The message is rejected.

Operator Action: Check the system configuration for the correct range of CPU(s) and resubmit the request.

MC: ASSIGN CPU <unit id>
INVALID MODE INDICATOR

Something other than "-TEST" was detected or "-TEST" has been requested on an invalid platform (i.e., DPS 88 system).

Operator Action: None.

MC: ASSIGN CPU <unit id>
REQUEST TEST MODE/ALREADY IN TEST MODE

The CPU has been requested to be put into "-TEST" MODE while a CPU is already in test mode.

Operator Action: None.

MC: ASSIGN CPU <unit id>
ALREADY IN PROGRESS

A CPU request is already in progress. The message is discarded.

Operator Action: Resubmit the request when current processor request has finished.

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MC: ASSIGN CPU <unit_id>
CPU NOT CONFIGURE

The CPU requested is not in the system configuration.

Operator Action: Check the system configuration for valid CPU(s) and resubmit the request.

MC: ASSIGN CPU <unit_id>
CPU ALREADY ASSIGNED

The requested assignment of the CPU is invalid. The CPU is already assigned to the system.

Operator Action: None.

MC: ASSIGN CPU <unit_id>
ONLY ONE CPU CONFIGURED

The CPU requested is the only CPU assigned to the system.

Operator Action: None.

MC: ASSIGN CPU <unit_id>
CPU FAILED TO PARK

An assign command is executed for a faulty CPU. The faulty processor will not "PARK" and is left in a released state.

Operator Action: Notify the Honeywell Bull Response Center of this condition.

ASSIGN MEMORY Errors

This processor calls "DMM4" Entry Point 3 to make an assignment request for MEMORY. The following messages could be returned from "RASE". The only thing returned from "DMM4" will be a denial code.

System Replies Possible:

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MC: MEMORY <ssssss nnnnnn> ASSIGNED

This response is returned if the request was successfully completed. No other information will be given.

Operator Action: None.

MC: ASSIGN MEMORY <ssssss nnnnnn>
INVALID MEMORY REQUEST

This request was rejected and the assign MEMORY request will not be honored.

Operator Action: Check the starting page and number of pages. One of them is not within assignable memory limits.

MC: ASSIGN MEMORY <ssssss nnnnnn>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN MEMORY <ssssss nnnnnn>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

ASSIGN SCU Errors

This processor calls "RAS3" to make the assignment request for an "SCU". The routine "RAS3" is a "RAS8" module and uses the "RASE" message format and is also a new module specifically designed for assigning and releasing an SCU and all of its components. A status code is returned for processing and is checked against the "SCU" message table for selection of the proper message. If the status is not in the table, another error message is produced (see General Errors (All Levels - System Errors)).

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System Replies Possible:

MC: ASSIGN SCU <unit id>
NOT IMPLEMENTED YET

Indicates that a planned function was attempted, but is not yet in place and activated.

Operator Action: None.

MC: ASSIGN SCU <unit id>
SCU NUMBER NOT VALID

The SCU number is not within the valid range. At present the only SCU numbers considered valid are SCU 0 and 1. This request is rejected.

Operator Action: None.

MC: ASSIGN SCU <unit id>
SCU RECONFIGURATION REQUEST DENIED
MEMORY REQUEST ILLEGAL

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to Honeywell Bull Response Center. Rebooting is not necessary.

MC: ASSIGN SCU <unit id>
SCU RECONFIGURATION REQUEST DENIED
MEMORY RANGE ILLEGAL

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to Honeywell Bull Response Center. Rebooting is not necessary.

MC: ASSIGN SCU <unit id>
SCU RECONFIGURATION GATE NOT SHUT

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

M
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MC: ASSIGN SCU <unit_id>
COULD NOT ASSIGN MEMORY ON SCU ASSIGN

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary. It may be possible to "ASSIGN" memory back via the "ASGNC" or "MC A MEM" operator verb.

MC: ASSIGN SCU <unit_id>
PORTS COULD NOT BE MASKED

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

MC: ASSIGN SCU <unit_id>
SCU RECONFIGURATION IN PROGRESS

A previous request to "Reconfigure" an SCU is in execution. This request is rejected.

Operator Action: None. When the current SCU request is complete, resubmit the rejected request.

MC: ASSIGN SCU <unit_id>
SCU ALREADY ASSIGNED

A request has been made to "ASSIGN" this SCU. This SCU is already assigned. The request is rejected.

Operator Action: None.

MC: SCU <unit_id> ASSIGNED

This response is returned if the request was successful. No other information will be given.

Operator Action: None.

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MC: ASSIGN SCU <unit id>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN SCU <unit id>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN SCU <unit id>
SCU A/R NOT VALID ON THIS PLATFORM

This response is returned if the assign was requested on an DPS 8/70 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN SCU <unit id>
SCU RECONFIGURATION REQUEST DENIED
CPU RECONFIGURATION IN PROGRESS

A previously requested "ASSIGN/RELEASE" or "RELIEF" process is in execution.

Operator Action: Wait for "CPU" reconfiguration to complete and retry the request.

MC: ASSIGN SCU <unit id>
SCU RECONFIGURATION REQUEST DENIED
ERROR IN "\$RASE", SNAP TAKEN

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

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MC: ASSIGN SCU <unit_id>
SCU RECONFIGURATION REQUEST DENIED
CU NOT ACCESSIBLE

An SCU port or a CPU port was not enabled.

Operator Action: Verify configuration. If the SCU is in use by another system, this is the denial that is returned.

ASSIGN IOP Errors

This processor calls "IOS2" Entry Point 3 to make the assignment request for an "IOP". "IOS2" uses the "RAS8" message format. A status code is returned for processing and is checked against the "IOP" message table for selection of the proper message. If the status is not in the table, another error message is produced (See General Errors (All Level - System Errors)).

System Replies Possible:

MC: IOP <unit_id> ASSIGNED

This response is returned if the request was successful. No other information will be given.

Operator Action: None.

MC: ASSIGN IOP <unit_id>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: ASSIGN IOX <unit_id>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the assign was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

M
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MC: ASSIGN IOP <unit id>
REQUESTED IOP NOT CONFIGURED

The IOP requested to be assigned to the system is not configured on the system. The request is rejected.

Operator Action: Check the system's configuration for the list of valid IOP's and reenter the message with the correct IOP unit_id number.

MC: ASSIGN IOP <unit id>
REQUESTED IOP IS NOT RELEASED

A request has been issued to assign the IOP to the system. The requested IOP is valid, however, it is already assigned.

Operator Action: None.

MC: ASSIGN IOP <unit id>
SCU IS IN "MANUAL"

The SCU switch is set to "MANUAL" position.

Operator Action: Set the "SCU" switch to "PROGRAM" and reenter the request. If the "SCU" switch is already in "PROGRAM", notify Honeywell Bull Response Center.

MC: ASSIGN IOP <unit id>
IOP DOES NOT RESPOND

When the assign was issued to the IOP, it failed to connect. The request is discarded.

Operator Action: Contact the Honeywell Bull Response Center.

MC: ASSIGN IOP <unit id>
INVALID IOP NUMBER

The requested IOP number is not within the valid range of numbers. The message is rejected.

Operator Action: Check the system's configuration for the IOP unit_id numbers. Reenter the message with a correct IOP number or ignore the response.

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MC: ASSIGN IOP <unit id>
IOP'S PROGRAM MODE NOT SET

The program switch for the IOP is not set to "PROGRAM".

Operator Action: Set the IOP switch to "PROGRAM" and resubmit the request.

MC: ASSIGN IOP <unit id>
PORT IS ENABLED

An assign has been issued for this IOP and the PORT is already enabled.

Operator Action: None.

MC: ASSIGN IOP <unit id>
IOP IS ALREADY ASSIGNED

A request has been issued to assign the IOP to the system. The requested IOP is valid, however, it is already assigned.

Operator Action: None.

RELEASE Errors

The "RELEASE" processor determines which of its subprocessors will handle the request and calls that routine.

System Replies Possible:

MC: RELEASE <object> <unit id>
COMMAND -NO- MATCH RELEASE REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator action: Contract the Honeywell Bull Response Center.

MC: RELEASE <object> <unit id>
RLSE EXT. CMD. -NO- MATCH ON TABLE (SYSERR)

The extended command code (object) does not match anything in the table that is releasable. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

M
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MC: <message text>
RLSE EXT.CMD. -NO- MATCH ON TABLE (SYSERR)

The extended command code (object) does not match anything in the table that is assignable. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <message text>
COMMAND -NO- MATCH RELEASE REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

RELEASE CPU Errors

This processor calls ".MRAS2" Entry Point 1 to make the release request for a "CPU". The routine "RAS2" is a "RAS8" module and uses the "RASE" message format. A status code is returned for processing and is checked against the "CPU" message table for selection of the proper message. If the status is not in the table, another error message is produced (see General Errors (All Levels - System Errors)).

System Replies Possible:

MC: CPU <unit_id> RELEASE

This response is returned if the request was successful. No other information will be given.

Operator Action: None.

MC: RELEASE CPU <unit_id>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

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MC: RELEASE CPU <unit id>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

MC: RELEASE CPU <unit id>
CPU FAILED TO RESPOND

An attempt was made to release a CPU which did not respond to the connect. The message is rejected and the CPU is left in the RELEASED state from GCOS(s) point of view.

Operator Action: Check the status of the CPU being released. Check switches and configuration. If acceptable, notify the Honeywell Bull Response Center.

MC: RELEASE CPU <unit id>
RELIEF/WARP PROCESSING IN PROGRESS

The assign command was issued while a processor is in the RELIEF/WARP state.

Operator Action: Retry the message when the RELIEF/WARP is over.

MC: RELEASE CPU <unit id>
INVALID CPU (RANGE > 5 OR < 0)

The CPU request is not unit numbers 0 through 5. The message is rejected.

Operator Action: Check the configuration for the correct range of CPU(s) and resubmit the request.

MC: RELEASE CPU <unit id>
INVALID MODE INDICATOR

Something other than "-TEST" was detected or "-TEST" has been requested on an invalid platform (i.e., DPS 88 system).

Operator Action: None.

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MC: RELEASE CPU <unit id>
REQUEST TEST MODE/ALREADY IN TEST MODE

The CPU was requested to be put into "-TEST" MODE while a CPU is already in test mode.

Operator Action: None.

MC: RELEASE CPU <unit id>
ALREADY IN PROGRESS

A CPU request is already in progress. The message is discarded.

Operator Action: Resubmit the request when the current processor request has finished.

MC: RELEASE CPU <unit id>
CPU NOT CONFIGURED

The CPU requested is not in the system configuration.

Operator Action: Check the system configuration for valid CPU(s) and resubmit the request.

MC: RELEASE CPU <unit id>
CPU ALREADY RELEASED

The requested release of the CPU is invalid. The CPU is already released from the system.

Operator Action: None.

MC: RELEASE CPU <unit id>
ONLY ONE CPU CONFIGURED

This CPU is the only CPU configured on the system. It cannot be released.

Operator Action: None.

MC: RELEASE CPU <unit id>
THIS IS ONLY AVAILABLE PROCESSOR

This CPU is the only CPU available to the system. It cannot be released.

Operator Action: None.

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MC: RELEASE CPU <unit id>
DPS8, ELS OR RPM FAILED TO PARK IN 8 SEC.

The processor failed to "PARK" within 8 seconds. It is left in the RELEASED state. This may cause a "fault on fault" condition to occur.

Operator Action: Check the CPU switch settings. If they are acceptable, notify the Honeywell Bull Response Center.

MC: RELEASE CPU <unit id>
CPU FAILED TO PARK

A release command is executed for a faulty CPU. The faulty processor will not "PARK" and is left in the RELEASED state. This may cause a "fault on fault" condition to occur.

Operator Action: Notify the Honeywell Bull Response Center.

RELEASE MEMORY Errors

This processor calls "POR5", Entry Point 5 to make a release of the requested memory. If Programs are involved in the "MEMORY" release, "MEMREL" is spawned. The same messages that are currently being displayed from "POR5" and the spawning and execution of "MEMREL" are produced plus the messages produced by "RASE". The following is the format of messages created as the result of a release "MEMORY" request:

MC: RELEASE MEMORY <ssssss nnnnnn>
NOT COMPLETE
Spawn information
Messages being returned from "MEMREL"
MC: RELEASE MEMORY <ssssss nnnnnn>
MEMORY SUCCESSFULLY RELEASED

If an error occurs during the release or memory cannot be released, a status code is returned with the error indication. If the status code is not found in the MEMORY table, another error message is produced (see General Errors (All Levels - System Error)).

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System Replies Possible:

MC: RELEASE MEMORY <ssssss nnnnnn>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: RELEASE MEMORY <ssssss nnnnnn>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

MC: RELEASE MEMORY <ssssss nnnnnn>
NOT COMPLETE

This response is returned in two instances, when "POR5" gets the release MEMORY request and if the release process is still being carried out every 30 seconds. This is an informational message only.

Operator Action: None.

MC: RELEASE MEMORY <ssssss nnnnnn>
MEMORY SUCCESSFULLY RELEASED

This response is returned if the request was successful. No other information will be given after this message.

Operator Action: None.

MC: RELEASE MEMORY <ssssss nnnnnn>
ATTEMPTED RELEASE UNSUCCESSFUL

The MEMORY requested to be released cannot be released. Programs residing in the portion of the affected area cannot be moved. The request has been discarded.

Operator Action: Check the contents of MEMORY with a "LSTCR". Check if part of the request is "HARD CORE" location.

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MC: RELEASE MEMORY <ssssss nnnnnn>
ANOTHER REQUEST IN PROGRESS, (TRY LATER)

A release MEMORY request is currently being processed. The current request is discarded.

Operator Action: Wait until the MEMORY release in execution is completed and then reenter the request.

MC: RELEASE MEMORY <ssssss nnnnnn>
INVALID MEMORY REQUEST

The MEMORY release request is not correct. The message is rejected.

Operator Action: Reenter the message properly.

MC: RELEASE MEMORY <ssssss nnnnnn>
MEMORY RANGE ILLEGAL

The release MEMORY request is outside the bounds of configured memory. The message is rejected.

Operator Action: Type "LSTCR" to get a map of configured memory and then resubmit the message.

MC: <message text>
PROGRAMS BEING MOVED (TRY LATER)

A release memory request is currently in progress and cannot handle this additional request.

Operator Action: None. The message should be reentered after the completion of the request that is currently being serviced.

MC: <message text>
ANOTHER REQUEST IN PROGRESS, (TRY LATER)

A release memory request is currently being processed. This additional request cannot be acted upon until the current request is completed.

Operator Action: None. The message should be reentered after the completion of the request that is currently being serviced.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MC: <message text>
NOT COMPLETE

The release MEMORY request has not completed. This message is printed to the system console every 30 seconds until the request has completed processing the request.

Operator Action: None.

RELEASE SCU Errors

This processor calls "RAS3" to make the release request for an "SCU". The routine "RAS3" is a "RAS8" module and uses the "RASE" message format. It is also a new module specifically designed for assigning and releasing an SCU and all of its components. A status code is returned for processing and is checked against the "SCU" message table for selection of the proper message. If the status is not in the table, another error message is produced (see General Errors (All Levels - System Error)). The release request will take time to complete such that after the initial request is made to release, the request is queued in a clock queue and checked every 10 seconds until it is either completed or an error status is returned.

System Replies Possible:

MC: RELEASE SCU <unit id>
NOT IMPLEMENTED YET

This indicates that a planned function was attempted, but is not yet in place and activated.

Operator Action: None.

MC: RELEASE SCU <unit id>
SCU NUMBER NOT VALID

The SCU number is not within the valid range. At present the only SCU numbers considered valid are SCU 0 and 1. This request is rejected.

Operator Action: None.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MC: RELEASE SCU <unit id>
CANNOT RELEASE LAST SCU

A request has been issued to release the last remaining SCU configured on this system. The request is rejected.

Operator Action: None. If SCU is released, another one must be reassigned to the system first.

MC: RELEASE SCU <unit id>
SCU ALREADY RELEASED

A request has been issued to RELEASE this SCU from the system. A previous request has already caused this SCU to be released.

Operator Action: None.

MC: RELEASE SCU <unit id>
LOWER SCU CANNOT BE RELEASED

A request has been issued to release the lower SCU (SCU 0) from the system. This cannot be done; the request is rejected.

Operator Action: None.

MC: RELEASE SCU <unit id>
MEMORY CANNOT BE RELEASED

The GCOS modules reside in this part of memory and cannot be moved.

Operator Action: None.

MC: RELEASE SCU <unit id>
MEMORY REQUEST ALREADY IN PROGRESS

A request to "Reconfigure" MEMORY is already in execution. The requested SCU cannot be released until the current request has completed.

Operator Action: Wait until the executing "Reconfiguration" MEMORY request has completed and resubmit this RELEASE SCU request, else, ignore the response if no action is desired.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MC: RELEASE SCU <unit id>
SCU RECONFIGURATION REQUEST DENIED
MEMORY REQUEST ILLEGAL

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

MC: RELEASE SCU <unit id>
SCU RECONFIGURATION REQUEST DENIED
MEMORY RANGE ILLEGAL

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

MC: RELEASE SCU <unit id>
SCU RECONFIGURATION GATE NOT SHUT

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

MC: RELEASE SCU <unit id>
PORTS COULD NOT BE MASKED

This is a system error.

Operator Action: Report the error to the Honeywell Bull Response Center. Memory is left released. It can be reassigned via "ASGNC" or by the "MC A MEM" operator verb.

MC: RELEASE SCU <unit id>
SCU RECONFIGURATION IN PROGRESS

A previous request to "Reconfigure" an SCU is in execution. This request cannot be honored and is rejected.

Operator Action: None. When the current SCU request is complete, resubmit the rejected request.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MC: SCU <unit_id> RELEASED

This response is returned if the request was successful. No other information will be given.

Operator Action: None.

MC: RELEASE SCU <unit_id>
NOT COMPLETE

This response is returned every 30 seconds until either the completion status or an error status is returned. This is an informational message.

Operator Action: None.

MC: RELEASE SCU <unit_id>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: RELEASE SCU <unit_id>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

MC: RELEASE SCU <unit_id>
SCU A/R NOT VALID ON THIS PLATFORM

This response is returned if the release was requested on an DPS 8/70 system. The request will not be honored.

Operator Action: None.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MC: RELEASE SCU <unit_id>
SCU RECONFIGURATION REQUEST DENIED
CPU RECONFIGURATION IN PROGRESS

A previously requested "ASSIGN/RELEASE" or "RELIEF" process is in execution.

Operator Action: Wait for "CPU" reconfiguration to complete and retry the request.

MC: RELEASE SCU <unit_id>
SCU RECONFIGURATION REQUEST DENIED
ERROR IN "\$RASE", SNAP TAKEN

This is a system error.

Operator Action: A "\$RASE" snap is taken. Save printer or accounting file output. Report error to the Honeywell Bull Response Center. Rebooting is not necessary.

MC: RELEASE SCU <unit_id>
SCU RECONFIGURATION REQUEST DENIED
SCU NOT ACCESSIBLE

An SCU port or a CPU port was not enabled.

Operator Action: Verify configuration. If the SCU is in use by another system, this is the denial that is returned.

RELEASE IOP Errors

This processor calls "IOS2" Entry Point 2 to make the release request for an "IOP". "IOS2" uses the "RAS8" message format. A status code is returned for processing and is checked against the "IOP" message table for selection of the proper message. If the status is not in the table, another error message is produced (see General Errors (All Levels - System Error)).

System Replies Possible:

MC: IOP <unit_id> RELEASED

This response is returned if the request was successful. No other information will be given.

Operator Action: None.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MC: RELEASE IOP <unit_id>
USE MSOS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 90 system. The request will not be honored.

Operator Action: None.

MC: RELEASE IOX <unit_id>
USE SMAS COMMAND, NOT GCOS FUNCTION

This response is returned if the release was requested on a DPS 88 system. The request will not be honored.

Operator Action: None.

MC: RELEASE IOP <unit_id>
ONLY ONE IOP IS CONFIGURED

A request has been issued to release the only IOP configured on the system. The only IOP configured on the system cannot be released. The request is rejected.

Operator Action: None.

MC: RELEASE IOP <unit_id>
REQUESTED IOP NOT CONFIGURED

The IOP requested from being released to the system is not configured on the system. The request is rejected.

Operator Action: Check the system's configuration for the list of valid IOP's and reenter the message with the correct IOP unit_id number.

MC: RELEASE IOP <unit_id>
REQUESTED IOP IS NOT ASSIGNED

A request has been issued to release the IOP from the system. The requested IOP is valid, however, it is already released.

Operator Action: None.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MC: RELEASE IOP <unit_id>
IOP ERROR CODE IS NOT DEFINED

The error code for this IOP is not defined.

Operator Action: Contact the Honeywell Bull Response Center.

MC: RELEASE IOP <unit_id>
RELEASE OF THIS IOP WILL RELEASE "TY1"

If the IOP is released "TY1" (master console) will be lost.

Operator Action: Move "TY1", if possible, and resubmit the request. If "TY1" cannot be moved, the request cannot be completed.

MC: RELEASE IOP <unit_id>
SCU IS IN "MANUAL"

The SCU switch is set to "MANUAL" position.

Operator Action: Set the "SCU" switch to "PROGRAM" and reenter the request. If the "SCU" switch is already in "PROGRAM", notify the Honeywell Bull Response Center.

MC: RELEASE IOP <unit_id>
CONSOLE MANAGER ACTIVE ON IOP

The console manager is active on this IOP. The IOP cannot be released.

Operator Action: None.

MC: RELEASE IOP <unit_id>
INVALID IOP NUMBER

The requested IOP number is not within the valid range of numbers. The message is rejected.

Operator Action: Check the system's configuration for the IOP unit_id numbers. Reenter the message with a correct IOP number.

M
OUTPUT MESSAGES

MC: RELEASE IOP <unit id>
IOP ALREADY RELEASED

A request has been issued to release the IOP from the system. The requested IOP is valid, however, it is already released.

Operator Action: None.

MC: RELEASE IOP <unit id>
NO PATH TO ACCOUNTING TAPE

The accounting tape is assigned to this IOP. The IOP cannot be released.

Operator Action: None.

MC: RELEASE IOP <unit id>
IOP'S PROGRAM MODE NOT SET

The program switch for IOP is not set to "PROGRAM".

Operator Action: Set the IOP switch to "PROGRAM" and resubmit the request.

MC: RELEASE IOP <unit id>
PORT IS DISABLED

A release has been issued for this IOP and the PORT is already disabled.

Operator Action: Check the IOP and if not acceptable, correct the switches and reissue the request, else, notify the Honeywell Bull Response Center.

MC: RELEASE IOP <unit id>
NO PATH TO PERM DEVICE

A request to release the IOP would cause the system to crash as there are GCOS devices assigned to this IOP (i.e., ST1).

Operator Action: None.

M
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OUTPUT MESSAGES

MC: RELEASE IOP <unit id>
LAST AVAILABLE IOP CAN'T BE RELEASED

This is the only IOP remaining assigned to the system.

The last available IOP cannot be released.

Operator Action: No operator action is required until another IOP has been assigned to the system. Then this request can be resubmitted.

MC: RELEASE IOP <unit id>
MDRS/ITRS ACTIVE ON THIS IOP

A request has been issued to release an IOP where T&D(s) may be in the process of booting an MPC. The request is discarded.

Operator Action: When the T&D process is completed, resubmit the request.

MC: RELEASE IOP <unit id>
IOP RELEASE ALREADY PENDING

A release request is already in the process of releasing an IOP. This request is discarded.

Operator Action: When the previous request is completed, resubmit the request.

HELP Errors

The "HELP" processor performs four checks on the data before accepting it as a valid message to print.

System Replies Possible:

MC: HELP <message text>
COMMAND -NO- MATCH HELP REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

M
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MC: HELP <message text>
HELP QUEUE ENTRY INVALID - SYSTEM ERROR

An error has been detected in the queue structure.

Operator Action: Contact the Honeywell Bull Response Center.

MC: HELP <message text>
HELP MESSAGE TABLE EXHAUSTED - SYSTEM ERROR

During the building of this "HELP" message, the collection buffer has filled up and the message construction is not yet complete.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <message text>
COMMAND -NO- MATCH HELP REQUEST (SYSERR)

The command code in the queue does not agree with this entry point. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <message text>
MC HELP W/CONF. - WRONG E.P. (SYSERR)

The wrong Entry Point was dispatched to by the "RAS8" Executive. This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <input message repeated>
HELP QUEUE ENTRY INVALID - SYSTEM ERROR

Some type of error has occurred within "RASE".

Operator Action: Contract the Honeywell Bull Response Center.

General Errors (All Levels - System Error)

There are a number of errors associated with the Modify Configuration (MC) verb and are applicable to all of the RAS8 system modules. These errors were shown within their specific message sections and are listed here in a composit for ease of reference.

System Replies Possible:

MC: <message text>
INVALID SUB STATUS RETURNED (SYSTEM ERROR)

The called module, processing the reconfiguration request, has returned an invalid status of its disposition of the request to the "RASE" module "PROCON". This is a system error.

Operator Action: Contact the Honeywell Bull Response Center.

MC: <input message repeated>
INVALID EXT COMMAND CODE - SYSTEM ERROR

Some type of error has occurred within "RASE".

Operator Action: Contact the Honeywell Bull Response Center.

MC: <input message repeated>
QUE IS TEMPORARILY FULL - REENTER MESSAGE

The system is busy processing messages from this queue and no space remains for queuing the current message.

Operator Action: Wait for a completion or rejection message and resubmit the input message. If the message continues contact the Honeywell Bull Response Center.

M
OUTPUT MESSAGES

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MC: <message text>
DEVICE RECONFIGURATION REQUEST DENIED

```
-----  
<unit_id> IS [NOT] A |TAPE UNIT  
                    |DISK UNIT  
                    |PRINTER UNIT  
                    |READER UNIT  
                    |PUNCH UNIT  
                    |READER/PUNCH UNIT  
                    |VALID DEVICE TYPE  
-----
```

This is a safety check feature used by the new verb "MC" which causes the inadvertant reconfiguration of the wrong device type from taking place. As an example, releasing 1T2 as a printer device, when 1T2 is actually a TAPE device, will produce the above message with the proper message construction stating this is what would have taken place if allowed to continue with the RELEASE process. The request is rejected.

Operator Action: Resubmit the request using the proper unit_id to match the object.

CONSOLE OUTPUT INFORMATION MESSAGES

The "RAS8" system has a number of messages that are informational in nature only. As an example, the response "IOP 1 RELEASED" is self explanatory and needs no intervention. These messages were shown within their specific message sections and are listed here in a composit for ease of reference.

M
OUTPUT MESSAGES

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System Replies Possible:

```
-----  
MC: <object> <unit_id> | ASSIGNED  
                        | RELEASED  
                        | DEDICATED  
                        | UNDEDICATED  
-----
```

This response is sent for any reconfiguration request that goes through a RAS8 module to complete processing. This response means that the request was successfully completed. Calls to POP modules do not return the completed status for display through "RASE".

Operator Action: None.

MC: <message text>
COMMAND CURRENTLY NOT SUPPORTED

The console command that has been entered is not supported but is planned for future implementation. This response is not to be confused with the "INVALID COMMAND" response.

Operator Action: None.

MC: <message text>
CPU FUNCTION NOT YET IMPLEMENTED

The requested "CPU" function is planned but has not been implemented.

Operator Action: None.

MC: <message text>
NOT IMPLEMENTED YET

The requested function is planned but is not yet implemented.

Operator Action: None.

M
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MC: <message text>
QUE IS TEMPORARILY FULL - REENTER MESSAGE

The "RAS8" processing queues are temporarily full due to heavy request activity within "RASE".

Operator Action: None. This message will be returned only when the "RAS8" system is very busy. The rejected message can be reentered when some of the requested activity has been completed.

***\$ MCT MEMORY SIZE FIELD IGNORED, ON THE DPS 90**
***FOUND aaaaK OF MEMORY**

Startup Message. The DPS 90 RAS philosophy requires that memory release and assign be administered by MSOS, not GCOS. Therefore, Startup obtains memory size from Reserve Memory.

aaaa - Number of 1K blocks that were found.

The above message will not type if the optional memory size field of the \$ MCT statement is null.

Operator Action: None.

MDISP OR MPOPM NOT LOADED

Startup Message. The MDISP or MPOPM modules were not loaded. Startup aborts.

Operator Action: Check edit tape or \$LOAD section.

*****.MDNET SITE OPTION PATCH(ES) IGNORED, USE \$ MODOPT CARD(S)**

Startup Message. DNET Site Options must be specified with the \$ MODOPT configuration statement; patches to the option words are no longer permitted. Startup continues using the default values or values set by \$ MODOPT statements that may be present.

Operator Action: Correct the Startup job stream before next system boot.

M
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OUTPUT MESSAGES

* sssss-aa MEDIA AND DEVICE i ccc dd INCOMPT EXCH/MNT (Y/N)

CIOS Message. The density of the magnetic tape mounted on the device indicated is incompatible with the capabilities of the device. The operator is asked if exchanging magnetic tape handlers or mounting a new magnetic tape is desired.

Operator Action:

Enter Y - Either mount a magnetic tape with the correct density on the same handler or exchange handlers through the use of the EXCHG verb.

Enter N - Return control to the user program.

sssss MEDIA ERROR ON TAPE aaaaa
ADMINISTRATIVE ACTION IS REQUIRED.

Integrated Software Message. This is produced when journal software cannot find the append position on a journal tape.

sssss - SNUMB of Integrated Software
aaaaa - Reel number of the tape volume

Operator Action: Mount a different tape volume when the RDY message is issued. Notify the system administrator when the journal tape append position cannot be located. To establish a new base for recovery operations, perform one of the following as appropriate for the journal type involved:

- o For an after image journal, execute a DDBA command for all files assigned to the journal.
- o For an archived before image journal, execute a SRMK command for all files assigned to the journal.
- o For a checkpoint journal, execute the checkpoint journal dump job stream

(SYS_SOFTWARE/yyyy/JCL/CKJDUMP.SPWN)

yyyy - GCOS 8 Software Release identifier (e.g., 2500)

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

*MEDIA--S#sssss-aa DMT i-ccc-dd[(i-ccc-dd)] fc #nnnnn [filename] @tt.ttt

Peripheral Allocator Message. Requests operator action at the specified tape unit or disk subsystem. The second i-ccc-dd appears when an alternate unit was specified for the file.

DMT - Dismount
nnnnn - File, reel, or pack serial number

Operator Action: Dismount the specified tape(s) or pack(s) on the unit(s).

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears only on the first line and the time field (i.e., @tt.ttt) appears only on the last line. Different types (i.e., DMT and FPT) of specifiers may appear in the same *MEDIA message.

*MEDIA--S#sssss-aa FPT i-ccc-dd[(i-ccc-dd)] fc tt.ttt #nnnnn [filename]

Peripheral Allocator Message. Requests operator action at the tape unit specified. The second i-ccc-dd only appears when an alternate unit was specified for the file.

FPT - File Protect

Operator Action: Remove the write-permit ring from the specified device.

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears only on the first line and the time field (i.e., @tt.ttt) appears only on the last line. Different types (i.e., DMT and FPT) of specifiers may appear in the same *MEDIA message.

M
OUTPUT MESSAGES

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*MEDIA--S#sssss-aa LBL i-ccc-dd [(i-ccc-dd)] [filename] @tt.ttt

Peripheral Allocator Message. The reel on the specified tape unit is to be labeled. The second i-ccc-dd appears when an alternate unit is specified for the file.

LBL - Tape label

Operator Action: None.

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears only on the first line and the time field (i.e., @tt.ttt) appears only on the last line. Different types (i.e., LBL, MNT, NUM, RDY, and RNG) of specifiers may appear in the same *MEDIA message.

MEDIA--S#sssss-aa MNT i-ccc-dd [(i-ccc-dd)]#nnnn[-xx][filename] @tt.ttt

Peripheral Allocator Message. Requests operator action at the specified tape unit or disk subsystem.

xx - Reel sequence number. This is only present when a reel sequence number other than one is specified for a tape.

nnnn - File, reel, or pack serial number

The second i-ccc-dd appears when an alternate unit is specified for the file.

Operator Action: Mount the specified tape(s) or pack(s) on the unit(s).

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears only on the first line and the time field (i.e., @tt.ttt) appears only on the last line. Different types (i.e., LBL, MNT, RDY, and RNG) of specifiers may appear in the same *MEDIA message.

M
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*MEDIA--S#sssss-aa NUM i-ccc-dd [(i-ccc-dd)]

Peripheral Allocator Message. A work tape is mounted on the specified drive, but the reel number is not known. The second i-ccc-dd is present only if an alternate drive was specified for the file.

Operator Action: Use the Reel xx rrrrr reply to input the reel number to the system.

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears in the first line and the time field (i.e., @tt.ttt) appears in the last line. Different types (i.e., LBL, MNT, RDY, and RNG) of specifiers may appear in the same *MEDIA message.

*MEDIA--S#sssss-aa RDY i-ccc-dd [(i-ccc-dd)][filename] @tt.ttt

Peripheral Allocator Message. Requests operator action at the specified tape unit.

The second i-ccc-dd appears when an alternate unit is specified for the file.

Operator Action: Mount a work tape on the specified tape unit with the write permit ring in.

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears only on the first line and the time field (i.e., @tt.ttt) appears only on the last line. Different types (i.e., LBL, MNT, RDY, and RNG) of specifiers may appear in the same *MEDIA message.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

*MEDIA-- S#sssss-aa RNG i-ccc-dd [(i-ccc-dd)][filename] @tt.ttt

Peripheral Allocator Message. Requests operator action at the specified tape unit.

The second i-ccc-dd only appears when an alternate unit was specified for the file.

Operator Action: Insert a write permit ring in the tape on the specified unit and remount the tape on that unit.

NOTE: Multiple files may be specified on one *MEDIA message. If that is the case, the header (i.e., *MEDIA--S#sssss-aa) appears only on the first line, and the time field (i.e., @tt.ttt) appears only on the last line. Different types (i.e., LBL, MNT, RDY, and RNG) of specifiers may appear in the same *MEDIA message.

*MEM DSCRBD xxxx, FOUND yyyy, (1K BLKS) LOWER USED

Startup Message. The memory size entered on the \$ MCT statement is different from the actual memory size in the system. If the operator takes no action, the lower value is used.

xxxx - Number of 1K blocks described in the \$CONFIG section of Startup

yyyy - Number of 1K blocks actually on line

Operator Action: If the lower of the two values is insufficient, correct either the \$ MCT statement or the system controller switches.

MEM PARITY xxxx,YYYY

FALT Message. A search of memory initiated by a parity fault resulted in finding a location containing bad parity.

xxxx - Page number

YYYY - Offset within the page indicated by xxxx

Operator Action: Wait for next message that describes the cause and gives instructions.

M
OUTPUT MESSAGES

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***MEM RLSE F6ABRT x....x LOCATIONS STARTING AT y....y

GPOP Message. Release memory associated with a slave F6 abort will be put automatically under test.

x....x - Number of locations involved
y....y - Absolute starting address

Operator Action: Monitor resulting automatic testing and assign good memory back to GCOS after testing has been completed. Assign memory using the ASGNC verb.

NOTE: If the system hangs following this message due to large amount of memory which has been released, assign suspected good portions of memory back to GCOS using the ASGNC verb until enough memory is available for automatic memory test programs.

MEMORY CHECKSUM ERROR, CAN'T DO AUTOLOAD

Startup Message. Checksum of Part A of Startup (main body of code) failed. Autoload is also unsuccessful. Startup continues running normally.

Operator Action: None.

*** sssss: MEMORY RELEASE COMPLETE

MEMREL program spawned by RLSEC request. The requested memory was released and any processors released by MEMREL were reassigned. Job output will show how memory was released.

Operator Action: None.

*** sssss: MEMORY RELEASE IS INCOMPLETE, SEE PROGRAM OUTPUT

MEMREL program spawned by RLSEC request. MEMREL was unable to complete the request and the reason is shown in the output for the job. It may suggest that the RLSEC request be repeated.

Operator Action: Check/save job output.

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*MEMORY PARITY AT n....n

Startup Message. A memory parity was detected during execution of the dump portion of Startup. The erroneous memory location is flagged with a "P" on the dump. Startup continues until the dump is complete.

n....n - Memory location at which error occurred.

Operator Action: Notify the Honeywell Bull Response Center.

*MEMORY PARITY ERROR xxxxxx

DUMP Message. A memory parity error exists when dumping to the printer. Dump will continue.

xxxxxx - Location of error

Operator Action: None.

.MGEOT SYSOUT MESSAGES

SYSOUT Message. The following MGEOT messages are of the SYSOUT category and are either error messages (E) or informative messages (I). They take the form:

MGEOT ERROR(nnn)--(message text appears here)

OR

MGEOT INFO(nnn)--(message text appears here)

where nnn represents a numeric identifier peculiar to the SYSOUT MGEOT messages only.

Numbers 001-199 are mainline messages, 200-299 are remote messages, and 300-399 are initialization messages.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

A list of the messages, as they appear at the console, is given first; the details of each message and suggested operator action follow this list. Remember, the messages are presented in numeric order.

<u>NUMBER</u>	<u>TYPE</u>	<u>TEXT</u>
001	I	CANCL yyyyy DENIED, SPECIAL NOT IN EFFECT
002	I	BAD REDRC IN TABLE, OUTPUT TYPES ARE BAD
002	I	BAD REDRC IN TABLE, DESTINATIONS ARE BAD
003	I	URGC REQUEST APPLIED TO xx JOBS
004	E	ILLEGAL OUTPUT TYPE - SNAP TAKEN
005	E	DEV nnn NOT SUITABLE FOR OUTPUT CANDIDATES
006	E	ERROR CALCULATING S.FNWD - SNAP TAKEN
007	E	JOB CANDIDATE TABLE OVERFLOW - SNAP TAKEN
008	I	DEFERRED TABLE FULL-SPECIAL DENIED
009	I	vvvvv REQUEST APPLIED xxxx TIMES - JOB SPECIAL MADE
010	I	vvvvv REQUEST APPLIED xxxx TIMES - NO JOB SPECIAL MADE
011	E	READ STATUS ERROR ON NON-EXISTENT BLINK
012	I	ALIGN FORM & INTERRUPT i-ccc-dd
013	I	BLINK SPACE NEEDED
013	I	JOT SPACE NEEDED
013	I	BDI SPACE NEEDED
013	I	TEMP SPACE NEEDED
014	E	INVALID SPECIAL ENTRY - SNAP TAKEN
015	I	CAN'T COPY/PURGE - NO TAPES CONFIGURED
016	I	PLEASE FIX DEVICE i-ccc-dd
017	E	sssss DELETED-PRMFL SIZE ERROR-SNAP TAKEN
018	E	ERROR EXCHANGING JOB
019	I	ENTRY MADE IN DEFERRED SPECIALS TABLE FOR sssss
020	I	MOVED-PLEASE INTERRUPT i-ccc-dd
021	E	ERROR IN JOB OUTPUT TABLE SEGMENT
022	E	INVALID QUEUE ENTRY-SNAP TAKEN
023	E	ERROR IN BACKDOOR INFORMATION SEGMENT
024	E	INVALID DEVICE ASSIGNED TO IDLE SUBPROGRAM
025	I	ASCII PRINTER NEEDED
025	I	BCD PRINTER NEEDED
025	I	PUNCH NEEDED
025	I	WIDE ASCII PRINTER NEEDED
025	I	WIDE BCD PRINTER NEEDED
026	I	HOPPER ALERT i-ccc-dd
027	I	MANUAL HALT i-ccc-dd
028	I	CHAD BOX FULL i-ccc-dd
029	I	REMOVE ONE CARD i-ccc-dd

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

<u>NUMBER</u>	<u>TYPE</u>	<u>TEXT</u>
030	I	FEED ALERT i-ccc-dd
031	I	CARD JAM i-ccc-dd
032	I	CHECK PAPER i-ccc-dd
033	I	VFC ERROR i-ccc-dd
034	I	CHECK ALERT i-ccc-dd
035	I	WRITE ABORTED - ssssssssssss ON i-ccc-dd
036	I	LOST INTERRUPT ON i-ccc-dd
037	I	START FORM: ffffffff VFC: vvvvvv ssssss-aa ON i-ccc-dd
038	E	UNEXPECTED PUNCH TRANSLITERATION REQUEST
039	I	POWER OFF i-ccc-dd
040	I	ALERT AFTER PRT i-ccc-dd
041	E	READ STATUS ERROR ON DEV-xxx LLINK-yyyyyy
042	E	BAD OUTPUT TYPE IN JOB CANDIDATE TABLE
043	I	TRAIN & VFC IMAGES RELOADED - INTERRUPT i-ccc-dd
044	I	DEVICE RETURNED i-ccc-dd
045	I	DISMOUNT COPY/PURGE TAPE ON i-ccc-dd
046	E	sssss - UNABLE TO START BACKDOOR JOB
048	E	JOT TABLE - BLINK TABLE MISMATCH
050	E	REPOSITION ERROR--sssss - SNAP TAKEN
051	E	REPORT ABORTED--sssss - SNAP TAKEN
052	E	SNAP TAKEN - BAD STATUS - ssssssssssss FIX i-ccc-dd
055	E	ERROR IN CVTTYP ROUTINE
057	E	ERROR ENDING JOB
058	E	sssss - VFC LOAD ERROR i-ccc-dd
060	I	NO PAT SPACE FOR BACKDOOR FILE RELEASE
062	E	COPY/PURGE STATUS ERROR ON i-ccc-dd
063	I	READY COPY/PURGE ON i-ccc-dd
064	I	COPY/PURGE IS #nnnnn ON i-ccc-dd
065	I	SPECIFIC SPECIAL NOT ALLOWED FOR sssss
066	I	REDRC REQUEST DENIED OUTPUT TYPES ARE BAD
066	I	REDRC REQUEST DENIED DESTINATIONS ARE BAD
067	E	READ ERROR GETTING \$IDENT INFO - SNAP TAKEN
068	E	UNEXPECTED ABORT AT xxxxxx
069	I	JEND ALL ISSUED
070	E	.MLBL2/4 ERROR - STATUS ssssssssssss
071	E	TAPE ERROR PROCESSING sssss --- ssssssssssss
072	I	CANCL DENIED - NO COPY/PURGE IN PROGRESS
073	I	CANCL vvvvv PROCESSED
074	E	PAT SPACE ERROR FOR BACKDOOR JOB sssss
075	E	BACKDOOR JOB NOT FOUND IN BDI
076	I	REMOV vvvvv REQUEST APPLIED xxx TIMES
077	I	REMOV REDRC DENIED, OUTPUT TYPES ARE BAD
077	I	REMOV REDRC DENIED, DESTINATIONS ARE BAD

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

<u>NUMBER</u>	<u>TYPE</u>	<u>TEXT</u>
078	I	DISMOUNT TAPE REQUEST ACCEPTED
079	E	CP xxx CLEANPOINT ERROR - SYSTEM TRACE DISABLED
084	I	PAPER MOTION ALTER i-ccc-dd
085	I	sssss TRANSPORT ABORTED-- SEE EXECUTION REPORT
086	I	sssss CANNOT TRANSPORT-- SYSTEM n NOT ACTIVE
087	I	sssss CANNOT TRANSPORT-- BLINKS RELEASED
088	I	INVALID SUBTYPE FOR INTERSYSTEM COMMAND
089	I	sssss NOT IN JOT TABLE
090	I	RECEIVED AN INVALID INTERSYSTEM COMMAND
091	I	IS AN INVALID SYSTEM NUMBER
092	I	INTERSYSTEM COMMANDS INVALID IN A NON-SHARED SYSTEM
093	I	OFFLINE? i-ccc-dd
180	E	(message text varies depending on the error)
181	E	(message text varies depending on the error)
182	E	UNABLE TO PERSON ID QUEUE TYPE 20 - TABLE FULL
183	I	NO PERSON ID FOR snumb -RMT ACCESS WILL BE DENIED
201	I	REMOTE WAITING TABLE FULL
202	E	RMT ID NOT CONNECTED - SNAP TAKEN
203	E	ILLEGAL REMOTE REQUEST CODE
204	E	REMOTE WILL NOT FIT IN SUBPROGRAM
205	I	REMOTE INTERRUPTED TABLE FULL
206	E	PROCESSING JOB THAT WAS NEVER STARTED
207	I	sssss INTERRUPTED ON STA-xx
208	E	ILLEGAL REMOTE TCB MEDIA CODE
209	I	REDRC Ixx ONL RECEIVED
301	I	FOUND nnnnn BLINKS x PRINTER(S) y PUNCH(ES) & (NO) REMOTES
302	E	BAD SD.JOT DURING INITIALIZATION
303	E	BAD SD.BDI DURING INITIALIZATION
304	E	PAT POINTERS/BODIES OVERLAP
305	I	LIMITED BACKDOOR PAT SPACE
306	E	SYSOUT COMMUNICATION FILE NOT DEFINED
307	E	INVALID SCT ADDRESS IN .CRSCT

NOTE: If a message or operator action indicates that a SNAP is taken, this is done to either a dedicated PR2 or the accounting file. This SNAP and a System Technical Action Request (STAR) should be handled appropriately for Honeywell Bull investigation.

xxxxxxxxxxxxx - Device status

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT DISASTER

**** MGEOT ERROR MESSAGE (nnn) ABOVE REPORTS A ****
**** DISASTROUS CONDITION FROM WHICH GEOT CAN ****
**** NOT RESUME. PLEASE DUMP SYSTEM WHEN READY ****

SYSOUT Message. GEOT detected an error condition, as reported in the previous message, from which it cannot recover. No output is delivered and no queue entries are processed. This is repeated at one minute intervals until the system is taken down.

Operator Action: After warning TSS users and concluding wrap-up procedures, perform a system dump.

MGEOT INFO(001)-CANCEL yyyyy DENIED, SPECIAL NOT IN EFFECT

SYSOUT Message. An attempt was made to cancel a job output special that is not in effect.

Operator Action: None. You may use the SYSOUT SPEC console command to list the current specials.

MGEOT INFO(002)-BAD REDRC IN TABLE, xxxxxx ARE BAD

SYSOUT Message. An attempt was made to apply an existing redirect to a new job and an illegality in xxxx (Output Types or Destinations) was found. Refer to the message "MGEOT INFO(066)--REDRC REQUEST DENIED xxxxxx ARE BAD".

Operator Action: Use SYSOUT SPEC console command to list current special and cancel the bad entry.

MGEOT INFO(003)-URGC REQUEST APPLIED TO xx JOBS

SYSOUT Message. This is a SYSOUT response to the console command URG. No message is output if the desired job is in execution.

Operator Action: None.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(004)-ILLEGAL OUTPUT TYPE - SNAP TAKEN

SYSOUT Message. A queue entry was received with an illegal output type field.

Operator Action: None.

MGEOT ERROR(005)-DEV nnn NOT SUITABLE FOR OUTPUT CANDIDATES

SYSOUT Message. A redirect was issued to a device that is incapable of handling the output type.

Operator Action: Correct the device name and retry. Use STATS console command to check output type of job(s) being redirected.

MGEOT ERROR(006)-ERROR CALCULATING S.FNWD - SNAP TAKEN

SYSOUT Message. The number of sectors left in the last llink is incorrect. The last llink of report being delivered will not read.

Operator Action: Submit a System Technical Action Request (STAR) and include a copy of the snapshot dump.

MGEOT ERROR(007)-JOB CANDIDATE TABLE OVERFLOW - SNAP TAKEN

SYSOUT Message. A logic error occurred in GEOT.

Operator Action: Submit a System Technical Action Request (STAR) and include a copy of the snapshot dump.

MGEOT INFO(008)-DEFERRED TABLE FULL-SPECIAL DENIED

SYSOUT Message. SYSOUT special for job still in execution was entered, but the table to retain such specials was full (maximum of 10).

Operator Action: Retry console command later or after job is in SYSOUT.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(009)-vvvvv REQUEST APPLIED xxxx TIMES - JOB SPECIAL MADE

SYSOUT Message. This is a SYSOUT response to console command vvvvv. The request was applied to xxxx jobs and the request added to the job specials table.

Operator Action: None.

MGEOT INFO(010)-vvvvv REQUEST APPLIED xxxx TIMES - NO JOB SPECIAL MADE

SYSOUT Message. This is a SYSOUT response to console command vvvvv. It is possible that no entry was made because the request was by SNUMB or SYSOUT identifier, special already exists, or specials table is full.

Operator Action: None.

MGEOT ERROR(011)-READ STATUS ERROR ON NON-EXISTENT BLINK

SYSOUT Message. This indicates that a read error occurred on blink <1 or > maximum configured. A GEOT disaster procedure will be invoked.

Operator Action: Submit a System Technical Action Request with a copy of the HCM,P03 dump.

MGEOT INFO(012)-ALIGN FORM & INTERRUPT i-ccc-dd

SYSOUT Message. A forms template record was encountered and a MME GESPEC special interrupt request was entered for device (i-ccc-dd).

Operator Action: If the device has forms properly aligned, place the device in STANDBY and then return it to READY. If the device does not have the forms aligned, and it is desired to print the forms template again, use the REVERSE/REWIND button to reprint the forms template. This message will be reissued following reprinting.

M
OUTPUT MESSAGES

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MGEOT INFO(013)-xxxxx SPACE NEEDED

SYSOUT Message. A threshold for BLINK, JOT, BDI, or TEMP file space was reached.

Operator Action: A PURGE may be required. If the space is not obtained through normal job delivery, this message will recur (e.g., many jobs for a specific remote which is not pulling its output). BLINK indicates that not enough blinks could be flushed to get above the threshold value. JOT indicates a shortage of Job Output Table space. BDI indicates a shortage of Backdoor Information table space. TEMP indicates that a large amount of system temporary file space is occupied by backdoor jobs.

NOTE: If this message indicates that BLINK space is needed and an unpurged job has aborted since the last system boot, additional SYSOUT BLINK space can be released by a reboot with SYSOUT recovery.

MGEOT ERROR(014)-INVALID SPECIALS ENTRY - SNAP TAKEN

SYSOUT Message. An unrecognizable job output special was encountered.

Operator Action: Submit a System Technical Action Request (STAR) and include a copy of the snapshot dump.

MGEOT INFO(015)-CAN'T COPY/PURGE - NO TAPES CONFIGURED

SYSOUT Message. A COPY or PURGE console command was entered; GEOT found no tapes configured.

Operator Action: None.

MGEOT INFO(016)-PLEASE FIX DEVICE i-ccc-dd

SYSOUT Message. GEOT is awaiting corrective action for a previous message for device i-ccc-dd.

Operator Action: Either ready device i-ccc-dd or enter a console command to exchange devices.

M
OUTPUT MESSAGES

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MGEOT ERROR(017)-sssss DELETED-PRMFL SIZE ERROR-SNAP TAKEN

SYSOUT Message. Backdoor job sssss is using a permanent file of size 0 or greater than 2**18 llinks.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of snapshot dump.

MGEOT ERROR(018)-ERROR EXCHANGING JOB

SYSOUT Message. A GEOT error occurred while moving a job for a device exchange.

Operator Action: Submit a System Technical Action Request (STAR) with a dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(019)-ENTRY MADE IN DEFERRED SPECIALS TABLE FOR sssss

SYSOUT Message. Response to a request for job sssss that is known to the system, but not yet in the job output table.

Operator Action: None.

MGEOT INFO(020)-sssss MOVED - PLEASE INTERRUPT i-ccc-dd

SYSOUT Message. Response to an exchange or release request for a device owned by GEOT after successfully acquiring a similar device.

Operator Action: Place new device i-ccc-dd in STANDBY and then in READY. An electronic VFC, if specified, will be loaded in the new device; a paper VFC and/or special form, if required, should be moved to the new device.

MGEOT ERROR(021)-ERROR IN JOB OUTPUT TABLE SEGMENT

SYSOUT Message. GEOT determined that an error exists in a job output table during execution.

Operator Action: Submit a System Technical Action Request (STAR) with a dump of HCM,P03. A GEOT disaster procedure will be invoked.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(022)-INVALID QUEUE ENTRY-SNAP TAKEN

YSOUT Message. A queue entry with invalid data was received by GEOT.

Operator Action: Submit a System Technical Action Request (STAR) and include a copy of the snapshot dump.

MGEOT ERROR(023)-ERROR IN BACKDOOR INFORMATION SEGMENT

YSOUT Message. GEOT determined that an error exists in a backdoor information segment during its processing.

Operator Action: Submit a System Technical Action Request (STAR) with a dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(024)-INVALID DEVICE ASSIGNED TO IDLE SUBPROGRAM

YSOUT Message. GEOT cannot determine the output device type.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(025)-xxxxxx NEEDED

YSOUT Message. GEOT was denied allocation of a device which was known at initialization time. Device xxxxxx can be:

WIDE BCD PRINTER
WIDE ASCII PRINTER
BCD PRINTER
ASCII PRINTER
PUNCH

Operator Action: Assign a device previously released but currently usable, if applicable.

MGEOT INFO(026)-HOPPER ALERT i-ccc-dd

YSOUT Message. Punch device i-ccc-dd returned the status indicated in this message.

Operator Action: Correct the hopper/stacker condition and ready the device.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(027)-MANUAL HALT i-ccc-dd

SYSOUT Message. Device i-ccc-dd was placed in standby.

Operator Action: Ready the indicated device.

MGEOT INFO(028)-CHAD BOX FULL i-ccc-dd

SYSOUT Message. Punch device i-ccc-dd returned status of a full chad box.

Operator Action. Empty the chad box of the punch device i-ccc-dd and ready that device.

MGEOT INFO(029)-REMOVE ONE CARD i-ccc-dd

SYSOUT Message. Punch device i-ccc-dd returned a data alert status which indicates a card has been incorrectly punched; the next card punched should be a correct version of the erroneous card.

Operator Action: Run out the device i-ccc-dd and remove the last card punched.

MGEOT INFO(030)-FEED ALERT i-ccc-dd

SYSOUT Message. The punch device i-ccc-dd returned the status indicated in the message.

Operator Action: Correct the condition at device i-ccc-dd and ready it.

MGEOT INFO(031)--CARD JAM i-ccc-dd

SYSOUT Message. Punch device i-ccc-dd returned the status indicated in the message.

Operator Action: Correct the condition at device i-ccc-dd and ready it.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(032)-CHECK PAPER i-ccc-dd

SYSOUT Message. Printer device i-ccc-dd returned the status indicating a stacker alert, paper jam, or paper low-condition exists.

Operator Action: Correct the condition at device i-ccc-dd and ready it.

MGEOT INFO(033)-VFC ERROR i-ccc-dd

SYSOUT Message. Printer device i-ccc-dd returned the status indicated in the message.

Operator Action: Correct the condition at printer device i-ccc-dd and ready it.

MGEOT INFO(034)-CHECK ALERT i-ccc-dd

SYSOUT Message. Printer device i-ccc-dd returned the status given in the message.

Operator Action: Correct the device's condition and ready it.

MGEOT INFO(035)-WRITE ABORTED - ssssssssssss ON i-ccc-dd

SYSOUT Message. IOS aborted the I/O for device i-ccc-dd and returned status ssssssssssss.

Operator Action: Correct erroneous condition at device i-ccc-dd and ready it or enter the console command to exchange devices.

MGEOT INFO(036)-LOST INTERRUPT ON i-ccc-dd

SYSOUT Message. IOS returned the status given in the message.

Operator Action: Correct the condition which caused the status at device i-ccc-dd and ready it or enter the console command to exchange devices.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(037)--START FORM: ffffffff VFC: vvvvvv sssss-aa ON i-ccc-dd

SYSOUT Message. A \$ REPORT, \$ REPTR, or \$ REPTL statement specifying that form name ffffffff and/or VFC vvvvvv was included for job sssss and activity aa. This job is now being started on device i-ccc-dd.

Operator Action: Change to correct form and/or VFC at device i-ccc-dd; align form and ready the device. A form or VFC name of all blanks indicates standard form or VFC.

MGEOT ERROR(038)-UNEXPECTED PUNCH TRANSLITERATION REQUEST

SYSOUT Message. A GEOT logic error occurred while handling a remote preformatted punch output.

Operator Action: Submit a System Technical Action Request (STAR) with a dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(039)-POWER OFF i-ccc-dd

SYSOUT Message. Device i-ccc-dd is powered down or MPC is inoperable.

Operator Action: Correct the condition at device i-ccc-dd and ready it or enter the console command to exchange devices.

MGEOT INFO(040)-ALERT AFTER PRT i-ccc-dd

SYSOUT Message. A hardware error occurred.

Operator Action: Correct the condition at device i-ccc-dd and ready it or enter the console command to exchange devices.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(041)-READ STATUS ERROR ON DEV-xxx LLINK-yyyyyy

SYSOUT Message. A read error status was returned to GEOT while readying the indicated device and relative llink number. If a non-backdoor job, the blink containing the llink indicated in the message will be marked in error and will not be reused until a system boot is done which includes a NO response to the SYSOUT recovery question. If the name of the device is reported as xxx, another error occurred while trying to find the device name in the system name table. A SNAP will be taken.

Operator Action: Given the SNAP to the appropriate site personnel for their investigation.

MGEOT ERROR(042)-BAD OUTPUT TYPE IN JOB CANDIDATE TABLE

SYSOUT Message. A GEOT logic error occurred.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(043)-TRAIN & VFC IMAGES RELOADED - INTERRUPT i-ccc-dd

SYSOUT Message. The GEOT detected a lost train and/or VFC image and reloaded the image on the controller.

Operator Action: Realign the currently loaded form, place the device in STANDBY, and then return it to READY.

MGEOT INFO(044)-DEVICE RETURNED i-ccc-dd

SYSOUT Message. In response to a RLSE i-ccc-dd operator entry.

Operator Action: None required; however, it may be wise to reassign the device, if possible, to prevent recurring of message, "GEOT INFO(025)--xxxxxxx NEEDED".

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(045)-DISMOUNT COPY/PURGE TAPE ON i-ccc-dd

SYSOUT Message. Tape drive i-ccc-dd was released by GEOT; if additional copy/purge jobs exist, message "GEOT INFO(063)--READY COPY/PURGE ON i-ccc-dd" will be issued.

Operator Action: Dismount copy/purge tape from i-ccc-dd and label per site specifications.

MGEOT ERROR(046)-sssss - UNABLE TO START BACKDOOR JOB

SYSOUT Message. Either the PAT information is erroneous or the backdoor information for sssss could not be found.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT ERROR(048)-JOT TABLE - BLINK TABLE MISMATCH

SYSOUT Message. An inconsistency between the blink table and JOT segment was found.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(050)-REPOSITION ERROR-sssss - SNAP TAKEN

SYSOUT Message. An error occurred for job sssss while either repositioning with the printer button interface or repositioning due to internal table overflow.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of snapshot dump.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(051)-REPORT ABORTED-sssss - SNAP TAKEN

SYSOUT Message. The job will end with an -- ERR -- banner. The message is added to the user's output to advise the user why the report was aborted. The reason, which appears as sssss in the message, may be one of the following:

- TRADEMARK - A record was encountered which did not belong to the job being delivered (mixed SYSOUT).
- REPORT CODE - A record was encountered which did not belong to the report being delivered.
- MEDIA CODE - A record was encountered which did not belong to the report being delivered.
- READ STATUS - A bad read status was returned to GEOT; if not a backdoor job, the blink being read will be marked in error. (msg 041)
- .MSYOT I/O - The collection of this report was terminated by SYOT due to a write error.
- ILLEGAL RCW - A record was encountered which contained an improper record control word.
- MISSING EOF - An attempt was made to read past the physical end of a backdoor file.
- LOST PAT UPD - An attempt was made to read the next llink of a normal job; however, no link pointer was found in the last llink of the current link.

Whenever a report is aborted for any of the above reasons, the operator is informed and a SNAP of GEOT is taken.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump, except for "MISSING EOF". For "MISSING EOF" check all backdoor files for any missing EOF and correct error.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(052)-SNAP TAKEN - BAD STATUS - ssssssssssss FIX i-ccc-dd

SYSOUT Message. Device i-ccc-dd returned an unrecognizable status. This message will also be issued if an error condition is encountered while trying to issue the "*** LINE TOO LONG" message.

ssssssssss - Status

Operator Action: Correct the condition at device i-ccc-dd and ready it; or enter the console command to exchange devices.

MGEOT ERROR(055)--ERROR IN CVTTYP ROUTINE

SYSOUT Message. A GEOT logic error occurred.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(057)--ERROR ENDING JOB

SYSOUT Message. A GEOT logic error occurred.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(058)-sssss - VFC LOAD ERROR i-ccc-dd

SYSOUT Message. An error occurred while trying to load an electronic VFC. AR and QR displayed on the report indicate the type of error encountered. Errors include missing VFC and I/O errors on load. A snapshot dump is taken and a report is delivered with standard VFC.

Operator Action: None.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(060)-NO PAT SPACE FOR BACKDOOR FILE RELEASE

SYSOUT Message. This message should occur only if the message "GEOT INFO(305)-- LIMITED BACKDOOR PAT SPACE" was issued. This message (GEOT INFO(060)) indicates a condition of insufficient PAT segment space needed to hold a large backdoor file PAT for release.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT ERROR(062)-COPY/PURGE STATUS ERROR ON i-ccc-dd

SYSOUT Message. A status error was received from tape device i-ccc-dd. This message is issued while trying to obtain a device for copy or purge.

Operator Action: Correct the condition at device i-ccc-dd or enter the console command to release the device. A snapshot dump is taken for further investigation of the problem.

MGEOT INFO(063)--READY COPY/PURGE ON i-ccc-dd

SYSOUT Message. Device i-ccc-dd was obtained for a copy or a purge and needs to be made ready.

Operator Action: Mount scratch reel with write ring on i-ccc-dd.

MGEOT INFO(064)-COPY/PURGE IS #nnnnn ON i-ccc-dd

SYSOUT Message. Displays reel number nnnnn after label processing.

Operator Action: None.

MGEOT INFO(065)-SPECIFIC SPECIAL NOT ALLOWED FOR sssss

SYSOUT Message. A special was entered for job sssss, but it is not in JOT and is not known to the system. A job is "known to the system" for GEOT's purposes, when it can be found in the SD.SNB (SNUMB) segment.

Operator Action: Reenter request when job is known to the system or when it is in SYSOUT.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT INFO(066)-REDRC REQUEST DENIED xxxxxx ARE BAD

SYSOUT Message. If xxxxxx is OUTPUT TYPES, a redirect was entered with both old and new output types which conflict (e.g., REDRC PRT PNC). If xxxxxx is DESTINATIONS, a redirect was entered which contained a bad new destination (e.g., REDRC IAA RMT). An attempt was made to apply a new redirect to an existing job and an illegality was found. Refer to message, "MGEOT INFO(002)-BAD REDRC IN TABLE, xxxxxx ARE BAD".

Operator Action: Reenter correct redirect.

MGEOT ERROR(067)-READ ERROR GETTING \$ IDENT INFO - SNAP TAKEN

SYSOUT Message. A bad read status was returned while attempting to read the \$ IDENT information from J*.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT ERROR(068)--UNEXPECTED ABORT AT xxxxxx

SYSOUT Message. GEOT, or a module executing on behalf of GEOT, received an unexpected fault or other error.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(069)-JEND ALL ISSUED

SYSOUT Message. The Job Output Table (JOT) became full and the Scheduler stopped scheduling jobs.

Operator Action: Remove jobs from JOT (i.e., PURGE) and reopen Scheduler classes (refer to JSTRT).

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(070)-.MLBL2/4 ERROR - STATUS ssssssssssss

SYSOUT Message. An unexpected error return was received from either the .MLBL2 or the .MLBL4 module.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT ERROR(071)--TAPE ERROR PROCESSING sssss --- ssssssssssss

SYSOUT Message. The tape subsystem returned an error status that GEOT cannot handle; GEOT was copying or purging job sssss. GEOT will return the drive currently in use and attempt to get a new drive; the job being processed will be put on the next tape. No attempt should be made to un purge the job from the first tape.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT INFO(072)-CANCL DENIED - NO COPY/PURGE IN PROGRESS

SYSOUT Message. A cancel copy or purge request was entered at a time when no copy or purge activity was in progress.

Operator Action: None.

MGEOT INFO(073)-CANCL vvvvv PROCESSED

SYSOUT Message. A cancel request was successful in removing a job output special.

Operator Action: None.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MGEOT ERROR(074)-PAT SPACE ERROR FOR BACKDOOR JOB sssss

SYSOUT Message. The PAT buffer area is not sufficient to hold a large backdoor job for delivery. This message should only occur if GEOT initialization message, "MGEOT INFO(305)--LIMITED BACKDOOR PAT SPACE" was issued.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT ERROR(075)-BACKDOOR JOB NOT FOUND IN BDI

SYSOUT Message. A mismatch occurred in JOT and BDI.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(076)-REMOV vvvvvv REQUEST APPLIED xxx TIMES

SYSOUT Message. The SYSOUT response to REMOV requests.

xxx - the number of times the special was removed.

Operator Action: None.

MGEOT INFO(077)-REMOV REDRC DENIED xxxxxx ARE BAD

SYSOUT Message. If xxxxxx is OUTPUT TYPES, a command was entered with old and new output types which conflict (e.g., REMOV REDRC PRT PNC). If xxxxxx is DESTINATIONS, a command was entered with a bad new destination.

Operator Action: Reenter the correct remove request.

M
OUTPUT MESSAGES

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MGEOT INFO(078)-DISMOUNT TAPE REQUEST ACCEPTED

SYSOUT Message. A CANCL COPY or CANCL PURGE with no other arguments was received, indicating copy or purge to tape on i-ccc-dd will end after completion of the current job. If additional jobs remain to be copied or purged, a request will be made to mount a new tape.

Operator Action: Remove copy/purge tape and label per site specifications.

NOTE: Message "MGEOT INFO(045)--DISMOUNT COPY/PURGE TAPE ON i-ccc-dd" will be issued after current job completes.

MGEOT ERROR(079)-CP xxx CLEANPOINT ERROR - SYSTEM TRACE DISABLED

SYSOUT Message. An unexpected error return was encountered while cleanpointing xxx, where xxx is JOT, JOS, BDI, or SBT. The system trace is disabled to aid in determining the error.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of the snapshot dump.

MGEOT INFO(084)-PAPER MOTION ALERT i-ccc-dd

SYSOUT Message. A printer returned status indicates that two top-of-page marks were detected in a single slew operation.

Operator Action: If the printer is using a paper VFC verify that the tape is punched and installed and that the read station is clean. Note, the status returned may result from a program attempting to advance the paper improperly.

MGEOT INFO(085)-sssss TRANSPORT ABORTED - SEE EXECUTION REPORT

SYSOUT Message. While an attempt was being made to transport a job, transport aborted. Check execution report for cause of abort.

Operator Action: Direct output to an active system or redirect output online.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MGEOT INFO(086)-sssss CANNOT TRANSPORT - SYSTEM n NOT ACTIVE

SYSOUT Message. MGEOT was denied transport of a job to the specified system, because the system was inactive.

sssss - Job number
n - Specified system number

Operator Action: Direct output to an active system or redirect output online.

MGEOT INFO(087)-sssss CANNOT TRANSPORT - BLINKS RELEASED

SYSOUT Message. A move all (MVALL) request was denied.

Operator Action: None.

MGEOT INFO(088) INVALID SUBTYPE FOR INTERSYSTEM COMMAND

SYSOUT Message. An invalid queue entry was received by GEOT.

Operator Action: None.

MGEOT INFO(089)-sssss NOT IN JOT TABLE

SYSOUT Message. A move all (MVALL) request was denied because the job identifier (SNUMB) was not found in the Job Output Table (JOT).

Operator Action: None.

MGEOT INFO(090) RECEIVED AN INVALID INTERSYSTEM COMMAND

SYSOUT Message. An invalid queue entry was received by GEOT.

Operator Action: None.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MGEOT INFO(091) IS AN INVALID SYSTEM NUMBER

SYSOUT Message. Transport of a job to another system was denied because the system number specified was outside the range 0 to 3.

Operator Action: Re-issue input message with the correct system number.

MGEOT INFO(092) INTERSYSTEM COMMANDS INVALID IN A NON-SHARED SYSTEM

SYSOUT Message. A move all (MVALL) request was made in a non-shared system.

Operator Action: None.

MGEOT INFO(093) OFFLINE? i-ccc-dd

SYSOUT Message. Card punch device adapter could not communicate with the unit record MPC.

Operator Action: Run out the device i-ccc-dd, remove the last card punched, and ready device.

MGEOT ERROR(180)

MGEOT ERROR(181) - (message text varies depending on the error)

SYSOUT Message. Contains the error message from GCOS 8 System Security Manager that describes an unexpected error condition. Refer to the GCOS 8 OS Security User's Guide for information on error message text.

Operator Action: Submit a System Technical Action Request (STAR) with a dump of HCM and system program 3 (P/03). A GEOT disaster procedure will be invoked.

MGEOT ERROR(182) - UNABLE TO PERSON_ID QUEUE TYPE 20 - TABLE FULL

SYSOUT Message. GEOT has received a Person_id queue entry (type 20), but is unable to process it due to a lack of table space.

Operator Action: Submit a System Technical Action Request (START) with dump of HCM and system program 3 (P/03). A GEOT disaster procedure will be invoked.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MGEOT INFO(183) NO PERSON_ID FOR snumb -RMT ACCESS WILL BE DENIED

SYSOUT Message. GEOT has received a New Job Finished queue entry (type 12) or a Backdoor queue entry (type 7) and cannot locate the corresponding Person_id queue entry (type 20).

Operator Action: None. The remote user who submitted job identified will not be able to access the job output. It can, however, be redirected online.

MGEOT INFO(201)-REMOTE WAITING TABLE FULL

SYSOUT Message. The table of remote output requests, for which there is no output currently waiting but for which a job collecting output exists in the system, is full. When checking for such jobs, only the originating station code is known, thus limiting the effectiveness of such a check.

Operator Action: None.

MGEOT ERROR(202)-RMT ID NOT CONNECTED - SNAP TAKEN

SYSOUT Message. A remote request for an ID which is unknown to GEOT was received.

Operator Action: Submit a System Technical Action Request (STAR) with a copy of snapshot dump.

MGEOT ERROR(203)-ILLEGAL REMOTE REQUEST CODE

SYSOUT Message. DNET returned an illegal request to GEOT.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MGEOT ERROR(204)-REMOTE WILL NOT FIT IN SUBPROGRAM

SYSOUT Message. DNET illegally requested another remote to be connected to a GEOT subprogram.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(205)-REMOTE INTERRUPTED TABLE FULL

SYSOUT Message. The table which maintains a list of the remotes, which were disconnected while delivering output, is full. The current table size accommodates 10 interrupted remotes.

Operator Action: None. Be aware that the remote operator will not be able to do a \$\$OUTC. Message #207 will identify the station.

MGEOT ERROR(206)-PROCESSING JOB THAT WAS NEVER STARTED

SYSOUT Message. GEOT encountered an error while building a remote interrupted table entry.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(207)-sssss INTERRUPTED ON STA-xx

SYSOUT Message. Job sssss was being delivered to station xx when a disconnect was received.

Operator Action: None. The remote operator should do a \$\$OUTC after reconnecting.

MGEOT ERROR(208)-ILLEGAL REMOTE TCB MEDIA CODE

SYSOUT Message. During the processing of preformatted SYSOUT (TCB), GEOT encountered a logic error.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MGEOT INFO(209)-REDRC Ixx ONL RECEIVED

SYSOUT Message. The remote output was redirected to an online printer.

Operator Action: None.

MGEOT INFO(301)-FOUND nnnnn BLINKS x PRINTER(S) y PUNCH(ES) & (NO) REMOTES

SYSOUT Message. This is a normal GEOT initialization message.

nnnnn = Number of configured blinks
x = Number of configured printers (maximum of 8)
y = Number of configured punches (maximum of 8)
() = Indicates optional output.

REMOTES or NO REMOTES depends solely upon whether or not FNP(s) are configured. The initialization message, on previous releases, indicating that a backdoor file was found, is no longer applicable.

Operator Action: None.

MGEOT ERROR(302)-BAD SD.JOT DURING INITIALIZATION

SYSOUT Message. An error occurred during POPM system initialization.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(303)-BAD SD.BDI DURING INITIALIZATION

SYSOUT Message. An error occurred during POPM system initialization.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MGEOT ERROR(304)-PAT POINTERS/BODIES OVERLAP

SYSOUT Message. This rare condition could occur if the PAT segment size is reduced or if GEOT is reconfigured with too many subprograms.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(305)-LIMITED BACKDOOR PAT SPACE

SYSOUT Message. A GEOT logic error occurred.

Operator Action: None.

MGEOT ERROR(306) SYSOUT COMMUNICATION FILE NOT DEFINED

SYSOUT Message. A \$ PFILES statement was missing in the file section of the startup job stream for the SYSOUTCOM file.

Operator Action: Define SYSOUTCOM file.

MGEOT ERROR(307) INVALID SCT ADDRESS IN .CRSCT

SYSOUT Message. A system error occurred.

Operator Action: Perform a dump and notify the Honeywell Bull Response Center.

*MINIMUM SIZE FIELD IS OK

Startup Message. The read/write memory configured on the \$ MPC Startup \$ CONFIG statement (n = 1K blocks) was found to be too small. The GCOS minimum is 8K. This message is followed by the message:

CARD BELOW CONTAINS AN ERROR NEAR COLUMN n

and a description of the \$ MPC statement.

Operator Action: Correct the \$ MPC statement to reflect the proper read/write memory configuration and retry at the card reader. Refer to the GCOS 8 OS System Startup manual for \$ MPC statement information.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MISSED INTERRUPT ON i-ccc-dd

Dump Message. An I/O operation was initiated, but no status was returned.
(Fastboot is not active.)

Operator Action: None. This message is followed by the message:

ENTER [(O)PTION], (U)SE \$ANSWER, OR (N)ONE?

MISSING/EXTRA CARDS

Startup Message. Startup encountered either missing or extra statement(s).

Operator Action: Correct the job stream and retry.

MISSING/INVALID TAPE LABEL i ccc dd:

*FIX TYPE GO, OR TYPE STOP

Startup Message. An EDIT tape has no label or an invalid label.

Operator Action: Mount new tape, type GO to continue or type STOP to abort
Startu,p and then reboot.

*MISSING MPC NUMBER

Startup Message. An MPC number is missing on a \$ MPC statement.

Operator Action: Correct the required \$ MPC statement and restart.

*.MMLNK ERROR RETURN - CAN'T FIND DYNAMIC LINK NAME

POPM Message. There is a missing \$ SYSTEM JCL statement for the shared run
unit library in the startup job stream.

Operator Action: Insert missing \$ SYSTEM JCL statement and reboot the system.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

sssss-aa MNT # nnnnn i-ccc-dd

FILEDIT Message. The editor needs a new tape mounted.

nnnnn - Reel number of tape to be mounted

Operator Action: Mount the requested tape.

sssss-aa MNT ON PUNCH i ccc n...n

UTL2 Message. A special card form was requested via a FORM option on the FOPT control card.

n...n - Special form designation (maximum 45 characters)

Operator Action: Load the card punch specified with the special form and press OPERATE.

sssss-aa MNT ON PUNCH i ccc STANDARD FORM

UTL2 Message. The previous job, which required special cards, was completed.

Operator Action: Remove the special cards from the card punch and load the card punch with standard cards. Press OPERATE/RESET to start the next job or activity.

sssss-aa MNT {PRT} {PCH} i ccc n...n

Bulk Media Conversion Message. A special form was requested via a \$ FORM statement.

n...n - Up to 51 characters from columns 16-66 of the \$ FORM statement

Operator Action: Load the specified printer or punch with the special form and press OPERATE.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

*MNT TAPE nnnnn-xx filename S#sssss ON i-ccc-dd (OR TYPE A)

Peripheral Allocator Message. For the specified job to be restarted following a system interruption, the specified tape has to be mounted on the specified drive.

nnnnn - Reel number
xx - Reel sequence number

Operator Action: If the job is to be restarted, mount the specified tape on the specified drive and type an end-of-message. If the job is not to be restarted, enter an A to abort.

*MNT TAPE S#sssss i-ccc-dd REEL#

MME GEMORE Message. A MME GEMORE for a specific reel requested the indicated tape.

Operator Action: Mount the requested reel.

\$ MODOPT .MDNET ERRORS:

```
{ NULL KEYWORD IS INVALID }  
{ kkkkkk REQUIRES A VALUE, NONE WAS FOUND }  
{ kkkkkk vvvvvv IS INVALID, DEFAULT (xxxxxx) USED }  
{ kkkkkk vvvvvv IS TOO LARGE }  
{ kkkkkk vvvvvv THE FOLLOWING CHARACTER IS INVALID c }  
{ kkkkkk MUST HAVE ONLY ONE VALUE }  
{ kkkkkk vvvvvv IGNORED, KEYWORD PREVIOUSLY DEFINED }  
{ kkkkkk PREVIOUSLY DEFINED, LAST OCCURRENCE USED }  
{ KEYWORD TRACE t [t ...] TYPE(S) CONTRADICTED }
```

Startup Message. DNET options, as specified, via \$ MODOPT configuration statements may produce these error messages. The first line of the message followed by one or more of the messages in brackets is produced for each error encountered.

kkkkk - A specified keyword for the \$ MODOPT statement which can be one of the following:

TRACE
TRCSZ

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

RMIQT
GENSTS
RSMB7
RECDIS
TSSLF
CKBSY
IOTRC

vvvvv - A specified value for a specified keyword for a \$ MODOPT statement.

c - An actual character in a value specified \$ MODOPT statement that is invalid.

t - Trace type, which can have a value of 01-13 (octal)

xxxxx - Default value for the keyword that is used.

NOTE: A maximum of 10 characters of an invalid keyword or value will be displayed in the error message.

\$ MODOPT .MDSX6 - OPTION DIAGNOSTICS

Startup Message. Module .MDSX6 encountered an error while processing the \$ MODOPT .MDSX6 statement in the job stream. One or more specific messages will follow. This message serves to identify .MDSX6 as the originator of the following message(s). (Informational message).

SKIPPING INVALID KEYWORD xxxxxxxxxxxxxx

.MDSX6 encountered an unknown keyword while scanning the \$ MODOPT .MDSX6 statement.

xxxxxxxxxxxxx DUPLICATED, FIRST VALID OCCURRENCE USED

.MDSX6 encountered the same keyword more than once. The value from the first instance is used.

*** KEY=xxxxxx INVALID OPTION - yyyyyyyyyyyy**

While processing keyword option xxxxxx, .MDSX6 encountered an invalid value, yyyyyyyyyyyy. Processing skips to the next keyword on the \$ MODOPT .MDSX6 statement.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

xxxxxx - DEVICE yyyyyy NOT FOUND OR UNUSABLE

While processing either the TMPFIL or SYSFIL keyword (as indicated by xxxxxx), .MDSX6 encountered a device which was not acceptable for one of the following reasons: 1) the name (yyyyyy) had an invalid length (must be three characters); 2) the named device could not be found in the system configuration; 3) the named device was not mass storage; 4) the named device was configured as RMVBL. The device was skipped and processing continues with the next name in the list.

xxxxxx - No valid names found

After processing was completed for the xxxxxx option of the \$ MODOPT .MDSX6 statement, no valid devices were found to have been processed. Processing continues as if the xxxxxx option had not been specified (i.e., defaults will be used).

Temp device table full, truncated

Warning Message. While building the default list of devices to be used to hold temporary files (i.e., the default for the TMPFIL parameter of the \$ MODOPT .MDSX6 statement), more permanent mass storage devices were found than could be fit into the table. The excess devices were ignored. In SR3000, the table size is 2048, which is enough to allow the system to operate without problem. Report this message to the Honeywell Bull Response Center.

*MODULE .MPPEX NOT FOUND - CAN'T CONFIGURE PPS

GPOP Message. Page Processing System Startup statements were processed but the Page Printing Executive module (.MPPEX) was not found.

Operator Action: If Page Processing is not desired, remove the PPS statements from the startup job stream. If Page Processing is desired, verify the total system tape and reboot the system.

*MODULE .MPPEY NOT FOUND - CAN'T CONFIGURE ON-LINE PPS

GPOP Message. Online Page Processing System Startup statements were processed but the Page Printing Executive DAC overlay module (.MPPEY) was not found.

Operator Action: If Page Processing is not desired, remove the PPS statements from the startup deck. If offline Page Processing is desired, correct the PPS statement or verify the total system tape and reboot the system.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

If online Page Processing is desired, check the accuracy of the PPS statement, verify the total system tape, and reboot the system.

*xxx(MOLTS EXECUTIVE) WRAPUP DURING F6 ABORT MEMORY TEST FOR yyy/zzz, FOLLOW UP

MOLTS Message. Wrapup occurred during automatic testing of memory associated with a slave F6 abort. This is an unexpected situation and MOLTS should not have aborted.

yyy000 - Beginning address of test range
zzz777 - Ending address of test range

Operator Action: No automatic testing will recur, therefore, the operator should initiate a retest of the suspected bad memory using the TEST Mxxxxxxxxx verb. (Refer to the Total Online Test System (TOLTS) Reference Manual for specific definition of this command). If this test indicates that the memory space is definitely bad, it should remain released and the Honeywell Bull Response Center notified so that further test and repair can be done at the earliest possible time. If the memory test indicates that the memory space is good, it can be reassigned back to the system via the ASGNC console verb.

MOUNT STANDARD CARDS ON PUNCH #cc

Bulk Media Conversion Message. The previous job, which required special cards, was completed.

Operator Action: Remove special cards and load the punch with standard cards. Press OPERATE/RESET (or START) in order to terminate BMC activity and allow the next activity or job to begin.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MOUNT STANDARD FORM ON PRINTER #cc

Bulk Media Conversion Message. The previous job, which required a special form, was completed.

Operator Action: Remove special form and load the printer with the standard form. Press OPERATE/RESET in order to terminate BMC activity and allow the next activity or job to begin.

*MOUNTED TRAIN ID xxx REQUESTED TRAIN ID yyy

Startup Message. The train identification from the train mounted on the printer is not the train identification requested on the \$ IOM statement for this printer.

xxx - Train mounted
yyy - Train requested

Operator Action: Mount the correct train.

*MPC ALREADY MENTIONED OR X-BARRED ON CARD BELOW

Startup Message. A specific MPC was entered on more than one \$ XBAR statement or it was duplicated in the \$CONFIG section.

Operator Action: Correct either the incorrect \$ XBAR statement or the \$CONFIG section, and retry.

*MPC ON i ccc BOOTLOAD?

MPCB Message. Asks the operator if he wants to bootload MPC i ccc.

Operator Action: Normally enter YES, otherwise, NO if CSD is working on the controller or operator wishes to leave MPC in a standby condition. If answering NO the following message will be printed:

*MPC ON i ccc NOT RESPONDING PROPERLY
TYPE (B)OOT, (S)KIP, OR (R)ETRY S

Typically the operator responds with a SKIP. BOOT or RETRY will simply bootload firmware in the controller.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

*MPC ON i ccc PRE-INITIALIZE?

MPCB Message. Startup recognizes a DAU Disk Controller and asks if operator wishes to run self tests.

Operator Action: Answering YES simply saves sometime later on when the question "*MPC ON i ccc BOOTLOAD? is asked. Self test will then be skipped during the firmware bootload sequence of this particular disk controller.

CAUTION

When entering YES to the PRE-INITIALIZE? question, one must enter YES to BOOTLOAD because self tests destroy firmware. Entering NO to PRE-INITIALIZE? question will simply add sometime to the BOOTLOADING of firmware if YES is entered to the BOOTLOAD? query later on.

*xxxMPC ON i ccc BOOTLOAD? SYS ID NAME n....n, REV.rr

MPCB Message. Output to the system console if an MPC firmware deck in the \$INITIALIZE section of the startup program is entered into the system either via the card reader or a bootload tape (not a \$ READIN tape), which does not agree with the firmware revision as defined on the \$ MPCFIG statement in the \$CONFIG section of the startup program.

{DSK}
{MT }
xxx - {URC}
{TUR}

n....n - Firmware name
pppp - Four-character firmware object deck identifier
rr - Two-character revision identifier

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

Operator Action: Enter YES to load the firmware mentioned in the message.
Enter NO or EOM to ignore the firmware mentioned in the message.

NOTE: If the firmware mentioned in the message is indeed booted into the system, and subsequently, on a system reboot, the correct firmware revision is located on the DECKFILE or a \$ READIN firmware tape, the message will be output as follows with no required operator response:

*xxxMPC ON i ccc BOOTLOADED SYS ID NAME n....n pppp, REV.rr

*xxxMPC ON i ccc BOOTLOADED SYS ID NAME n....n pppp, REV.rr

MPCB Message. The MPC was booted with an MPC firmware deck in the \$INITIALIZE section of the startup program (either via the card reader or a bootload tape; not a \$ READIN tape) that does not agree with the firmware revision as defined on the \$ MPCFIG statement in the \$CONFIG section of the startup program. This message is output to the system console, if subsequently, the correct firmware revision deck is found on the DECKFILE or a \$ READIN firmware tape.

{DSK}
{MT }
xxx - {URC}
{URT}
{TUR}

n....n - Firmware name
pppp - Four-character firmware object deck identifier
rr - Two-character revision identifier

Operator Action: None.

MPC-n, LOCK BYTE mmm SHUT BY SYSTEM-s, YES TO
OVERRIDE THAT SYSTEMS LOCK BYTES

Startup Message. Startup is in a loop trying to, conditionally, set the lock byte. This message informs the operator of a possible hang condition.

Operator Action: Enter YES to cause Startup to, unconditionally, write the lock byte and continue. Otherwise, Startup will continue looping, waiting for the lock byte to open.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

***MPC-x, PSI-x, PSI-y, NOT ON SAME MPC**

Startup Message. Startup surveys all MPC mass storage controller connections. The startup configuration indicated that the MPC had two PSI connections, but data written to the MPC memory from one PSI cannot be found from the other PSI. This could be related to having the PSIs on different MPCs and not the same MPC.

Operator Action: Correct the startup configuration to correctly reflect the hardware connections. This is an FYI message and Startup will continue to execute; however, a following disk boot may not operate correctly.

***MPC-x, PSI-x WAS SPECIFIED AS LC-x, FOUND AS LC-y**

Startup Message. Startup surveys all MPC mass storage controller connections (all logical channels). The MPC returned data which indicated that the logical channel over which the command was issued was not what Startup expected. Condition could be related to a configuration which had two PSI channels which had adjacent channel numbers in an IOP and the startup configuration was specified as if there were only one PSI, but with twice as many channels.

Operator Action: Correct the startup configuration to correctly reflect the hardware connections. This is an FYI message and Startup will continue to execute; however, a following disk boot may not operate correctly.

***MPC-x IS SAME PHYSICAL MPC AS MPC-y**

Startup Message. Startup surveys all MPC mass storage controller connections. The startup configuration indicated that the MPCs specified were separate MPCs, but MPC memory written from a PSI on the first MPC causes a detectable change in the second MPC memory. Condition could be related to an MPC which has two PSI connections instead of two different MPCs.

Operator Action: Correct the startup configuration to correctly reflect the hardware connections. This is an FYI message and startup will continue to execute; however, a following disk boot may not operate correctly.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

*MPC-x WAS SPECIFIED AS PSI-x, FOUND AS PSI-y

Startup Message. Startup surveys all MPC mass storage controller connections. The MPC returned data which indicated that the channel over which the I/O was issued was connected to a different PSI than was indicated in the startup configuration.

Operator Action: Correct the startup configuration to correctly reflect the hardware connections. This is an FYI message and Startup will continue to execute; however, a following disk boot may not operate correctly.

MPCD CONTROLLER DESCRIPTIONS (DSS191,MTS500,MT601,
MT610,URC,MS0400,MS0450,MS0500)?

MPCD Message. An invalid response was entered in reply to the system's MPCD OPTIONS? message.

Operator Action: Reply with valid controller description(s). Refer to MPCD OPTIONS? message for explanation of controller options. Enter D (Default) to include the \$ SET controller descriptions from the program job stream. Reply EOM to specify all MPCs.

MPCD FUNCTIONS (SNAP, DUMP, TRACE, STATC, STATE, CLEAR, AUX, STATD, ALL)?

MPCD Message. An invalid response was entered in reply to the system's MPCD OPTIONS? message.

Operator Action: Reply with valid function(s). Refer to MPCD OPTIONS? message for explanation of function options. Enter D (Default) to include the \$ SET functions from the program job stream.

MPCD OPTIONS?

MPCD Message. The \$ SET 25 MPCD option was included in the MPCD job stream, allowing the user to select program options via console input. The MPCD program uses this message to request options.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

Operator Action: Enter one or more of the following valid functions and/or controller descriptions, separating multiple entries by one or more blanks or commas.

<u>Function Entry</u>	<u>Description</u>
SNAP	Snapshot of memory
DUMP	Dump MPC read/write memory
TRACE	Read and print formatted trace table from MPC memory
STATC	Read and print device statistics from MPC memory
STATF	Print MPC statistics totals retained on the ESF
CLEAR	Clear MPC statistics
AUX	Read and print auxiliary controller statistics
STATD	Include connects from device SCT in device statistics (STATC)
ALL	All functions
Controller	
<u>Description Entry</u>	<u>Description</u>
FIPS*TAPE9	Print reports for FIPS (Federal Information Processing Standards) 9-track tape systems
MTS500	Print reports for MTS500 systems
MTS600	Print reports for MTS600 systems
MTS610	Print reports for MTS610 systems
URC	Print reports for URC systems
MS0400	Print reports for MS0400 systems
MS0402	Print reports for MS0402 systems
MS0450	Print reports for MS0450 systems
MS0500	Print reports for MS0500 systems
MSU3380	Print reports for MSU3380 systems

Enter D (Default) to include the \$ SET functions and controller descriptions from the program job stream.

M
OUTPUT MESSAGES

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OUTPUT MESSAGES

MPOPJ INFO(001)--ERROR <nnnnnn> RETRIEVING CONSOLE TEXT SEGMENT;RE-ENTER

GPOP Message. A normally transient system error occurred.

nnnnnn - The octal PMME DLTSEG error code

Operator Action: Reenter prior SYSOUT verb. If condition persists, contact Honeywell Bull Response Center for assistance.

MPOPJ INFO(002)--ERROR <nnnnnn> DELETING CONSOLE TEXT SEGMENT;RE-ENTER

GPOP Message. A normally transient system error occurred.

nnnnnn - The octal PMME DLTSEG error code

Operator Action: Reenter prior SYSOUT verb. If condition persists, contact Honeywell Bull Response Center for assistance.

MPOPL INFO(0xx)--text

GPOP Message. "text" is one of the following:

EXACTLY ONE SNUMB REQUIRED
ILLEGAL SNUMB GIVEN
SCHEDULER QUEUE FULL - TRY LATER
NO ARGUMENTS ALLOWED FOR LSTQ
ARGUMENT TOO LONG
JOB OUTPUT TABLE BUSY
ALLOCATOR QUEUE FULL - TRY LATER
SSA SEGMENT BUSY
BACKDOOR JOB NOT FOUND

Operator Action: Retry, then wait until later and retry.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MPOPM ABT message ON ddd BLOCK# nnnnnn

GPOP Message. In the .MPOPM disk or tape I/O routine, an unrecoverable error is reported.

message - SEEK ERRnnn
CHECKSM ERR
STATUS ERR
DATA ERR

The device name is the name that is stored in the .CRSCN name table. The BLOCK# applies only to disk errors and is the seek address.

Operator Action: None.

.MPOPM INFO (nnn) -- sssss DELETED - (text)

GPOP Message. Issued only during Startup for informative purposes only. In this message nnn represents a numeric identifier having the following corresponding text.

302	BLINK ZERO
303	BLINK UNASSIGNED
304	BLINK PREV. RCVRED
305	TYPE/DEST MISMATCH
306	JOB/BLINK MISMATCH
307	BKDR ENTRY NOT FOUND
308	BKDR ENTRY RECOVERED
309	BKDR PERMFILE ERROR nnnn (nnnn = file system status return)
310	BKDR TEMP FILE ERROR
311	BKDR ID ZERO
312	BLINK # ERROR
313	SYSOUT RECOVERY NOT POSSIBLE

Operator Action: Notify the Honeywell Bull Response Center of this condition.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

MPOPW INFO(nnn)--text

Accounting Messages. Message from POPW (Disk to Disk Accounting) SSA running on behalf of SCHD. These messages inform the user of the current status of the disk copy to the PRMFL.

START MESSAGE

001 DISK TO DISK ACCOUNTING PURGE STARTED
102 COMPLETED- FILE2(ACCTFILE2), CURRENT- FILE1(ACCTFILE1)

This is a normal message that appears on each accounting purge when running \$ INFO SCFPRG. It shows which file is purging and that it is currently being used by the system for accounting data.

SUCCESSFUL COMPLETION

002 ACCOUNTING FILE PURGE COMPLETE
101 FILE SAVED: UMC/CATALOG/FILENAME

This appears on every successful purge. Filename is of the form
YYMMDDHH.MMM

where:

YY - Year
MM - Month
DD - Day
HH - Hour
MMM - Thousandths of an hour

I/O ERROR ON UTILITY SPAWN

201 UNABLE TO ATTACH ACCOUNT CONTROL FILE

If the accounting control file was successfully allocated and POPW is unable to access the contents, this message is used. POPW will continue to processing the accounting file using the defaults for SMC and CATALOG.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

ERROR SPAWNING UTILITY

202 UNABLE TO SPAWN ACCOUNTING UTILITY

This is encountered if the user defined an SWN= card in the accounting control file and POPW gets a denial return spawning the user's file. POPW will continue processing. Care should be taken to complete the work that the SWN= card was to do.

ERROR MESSAGES

003 ACCOUNTING FILE PURGE ERROR
005 STARTING BACKUP (TAPE) PURGE

Disk to Disk Accounting cannot continue because of file space, I/O problems, or software problems; POPV is called to purge accounting to tape.

FMS ERROR CREATING CATALOG OR FILE

203 FMS:<nnn> FMS ERROR DESCRIPTION

OPOM gets a denial return from FMS while creating the target file. The FMS number (nnn) and message returned are made available to the user. POPV is called to purge accounting to tape.

ERROR ALLOCATING FILE

204 FILE ALLOCATE ERROR

POPW gets a denial return while allocating the target file. POPV is called to purge accounting to tape.

ERROR READING/WRITING FILE

004 ACCOUNTING FILE PURGE I/O ERROR
205 STATUS: xxxxxxxxxxxxxx yyyyyyyyyyyy

POPW receives an unrecoverable I/O error status from IOS. The two return status words (xxxxxxxxxxxx and yyyyyyyyyyy) are made available to the user. POPV is called to purge accounting to tape.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

ERROR WIRING ADS FOR I/O

206 DISK TO DISK I/O BUFFER ERROR

POPW receives a denial trying to wire pages of the automatic data stack.
POPV is called to purge accounting to tape.

MSCHD--CAN'T WRITE SD.INJ CLEANPOINT--ERROR #XX.

Scheduler Message. "xx" defines error exit from module RCV5:

- xx - 23 New bound too large I/O completed
- 24 New bound too small I/O completed
- 25 Entry not descriptor type with A=0
- 26 Unknown SCT address or device name
- 27 Entry not in table
- 28 No room in recovery table
- 29 Cannot get file space
- 30 Cleanpoint not in effect
- 31 Wrong SNUMB accessing entry
- 32 Any DCW problem
- 33 Bad checksum
- 34 I/O error
- 35 Any ST1 problem

Operator Action: Notify Honeywell Bull Response Center of this condition.

M/S GEIN S#sssss LOST CODEn

GPOP Message. Processing of mass storage System Input job sssss was unsuccessful. Job was deleted from the system.

- n - 1 no such name
- 2 released device
- 3 status failure
- 4 .MAS14 denial

Operator Action: None.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

\$ MSG3 CARD {BAD DATE }
 {BAD TIME INTERVAL}

System Scheduler Message. The \$ MSG3 statement contained either an unacceptable date or improper cyclic time interval. If the BAD DATE condition is output, one of the following discrepancies is on the \$ MSG3 statement.

- o The starting or ending date is previous to the current date.
- o The starting date yymm (year,month) is not legitimate or is greater than one year from the last system boot.
- o The starting date, dd (day), is a number higher than the number of days in the month of the starting date.
- o The ending date month is higher than 12.
- o The starting date dd (day) entry is not the last day of the month for time interval type ml.

If the BAD TIME INTERVAL condition is output, one of the following discrepancies is on the \$ MSG3 statement.

- o The type of time interval specified is not allowed.
- o The amount of time interval specified is not within allowable limits.

The program is deleted.

Operator Action: Correct the \$ MSG3 statement and reenter the program.

*MSG xxxxxx INVLD

GPOP Message. The operator input message, MSG (OFF or ON), was invalid.

xxxxxx - Six characters following the MSG verb of the original operator input

Operator Action: Repeat the original message.

M
OUTPUT MESSAGES

M
OUTPUT MESSAGES

**MTH i-ccc-dd IS NOT ALLOCATABLE - STATUS = xxxxxx

Peripheral Allocator Message. While attempting allocate device i-ccc-dd an I/O was attempted to the device. The exception status xxxxxx was returned from the I/O. The device has been released.

Operator Action: After the exception condition has been corrected, assign the device.

*MULTIPLE \$ BASE CARDS. CARD IGNORED

Startup Message. More than one \$ BASE card was found.

Operator Action: Only the first \$ BASE statement is acted upon by Startup. If one of the following statements was desired as the active \$ BASE statement or the extra \$ BASE cards were added in error, then remove all but the desired \$ BASE statement and re-boot Startup.

*MUST INIT BEFORE CLEARING DIRECTORY

Startup Message. A \$ DIRECT CLEAR statement is being processed for a device that was not initialized.

Operator Action: If the \$ DIRECT CLEAR statement is needed, initialize the device. If an INIT cannot be done, remove the \$ DIRECT CLEAR statement and reboot.

.Mxxxx IS NOT IN MEMORY

Dump Message. Module .Mxxxx was requested to be dumped in response to the "ADDITIONAL OPTIONS:" message but .Mxxxx was not in memory at the time of the system abort. Informational message only. The remaining options specified will be processed.

Operator Action: None.

SECTION 17

OUTPUT MESSAGES BEGINNING WITH THE LETTER N

NAME ALREADY USED

GPOP Message. The operator entered a NAME request, but the name already appears in the name table.

Operator Action: Reenter the NAME message, using a different name.

NAME ILLEGAL

GPOP Message. The second character of the device name is numeric (0-9), or the operator asked to remove ST1 from the name table.

Operator Action: Change the second character of a device name to alphabetic (A-Z). ST1 cannot be removed from the name table.

NAME NOT FOUND

GPOP Message. The operator has entered a UNAME, DEDCAT, or UNDED request, but the name does not appear in the name table.

Operator Action: Check that the original request was properly entered. If not, reenter it. If the correct name was used, enter a NAME request, then reenter the DEDCAT request.

NAME TABLE FULL

GPOP Message. The operator has entered a NAME request but the name table is full.

Operator Action: Enter a UNAME request to make room in the table; then reenter the NAME request.

*NEED 2 RDM ACCTNG FILES

Startup Message. Only one disk statistical collection file is defined on the \$ ACCOUNT statement. There must be two.

Operator Action: Correct the \$ ACCOUNT statement and continue.

N
OUTPUT MESSAGES

N
OUTPUT MESSAGES

*NEED MPCB BUT CANT SAVE IN MEMORY

Startup Message. Startup program has too much data. System aborts.

Operator Action: Revise Startup program.

*NEED READER PORT, IOM, CHANNEL (Piccc)

Startup Message. A control change is to be made in Startup while an AUTOLOAD is being processed from either a DUMP/BOOT or from within the Startup program, and the prior mode of input is magnetic tape. Message indicates that it is time to stop reading tape and start reading cards, in response to a YES response to the tape bootload REPLACE? question.

NOTE: This can occur after a tape boot without "REPLACE? YES" at the next AUTOLOAD reboot.

Operator Action: Enter port, IOM (input/output controller), and channel numbers to identify the card reader to be read.

*NEED PRINTER PORT, {IOX}, {IOM}, CHANNEL, (piccc)
{IOP}

Startup Message. Startup does not have enough information to find a printer.

Operator Action: Reply piccc

- p - Port number (not required on DPS 88)
- i - IOX, IOM, or IOP (input/output controller) number
- ccc - Channel number

This response is followed by the message:

*ENTER TRAIN ID

Respond with any standard print train identifier (i.e., 764 or 1130) or any train ID specified via \$ IMAGE JCL statement. Any other response causes the "*ENTER TRAIN ID" message to be repeated.

If the firmware rejects the TRAIN ID, the following appears:

*TRAIN ID REJECTED, CHANGE TRAIN ID?

N
OUTPUT MESSAGES

N
OUTPUT MESSAGES

*NO D,O,A,L,Y CARDS AFTER \$ DIRECT - EOM SKIPS THIS CARD

Startup Message. A \$ DIRECT statement has no D, O, L, Y, or A information statements following it.

Operator Action: Enter EOM to ignore if D, O, L, Y, or A is not necessary; otherwise, correct job stream and continue.

NO FNP'S CONFIGURED IN SYSTEM DUMP NOT POSSIBLE

DATANET 355/6600 Dump Program Message. No DATANET 355/6600 processors were configured when the operator responded GRANT sssss following a 355/6600 Dump program SPAWN and PRIVITY sequence.

Operator Action: None.

*NO HANDLERS CAPABLE OF DEFAULT HIGH/LOW DENSITY

Startup Message. A magnetic tape subsystem was configured and either a \$ INFO statement specified default high/low density settings or the assumed high/low of 800/200 was used by Startup; however, there are no handlers capable of accepting these densities.

Operator Action: Enter a \$ INFO statement with default high/low settings that correspond with the capabilities of at least one configured handler.

*NO HEX CAPABILITY ON CPU-n HEX OPTION DISABLED

Startup Message. The \$ INFO statement was included in the startup job stream, but CPU-n (n=0-5) was incapable of executing HEX. The HEX option was disabled and startup continued.

Operator Action: None.

NO IDS JOURNALIZATION TO SCF

Startup Message. I-D-S/I records are not buffered (information only).

Operator Action: None.

N

OUTPUT MESSAGES

N

OUTPUT MESSAGES

NO MAILBOX AVAILABLE FOR FNP #n

GPOP Message. All seven mailboxes configured on FNP #n (n = 0-7) for communicating with the DPS 8 or DPS 88 are busy at the time an FNP communications verb (i.e., ACALL, NCALL, TCALL) was entered at the console.

Operator Action: Keep retrying periodically until a mailbox becomes free and the verb entry is accepted by the FNP.

*NO PATCH SECTION

Startup Message. There was no \$PATCH section configured (information only).

Operator Action: None.

NO POST MORTEM DATA FOR RESTART OR SYSOUT RECOVERY

SYSOUT Message. Post-mortem data was not saved at system failure and cannot be used for restart or SYSOUT recovery.

NO RESTART PROCESSING FAILS

GPOP Message. An unrecoverable error occurred during a non-restart situation. An initialize edit might be required to recover from this condition.

Operator Action: Contact the Honeywell Bull Response Center.

*NO RESVID'S FOUND

Startup Message. The \$ INFO RESVID statement, encountered in the \$CONFIG section of the Startup job stream, contains no destination IDs for Page Printer output in the option field. Startup aborts.

Operator Action: Add the necessary destination IDs to the \$ INFO RESVID statement and reboot the system.

N
OUTPUT MESSAGES

N
OUTPUT MESSAGES

*NO SSFILE FOUND

Startup Message. No SSFILE file was edited.

Operator Action: Reboot with a \$ SSFILE statement.

NO SYS ERROR CODE FOUND
ALL WILL BE USED AS DUMP OPTION.

Dump Message. A DCAF error has occurred. The ALL option will overwrite the default DCAF option.

Operator Action: None.

*NO \$ TRAINS CARD FOUND

Startup Message. The \$ TRAINS statement, listing the standard BCD trains for the site, is missing. Startup cannot establish the in-memory table of BCD standard trains.

Operator Action: Insert the proper \$ TRAINS statement.

NO VALID DEVICE CARDS PRESENT

Disk Space User Report Message. Either no DSUR DEVICE option entries were made or all of the ones entered were ignored due to an error condition. The DSUR program will abort with a 02 MME GEBORT.

Operator Action: Be sure that at least one applicable DEVICE parameter followed by one SECTOR parameter is present to process the DSUR program.

NO VALID DEVICE OPTION ACTIVE - REQUEST IGNORED

Disk Space User Report Message. A SECTOR entry is encountered but no DEVICE is option active. Either no DEVICE entry was made or the last DEVICE option was ignored because of an error.

Operator Action: Enter a valid DEVICE option before any applicable SECTOR entries.

N

OUTPUT MESSAGES

N

OUTPUT MESSAGES

NO VALID SECTOR CARDS PRESENT

Disk Space User Report Message. Either no DSUR SECTOR option entries were made or all of the ones entered were ignored due to an error condition. The DSUR program will abort with a 02 MME GEBORT.

Operator Action: Be sure that at least one applicable DEVICE parameter followed by one SECTOR parameter is present to process the DSUR program.

NONSTANDARD EOF xx ON INPUT FILE

Utility Message. A nonstandard tape mark (xx) can be read by Utility, but cannot be copied to the output file. (MTU0600 Magnetic Tape Subsystem only.)

Operator Action: None.

*sssss NOT AUTHORIZED AS TRACE COLLECTOR

Trace Analyzer Message. The Trace Analyzer trace collector program job identifier (SNUMB) was not given class-A priority.

sssss - Job identifier (SNUMB) of trace collector program

Operator Action: Enter "APRIOR sssss" console command and resubmit trace collector program.

NOT ENOUGH SPACE FOR FILE REQUEST ON DEVICE xxx

Startup Message. May be issued during the performance of an EDIT; it impacts initialization only and may be suppressed in some systems.

xxx - the device name

Operator Action: None.

N
OUTPUT MESSAGES

N
OUTPUT MESSAGES

****NOT IN CORE/SYSTEM**

Operator Interface Message. Issued when trying to dump a module, in response to the "LOOK: ENTER (PXXX SSS, MXXX, H6XXX) OFFSET NUM(OCTAL)" message, that is not in memory.

Operator Action: None.

<u>**NOT READY* STATUS ON TYPEWRITER</u>	{ OUTPUT }
	{ }
	{ INPUT }

Startup Message. Startup was aborted because input was impaired or output was not possible.

Operator Action: Check the status of the console and reboot, if necessary.

***sssss NOTIFY TPE-II ADMINISTRATOR**

TP8 Message. This informational message is issued when 10 percent of the total collection file space on files C1-C8 remains available for cataloging messages. This message is issued at 5-minute intervals until corrective action is taken (i.e., some messages are released or space is increased) or until all collection space is occupied.

Operator Action: The following procedure is recommended when releasing cataloged messages:

1. Save collection file content via the SAVE command of the TQUTL program.
2. Re-create the collection files via File Management Supervisor FCREAT directives with larger file sizes specified.
3. Initialize the collection files via the INITIALIZE command of the TQUTL program.
4. Restore collection file content via the RESTORE command of the TQUTL program.

N
OUTPUT MESSAGES

N
OUTPUT MESSAGES

*NR OF TRACE ENTRIES TRUNCATED

GPOP Message. The size of the trace table was truncated because .MPOP was unable to execute in the remaining memory.

Operator Action: Reduce the size specified on the \$ PATCH statement to location 0 of .MPOP.

*NTR SCF #SSSSS THRU CD RDR

SCF Message. System informs the operator to purge the disk SCF to tape via the card reader.

Operator Action: Enter the following control deck at the card reader.

```
$      SNUMB  XXXXA  
$      IDENT  
$      PROGRAM .GEAA  
$      PRIVITY  
$      PROGRAM .GEAC  
$      FILE IN,A1R  
$      BREAK  
$      PROGRAM .GEAB  
$      PRIVITY  
$      ENDJOB  
***EOF
```

SECTION 18

OUTPUT MESSAGES BEGINNING WITH THE LETTER O

<u>*OBJECT DECK CARD</u>	{IS OUT OF SEQUENCE, IGNORE SEQUENCE ERROR?}	
	<u>{HAS CHECKSUM ERROR</u>	}
	<u>{IS ILLEGAL TYPE</u>	}
	<u>{HAS RELOCATION ERROR</u>	}

Startup Message. An error condition, as indicated, exists in the object program.

Operator Action: Correct the object program and retry.

*OCTAL CARD ERROR: BACKSPACE TO RETRY OR END MESSAGE TO IGNORE

Startup Message. The last card read contains a non-octal digit or a punctuation error.

Operator Action: Correct the card error, replace in input hopper, and enter B.

*OCTAL DECK ORIGIN TOO LOW

Startup Message. A binary program in the second load section has an origin too low.

Operator Action: Check to be sure that modules in the \$LOAD section follow the \$ LOAD statement and precede the first ***EOF statement. Reboot.

*OCTAL DECK OUT OF SEQUENCE, IGNORE?

Startup Message. The binary program is out of sequence.

Operator Action: Enter YES to continue, ignoring the sequence error; enter NO or EOM to abort Startup.

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

***OHLR sssss-aa DS i ccc dd FILE (fc) SPACE RETENTION IS PERMANENT AC**

Standard COBOL-68 I/O System Message. The retention period in the header label indicates permanent retention on a mass storage file being opened for output. This message occurs only if the site has enabled the override option C by changing subroutine module CWJO.

Operator Action: Enter A - Terminate the activity.
Enter C - Continue the activity, overwriting the file space.

***OHLR sssss-aa DS i ccc dd FILE (fc) SPACE RETENTION IS UNEXPECTED AC**

Standard COBOL-68 I/O System Message. The retention period in the header label has not expired on a mass storage file being opened for output. This message occurs only if the site has enabled the override option C by changing subroutine module CWJO.

Operator Action: Enter A - Terminate the activity.
Enter C - Continue the activity, overwriting the file space.

***OHLR sssss-aa MT i ccc dd TAPE IS:nnnnn PROGRAM WANTS:yyyyy NAC#**

Standard COBOL-68 I/O System Message. The tape reel serial number found within a labeled scratch tape does not match the one provided either on the file allocation statement or by the operator. The internal and external labels on this reel might not match.

nnnnn - Reel serial number from internal tape label
yyyyy - Reel serial number expected by the program

Operator Action: Respond with one of the following:

Enter N - Try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.
Enter A - Terminate the Activity.
Enter C - Continue processing with the current reel. The number nnnn will be used for internal labels.
Enter xxxxx - (a five-character identifier for reel number). Continue processing with the present reel. This identifier, supplied by the operator, will be used for internal labels (do not enter the pound sign (#) character).

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

*OHLR sssss-aa MT i ccc dd TAPE IS UNLABELED NA#

Standard COBOL-68 I/O System Message. The first physical record on the output reel is not recognized as a system standard label. The I/O system cannot check retention on the reel prior to writing on the reel.

Operator Action: Respond with one of the following:

Enter N - Try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.

Enter A - to terminate the activity.

Enter xxxxx - (a five-character identifier for reel number). Continue processing using the present reel. The existing content will be overwritten with a label containing the identifier entered by the operator (do not enter the pound sign (#) character).

*OHLR sssss-aa MT i ccc dd TAPE nnnnn RETENTION IS PERMANENT NA

Standard COBOL-68 I/O System Message. The retention days field in the label of the output scratch reel has a value of 999, indicating permanent retention.

nnnnn - Tape reel serial number

Operator Action: Respond with one of the following:

Enter N - Try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.

Enter A - Terminate the activity.

*OHLR sssss-aa MT i ccc dd TAPE nnnnn RETENTION IS PERMANENT NAC#

Standard COBOL-68 I/O System Message. The retention days field in the label of the output scratch reel has a value of 999, indicating permanent retention. This message occurs only if the site has enabled the override options C and # by changing the subroutine module CWJO.

nnnnn - Tape reel serial number

Operator Action: Respond with one of the following:

Enter N - Try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.

Enter A - Terminate the activity.

Enter C - Continue output on the current reel.

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

Type xxxxx - (a five-character identifier for reel number). Continue processing with the present reel. This identifier, supplied by the operator, will be used for internal labels (do not enter the pound sign (#) character).

*OHLR sssss-aa MT i ccc dd TAPE nnnnn RETENTION IS UNEXPIRED NA

Standard COBOL-68 I/O System Message. The value of the creation date plus retention days in the label of the output scratch reel exceeds today's date. It may be necessary to retain the data on the scratch reel.

nnnnn - Tape reel serial number

Operator Action: Respond with one of the following:

- Enter N - Try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.
- Enter A - Terminate the activity.

*OLHR sssss-aa MT i ccc dd TAPE nnnnn RETENTION IS UNEXPIRED NAC#

Standard COBOL-68 I/O System Message. The value of the creation date plus retention days in the label of the output scratch reel exceeds today's date. It may be necessary to retain the data on the scratch reel. This message occurs only if the site has enabled the override options C and # by changing the subroutine module CWJO.

nnnnn - Tape reel serial number

Operator Action: Respond with one of the following:

- Enter N - Try a new reel. The input/output system will dismount the present reel to facilitate mounting another reel.
- Enter A - Terminate the activity.
- Enter C - Continue processing with the current reel.
- Enter xxxxx - (a five-character identifier for reel number). Continue processing with the present reel. This identifier, supplied by the operator, will be used for internal labels (do not enter the pound sign (#) character).

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

*OHLR MT i ccc dd sssss-aa TAPE=xxxxx FCB=yyyyy literal reply

File and Record Control Message. A discrepancy was detected in the output header label.

xxxxx - File serial number read from the label
yyyyy - File serial number contained in the file control block

The type of discrepancy is indicated by the literal.

NOTLAB - The output tape has no label.
PREV - The output reel number entered in response to a LOCATE message does not agree with the number of the reel mounted.
VERIFY - The file serial number in the label does not agree with the file serial number provided on tape control statement.
UNEXP - The output header label indicated unexpired retention.
PERM - The output header label indicates permanent retention.
reply - A combination of the characters NACI#, which indicate that an operator response is needed.

Operator Action: Enter N to dismount the tape, and mount a new tape and continue. Enter I to accept the mounted tape, A to abort the activity, or C to continue with the mounted tape. Enter the reel number to accept the mounted tape and correct the reel number on the label.

OHLR MT i ccc dd sssss-aa nnnnn VERIFY Y#

GCOS Label Routine (LBL2). Requires the operator to verify the number of an output tape.

Y# - Operator reply
nnnnn - Reel number

Operator Action: Enter Y if the reel number in the output message is correct. If the reel number is not correct, enter the correct number.

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

*OK TO MOVE PUB ccc DEVICE yy TO xx

Exception Processing Message. The primary device and alternate device can be put in STANDBY on a disk pack exchange.

- yy - Primary device (device that the pack is to be moved from)
- xx - Alternate device (device that the pack is to be moved to)

Operator Action: Enter YES to put the devices in STANDBY so that the operator can save the pack. Enter NO to try another pack. Enter *NO (or just *) to cancel the move request.

**O(MX sss/fff) NORMAL TERM 1:0 STATUS AND dddd DATA ERRORS
TEST MEMORY NOT ASSIGNED BACK TO GCOS
ERROR MAP: xxxxxxxxxxxx, IGNORE IF MEM INTERLACED

MOLTS Message. Automatically called memory test page testing memory associated with a slave F6 abort terminated.

- MX - MOLTS F6 abort memory test
- sss000 - Beginning address of memory test range
- fff777 - Ending address of memory test range
- dddd - Number of parity/compare errors detected
- xxxxxxxxxxxx - Each bit from 0 to 31 represents 8K blocks of memory. If on, bit 35 indicates interlaced memory. The following table specifies the address range associated with each bit or 8K block.

<u>Error</u> <u>Map Bits</u>	<u>Begin</u> <u>Address</u>	<u>End</u> <u>Address</u>	<u>Error</u> <u>Map Bits</u>	<u>Begin</u> <u>Address</u>	<u>End</u> <u>Address</u>
0	000000	017777	16	400000	417777
1	020000	037777	17	420000	437777
2	040000	057777	18	440000	457777
3	060000	077777	19	460000	477777
4	100000	117777	20	500000	517777
5	120000	137777	21	520000	537777
6	140000	157777	22	540000	557777
7	160000	177777	23	560000	577777
8	200000	217777	24	600000	617777

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

<u>Error</u> <u>Map Bits</u>	<u>Begin</u> <u>Address</u>	<u>End</u> <u>Address</u>	<u>Error</u> <u>Map Bits</u>	<u>Begin</u> <u>Address</u>	<u>End</u> <u>Address</u>
9	220000	237777	25	620000	637777
10	240000	257777	26	640000	657777
11	260000	277777	27	660000	677777
12	300000	317777	28	700000	717777
13	320000	337777	29	720000	737777
14	340000	357777	30	740000	757777
15	360000	377777	31	760000	777777

Operator Action: Assign all memory tested back to GCOS, using the ASGNC verb.

device ON i-ccc-dd RELEASED. STATUS = 000000

GPOP Message. The device indicated was configured, but was not ready during rollcall. The device was released.

Operator Action: None.

device ON i-ccc-dd NOT READY. STATUS = 000000
RETRY OR CONTINUE?

GPOP Message. A permanent disk device was not ready during rollcall.

Operator Action: Enter C to release the device and continue rollcall. Enter R (or any other response) to have rollcall retry the device to see if it is on line.

**0(MX sss/ff) START TDMEMA-MEMORY, TTLDAT dddddd, PHY/LOG ID pp/11

MOLTS Message. If no manual TEST entry was made at the console and this message appears, a memory test page was automatically called into execution to test memory associated with a slave F6 abort. This message also appears, following a manual TEST entry, at the console.

MX - MOLTS F6 abort memory test
sss000 - Beginning address of memory test range
fff777 - Ending address of memory test range
dddddd - TTL card date in mmddyy
pp/11 - The physical/logical identifier

Operator Action: Monitor testing until completion.

0
OUTPUT MESSAGES

0
OUTPUT MESSAGES

***OPENING SCF R#rrrrr/F#ffff-sss**

SCF Message. A label was written on a new statistics collection file tape.

rrrrr - Reel serial number
fffff - File serial number
sss - Reel sequence number

Operator Action: None.

***OVER-PATCH CARD BELOW IGNORED**

***ANSWER YES TO CONTINUE WITHOUT ABOVE PATCHES**

Startup Message. The \$ PATCH statement is a duplicate.

Operator Action: Enter YES to skip the statement and continue processing without the patches. Enter NO to halt processing; then, correct the \$PATCH section and reload.

SECTION 19

OUTPUT MESSAGES BEGINNING WITH THE LETTER P

*PACK #'S DON'T MATCH - LABEL SAYS nnnnnn
EOM TO IGNORE OR TYPE STOP

Startup Message. The serial number in the pack label is not the same as that specified on the \$ DIRECT statement listed after the error message.

nnnnnn - Pack number that is in the physical pack label

Operator Action: Correct the job stream and reboot, enter EOM to ignore, or enter STOP.

*PACK SERIAL NUMBER ssssss DUPLICATED 111,111

Startup Message. In testing for one or more devices that have duplicate pack serial numbers, Startup found a pair that have the same serial number.

ssssss - pack serial number
111 - LUD of device (i.e., STI)

Startup aborts after outputting the above message, to avoid passing the error onto FMS.

Operator Action: Initialize one of the two packs and change the name.

<< \$PALC NOT ABLE TO SPAWN SYSPN >>
GETTING "xxxxxxxxxxxx" RETURN
<<< SYS-OP BIT WILL BE LEFT OFF >>>

Peripheral Allocator Message. During system restart, the Peripheral Allocator attempted to spawn SYSPN and failed.

xxxxxxxxxxxx - Error code from .MGNEW

Operator Action: Type in the SYSOP ON reply to enable jobs to run.

P
OUTPUT MESSAGES

P
OUTPUT MESSAGES

***** \$PALC RELEASED RECOVERY STRUCTURE FOR SNUMB sssss *****

Peripheral Allocator Message. During system restart the Peripheral Allocator called Integrity Management to release the recovery structure for the specified job. (Informative message).

Operator Action: None.

\$PALC SNAFU, DUMP SYSTEM WHEN READY

Peripheral Allocator Message. A fault/error (not caused by a slave job) occurred in the Peripheral Allocator. System halts.

OPC \$PALC - Peripheral Allocator Program (PGM #02)

Operator Action: Let system die down and dump HCM,2; then enter YES to restart.

***** \$PALC WAITING FOR SHARED SOFTWARE LOAD *****

Peripheral Allocator Message. The system is being started, but the Peripheral Allocator is waiting for Integrated Software to be loaded before continuing with initialization.

Operator Action: None.

PALC WILL RELOAD ITSELF

Peripheral Allocator Message. An error occurred such that the Peripheral Allocator must load a fresh copy of itself.

Operator Action: None.

***** \$PALC'S INITIALIZATION/RESTART IS COMPLETE *****

Peripheral Allocator Message. The Peripheral Allocator completed its initialization and restart processing. It is now ready to process new jobs.

Operator Action: None.

P
OUTPUT MESSAGES

P
OUTPUT MESSAGES

##-----##
PARS8 IS ABORTING
##-----##

PARS8 Message. This is issued by the PARS8 collector to notify the operator of the wrap-up and termination of the PARS8 collector.

Operator Action: Report the abort to the responsible party for PARS8.

*PATCH CARD BELOW CONTAINS ERROR NEAR COLUMN nn

Startup Message. The statement is formatted improperly. The contents of the statement are typed out following the message.

nn - Column number

Operator Action: Correct or replace the erroneous statement.

*PATCH CARD BELOW CONTAINS UNDEFINED PROGRAM NAME

Startup message. A program name in columns 73-78 of the statement cannot be found in the system name tables. The contents of the statement are output following the message.

Operator Action: Verify the program name on the patch statement, and notify the personnel responsible for providing the patch statement if any errors are found.

*PATROL DISABLED, PRC# N PORT# x

ECOL Message. The Processor Automatic Test Routine Online (PATROL) program was disabled on the indicated processor (DPS 8/20 & 8/44 systems only). If this message appears after initial startup of ECOL, the hardware/firmware program may not have been loaded during firmware loading. (Refer to the firmware loading procedures in the GCOS 8 OS System Startup manual.) Otherwise, this message appears after the console verb ECOL PTLOFn or PTLONn, or after restart of ECOL, when the previous status of the system communication region cells status bits that control the PATROL function indicate a request for the state set.

Operator Action: If the firmware has indeed not been loaded, determine whether or not this action should be taken.

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*PATROL ENABLED, PRC# n PORT# x

ECOL Message. The Processor Automatic Test Routine Online (PATROL) program was enabled on the indicated processor (DPS 8/20 & 8/44 systems only).

Operator Action: None. This message normally appears when ECOL enables PATROL initially, after the console verb ECOL PTLOFn or PTLONn is entered or after restart of ECOL, when the previous status of the system communication region cells status bits that control the PATROL function indicate a request for the state set.

*PATROL INTERMITTENT ERROR CNT ON PRC# n = xxx *
PLEASE EXECUTE SOLTS FOR CPU CONFIDENCE TST

ECOL Message. The Processor Automatic Test Routine Online (PATROL) program has detected an intermittent error on the indicated processor (DPS 8/20 & 8/44 systems only).

Operator Action: Execute SOLTS on the indicated processor (refer to input messages TEST verb in Section 2) and notify the Honeywell Bull Response Center that the situation requires analysis, and corrective action should be taken at the first opportunity.

iccodd PERIPH TYPE #CON=nnnnnnnnnnnn
#ERR=nnnnnn ER=nn/64 #FLS=nnnn DLINK=nnnn

GPOP Message. May appear in reply to an operator PSTATS input message.

- PERIPH TYPE - Device number, type, name
- CON - Connects
- nnnnnnnnnnnn - Number of connects on this device
- nnnnnn - Total number of errors
- nn/64 - Number of errors in 64 connects (This does not appear on multiple device channels)
- #FLS - Usage Count
- DLINK - Number of defective links

Operator Action: Notify the Honeywell Bull Response Center if error ratio is excessive.

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*PHASE 1 RECOVERY FMS ERROR STATUS xxxx AT yyy

Rollcall Message. FMS returned an error code to rollcall during the processing of catalog SYS_CAT/JOURNAL for Phase 1 Recovery/Restart.

xxxx - Error status returned by FMS
yyy - Error location within POPM

Operator Action: Notify the site administrator to verify SYS_CAT/JOURNAL structure.

*PIHL MT i-ccc-dd

System (Master Mode Label Processing) Message. A parity error occurred while reading the beginning tape label.

PIHL - Parity on input header label

Operator Action: None.

PLEASE RESPOND TO (DUMP) QUERY
(BOOT)

Dump Message. If the system operator does not respond within 30 seconds to any DUMP query, this message is issued requesting a response to the last query message.

Operator Action: Enter appropriate response.

*POF I/T (ssxx) pp i ccc dd sssss seek address (disk only) (operator response)
(?)

Exception Processor Message. The device pp, or its subsystem, is either not powered on, not connected to its channel, or the maintenance panel switch is set to TEST or OFFLINE.

I/T - Status was returned on an Initiate/Terminate interrupt
ss - Octal substatus code
xx - Instruction code (refer to Appendix A)
pp - One of the following device types:

CP - Card Punch
CR - Card Reader

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DP - Disk Pack
DS - Disk
MT - Magnetic Tape
PR - Printer

TY - Console (If multiple consoles are configured, this message appears on an alternate device. If not, the message is output on the interrupted console once power has been restored.)

i - Input/output controller number
ccc - Channel number
dd - Device number
sssss - SNUMB

Operator Action: A variety of conditions may have caused the Power Off to occur. The activity required before responding at the console may involve powering on devices or controllers, correctly setting maintenance panel switches, or checking device/channel cable connections. If cabling is a problem, the appropriate personnel should be notified to ensure that the correct cable connections exist.

One or more of the following explicit responses may be available. These are punctuated with a question mark (?) and the keyboard is enabled to allow operator input.

R - Retry I/O.
U - Return status to the user program.
S - Type the disk seek address. The *POF message will then be repeated.
M - Move all console names on the malfunctioning console to an alternate console. This is followed by the message:

TYn MOVED TO i ccc dd

When the original console has been repaired, the moved names can be moved back via the MOVE input verb.

The implicit A option is not always printed on the console by the Exception Processor, but it is always available for aborting the job.

If the A option is printed but is not punctuated with a question mark (?), the keyboard will not be enabled. A power off status was received during the initial interrupt phase on a card reader, card punch, or printer, and data transfer has started. An unconditional abort results. Following correction of the hardware problem the program should be rerun.

EXAMPLE: *POF I DS 0 08 26 5840Z RS?

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The disk subsystem power is either not turned on, not connected to its channel, or the maintenance panel switch is in the TEST position. The appropriate site personnel should check the status in these three areas. This condition may occur while the system was processing an initiate interrupt to the disk on IOM-0, channel 08, device 26. Enter S if the seek address is desired. Enter R several times following correction of the problem. If the condition persists, enter A to abort the job.

*POPM IN BUFFER WAS DESTROYED

Startup Message. The .MPOP program was lost during temporary storage in the Startup program's buffer. This condition could have resulted from a patch to a module that went beyond the module bounds.

Operator Action: None.

*PORT MULTIPLY DEFINED ON PSI

Startup Message. When defining URMPC port assignments, the same port number was specified twice for one PSI.

Operator Action: Correct the \$ MPC statement and reboot.

*PORT ON MPC DEFINED WITH MULTIPLE DEVICE TYPES

Startup Message. PUBs with two different type devices are defined on the same MPC port.

Operator Action: Correct statement and reboot.

POSIT ERROR STATUS ssssss ON icccdd CAN'T CONTINUE

Dump message. An error occurred while the dump tape mounted on the unit icccdd was being repositioned. As a result, repositioning cannot continue. The status at the time of the error was ssssss and can be one of the following:

CMD REJECT
DATA ALERT

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EOF
ILLEGAL

Operator Action: The console message "SELECT DEVICE:" is issued. Any option may be selected. It may be advantageous to mount a new tape on another tape drive (i.e., to avoid repeating a media or device error).

*POSITION PAPER IN PRINTER

Startup Message. The paper on the printer must be re-positioned.

Operator Action: Realign the paper on the printer as follows:

1. Declutch tractors
2. Align fold with scribe mask
3. Press SKIP button
4. Engage tractors
5. Press SKIP button
6. Press START button

Printer should then indicate READY. Enter GO to system *FIX TYPE GO, OR TYPE STOP message.

\$PPSE INFO-- BAD RQST id

Page Processing System Executive Message (Online). The ID requested by the Level 6 is not a valid PPS ID. A corresponding message is simultaneously sent to the L6/PPS. It is an optional message. The default is on. It will appear unless patched off by the user.

Operator Action: None.

*PPSE INFO-- CAN'T ALLOCATE TAPE

Page Processing System Executive Message (Offline). Following the input of a PPS TAPE verb, \$PPSE was unable to allocate a tape drive for PPS spooling. Allocation will be reattempted at 1-minute intervals until successful. Each unsuccessful attempt will display this message.

Operator Action: None. If it appears that a tape drive will not be available for some time, the TAPE task may be terminated by entry of two consecutive PPS STOP verbs with no parameters.

\$PPSE INFO-- CAN'T (PPS TAPE Iid SID=sid), BACKDOOR REQUEST NOT ALLOWED

Page Processing System Executive Message (Offline). A PPS TAPE verb was entered requesting that Backdoor SYSOUT data be spooled to the PPS tape. Backdoor SYSOUT data is not processed by \$PPSE.

Operator Action: None.

\$PPSE INFO-- CAN'T (PPS STOP...), NO ACTIVE REQUESTS

Page Processing System Executive Message (Offline). A PPS STOP verb was entered, but cannot be honored, since there are no outstanding entries in the 64-entry PPS TAPE request table. Either no requests have been entered (PPS TAPE...), or all requests have been cancelled (PPS STOP...) or completed.

Operator Action: None.

\$PPSE INFO-- CAN'T (PPS STOP...), NO MATCHING REQUEST

Page Processing System Executive Message (Offline). A PPS STOP verb was entered, but it cannot be matched with an outstanding PPS TAPE request.

Operator Action: Reenter the correct matching request.

\$PPSE INFO-- CAN'T (PPS STOP...), PTAPE NOT RUNNING

Page Processing System Executive Message (Offline). A PPS STOP verb was entered when the TAPE task was not running (inactive).

Operator Action: None.

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\$PPSE INFO- CAN'T {PPS STOP...} {PPS TAPE...}, PPTAPE STOPPING TRY LATER

Page Processing System Executive Message (Offline). A PPS TAPE or PPS STOP verb was entered while the TAPE task was in the process of terminating. Termination is complete when the message \$PPSE INFO--PPTAPE TERMINATED is displayed.

Operator Action: None. If desired, the TAPE task may be reactivated following the TERMINATED message by entering a PPS TAPE request.

\$PPSE INFO-- CAN'T (PPS TAPE...), DUPLICATE REQUEST

Page Processing System Executive Message (Offline). The PPS TAPE request entered is identical to or within the scope of an outstanding request.

Operator Action: None. If desired, the PPS TPREQ verb may be entered to display all outstanding PPS TAPE requests.

\$PPSE INFO-- CAN'T (PPS TAPE...), ID NOT A PPS ID

Page Processing System Executive Message (Offline). The ID specified in the PPS TAPE request is not a PPS reserved ID.

Operator Action: Repeat the request entering the correct ID.

\$PPSE INFO-- CAN'T {PPS TAPE}.. {PPS STOP}.. , \$PPSE TERMINATING {PPS WAIT}..

Page Processing System Executive Message (Offline). A PPS TAPE, PPS STOP or PPS WAIT request was entered following a PPS TERM request. The new request cannot be honored since \$PPSE is in the process of terminating.

Operator Action: None. If additional spooling of PPS output is desired, enter a PPS STRT verb when termination is completed to restart \$PPSE. A PPS TAPE request can then be entered to initiate spooling.

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\$PPSE INFO-- CAN'T (PPS TAPE...), REQUEST LIMIT REACHED

Page Processing System Executive Message (Offline). The PPS TAPE request table reached its maximum of 64 entries. The last PPS TAPE request was not accepted. SNUMB and SID entries are automatically deleted when completed, but ID or ALL entries remain until deleted by a corresponding PPS STOP entry.

Operator Action: Refrain from entering additional PPS TAPE requests until one or more entries are deleted, either automatically or by use of the PPS STOP verb. The PPS TPREQ verb may be entered to display all outstanding PPS TAPE requests.

\$PPSE INFO-- CAN'T (PPS TAPE...), TASK LIMIT REACHED

Page Processing System Executive Message (Offline). \$PPSE performs three types of media conversion tasks:

- o DAC transfer of SYSOUT data to the L6/PPS (DATA)
- o DAC transfer of accounting information from the L6/PPS (ACCT)
- o Tape transfer of SYSOUT data to the L6/PPS (TAPE)

Any combination of eight tasks (including one PPTAPE task) are allowed concurrently. If more than eight are attempted, the above message appears.

Operator Action: Refrain from entering additional PPS TAPE requests for a brief period to allow current tasks to finish.

\$PPSE INFO-- CAN'T (PPS WAIT Iid), ID NOT FOUND

Page Processing System Executive Message (Online). A PPS WAIT Iid verb was entered to cancel the wait for reconnect of a disconnected L6/PPS. There is no DAC task working with the logon ID specified.

Operator Action: Reenter the PPS WAIT verb using the correct logon ID.

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\$PPSE INFO-- CAN'T START, 'SITE-PPS-CB' FILE {MISSING OR NULL}
 {INVALID }
 {READ ERRORS }

Page Processing System Executive Message. Appears during the initialization of \$PPSE following the console request PPS STRT indicating that the site-standard control block file (OPNSUTIL/SITE-PPS-CB) cannot be processed. The file must be defined before \$PPSE can be started.

MISSING - The file is missing or contains no data. \$PPSE terminates.

INVALID - The file contains incorrect data, is an invalid size, or is not a control block. \$PPSE terminates.

READ ERRORS - The file cannot be read. \$PPSE terminates.

Operator Action: Contact the site techniques personnel to create or correct this file. Once this is done, \$PPSE can be started.

\$PPSE INFO-- DENSITY OPTION INVALID, 1600 USED

Page Processing System Executive Message. Appears during the initialization of \$PPSE indicating that \$PPSE was patched to override the 1600 bpi default tape density, but the patch specifies an invalid density option. The default value is used.

Operator Action: If other than 1600 bpi is required, reboot the system and insert a corrected patch. If 1600 is acceptable, no further action is required.

\$PPSE INFO-- DISCNCT ID (ACCT)

Page Processing System Executive Message (Online). The online connection between the L6/PPS (ID) and \$PPSE was disconnected. An ACCT tag indicates that this was an accounting information connection and not a SYSOUT data connection.

Operator Action: None.

P
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\$PPSE INFO-- DMT PPS TAPE, i-ccc-dd <PPSII@tt.ttt>

Page Processing System Executive Message (Offline). The PPS tape was rewound and dismounted in response to a PPS STOP request, a data write error, or label error.

i-ccc-dd - input/output controller-channel-tape drive
<PPSII@tt.ttt> - tape file label (where tt.ttt is the time the first reel was labeled)

Operator Action: Remove the tape and submit it for printing on the Page Processing System.

\$PPSE INFO-- NO O/P id/id

Page Processing System Executive Message (Online). No output is available in SYSOUT for the ID requested by the L6/PPS. A corresponding message is simultaneously sent to the L6/PPS. This message is optional. The default is on. It will appear unless patched off by the user.

Operator Action: None.

\$PPSE INFO-- PPS TAPE, FILE-NAME = <PPSII@tt.ttt>

Page Processing System Executive Message (Offline). The PPS TAPE verb was entered and a tape file for spooling output for offline printing on the PPS is now available.

<PPSII@tt.ttt> - tape file label (where tt.ttt is the time the first reel was labeled)

Operator Action: None. PPS output will be spooled to this tape file as requested by the parameters in the initial PPS TAPE request and in subsequent requests.

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\$PPSE INFO--PPS TAPE (ss) IS #rrrrr PM i-ccc-dd @ tt.ttt

Page Printer Executive Message. A new PPS tape reel was labeled.

ss - Reel sequence number
rrrrr - Reel serial number
i-ccc-dd - Input/output controller-channel-tape device
tt.ttt - Time when the label was written

Operator Action: None. Subsequent spooling of PPS output will take place on this reel.

\$PPSE INFO-- PPTAPE SUSPENDED

Page Processing System Executive Message (Offline). A PPS STOP verb without parameters was entered. Spooling is suspended; the tape is dismounted. This message repeats every five minutes until another PPS TAPE verb is entered. The TAPE task also enters a suspended state following the issuance of the following two messages:

\$PPSE INFO-- TAPE DATA IO ERROR
\$PPSE INFO-- TAPE LABEL IO ERROR

This message is optional. The default is on. It will appear unless patched off by the user.

Operator Action: None. If further spooling of output is desired, mount a new PPS tape then enter a PPS TAPE verb without parameters to reactivate outstanding PPS TAPE request or enter a new PPS TAPE request. If no further spooling is necessary, a second PPS STOP entry without parameters will terminate the TAPE task and release the tape drive back to the system.

\$PPSE INFO-- PPTAPE TERMINATED

Page Processing System Executive Message (Offline). Two consecutive PPS STOP requests with no parameters were entered, causing the TAPE task to be terminated. The spooling tape was rewound and dismounted, and the tape drive released to the system.

Operator Action: None.

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\$PPSE INFO-- RESTART id/id/snumb

Page Processing System Executive Message (Online). This informative message appears in place of the \$PPSE INFO-- SENDING message when a previously disconnected L6/PPS has reconnected to \$PPSE, and online transfer of the interrupted id/snumb has resumed. It will always be preceded by the \$PPSE INFO--WAITING RECONNECT TO id message, which is displayed at the time of disconnect and every five minutes thereafter.

Operator Action: None.

\$PPSE INFO-- SENDING id/id/snumb

Page Processing System Executive Message (Online). \$PPSE began online transfer of SYSOUT data (denoted by the second ID and SNUMB) to a L6/PPS (denoted by the first ID). This message is optional. The default is on. It will appear unless patched off by the user.

Operator Action: None.

\$PPSE INFO-- SIGN-ON id (ACCT)

Page Processing System Executive Message (Online). The L6/PPS established an online connection between itself and \$PPSE so that output can be transferred directly from SYSOUT to the PPS for printing. This message is usually followed by a SENDING message indicating that transfer of data has begun. If the ACCT tag is present, the L6/PPS established an online connection in order to transfer accounting information to \$PPSE for logging on the GCOS Statistical Collection File.

Operator Action: None.

\$PPSE INFO-- SPOOLING id/snumb

Page Processing System Executive Message (Offline). Indicates which SNUMB and its associated ID are being transferred from SYSOUT to the PPS tape for later printing on the Page Processing System. This message appears immediately prior to each ID being spooled to tape. It is optional. The default is on. It will appear unless patched off by the user.

Operator Action: None.

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\$PPSE INFO-- STARTED

Page Processing System Executive Message. Operator entered a PPS STRT request. The Page Processing System Executive (\$PPSE) is initialized and in execution on the host system.

Operator Action: This is an information message only. The \$PPSE remains inactive until either the operator enters a PPS TAPE request or the L6/PPS requests output.

\$PPSE INFO-- TAPE DATA TO ERROR

Page Processing System Executive Message (Offline). While spooling SYSOUT to tape, a write error occurred. The PPS tape is rewound and dismounted. The TAPE task enters a suspended state, and the following message is output:

\$PPSE INFO-- PPTAPE SUSPENDED

Operator Action: There is good data on the tape. Send it to the L6/PPS for printing. Mount a new tape. Enter a PPS TAPE verb with no parameters to reactivate the existing PPS TAPE request(s), and begin spooling on the new tape.

\$PPSE INFO-- WAITING RECONNECT TO id

Page Processing System Executive Message (Online). A L6/PPS (denoted by ID) was disconnected from \$PPSE during online data transfer. This message appears on the console every five minutes until a reconnect occurs.

id - the log-on station ID of the disconnected PPS

Operator Action: If reconnect of the disconnected L6/PPS is not possible, enter the PPS WAIT verb to cancel the wait for reconnect of the disconnected L6/PPS.

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\$PPSE INFO-- PPTAPE WAITING REQUEST

Page Processing System Executive Message (Offline). Displayed every five minutes when the TAPE task is active but has nothing to do (i.e., the 64-entry PPS TAPE request table contains no outstanding (active) requests). No requests have been entered (PPS TAPE...), or all requests have been cancelled (PPS STOP...) or completed. This message is optional. The default is on. The message will be displayed unless patched off by the user.

Operator Action: None. A PPS TAPE... request may be entered to start spooling, or two consecutive PPS STOPS with no parameters may be entered to rewind and dismount the tape and terminate the TAPE task.

*PPS*FEP NEEDS ON-LINE PPS. \$ IOM CARD IGNORED

Startup Message. Startup encountered a \$ IOM PPS*FEP statement but found no \$ INFO RESVID/PPSONL statement. The PPS front-end processor coupler will not be configured.

Operator Action: If the online Page Processing System is required, insert a \$ INFO RESVID/PPSONL statement in the \$CONFIG section and reboot the system. If online PPS is not required, remove the \$ IOM statement from the Startup job stream.

sssss-aa PR 1 ccc ERROR IN REPORT RESTART

Bulk Media Conversion Message. A standard filemark was encountered while backspacing the input device but, upon repositioning, the filemark was not detected. The message is output on the printer as well as on the console.

Operator Action: If required parts of the printout are missing, terminate the job and start over.

sssss-aa PR 1 ccc ERROR BKS INPUT DEVICE

Bulk Media Conversion Message. A standard filemark was encountered while backspacing the input device. However, upon repositioning, the filemark was not detected. The message is output on the printer as well as the console.

Operator Action: Terminate the job and restart.

P
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sssss-aa PR i ccc FILEMARK ON BACKSPACE INPUT

Bulk Media Conversion Message. An end-of-file was encountered while backspacing the input device. The message is output on the printer as well as on the console.

Operator Action: Forward space to the top of the page, or restart or terminate the report.

sssss-aa PR i ccc FILEMARK ON PRINT ONE LINE

Bulk Media Conversion Message. An end-of-file was encountered while printing one line.

Operator Action: Backspace to top of page, or restart or terminate the report.

sssss-aa PR i ccc FILEMARK ON FWD SPACE INPUT

Bulk Media Conversion Message. A standard filemark was encountered while forward spacing the input device.

Operator Action: Backspace to top of page, or restart or terminate the report.

sssss-aa PR i ccc NEEDS ATTN

Bulk Media Conversion Message. The printer is not in Ready status.

Operator Action: Correct any attention conditions at the printer and press OPERATE/RESET.

*sssss-aa PR i ccc NEEDS ATTN LINE TOO LONG

Bulk Media Conversion Message. A line of data longer than the printer can print was sent to the printer. Message also appears on the Execution report.

Operator Action: Press OPERATE/RESET to continue printing.

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sssss-aa PR i ccc REJECT BACKSPACE

Bulk Media Conversion Message. The BACKSPACE TOP button was used but the input device cannot backspace.

Operator Action: Attempt to restart the report by pressing REVERSE; or terminate the report and go to the next activity or end of job by pressing BACKSPACE.

sssss-aa PR i ccc REJECT FORWARD SPACE

Bulk Media Conversion Message. The FORWARD TOP button was used, but the input device was not magnetic tape or disk.

Operator Action: Press OPERATE. If unsuccessful, press REVERSE to restart the report, or press BACKSPACE to terminate the report and go to the next activity or end of job.

sssss-aa PR i ccc REJECT REPORT RESTART

Bulk Media Conversion Message. The report cannot be restarted because the input device is not magnetic tape. The message is output on both the printer and the console.

Operator Action: Press REVERSE to try to restart the report. Press OPERATE. If any output is missing, rerun the job.

sssss-aa PR i ccc REJECT TERMINATE REPORT

Bulk Media Conversion Message. The report cannot be correctly terminated because the input device is not magnetic tape or disk. The message is output on both the printer and the console.

Operator Action: Press OPERATE on the printer. If unsuccessful, terminate the job at the console and rerun it.

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sssss-aa PR i ccc REPORT RESTARTED

Bulk Media Conversion Message. The REVERSE REWIND button was used. The message is output on both the printer and the console.

Operator Action: None.

sssss-aa PR i ccc REPORT TERMINATED

Bulk Media Conversion Message. The BACKSPACE button was used. The message is output on both the printer and the console.

Operator Action: None.

sssss-aa PR i ccc UNEXPLAINED EOF FROM PBI

Bulk Media Conversion Message. An end-of-file exit from the printer button routine occurred, but the correct status code was not set. The message is output on both the printer and the console.

Operator Action: Attempt to restart the activity by pressing REVERSE on the printer. If unsuccessful, terminate the job at the console and rerun it.

sssss-aa PR i ccc WRITING BEGIN BANNER, NEEDS ATTN

Bulk Media Conversion Message. The printer needs attention because of a malfunction while writing the beginning banner. No data was lost.

Operator Action: Correct the condition at the printer and press OPERATE/RESET.

PR1201 PR0901 CANNOT BE CONFIGURED ON A MPC

Startup Message. An attempt was made to configure either of the identified printers on a Microprogrammed Peripheral Controller which cannot accept the configuration.

Operator Action: Reconfigure correctly.

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*PRCSS #nnn DISASTER S#ssst xx

Termination Message. A fault that occurred during program processing recurred during termination. Program dump is on the Statistical Collection File, unless a PR2 is named and dedicated.

Operator Action:

xx - D1 - Job was using protected files and the commitment unit was not closed. Run deferred recovery to place the protected files in a consistent state, and to release the recovery structure.

D2 - Job was using protected files and recovery structure still exists. Run deferred recovery to release the recovery structure so that spurious abort locks do not occur at the next boot.

ATTENTION: A process disaster implies that all termination functions could not be completed (e.g., files left busy, memory not released back to the system, or locked hashes). This could produce a variety of unexpected situations which may adversely affect the performance of the system. Notify the site administrator.

sssss-aa PREPARE NEW WORK TAPE FOR HANDLER i ccc dd

Sort Message. The Sort reached the end of a scratch output tape and needs another empty scratch tape. This message will be followed by the appropriate File and Record Control reel switching messages.

Operator Action: Mount a scratch tape on the specified tape unit.

sssss PREV SINCE, INCR, OR TOTAL SAVE TAPE #, OR (E)ND

Save/Restore Conversion Message. System completed restore operation on a set of SINCE or incremental tapes.

Operator Action: Enter the serial number of the first tape of the previous set of SINCE or incremental tapes to be run next, or the number of the first of the set of total tapes to be run. If there are no further tapes to be run, enter E or END.

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*****PREVIOUS CATALOG NOT FOUND*****
(A)BORT, (C)ONTINUE

Save/Restore Message. A subordinate catalog was missing on the save tape.

Operator Action: Check the save report and the MASLST/CLIST report (if available), that were taken at save time, for discrepancies. Enter A to abort or C to continue. If the continue option is selected, restore continues with the next user, and a message is output on the printer, identifying the user that was not restored.

PRINTER ALERT: xxxxxxxxxxxx i ccc dd TYPE END SKIP OR GO

Dump Message. System gives the operator the option of terminating the dump at the point of interrupt.

xxxxxxxxxxxx - Status word returned after operation

Operator Action: Enter END to terminate the dump operation. Enter SKIP to terminate all printing from that point on (used when a printer is unavailable because of a malfunction). Enter GO for continued operation of the printer, regardless of the interrupt.

***PRINTER ERROR i ccc dd eeeee CANNOT PROCEED**

Startup Message. The printer returned an Illegal Status or Instruction Rejected status.

eeeeee - Error status

Operator Action: Attempt to clear or reset printer and press OPERATE/RESET. If the condition persists, notify the Honeywell Bull Response Center.

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***PRINTER ERROR i ccc dd: eeeeee DEVICE RELEASED**

Startup Message. The printer returned Not Present or Power Off, or Device Attention status, or returns Data Alert, Character Alert since configured train cannot be used by Startup.

eeeeee - Error status

Operator Action: None. Startup may find another printer; if it does not, Startup will continue without printing, and the device can be assigned after the system is running.

***PRINTER ERROR i ccc dd: status**
FIX TYPE GO, OR TYPE STOP, OR TYPE RLSE

Startup Message. A printer error, status, occurred on the specified printer.

Operator Action: Fix the device and enter GO to continue operation with the device; enter STOP to abort the Startup program; or enter RLSE to release the device and continue operation without the subject printer.

***PRINTER ERROR i ccc dd eeeeee OPERATE WHEN READY**

Startup Message. An Attention status was received from the printer.

eeeeee - Error status

Operator Action: Correct the attention condition and press OPERATE/RESET. If the printer cannot be made ready, press REQUEST then EOM on the console twice. This will cause Startup to output the *PRINTER ERROR -- FIX TYPE GO message which will allow changing to a different printer via a RLSE response. If no other printer is available, the survey for another printer will output the *NEED PRINTER message. In response to this, enter EOM and Startup will internally flag no printer available and throw away all subsequent printer output.

P
OUTPUT MESSAGES

P
OUTPUT MESSAGES

*PRINTER ON i-ccc RELEASED

GPOP Message. The specified device cannot be assigned by Startup because power is off or the device is in an offline condition.

Operator Action: Either run the system without the device; or ready the specified device and enter an ASGN request, which may be assigned while the system is running.

PRINTER PRn NOT ASSIGNED

*SELECT PRINTER DEVICE (PRn OR END)

Dump Message. The system attempted to print a master mode dump on PRn and found no PRn available. The keyboard is unlocked and the operator is asked to designate an alternate printer or END.

Operator Action: Enter the logical device name of an alternate printer, such as PR2. If END or an End-Of-Message is entered, the system returns to the ERROR [(O)PTION, (U)SE, OR (N)ONE? message.

sssss-aa PRINTER i ccc WRITING END BANNER, NEEDS ATTN

Bulk Media Conversion Message. The printer needs attention because of a malfunction while writing the end banner. No data has been lost.

Operator Action: Correct the condition at the printer and press OPERATE/RESET.

PRIOR HAS BEEN REPLACED - PLEASE USE URG

SYSOUT Message. The verb PRIOR was replaced with the verb URG.

Operator Action: Use the correct verb, URG.

P
OUTPUT MESSAGES

P
OUTPUT MESSAGES

*PROCESS DIRECTORY CARD FOR DEVICE ddd?

Startup Message. On a partial edit, asks whether the operator wants to process the directory statement for the particular device named.

Operator Action: Enter YES if the statement should be processed; enter NO or respond EOM if the card should not be processed.

PROCESS DIRECTORY CARD FOR SHARED DEVICE ddd

Startup Message. On a partial edit in a Common Files Facility environment, asks whether the operator wants to process the directory card for the particular device named.

Operator Action: Enter YES if the statement should be processed; enter NO or respond EOM if the statement should not be processed.

*PROCESS \$ READIN?

Startup Message. Operator answer to *INITIALIZE message was PARTIAL, and a \$ READIN statement for the firmware was encountered.

Operator Action: Enter YES to cause the tape to be processed. Enter NO or respond EOM to cause the statement to be skipped. Any other response causes a repeat of the message.

*PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR?

Startup Message. Asks the operator if the existing System Scheduler file is to be maintained or if it should be cleared and replaced with the file described on the \$ SSFILE statement.

Operator Action: Enter YES to clear the existing System Scheduler file and build a new one. Enter NO or respond EOM to maintain the existing System Scheduler file.

NOTE: Entering YES causes an automatic protected file recovery to be bypassed; it may be necessary to run a Deferred Recovery.

P

OUTPUT MESSAGES

P

OUTPUT MESSAGES

***PROCESSOR n IS CONTROL PROCESSOR**

Startup Message. Indicates which configured processor is the control processor on the system (i.e., logical processor 0).

n - number of processor (other than physical processor 0)

Operator Action: None.

***PROCESSORS MAY NOT BE CONFIGURED ON PORT-0**

Startup Message. Processors were not configured to port 0.

Operator Action: Reconfigure the processors.

***PROCESSOR ON PORT y DOESN'T ANSWER CONNECT, YES TO CONTINUE**

Startup Message. The processor configured to port y does not respond to a connect.

Operator Action: Enter YES to continue operation without that processor. Enter NO or respond EOM to abort startup procedures; then reboot to attempt to bring the subject processor on line.

***PROCESSOR ON PORT p IS n EXPECTED n**

Startup Message. The processor numbers configured on the \$ MCT statements in the startup program do not match the actual configuration switch settings.

p - Port number
n - Processor (CPU) number

Operator Action: Match the processor numbers between the correct configuration switch settings and \$ MCT statements.

P
OUTPUT MESSAGES

P
OUTPUT MESSAGES

*PROCESSOR n RELEASED

Startup Message. Physical processor n was released as a result of a YES response to the *PROCESSOR ON PORT y DOESN'T ANSWER CONNECT, YES TO CONTINUE message.

Operator Action: None.

*PROCESSOR xxx NOT FOUND

Dump Message. Program (process) xxx was not in memory at the time the system aborted; therefore, it cannot be dumped as requested.

Operator Action: Following the system reprint of the "***Dump:ALL,HCM..." message, enter the appropriate process number xxx.

*** sssss: PROCESSORS CANNOT BE REASSIGNED DURING MEMORY RELEASE

Memory Release Message. MEMREL program spawned by RLSEC request. The MEMREL program makes certain that only one processor is active while memory release is performed and does not permit an assign to occur. This message informs the operator that a processor assign cannot occur.

Operator Action: None.

*PSI ALREADY DEFINED ON THIS MPC

Startup Message. One of the PSI numbers on a \$ MPC statement was used twice.

Operator Action: Correct statement and reboot.

P
OUTPUT MESSAGES

P
OUTPUT MESSAGES

*PT1SIZ LIMIT ERROR

Startup Message. An error was encountered in a \$ INFO statement. The following message is issued after this message:

*CONFIG CARD BELOW CONTAINS AN ERROR NEAR COLUMN nn
\$ INFO PT1SIZ/ssss

nn - Column number

Operator Action: Correct the erroneous \$ INFO statement.

*PUNCH i-ccc RELEASED

GPOP Message. The specified device could not be assigned by Startup because either power is off or the device is in an offline condition.

Operator Action: Either run the system without the device, or ready the specified device and enter an ASGN request. The device may not be assigned while the system is running if assignment requires initializing the catalogs.

PURGE IN PROG, SAY YES TO RSTRT, SCF CONT

Dump Message. The Statistical Collection File (SCF) filled on mass storage and data is being written to the alternate SCF. Although the .MGEAA module was spawned for the purpose of purging the filled SCF to magnetic tape, a system failure occurred and prevented the purge.

Operator Action: None. However, when the system is rebooted, the operator must enter YES to *RESTART? message and to the *SCF CONTINUATION? message so that the purge to tape will occur.

SECTION 20

OUTPUT MESSAGES BEGINNING WITH THE LETTER Q

*QUE EMPTY tt.ttt

System Scheduler Message. The last entry was removed from the System Scheduler job queue.

Operator Action: Read new jobs into the system for processing.

(

)

SECTION 21

OUTPUT MESSAGES BEGINNING WITH THE LETTER R

```

                                     { BEFORE }
***{ RBCK } CI ERROR {           } APPLYING THE DATABASE IMAGE
                                     { AFTER  }
SNUMB = sssss TIME = hh:mm:ss JRNL = aaaaa
EXPECTED = xxxxx FOUND = yyyy LSCI = zzzzz NA(C/R)I
```

Integrated Software Message. A CI error is encountered during a rollback or a rollforward operation. Note that the time (hh:mm:ss) associated with this message is also included in report code 60 output.

- sssss - SNUMB of the process
- hh:mm:ss - Time in hours:minutes:seconds
- aaaaa - Journal name
- xxxxx - Expected CI number (octal with leading zeros truncated)
- yyyyy - Either the read CI number (octal with leading zeros truncated) or one of the following messages:

BAD CI SIZE (record size of the record read is not the same as that specified in the journal directory)

BAD REC TYPE (record type of the first logical record in the CI is not valid for the type of journal involved)

BAD READ (operator responded U to an exception processing message (e.g., M13, ATT, or LRT) and a valid read of the expected CI did not occur)

BAD GEN NUMB (the CI just read was not generated by the most recent use of the journal (i.e., the data is associated with a previous use of the journal)).

Operator Action: Respond with the one of the following:

- N = Continue processing with the next tape volume recorded in the journal directory. This is recommended if, based on a previous dump or analysis of the tape, a tape is known to have no more valid, readable data.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

A = Abort the rollback or rollforward operation. This response is recommended only when other responses have been tried and as a result produced the same error message.

C = Continue processing with the current CI. This response is recommended if the expected CI (xxxxx) and found CI (yyyyy) values are approximately the same. Repeated use of this response is not recommended. This response is not an option when the value for yyyyy is BAD READ (refer to the R response).

R = Retry (i.e., reread the current CI). This is an option only when the value for yyyyy is BAD READ, and it is the recommended response.

I = Ignore the current CI. This response is recommended if, based on a previous dump or analysis of the tape, a tape is known to have a bad spot or garbage data followed by good CIs.

RCE MT D#icccdd sssss-aa L=nnnnnnnnnnnn F=nnnnnnnnnnnnCEA

File and Record Control Message. The logical record count in the trailer label does not agree with the internal record count.

Operator Action: Enter C to continue execution and ignoring the label check. Enter E to force an end-of-file condition. Enter A to abort the program.

RCV TABLES BAD SAY NO TO RESRT

Dump Message. The recovery tables are invalid as a result of a bad I/O status on the disk read, because of a checksum error, or because an entry was invalid. Job restart cannot be performed.

Operator Action: Respond NO or respond EOM to the RESTART? message.

*RDR i-ccc- IS FREE

Termination Message. The specified card reader was deallocated and is available for job deck inputs via System Input.

Operator Action: None.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

*RDY PR i-ccc-dd

Peripheral Allocator Message. Instructs the operator to make the specified device ready.

Operator Action: Ready the specified device.

*RDY xx icccdd

Exception Processor Message. Instructs the operator to make the specified device ready.

xx - Device type

Operator Action: Ready the specified device.

*RDY sssss-aa MT i ccc dd (fc) file-name nnnnn 0001 INPUT

Standard COBOL-68 I/O System Message. The tape handler upon which the specified reel is to be mounted is not ready. The reel should be loaded on the tape handler and the handler should be prepared for operation.

file-name - 12-character file identifier supplied by the file assignment statement (will be suppressed if not present)

nnnnn - Reel serial number of desired reel

Operator Action: Mount the specified reel. The *RDY message will be repeated every 30 seconds until the tape handler is prepared for operation.

*RDY sssss-aa MT i ccc dd (fc) file-name nnnnn mmmmm INPUT CF

Standard COBOL-68 I/O System Message. The tape handler upon which the specified reel is to be mounted is not ready. The reel should be loaded on the tape handler and the handler should be prepared for operation.

file-name - 12-character file identifier supplied by the file assignment statement (will be suppressed if not present)

nnnnn - Reel serial number of desired reel

mmmmm - Reel sequence number within file

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

Operator Action: Enter C - Continue processing. The *RDY message will be repeated every 30 seconds until the tape handler is prepared for operation.
Enter E - Force the end-of-file condition for this input file.

*RDY MT i ccc dd sssss-aa (fc) FOR filename mmm OUT

After Journal Control Message. Instructs the operator to mount the indicated tape reel and ready the device.

Operator Action: Mount the specified reel. This message will be repeated every 30 seconds until the tape handler is prepared for operation.

*RDY sssss-aa MT i ccc dd (fc) file-name nnnnn mmmm OUTPUT

Standard COBOL-68 I/O System Message. The referenced reel is to be mounted on the specified tape handler and prepared as the next output reel.

file-name - 12-character file identifier supplied by the file assignment statement (will be suppressed if not present)
nnnnn - Reel serial number of reel to be mounted
mmmm - Reel sequence number within the file of the tape to be mounted

Operator Action: Mount the specified reel. This message will be repeated every 30 seconds until the tape handler is prepared for operation.

*RDY MT i ccc dd sssss-aa (fc) filename rsen {INPUT CE} or {IN CE}
{OUTPUT C} {OUT C}

File and Record Control Message. Instructs the operator to mount the indicated tape reel and ready the device.

rsen - Reel sequence number

Operator Action: Enter C to continue execution or E to force an end-of-file condition. When a secondary logical unit is used, the present reel is put in standby to prevent its being written on if a second unit switch is necessary. Care should be taken when going to the third reel of output so that the first reel is not rewritten as the third reel.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

Output

*RDY MT i ccc dd sssss-aa (fc) FILENAME rrrr yyyy OUT C
or with an alternate device

*RDY MT i ccc dd (i ccc dd) sssss-aa (fc) FILENAME rrrr yyyy OUT C

Input

*RDY MT i ccc dd sssss-aa (fc) FILENAME rrrr yyyy IN CE
or with an alternate device

*RDY MT i ccc dd (i ccc dd) sssss-aa (fc) FILENAME rrrr yyyy IN CE

File and Record Control Message. Instructs the operator to mount the indicated tape reel and ready the device.

(i ccc dd) - Alternate unit for this file
yyyy - Reel sequence number
rrrr - Reel serial number

Operator Action: Enter C to continue execution or E to force an end-of-file.

NOTE: The literal PREV may occur in the sequence number field of the output message when the operator has mounted a reel (part of a multi-reel set) that is too far along in the set. The operator should select the correct tape from earlier in the set, mount it, and enter C.

RE AUTO {JOB CAN'T SWAP }
{SWAP IN PROGRESS }
{WS #1 PAGE IN RANGE}

GPOP Message. The system tried to automatically release defective memory, as described in this message, but could not do so for the reason given. Descriptions of these reasons and the remaining information contained in this message are found in either the RLSEC LIST or ASGNC LIST verbs presented in Section 2 of this manual.

Operator Action. Provide the Honeywell Bull Response Center with this data and monitor the system for memory caused problems. Be prepared to terminate programs or release memory via the RLSEC verb as required by the appropriate site personnel.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

RE F6ABT RELEASED sssss bbbbb

GPOP Message. A slave program aborted because of a memory parity fault. The entire memory area assigned to the aborted program is released. If a RLSEC table location is available, a descriptive entry is placed in that location and TOLTS is called to test the memory area.

sssss - Starting address

bbbbbb - Number of 512 (dec) word (1000 octal) blocks released

If no table location is available, the memory area is reassigned to GCOS and the following message is output.

RE F6ABT RLSEC TABLE FULL

This situation can occur only if 16 noncontiguous blocks of memory are released.

Operator Action: If the "TABLE FULL" response is received, reduce the number of noncontiguous blocks by releasing memory between released entries or by assigning some released areas.

*** READ DISC ERROR ****
(A)BORT, (C)ONTINUE

Restore Message. During restore, an error was encountered reading the SMC.

Operator Action: Enter A to abort the program or C to continue the restore function. The C option will skip the user being restored when the error occurred. If the error persists, abort the program and notify the appropriate personnel so that the problem source can be determined.

***READ OR CHECKSUM ERROR OF DUP FOR USER---XXXXXXXXXXXXX, FILE x....x ***
(A)BORT, (C)ONTINUE

Restore Message. An error occurred in reading the substructure, or a checksum error in the structure that was read occurred, during device restore.

XXXXXXXXXXXXX - USERID

Operator Action: Enter A to abort the program, if desired, or C to continue the restore. The C option will skip the user being restored at the time of the error and go on to the next user.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

*READ \$ READIN WHILE UNDER \$ READIN OR \$LOAD CONTROL

Startup Message. A second \$ READIN statement was encountered.

Operator Action: Remove the extra \$ READIN statement and reboot.

sssss *** READ TAPE ERROR *** COPY # IS UNKNWN
(A)BORT, (C)ONTINUE, COPY #

Restore Message. An error was encountered while trying to read the save file. If the copy file number is unknown, the message is typed as described. If the copy file is known, its reel serial number appears in place of UNKNWN. If the Copy option is specified, this message is followed by a tape mount message.

Operator Action: Type A to abort the program, C to continue which skips the file in error, or the reel number of the copy save file.

READ SMC ERROR
(A)BORT, (C)ONTINUE

Save/Restore Message. A read SMC error occurred during restore.

Operator Action: Enter A to abort or C to continue the restore function.

READ TAPE ERROR*
(A)BORT, (C)ONTINUE

Save/Restore Message. A read tape error occurred during restore.

Operator Action: Enter A to abort or C to continue restore operation.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

xxxxxx READS yyyyyy WRITES zzzzzz CACHE HITS

File Management Supervisor Message. Follows entry of the FMS HIST or FMS HISTRE verbs. (Information message only).

xxxxxx - Number of physical catalog reads performed by FMS
yyyyyy - Number of physical catalog writes performed by FMS
zzzzzz - Number of physical reads that have been saved by having catalog cache configured

Operator Action: None.

*READY {INPUT } RLnn ON MT i ccc dd sssss-aa fc filename C
{OUTPUT}

Tape Labeling Message. The next reel of a multitape file is to be mounted, but a secondary logical unit designator was not used on the \$ TAPE statement.

RLnn - Reel sequence number
C - Continue

Operator Action: Mount the reel called for on the specified tape handler. Enter C to continue.

READY READER FOR REPLACE
EOM WHEN READY

DUMP Message: Startup \$ CONTROL missing or out of place.

Operator Action: Insert the startup \$ CONTROL JCL into the reader and make it ready. Press EOM.

*READY STEM COLLECTOR sssss-aa ON i-ccc-dd;
REEL nnnnn

STEM (PERSUE-8) Message. Tape device i-ccc-dd is not ready.

Operator Action: Ready the device.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

*RE-BOOT URMPC READER/PUNCH FIRMWARE IN \$INITIALIZE

Startup Message. The URMPC reader/punch was not initialized.

Operator Action: Reboot and answer YES to the INITIALIZE? message.

*REBOOT USING NEW CONTROL CPU

Startup Message. Startup found the control CPU on a port which had been marked released on a prior boot and the operator did not choose to continue using the CPU.

Operator Action: Change the SCU MASK PORT ASSIGNMENT SWITCH on the control SCU and reboot from switches to cause the new CPU to start executing as the control CPU.

*RECOV DATA SKIPPED OK

Dump Message. The system bootload was not complete when this dump occurred. Therefore, since no processing occurred, there is no data available to save for restart purposes. (Information message only).

Operator Action: None.

**RECOV ENTRY BAD xxxxxx

Dump Message. An error occurred when the .MDUMP module attempted to read an entry in the recovery table that is used to save system recovery information. A subsequent system restart may be successful. However, jobs affected by this error condition that must be reentered are defined during the restart procedure in a list that accompanies the console message JOBS THAT CANNOT BE RESTARTED, RE-INPUT. The error causing this problem is defined by xxxxxx, which can be one of the following:

- *I/O* - An I/O error occurred when .MDUMP attempted to read block 0 of device ST1.
- *SEEK* - An invalid seek address for the recovery table was encountered.
- *CKSUM* - The recovery table being read did not contain a valid checksum.
- *SPACE* - The dump file was not large enough to accommodate system slave program data (e.g., for the System Scheduler program).

Operator Action: None. However, when the system is rebooted, the operator must enter YES to the message *RESTART? and must reenter any jobs that were in process at the time the preceding error condition occurred.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

*** RECOVERY TABLES SAVED**

Dump message. All recovery data was saved.

Operator Action: Enter YES to the message "*RESTART?"

****RECOV H.C.Q. BAD xxxxxx**

Dump Message. An error occurred when the .MDUMP module attempted to save main memory table (i.e., hard core queue) information that is necessary for system restart. No subsequent system restarts can be performed, although it may be possible to restart SYSOUT. The error causing this problem is defined by xxxxxx, which can be one of the following:

- *I/O* - An I/O error occurred when .MDUMP attempted to read block 0 of device ST1.
- *SEEK* - An invalid seek address for the recovery table was encountered
- *CKSUM* - The recovery table being read did not contain a valid checksum
- *SNUMB* - The program that requested recovery data be saved was not in memory at the time the dump occurred (i.e., the program either was terminated or never started).
- *SPACE* - The dump file was not large enough to accommodate system slave program data (e.g., for the System Scheduler program).

Operator Action: None.

****RECOV TABLE BAD xxxxxx**

Dump Message. An error occurred when the .MDUMP module attempted to read either block 0 of device ST1 or the recovery table that is used to save system recovery information. Therefore, subsequent system restarts cannot be performed. However, it may be possible to restart SYSOUT. The error causing this problem is defined by xxxxxx, which can be one of the following:

- *I/O* - An I/O error occurred when .MDUMP attempted to read block 0 of device ST1 or attempted to read the recovery table.
- *SEEK* - An invalid seek address for the recovery table was encountered.
- *CKSUM* - The recovery table being read did not contain a valid checksum.

Operator Action: When the system is rebooted, the operator must respond NO to the message *RESTART? and must reenter any jobs that were in progress at the time the preceding error condition occurred.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

*REEL # DOES NOT AGREE CA

System Input Message. The reel number entered for the IMCV does not match the number in the label.

Operator Action: Enter A to abort or C to continue.

*sssss-aa REEL nnnnn MT i ccc dd IS (fc) VOL:nnnnn
LOCATE SCRATCH REEL FOR MT i ccc dd AS (fc) VOL:xxxx AND ENTER #

Standard COBOL-68 I/O System Message. An output file reached the end of a reel and requires another scratch reel. The first line of the message identifies the current reel and the tape handler. The second line identifies the tape handler upon which the next scratch reel should be mounted.

nnnnn - Current reel serial number
nnnnn - Current reel sequence number within the file
xxxx - Next reel sequence number within the file

Operator Action: Enter the 5-character reel serial number of the next scratch tape to be used (not the character '#'). If the file utilizes standard labels, this reel serial number will be placed in the trailer label of the present reel before the located scratch tape's label is processed.

sssss-aa REEL #rrrrr ON MT i ccc dd IS (filename, FILE Ser#/Reel Seq.#)

Sort/Merge Message. A full reel of collation output was completed. If this is not the last reel in a multireel collation file, the message is followed immediately by a PREPARE NEW WORK TAPE message and appropriate File and Record Control messages. If the specified reel is the last in a multireel file, a GET REEL message will be issued for the first reel of the file.

Operator Action: Take necessary action in accordance with the follow-up message requirements.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

REEL NO. rrrrr

Startup Message. For operator information.

rrrrr - Number of the edit tape

Operator Action: None.

*RE-ENTER MESSAGE

Startup Message. A transfer timing error, operator error, or message length error occurred.

Operator Action: Reenter message.

RE*GRANT* sssss NOT A PRIVITY JOB - USE "RUN"

Peripheral Allocator Message. The operator entered a GRANT request to start a job which does not require privity.

Operator Action: Use the RUN console command to start the job.

REISSUE TPE REQUEST PLE

TPE Message. TP REST request or TP TERM id request was not completed successfully.

Operator Action: Reenter the original request.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

REJ I ssxx nn pp i-ccc-dd sssss seek address (disk only) R(S) ?

Exception Processor Message. An Instruction Rejected status occurred on a peripheral device.

REJ - Instruction Rejected major status
I - Status was returned on an initiation interrupt
ss - Octal substatus code (refer to Appendix D)
xx - Instruction code (refer to Appendix A)
R(S) - Operator reply

Operator Action: Enter S if seek address on disk is wanted. Enter R several times if necessary. If the condition persists, enter A to abort the program. If the condition recurs, notify the Honeywell Bull Response Center.

*i-ccc-dd RELEASED

GPOP or Termination Message. If a GPOP message, the device received a RLSE request while assigned to a job or activity and was released from reallocation upon job or activity completion. If a Termination message, an activity or job has terminated and the JCL included a removable disk pack with a release disposition in the Logical Unit Designator (LUD).

Operator Action: If the device is a disk unit, remove the disk pack from the device and reassign the device using the ASGN verb to allow reallocation. For other peripherals assign the device back for reallocation, using the ASGN verb, if the device is operable and required.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

***RELEASING FILE BUT SPACE ALREADY RELEASED**
ANSWER YES TO KEEP THE SPACE BUT NOT USE IT

Startup Message. Startup is releasing a file, and the space for that file was already released.

Operator Action: Enter YES to release the file but keep the space. Any other reply causes the space to be released.

#REMOTE CONNECTED#

Remote Maintenance Interface Message. An #ENABLE REMOTE command verb was received from the local console and the remote console is ready. At this point the remotechannel is enabled to allow operator input. This message is transmitted to both remote and local consoles.

Operator Action: The following RMI command verbs are available:

DISABLE REMOTE	ENABLE REMOTE
ENABLE MAINTENANCE	ALLOW MAINTENANCE
ENABLE TEXT	ENABLE INITIALIZE
ENABLE CONSOLE	DISABLE INITIALIZE
DISABLE MONITOR	
ENABLE MONITOR	
RELINQUISH	
ENABLE CHANNEL	
STATUS	

#REMOTE DISCONNECTED#

Remote Maintenance Interface Message. An #ENABLE REMOTE command verb was received and the remote channel is not ready, or, if the remote console has become non-operational after it has been enabled. Additionally, this message is issued upon receipt by either console of an #DISABLE REMOTE command verb. Any transaction that was in process on the remote channel is aborted. Remote Maintenance entries do not affect system operation. This message is issued at the local console.

Operator Action: If the disconnect was unexpected, determine possible causes and notify the Honeywell Bull Response Center, if necessary.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

**** REMOTE ID xx REQUESTS TOLT TESTING, RUN? ('RUN id' OR 'NO')**

TOLTS Message. A correct user's number was entered from a remote terminal, and the TOLTS system requests permission to allow testing.

xx - User's identification

Operator Action: If permission to run is to be granted, enter RUN xx. If permission to run is not to be granted, enter NO.

NOTE: If permission to run is granted, the TOLTS reference manuals must be used to interpret messages generated by the test system.

sssss-aa REMOVE 2 CDS iccc

UTL2 Message. The last two cards produced on the specified card punch are incorrect.

Operator Action: Remove the cards from the stacker and press OPERATE. The two cards will be repunched. Check for proper sequence.

sssss-aa REMOVE LAST 2 CARDS PN i ccc

Bulk Media Conversion Message. The last two cards produced on the specified punch are incorrect.

Operator Action: Remove the cards from the stacker and press OPERATE. The two cards will be repunched. Check for proper sequence.

***REPLACE?**

Startup Message. The operator is given the opportunity to selectively replace one or more sections of the Startup deck on the AUTOLD file.

Operator Action: Entering NO means no changes are desired in the startup deck that resides on the AUTOLD file. Enter YES to load in the replacement section(s) via the card reader, which must be in a ready state, or the following message will appear:

*BOOTLOAD DEVICE ERROR icccdd: xxxxxx OPERATE WHEN READY

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

Individual or multiple sections can be replaced; however, they must be read through the card reader in their order of appearance in the Startup deck. If not in order the message

****EXPECT s...s ccccc FIX TYPE GO**

is issued to the console (where s...s = name of the section that is out of sequence and ccccc = image of the last card read). The message

***NEED "READER Piccc" (PORT, IOM, CHANNEL)**

may be issued during this procedure. After entering READER piccc (where p = input/output controller port number, i = input/output controller number, and ccc = input/output controller channel number), the replacement section(s) will be read by the card reader.

REPNC HAS BEEN REPLACED - PLEASE USE REPRO

SYSOUT Message. The verb REPNC was replaced with the verb REPRO.

Operator Action: Use the correct verb, REPRO.

REPNT HAS BEEN REPLACED - PLEASE USE REPRO

SYSOUT Message. The verb REPNT was replaced with the verb REPRO.

Operator Action: Use the correct verb, REPRO.

***REPLACEMENT DECK IS TOO BIG FOR xxxx**

Startup Message. Firmware deck xxxx is larger than the previous deck.

Operator Action: Re-initialize the deck file.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

*REQUIRED GCOS MODULE name UNDEFINED

Startup Message. The module name table contains a required module which cannot be found in the system files specified by the system description statements.

Operator Action: Check the \$EDIT and \$FILES sections for missing or mispunched cards; correct and reboot.

RE"RUN" sssss REQUESTS PRIVITY - USE "GRANT"

Peripheral Allocator Message. The operator entered a RUN request to start a job which requires privity.

Operator Action: Use the GRANT console command to start the job.

*RESTART?

Startup Message. Asks the operator if the jobs in the system should be restarted. File recovery is performed for protected files. In a Common Files Facility environment, the response applies only to the system(s) in the multiple system cluster sharing the one common SSFILE.

Operator Action: Enter YES to restart if restart of all jobs is desired and the restart tables were saved. All other responses are interpreted as NO. If the peripheral configuration changed, if an initialize edit will be performed, or if the restart tables were not saved, restart is not possible and the response must be NO.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

SCF RESTRT ABT message ON device name BLOCK#nnnnn

GPOP Message. In the .MPOPM disk or tape I/O routine, an unrecoverable error was reported. The error occurred during the recovery/restart phase.

message - {SEEK ERR }
 {CHECKSM ERR}
 {STATUS ERR }
 {DATA ERR }

The device name is the name that is stored in the .CRSCN name table. The BLOCK# applies only to disk errors, and is the seek address.

Operator Action: None.

*RESTART AND SYSOUT RECOVERY PROCESSING IMPOSSIBLE
CONTINUE? ("NO" & EOM = ABORT THIS REBOOT
"YES" = CONTINUE BUT SYSOUT RECOVERY WILL BE LOST)?

Rollcall Message. An error prevented restart and SYSOUT recovery processing from continuing.

Operator Action: Enter YES or respond EOM to proceed with no restart or SYSOUT recovery processing. Any other response will cause the restart failure to be considered a fatal error.

*** RESTART FILE ERROR - \$PALC CAN'T CONTINUE ***

Peripheral Allocator Message. The system is being restarted, and an error occurred when the Peripheral Allocator attempted to allocate the restart file or when the Peripheral Allocator attempted an I/O to the restart file.

Operator Action: None.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

***** RESTART FILE ERROR. PHASE 1 & PHASE 2 BYPASSED *****

Peripheral Allocator Message. The system is being restarted, and an error occurred on the restart file. No automatic file recovery or process restart is possible. The deferred recovery utility can be run to recover protected files.

Operator Action: None.

"RESTART" PROCESSING FAILS

GPOP Message. An unrecoverable error occurred during restart. The system aborts.

Operator Action: Enter NO to Restart. Contact the Honeywell Bull Response Center.

***RESTART PROCESSING IMPOSSIBLE**

CONTINUE? ("NO" & EOM = ABORT THIS REBOOT

"YES" = CONTINUE BUT SYSOUT RECOVERY WILL BE LOST)?

Rollcall Message. Restart Processing is not possible because of a nonfatal error encountered during restart processing.

Operator Action: Enter NO or respond EOM to proceed with no restart processing. Any other response will cause the restart failure to be considered a fatal error.

*** RESTRT/ACFCNT CAN'T BECAUSE OF NO SAVED DATA BY DUMP.**

Rollcall Message. RESTART and SCF CONTINUATION are not possible because DUMP was unable to save the data required for these activities. This may be caused by GEOT's failure to complete initialization on the previous system bootload. No RESTART or SCF CONTINUATION will occur.

Operator Action: None.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

* RESYID TABLE FULL - OPTION IGNORED

Startup Message. More than 512 reserved identifications were specified.

Operator Action: Reduce number of reserved identifications to valid limit (512) and reboot.

*RETRY CONSOLE REQUEST vvvvvv cccccccccccc

Core Allocator Message. The core allocator queue is full and temporarily cannot accept a request to bring an operator interface module into core.

vvvvvv - Verb portion of the operator input message that was not processed

ccccccccccc - First 12-characters of message text following the verb

Operator Action: Wait briefly and retry the message; if unsuccessful, wait for a job to come to termination. In this case, however, no validity check is made on any input information; therefore, it cannot be assumed that the input information was valid.

(R)ETRY, (C)ONTINUE?

Restore Message. This message is always preceded by a specific error message describing an existing error condition.

Operator Action: Enter R to retry the activity which met the error condition. Enter C to continue processing after the activity which met the error condition.

*RETURNING TO CONSOLE--ROLLCALL DEVICE ERROR

GPOP Message. The device specified on the \$ INFO ROLLCALL/xxx failed; therefore, all messages will be output at the console.

Operator Action: None.

REV TABLE CHECKSUM ERROR

Dump Message. The recovery table read by the Dump program contains a checksum error. No recovery is attempted, and the Dump program continues to the next function.

Operator Action: None.

```

                                     { BEFORE }
***{ RFWD } CI ERROR {                } APPLYING THE DATABASE IMAGE
                                     { AFTER  }
SNUMB = sssss TIME = hh:mm:ss JRNL = aaaaa
EXPECTED = xxxxx FOUND = yyyyy LSCI = zzzzz NA(C/R)I
```

Where:

sssss - SNUMB of the process
hh:mm:ss - Time in hours:minutes:seconds
aaaaa - Journal name
xxxxx - Expected CI number (octal with leading zeros truncated)
yyyyy - Either the read CI number (octal with leading zeros truncated) or one of the following messages:

BAD CI SIZE (record size of the record read is not the same as that specified in the journal directory)

BAD REC TYPE (record type of the first logical record in the CI is not valid for the type of journal involved)

BAD READ (operator has responded U to an exception processing message (e.g., M13, ATT, or LRT) and a valid read of the expected CI did not occur)

BAD GEN NUMBER (the CI just read was not generated by the most recent use of the journal, i.e., the data is associated with a previous use of the journal).

Integrated Software Message. This is produced when a CI error is encountered during a rollback or a rollforward operation. Note that the time (hh:mm:ss) associated with this message is also included in report code 60 output.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

Operator Action: Respond with the one of the following:

N = Continue processing with the next tape volume recorded in the journal directory. This is recommended if, based on a previous dump or analysis of the tape, a tape is known to have no more valid, readable data.

A = Abort the rollback or rollforward operation. This response is recommended only when other responses have been tried and result in the same error message.

C = Continue processing with the current CI. This response is recommended if the expected CI (xxxxx) and found CI (yyyyy) values are approximately the same. Repeated use of this response is not recommended. This response is not an option when the value for yyyyy is BAD READ; see the R response.

R = Retry (i.e., reread the current CI). This is an option only when when the value for yyyyy is BAD READ, and it is the recommended response.

I = Ignore the current CI. This response is recommended if, based on a previous dump or analysis of the tape, a tape is known to have a bad spot or garbage data followed by good CIs.

*RING FOR STEM COLLECTOR sssss-aa ON i-ccc-dd

STEM (PERSUE-8) Message. the tape mounted on i-ccc-dd is write protected. It has been dismounted. A Identify and Verify message pair will be issued for the new tape.

Operator Action: Mount an unprotected tape.

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

RLSEC LIST
(HCM) 00000 0xxxx
RLSEC xxxxxx xxxxxx
" " "

GPOP Message. Defective memory, as described in the message, was automatically released by the system, providing this output. For a description of the information contained in this message refer to the RLSEC LIST verb in Section 2 of this manual.

Operator Action: Provide the Honeywell Bull Response Center with this data and, following hardware corrections. Be prepared to reassign the memory back into use via the ASGNC verb.

*RNG MT i ccc dd sssss-aa NA

File and Record Control message. The tape mounted as output does not have a Write Permit Ring fitted.

NA - Operator reply options

Operator Action: Enter N to dismount the tape. Check that the correct tape is in use; if so, insert a ring and remount the tape. Otherwise, mount new tape. Enter A to abort the program.

ROLLBACK?

Terminate Message (.MBRT2). The process terminated abnormally and a JROLL option was specified on either the \$ EXECUTE or \$ PROGRAM statement. The JROLL option provides for rollback of protected files to a previous checkpoint. A checkpoint must exist for this message to be issued.

Operator Action:

Enter (Y)ES - Rollback to the most recent checkpoint. If successful, no other message is issued. If unsuccessful, the following message is issued:

*END sssss-aa @tt.ttt N3-ROLLBACK NOT POSSIBLE

R
OUTPUT MESSAGES

R
OUTPUT MESSAGES

This message indicates that a problem exists with the checkpoint itself. For a detailed explanation of various N3 rollback error codes, refer to the GCOS 8 OS Programmer Messages And Abort Codes manual.

Enter (N)0 - Abort the process. The originally displayed abnormal termination message will be repeated. If a prior YES response was given, the above *END..... message will be repeated in its exact form.

RPT sssss LOAD CARD READER iccc

Bulk Media Conversion, UTL2, and Source/Object Library Editor Message.
Repeats a previous LOAD CARD READER message.

RPT - Repeat

Operator Action: Refer to LOAD CARD READER. The message is repeated until the necessary action is taken.

RUN TIME EXHAUSTED CONTINUE OR ABORT C/A?

SYSOUT Message. The processor runtime was exhausted.

Operator Action: Enter C to increase processor run time 5 minutes. Enter A to abort.

SECTION 22

OUTPUT MESSAGES BEGINNING WITH THE LETTER S

*S#ssssA ACCOUNTING FILE PURGE {UNSUCCESSFUL}
FILEn RETURNED TO SYSTEM {SUCCESSFUL }
UNRECOVERABLE DISC ERROR ENCOUNTERED (optional)

Statistical Collection Purge Message. The final status of the purge program and of any disk errors.

ssssA - Generated SNUMB of purge program

Operator Action: Return output to accounting function. Notify maintenance of any disk errors.

*S#sssss-aa {BLINK SPACE }
{RUN TIME } EXHAUSTED CONTINUE OR ABORT C/A?
{SYSOUT LINES}
{JOB LIMIT }

SYSOUT or Dispatcher Message. The indicated condition occurred during processing of activity aa of the job associated with snumb sssss.

Operator Action: Enter C to continue processing the job. Corrective actions are as follows:

- BLINK SPACE - Delay until blinks become available.
- RUN TIME - Increase activity time limit by 5 minutes.
- SYSOUT LINES - Increase maximum SYSOUT records allowed by 10,000.
- JOB LIMIT - Increase run time and/or SYSOUT lines (whichever is applicable) by the amounts described above.

Enter A to abort the job.

NOTE: RUN TIME, SYSOUT LINES, and JOB LIMIT conditions only require operator intervention if the LIMITS option is specified on a \$ INFO startup statement.

S

OUTPUT MESSAGES

S

OUTPUT MESSAGES

*S#sssss ASKS PACK OK,ACTY=aaaaaa ID=xxxxxxxxxxxxx.GRANT?

Peripheral Allocator Message. Job sssss requested mounting for a stranger pack and was placed in HOLD status.

aaaaaa - Activity type of the first activity of the job

Operator Action: Enter either GRANT sssss or ABORT sssss. If GRANT sssss is used, the job will then request the pack to be mounted.

*S#sssss ASKS PRIVILEGE,ACTY=aaaaaa ID =xxxxxxxxxxxxx.GRANT?

Peripheral Allocator Message. The job requested Master Mode privileges and was put into HOLD status.

aaaaaa - Activity type of the first activity of the job

Operator Action: Enter GRANT sssss or ABORT sssss. However, to leave the job in HOLD for a short time, no action is required.

*S#sssss ASKS RMT MAINT CONSOLE ID=xxxxxxxxxxxxx..RUN

Peripheral Allocator Message. The specified job requires use of the remote maintenance console, and the Peripheral Allocator site option is set so that permission to use the remote maintenance console is under operator control.

xxxxxxxxxxxxx - User identification

Operator Action: Enter a RUN sssss request to run the job or enter ABORT sssss request if the job is not to be run.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

***S \$CALC TRN TRAINn/IC xxxx PRINTIMAGE FILE MISMATCH**

PRLC Message. During Rollcall, the print train defined on the \$ TRAINS statement in the startup job stream cannot be found in the PRINTIMAGE file. If multiple trains are defined, all are available except the train indicated on the console.

Operator Action: If the train indicated is not critical, continue operation. If it is critical, two options are available:

- o Correct the \$ TRAINS statement and reboot the system
- o Re-edit the PRINTIMAGE file or rebuild the missing non-standard images by running the TVIM program. (Refer to the GCOS 8 OS System Operating Techniques manual for additional information concerning the TVIM program.)

***SCF CONTINUATION?**

Startup Message. Allows the operator to continue or restart data collection on the Statistical Collection File (SCF).

Operator Action: Enter YES to have data collection resume from the points of interruption. Enter NO to have SCF data collection begin anew. If the SCF resides on mass storage, the NO response results in the clearing of all previously written information. This information cannot be recovered. If the SCF resides on magnetic tape, restart does not affect information written to the SCF. The tape containing the SCF must be rewound and a new tape mounted before collection is resumed.

NOTE: The tape is automatically rewound and placed in a ready condition if a site-option patch is applied to the .MPOPM module (Memory Allocation Program). (Refer to the GCOS 8 OS System Startup manual for a description for the site-option patch to .MPOPM.)

***Ssssss CHECKSUM ERR READING PRINTIMAGE FILE**

PRLC Message. .MPRLC encountered a checksum error while performing a checksum on the PRINTIMAGE file train catalog.

Operator Action: Reload the PRINTIMAGE train file, using TVIM to rebuild the file.

S
OUTPUT MESSAGES

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OUTPUT MESSAGES

<<< S#sssss *** n DEFERRED RECOVERIES FAILED (SEE LISTING) >>>

Integrated Software Message. The deferred recovery process terminated with errors.

sssss - Deferred recovery SNUMB
n - Number of attempted recoveries that failed

Operator Action: None.

*Ssssss DISC I/O ERR READING PRINTIMAGE FILE

PRLC Message. A bad status occurred while the PRINTIMAGE file was being read from disk.

Operator Action: Rerun the job. If the error occurred during rollcall, run .MTVIM, using the \$ SECTOR option, when the system becomes operational.

*SD.SCA AND SD.SBT CONTROL WORD MISMATCH - SNAP TAKEN

POPM Message. A mismatch occurred between SD.SCA and SD.SBT control words during recovery processing. Snap of both segments routed to dedicated PR2.

Operator Action: Submit a System Technical Action Request (STAR) with supporting documentation.

S#sssss-aa DISK USED nnnnnn, NEEDS nnnn, (C)ONTINUE OR (D)ENY?

MME GEMORE Message. A request for additional temporary disk space exceeds the "SIEVE" limit set at the site (refer to "LIMIT LINKS" input message).

sssss - Job identifier (SNUMB)
aa - Activity number
nnnnnn - Llinks used
nnnn - Llinks needed

NOTE: If "SIEVE" limit was not specified, GEMORE will not be restricted from obtaining temporary file space.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

Operator Action: Enter one of the following:

- C - Allow this request
- C* - Allow this request and all other requests made by this activity
- D - Deny this request
- D* - Deny this request and all other requests made by this activity

S#sssss DP i-ccc-dd (message)

Removable Store Initialization Program (RSIP) Message. RSIP is a privileged slave program which checks, formats, and labels disk packs for use with GCOS 8 System software. (These messages, along with the operation of the program, are fully described in the GCOS 8 OS System Operating Techniques manual.)

S#sssss DP icccdd # OF BLOCKS TO DUMP IN MPL OF 5's

Removable Store Initialization Program (RSIP) Message. A \$ SET 35 and/or a \$ SET 34 statement was included in the job stream for use in printing disk pack labels. If a \$ SET 35 statement was included, this message is output after step 13 of the RSIP sequences, and it asks the operator how many 64-word blocks (in multiples of 5) of old disk pack labels should be dumped. If a \$ SET 34 statement was included, this message is output after step 56 of the RSIP sequence, and it asks the operator how many 64-word blocks (in multiples of 5) of new disk pack labels should be dumped.

If both \$ SET statements are included, the message will be output twice, first for the old labels and then for the new labels.

Operator Action: Enter EOM to skip dumping the label. Specify the number of 64-word blocks, in multiples of 5 (five 64-word segments equals one llink), beginning with llink 0.

*S#sssss DUMPn ACCESS DENIED -xxxxxxxxxxxx

Dump Analyzer Message. The userid from which .MMDMP is being run does not have specific permission to read the DUMPn files on userid SYS_CAT. The File Management Supervisor (FMS) denial message appears at the end of the message.

Operator Action: Change the userid from which .MMDMP is being run, or make an appropriate change to the permissions.

S
OUTPUT MESSAGES

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OUTPUT MESSAGES

*S#sssss - DUMPn IS EMPTY

Dump Analyzer Message. The DUMPn file specified by the operator contains no data.

Operator Action: Enter with one of the following:

- I (or EOM) - Accept the DUMPn file and continue processing.
- C - Release the DUMPn file. The operator then can specify another file in response to the message: "*S#sssss ENTER DUMPn or TAPE MODE/REEL #, DENSITY."
- A - Abort the .MMDMP program.

S#sssss-aa FNP#n APPEARS OPERATIONAL, PROCEED WITH BOOTLOAD?

DATANET 355/6600 Bootload Program Message. The FNP#n is already operational and no disk initialization was performed on the job. Regardless of the BOOTLOAD (?) directive in the NPSLOD deck, the system utilizes this message to ask the operator permission to proceed with the bootload.

Operator Action: Enter NO to terminate bootload request. If a disk initialize just preceded, the job will terminate normally. However, if the operator opts for neither initialize nor operational bootload, the NPSLOD program terminates abnormally with the abort code ER and sends this message to the console:

S#sssss-aa, FNP#n NOT BOOTLOADED-AT OPERATOR'S REQUEST

Enter YES to abort FNP software being run in the requested processor. If the processor does not acknowledge the abort command within 1 second, the following message is issued to the system console:

S#sssss-aa FNP#n NOT BOOTLOADED - NO RESPONSE FROM ABORT OP SENT TO FNP

When the abort command is acknowledged by the FNP, the bootload program waits for completion of the abort wrapup procedures. If the abort does not occur within 30 seconds, the following message is printed on the system console:

*FNP #n NOT BOOTLOADED - ABORT OP ACK BUT NO ABORT OCCURRED

If the FNP does abort within 30 seconds, the bootload process continues. Data is obtained from the GCOS communication region and is placed into the NICB program. The NICB program is then bootloaded into the DATANET FNP to complete the task of loading the NPS program from central system memory to FNP memory.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

S#sssss-aa FNP#n APPEARS OPERATIONAL, PROCEED WITH DISK INIT?

NPS Bootload Program (NBFP) Message. The FNP to be bootloaded is currently operational, and the DISKINIT or the DISKINIT? directive was specified.

Operator Action: Enter NO to cause NPSLOD to proceed directly to the operational bootload. Enter YES to cause NPSLOD to perform an initialization bootload before the operational bootload.

S#sssss-aa FNP#n BOOTLOADED W/DAC LOADER

NPS Bootload Program (NBFP) Message. Communication across the interface was successful, and module NICB and the NPS load deck were transferred to FNP memory. At this point the NPS loader in the FNP asks the central system for the boot deck card images to continue loading NPS.

Operator Action: None.

S#sssss-aa FNP#n DISK INITIALIZE?

NPS Bootload Program (NBFP) Message. The FNP to be bootloaded is not operational, and the DISKINIT? directive is included in the NPSLOD program.

Operator Action: Enter NO to cause NPSLOD to proceed directly to the operational bootload. Enter YES to cause NPSLOD to perform an initialization bootload before the operational bootload.

S#sssss-aa FNP#n DISK INITIALIZE COMPLETED, PROCEED W/BOOTLOAD?

NPS Bootload Program (NBFP) Message. Disk initialization is complete, and asks the operator whether to restore operational bootload.

Operator Action: Check the FNP console to verify that disk initialization completed successfully. Enter NO to cause a normal termination. Enter YES to cause the bootload process to restart for an operational bootload.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

S\$sssss-aa FNP#n - FNP CONSOLE NEEDS ATTENTION

NPS Bootload Program (NBFP) Message. A bad disk status was encountered when reading or writing the NPS disk during bootload.

Operator Action: Check the FNP console for further information. Refer to the NPS Startup manual for interpretation of FNP console message and necessary action.

S#sssss-aa FNP#n LOAD COMPLETED

NPS Bootload Program (NBFP) Message. The operational bootload portion of NPS startup for FNP#n is complete.

Operator Action: None.

S#sssss-aa FNP#n NO RESPONSE - SHOULD BOOTLOAD BE ATTEMPTED AGAIN?

DATANET 355/6600 Bootload Program Message. No status was received from the DATANET 355/6600 processor-n 2 minutes after the bootload was initiated.

Operator Action: Enter NO or N to terminate the program. Enter YES or Y to re-attempt bootload. (Bootload will not be attempted more than three times.)

S#sssss-aa FNP#n NOT CONFIGURED

DATANET 355/6600 Bootload Program Message. Operator called for a non-configured DATANET 355/6600 processor to be bootloaded. The program terminates.

Operator Action: Enter correct configuration data or reconfigure system.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

S#sssss-aa FNP#n PROCEED W/BOOTLOAD?

NPS Bootload Program (N355) Message. The FNP is not operational and the NPSLOD program contains the BOOTLOAD? directive. The system asks the operator if it is to proceed with bootloading.

Operator Action: Enter NO to terminate bootload request. If a disk initialize just preceded, the job will terminate normally. However, if the operator opts for neither initialize nor operational bootload, the NPSLOD program terminates abnormally with the abort code ER and sends this message to the console:

S#sssss-aa, FNP#n NOT BOOTLOADED-AT OPERATOR'S REQUEST

Enter YES to abort FNP software being run in the requested processor. If the processor does not acknowledge the abort command within 1 second, the following message is issued to the system console:

S sssss-aa FNP#n NOT BOOTLOADED - NO RESPONSE FROM ABORT OP SENT TO FNP

When the abort command is acknowledged by the FNP, the bootload program waits for completion of the abort wrapup procedures. If the abort does not occur within 30 seconds, the following message is output on the system console:

*FNP #n NOT BOOTLOADED - ABORT OP ACK BUT NO ABORT OCCURRED

If the FNP does abort within 30 seconds, the bootload process continues. Data is obtained from the GCOS communication region and is placed into the NICB program. The NICB program is then bootloaded into the DATANET FNP to complete the task of loading the NPS program from central system memory to FNP memory.

*S#sssss HAS PACK OK,ACTY=aaaaaa ID=xxxxxxxxxxxx

Peripheral Allocator Message. Job sssss requested mounting for a stranger pack and was placed in LIMBO status.

aaaaaa - Activity type of the first activity of the job
xxxxxxxxxxxx - Pack identification

Operator Action: Enter either RUN sssss or ABORT sssss. If RUN sssss is used, the job will then request the pack to be mounted.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

*S#sssss HAS PRIVITY,ACTY=aaaaaa ID=xxxxxxxxxxxxx

Peripheral Allocator Message. The specified job was automatically given master mode privileges.

aaaaaa - Activity type of the first activity of the job
xxxxxxxxxxxxx - 12-character identification

Operator Action: None.

*S#sssss HAS RDR i-ccc-dd [510PT]

Peripheral Allocator Message. The specified card reader was allocated to the job. 510PT appears when the 51 column option is specified.

Operator Action: Load the required deck into the specified reader, followed by a ***EOF control card.

*S#sssssA INPUT ERROR, SKIPPED REC mmmmmmm

SCF Purge Message. Input (disk statistical collection file) I/O errors and identification of the record that will be missing on the output tape.

sssssA - Generated SNUMB of purge program
mmmmmm - Number of records skipped

Operator Action: Notify your System Software Administrator of disk errors on system statistical collection file space. Notify statistical collection function of missing data on final purge tape.

* S#sssss IS IN HOLD @tt.ttt

Peripheral Allocator Message. The job is in HOLD status, and 5 minutes elapsed without a reply. The HOLD status is the result of an operator HOLD request, privity being requested, a remote maintenance console being requested via JCL, or a request for a named device which is not active.

Operator Action: When the message is the result of an ASKS PRIVITY request, type a GRANT sssss or ABORT sssss reply. If the job is in HOLD because of an operator HOLD request or a remote maintenance console request, enter RUN sssss or ABORT sssss. If the job is in HOLD because of a named device not being active, bring the named device online and enter RUN sssss or ABORT sssss.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

* S#sssss IS IN LIMBO @tt.ttt

Peripheral Allocator Message. The specified job is in LIMBO status and has been waiting 5 minutes for a RUN or ABORT request.

The job was placed in LIMBO status because of needing input tapes, a disk pack, a print train, or a non-standard form for printing or punching.

Operator Action: Enter a RUN sssss request after the tapes, disk packs, trains, and/or forms have been collected, or enter an ABORT sssss request. A RUN LIMBO request may be entered to cause all jobs in LIMBO status to be run.

* S#sssss IS IN REST @tt.ttt

Peripheral Allocator Message. The specified job is in REST (restart) status following a system interruption, and 5 minutes have elapsed without a RUN sssss or ABORT sssss request having been made.

Operator Action: Enter RUN sssss if the job is to be run or ABORT sssss if it is not to be run. Enter RUN REST to run all jobs in REST status.

* S#sssss IS IN SIEVE @tt.ttt

Peripheral Allocator Message. The specified job exceeds the system sieve limits, and five minutes have elapsed without a RUN sssss or ABORT sssss request having been made.

Operator Action: Enter a RUN sssss request if the job is to be run or an ABORT sssss request if it is not to be run. A RUN SIEVE request may be entered to cause all jobs in SIEVE status to be run.

S

OUTPUT MESSAGES

S

OUTPUT MESSAGES

* S#sssss NEEDS n xx @tt.ttt

Peripheral Allocator Message. Job allocation is delayed because of the type of peripheral device specified.

n - Number of devices/links needed
xx - Device type

Operator Action: If additional unassigned peripheral devices are available and can be assigned without causing system problems, do so in order to run the job; or wait until the specified device is released by a job in the system so it may be reassigned to the new job; or if the required device will not be available, terminate the new job.

* S#sssss NEEDS fc PRMFL @tt.ttt

Peripheral Allocator Message. Job allocation is delayed because the specified PRMFL is being used by another job.

Operator Action: Wait until the specified PRMFL can be assigned by the system; or if it is not possible to wait, terminate the job.

*Ssssss NO PAT ROOM TO READ PRINTIMAGE FILE

PRLC Message. .MPRLC could not acquire space for a PAT body to perform I/O.

Operator Action: Rerun TVIM with file statements adjusted to allocate more area for the PAT.

*S#sssss NOT IN QUE

Peripheral Allocator Message. An input to the Peripheral Allocator queue made for a job not in the queue.

Operator Action: Check to see if the proper sequence number was entered. If it was, check the console log for the disposition of the job.

S
OUTPUT MESSAGES

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OUTPUT MESSAGES

<<<S#sssss PROTECTED FILES REMAIN ABORT--LOCKED>>>

Integrated Software Message. All requested recovery has been successful, yet abort--locks remain on one or more protected files which were involved.

sssss - Deferred recovery process SNUMB

Operator Action: Examine the deferred recovery reports for more information.

*S#ssssa PURGE SUCCESSFUL. SYSTEM ACCT PURGE IS R#rrrr ON icccdd

GPOP Message. The status of the statistical collection file purge and identification of the purge tape.

ssssa - Generated SNUMB of purge program
rrrr - Reel number of purge tape

Operator Action: Dismount and save purge tape.

*S#ssssa PURGE SUCCESSFUL (PARTIALLY COMPLETED) SYSTEM ACCT
PURGE IS R#rrrr ON icccdd

GPOP Message. An end-of-tape was encountered, and this reel is one of the valid output reels.

ssssa - Generated SNUMB of purge program
rrrr - Reel number of purge tape

Operator Action: Dismount and save tape when termination DMT messages are issued. Output is valid.

S
OUTPUT MESSAGES

S
OUTPUT MESSAGES

***S#ssssA PURGE UNSUCCESSFUL. OUTPUT ERROR.**
SYSTEM ACCT PURGE IS R#rrrr ON lccodd

GPOP Message. The normal execution level purge failure was caused by the output (tape). The statistical collection purge tape is partial. An attempt will be made in wrapup to purge again.

ssssA - Generated SNUMB of purge program
rrrr - Reel number of purge tape

Operator Action: Dismount and save partial purge tape. If purge fails in wrapup, the partial tapes may contain some data that can be salvaged.

***S#sssss REEL SEQUENTIAL # IS WRONG, C(HANGE), A(BORT), I(GNORE)**

Dump Analyzer Message. The tape reel's sequential reel number within a multi-reel file is not the same as specified on the previous reel's end-of-tape label.

Operator Action: Enter one of the following entries:

C - Release the tape. The operator then can mount the correct tape.

I (or EOM) - Accept the tape that is mounted and continue processings.

A - Abort the .MMDMP program.

S#sssss RESTORE TERMINATED WITH DIAGNOSTIC - CHECK EXECUTION REPORT

Restore Message. A message describing the problem was printed on the execution report that preceded the current restore operation.

Operator Action: Check the execution report to determine the problem.

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OUTPUT MESSAGES

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S#sssss ***** SIn.m INTEGRATED SOFTWARE LOADED SUCCESSFULLY *****

Integrate Software Message. Integrated Software successfully loaded. This one line message will be seen only if Integrated Software was loaded successfully without errors. Otherwise, the following message will be seen.

S#sssss ***** SIn.m INTEGRATED SOFTWARE STATUS *****

S#sssss SHARED NAME = nnnn [LOADED SUCCESSFULLY]
[INTEGRATED SOFTWARE ABORTED]

S#sssss # OF FATAL ERRORS - x # OF NON-FATAL ERRORS -y

S#sssss # OF BUFFER POOL COMMANDS - xx # OF B-P ERRORS - yy

[S#sssss MAXIMUM WIRED PAGES ALLOWED (zz) - mmmm]

[S#sssss BACKDOOR LOAD-MAP - [YES]
[NO]]

Integrated Software Message. Status of the loading of Integrated Software.

NOTE: The penultimate message will appear only if the ASSIGN-SITE-PARAMETER -SET MAX WIRED PAGES mmmm was specified in the loading directives. The last message will appear only if the ALLOCATE -BACKDOOR -PATHNAME USERID/CAT-FILE was specified in the loading directives.

- n.m - Integrated Software release number (e.g., 4.2)
- nnnn - SYS
- x - Number of fatal loading errors
- y - Number of non-fatal loading errors
- xx - Number of buffer pool commands read by SDL
- yy - Number of buffer pool command errors
- zz - "DEFAULT" or "REQUESTED"
- mmmm - Maximum wired pages allowed for sssss
- sssss - Integrated Software Loader (SDL) SNUMB (usually SHARD)

Operator Action: If loading was successful, verify if any fatal or non-fatal errors occurred. If Integrated Software aborted (one or more fatal errors occurred), correct the cause of the abort and spawn the Integrated Software (SHARD) again.

S

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```
                {i LINKS}
                {j TAPES}
*S#sssss SIEVE {k TIME } RUN xxx?
                {lK SYOT }
                {mK SIZE }
                {nK +TSS }
```

Peripheral Allocator Message. The job demands exceed sieve specified.

- i - Number of llinks
- j - Number of tapes
- k - Processor time
- lK - Number of SYSOUT records times K (K=1024)
- mK - Memory size in multiples of 1024 words
- nK +TSS - The number (n) of K words (1024) by which TSS has exceeded the available memory space. TSS must be terminated or reduced in size by the amount indicated before the job can be run.
- xxx - KPX

Operator Action: Enter RUN sssss or ABORT sssss. The sieve may also be changed and a RUN SIEVE request issued to the console.

S#sssss - TAPE DENSITY ERROR

Dump Analyzer Message. The density of the magnetic tape mounted on the tape handler is different from that specified in response to the following console message:

```
*S#sssss ENTER DUMPn OR TAPE MODE/REEL #, DENSITY
```

Operator Action: Correctly enter the tape density in a repeat of the entire response to the message.

S
OUTPUT MESSAGES

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*S#sssss - TAPE # IS nnnnn ON LABEL C(HANGE), I(GNORE)

Dump Analyzer Message. The tape reel number entered by the operator is not the same as that in the tape label.

Operator Action: Enter with one of the following entries:

C - Release the tape. The operator then can specify another tape reel number in response to the message "*S#sssss ENTER DUMPn OR TAPE MODE/REEL #,DENSITY."

I (or EOM) - Accept the tape that is mounted and continue processing.

A - Abort the .MMDMP program.

*S#sssss - TAPE LABEL IS WRONG C(HANGE), A(BORT), I(GNORE)

Dump Analyzer Message. The tape reel that is mounted is different from that which was requested in the job control language.

Operator Action: Enter with one of the following:

C - Release the tape. The operator then can specify another tape reel number in response to the message "*S#sssss ENTER DUMPn OR TAPE MODE/REEL #,DENSITY".

I (or EOM) - Accept the tape that is mounted and continue processing.

A - Abort the .MMDMP program.

*S#sssss - TAPE NOT READABLE, PLEASE CHECK MODE, DENSITY

Dump Analyzer Message. The specified tape is not readable, possibly because of a mode or density error.

Operator Action: Enter one of the following:

C - Release this tape. The system then repeats the console message "*S#sssss ENTER DUMPn OR TAPE MODE/REEL #,DENSITY". The operator can then specify the correct tape reel number, mode, or density.

A - Abort the .MMDMP program.

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*S#sssss - TOO MANY PRG NUMBERS

Dump Analyzer Message. More than eight program (process) numbers were specified in response to the following message:

ADDITIONAL OPTIONS: ALL,HCM,SOFT,SLV,W/XX,P/XX,REAL,NPURE,NONE,
DEVICE,DUMPO,(-)SD.XXX,.MXXXX,PH.XXX,PSH,SSF,
HIS,TRC,COM,PTW,ONLY,EXEC,FLTKPX,CACHE,SDC,
AUTO,PAED,RES,END

Operator Action: Repeat the entire response, but do not specify more than eight program process numbers.

*S#sssss - TOO MANY WS NUMBERS

Dump Analyzer Message. More than eight working space numbers were specified in response to the following message:

ADDITIONAL OPTIONS: ALL,HCM,SOFT,SLV,W/XX,P/XX,REAL,NPURE,NONE,
DEVICE,DUMPO,(-)SD.XXX,.MXXXX,PH.XXX,PSH,SSF,
HIS,TRC,COM,PTW,ONLY,EXEC,FLTKPX,CACHE,SDC,
AUTO,PAED,RES,END

Operator Action: Repeat the entire response, but do not specify more than eight working spaces.

*S#sssss - TOO MANY SNUMBS

Dump Analyzer Message. More than eight SNUMBs were specified in response to the following message:

ADDITIONAL OPTIONS: ALL,HCM,SOFT,SLV,W/XX,P/XX,REAL,NPURE,NONE,
DEVICE,DUMPO,(-)SD.XXX,.MXXXX,PH.XXX,PSH,SSF,
HIS,TRC,COM,PTW,ONLY,EXEC,FLTKPX,CACHE,SDC,
AUTO,PAED,RES,END

Operator Action: Repeat the entire response, but do not specify more than eight SNUMBs.

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*S#sssss TRAIN name/ID train id REMOVED FROM TRAIN TABLE

PRLC Message. The operator-supplied train type (BCD or ASCII) or printer type (PRT401) specified in the TVIM to create the train file does not agree with the corresponding data on the \$ TRAINS statement in the \$CONFIG section of the Startup deck. The specified train cannot be used as a site standard train.

Operator Action: Correct the \$ TRAINS statement and/or rebuild the name/identifier on the PRINTIMAGE file by running .MTVIM. Reboot the system to reload the train name/identifier back into the train incore table.

S#ssssss UNABLE TO ALLOCATE TAPE HANDLER

Dump Analyzer Message. Multiple attempts to obtain a tape drive were unsuccessful.

Operator Action: Resubmit the job when a tape drive is available to process the dump tape.

*S#sssss UNKNOWN MODE

Dump Analyzer Message. When identifying the number of tape tracks, the operator incorrectly specified the number of tracks on the magnetic tape mounted on the tape handler (e.g., specified 9-track instead of 7-track or entered a number other than 7 or 9) in response to the following message:

*S#sssss ENTER DUMPn OR TAPE MODE/REEL #, DENSITY

Operator Action: Correctly enter the tape mode in a repeat of the entire response to the message:

*S#sssss DUMPn OR 7/XXXXX, DENS OR 9/XXXXX, DENS.

*S#sssss - UNKNOWN OPTION

Dump Analyzer Message. An invalid option was entered in response to the following message (e.g., an option was misspelled):

*S#sssss ENTER DUMPn OR TAPE MODE/REEL #, DENSITY

Operator Action: Repeat the entire response and enter correct option.

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*S#sssss USES RMT MAINT CONSOLE ID=xxxxxxxxxxxxx

Peripheral Allocator Message. The specified job requires use of the remote maintenance console, and the Peripheral Allocator site option is set so that permission to use the remote maintenance console is given automatically.

xxxxxxxxxxxxx - User identification

Operator Action: None.

S#sssss-aa WHICH FNP IS TO BE BOOTLOADED?n

DATANET 355/6600 Bootload Program Message. More than one DATANET 355/6600 processor was configured in the system. The operator is asked to indicate the number of the DATANET 355/6600 processor to be bootloaded.

n - Number (0-7) of FNP to be loaded

Operator Action: Reply with the number (0-7) of the DATANET 355/6600 processor to be bootloaded.

*S#ssssA WRAPUP ENGAGED

SCF Purge Message. The normal level execution of the purge program aborted and a recovery is being attempted.

ssssA - Generated SNUMB of purge program

Operator Action: None.

*S#ssssA WRAPUP SUCCESSFUL SYSTEM ACCT PURGE IS R#rrrrr ON icccdd

SCF Purge Message. The status of statistical collection file purge and identification of the purge tape.

ssssA - Generated SNUMB of purge program
rrrrr - Reel number of purge tape

Operator Action: Dismount purge tape and save it.

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*Ssssa WRAPUP UNSUCCESSFUL. OUTPUT ERROR.
PURGE TAPE MAY BE INCOMPLETE (mmmmm) RECORDS.
SYSTEM ACCT PURGE IS R#rrrr ON iccdd

SCF Purge Message. All purge attempts failed, and identifies the partial output tape is identified.

sssa - Generated SNUMB of purge program
mmmm - Number of records on tape
rrrr - Reel number of purge tape

Operator Action: Save the partial output tape for possible salvage attempts.

*** SAVE DEVICE xxx NOT CONFIGURED ***
(A)BORT, (C)ONTINUE

Restore Message. An attempt was made to do a device restore from a device save onto a device that does not exist on the system, and the RESET/DEVICE/ option was not a specified directive.

Operator Action: Enter A to abort the restore, if desired, or C to continue. The C response automatically invokes the RESET option, which removes all device constraints from catalogs and selects available devices on the system to which files can be restored.

SCF ABT DATA ERR ON ddd LLK# nnnnn

POPM Message. The operator answered YES to Disk Accounting Continuation during startup operation and an end-of-file was not found following previous disk accounting information. This is a fatal error.

ddd - Logical device name
nnnnn - Llink number where the end-of-file is missing

Operation Action: Reboot the system and enter NO to the accounting continuation query.

*SCF CONTINUATION?

Startup Message. Asks operator to specify whether or not the Statistical Collection File is to be continued.

Operator Action: Enter YES or press EOM.

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*SCF CONTINUATION TABLE CHECKSUM ERROR

Rollcall Message. A checksum error occurred on the SCF continuation table. The system will attempt to use the data as recovered.

Operator Action: None.

*SCF CONTINUATION TABLE SEEK ADDRESS ERROR

Rollcall Message. A fatal rollcall error occurred for disk accounting. The seek address for SCF CONTINUATION data was zero.

Operator Action: Reboot the system or switch to tape accounting. Field engineering should analyze the dump.

*SCF CONTINUATION PROCESSING BAD

GPOP Message. An error occurred, and data on the Statistical Collection File (SCF) cannot be recovered.

Operator Action: If an SCF tape is being used, dismount the tape and save it.

*SCF FILE AT i-occ-dd

Dump Analyzer Message. Indicates the location of the statistical collection file.

Operator Action: None.

*SCF FILE NOT CONFIGURED. REBOOT

Startup Message. No \$ ACCOUNT statement was in the Startup program (\$FILES section).

Operator Action: Add a \$ ACCOUNT statement to the \$FILES section and reboot.

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*SCF I/O ERROR-ENTER iocc TO EXCHG SS?

SCF Message. The tape subsystem that contained the Statistical Collection File (SCF) tape failed. The system is asking the operator to enter the input/output controller (i) and PUB (channel) number (ccc) of the tape subsystem to which the SCF is to be switched.

Operator Action: Enter the input/output controller and PUB number of the alternate tape subsystem to switch the SCF or enter EOM if exchange is not desired.

SCHEDULER CATALOG DESTROYED DUE TO INITING A DEVICE

System Scheduler Message. The device that contained the System Scheduler catalog was initialized, which cleared the catalog files.

Operator Action: None.

{ SD.INJ }
{ SD.SBT }
{ SD.JOT }
* { SD.BDI } RCVERY BY CLEANPOINT UNSUCCESSFUL
{ SD.SYQ }
{ SD.JOS }
{ SD.SCA }
{ .CRSLQ }

Rollcall Message. The specified segment or data could not be recovered from the system cleanpoint file. Either the previous bootload did not employ cleanpointing or a mass storage problem exists.

Operator Action: None.

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{ SD.INJ }
{ SD.SBT }
{ SD.JOT }
* { SD.BDI } RCVRY BY POST-MORTEM UNSUCCESSFUL
{ SD.SYQ }
{ SD.JOS }
{ SD.SCA }
{ .CRSLQ }

Rollcall Message. The specified segment or data could not be recovered from the data saved by the DUMP program at abort time. The system will attempt to recover the data from the cleanpoint files, if cleanpointing is requested by the \$ INFO statement in the Startup job stream.

Operator Action: None.

* SD.INJ N/S INPUT S#sssss LOST CODEn

GPOP Message. Processing of mass storage System Input job sssss failed. Job was deleted from the system.

- n = 1 - No such name
- 2 - Device released
- 3 - Device status failure
- 4 - System Scheduler SNUMB# is not equal to J*SNUMB#
- 5 - Program number invalid

Operator Action: None.

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***SECOND SCU BASE WILL NOT ALLOW SCU EXCHANGES**

Startup Message. This is an FYI message. The DPS 8000 configuration file specifies an address split which will not allow later exchanging of SCUs (the high SCU size exceeds the size of the low SCU and the address split address is less than the size of the high SCU). The SCUs and CPUs could be corrected to the desired value by Startup, however the IMX port configuration cannot be changed thus no attempt to do this will be made.

Operator Action: Update the DPS 8000 service processor configuration file and the IMX configuration files to reflect an address split that is the next 16MEG address above the largest SCU size (i.e., if the low SCU is 16MEG and the high SCU is 32MEG, set the address split to 32MEG leaving a 16MEG memory hole). This action is only required if it would later be desired to dynamically swap the low and high SCUs to do maintenance on the (current) low SCU while the system was still running.

SECTOR NUMBER OR RANGE IS TOO MANY DIGITS - REQUEST IGNORED

Disk Space User Report Message. A SECTOR entry has more than seven digits for the starting sector number or more than three digits for the range (two digits maximum MSU0501 devices).

Operator Action: Reenter the correct number of digits.

SECTOR NUMBER OR RANGE NOT EXPRESSED IN OCTAL - REQUEST IGNORED

Disk Space User Report Message. A DSUR SECTOR entry was not valid octal input.

Operator Action: Reenter the correct octal sector address.

SECTOR OUT OF RANGE FOR DEVICE - REQUEST IGNORED

Disk Space User Report Message. Some portion or all of the sector range entered in a DSUR request is beyond the end of the pack. The entire entry is ignored even if part of it is valid.

Operator Action: Reenter the correct sector range.

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SECTOR RANGE IS ZERO - REQUEST IGNORED

Disk Space User Report Message. The range entered for a DSUR SECTOR option was zero or nothing was entered.

Operator Action: No entry or an entry of zero is not a valid DSUR SECTOR entry. A value must be entered.

SECTOR TABLE OVERFLOW - REQUEST IGNORED

Disk Space User Report Message. More than 100 DSUR SECTOR options were entered. This last SECTOR entry and all remaining SECTOR entries will be ignored.

Operator Action: No more than 100 SECTOR entries may be made during a single processing of the Disk Space User Report.

SELECT DEVICE: (PRINT), (DISK), PRINTER NAME (PR1),
(DDD/TAPE#,DENSITY), (NONE)

Dump Message. Request for device to be used by .MDUMP.

Operator Action: The operator should select the device for dumping the options which have been selected.

SELECT DEVICE: PRX OR SKIP

Dump Message. A repetitive error occurred on the printer being used for a dump.

Operator Action: Enter PRX (where X = the third character of the printers' logical device name, such as PR(2)) to redirect the dump to another online printer or enter SKIP to bypass the dump.

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*SELECT PRINTER DEVICE

Dump Message. The system has tried to dump to the system printer (PR1) and found it not available.

Operator Action: Either enter the logical device name of another online printer or Press EOM, whereupon the "***DUMP (O)PTION/(D)EFAULT/(N)ONE?" message is output at the console. The operator can choose a different method of dumping the system.

SET ENA OF CACHE OFF

Dump Message. The cache memory ENA switch is in the ON position, preventing the Dump program from resetting the memory.

Operator Action: Change the ENA switch to the OFF position.

*\$SHARED MPC-a MUST USE PSI-b ON SYSTEM-c

Startup Message. Either the \$ SHARED statement has an incorrect system number, or it was not preceded by the proper \$ MPC statement. (Reference the \$ SHARED statement in the GCOS 8 OS System Startup manual.)

- a - MPC number
- b - PSI number
- c - System number

Operator Action: Check the \$ SHARED statement and/or for the proper \$ MPC statement and make the necessary adjustment.

*\$SHCM CARD OUT OF SEQUENCE IGNORE?

Startup Message. Startup encountered two \$ SHCM statements in the \$LOAD section of the Startup job stream.

Operator Action: Enter YES if the second \$ SHCM statement should be ignored so Startup processing can continue. Enter NO to halt Startup processing so that the appropriate corrections can be made. Check for duplicate statements or modules in the \$LOAD section.

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SNUMB sssss FROM IMCV TPnnnnn

System Scheduler Message. Tape job sssss from IMCV tape reel number nnnnn was only partially received prior to system abort.

Operator Action: To run the job, resubmit it.

**** SNUMB sssss ** TAPE ON i-ccc-dd
BLANK TAPE ON READ NACI
or,
BLOCK LENGTH ERROR NACI
or,
BLOCK SERIAL NUMBER ERROR NACI**

PARS8 Message. This message is produced after the "U" option is supplied to a GEPR error message. The operator response to this message will direct PSORT8/PANLZ8 and PFKMT8 to process this tape in a manner not supported by GEPR.

Operator Action:

- I - Ignore current block and continue
- C - Process current block and continue
- A - Process data received and EOJ
- N - Skip mounted reel; proceed to next reel in REEL#-statement or "U" response is given to a GEPR ERROR; they are self-explanatory.

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****SNUMB xxxxx ** TAPE ON i-zcc-dd
INTERNAL LABEL yyyyy DIFFERS FROM EXTERNAL zzzzz NACI**

PARS8 Message. This occurs when the tape reel mounted does not match the reel number specified by REEL#- statement.

Where:

yyyyy - Reel # of magnetic tape mounted
zzzzz - Number from REEL#- statement

Operator Action:

- I - Ignore reel mismatch and continue
- C - Accept mounted reel and continue
- A - Process data received and EOJ
- N - Skip mounted reel; proceed to next reel in REEL#- statement or begin sort if last reel

**** SNUMB xxxxx ** TAPE ON i-zcc-dd
TAPE STATUS ERROR NACI**

PARS8 Message. This message is produced after the "U" option is supplied to a GEPR error message. The operator response to this message will direct PSORT8/PANLZ8 and PFKMT8 to process this tape in a manner not supported by GEPR.

Operator Action:

- I - Ignore current block and continue
- C - Process current block and continue
- A - Process data received and EOJ
- N - Skip mounted reel; proceed to next reel in REEL#- statement or begin sort if last reel. (This message occurs when a "U" response is given to GEPR ERROR).

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**** SNUMB xxxxxx ** TAPE ON i-zcc-dd
TAPE STATUS ERROR NACI**

PARS8 Message. This is given when the automatic update of the PARS8 history file is requested. It indicates the history file was not updated and the execution report should be checked for the cause of this error.

Operator Action: Notify the person responsible for PARS8.

**** SNUMB sssss ** SAVE TAPE(S) FROM i-zcc-dd FOR xxx...xxx
ACCT# zzz...zzz AND TITLE "yyy...yyy".
SAVED TAPE(S) IS A nTK wwwBPI**

PARS8 Message. This message follows "*MNT TAPE S#sssss i-ccc-dd REEL#" message issued for PSORT8/PFRMT8/PANLZ8's MME GEMORE of the tape (if a MME GEMORE was executed). This appears in any case.

Where:

sssss - The SNUMB of the job
i-zcc-dd - The address of the handler on which the tape is mounted
xxx...xxx - A 9-character identification taken from field #2 of the
\$ IDENT statement

***SOFTWARE INSTALLED SUPPORTS ONLY THE FOLLOWING:**

1. *DPS8-47, DPS8-49
2. *DPS8-47, DPS8-49, DPS8-50, DPS8-70, DPS8000
3. *DPS-47, DPS8-49, DPS8-50, DPS-70, DPS8000, DPS88

KEY6 Message. The "*SOFTWARE INSTALL" message is printed when the KEY6 module detects that it is executing on a hardware platform higher tier than the version of GCOS 8 that was purchased.

The tiers are:

1. DPS8-47, DPS8-49

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2. DPS8-47,DPS8-49,DPS8-8000,DPS8-70,DPS8000
3. DPS8-47,DPS8-49,DPS8-50,DPPS8-70,DPS8000,DPS88
4. DPS 90 supports everything.

The rule for Tiered Pricing is: A higher tiered operating system will run on all lower tiered hardware platforms. A lower tiered operating system will not run on a higher tiered hardware platform.

sssss-aa SORT BLOCKED AT nnnnn LINKS, MAY IT CONTINUE ON TAPE YN

Sort/Merge Message. A mass storage sort reached the limit of its collation area.

nnnnn - Size of collation area
YN - Operator replies

Operator Action: Enter N to abort. Enter Y to allow Sort to attempt to find three tapes for spill.

sssss-aa SORT CANNOT FIND THREE TAPES, MAY IT KEEP TRYING YN

Sort/Merge Message. The mass storage sort cannot find three collation tapes via a MME GEMORE.

YN - Operator replies

Operator Action: Enter N to abort. Enter Y to allow Sort to continue its search for three tapes.

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SPAWN ABT {BAD POINTER }
{NON-RCVBL IO}
{NO SPACE AVL}
{SD.SCQ FULL }
{DUPL SNUMBS }
{BAD EOS FLAG}

GPOP Message. The operator requested the system to spawn a job, but the spawn could not be effected for one of the following reasons.

- BAD POINTER - The file/stream pointer was outside the calling area.
- NON-RCVBL IO - Nonrecoverable I/O error.
- NO SPACE AVL - No mass storage space was available.
- SD.SCQ FULL - System Scheduler queue was full.
- DUPL SNUMBS - The requested SNUMB already exists in the table.
- BAD EOS FLAG - The end-of-stream flag is either missing or out of position.

Operator Action: Try again to spawn the job. If the second try fails, take necessary action, depending upon the reason for the failure.

*SRT xxxxx-aa tt.tt eeeee KPX = nnn

GPOP Message. The job began. This message is issued for each activity if the console queue is such that system degradation will not be affected. If the system is very busy, it is possible that no *SRT at all would be entered for a job. All time limits will be output as hours, with a resolution of either hundredths or thousandths of an hour, and will include an explicit decimal point.

- eeeeee - Activity type (GMAP, FORTA, etc.)
- nnn - Octal value for the KPX number

Operator Action: None.

*SSCLEAR FORCED DUE TO \$ SSFILE CARD PROCESS

GPOP Message. System Scheduler clear was performed as a result of processing a \$ SSFILE statement.

Operator Action: None.

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**SSF AUTO BOOTING/SWITCHING
RESTARTING DUMP...**

Dump Message. Dual SSFs exist on a DPS 88. If a problem has occurred during the dumping process, these SSFs must be switched while dumping.

Operator Action: None.

***SSFILE CARD ORDER MUST BE .EXPRS, .HOLD, 1 .USER**

Startup Message. The \$ SSFILE was processed with entries .EXPRS and/or .HOLD missing or with entries out of sequence.

Operator Action: Correct the \$ SSFILE statement and restart.

***SSFILE CRD PROCESSED, NO PROTECTED FILE RECOVERY**

GPOP Message. The \$ SSFILE statement in the Startup job stream created space for the System Scheduler, but no processes can be restarted to provide the required protected file rollback because the System Scheduler file was just created.

Operator Action: None.

SSFILE CRD PROCESSED, NO RESTART POSSIBLE

GPOP Message. The \$ SSFILE statement in the Startup job stream creates space for the System Scheduler. Since the System Scheduler file was just created, there is no file from a previous bootload to restart.

Operator Action: None.

*** 52 SSFILE CLASSES**

Startup Message. The \$ SSFILE statement is in error. There are more than 52 job classes listed.

Operator Action: Correct the statement and continue.

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SSFILE PROCESS TROUBLE:xxxxxxxxxxxx

GPOP Message. An unrecoverable I/O problem exists on the System Scheduler file. The bootload terminates. The System Scheduler file might require re-editing.

xxxxxxxxxxxx can be:

- STATUS ERROR - Status error occurred after LLINK 0 of the SSFILE was read.
- CHKSUM ERROR - A checksum error occurred following the read.
- BEYOND BOUND - Search entry was not found.

Operator Action: Contact the Honeywell Bull Response Center.

SSFILE SET UP TROUBLE:xxxxxxxxxxxx

GPOP Message. GPOP (.MPOPM) could not create a System Scheduler file.

xxxxxxxxxxxx can be:

- STATUS ERROR - I/O status error occurred after LLINK 0 of the SSFILE was read.
- CHKSUM ERROR - A checksum error occurred following the read.
- SZ TOO SMALL - The size was less than the minimum size stored in .CRSSC.
- SZ TOO BIG - The size was larger than that stored in .CRSSC.

Operator Action: None.

***ST1 AND SMCDUP INITED BUT NOT ALL OTHERS, FILE SPACE WILL BE LOST**

Startup Message. Not all mass storage devices were initialized on the bootload of the system. This is a warning only, startup does not abort.

Operator Action: None.

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***ST1 CAN'T BE THE SMC DUP DEVICE**

Startup Message. The device specified on the \$ INFO statement for the SMCDUP is the ST1 device.

Operator Action: Reboot, assigning the SMCDUP to a different device.

***ST1/SMCDUP CONFIG MAP SIZE IS 180 MASS STORE DEVICES**

Startup Message. Startup was attempted with more than 180 mass storage devices configured. Startup aborts.

Operator Action: None.

***xxx ST1/SMCDUP DEVICE WRONG PACK MOUNTED**

Startup Message. The System Master Catalog (SMC) or SMCDUP is not on the pack that was mounted on the device specified for the SMC or the SMCDUP. Startup aborts.

Operator Action: Mount the correct pack and reboot.

ST1/SMCDUP/GCOS FILE/CAT DEVICES CAN'T DEFINE NOFMS

Startup Message. A device specified as NOFMS on the \$ IOM statement was configured as the ST1, SMCDUP, or GCOS FILE device or as a device specified on the \$INIT statement with the CAT option. The NOFMS device can contain no GCOS files, FMS files, or catalogs.

Operator Action: Correct the statement in error (\$ IOM statement for the NOFMS option or the \$ INIT statement for the CAT option) and retry.

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xxxxxx START TIME?

RGIN Message. A remote terminal inquired about a specific job.

xxxxxx - Program name given in the \$\$\$ DAC request

Operator Action: Enter the estimated program start time in hours and hundredths of an hour. If the program will not start, enter NO.

*STARTING PUB NO. NOT CORRECT MODULUS

Startup Message. A \$ MPC statement has an invalid starting PUB number for the hardware strapping requirements. (If there is only one PUB specified, it can start anywhere; two PUBs must start at modulo-2; three or four PUBs must start at modulo-4; five to eight PUBs must start at modulo-8.)

Operator Action: Correct the starting PUB number and reboot.

*STARTUP ABORTED LOC xxxxxx
*PICK ONE DUMP: ALL,NONE,NORMAL,DISK

Startup Message. Startup detected a fatal error.

xxxxxx - Location of Startup abort

Operator Action: Respond with one of the following.

- ALL - Full Startup dump, including startup statements.
- DISK - Startup writes the dump to the DUMP1 file.
- NONE - No dump will be taken.
- NORMAL - Dump will not include Startup itself, but does include Startup statements. (Startup is written in a pure procedure mode and, therefore, never changes.) If a checksum test fails because Startup was altered, the dump will proceed as if ALL had been output.

If the ALL or NORMAL option is selected, *END is output at the completion of the dump. If the operator does not respond with a valid dump option, the ALL option will be assumed. In addition, if startup aborts in the LOAD section no statements will be printed.

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*STARTUP BODY CHECKSUM OK

Startup Message. A checksum made on startup indicated no checksum errors.

Operator Action: None.

*STARTUP SECOND COPY OK

Startup Message. Processing of the second copy of Startup showed no checksum errors.

Operator Action: None.

----- STEM COLLECTOR sssss-aa HAS DISENGAGED AT HH:MM:SS:SSS

STEM (PERSUE-8) Message. The STEM collector running, as snumb sssss-aa, has terminated at the indicated time.

Operator Action: None.

-----STEM COLLECTOR sssss-aa HAS ENGAGED AT HH:MM:SS:SSS

STEM (PERSUE-8) Message. The STEM collector running, as snumb sssss-aa, has started at the indicated time.

Operator Action: None.

----- STEM COLLECTOR sssss-aa NEEDS TRACE ON

STEM (PERSUE 8) Message. This occurs when STEM is started and the system trace was turned off by the operator. It will be issued every 30 seconds until trace is either turned on or five requests for trace on have been made.

Operator Action: Enter TRACE ON command.

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*SV-Ssssss - SAVE LIST ENTRY = ssssssssssss/nnnnnnnnnnn:CKSM CIT?

File Management Supervisor (FMS) Message. A checksum error occurred in a user's file descriptor.

- ssssssssss - bits 0-5, class number of FD
- bits 6-17, sector offset within llink
- bits 18-35, sector address of llink in which FD resides
- nnnnnnnnnn - bits 0-17, SCT address of device
- bits 18-35, device name on which FD resides

Operator Action: Enter C to continue processing, which will cause that file to be skipped and processing to continue to the next file. Enter I to ignore the error and to attempt to continue the save of the entry causing the error; however, further problems could occur. Enter T to terminate the program.

	{USER SAVE	}	
	{MAST "ALL"	}	
*SV-S#sssss	{MAST "DONTDO"	{COMPLETED	}
	{MAST "DOONLY"	{COMPLETED WITH DIAGNOSTICS}	}
	{MAST "RANGE"	}	

Save Message. Informs the operator that the save has completed with or without diagnostics of the problem printed on the execution report associated with the snumb sssss.

Operator Action: If completed with diagnostics, check the execution report to find the problem.

*SWAP FILE ERR xxxxxxxxxxxx TYPE: END SKIP OR GO

Dump Message. The Dump module saves the memory where its overlays are executed in the swap file and dump encountered an error while reading its swap file. The error status = xxxxxxxxxxxx.

Operator Action: Enter END to terminate the dump, SKIP to continue the dump, (meaning some data may not be correct), or GO to retry the I/O.

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***SYNTAX ERR ON \$ DIRECT -EOM SKIPS THIS CARD**

Startup Message. The fields on the \$ DIRECT statement are out of order.

Operator Action: If the statement is unnecessary, press EOM. Otherwise, correct the statement and reboot.

*** SYS_CAT/RESTART FATAL WRITE ERROR**

Rollcall Message. A fatal write error occurred on file SYS_CAT/RESTART. An initialize edit may be required before any future restart processing will be successful.

Operator Action: Contact the Honeywell Bull Response Center.

***SYSOUT RECOVERY PROCESSING IMPOSSIBLE
CONTINUE? (*NO* & EOM = ABORT THIS REBOOT
YES = CONTINUE BUT SYSOUT RECOVERY WILL BE LOST)?**

Rollcall Message. Restart Processing is not possible because of a nonfatal error encountered during SYSOUT processing.

Operator Action: Enter NO or press EOM to proceed with no SYSOUT processing. Any other response will cause the SYSOUT failure to be considered a fatal error.

***SYS SCHED CANNOT START JOBS - NOT ENOUGH BLINKS**

System Scheduler Message. The System Scheduler cannot put the job into execution, because there are insufficient (less than 5) available blinks in SYSOUT.

NOTE: If the SYSOUT unurge program aborts during the process of putting a job back into SYSOUT, the BLINKS already marked as used will not be given back. If it is desired to regain this area, a system reboot with YES to SYSOUT recovery will make those BLINKS once again available, while retaining all the other jobs in SYSOUT.

Operator Action: None. System Scheduler will start the job when space becomes available.

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***SYS SCHED CATALOG CHECKSUM ERROR**
CLASS BLOCK RELEASED

System Scheduler Message. A System Scheduler checksum error occurred in the specified class and block.

Operator Action: Edit the SSFILE again during the next boot by responding PARTIAL to the edit message and YES to the message:

*PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR.

***SYS SCHED CATALOG I/O ERROR CLASS xxxx BLOCK yy RELEASED**

System Scheduler Message. A System Scheduler I/O error on the SSFILE caused release of the specified block from the class indicated.

Operator Action: Edit the SSFILE again during the next boot by responding PARTIAL to the edit message and YES to the message:

*PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR.

*****SYS SCHED CLASS xx NEARING EXHAUSTION**

System Scheduler Message. The System Scheduler damper has been set for a particular class.

xx - Class number

Operator Action: None.

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SYS SCHED OPTIONS: ALL, ONL, SID, .NAME, NN, SNUMB, ACT, SAVE, EOM
SYS SCHED OPTION?

System Scheduler Message. Requests the operator to name the option desired in unpurging a program back from tape to the System Scheduler.

- ALL - Unpurge all jobs that have been purged from the System Scheduler.
- ONL - Unpurge all jobs that were purged from online status in the System Scheduler.
- SID - Unpurge all jobs that originated at remote station id.
- .NAME - Unpurge all jobs that were purged from class .NAME.
- NN - Unpurge all jobs that were purged from class number nn.
- SNUMB - Unpurge job with the specified SNUMB.
- ACT - Unpurge all active jobs (jobs that are candidates for execution, but not in the saved category).
- SAV - Unpurge all saved jobs.

Operator Action: The question will be repeated by the system five times or until the operator enters ALL or presses EOM. Jobs will be unpurged in accordance with the options selected.

*SYSIO ERR sssss (error type) - (activity type)

Dispatcher Message. A system I/O error occurred while job sssss was being processed. The error types and activity types are as follows:

Error types-

I/O ERROR
CHECKSUM ERROR
IMPROPER DATA READ
ILLEGAL FILE DESCRIPTORS

Activity types-

LOAD MODULE nnn (nnn=module number)
PUSH
POP

Operator Action: None.

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SYSOUT CANT HANDLE MORE THAN 1966020 LLINKS

Startup Message. More than 1966020 llinks were specified for SYSOUT on the \$ FILDEF statements associated with SYSOUT files.

Operator Action: Reduce the size of the \$ FILDEF statements and reboot.

***SYSOUT FILES MUST BE GREATER THAN 11 LLINKS**

Startup Message. The file declared on a SYSOUT statement is of insufficient size for SYSOUT collection purposes.

Operator Action: Correct the \$ FILDEF statement and reboot.

SYSOUT LINES EXHAUSTED CONTINUE OR ABORT C/A?

SYSOUT Message. The SYSOUT records limit was exceeded.

Operator Action: Enter C to increase the SYSOUT records limit by 10,000 records. Enter A to abort.

***SYSOUT RECOVERY?**

Startup Message. Gives operator the option of attempting recovery of jobs in SYSOUT at time of last interruption.

Operator Action: Enter NO or press EOM if recovery is not to be attempted. Enter YES if recovery of SYSOUT jobs is desired. Note that SYSOUT recovery should not be attempted on a cold boot without having the clean point feature enabled.

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*SYSOUT RECOVERY PROCESSING IMPOSSIBLE
CONTINUE? ("NO" & EOM = ABORT THIS REBOOT
"YES" = CONTINUE BUT SYSOUT RECOVERY WILL BE LOST)

Rollcall Message. An error prevented SYSOUT recovery processing from continuing.

Operator Action: Enter NO or press EOM to proceed with no SYSOUT recovery processing. Any other answer will cause the SYSOUT recovery failure to be considered a fatal error.

*SYSPN - DO YOU WISH TO CONTINUE PROCESSING SYSPN DIRECTIVES (Y/N)?

System Spawn Message. The operator responds N to the message:

*SYSPN - SHARD NOT OPERATIONAL; SYSPN CONTINUED BY OPERATOR

Operator Action: Respond accordingly, as follows:

- o Enter Y, if no impairment will result from processing subsequent directives.
- o Enter N, to stop the processing of the SYSPN directives. The following messages will be issued:

*SYSPN - SUBSEQUENT SYSPN DIRECTIVES ARE BYPASSED - SHARD NOT OPERATIONAL

*SYSPN - SHARD IS NOT OPERATIONAL

*SYSPN - ERROR ENCOUNTERED WHILE ATTEMPTING JOB SPAWN

*SYSPN - ERROR ENCOUNTERED WHILE PARSING CONTROL CARDS

- o Refer to message

*SYSPN - ***** SYSPN IS ABORTING *****

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*SYSPN - ERROR ENCOUNTERED DURING SYSPN INITIALIZATION

System Spawn Message. SYSPN was unable to complete initialization in order to begin directive processing. Subsequently, SYSPN aborts.

Operator Action: Refer to message:

SYSPN - ***** SYSPN IS ABORTING *****

*SYSPN - ERROR ENCOUNTERED WHILE ATTEMPTING FILE COPY

System Spawn Message. SYSPN attempted to copy the contents of a file to another file but an error was encountered.

Operator Action: Refer to message:

*SYSPN - ***** SYSPN IS ABORTING *****

*SYSPN - ERROR ENCOUNTERED WHILE ATTEMPTING FILE I/O

System Spawn Message. An error was encountered while reading from or writing to a file. SYSPN aborts.

Operator Action: Refer to message:

*SYSPN - ***** SYSPN IS ABORTING *****

*SYSPN - ERROR ENCOUNTERED WHILE PARSING CONTROL CARDS

System Spawn Message. SYSPN initialization was completed and directive processing was in progress but an error was encountered. SYSPN subsequently aborts. A message was issued previously indicating the cause of the error.

Operator Action: Refer to message:

*SYSPN - ***** SYSPN IS ABORTING *****

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*SYSPN - ERROR ENCOUNTERED WHILE PARSING INPUT DIRECTIVES

System Spawn Message. The last displayed SYSPN directive contains an error.

Operator Action: Correct directive syntax and refer to message:

*SYSPN - ***** SYSPN IS ABORTING *****

*SYSPN - ERROR ENCOUNTERED WHILE PARSING INPUT DIRECTIVES

System Spawn Message. SYSPN attempted to spawn SHARD but a job with the system job number (SNUMB) SHARD was already in execution. Normally, this error occurs when SHARD is restarted.

Operator Action: None.

*SYSPN - SHARD IS NOT OPERATIONAL

*SYSPN - DO YOU WANT TO WAIT FOR SHARD TO BECOME OPERATIONAL (Y/N)?

System Spawn Message. The time allotted to wait for SHARD expired. SYSPN spawned SHARD but has to wait for SHARD to become operational.

Operator Action: Respond accordingly, as follows:

- o Enter Y, if more time is desired for SHARD to become operational. The following message is issued:

*SYSPN - SHARD NOT OPERATIONAL; SYSPN CONTINUED BY OPERATOR

- o Enter N, if an error is suspected as the cause of the delay.

NOTE: The subsequent SYSPN directives will be bypassed and SYSPN will abort.

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*SYSPN - SHARD OPERATIONAL AT <time of day>

System Spawn Message. SHARD was spawned by SYSPN and is operational.

Operator Action: None.

*SYSPN - <SNUMB> CURRENTLY IN EXECUTION; <SNUMB> NOT SPAWNED

System Spawn Message. SYSPN attempted to spawn a job but a job with the same system job number (SNUMB) was already in execution. The -SKIP_DUPLICATE_ASK option was also specified on the spawn directive.

Operator Action: None.

*SYSPN - ***** <SNUMB> HAS ABORTED *****

*SYSPN - DO YOU WISH TO CONTINUE PROCESSING SYSPN DIRECTIVES (Y/N)?

System Spawn Message. A system job number (SNUMB) spawned and detected (-WAIT directive) an abnormal completion.

Operator Action: Respond accordingly, as follows:

- o Enter Y, if no impairment will result from processing subsequent SYSPN directives.
- o Enter N, to stop subsequent SYSPN directives from being processed. The following message will be issued:

*SYSPN - SUBSEQUENT SYSPN DIRECTIVES ARE BYPASSED - ABNORMAL TERM <SNUMB>

- o Refer to message:

*SYSPN - ***** SYSPN IS ABORTING *****

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SYSPN - ** <SNUMB> IS ALREADY IN EXECUTION *******

***SYSPN - DO YOU WISH TO CONTINUE PROCESSING SYSPN DIRECTIVES (Y/N)?**

System Spawn Message. SYSPN attempted to spawn a job but a job with the same system job number (SNUMB) was already in execution.

Operator Action: Respond accordingly, as follows:

- o Enter Y, if the current job was properly identified and bypassing the spawn causes no impairment. The following message will be issued and subsequent directives will be processed:

***SYSPN - <SNUMB> ALREADY IN EXECUTION; SYSPN CONTINUED BY OPERATOR**

- o Enter N, if the current job is in error. The following message will be issued and subsequent directives will be ignored:

***SYSPN - SUBSEQUENT SYSPN DIRECTIVES ARE BYPASSED - DUPLICATE SNUMB - <SNUMB>**

NOTE: The operator cannot abort the job in execution and retry the spawn.

***SYSPN - <SNUMB> NO CHANGE IN STATUS; CONTACT YOUR SITE ADMINISTRATOR**

***SYSPN - ERROR ENCOUNTERED WHILE ATTEMPTING JOB SPWN**

***SYSPN - ERROR ENCOUNTERED WHILE PARSING CONTROL CARDS**

System Spawn Message. A system job number (SNUMB) that was spawned and monitored (-WAIT directive) has not changed status.

Operator Action: Refer to message:

SYSPN - ** SYSPN IS ABORTING *******

***SYSPN - < SYSPN DIRECTIVE >**

System Spawn Message. A status of the directives being processed is provided to permit monitoring of the sequence of initialization events.

Operator Action: None.

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*SYSPN - ***** SYSPN IS ABORTING *****
*SYSPN - (NOTE: A RESPONSE OF N WILL CRASH THE SYSTEM)
*SYSPN - DO YOU WANT TO ALLOW FURTHER SCHEDULING OF JOBS (Y/N)?

System Spawn Message. SYSPN aborted and is in wrap-up process.

Operator Action: Respond accordingly, as follows:

- o Enter N to bring the system down and obtain a dump of the system status. The following message will be issued:

*SYSPN - SYSPN HAS ABORTED - SYSTEM IS CRASHING

- o Enter Y to continue if subsequent jobs need to be executed for further analysis. The following messages will be issued:

*SYSPN - *****
*SYSPN - *SYSPN IS ABORTING - SYSTEM OPERATIONAL HAS BEEN SET*
*SYSPN - *NOTIFY YOUR SITE ADMINISTATOR IMMEDIATELY *
*SYSPN - *****

sssss xxxxxxxxxxxxxx SYSTEM #n

System Scheduler Message. The System Scheduler successfully searched the \$D file for a SNUMB requested by the operator STATS/SNUMB sssss message, and reports the status of that job by this message.

xxxxxxxxxxxxx - READING-RMT
READING-CR
READING-MT
READING-D/D
WAIT-ALOC
WAIT-PERIP
WAIT-CORE
IN HOLD
IN LIMBO
EXECUTING
SWAPPED
WAIT-TAPE
TOO BIG

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OVERDUE
IN RESTART
TERMINATING

n - System number where the SNUMB was found

Operator Action: None.

***SYSTEM CONTROLLER CLOCK AND .CRDAT MISMATCH**

Startup Message. This is issued when Startup detects a difference between the date calculated from the system controller clock and the date recovered from .CRDAT on an autoboot with CHANGE? NO. This will also appear when a difference of one minute or more is determined when the time is calculated from the system controller clock is compared to the time calculated from .CRDAT+1 and .CRDAT+2. The DATE? question is printed and the response values input are used to set the system controller clock and .CRDAT.

Operator Action: Enter the correct values for DATE? and TIME?.

***SYSTEM CONTROLLER CLOCK IS NOT INCREMENTING**

Startup Message. Startup performed a test on the system controller clock and found that it was not incrementing. Startup aborts after sending this message to prevent a system hang.

Both Startup and GCOS use the system controller clock as an interval timer to terminate wait loops (MME GWAKE). If the clock stops incrementing, the wait loops never terminate.

Operator Action: Contact your Customer Service Division (CSD)

***SYSTEM ID?**

Startup Message. There was no \$ SYID statement in the Startup job stream.

Operator Action: Enter the system identifier on the console.

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***SYSTEM SCHDLR JOBS TO RE-INPUT**

GPOP Message. Following this message, the jobs in the System Scheduler that could not be restarted are listed.

Operator Action: Rerun the listed jobs.

***SYSTEM SCHEDULER CLEAR?**

Startup Message. Gives the operator the option of restarting jobs that are currently in the System Scheduler catalogs.

Operator Action: Enter NO or press EOM if restart is desired and recovery tables were saved on the preceding dump or boot. Enter YES to clear the Scheduler. If in a shared environment, enter YES to clear the Scheduler only when all other systems are not up.

***SYSTEM SCHEDULER CLEAR FORCED DUE TO PRIOR \$SSFILE CARD PROCESS**

System Scheduler Message. The operator responded YES to the following startup message:

***PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR?**

(Information message only).

Operator Action: None.

*****SYSTEM SCHEDULER CLEAR IN PROCESS**

System Scheduler Message. The operator responded YES to either of the following Startup messages:

***PROCESS SSFILE CARD AND SYSTEM SCHEDULER CLEAR?**

or

***SYSTEM SCHEDULER CLEAR?**

The message is repeated every two minutes until the ******SYSTEM SCHEDULER INITIALIZATION COMPLETED** message is received.

Operator Action: None.

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***SYSTEM SCHEDULER INITIALIZATION COMPLETED

System Scheduler Message. The System Scheduler completed its initialization and the system is now ready to process work.

Operator Action: Proceed with work processing.

*SYSTEM STORAGE DEVICE ST1 NOT AVAILABLE

GPOP Message. The specified device could not be assigned by Startup because either the power is off or the disk device ST1 is in an offline condition.

Operator Action: Ready the specified device and enter an ASGN request. The device may not be assigned while the system is running if assignment requires initializing the catalogs. If this occurs during rollover, it is a fatal error and the system must be rebooted after the specified device is made ready. If difficulty is encountered, notify the Honeywell Bull Response Center.

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SECTION 23

OUTPUT MESSAGES BEGINNING WITH THE LETTER T

*TAPE CONFIG INCONSISTENT

GPOP Message. The physical tape unit configuration is not the same as that described in the system description statements.

Operator Action: Compare the Startup program tape configuration to the physical system tape configuration. When they are consistent with one another, reboot the system.

*TAPE ERROR i ccc dd eeeee CANNOT PROCEED

Startup Message. A tape error occurred that Startup cannot bypass.

eeee - Error status

Operator Action: Try rebooting with the tape on another handler. If error still occurs, the tape is unusable.

TAPE ERROR STATUS ssssss ON icccdd CAN'T CONTINUE

Dump Message. An error occurred while dump data was being written to magnetic tape and the dump cannot continue. The error is defined by the status ssssss, which can be either ILLEGAL or CMD REJECT.

Operator Action: The console message "SELECT DEVICE:" is issued. Select any of these options.

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*** TAPE ERROR i ccc dd:DEVICE RELEASED**

Startup Message. During tape survey on an MTS500, MTU0400/0500, or MTU0600 subsystem, no information was returned for the device configured, indicating that the device was powered off, was in an offline condition, or was experiencing a hardware condition that precluded MPC access.

Operator Action: None, if the device is not needed. If the device is required, contact the Honeywell Bull Response Center for device repair; then assign it back to the system either via the ASGN input message or through the Startup program by restarting the \$INITIALIZE section.

***TAPE ERROR i ccc dd sssss MAY BE RECOVERABLE**

Startup Message. An I/O error was encountered on a tape.

Operator Action: This message will be followed by a FIX, TYPE GO message; respond accordingly.

***TAPE ON CARD BELOW NOT CAPABLE OF DEFAULT OR SPECIFIED DENSITY**

Startup Message. The indicated statement specifies a density option or received system default, but the tape handler named is not capable of operating at the specified or default density.

Operator Action: Specify a device that corresponds to a handler capable of processing the specified or default density; then reboot Startup.

***TAPE dd ON i-cc RELEASED**

Rollcall Message. The magnetic tape device dd on i-cc was released.

Operator Action: Either run the system without the device, or ready the specified device and enter an ASGN request. The device may not be assigned while the system is running if assignment requires initializing the catalogs.

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***TAPES - IMCV MNT i-ccc-dd**

***OPTIONS**

System Input Message. The requested IMCV tape was mounted, and the operator is asked to submit the desired option.

Operator Action: Enter one of the following.

ALL - System Input accepts all jobs on the IMCV tape.

TAKEØsssss ssss...sssss - System Input accepts only those jobs (maximum of five) indicated by SNUMB for execution.

STARTØsssss - System Input accepts all jobs from the indicated SNUMB to EOF.

STARTØsssss ssss - Beginning with the first SNUMB, System Input accepts all jobs from the first SNUMB up to, but not including, the second SNUMB.

DELETEØsssss ssss...sssss - System Input accepts all jobs for execution except those indicated (maximum of five jobs).

All option responses must be formatted exactly as shown. If an option is entered before mounting the IMCV tape, System Input will consider any tape mounted on the assigned tape unit as the IMCV tape and will try to read that tape.

If the IMCV tape is a labeled tape, the following message is output by System Input after the option has been input.

*GEIN MT i-ccc-dd, TYPE IN REEL # OF IMCV

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TERM sssss, REEL rrrr, FILE ff, COUNT nnnnn

Bulk Media Conversion Message. Either an abort occurred during a restartable activity, or information is needed in a nonrestartable situation such as a card-to-tape operation.

ff - File number count

nnnnn - Number of logical record processed to this point. This count is set to zero at the beginning of each file on a multifile reel and at the beginning of each reel of a multireel file.

Operator Action: None.

#TEXT DISABLED#

Remote Maintenance Interface. Transmitted to the local or remote console (when the command #DISABLE TEXT# is entered at remote console) when exiting Text Mode.

Operator Action: None.

THE TAPE ON i-ccc-dd IS UNUSABLE BY sssss

Integrated Software Message. This is produced when an error has occurred in header label processing for a new tape volume of a journal.

Operator Action: Mount a different tape volume when the RDY message is issued.

***THIS HARDWARE PLATFORM IS NOT SUPPORTED BY SR2500**

Startup Message. The GCOS 8 Operating System SR2500 does not support CPUs with 2K cache (i.e., ELS-1, ELSIE and older L66s).

Operator Action: Contact the designated site personnel.

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***TILT, DLT S#sssss**

Peripheral Allocator Message. The specified job caused peripheral allocation to fault, and the job was deleted. A Peripheral Allocator disaster dump is produced on either PR2 or on the statistical collection tape for analysis of the problem.

Operator Action: Preserve the printer dump, if any, and inform the field engineer of the problem.

***TIME hh.mmm**

Startup Message. Informs the operator of GCOS time (can be different from System Controller Clock time.)

hh = hours (24-hour clock)
.mmm = millihours

Operator Action: Enter a new GCOS time or enter a carriage return.

***** TIMING ERROR OCCURRED ON TRACE DUMP *****

Trace Analyzer Message. The alternate System Trace segment became full and switched before the current segment was completely written to the trace collector tape. Some trace entries may have been left out from the collector tape.

Operator Action: None.

TO DUMP .Mxxxx SELECT {SD.HCM}
 { }
 {SD.SRM}

Dump Message. Selected module xxxx is not contained in HCM but is contained in segment SD.HCM or SD.SRM.

Operator Action: Select either segment SD.HCM or SD.SRM in order to dump module xxxx.

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***TOLT TESTING NORMAL - TERM P.T. xxxxxxxxxxxxxx

TOLTS Message. All test activity terminated.

xxxxxxxxxxxxx - Processor time in milliseconds

Operator Action: None.

TOO FEW LLINKS

(Image of subject \$ FILDEF statement)

Startup Message. During a Startup edit, the original system file size created on the subject \$ FILDEF statement is too small to contain the information being edited into the file. Startup aborts.

Operator Action: Replace the subject \$ FILDEF statement with a statement specifying sufficient llinks for the file. Either reinitialize and re-edit the pack, or change the file name on the \$ FILDEF statement and on the associated \$ SYSTEM statement in the \$FILES section and re-edit the file.

*ioccdd TOO MANY DEFECTIVE TRACKS

Startup Message. Startup found more than 63 bad tracks on this pack.

Operator Action: This pack cannot be used in this condition. Notify the Honeywell Bull Response Center.

*TOO MANY DEVICE NAMES IN IOM NAME TABLE

Startup Message. More than 254 device names were specified on the \$ IOM statements. Startup halts.

Operator Action: Eliminate some of the names and reboot the system.

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***TOO MANY DEVICES TO BUILD LOGICAL DEVICE TABLE**

Startup Message. The size of the logical device table is not large enough to include all devices described in the \$CONFIG section. The maximum number of devices that can be configured is defined in the system macro package. Normally this message will not be displayed.

Operator Action: Remove device(s) from \$CONFIG section and reboot.

***TOO MANY ENTRIES ON MPCFIG CARDS**

Startup Message. There are too many entries on the \$ MPCFIG statements. Startup aborts.

Operator Action: Delete some of the entries on the \$ MPCFIG statements and reboot.

***TOO MANY FILES ON SYSTEM CARD**

Startup Message. An error occurred in the Startup job stream. No more than 32 system files may be described on System statements.

Operator Action: Remove enough non-essential system files to allow a reboot of the system.

***TOO MANY PATCHES USE \$ INFO PTCHSZ/N**

Startup Message. The maximum allowable number of patches in the \$PATCH section was exceeded.

Operator Action: Adjust the maximum allowable number of patches upward via the \$ INFO.....PTCHSZ/N statement.

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*TOO MANY PRG NUMBERS
*TOO MANY SNUMBS
*TOO MANY WS NUMBERS

Dump Analyzer Message. More than eight process numbers, working space numbers, or SNUMBs were specified in the P/pp, W/ww, or S/sssss response to the *Ssssss ENTER OPTIONS... message.

Operator Action: Repeat P/pp, W/ww, or S/sssss response, limiting the maximum to eight.

*TOTAL NO. UNITS NOT CORRECT

Startup Message. The NONSEQ option was used on a \$ CONFIG statement, and the UNITS-x field of the statement is incorrect. This number, x, should be exactly the total number of units listed with UNIT-n fields.

Operator Action: Correct statement and reboot.

*sssss ***TP8 CONFIG: CORRESPONDENT TYPES, COLLECTION FILES PRESENT

TP8 Messages. This is an informational message indicating that message cataloging was requested via the -CORRESPONDENT TYPE parameter of the CREATE TX QUEUER PROGRAM NAME command, but not collection files are configured. Although the Transaction Queuer workstation continues to execute, no message are cataloged.

Operator Action: None.

*sssss ***TP8 CONFIG: CORRESPONDENT TYPES, NO COLLECTION FILES PRESENT

TP8 Message. This is an informational message indicating that message cataloging was requested via the -CORRESPONDENT TYPE parameter of the CREATE TX QUEUER PROGRAM NAME command, but no collection files are configured. Although the Transaction Queuer workstation continues to execute, no messages are cataloged.

Operator Action: None.

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***sssss ***TP8 CONFIG: NO CORRESPONDENT TYPES, COLLECTION FILES PRESENT**

TP8 Message. This is an informational message indicating that message cataloging was not requested via the -CORRESPONDENT TYPE parameter of the CREATE TX QUEUER PROGRAM_NAME command, but that collection files are configured. Message cataloging occurs only under selected conditions (i.e., when the TQ HDR YES parameter is specified via the CREATE_SOURCE_LID or CREATE_DESTINATION_LID command).

Operator Action: None.

***sssss ***TP8 CONFIG: NO CORRESPONDENT TYPES, NO COLLECTION FILES PRESENT**

TP8 Message. This is an informational message indicating that message cataloging was not requested via the -CORRESPONDENT TYPE parameter of the CREATE TX QUEUER PROGRAM_NAME command and that no collection files are configured.

Operator Action: None.

***sssss TP8 QUEUED INPUT DIRECTORY ENTRY: AVAIL=xxxxx
REQUESTED=yyyyy**

sssss ***NOTIFY TP8 ADMINISTRATOR**

xxxxx -space available in directory file
yyyyy -space requested

TP8 Message. This message is issued only if the value yyyy is greater than the value xxxxx and indicates that the amount of space available for entries in the queued input directory file (DF) is insufficient to accommodate space requested via the NUM_DIR_ENTRY parameter the \$ PROGRAM statements.

Operator Action: One of the following corrective actions can be taken:

- o Increase the size of the DF file so that the file will accommodate more 64-word entries.
- o Reduce the value specified via the NUM_DIR_ENTRY parameter of the \$ PROGRAM statement. This statement is in the Transaction Queuer execution JCL.

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*sssss TP8 CF MSG SPACE CURR AVAIL = xxx BLKS, yy% OF TOTAL

TP8 Message. A total of xxx 512-word blocks remain available for message cataloging on all collection files (C1-C8). This represents yy percent of the total space defined for the files via File Management Supervisor FCREAT directives or Time Sharing System CREATE FILE command.

This informational message is initially issued when the Transaction Queuer workstation enters execution and then when 50 percent of the file space remains available. Thereafter, the message is issued at descending intervals of 10 percent (i.e., 40%, 30%, 20% and 10%). It is recommended that the TP8 administrator be informed when available space is reduced to the 20-30% level.

As collection space is reinstated (e.g., via a \$RLSE command), this message is issued at ascending intervals of 10 percent.

Operator Action: None.

*sssss TP8 CF SPACE EXHAUSTED

TP8 Message. All collection files space is occupied by recoverable messages. The Transaction Queuer workstation is aborted.

Operator Action: Inform the TP8 administrator, who must (1) release some of the messages via the TQUTL commands DELETE or RELEASE or (2) increase file size if any additional message cataloging is to occur. (Refer to the NOTIFY TPE-II ADMINISTRATOR message for procedures to release messages and increase file size.)

*TP REDI xxx UNASSIGNED

TPE Message. The Redirect command from the system console specified redirect to an unassigned logical terminal identifier.

Operator Action: Specify redirect to an assigned terminal.

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TP REDI xxx UNDEFINED

TPE Message. The TP REDI command from the system console specified redirect to an undefined logical terminal identifier.

Operator Action: Specify redirect to a defined terminal.

TP SPAWN LIMIT REACHED

TPE Message. A TP REST *** request spawned TPAPs up to the TPE spawn limit. However, not all TPAPs were spawned.

Operator Action: None.

TPE ALTERNATE SOURCE FILE?

TPE Message. The alternate source file option was configured.

Operator Action: Enter NO or press EOM to cause the system copy of TPE to be loaded. Other responses might be defined on a site basis to cause alternate copies to be loaded.

****TPE AT IMPASSE - xxxxxx AREA**

TPE Message. All TPAPs are terminated when this message is sent. Except for JC-STs, these names specify tables in which the fault may have occurred. However, unless the tables are unreasonably small, the source of the problem is probably elsewhere, with the table name indicating the source as follows:

1. LINK indicates that transaction requests are not being processed fast enough. This can happen when the TPAPs receive too little processor time or other system resources.
2. UNDOT table overflow indicates that output is not being delivered because of a high level of terminal activity or too many disconnected or undefined terminals.
3. OUTBUF indicates overflow of buffers because of too much activity with unjournalled transactions. INPUT indicates an invalid buffer pointer in call to release (highly improbable).

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4. The TRABUF area should be large enough for one message to each physical terminal at one time. If message sizes vary, this must be considered in sizing this buffer.
5. Overflow of the RECOVY area indicates a generally sluggish condition due to a slight buffer inadequacy in all areas. All tables may be enlarged slightly to correct this situation, or the TPAPs may be checked to see if one of them is not correct.
6. JC-STS refers to an unrecoverable error on a journal file. (JC will actually appear as JI or JO). This situation can be corrected by using a user-supplied program to create a new file, copy as much valid data from the old file as possible, purge the bad file, and rename the new file. With the new file in place, restart the TPE using the Recovery function.

xxxxxx - LINK, RECOVY, OUTBUF, TRABUF, UNDOT, INPUT, or JC-STS

Operator Action: Refer to appropriate action in above steps.

TPE CANNOT DISCONNECT ALL LINES

TPE Message. TPE did not succeed in disconnecting all remote lines during wrapup.

Operator Action: None.

**TPE CANNOT SPAWN yyy CODE xx

TPE Message. When a spawn request is denied, both the code returned by the MME GENEW and the TPAP are inserted into this message.

xx - Code returned by MME GENEW
yyy - TPAP identification

Operator Action: None.

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**TPE-CANT GENERATE RECOVERY MSG FOR xxxoo

TPE Message. A RECOVERY transaction request cannot be entered into the system because there is no link entry.

xxxoo - TPAP identification

Operator Action: None.

**TPE - CHECK TRAP xxxoo GEIN DELETE

TPE Message. Message is caused by a System Input delete (invalid statements, etc.) on a spawn.

xxxoo - TPAP identification

Operator Action: Correct slave program and enter TP REST id.

**TPE - FILE ACCESS ERROR file code, status code

TPE Message. During initialization, an error in accessing the files (e.g., file busy) causes this message to be issued to the console. File code and error code are listed. The initialization is aborted.

Operator Action: None.

***TPE FILE COPY - (C)OPY, (S)KIP, OR (A)BORT?

TPE Message. Indicate whether to copy, skip, or abort.

Operator Action: Enter one of the following:

C to cause JCP** to find the last entries in the JCP-TPE control block. The files are then copied from the beginning up to the last entries found in the control block. The normal copying procedure then continues copying the files.

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S to cause JCP** to find the last entries made in the JCP-TPE control block. JCP** backs up two non-zero, non-EOF entries in the control block and starts the normal copy procedure from this position.

A to abort JCP**. TPE then restarts the program.

***TPE FILE COPY ERROR xxxxxx

TPE Message. Neither the JOUR-IN nor JOUR-OUT file can be accessed or there is trouble reading the JCP-TPE control block.

xxxxxx - GEMORE for JI
 GEMORE for JO
 READING CNTRL BLK

Operator Action: None. Job is aborted.

***TPE FILE COPY RECOV ERR {yyyyyy} {zzzzzz}

TPE Message. An error occurred while using the JCP-TPE control block.

yyyyyy - A standard recovery error message
zzzzzz - Address at which the error was detected

Operator Action: None. This message is followed by the following message.

***TPE FILE COPY-(C)OPY, (S)KIP, (A)BORT?

***TPE FILE COPY - 7 OR 9 TRACK?

TPE Message. JCP** sends a request for a seven-track tape in standby. If none is found, this message is output to the console.

Operator Action: Enter 7 for a seven-track tape or 9 for a nine-track tape.

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****TPE FORCED OUTPUT**

XXXXXX
.
.
XXXXXX

TPE Message. An UNDOT threshold condition occurred, and output was made to the online printer.

XXXXXX
.
. Transaction numbers affected
XXXXXX

Operator Action: None.

TPE INIT?

TPE Message. The journal files were attached or accessed.

Operator Action: Enter YES to cause the journal buffers and indexes to be initialized for new, unwritten files. Enter NO or a null response and the following message appears

TPE RECOVERY?

****TPE - NO RECOVERY DUMP**

TPE Message. Operator responded YES to the TPE RECOVERY? message. GCOS recovery was queried for abort or cleanpoint dump, and no data existed. The system returns to the TPE INIT? message.

Operator Action: Refer to TPE INIT? message.

****TPE - NO RECOVERY TPAP FOR xxoo**

TPE Message. A TPAP aborted and there is no keyword RECOVER defined.

Operator Action: None.

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TPE RECOVERY?

TPE Message. Operator is asked if a continuation of the previous journal files is required. The last catalog written on each of the journal files is found, and buffers and indexes are established to continue journalization on the files from that point. The entries are made in GCOS recovery table and initialization is complete.

Operator Action: Enter NO or null to continue the previous journal files. Enter YES to cause GCOS recovery to be queried for abort or cleanpoint dump. If no data exists by either means, the following system message is typed.

****TPE - NO RECOVERY DUMP**

If data exists, recovery of all processed transaction is started.

**TPE RECOVERY ERROR

TPE Message. This message, followed by an explanatory comment, may be issued to the console during wrapup or initialization if an error return occurs during the calls to the Recovery modules (.MCRV1, .MCRV2, and .MCRV3). When issued, TPWRAP completes the wrapup, or TPINIT restarts the initialization procedure.

Operator Action: None.

**TPE TAPE COPY #zzzz TRAX NO.

JI MIN wwwww MAX xxxxxx

JO MIN yyyyy MAX xxxxxx

TPE Message. The tape, which was used by the Journal Copy Program (JCP**), was dismounted.

#zzzz - Tape number
wwwww - xxxxx - Approximate range of transaction numbers (minimum to maximum) that have been copied from the JI and JO files onto
yyyyy - xxxxx - The tape that was just dismounted

Operator Action: Copy these numbers onto the external tape label as an additional means of tape identification.

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*TPE THRSHLD ON IPxx LKxx RYxx OTxx TRxx UDxx DBxx

TPE Message. The threshold situations reached certain predetermined levels.

IPxx - Number of INPUT threshold situations
LKxx - Number of LINK threshold situations
RYxx - Number of RECOVY threshold situations
OTxx - Number of OUTBUF threshold situations
TRxx - Number of TRABUF threshold situations
UDxx - Number of UNDOT threshold situations
DBxx - Number of BPOOL threshold situations

Operator Action: None.

TPE WRAPUP

TPE Message. TPE began wrapup after a TP TERM or an ABORT \$TRAX request.

Operator Action: None.

*sssss TRACE IS NOT CONFIGURED

Trace Analyzer Message. The Trace Analyzer trace collector program was requested, but System Trace is not configured or was disabled.

sssss - Job identifier (SNUMB) of trace collector program

Operator Action: Either (1) configure System Trace or (2) enter the TRACE console command to enable System Trace and resubmit trace collector program.

*TRAIN ID UNKNOWN TO STARTUP

Startup Message. The printer train identifier is not known to the Startup program. It may be in the PRINTIMAGE file.

Operator Action: Make sure train is indicated on the \$ IOM statement.

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*TRAIN ID REJECTED, CHANGE TRAIN ID?

Startup Message. YES causes the "*ENTER TRAIN ID" message to be asked again.

NO releases the printer and causes the "*NEED PRINTER PORT ..." message to be resent.

Operator Action:

*TRAIN xxxxx [ON ddd] IS NOT ACTIVE, S#sssss IS IN HOLD

Peripheral Allocator Message. If "ON ddd" is indicated, the specified train is not mounted on printer ddd; if "ON ddd" is not indicated, the specified train is not mounted on any printer on the system. The specified job was placed into HOLD status.

ddd - Device name
xxxxx - Train identification

Operator Action: If the job is to be executed, mount the train on a printer (printer ddd if specified) and enter RUN sssss. If the job is not to be run, enter ABORT sssss reply.

**TRAX# iiii { LINE SWITCH ERR* }
{ TPAP ABORT ERR* }
{ TOO MNY LID ERR* }
{ INVLD ***MSG ERR* }
{ OUTBUF HDR ERR* }
{ OUTPUT SIZE ERR* }
{ INPT TRNSLT ERR* }
{ OTPT TRNSLT ERR* }
{ RETRVE JI ERR* }
{ RETRVE JO ERR* }
{ INTERACT MSG ERR* }

TPE Message. Indicates an aborted transaction number and the reason for the abort.

iiii - Aborted transaction number

Operator Action: None.

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*TRL ER i ccc dd sssss-aa filename SEQ#xxx INPUT CEA

Unified File Access (UFAS) Message. The trailer label group on the dismounted input reel is incorrect or missing.

filename - File name from the \$TAPE27/29 statement
xxx - Reel sequence number

Operator Action: Enter C - Continue processing after mounting the indicated reel.
Enter E - Force an end-of-file condition on this file.
Enter A - Abort the program.

Time Sharing System (TSS) messages are listed separately in this section under TSn.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing
n - S All copies of Time Sharing in execution.

The term "terminate TS8" in the discussion of the following TS8 messages indicates use of the TS8 TERM or TS8 STOP verb. The term "start TS8" indicates use of the TS8 START or TS8 STRT verb and "restart TS8" indicates use of the TS8 RESTRT verb.

TS8 ABORTING--CORRUPTED COMMON SEGMENT

Time Sharing 8 Message. Message issued when the TS8 Administrative Program aborts, which occurs when the program detects a data integrity problem.

Operator Action: Contact the designated site personnel.

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TS8 HAS ALREADY BEEN STARTED

Time Sharing 8 Message. Informational message produced when TS8 START, TS8 STRT, or TS8 RESTRT is entered at the console indicating that TS8 is already operational.

Operator Action: None; informational message only.

TS8 INITIALIZATION BYPASSED

Time Sharing 8 Message. Informational message produced when TS8 RESTRT is used to reinitiate TS8 processing indicating that certain TS8 Administrative Program functions (e.g., processing of the TS8 Initialization file) are not performed.

Operator Action: None; informational message only.

TS8 IS OPERATIONAL AT hh:mm:ss PROC nnn

Time Sharing 8 Message. Informational message produced when TS8 START, TS8 STRT, or TS8 RESTRT is entered at the console indicating that TS8 has been successfully initiated (where hh:mm:ss = time in hours (hh), minutes (mm), and seconds (ss) and nnn = Known Process Index (KPX) of the TS8 Administrative Program).

Operator Action: None; informational message only.

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TS8 QUEUE FULL, TRY LATER

Time Sharing 8 Message. One of the following verbs has been entered at the console but the TS8 Administrative Program queue, which is used to control the processing of these verbs, is full.

- o TS8 MESS
- o TS8 SPEC
- o TS8 STAT
- o TS8 TCALL
- o TS8 WARN
- o TS8 WHO

Operator Action: Retry the verb at a later time. If the same message persists, contact the designated site personnel.

{TS8 SPEC/TS8 TCAL} USERID/STATION ID ILLEGAL

Time Sharing 8 Message. An invalid user identifier or station identifier has been supplied as part of the TS8 SPEC or TS8 TCAL console verbs. (Refer to Section 2 of this manual for more information on these verbs.)

Operator Action: Verify the user identifier or station identifier and retry.

TS8 TIMESHARING SYSTEM TERMINATED

Time Sharing 8 Message. Informational message indicating that the TS8 System was terminated at tt.ttt (where tt.ttt = time in hours and thousandths of an hour). Note that this message is issued for a normal termination of the TS8 System (i.e., via the TS8 STOP or TS8 TERM verb) as well as an abnormal termination of the TS8 System (i.e., via the ABORT verb or an abnormal termination of the TS8 Administrative Program).

Operator Action: None; informational message only.

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TS8 yy-mm-dd hh-mm-ss nn USERS
SWAPS: pp PROCESSES
MEMORY: cc CURRENT
PROCESSOR: hh:mm:ss SUBSYSTEM, hh:mm:ss EXECUTIVE

Time Sharing 8 Message. TS8 System status message displayed when the TS8 STAT verb is entered at the console, where the following variables apply:

yy-mm-dd - Date expressed in year (yy), month (mm), and day (dd)

hh-mm-ss - Time expressed in hours (hh), minutes (mm), and seconds (ss).
The first occurrence of this field represents the current time (i.e., time of the status message). The second occurrence (i.e., hh:mm:ss subsystem) represents the total processor time used by all subsystems since TS8 was last started. The third occurrence (i.e., hh:mm:ss executive) is the total processor time for the TS8 Command Executive since TS8 was last started.

nn - Total number of users who are currently logged on

pp - Total number of processes that have been swapped since TS8 was last started

cc - Amount of TS8 process local memory (in K words) currently in use

Operator Action: None; informational message only.

TS8 - 256K IS MAX S/S CACHE SIZE

Time Sharing 8 Message. The value specified for the TS8 Initialization file directive SUBSYSTEM CACHE PAGES was greater than 256 (K). The default of 256 (K) is used.

Operator Action: None.

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TS8 - BAD STATUS DURING SUBSYSTEM LOADING FC=xx

Time Sharing 8 Message. An I/O error occurred when loading a subsystem to program file code xx (where xx is #P for Program File 1 or #Q for the Program File 2). TS8 will abort.

Operator Action: Verify that the file indicated in the message is properly defined and has enough space, and that the device on which it is located is operating correctly. Start TS8.

TS8 - CANNOT ACCESS INIT FILE (SMC BUSY) - START TS8 AGAIN

Time Sharing 8 Message. TS8 could not access the TS8 Initialization file because the System Master Catalog (SMC) SYS_SOFTWARE was busy. TS8 will abort.

Operator Action: Ensure that the SMC for the TS8 Initialization file is not accessed elsewhere in the GCOS 8 System. (This situation is usually a temporary condition caused by a resource or password change to the SMC.) Start TS8.

TS8 - COMMENT LOG FILE WRITE ERROR-

Time Sharing 8 Message. A write to the TS8 Comment file, which contains console output produced during TS8 startup and a TS8 Subsystem Cache map, was unsuccessful. TS8 processing continues, but no additional output to the Comment file is attempted.

Corrective Action: If use of the TS8 Comment file is desired, terminate TS8. Start TS8. If the same error persists, contact the Honeywell Bull for assistance.

TS8 - ERROR DURING GEMORE ATTACH OF \$LOAD FILE ppp xxx

Time Sharing 8 Message. File ppp, as specified by a \$LOAD directive, could not be attached (i.e., opened) via a MME GEMORE. FMS status xxx is returned by the MME GEMORE. (Refer to the GCOS 8 OS File Management Supervisor manual for an explanation of the return status.) TS8 marks this subsystem in the program descriptors as missing, but TS8 processing continues.

Corrective Action: If use of the \$LOAD directive is desired, terminate TS8. Correct the cause of the FMS error. Start TS8.

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TS8 - ERROR DURING GERSTR OF \$LOAD FILE ppp - CHECK FILE FORMAT

Time Sharing 8 Message. File ppp, as specified in a \$LOAD directive, was attached successfully but the attempt to MME GERSTR it (i.e., load it from an H*) failed. TS8 marks this subsystem in the program descriptors as missing, but TS8 processing continues.

Operator Action: If use of the \$LOAD directive is desired, terminate TS8. Correct the cause of the MME GERSTR error (probably incorrect file format). Start TS8.

TS8 - FILE: xx - MODE NOT RANDOM

Time Sharing 8 Message. Program file code xx has been opened successfully but the mode of the file is not random, as required by TS8. Values for xx are #P for Program File 1 and #Q for Program File 2. TS8 will abort.

Operator Action: Modify or recreate the file so that its access method is random. Start TS8.

TS8 - FILE SPACE GEMORE DENIED DURING SUBSYSTEM LOADING FC=xx

Time Sharing 8 Message. A request for additional file space (via a MME GEMORE) to load a subsystem to program file code xx was denied. Values for xx are #P for Program File 1 and #Q for Program File 2. TS8 will abort.

Operator Action: Increase the maximum file size of the program file identified in the message. Start TS8.

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TS8 - FMS UNABLE TO ATTACH INIT FILE - FMS STATUS=xxx

Time Sharing 8 Message. TS8 cannot access the TS8 Initialization file because FMS is unable to attach (i.e., open) it. FMS status xxx is returned. (Refer to the GCOS 8 OS File Management Supervisor manual for an explanation of the return status.) TS8 processing continues, using default initialization parameters.

Operator Action: If use of the TS8 Initialization file is desired, terminate TS8. Correct the cause of the FMS error. Start TS8.

TS8 - FMS UNABLE TO ATTACH xx FILE: FMS STATUS =xxx

Time Sharing 8 Message. TS8 cannot access program file code xx because FMS is unable to attach (i.e., open) it. Values for xx are #P for Program File 1 and #Q for Program File 2. FMS status xxx is returned. (Refer to the GCOS 8 OS File Management Supervisor manual for an explanation of the return status.) TS8 will abort.

Operator Action: Correct the cause of the FMS error. Start TS8.

TS8 - FORMAT ERROR FOR PATCH CONTAINED IN INIT FILE (rrr)

Time Sharing 8 Message. There is an error in the format of a statement contained in the \$PATCH section of the TS8 Initialization file. The statement in error is ignored; processing continues with the next statement.

The error, which is represented by rrr, may be one of the following:

<u>Error</u>	<u>Description</u>
NON-OCTAL DIGIT	Patch correction data contains a digit other than 0-7.
COLUMN-7 NON-BLANK	Column 7 of the patch statement is not blank.
PATCH LENGTH	Patch correction data is larger than 12 octal digits.

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UNMATCHED MODULE Contents of columns 73-78 do not match a valid GECALL name for a subsystem.

Operator Action: If use of the \$PATCH section statement is desired, terminate TS8. Correct the statement format. Start TS8.

TS8 - GEMORE MEMORY REQUEST DENIED DURING LOAD OF ROUTINE ppp

Time Sharing 8 Message. A request for additional memory (via a MME GEMORE) to load file ppp, as specified in a \$LOAD directive, was attempted and denied five times. This message indicates that the system-level memory was inadequate to load the requested file. TS8 will abort.

Operator Action: Ensure that sufficient memory is available during TS8 initialization. For example, ensure that TS8 is started at a time when the amount of other system processing is light. Start TS8.

TS8 - I/O ERROR DURING READ OF INIT FILE

Time Sharing 8 Message. An I/O error has occurred in trying to read the TS8 Initialization file. TS8 initialization continues, using default parameters.

Operator Action: If use of the TS8 Initialization file is desired, terminate TS8. Verify that the TS8 Initialization file is properly defined, and that the device on which the file resides is operating correctly. Start TS8.

TS8 - INIT FILE BLOCK SERIAL NUMBER ERROR

Time Sharing 8 Message. The first block of the TS8 Initialization file is not in system standard format (i.e., block serial number is not 1) so TS8 is unable to process the file. TS8 initialization continues, using default parameters.

Corrective Action: If use of the TS8 Initialization file is desired, terminate TS8. Modify or recreate the TS8 Initialization file so that it is in system standard format. Start TS8.

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TS8 - INIT FILE CONTENTS NOT ASCII OR BCD

Time Sharing 8 Message. The media code of the statements in the TS8 Initialization file is not ASCII or BCD so TS8 is unable to process the file. TS8 initialization continues, using default parameters.

Operator Action: If use of the TS8 Initialization file is desired, terminate TS8. Modify or recreate the TS8 Initialization file so that the media code is either ASCII or BCD. Start TS8.

TS8 - INIT FILE NOT PRESENT

Time Sharing 8 Message. An FMS attempt to attach (i.e., open) the TS8 Initialization file indicates that it does not exist. TS8 initialization continues, using default parameters. Note that this message represents an error condition only when an installation intends to process a TS8 Initialization file.

Operator Action: If use of a TS8 Initialization file is desired, terminate TS8. Verify that the Initialization file exists. Start TS8.

TS8 - INIT FILE REQUIRED SECTION LABEL NOT PRESENT

Time Sharing 8 Message. The first statement in the TS8 Initialization file is not one of the following: \$INFO, \$LOAD, or \$PATCH. As a result, TS8 cannot process this file. TS8 initialization continues, using default parameters.

Operator Action: If use of the TS8 Initialization file is desired, terminate TS8. Ensure that the first statement in the Initialization file is \$INFO, \$LOAD, or \$PATCH. Start TS8.

TS8 - INIT FILE TOO MANY SUBSYSTEM PATCHES, NONE APPLIED

Time Sharing 8 Message. More than 128 subsystem patches were present in the \$PATCH section of the TS8 Initialization file. As a result, none were applied. TS8 initialization continues.

Operator Action: If use of TS8 subsystem patches is desired, terminate TS8. Ensure that the \$PATCH section contains no more than 128 statements. Start TS8.

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TS8 - INIT FILE \$INFO ARGUMENT LENGTH BAD

Time Sharing 8 Message. The length of a directive value in the \$INFO section of the TS8 Initialization file exceeds the maximum permitted. (The actual statement containing the directive in error is printed after the console message.) The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$INFO directive is desired, terminate TS8. Correct the directive involved. Start TS8.

TS8 - INIT FILE \$INFO ARGUMENT INVALID

Time Sharing 8 Message. A directive in the \$INFO section of the TS8 Initialization file does not contain a valid value. (The actual statement containing the directive in error is printed after the console message.) The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$INFO directive is desired, terminate TS8. Correct the directive involved. Start TS8.

TS8 - INIT FILE \$INFO ARGUMENT OUT OF RANGE

Time Sharing 8 Message. A directive in the \$INFO section of the TS8 Initialization file does not contain a value within its valid range. (The actual statement containing the directive in error is printed after the console message.) The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$INFO directive is desired, terminate TS8. Correct the directive involved. Start TS8.

TS8 - INIT FILE \$INFO DIRECTIVE NOT SUPPORTED

Time Sharing 8 Message. A directive in the \$INFO section of the TS8 Initialization file was not specified correctly (probably not spelled correctly). (The actual statement containing the directive in error is printed after the console message.) The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$INFO directive is desired, terminate TS8. Correct the directive involved. Start TS8.

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TS8 - INIT FILE \$INFO ERROR ON CACHE SET/RESET FOR (sss)

Time Sharing 8 Message. Subsystem sss, as specified in a DO CACHE or DON'T CACHE directive in the TS8 Initialization file, does not match any of the subsystem names contained in the program descriptors. The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the DO CACHE or DON'T CACHE directive is desired, terminate TS8. Verify that the subsystem name in the directive is spelled correctly, and that the subsystem represents a TS8-supported subsystem. (Refer to Appendix F of the GCOS 8 OS Time Sharing 8 Administrator's Guide manual for a list of TS8-supported subsystems.) Start TS8.

TS8 - INIT FILE \$INFO TABLE FULL FOR {GENERAL ACCESS USERID}
{
{TS8 RESTRICTED USERID}

Time Sharing 8 Message. A value supplied for the directive indicated in the message has exceeded the number of entries permissible for the directive. Only one value may be specified per directive. The directive is skipped, and TS8 initialization continues.

GENERAL ACCESS USERID may be included 10 times in the TS8 Initialization file (i.e., 8 entries are permitted in addition to the defaults of CMDLIB and LIBRARY). TS8 RESTRICTED USERID may be included 12 times in the TS8 Initialization file (there are no defaults for this directive).

Operator Action: If use of the directive is desired, terminate TS8. Ensure that the number of directive entries does not exceed the maximum allowed. Start TS8.

TS8 - INIT FILE \$INFO TEXT DOES NOT CONTAIN "="

Time Sharing 8 Message. A statement in the \$INFO section of the TS8 Initialization file does not have an equal sign separating the directive and its value. (The actual statement containing the directive in error is printed after the console message.) The statement is skipped, and TS8 initialization continues.

Corrective Action: If use of the \$INFO directive is desired, terminate TS8. Ensure that the directive contains an equal sign separating the directive and its value. Start TS8.

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TS8 - INIT FILE \$INFO TEXT LENGTH IN ERROR

Time Sharing 8 Message. A directive in the \$INFO section of the TS8 Initialization file is either missing an equal sign or exceeds 24 characters in length. (The actual statement containing the directive in error is printed after the console message.) The directive is skipped, and TS8 initialization continues.

Corrective Action: If use of the \$INFO directive is desired, terminate TS8. Correct the directive. Start TS8.

TS8 - INIT FILE \$LOAD CMDLIB NAME DUPLICATED ppp

Time Sharing 8 Message. Subsystem ppp, as specified in a \$LOAD directive CMDLIB/ppp, represents a subsystem name that already has a program descriptor. The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$LOAD directive is desired, terminate TS8. Verify that ppp represents a unique subsystem name. Start TS8.

TS8 - INIT FILE \$LOAD CMDLIB SYNTAX ERROR FOR- ppp
CHECK LENGTH/CONTENT

Time Sharing 8 Message. Subsystem ppp, as specified in a \$LOAD directive CMDLIB/ppp, represents an invalid subsystem name. Probable causes for this message are omitting the subsystem name, omitting the slash (/) between CMDLIB and the subsystem name, or using an invalid character for the subsystem name. (The subsystem name may contain 1-6 characters of the following: letters of the alphabet, digits, periods, dashes, and back arrow (ASCII underscore).) The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$LOAD directive is desired, terminate TS8. Verify that subsystem ppp is a valid subsystem name and that the syntax of the statement is correct. Start TS8.

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TS8 - INIT FILE \$LOAD FILE NAME NOT FOUND IN DESCRIPTORS ppp

Time Sharing 8 Message. Subsystem ppp, as specified in a \$LOAD directive to replace an existing TS8 subsystem, does not match any of the subsystem names in the program descriptors. (A subsystem that is to replace an existing TS8 subsystem must be placed in a file (under the master user identifier) whose name corresponds to the GECALL name for the existing subsystem. The GECALL names for TS8 subsystems are listed in the GCOS 8 OS Time Sharing 8 Administrator's Guide.) The directive is skipped, and TS8 initialization continues.

Operator Action: If use of the \$LOAD directive is desired, terminate TS8. If the subsystem name was specified incorrectly, correct it. Otherwise, modify the statement using the format CMDLIB/ppp so that ppp will be added as a TS8 subsystem. (Refer to the GCOS 8 OS Time Sharing 8 Administrator's Guide for more information on the format of \$LOAD directives.) Start TS8.

TS8 - INIT FILE \$LOAD FILE NAME SYNTAX ERROR ppp

Time Sharing 8 Message. Subsystem ppp, as specified in a \$LOAD directive to replace an existing TS8 subsystem, does not have a valid subsystem name. (The subsystem name may contain 1-6 characters of the following: letters of the alphabet, digits, periods, dashes, and back arrow (ASCII underscore).) The directive is skipped, and TS8 initialization continues.

Corrective Action: If use of the \$LOAD directive is desired, terminate TS8. Correct the subsystem name. Start TS8.

TS8 - INIT FILE \$LOAD NAME HAS ILLEGAL PERMISSIONS ppp

Time Sharing 8 Message. Program descriptor permission bits are not valid for subsystem ppp, as specified in the \$LOAD directive CMDLIB/ppp. The permission bits must be six octal digits immediately following the name of the subsystem. (Refer to the GCOS 8 OS Time Sharing 8 Administrator's Guide for more information on program descriptor permission bits.) The directive is skipped, and TS8 initialization continues.

Corrective Action: If use of the \$LOAD directive is desired, terminate TS8. Correct the permission bits for subsystem ppp. Start TS8.

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TS8 - INIT FILE \$LOAD PROCESSING, NO DESCRIPTOR SPACE FOR ppp

Time Sharing 8 Message. Subsystem ppp, as specified in the \$LOAD directive CMDLIB/ppp, could not be added because there are no program descriptors available in the TS8 command list. Addition of TS8 subsystems is limited to 20 (the number of empty descriptors in the command list). The directive is skipped, and TS8 initialization continues.

Operator Action: None; it is not possible to add more TS8 subsystems than the number of empty program descriptors (20).

TS8 - INIT FILE \$LOAD SECTION HAS TOO MANY ELEMENTS

Time Sharing 8 Message. More than the maximum of 50 subsystems have been supplied via \$LOAD directives to replace existing TS8 subsystems. Processing of this directive is skipped, and TS8 initialization continues.

Corrective Action: None; it is not possible to specify more than 50 replacement subsystems in the \$LOAD section.

TS8 - INIT IMAGE FILE WRITE ERROR

Time Sharing 8 Message. An error occurred when writing to the TS8 Image file, which contains an "image" of all statements in the TS8 Initialization file. As a result, nothing else may be written to the TS8 Image file, and this file cannot be printed through backdoor SYSOUT. TS8 initialization continues.

Operator Action: If use of the TS8 Image file is desired, terminate TS8. Check the TS8 Image file for the following errors: inadequate size, incorrect format (not sequential), invalid permissions, and file busy status. If errors are detected, modify or recreate the TS8 Image file. Start TS8.

TS8 - INVALID SETTING FOR {TS8 DEBUG/TS8 TRACE/TS8 TYPE26}

Time Sharing 8 Message. An invalid option has been supplied for one of the following verbs: TS8 DEBUG, TS8 TRACE, or TS8 TYPE26. Valid options are ON and OFF.

Operator Action: Verify the option and retry.

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TS8 - MASTER VERB DISABLED FOR TS8 MASTER {ON/OFF/TIME}

Time Sharing 8 Message. Informational message indicating that the TS8 MASTER {ON/OFF/TIME} verb has been entered at the console to override the TS8 master user logon time interval.

Operator Action: None; informational message only.

TS8 - NEED AT LEAST 6K OF S/S CACHE

Time Sharing 8 Message. The subsystem cache option (i.e., value for \$INFO directive SUBSYSTEM CACHE PAGES in the TS8 Initialization file) has been specified with a value less than the minimum of 6(K). The cache option is ignored, and TS8 initialization continues.

Corrective Action: If use of subsystem cache is desired, terminate TS8. Verify that the \$INFO directive SUBSYSTEM CACHE PAGES has been specified with a value of at least 6(K). Start TS8.

TS8 - NO MESSAGE INPUT FOR SPEC

Time Sharing 8 Message. A user identifier/station identifier but no message was supplied as part of the TS8 SPEC console verb. (Refer to the GCOS 8 OS Time Sharing 8 Administrator's Guide for more information on this verb.)

Operator Action: Retry ensuring that both a user identifier/station identifier and a message are entered.

TS8 - NO USERS

Time Sharing 8 Message. Informational message produced when the TS8 WHO verb is entered at the console but no users are currently logged on to the TS8 System.

Operator Action: None; informational message only.

TS8 - SUBSYSTEMS NOT LOADED

Time Sharing 8 Message. Subsystems detected in program descriptors and not marked as separately packaged were not edited onto the system (via statements in the \$EDIT and \$FILES sections of Startup) for GECALL to load. The message lists up to four subsystem names before issuing the number remaining. TS8 initialization continues.

Corrective Action: Ensure that all necessary subsystems are edited onto the system. (These subsystems are part of the Total System Software Tape (TSST) and are edited onto the system during System Startup.) Re-edit the system and start TS8.

TS8 - SUBSYSTEM xxx TOO LARGE TO LOAD

Time Sharing 8 Message. Subsystem xxx requires more than the GCOS 8 System segment limit of 256K to load. As a result, the subsystem is not loaded to the program files and cannot be used. TS8 initialization continues.

Corrective Action: If use of the subsystem is desired, terminate TS8. Ensure that subsystem xxx requires 256K or less in memory. Start TS8.

TS8 - UNABLE TO ABORT nnn PROCESSES

Time Sharing 8 Message. Informational message indicating that the TS8 System was unable to abort nnn processes in response to the TS8 ABORT verb. This is usually an indication that the nnn processes terminated without completing wrapup successfully.

Operator Action: None; informational message only.

TS8 - TIMESHARING SYSTEM NOT UP FOR xxxxxx

Time Sharing 8 Message. The TS8 System is not operational and, therefore, is unable to recognize the verb xxxxxx.

Operator Action: Verify that the TS8 System is operational and retry the verb.

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TS8 - UNABLE TO ACCESS COMMON DATA SEGMENT: STATUS=ssssss

Time Sharing 8 Message. An error occurred in the dynamic link to the TS8 Common Data Segment (where ssssss = error status returned from the Dynamic Linker Module). TS8 aborts. This error represents an internal system software error.

Operator Action: Contact the Honeywell Bull Response Center for assistance.

TS8 - UNABLE TO ACCESS SERVICES RU INIT ENTRY: STATUS=ssssss

Time Sharing 8 Message. An error occurred in the dynamic link to the Run Unit (RU) initialization entry for the TS8 Services Domain (where ssssss = error status returned from the Dynamic Linker Module). TS8 aborts. This error represents an internal system software error.

Operator Action: Contact the Honeywell Bull Response Center for assistance.

TS8 - UNABLE TO ACCESS PROGRAM DESCRIPTOR SEGMENT: STATUS=ssssss

Time Sharing 8 Message. An error occurred in the dynamic link to the TS8 Program Descriptor Segment (where ssssss = error status returned from the Dynamic Linker Module). TS8 will abort. This error represents an internal system software error.

Operator Action: Contact the Honeywell Bull Response Center for assistance.

TS8 - UNABLE TO CREATE TEMP FILE

Time Sharing 8 Message. An error occurred while trying to create a temporary file for either the TS8 Comment file (file code C#) or the TS8 Image file (file code I#). The TS8 Comment file contains console output during TS8 startup, and the TS8 Image file contains the image of the TS8 Initialization file. TS8 will abort.

Operator Action: Verify that there is sufficient mass storage space for the temporary creation of these files. (Both files are created with an initial size of 25 llinks.) Start TS8. If the same problem persists, contact the Honeywell Bull Response Center for assistance.

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TS8 - UNABLE TO LINK SUBSYSTEM CACHE SEGMENT:
STATUS=ssssss

Time Sharing 8 Message. An error occurred in the dynamic link for the TS8 Subsystem Cache Segment (where ssssss = error status returned from the Dynamic Linker Module). This error represents an internal system software error. Use of subsystem cache is disabled, but TS8 processing continues.

Operator Action: If use of subsystem cache is desired, terminate TS8 and contact the Honeywell Bull Response Center for assistance.

TS8 - UNABLE TO RELEASE START-UP MEMORY

Time Sharing 8 Message. After starting TS8, extra memory required to start TS8 could not be released (via a MMR GEMREL) to the system. TS8 processing continues, but the TS8 Administrative Program will execute with excess memory.

Operator Action: Contact the Honeywell Bull Response Center for assistance.

TS8 - UNABLE TO WIRE SUBSYSTEM CACHE SEGMENT

Time Sharing 8 Message. An error occurred while attempting to wire real memory for the TS8 Subsystem Cache Segment. Degradation in performance is a possible consequence due to the paging associated with loading subsystems from cache. TS8 processing continues.

Operator Action: If use of the TS8 Subsystem Cache Segment is desired, terminate TS8. Verify that adequate real memory is available (e.g., via the LSTCR console verb or the VIDEO monitor). (Contact the Honeywell Bull Response Center for assistance.) Start TS8.

TS8 - VERB NOT FOUND FOR xxxxxx

Time Sharing 8 Message. The TS8 System does not recognize the verb xxxxxx.

Operator Action: Verify that the verb is spelled correctly and retry. (A complete list of TS8 verbs may be obtained via the TS8 VOCAB verb.)

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TSn - 254K IS THE MAX S/S CACHE SIZE

Time Sharing Message. The Subsystem cache option was specified with more than 254K. The S/S cache is set to 254K.

n - 1, 2, 3, or 4

Operator Action: Contact designated site personnel.

TSn - 254K IS MAX SY SEGMENT SIZE**

Time Sharing Message. A request for in memory SY** buffer specified a size larger than 254K. Size is set to 254K.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn AUTOMATIC ERR RCVY NO DUMP

Time Sharing System Message. A system error occurred and a dump may be taken to the Statistical Collection File if the error was not in courtesy call. The types of errors which cause the message are:

<u>Error Code</u>	<u>Meaning of Error</u>	<u>Times Error Recovery Attempted</u>	<u>Snapshot Dump Taken?</u>
ZOP	Illegal procedure	*	Yes
MEMF	Memory fault	*	Yes
FLT	Fault code fault	*	Yes
DIVC	Divide check fault	*	Yes
OVF	Overflow fault	*	Yes
DRL	Derail fault	*	Yes
FATL	Lockup, ONC, parity fault	0	N/A
PLEC	Software error	0	N/A

n - 1, 2, 3, or 4

* - Error recovery is attempted unless five errors occurred within a 5-minute period.

Operator Action: None.

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TSn - BAD STATUS DURING SUBSYSTEM LOADING FC=xx

Time Sharing Message. An I/O error occurred during a MME GEINOS on file xx.
Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - CANNOT ACCESS INIT FILE (SMC BUSY) - RESTART TSS

Time Sharing Message. TSS could not access the INIT file because the SMC was busy. TSS will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - COMMENT FILE WRITE ERROR

Time Sharing Message. A write to the COMMENT backdoor file was unsuccessful.
Writing to the COMMENT backdoor file is ended.

n - 1, 2, 3, or 4

Operator Action: Contact designated site personnel.

TSn - DEFERRED CATALOG CHECKSUM ERROR - (A)BT, (C)ONT, OR (I)NIT

Time Sharing Message. Content of a deferred file is inconsistent. Console options are abort, continue, or initialize the deferred file.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - DEFERRED CATALOG FORMAT ERROR - (A)BT OR (I)NIT

Time Sharing Message. Contents of a deferred file indicate that the number of catalog entries are not consistent. Console options are abort or initialize the deferred file.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - DEFERRED CATALOG INITIALIZED

Time Sharing Message. Deferred catalog contents were not found in correct format. This message is always issued for a temporary deferred file.

n - 1, 2, 3, or 4

Operator Action: None.

TSn - DEFERRED CATALOG I/O ERROR

Time Sharing Message. I/O status return from reading the deferred file indicates an error. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - ERROR DURING GEMORE ATTACH OF \$LOAD FILE ppp xxx

Time Sharing Message. The file specified by a \$LOAD directive could not be attached via a GEMORE. ppp is the file name and xxx is the status returned by the GEMORE. Time Sharing will load the program designated by ppp from the TSS Library.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - ERROR DURING GERSTR OF \$LOAD FILE ppp - CHECK FILE FORMAT

Time Sharing Message. A \$LOAD directive was unsuccessful. The file ppp was attached correctly, but the attempt to GERSTR had failed. Time Sharing will load the program designated by ppp from the TSS Library.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - FILE SPACE DENIED FOR FILE - xx

Time Sharing Message. One of the TSS files cannot be established. The file is a temporary file and the file code is shown as xx. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - FILE SPACE DENIED FOR SY FILES**

Time Sharing Message. A request to .MALC6 for file space used for SY** allocation was denied. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - FILE SPACE GEMORE DENIED DURING SUBSYSTEM LOADING FC=xx

Time Sharing Message. An attempt to grow file xx, a TSS program file, was denied.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - FMS UNABLE TO ATTACH INIT FILE-FMS STATUS=xx

Time Sharing Message. TSS cannot access the initialization file. INIT file processing is bypassed.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - FMS UNABLE TO ATTACH PRMFL-xxx FMS STATUS=yy

Time Sharing Message. FMS cannot allocate one of the TSS files. The file named xxx was assigned as a permanent file by site options applied to .TSFDV. Both the numeric error status and the text supplied by FMS are issued. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - FORMAT ERROR FOR PATCH CONTAINED IN INIT FILE (rrr)

Time Sharing Message. An error occurred during the syntax scan of a patch in the \$PATCH section of the INIT file. The reason for the error, rrr, may be one of the following:

(NON-OCTAL DIGIT)	
(COL-7 NUMERIC)	Column 7 must be alphabetic in the range A-0 if non-blank.
(COL-7 BLANK)	Relocation of the patch contents was selected without giving a module identifier (A-0).
(MODULE ID ERROR)	The character in column 7 is not in the range A-0.
(PATCH LENGTH)	The patch content is larger than 12 octal digits.
(UNMATCHED MODULE)	The contents of columns 73-78 did not match .MTIMS or a valid subsystem name.
(PATCH BEYOND EXEC)	Patch location is beyond TSSO limits.

n - 1, 2, 3, or 4

Operator Action: Contact designated site personnel.

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TSn - GEMORE MEMORY REQUEST DENIED DURING LOAD OF ROUTINE ppp

Time Sharing Message. Loading of subsystem ppp required more memory. The GEMORE for more memory was denied five times. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing contact the designated site personnel.

TSn - INIT ERRORS, ABORT (S)YSTEM OR (T)Sn ONLY

Time Sharing Message. A fatal error occurred during TSS initialization. Concurrently "FASTBT" is on, "ERROR ABORT=SYSTEM" is indicated in the INIT file, and "ACALL/TSn" was indicated in STARTUP. These concurrent conditions could cause recurrent TSS abort, System abort, System restart, and TSS restart. Console options are abort System, or abort Time Sharing only.

n = 1 Standard Time Sharing
n = 1, 2, 3 or 4 Multicopy Time Sharing

Operator Action: Contact the designated site personnel.

TSn - INIT FILE \$ INFO ERROR TRYING TO RESET CACHE FOR ppp

Time Sharing Message. TSS was unable to find a program descriptor for ppp. The \$INFO directive to reset cache for ppp is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - INIT FILE \$ INFO ERROR TRYING TO SET CACHE FOR ppp

Time Sharing Message. TSS was unable to find a program descriptor for ppp. The \$INFO directive to set CACHE for ppp is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

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TSn - INIT FILE \$ INFO "FILE" SYNTAX BAD - xxxxx

Time Sharing Message. Part of the FILE directive in the \$INFO section of the INIT file is in error. The reason for the error is shown as xxxxx and is one of the following:

IMPROPER FILE CODE	File code is not found in the TSS file list.
NO COMMA AFTER FILE CODE	
BAD CHARACTER IN NAME	
NO FIELD AFTER COMMA	
SIZE FIELD NON-NUMERIC	Size field should be present or alphabetic characters were found.
BAD DELIMITER AFTER SIZE	Field is greater than four digits.
SIZE FIELD LENGTH ERROR	
TALLY SCANNING ERROR	Error in locating delimiter.
BAD STRING AFTER SIZE	Device name error.
FILE NAME ERROR	
PERM OPTION INCORRECT	Option is not "p".
NO DELIMITER, CAT/FILE	

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - INIT FILE \$ INFO PARAMETER LENGTH ERROR

Time Sharing Message. The numeric option field for an item in the \$INFO section is larger than six digits.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - INIT FILE \$ INFO TEXT DOES NOT CONTAIN "="

Time Sharing Message. Records in the \$INFO section of the INIT file did not have an equal sign separating directives and options.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - INIT FILE \$ INFO TEXT ERROR

Time Sharing Message. The directive in the \$INFO section does not match the list of directives in the executive.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - INIT FILE \$ INFO TEXT LENGTH IN ERROR

Time Sharing Message. The \$INFO directive spans more than 18 characters or less than one character.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn -INIT FILE \$LOAD CMDLIB NAME DUPLICATED ppp

Time Sharing Message. A \$LOAD directive of the form CMDLIB/ppp specifies a name that also has a program descriptor. The directive will be skipped.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn -INIT FILE \$LOAD CMDLIB SYNTAX ERROR FOR- ppp CHECK LENGTH/CONTENT

Time Sharing Message. A \$LOAD directive of the CMDLIB/ppp form is not constructed properly. The directive will be skipped.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn -INIT FILE \$LOAD FILE NAME NOT FOUND IN DESCRIPTORS ppp

Time Sharing Message. The \$LOAD directive contains a name ppp that does not have a program descriptor. The directive is skipped.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn -INIT FILE \$LOAD FILE NAME SYNTAX ERROR ppp

Time Sharing Message. The \$LOAD directive contains a file name ppp that is more than six characters long. The named file will be skipped.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn -INIT FILE \$LOAD NAME HAS ILLEGAL PERMISSIONS ppp

Time Sharing Message. The permissions specified on a \$LOAD directive for ppp are not in the proper format. The directive is skipped.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn -INIT FILE \$LOAD PROCESSING, NO DESCRIPTOR SPACE FOR-ppp

Time Sharing Message. No spare program descriptors are available for a \$LOAD directive CMDLIB/ppp. This and all subsequent directives are skipped.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

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TSn - INIT FILE \$LOAD PROCESSING, NO SPACE IN COMMAND LIST ppp

Time Sharing Message. No slot is available in the command list for a \$LOAD directive of the form CMDLIB/ppp. This and all subsequent directives are skipped.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - INIT FILE \$LOAD PROCESSING PRIMITIVE ERROR ppp

Time Sharing Message. The primitive for a \$LOAD directive of the form CMDLIB/ppp is not legal. This and all subsequent directives are skipped.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - INIT FILE \$LOAD SECTION HAS TOO MANY CMDLIB ROUTINES ppp

Time Sharing Message. The \$LOAD section contains more directives of the form CMDLIB/ppp than there is room to load. This and all subsequent directives are skipped.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - INIT FILE \$LOAD SECTION HAS TOO MANY ELEMENTS

Time Sharing Message. The \$LOAD section contains more than 50 entries. This and all remaining entries will be ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

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TSn - INIT FILE BLOCK SERIAL NUMBER ERROR

Time Sharing Message. The first block of the INIT file does not have a block serial number of 1.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - INIT FILE CONTENTS NOT ASCII OR BCD

Time Sharing Message. The media code of records in the INIT file is incorrect.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - INIT FILE NOT PRESENT

Time Sharing Message. The FMS status found during the attempted attach of the INIT file indicates that no file exists.

n - 1, 2, 3, or 4

Operator Action: None.

TSn - INIT FILE NULL

Time Sharing Message. The INIT file contains no data.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - INIT FILE REQUIRED SECTION LABEL NOT PRESENT

Time Sharing Message. The first record of the INIT file is not \$INFO, \$PATCH, or \$LOAD.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - INIT FILE TOO MANY SUBSYSTEM PATCHES, NONE APPLIED

Time Sharing Message. More than 128 subsystem patches were present in the \$PATCH section of the INIT file.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn -INIT IMAGE FILE WRITE ERROR

Time Sharing Message. A write to the INIT backdoor file was unsuccessful. Writing to the INIT backdoor file is ended.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - I/O ERROR DURING READ OF INIT FILE

Time Sharing Message. An I/O error was detected during MME GEINOS processing.

n - 1, 2, 3, or 4

Operator Action. Contact designated site personnel.

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TSn - MAX # INCORE SY** USERS = 406

Time Sharing Message. The value for the TSS Initialization file directive #SY**BUFFERS, which represents the number of in-memory buffers to use for TSS Collector files, was specified with a value greater than the maximum of 406. The maximum value of 406 is used for this directive.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn MAXIMUM MEMORY SIZE = xxxx

Time Sharing Message. The \$INFO directive TSS MAX SIZE specifies a size larger than the size specified by \$ INFO EXTSS startup directive. The value on the \$ INFO EXTSS will be used.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - .MPOPM QUEUE FULL

Time Sharing System Message. An attempt has been made to start a copy of TSS. When an entry to POPMs queue, telling it to start TSS was attempted, the queue was full. The startup of of TSS will not be attempted.

n - 1 Standard time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing

Operator Action: Wait for activity to die down and attempt to start TSS again.

TSn - NEED AT LEAST 6K OF S/S CACHE

Time Sharing Message. The subsystem cache option has been specified with less than 6K. This is not practical. The cache option is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

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TSn - * NO FNP AVAILABLE CHECK CONFIG

Time Sharing System Message. An attempt has been made to start a copy of TSS. However, there are no Front-end Processors configured on the system. The startup of TSS will not be attempted.

n - 1 Standard time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing

Operator Action: Check the Startup Deck \$CONFIG section to make sure that there is a FNP configured and restart TSS.

TSn -NUMBER OF EBM BUFFERS >256, RESET TO 16

Time Sharing Message. The number of EBM buffers requested is more than 256. The number is set to the default value of 16.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - POSSIBLE CACHE OPTION ERROR (LOWER=NONZERO)

Time Sharing Message. The S/S cache option word in TSS communication region does not have a zero in its lower half. Error is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - POSSIBLE SY OPTION ERROR (LOWER=NONZERO)**

Time Sharing Message. The SY** option word in TSS communication region must have a zero in its lower half. Option is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

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TSn - SUBSYSTEM xxx TOO LARGE TO LOAD

Time Sharing Message. Subsystem xxx is larger than 256K during GECALL. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn - SUBSYSTEMS NOT LOADED

Time Sharing System Message: Subsystems detected in program descriptors were not present for GECALL to load. The message lists up to four subsystem names before issuing the number remaining.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - TSS B-PRIORITY NOT DEFINED

Time Sharing System Message. The site option for B-priority dispatch consideration was not applied.

n - 1, 2, 3, or 4

Operator Action: None.

TSn - TSS FILE (xx) WON'T FIT ON UNIT (yyy) WILL USE (zzz)

Time Sharing Message. The site opted to assign the TSS file (xx) to specific device yyy but it will not fit on that device. The system assigned the file to device zzz.

n - 1, 2, 3, or 4

Operator Action: None (information message).

T

OUTPUT MESSAGES

T

OUTPUT MESSAGES

T_n - TSS MAXIMUM #USERS SET TO 999

Time Sharing Message. The site specified number of PAT segment pages is not sufficient to support the number of users specified in .TFMAX.

n - 1, 2, 3, or 4

Operator Action: Notify the site techniques personnel that the number of PAT segment pages patched in .MPOPA needs to be increased.

T_n - UNABLE TO ACTIVATE WORKING SPACE--STATUS=xxx

Time Sharing Message. An attempt to build the housekeeping data for the working space assigned for S/S cache and in memory SY** buffers has failed. xxx is the reason. The working space will be released.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

T_n - UNABLE TO ATTACH INIT BACKDOOR FILE
(GEMORE error message) if present.

Time Sharing Message. An attempt to attach the backdoor file to write the contents of the INIT file failed. The GEMORE error message, if present, will be printed. The INIT backdoor option is reset.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

T_n - UNABLE TO ATTACH COMMENT BACKDOOR FILE
(GEMORE error message) if present.

Time Sharing Message. An attempt to attach the backdoor file to write the TSS console traffic has failed. The GEMORE error message, if present, will be printed. The COMMENT backdoor option is reset.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

T

OUTPUT MESSAGES

T

OUTPUT MESSAGES

TSn - UNABLE TO BUILD CACHE SEGMENT--STATUS=xxx

Time Sharing Message. An attempt to create a segment for S/S cache has failed. xxx is the reason. The cache option is turned off.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - UNABLE TO BUILD SY SEGMENT--STATUS=xxx**

Time Sharing Message. An attempt to build a segment for in-memory SY** buffers has failed. xxx is the reason. The in-memory SY** option is reset.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - UNABLE TO EXPAND WORK SET--STATUS=xxx

Time Sharing Message. An attempt to create a working space for in-memory SY** buffers or S/S cache failed. xxx is the status returned. Those two options are skipped.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - UNABLE TO INITIALIZE SUB-DISPATCH QUEUE

Time Sharing Message. The Dispatcher rejected an attempt to establish TSS sub-dispatching. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

T

OUTPUT MESSAGES

T

OUTPUT MESSAGES

TSn - UNABLE TO STRUCTURE WORKING SPACE--STATUS=xxx

Time Sharing Message. An attempt to structure the working space assigned for S/S cache and in memory SY** buffers failed. xxx is the reason. The working space will be released.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

*TSn mmddy tt.ttt uuu USERS ccek

Time Sharing System Message. Indicates the number of Time Sharing System (TSS) users and of the size of the TSS area. This message is output when TSS requests more memory from GCOS, or each quarter-hour on the clock.

n - 1, 2, 3, or 4

uuu - Number of TSS users

ccek - Current size of TSS memory area

Operator Action: None.

*TSn mmddy tt.ttt uuu USERS

*TSn MEMORY SIZES cccK=CUR.nnnK=CHG.mmmK=MAX.sssK=SWAP.111K=LGST.

*TSn URGENT USERS xxx=URG. iiii STA.ID. www=SEC. yyyK=SIZE

*TSn - USAGES tt.tt=PROC TIME ggggk NEEDED BY zzz USERS aaa=USED

Time Sharing System Message. Indicates the status of the Time Sharing System. This message is an output upon operator request.

n - 1, 2, 3, or 4

mmddy - Date of message (month, day, year)

tt.ttt - Time of day of message

uuu - Number of users currently on Time Sharing

cccK - Current size of Time Sharing System memory allotted

nnnK - New size memory allocation requested of GCOS

mmmK - Authorized maximum memory size of Time Sharing System

sssK - Core swap size of Time Sharing System

T
OUTPUT MESSAGES

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lllK - Size of largest current Time Sharing program in memory
xxx - Number of urgent users
iiii - Station identification of most urgent user
www - Wait time of most urgent user
yyyK - Memory size allocated to most urgent user
tt.tt - Processor time used by Time Sharing System
ggggK - Total memory space needed by all user programs in TSS memory
allocation queue
zzz - Number of users waiting for memory allocation
aaa - Percent of available swap memory used

Operator Action: None.

TSS NOTIFICATION FROM \$PALC LOST-TSS QUEUE FULL FOR S#sssss

Peripheral Allocator Message. \$PALC attempted to notify TSS of the termination of a job which was run from TSS. The queue for the relevant copy of TSS is full, preventing such notification.

Operator Action: None.

TSS START TIME?

RGIN Message. A front-end processor is bootloaded and an ACALL was issued. However, Time Sharing was not started. A user connect was attempted and, not finding Time Sharing, has requested when it will be started by the operator. The keyboard was unlocked or enabled to allow operator entry.

Operator Action: Enter the time (hours and hundredths) it is anticipated Time Sharing will be started. This time is included in a message that is then printed on the users terminal.

***TURN OFF CACHE "ENA" ON PROCESSOR n**

Startup Message. The cache memory enable is active on processor n during startup.

Operator Action: Disable cache memory during startup.

T

OUTPUT MESSAGES

T

OUTPUT MESSAGES

*TWO \$ MPCFIG CARDS FOR SAME iccc

Startup Message. There are two \$ MPCFIG statements for the same input/output controller and channel.

Operator Action: Delete one of the \$ MPCFIG statements.

*TYn ON i ccc NOT READY, REPLACED BY x yyy

GPOP Message. The system console configured for channel ccc on input/output controller i was not ready; therefore, it was replaced by the system console that was configured on channel yyy on input/output controller x.

Operator Action: None.

TYPE: END, SKIP OR GO

Dump Message. A printer attention status was received.

Operator Action: Enter END - Terminate the dump operation.
SKIP - Skip to the next print operation.
GO - Continue the dump operation on the same printer.

SECTION 24

OUTPUT MESSAGES BEGINNING WITH THE LETTER U

*U3 sssss-aa MT i ccc dd ms ss

Utility Message. A hardware error abort (U3) occurred on writing to the output device while the Utility program was in control.

ms - Major status
ss - Substatus

Operator Action: None.

UDTAPE: DEVICE NAME NOT ASSIGNED

Operator Interface Message. The activity already terminated.

Operator Action: None.

UDTAPE: DEVICE NAME NOT FOUND

Operator Interface Message. The device name table does not contain the device named with the UDTAPE verb.

Operator Action: Retry UDTAPE verb with correct device (i.e., device originally used with DDTAPE verb).

UMC x...x LLINKS CHAIN CHECKSUM ERROR CIT?

Save/Restore Message. A checksum error occurred in one of the user's catalog llinks.

Operator Action: Enter C to continue, in which case the save function continues with the next user; or enter I to ignore, in which case the save function continues as if the error never occurred (which can, however, lead to further problems, depending on the condition of the catalog llink); or enter T to terminate the save function.

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OUTPUT MESSAGES

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OUTPUT MESSAGES

UMC x...x LLINK CHAIN READ ERROR CT?

Save/Restore Message. An I/O error occurred when a read to a catalog llink was tried.

Operator Action: Enter C to continue with the next user, or enter T to terminate the save function operation.

UMC x...x LLINK CHECKSUM ERROR IT?

Save/Restore Message. A checksum error occurred on the UMC x...x llink during save operation.

Operator Action: Enter I to ignore the error, in which case the save function will continue as if the error never occurred (which can, however, lead to further errors, depending on the condition of the UMC llink); or enter T to terminate the save function operation.

S#sssss UNABLE TO ALLOCATE TAPE HANDLER

Dump Analyzer Message. Multiple attempts to obtain a tape drive were unsuccessful.

Operator Action: Resubmit the job when a tape drive is available to process the dump tape.

S#sssss UNABLE TO CREATE OR GROW CARD INPUT FILE

System Input Message. The input file cannot be expanded.

Operator Action: Refer to the GCOS 8 OS System Operating Techniques manual, for all messages and explanations of the Removable Storage Initialization Program.

*UNABLE TO AUTOMATICALLY PFILE DUMPn
*MORE THAN 79 PFILES AND DFILES

Startup Message. The main PFILE routine detected an overflow condition. Startup aborts.

Operator Action: None.

U
OUTPUT MESSAGES

U
OUTPUT MESSAGES

***UNABLE TO EXCHANGE 1 ccc dd --- denial reason**

Exception Processor Message. The operator entered an X or EXCHG to request an exchange among the Exception Processor options, and no exchange can be made. The denial reason is included in the console message.

Operator Action: Follow the action described by the reason code and retry the exchange.

***UNABLE TO PFILE (file name)**
***MORE THAN 79 PFILES AND DFILES**

Startup Message. The main PFILE routine detected an overflow condition. Startup aborts.

Operator Action: None.

***** UNABLE TO POSITION COPY TAPE *****

Restore Message. The wrong save file copy tape was mounted in response to a system request for a copy tape upon receiving a read error on the original. (Information message).

Operator Action: None. However, this message is followed by the message:

```
sssss *** READ TAPE ERROR *** copy #  
IS UNKNOWN, (A)BORT, (C)ONTINUE, COPY #,
```

to which the operator can enter A to abort the program, C to continue, which skips the file in error, or the reel number of the correct copy save file tape.

UNABLE TO RECOVER sssss

Dump Message. This message is printed as the system is going down to indicate that the specified SNUMB sssss was found by the restart function in the recovery table, but no entry could be found in the SNUMB table because the SNUMB was not in memory at the time of the dump.

Operator Action: None.

UNABLE TO RECOVER CONFIGURATION TABLES - ERROR xx

Startup Message. This configuration retention is a feature for system startup (.MINIT). This is to provide the capability of certain peripheral channel and device information across a system interruption. It is invoked by answering YES to the RETAIN CONFIGURATION Startup question. With this ability, any channel that was dechanneled, and any device that was dedicated or released, and any name that was reassigned via the MOVE verb will be in force when the system is brought back up.

Configuration retention should be attempted only when the system has gone down giving the *RECOVERY TABLES SAVE message. The information stored on the RCVYINFO file is used to restore configuration when the system returns to operation.

Configuration retention should not be used when introducing a configuration change via a REPLACE from cards. TEXT from the console or from a different boot tape.

If Startup detects a problem reading the RCVYINFO file or discovers an introduced configuration change it issues a message "UNABLE TO RECOVER CONFIGURATION TABLES - ERROR xx". xx represents a code between 1 and 12 indicating the difficulty encountered. The following is a list of codes:

- 01 RCVYINFO FILE SECTOR # EQUAL ZERO
- 02 RECOVERY TABLE CHECKSUM ERROR
- 03 RECOVERY TABLE - HARD CORE QUE ENTRY - SNUMB INVALID
- 04 RECOVERY TABLE - HCQ-NO VALID DATA PRESENT
- 05 HCQ TABLE - # LLINKS EQUAL ZERO
- 06 HCQ TABLE - CHECKSUM ERROR
- 07 HCQ TABALE - SD.CR SEGMENT NOT FOUND
- 08 HCQ TABLE - INVALID DESCRIPTOR
- 09 DATBUF - INCONSISTENCY IN SD.SCN SIZE
- 10 DATBUF - INCONSISTENCY IN SD.LDT SIZE
- 11 DATBUF - INCONSISTENCY IN SD.CR SIZE
- 12 INCONSISTENCY IN .CRFIG OR .CRIRL

Startup continues normally and brings the system up with the configuration indicated on the AUTOLOAD file.

Operator Action: None.

U
OUTPUT MESSAGES

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OUTPUT MESSAGES

*UNDEFINED CHANNEL

Startup Message. The channel specified on the \$ CHAN statement was not previously defined on an I/O statement.

Operator Action: Correct \$ CHAN and I/O controller statements and reboot.

*UNIT dd DISC i ccc RELEASED

GPOP Message. The specified device could not be assigned by Startup because power is off or the device is in an offline condition.

Operator Action: Either run the system without the device, or ready the specified device and enter an ASGN request. The device may not be assigned while the system is running if assignment requires initializing the catalogs.

UNIT dd DSPK i ccc RELEASED

GPOP Message. During Startup, rolcall found a unit in a non-ready condition and released it from system resources.

Operator Action: Ready the specified disk unit and assign it using the ASGN message.

*UNIT NO. OR DENSITY MISMATCH ON i ccc dd; DEVICE RELEASED

Startup Message. A Tape Survey command was issued on an MTS500, MTU0400/0500, or MTU0600 tape subsystem, and the unit number field and/or density capability field that was returned for this unit did not match the configured value.

Operator Action: If the error is caused by hardware, the device is released. If the device is required, contact the Honeywell Bull Response Center. If the error is a result of misconfiguration, correct the \$ IOM statement(s) and restart Startup.

*UNIT NUMBER - xx INVALID FOR DEVICE TYPE

Startup Message. The unit number specified in the I/O controller card field was not within range of valid numbers.

Operator Action: Correct I/O controller statement and reboot.

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OUTPUT MESSAGES

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OUTPUT MESSAGES

*UNITSWITCH {INPUT }
{ } RLnn ON MT i ccc dd sssss-aa fc filename CE
{OUTPUT }

Master Mode Label Routines Message. Tape unit is switching from one tape of a multitape file to the next tape on another tape handler.

RLnn - Reel sequence number

Operator Action: Enter E to ignore, or mount the reel called for on the specified handler and enter C to continue.

*UNKNOWN DEVICE ON i ccc

Rollcall Message. Device type code found for this device is not known to Rollcall. The device is not usable by the operating system.

Operator Action: Verify the system configuration and reboot if the device is required.

UNKNOWN SEGMENT OR MODULE NAME "xxxxxx"

Dump Message. An unknown module or segment name was entered in response to the "ADDITIONAL OPTIONS:" message.

Operator Action: Reenter the correct module or segment name after Dump processes any valid options contained on the input line.

vvvvvv: UNKNOWN VERB

Operator Interface Message. The operator entered a verb at the console that is unknown to the system.

Operator Action: Enter correct verb.

U
OUTPUT MESSAGES

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OUTPUT MESSAGES

UNPURGE:

Unpurge Message. A prompt for specific unpurge requests. Several system responses are possible following the operator's input:

UNPURGE: THERE WAS NO VERB ON THIS COMMAND LINE
UNPURGE: AN UNRECOGNIZED VERB WAS USED ON THIS COMMAND LINE
UNPURGE: THE VERB ON THIS COMMAND LINE IS INCOMPATIBLE WITH EARLIER VERBS
UNPURGE: TOO MANY TAKE COMMANDS WERE ENTERED FOR A SINGLE RUN OF UNPURGE
UNPURGE: A REQUIRED FIELD WAS MISSING ON THIS COMMAND LINE
UNPURGE: A FIELD ON THIS COMMAND LINE WAS TOO LONG
UNPURGE: AN UNRECOGNIZED CONTROL FIELD WAS USED ON THIS COMMAND LINE
UNPURGE: AN INCONSISTENT CONTROL FIELD WAS USED ON THIS COMMAND LINE
UNPURGE: AN UNRECOGNIZED KEYWORD WAS USED ON THIS COMMAND LINE
UNPURGE: EXTRANEIOUS CHARACTERS WERE FOUND AT THE END OF THIS COMMAND LINE
UNPURGE: INPUT COMMAND MUST BE REENTERED PROPERLY

UNPURGED: UNSATISFIED OPTIONS:

Unpurge Message: Upon completion of Unpurge, the system replies:

TAKE APR SNB - 1234T

Operator Action: As indicated in specific message.

UNRECOGNIZED PARAMETER IS IGNORED

Disk Space User Report Message. The keyword in a DSUR option entry is not recognized.

Operator Action: Reenter one of the correct versions of the option entries. Valid inputs for the DEVICE entry are DEVICE, DEV, DVC, and D. Valid inputs for the SECTOR entry are SECTOR, SECT, SEC, SEEK, and S.

U
OUTPUT MESSAGES

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OUTPUT MESSAGES

***** UNRECOVERABLE ERROR - USERID xx...x *****
(A)BORT, (C)ONTINUE

Save/Restore Message. Follows a first message, which specifies the type of error that occurred.

Operator Action: Enter A to abort or C to continue restore. If the continue option is specified, restore continues with the next user.

UNSUCCESSFUL SMC LLINK READ
CLASS nn CT?

Save/Restore Message. An I/O error occurred during reading of an SMC llink.

Operator Action: Enter C to continue the save with the next class, or enter T to terminate save function operation.

*** UPPER LIMIT FOR CATALOG FENCE IS 51200**

Startup Message. Too large a value was used in the \$ INFO CATFNC/n statement.

Operator Action: Use a value between 0 and 51200 on the \$ INFO CATFNC/n statement.

URP8001 CAN CONTAIN 1 TO 4 PORTS

Startup Message: An incorrect number of ports are assigned on the \$ URP statement in the Startup job stream.

Operator Action: Assign ports correctly.

***** USER xxxxxxxx HAS NO DUP CATALOGS TO RESTORE dd1 *****

Save/Restore Message. User xxxxxxxx has catalogs on device dd1 for which a device restore is attempted, but no duplicate catalogs exist. Restore skips to the next user.

Operator Action: None.

U
OUTPUT MESSAGES

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OUTPUT MESSAGES

*** USER PREFERRED DEVICE LIST INVALID - SYSTEM DEFAULT USED**

Rollcall Message. The site option patch to POPM for the order of preference of devices is invalid because a non-mass-store device code was used. The system default (fastest device first) device preference will be used.

Operator Action: Correct the patch and reboot the system if device preference is critical to local operation.

***USW MT i ccc dd (i ccc dd) sssss-aa filename xxxxx yyyy OUT**

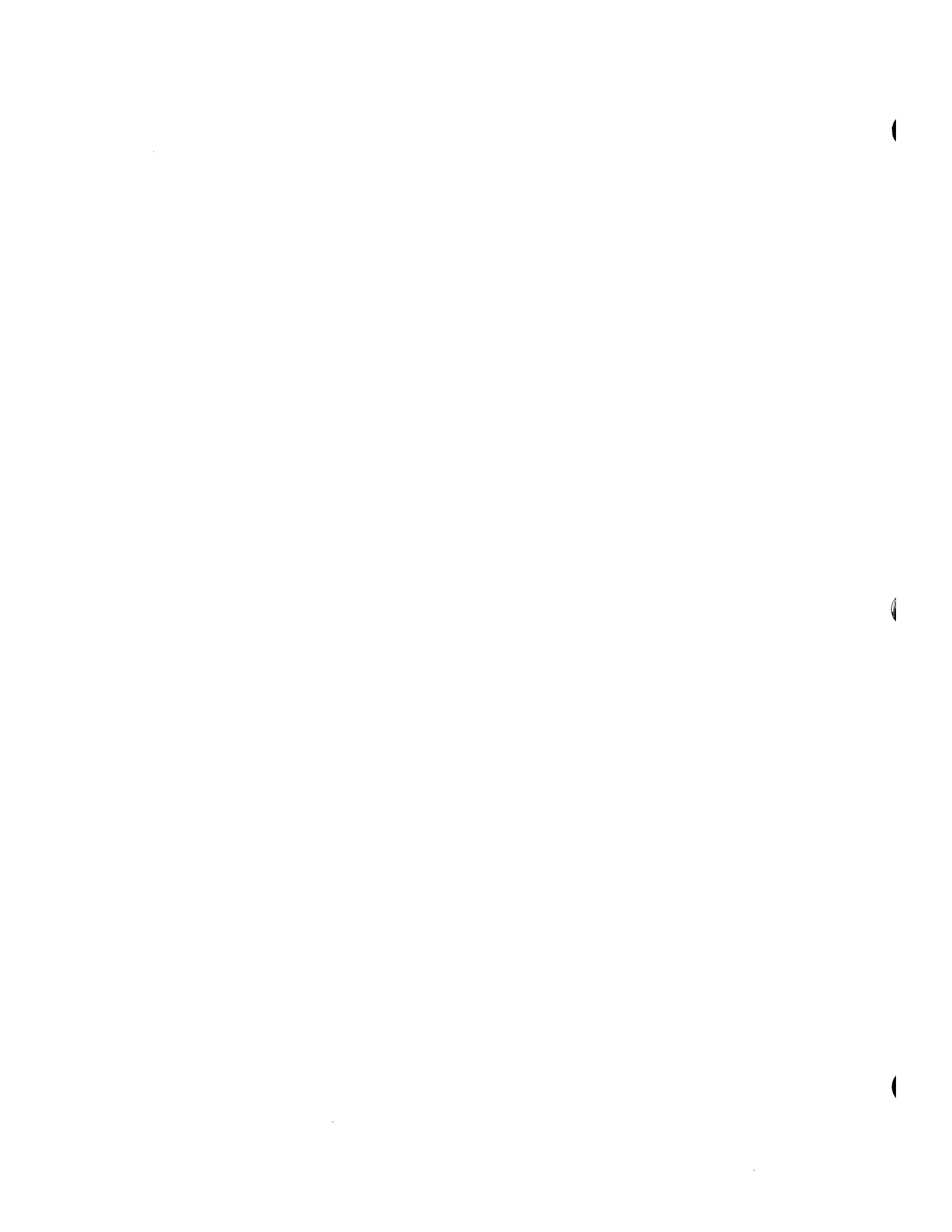
or

***USW MT i ccc dd (i ccc dd) sssss-aa (fc) filename xxxxx yyyy IN**

File and Record Control Message. The secondary or alternate device was in a ready state at unit switch time.

i ccc dd - File continued on this device
(i ccc dd) - Device placed in standby
xxxxx - Reel number
yyyy - Reel sequence number

Operator Action: None.



SECTION 25

OUTPUT MESSAGES BEGINNING WITH THE LETTER V

*sssss-aa VERIFY SCRATCH REEL FOR MT i ccc dd AS (fc) VOL: ~~mmmm~~ nnnnn YN

Standard COBOL-68 I/O System Message. Permits verification and/or correction of the reel serial number entered in an immediately preceding LOCATE SCRATCH message.

mmmm - Reel sequence number within the file
nnnnn - Reel serial number of next reel of tape

Operator Action: Enter Y if the reel serial number is correct. Processing continues.
Enter N if the reel serial number is incorrect. The input/output system will restart the operator interaction sequence by reissuing the LOCATE SCRATCH message for the file.

**VERIFY SCRATCH sssss-aa SEQ # sss FOR MT i ccc dd xxxxx

or

*VERIFY SCRATCH sssss-aa SEQ # sss FOR MT i ccc dd (i ccc dd) xxxxx YN

File and Record Control Message. Asks the operator to verify the number of a tape that is to be used to continue a multi-reel file.

sss - Next sequence number
(i ccc dd) - Alternate unit for this file
xxxxx - Next reel number for this file

Operator Action: Enter either Y to verify next reel number on i ccc dd or N to repeat the Locate and Verify messages.

*VIALE CPU NOT FOUND

Startup Message. A \$ CIU statement was rejected. All Central Processing Units (CPUs) were released or no CPUs were configured.

Operator Action: Check the \$ CIU statement against the Integrated Firmware and Diagnostics (IFAD) file listing and correct the \$ CIU statement.

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OUTPUT MESSAGES

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VIABLE IOX/IMX NOT FOUND

Startup Message. The \$ CIU statement specified IOXs/IMXs which all were found to be non-usable (i.e., no connectability from the DPS 88 CIU or DPS 8000 SCU).

Operator Action: Correct the \$ CIU statement to reflect additional IOXs/IMXs (Startup must be executing in at least one IOX/IMX that has connectability).

VSV VOLSET xxxxxxxxxxxx SUCCESSFULLY CREATED

Startup Message. The volume set was created as defined.

Operator Action: None.

VSV VOLUME xxxxxx ALREADY STAMPED

Startup Message. Volume xxxxxx was included on a VSET statement but it already belongs to another volume set. A message will follow informing the operator that the volume set could not be created. (Refer to "VSV VOLUME xxxxxx NOT FOUND" message).

Operator Action: None.

VSV VOLUME xxxxxx NOT FOUND

Startup Message. Volume xxxxxx was included on a VSET statement but could not be found in the VSI segment. A message will follow informing the operator the volume set could not be created. (Refer to "VSV ERROR- VOLUME xxxxxx HAS PMC" message).

Operator Action: None.

VSV ERROR- VOLUME xxxxxx HAS PMC

Startup Message. Volume xxxxxx was included on a VSET statement but it contains a Pack Master Catalog. A message will follow informing the operator the volume set could not be created. (Refer to "VSV ERROR- VOLUME xxxxxx NOT FIXED REMOVABLE" message).

Operator Action: None.

V
OUTPUT MESSAGES

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OUTPUT MESSAGES

VSV ERROR- VOLUME xxxxxx NOT FIXED REMOVABLE

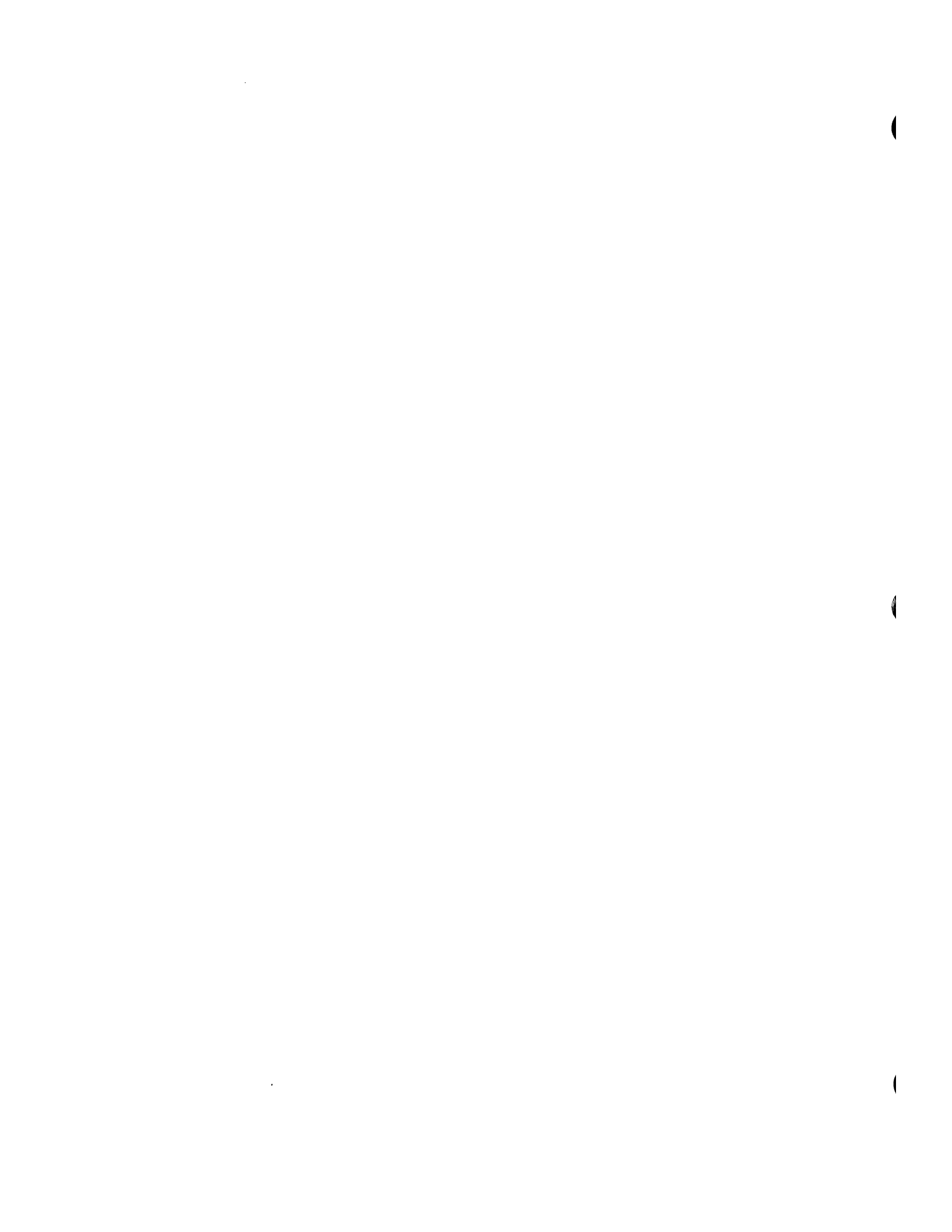
Startup Message. Volume xxxxxx was included on a VSET statement but it is not a fixed removable structured pack (e.g., 501, 3380). Physically removable volumes (e.g., MSU451) may not be members of a volume set. A message will follow informing the operator the volume set could not be created. (Refer to "VSV VOLSET xxxxxxxxxxxx CANNOT BE CREATED" message).

Operator Action: None.

VSV VOLSET xxxxxxxxxxxx CANNOT BE CREATED

Startup Message. An attempt to create a volume set that was specified in a VSET statement failed. The reason is indicated by one or more preceding error messages. Each volume in the specified volume set is validated and for each invalid volume a preceding error message will be typed on the operator's console before this message is typed.

Operator Action: None.



SECTION 26

OUTPUT MESSAGES BEGINNING WITH THE LETTER W

aaaaa WAITING ON JOURNAL GATE (xx) FOR bbbbb

Where:

aaaaa - SNUMB of the process waiting for the gate to open
bbbbbb - SNUMB of the process for which the gate was shut
xx - Name of the closed gate

Integrated Software Message. Indicates that at least one process is waiting for a journal gate to open and that the gate has been closed for 10 minutes. This is issued periodically until the condition is cleared.

Operator Action: If a console message requesting a tape mount was issued prior to the WAITING ON JOURNAL GATE message and a new tape volume was not mounted, simply mount the new tape volume. However, if a tape mount request is not outstanding when the WAITING ON JOURNAL GATE message is issued, Integrated Software must be aborted and respawned. Until Integrated Software is respawned, no journaling functions can be performed.

W
OUTPUT MESSAGES

W
OUTPUT MESSAGES

***** WARNING *** S# aaaaa ENCOUNTERED A FATAL ERROR
THE AFTER IMAGE AND ARCHIVING PROTECTION FEATURES OF
S# sssss ARE NO LONGER FUNCTIONAL @ tt.ttt
IMMEDIATE STATUS = xxxxx ORIGINAL STATUS = xxxxx**

Integrated Software Message. Indicates that a fault has occurred within journal software from which recovery is not possible. Journal software processing is no longer available although the GCOS 8 system remains operational.

Where:

aaaaa - SNUMB of the process encountering the error
sssss - SNUMB of Integrated Software
tt.ttt - Time (in hours and thousands of a hour) at which journal software encountered a fatal error
xxxxx - One of the following error status codes (octal):

400100003402 (indicates a memory fault)
400100003416 (indicates a lockup fault)
400100003424 (indicates an Illegal Procedure (IPR) fault)

NOTE: The values for immediate status and original status will be the same.

Operator Action: Abort and respawn Integrated Software.

***** WARNING ***
{ ONLY nnn } MORE TAPES CAN BE ASSIGNED TO JOURNAL aaaaa
{ NO }**

Integrated Software Message. This indicates each time a new tape volume is assigned to a journal after reaching 87.5 percent of the maximum number of tape volumes that can be assigned to a journal. When the maximum number of tape volumes has been assigned to a journal, the message "NO MORE TAPES CAN BE ASSIGNED TO JOURNAL aaaaa" is issued to the console. No more tape volumes can be assigned to the journal. Once the current tape volume is filled, no additional data base images can be journalized.

W

OUTPUT MESSAGES

W

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The maximum number of tape volumes that can be assigned to a journal is a function of the journal directory control interval size, which is established via the SDDL directive `ASSIGN SITE PARAMETER -JOURNAL DIRECTORY CISIZE`. The default for this parameter is `2K`, which will accommodate approximately 200 tape volumes for each journal on the system. If the number of journal tape volumes varies significantly from 200, the parameter can be increased or decreased. (Refer to the GCOS 8 OS System Startup manual).

Where:

- aaaaa - Journal name
- nnn - Number of additional tapes that can be assigned to the journal.

Operator Action: The 'ONLY nnn MORE TAPES' message is informational only. Corrective action for the 'NO MORE TAPES' message is to execute an Update Journal History (UPJH) command to release tape volumes containing older recovery points that are no longer of interest.

***WARNING - SCU IN MANUAL MODE**

Startup Message. Informative message issued during bootload procedure.

Operator Action: Continue processing in manual mode or reset SCU.

***** WARNING *** S#SHARD ENCOUNTERED AN ERROR IN THE HISTORICAL LOG
*** WITH ASP -HL IGNORE ERRORS xxx (YES/NO)
*** IMMEDIATE STATUS = xxxxxxxxxxxx ORIGINAL STATUS = xxxxxxxxxxxx**

Integrated Software Message. The site has specified the SDDL site parameter `ASP.-HISTORICAL` yes, and an error has occurred when trying to open or write to the historical log.

Operator Action: Examine the Integrated Software statuses and determine the proper action. If `-HL IGNORE ERRORS` is yes, their processing will continue. If errors are not being ignored, then processes using protected files, the system-wide checkpoint journal, or after/archive journals may abort.

W

OUTPUT MESSAGES

W

OUTPUT MESSAGES

WARNING - S# xxxxx-aa i-ccc-dd - TRUE DENSITY IS nnnn BPI FOR FILE CODE fc ***

UFAS Message. The operator accepted a tape volume for input after the Automatic Set Density function determined that the volume is recorded in a density other than that specified by the user. The Peripheral Allocation Table density was changed by UFAS and all volumes of this file set are processed at this density.

xxxxx - SNUMB
aa - Activity number
i - Input/out controller number
dd - Device number
ccc - Channel
nnnn - Density (200, 556, 800, 1600, or 6250)
fc - File code

Operator Action: None; (informational message only).

*WARNING - SSFILE BEING CREATED ON MULTIPLE DEVICES

Startup Message. One or more System Scheduler files exist on devices other than the one named on the current \$ SSFILE statement.

Operator Action: Be sure that the device name ordering on the \$ GCOSFILE statement is correct so that the proper System Scheduler file will be used.

WARNING - START TPE JOURNAL COPY PROGRAM (JCP)

TPE Message. Half the journal file space was used.

Operator Action: If JCP** does not execute, increase urgency.

WARNING - WHERE IS THE JOURNAL COPY PROGRAM (JCP)

TPE Message. One of the journals was filled.

Operator Action: Execute JCP**.

W
OUTPUT MESSAGES

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OUTPUT MESSAGES

******WAS ssssA STARTED BY ACCT FILE COMPLETING. YES OR NO?**

SCF Purge Message. Asks the operator whether ssssA is the statistical collection file purge program.

ssssA - generated SNUMB of purge program

Operator Action: Respond YES if the alternate statistical collection file will be purged by activity 2. Enter NO, if no purge will take place; the SNUMB will abort with AA abort code (activities 1 and 3).

*****WRITE DISC ERROR*****

(A)BORT, (C)ONTINUE

Save/Restore Message. One of the following situations occurred:

- o An error while writing an SMC entry to disk.
- o An unrecoverable error when a user's catalog was written either to disk or to the device directory.

Operator Action: If an SMC error occurred, enter A to abort or C to continue. If the continue option is selected, processing of the next SMC entry is attempted, but the condition of the erroneous SMC is uncertain.

If a user's catalog error occurred when writing to disk, enter A to abort or C to continue. If the continue option is selected, the next user subroutine is processed and a message is an output on the printer, identifying where the catalog error occurred when writing to the device directory. The restore function will terminate.

***** WRITE DISC ERROR DURING FD SEARCH FOR USER xxxxxxxxxxxxxx *****

(A)BORT, (C)ONTINUE

Restore Message. An error has occurred when writing the substructures while searching catalogs for files on the device being restored.

xxxxxxxxxxxxxx - USERID

Operator Action: Enter A to abort the program, if desired, or C to continue the restore. The C option will skip the user being restored at the time of the error and go to the next user.

W
OUTPUT MESSAGES

W
OUTPUT MESSAGES

*****WRITE SMC ERROR*****
(A)BORT, (C)ONTINUE

Save/Restore Message. A write SMC error occurred during restore.

Operator Action: Enter A to abort or C to continue restore functions.

***WRONG PORT NUMBER FOR CONTROL PROCESSOR**

Startup Message. A connect instruction issued to the control processor was not answered.

Operator Action: Check the PORT-n field on the \$ MCT-0 statement to see if it agrees with the processor configuration. Reboot.

SECTION 27

OUTPUT MESSAGES BEGINNING WITH THE LETTERS X, Y, Z

YOU HAVE JUST RE-USED AN EXISTING ttttt JOURNAL TAPE

Integrated Software Message. Indicates that a journal tape was improperly mounted. It is issued during journalization of images when the console operator failed to physically dismount the current journal volume and mount a scratch tape in response to console messages. As a result, some images on the current volume are overwritten and destroyed.

ttttt - Journal type (values include ARCHIVE, AFTER, and CHECKPOINT)

Operator Action: Notify the system administrator that the journal tape volume has been overwritten. To establish a new base for recovery operations, perform one of the following, as appropriate for the journal type involved:

- o For an after image journal, execute a DDBA command for all files assigned to the journal.
- o For an archived before image journal, execute a SRMK command for all files assigned to the journal.
- o For a checkpoint journal, execute the checkpoint journal dump job stream (SYS_SOFTWARE/yyyy/JCL/CKJDUMP.SPWN, where yyyy is equal to software release identifier (e.g., 2500)).

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APPENDIX A

PERIPHERAL INSTRUCTION CODES

<u>Device</u>	<u>Instruction</u>	<u>Code (Octal)</u>
<u>All</u>	Request Status	00
	Reset Status	40
<u>Card Readers</u>	Read Card Binary	01
	Read Card Binary-Continuous	01
	Read Card Decimal	02
	Read Card Decimal-Continuous	02
	Read Card Mixed	03
	Read Card Mixed-Continuous	03
	Read Card ASCII	04
	Read Card ASCII-Continuous	04
	Read Card ASCII Mixed	05
	Read Card ASCII Mixed-Continuous	05
	Read Card EBCDIC	06
	Read Card EBCDIC-Continuous	06
	Read Card Mixed and ASCII	07
	Read Card Mixed and ASCII-Continuous	07
	Set Native Mode	65
	Reserve Device (Refer to NOTE 1)	66
Release Device (Refer to NOTE 2)	67	
<u>Card Punches</u>	Write Card Binary	11
	Write Card Binary-Continuous	11
	Write Card Decimal	12
	Write Card Decimal-Continuous	12

NOTE: 1. The Reserve Device instruction reserves the device adapter to the PSI interface over which the command was received. This instruction is accepted only if the device is in a released state. Any instruction that is addressed to the device adapter and is accepted reserves the device.

NOTE: 2. The Release Device instruction releases the device adapter. When the device adapter is in the released state, commands from other PSI interfaces can be accepted.

<u>Device</u>	<u>Instruction</u>	<u>Code (Octal)</u>
<u>Card Punches</u> (cont)	Write Card Decimal-Edited	13
	Write Card Decimal-Edited Continuous	13
	Write Card ASCII	14
	Write Card ASCII-Continuous	14
	Write Card EBCDIC	15
	Write Card EBCDIC-Continuous	15
	Reserve Device (Refer to NOTE 1)	66
	Release Device (Refer to NOTE 2)	67
<u>Printer</u> (Refer to NOTE 3)	Write Printer	10
	Write Printer Continuous	10
	Write Printer Edited	30
	Write Printer Edited-Continuous	30
	Write Printer ASCII	14
	Write Printer ASCII-Continue	14
	Write Printer ASCII Edited	34
	Write Printer ASCII Edited-Continuous	34

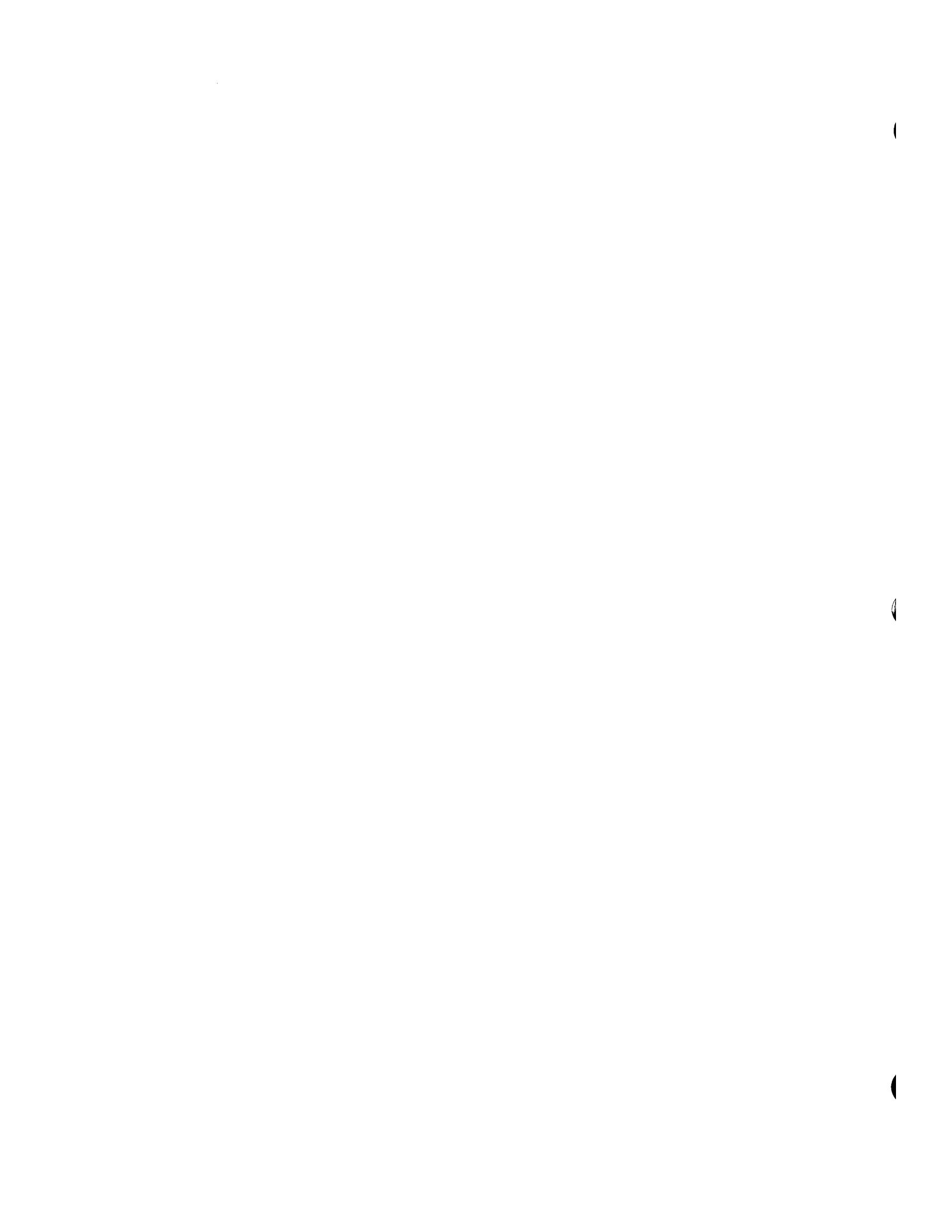
NOTE: 1. The Reserve Device instruction reserves the device adapter to the PSI interface over which the command was received. This instruction is accepted only if the device is in a released state. Any instruction that is addressed to the device adapter and is accepted reserves the device.

NOTE: 2. The Release Device instruction releases the device adapter. When the device adapter is in the released state, commands from other PSI interfaces can be accepted.

NOTE: 3. Printer slew instructions are not to be recognized, so that GCOS can assign output directly to the printer or to another device for subsequent printing. When slewing is to be performed, the escape character and appropriate slew character must appear in the line to be printed.

<u>Magnetic Tape</u>	Write Perforated Tape Edited	31
	Write Perforated Tape-Single Character	16
	Write Perforated Character	13
	Read Tape Binary	05
	Read Tape 9	03
	Read Tape Decimal	04
	Reread Tape Decimal	06
	Write Tape Binary	15
	Write Tape 9	13
	Write Tape Decimal	14
	Reread Tape Binary	07

<u>Device</u>	<u>Instruction</u>	<u>Code (Octal)</u>
<u>Magnetic Tape</u> (cont)	Write End of File	55
	Erase	54
	Backspace Record(s)	46
	Backspace File(s)	47
	Forward Space Record(s)	44
	Forward Space File(s)	45
	Rewind	70
	Rewind and Stand By	72
	Set Low Density	61
	Set High Density	60
	Read EBCDIC	24
	Read ASCII/EBCDIC	25
	Read ASCII	27
	Write EBCDIC	34
	Write ASCII/EBCDIC	35
	Write ASCII	37
	Set 200 bpi	64
	Set 6250 bpi	41
	Set 556 bpi	43
	Set 800 bpi	42
	Set 1600 bpi	65
	Set File Protect	62
	Set File Permit	63
	Reserve Device	66
	Release Device	67
	Data Security Erase	73
	Tape Load	75
<u>DATANET</u> <u>6670</u>	Write DATANET	10
	Read DATANET	01
<u>Consoles</u>	Read Console	03
	Write Console	13
	Write Console-Return to Read	13
	Write Console ASCII	33
	Read Console ASCII	23
<u>Mass Store</u> <u>Devices</u>	Seek Disk Address	34
	Read Disk-Continuous	25
	Write Disk-Continuous	31
	Write Disk-Continuous and Verify	33
	Compare and Verify	11
	Write Disk ASCII	32
	Read Disk ASCII	23
	Read Disk Non-Standard Six	04
	Write Zeros	30
	Write Conditional	32
	Read Non-Transfer	26



APPENDIX B

MPC STATUS CODES (OCTAL)

MAJOR STATUS CODE - MPC DEVICE ATTENTION, CODE 12

<u>Substatus</u>	<u>Substatus Code</u>
Configuration Error	01
IAI Error	01
Multiple Devices	02
DAI Error	02
Device Number Error	03
DA Transfer Error	04
Invalid Punch	10
Incompatible Mode	10
CA OPI Down	13
Alert EN1 Unexpected Interrupt	14
CA EN1 Error	15
CA Alert - No Interrupt	16
TCA Malfunction	14-17
(Low-order bits indicate the IAI port to which the malfunctioning TCA is connected)	
MTH Malfunction	20
Multiple Beginning of Tape	21

MAJOR STATUS CODE - MPC DEVICE DATA ALERT, CODE 13

Transmission Parity Error	01
Inconsistent Command	02
Checksum Error	03
Byte Locked Out	04
DIA Error	05
PSI Data Overflow	06
PE-Burst Write Error	10
Preamble Error (Tape)	11
Error Correction Required (Disk)	11
T&D Error (Tape)	12

MAJOR STATUS CODE - MPC DEVICE DATA ALERT, CODE 13 (cont)

EDAC Error Uncorrectable (Disk)	12
EDAC Parity (Disk)	16
Multiple Track Error	20
Slew Error (Tape)	21
Sector Size Error (Disk)	21
Postamble Error (Tape)	22
Nonstandard Sector Size (Disk)	22
NRZI CCC Error (Tape)	23
Search Alert First (Disk)	23
Code Alert	24
Search Alert Not First (Disk)	25
Sync Byte Not 19 (Disk)	26
Error Alternate Track (Disk)	27
EDAC Correction Last (Disk)	31
EDAC Correction Not Last (Disk)	32
Marginal Condition (Disk)	40

MAJOR STATUS CODE - MPC COMMAND REJECT, CODE 15

Illegal Procedure	01
Illegal Logical Channel Number	02
Illegal Logical Channel to Suspend Controller	03
Continue Bit Not Set	04
Device Reserved	10

APPENDIX C

DEVICE TYPES

<u>Device Type</u>	<u>Device Description</u>
CS6001	CSU6001 console; VIDEO
CS6002	CSU6002 console; VIDEO
CS66	CSU6601 console; VIDEO
CS66	CSU8400 console
MS0400	MSS0400 Mass Storage Subsystem
MS0402	MSS0402 Mass Storage Subsystem
MS0450	MSS0450 Mass Storage Subsystem
MS0500	MSS0500 Mass Storage Subsystem
MS0501	MSS0501 Mass Storage Subsystem
MSC1A	FIPS Mass Storage Subsystem
MSC1B	FIPS Mass Storage Subsystem
MSD1A	FIPS Mass Storage Subsystem
MSD1B	FIPS Mass Storage Subsystem
TAPE9*FIPS	FIPS nine-track magnetic tape
TAPE*500*7	MTS500 seven-track magnetic tape
TAPE*500*9	MTS0400/0500 seven-track magnetic tape
TAPE*500*9	MTS500 nine-track magnetic tape
TAPE*600*7	MTS0400/0500 nine-track magnetic tape
TAPE*600*9	MTS0600 seven-track magnetic tape
TAPE*610*7	MTS0600 nine-track magnetic tape
TAPE*610*9	MTS0610 seven-track magnetic tape
TAPE*610*9	MTS0610 nine-track magnetic tape
PR1100	PRU1100 printer
PR1200	PRU1200 printer
PR1600	PRU1600 printer
PR0901	PRU0901 printer
PR0903	PRU0903 printer
PR1201	PRU1201 printer
PR1203	PRU1203 printer
READER*MPC31	CRU1050 card reader
CC0401	CCU0401 card reader/card punch
CR0501	CRU0501 card reader
CR1050	CRU1050 card reader

Device Type

Device Description

PUNCH#200	CPZ201 card punch
PUNCH#300	CPZ300 card punch
PUNCH#MPC30	CPZ300 or PCU0120/0121 card punch
PC0120	PCUP120 card punch
PC0121	PCU0121 card punch
PC0300	CPZ300 card punch
6670	DATANET 6670 Front-end Network processor

APPENDIX D

PERIPHERAL OCTAL SUBSTATUS CODES

<u>Status</u>	<u>Device</u>	<u>Substatus Code</u> ¹	
<u>Substatus</u>			
ATTENTION (ATT)	CR	<u>CRU1050/CCU0401/CRU0501</u>	
Offline (Device POF)		000000	
Hopper/Stack Alert		xxx0x1	
Manual Halt		xxx01x	
Last Batch		NA	
Feed Alert		0x10xx	
Card Jam		x1x0xx	
Read Alert		1x00xx	
Sneak Feed		NA	
	CP	<u>CPZ201</u>	<u>CPZ300/PCU0120/ PCU0121/CCU0401</u>
Offline		NA	000000
Hopper/Stacker Alert		0xxxx1	0xxxx1
Manual Halt		0xxx1x	0xxx1x
Chad Box Full		0xx1xx	0xx1xx
Feed Failure		0x1xxx	0x1xxx
Card Jam		01xxxx	01xxxx
	PR	<u>PRU1100</u>	<u>PRU1200/PRU1600 PRU0901/PRU1201 PRU0903/PRU1203</u>
Power Fault		000000	000000
Out of Paper		00xxx1	000001
Manual Halt		000010	000001
Check		001000	001000
VFU Tape Alert		000100	NA

1. x = 0 or 1

<u>Status</u>	<u>Device</u>	<u>Substatus Code</u>
---------------	---------------	-----------------------

ATTENTION (ATT) (cont)

Magnetic Tape Devices refer to Table D-1.

Disk Devices refer to Table D-2.

	TY	<u>CSU6001/6002/6601</u>	
Attention		000000	
DATA ALERT (LRT)	CR	<u>CPZ300/PCU0120/PCU0121/</u>	
Transfer Timing Alert		NA	
Validity Alert		000x10	
Dual Read Failure		0001x0	
No Read Command		NA	
	CP	<u>CPZ201</u>	<u>CPZ300/PCU0120/ PCU0121/CCU0401</u>
Transfer Timing Alert		000xx1 or 000000	NA
Transmission Parity Alert		000x1x	NA
Punch Alert		0001xx	001000
	PR	<u>PRU1100</u>	<u>PRU1200/PRU1600 PRU0901/PRU1201 PRU0903/PRU1203</u>
Invalid Character Code/Image Buffer Alert		000000	000000
Transfer Timing Alert Alert Before Printing Started		000001	000001
Alert After Printing Started		000010	000010
Paper Low/Waring Alert		000100	000100
Slew/Paper Motion Alert		001000	001000
Top-of-Page Echo		010000	010000
		100000	NA

<u>Status</u>	<u>Device</u>	<u>Substatus Code</u>
---------------	---------------	-----------------------

DATA ALERT (LRT) (cont)

Magnetic Tape Devices refer to Table D-1.

Disk Devices refer to Table D-2.

	TY	<u>CSU6001/6002/6601/8400</u>
Transfer Timing Alert		000001
Transmission Parity Alert		0x0010
Operator Input Alert		000100
Operator Distracted		001000
Incorrect Format		0100x0
Message Length Alert		100000
	D30	<u>6670</u>
Parity Alert		00001x
Timeout		0000x1

DEVICE BUSY (BSY)

Magnetic Tape Devices refer to Table D-1.

Disk Devices refer to Table D-2.

	D30	<u>6670</u>
Channel busy		xxxxxxx
COMMAND REJECTED (REJ)	CR	<u>CRU1050/CCU401/CRU0501</u>
Invalid Operation Code		0000x1
Late Read Command		NA
Invalid Device Code ¹		00001x
Parity Error on IDCCW or Logical Channel Number ¹		000100
COMMAND REJECTED (REJ)	CP	<u>CPZ201</u> <u>CPZ300/PCU0120/ PCU0121/CCU0401</u>
Invalid Operation Code		NA 000001
Invalid Device Code		NA 000010
Parity Error on EDCW or Logical Channel Number		NA 000100

1. Applicable only for CCU0401 device.

<u>Status</u>	<u>Device</u>	<u>Substatus Code</u>
<u>Substatus</u>		
		<u>PRU0901/PRU1201</u>
		<u>PRU0903/PRU1203</u>
		<u>PRU1200/PRU1600</u>
	PR	PRU1100
VFC Image Not Loaded		NA 000000
Invalid Operation Code		000001 000001
Invalid Device Code		000010 000010
Train Image Not Loaded		NA 001000
Feed Alert on Last Slew Operation		010000 010000
Top-of-Page Echo on Last Slew Operation		100000 100000
Device/Command Code Parity Alert		NA NA
COMMAND REJECTED (REJ)	TY	<u>CSU6001/6002/6601/8400</u>
Invalid Command Code		000001
Parity Alert on Operation Code		NA
	D30	<u>6670</u> ¹
Parity Alert on Operation Code		00001x
Invalid Code or Improper Sequence		0000x1

MAGNETIC TAPE MAJOR STATUSES AND SUBSTATUSES

The statuses and substatuses in this section apply to the MTS8200 devices, as well as the MTS0500, MTS0600, MTS0610, and MTS0611 devices.

Where a status/substatus applies to all devices, no device identifier is shown in Table D-1. Where a status/substatus is unique to one or more devices, those devices are identified (i.e., refer to Note 1, etc.).

Unless specifically indicated, the device, and the device-dependent statuses and substatuses described apply to all Microprogrammable Peripheral Controllers (MPCs), and General Tape Channel Connections (GTCCs).

-
1. For a DATANET 6670 Front-End Network Processor, an initiation interrupt is an invalid interrupt type. Exception Processing treats the interrupt as a Command Rejected status.

Table D-1. Status And Codes For Magnetic Tape Subsystems

<u>Status and Substatus</u>	<u>Major Status Code</u>	<u>Substatus Code</u>	<u>Refer to Note</u>
CHANNEL READY	0000		
Ready		000000	
Nine-Track Tape Unit		0001xx	
Write Protected		xx0xx1	
Positioned At BOT		000x1x	
ASCII Alert		001100	1
Two-Bit Fill		010x0x	1
Four-Bit Fill		100x0x	1
Six-Bit Fill		110x0x	1
DEVICE BUSY	0001		
In Rewind		000001	
Device Reserved		100000	1
Alternate Channel in Control		000010	
Device Loading		000100	
ATTENTION	0010		
Tape Write Inhibited		00xx01	
No Such Tape Unit		000010	
Tape Unit Standby		0xx10x	
Tape Unit Check		0x1x0x	4
Blank Tape on Write		01xx00	3,4
DATA ALERT	0011		
Transfer Timing Alert		000001	
Blank Tape on Read		000010	
Bit Detected During Erase		xxxx11	4
Transmission Parity Alert		xxx1xx	4
Lateral Parity Alert		xx1xxx	4
Longitudinal Parity Alert		x1xxxx	4
End-of-Tape Mark		1xxxxx	

Table D-1 (cont). Status And Codes For Magnetic Tape Subsystems

<u>Status and Substatus</u>	<u>Major Status Code</u>	<u>Substatus Code</u>	<u>Refer to Note</u>
END-OF-FILE	0100		
EOF NRZI Mode		xxxxxx	1
EOF Marker (Seven-Track)		001111	
EOF Marker (Nine-Track)		010011	
EOF Data Alert		111111	
COMMAND REJECT	0101		
Invalid Density		000000	
Invalid Operation Code		000xx1	
Invalid Device Code		000x1x	
Invalid IDCW Parity		0001xx	
Tape on Load Point		001000	
Nine-Track Error		100000	
Forward Read After Write on Same Unit		010000	1
MPC/GTCC/GPA DEVICE ATTENTION	1010		
Configuration Switch Error		000001	1
Multiple Devices		000010	
Incompatible Mode		001000	
TCA Controller Malfunction		0011xx	3,4
Controller Malfunction		001100	3,4
MTH Malfunction		010000	3,4
Multiple Beginning of Tape		010001	
MPC/GTCC/GPA DEVICE DATA ALERT	1011		
Transmission Parity Alert		000001	1
Inconsistent Command		000010	1
Checksum Error		000011	2A
Byte Locked Out		000100	1
ID-Burst Write Error		001000	4
Preamble Error		001001	4
Multiple Track Error		010000	4
Slew Error		010001	4
Postamble Error		010010	4
NRZI CCC Error		010011	4
Marginal Condition		100000	4
Code Alert		010100	1

Table D-1 (cont). Status And Codes For Magnetic Tape Subsystems

<u>Status and Substatus</u>	<u>Major Status Code</u>	<u>Substatus Code</u>	<u>Refer to Note</u>
MPC/GTCC/GPA COMMAND REJECT	1101		
Indeterminate Density		000000	2
Illegal Procedure		000001	2A
Illegal Logical Channel Number		000010	2A
Illegal Suspended Logical Channel Number		000011	1
Continue Bit Not Set		000100	2A

NOTES: 1. Applies to MTS0500, MTS0600, MTS0610, and MTS0611 devices only.

2. Applies to MTS8200 devices only.

2A. Does not apply to MTS8200 devices on DPS 8 or DPS 88.

3. Causes Tape Unit Standby on MPCs; combined code is 01x100 unless a command has reset the Blank Tape On Write.

4. Generates a Request Device Status (REQS) command device hardware status. Extended Status is appended to the Summary Edit program type 03 accounting record.

Disk Subsystems Major Statuses And Substatuses

The statuses and substatuses in this section apply to the MSU3380 and MSU3381 devices, as well as the MSS0400, MSS0402, MSS0450, MSS0500, and MSS0501 devices.

NOTE: The MSU3380 and MSU3381 disk devices are identified to GCOS as MSC1A and MSC1B, or MSD1A and MSD1B, respectively.

Where a status/substatus applies to all devices, no device identifier is shown in Table D-2. Where a status/substatus is unique to one or more devices, those devices are identified (refer to Note 1, etc.).

Table D-2. Status And Codes For Disk Subsystems

<u>Status and Substatus</u>	<u>Major Status Code</u>	<u>Substatus Code</u>	<u>Refer to Note</u>
CHANNEL READY	0000	000000	
No Substatus/Ready		000000	
Automatic Retries		0000xx	
Retry Was Performed		000001	
Retry Twice		000010	
Retry Three Times		000011	
Device in T&D		0010xx	1
Error Recovery - EDAC Correction		010000	
DEVICE BUSY	0001		
File Positioning		000000	
Storage Directory busy; Alternate Channel in Control		010000	6
Alternate Channel in Control		100000	
ATTENTION	0010		
Write Inhibit		0000x1	1
Seek Incomplete		00001x	
Device Inoperable		001000	
Device In Standby		010000	1
Device Offline		100000	
DATA ALERT	0011		
Transfer Timing Alert		000001	
Transmission Parity Alert		000010	
Invalid Seek Address		000100	
Header Verification Failure		0x1000	
Cyclic Checkword Alert		x1x000	
Data Verification Alert		1x0000	3
END-OF-FILE	0100		
Good Track Detected		000000	
Last Consecutive Block		0000x1	
Sector Count Limit		00001x	
Defective Track Detected - Alternate Track Assigned		000100	1
No Alternate Track Assigned		001000	1
Alternate Track Detected		010000	1

Table D-2 (cont). Status And Codes For Disk Subsystems

<u>Status and Substatus</u>	<u>Major Status Code</u>	<u>Substatus Code</u>	<u>Refer to Note</u>
COMMAND REJECT	0101		
Invalid Operation Code		000001	
Invalid Device Code		000010	
Parity Alert on IDCW		000100	1
Invalid Command Sequence		001000	
CHANNEL BUSY	1000	000000	1
LOGICAL END OF FILE	1111	000000	
CONTROLLER DEVICE DATA ALERT	1011		
Nonstandard Sector Size		010010	
Sector Size Error		010001	
Search Alert on First Search		010011	
Cyclic Code Error (Not First Search)		010100	1
Search Alert (Not First Search)		010101	1
Sync Byte Error		010110	1
Error in Automatic Alternate Track Processing		010111	1
Buffer Parity Error		001000	4
Cyclic Code Redundancy Error		001001	4
Count Field Uncorrectable		001010	5
Write Buffer Parity Error		100001	2,5
Uncorrectable Read Substatus		100010	5
Defective Sector		010010	5
EDAC Parity Error		001110	1
Byte Locked Out		000100	1
MPC/IPC-FIPS DEVICE ATTENTION	1010		
Configuration Error		000001	1
Device Number Error		000011	
Multiple Devices		000010	
CA OPI Down		001011	1
Alert EN1 Unexpected Interrupt		001100	
CA EN1 Error		001101	
CA Alert - No Interrupt		001110	

Table D-2 (cont). Status And Codes For Disk Subsystems

<u>Status and Substatus</u>	<u>Major Status Code</u>	<u>Substatus Code</u>	<u>Refer to Note</u>
MPC/IPC-FIPS DEVICE DATA ALERT	1011		
Transmission Parity		000001	
Inconsistent Command		000010	
Checksum Error		000011	
Byte Locked Out		000100	
MPC/IPC-FIPS COMMAND REJECT	1101		
Illegal Procedure		000001	
Illegal Logical Channel Number		000010	
Illegal Logical Channel To Suspended Controller		000011	
Continue Bit Not Set		000100	

NOTES: 1. Applies to MSS0400, MSS0402, MSS0450, MSS0500, and MSS0501 devices only.

2. Applies to MSU3380 and MSU3381 devices only.

3. For MSS0450 and earlier devices, this substatus is Data Compare Alert.

4. Applies to MSS0500 only.

5. Applies to MSS0501 only.

6. Retry via alternate channel

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DH13-04

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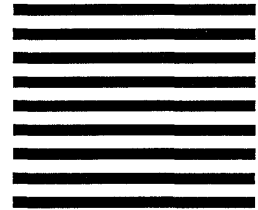


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LARGE SYSTEMS
GCOS 8 0S
SYSTEM OPERATOR MESSAGES
WWMCCS CHANGE 1

WWMCCS STANDARD SYSTEM SOFTWARE

SUBJECT:

Additions and changes to the Large Systems, GCOS 8, OS System Operator Messages.

SPECIAL INSTRUCTIONS:

This update, WWMCCS Change DH13-04-W1, is the first WWMCCS Change to Honeywell commercial software manual DH13, Revision 04, dated April 1987. Insert the attached pages into the manual according to the collating instructions on the back of this cover. Change bars in the margins indicate technical additions and changes; asterisks indicate deletions. Insert this cover after the manual cover to indicate updating of the document with Change DH13-04-W1.

SOFTWARE SUPPORTED:

WWMCCS Release W8.0.0
WWMCCS Base 8.0B
Commercial Release SR3000

ORDER NUMBER:

JDSSC WWMCCS Change DH13-04-W1

March 1988

COLLATING INSTRUCTIONS

To update this manual to WWMCCS Release W8.0.0, remove old pages and insert new pages as follows:

Remove

2-1, 2-2
2-103, 2-104
2-153, 2-154
6-41, 6-42
10-7 through 10-9, blank
16-33 through 16-36
23-37, 23-38
23-41, 23-42
23-49, 23-50
23-53, 23-54
i-25, blank

Insert

title page, collating instructions
2-1, 2-2
2-103 through 2-104.2
2-153 through 2-154.6
6-41 through 6-42.2
10-7 through 10-10.2
16-33 through 16-36.4
23-37 through 23-38.2
23-41 through 23-42.2
23-49 through 23-50.2
23-53 through 23-54.2
i-25, i-26

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SECTION 2

OPERATOR INPUT MESSAGES

Operator input messages to the system are initiated by pressing the request button on the console. The system replies with three question marks (???), after which one of the messages described in this section may be entered.

The one-character optional operator replies to system initiated messages are preceded by a single question mark. The option is to be entered without a space before the entry. These system messages will be repeated every 30 seconds until a reply is made.

The procedure for operator reply and input is as follows:

1. Once the operator has initiated a request or the system has issued a message requiring a response, a programmed READ command is issued to the console and the keyboard is enabled.
2. The operator enters the input verb or required response, then presses the end-of-message button. The console is then disabled for operator input.
3. To correct an incorrect input to the console before pressing the end-of-message button, the operator presses the operator error button, then enters the correct response, followed by an end-of-message.

If the operator presses end-of-message before detaching an incorrect reply and the reply is acceptable to the system, it will be interpreted by the system as being a valid response.

- NOTES:
1. The request button on the CSU6001/6002 consoles is labeled REQ. The request function on the CSU6601 console is the carriage return key.
 2. The end-of-message button on the CSU6001/6002 consoles is labeled EOM. The end-of-message function on the CSU6601 console is the carriage return key.
 3. The operator error button on the CSU6601/6602 consoles is labeled OPR ERR. The operator error function on the CSU6601 console is enabled by pressing Control X.

SYSTEM VERBS

A significant element of each Input Message is the VERB. This verb can be modified by certain "arguments", "control fields", and "options". A list which contains current system verbs as well as those that have been recently replaced is as follows:

ABORT	FASTBT	LSTCR	STMPVL
ACALL	FMS	LSTCT	SYSOP
ACCEPT		LSTPR	SYSOUT
ACCNT	GENSYS	LSTQ	
ACHNL	GRANT	LSTRT	
ACSTAT			TAPFG
ADDVL			TCALL
APRIOR	HAPS	MASFG	TCLASS
ASGN	HIST	MOVE	TEST
ASGNC	HISTRE	MSG	TIME
ASGNI	HOLD	MVALL	TP
ASGNP			TRACE
AUDIT		NAME	TSS
	IDENT	NCALL	TS8
	IGNORE	NOI	TYPFG
BOOT	IMCV	NOPRO	
BPRIOR	IMCV7		UDTAPE
	IMCV9		UNAME
		PPS	UNDED
CANCL	JCHGCV	PSTATS	UNJOUT
CHANGE	JCLASS	PTRAIN	URGC
CHANGEF	JCLGEN	PURGE	
COPY	JDELCY		VFC
CSTATS	JEND		VIDEO
	JLIST	REDRC	VOCAB
DATE	JLSTCY	REEL	VOCABU
DCHNL	JORDER	REMOV	VOID
DDTAPE	JOUST	REPRO	
DEDCAT	JPURGE	RLP	WHOSE
DELETE	JRERUN	RLSE	WORKST
DELEVL	JRUN	RLSEC	
DLINK	JSCHED	RLSEI	
DUMP	JSTRT	RLSEP	
DUPBAD		RUN	
DUPER	LAUTO	SECUR	
	LDTAPE	SNAP	
	LIMIT	SNUMB	
ECOL	LINES	SPAWN	
ELAN	LIST	SRM	
ESTATS	LISVL	SSA	
EXCHG	LISVS	STATS	
	LOOK		
	LSTAL		

R
INPUT MESSAGES

R
INPUT MESSAGES

REPRO (cnt) (SNB-snumb or SID=nnnnnn)

SYSOUT Message. This verb replaces the former verbs REPNC and REPNT.

In this verb's usage, the "cnt" represents the control field which specifies the output type and/or destination.

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MPOPF INFO(001) --ERROR RETRIEVING CONSOLE TEXT-PLEASE REENTER
MPOPF INFO(002) --ERROR DELETING CREATED SEGMENT
MPOPF INFO(005) --ILLEGAL OPTION IN FIRST CONTROL FIELD
MPOPF INFO(007) --CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MPOPF INFO(012) --GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INTO(014) --INVALID NUMBER
MPOPF INFO(015) --ILLEGAL KEYWORD ON LAST OPTION

Refer to syntactical display in Figure 2-1 for valid combinations.

RLP Ixx option

SYSOUT Message. In this verb's usage, the "Ixx" represents the control field which specifies the output destination (xx = Line id).

The option entry can be one of the following:

<u>Option</u>	<u>Description</u>
BSPJOB	Backspace job
BSPRPT	Backspace report
BSP%nn	Backspace report nn blocks
CON	Continue interrupted output
D00ALT	Create new RLP table entry in SYSOUT, or remove alternate RLP entry from existing RLP table entry
DyyALT	Make RLP on line yy an alternative for RLP on line xx

R
INPUT MESSAGES

R
INPUT MESSAGES

DyyEXC Exchange RLP on line xx to RLP on line yy
FSPJOB Forward space job
FSPRPT Forward space report
FSP%nn Forward space report nn blocks
IDS Display the line identification codes of all RLPs known to SYSOUT (xx is required but ignored)
REL Release RLP table entry from SYSOUT for RLP on line xx
STA Display status of RLP on line xx
STS Display status of all RLPs known to SYSOUT (xx is required but ignored)

System Replies Possible:

CAN'T DO (verb): SYSTEM ERROR xxxxxx AT LOC. xxxxxx OF .MPOP7
MCUXM INFO(001) --ERROR RETRIEVING CONSOLE TEXT-PLEASE REENTER
MCUXM INFO(002) --ERROR DELETING CREATED SEGMENT
MCUXM INFO(003) --REQUIRED CONTROL FIELD NOT SUPPLIED
MCUXM INFO(004) --ILLEGAL OPTION IN FIRST CONTROL FIELD
MCUXM INFO(005) --ILLEGAL OPTION IN SECOND CONTROL FIELD
MCUXM INFO(006) --CONFLICTING OPTIONS IN FIRST CONTROL FIELD
MCUXM INFO(008) --REQUIRED CONTROL FIELD NOT SUPPLIED
MCUXM INFO(009) --GEOT QUEUE FULL, PLEASE TRY LATER
MCUXM INTO(010) --INVALID NUMBER
MCUXM INFO(011) --ILLEGAL LAST OPTION
MCUXM INFO(012) --FIELD TOO LONG

 {icddd }
RLSE {device name}

GPOP Message. Operator requests release of the peripheral device from the system.

System Replies Possible. Any one of the following messages indicates either an error in the request, or that the request cannot be granted immediately.

R
INPUT MESSAGES

R
INPUT MESSAGES

IOM INVALID
CH# INVALID
* DEV iccdd ASGN iccdd RLSE
DEV INVALID
IS BUSY
*S#sssss ON CP icc TO BE CONTINUED ON xyy
*S#sssss ON PR icc TO BE CONTINUED ON xyy
*RE RLSE sssss, SYSOUT CANT

If release of one or both logical devices of an MSU0500 subsystem is requested and the two devices are in different statuses, the following message is returned to the console:

MSU0500 iccdd ASGN iccdd RLSE

NOTE: This procedure is not applicable to releasing ST1.

RLSEC nnnnnn bbbbbb

GPOP Message. Operator requests release of memory space from GCOS.

nnnnnn - Starting address (module 1000 octal and must be even)
bbbbbb - Number of 512 decimal (1000 octal and must be even)
word blocks to be released

System Replies Possible: If the memory release mechanism is busy at the time of request, the following message is printed:

RE RLSEC BUSY -- TRY AGAIN

If each of the variable fields (nnnnn bbbbbb) is not followed by a blank, the following message is printed:

RE RLSEC INVALID FORM

If either of the variable fields is an odd number, the following message is printed:

RE RLSEC INVALID-MUST BE EVEN

If any of the variables (nnnnn bbbbbb) are not octal digits, the following message is printed:

RE RLSEC INVALID-MUST BE OCTAL

R
INPUT MESSAGES

R
INPUT MESSAGES

If the last block of memory described in a RLSEC request is outside of configured memory, the following message is printed:

RE RLSEC INVALID-NOT CONFIGURED

If the variable bbbbb = 0, the following message is printed:

RE RLSEC-NOT RELEASABLE

If the above error conditions are passed, an attempt is made to satisfy the request. Regardless of the success of the attempt, the system will print to the console the same formatted data given by the RLSEC LIST verb to indicate which portion of the request was satisfied.

V
INPUT MESSAGES

V
INPUT MESSAGES

VIDEO

GPOP MESSAGE. Operator restores VIDEO program display after the TY5 has been returned to the VIDEO mode. Data display appears on the screen. This applies only if VIDEO was previously running TY5, then TY5 temporarily used as an operator console.

System Replies Possible:

VIDEO CANT START - NO TY5 OR DUP SCT ADDR

VOCAB

GPOP Message. Operator requests a list of all input system messages (except those which are suppressed). A list of all input system messages known to the system is typed out on the console.

VOCABU

GPOP Message. Operator requests a list of all user input messages. A list of all input messages that were implemented by the user is printed on the console. If none have been implemented the following message is printed:

NO USER VERBS.

VOID xxxxx

GEOT Message. Operator on one system requests that VERB xxxxx be voided on another system. The systems must be running full Common File Facility or be shared.

System Replies Possible:

MPOPF INFO(012) - GEOT QUEUE FULL, PLEASE TRY LATER
MPOPF INFO(018) - ILLEGAL REQUEST IN A NONSHARED SYSTEM

W
 INPUT MESSAGES

W
 INPUT MESSAGES

WHOSE sssss [-ALL]
 [-A]

where:

- sssss - any valid SNUMB (i.e., 5 characters or less,
 and not all zeros)
- ALL - find every occurrence of the SNUMB
- or -A

Operator Interface Message. The operator can request identification information for a SNUMB. The first argument must be the SNUMB. WHOSE will search SD.SNB, SD.JOT and scheduler's \$C file and report on the first job that it encounters that matches the given SNUMB. The -ALL option requests identification information for every occurrence of the SNUMB.

System Replies Possible:

With the PID option off:

```

* WHOSE - sssss                 FOUND IN found
  USERID - userid
  IDENT - ident
  
```

With the PID option on:

```

* WHOSE - sssss                 FOUND IN found
  PROJECT - project             PERSON_ID - person
  IDENT - ident
  
```

W
INPUT MESSAGES

W
INPUT MESSAGES

where:

- sssss - the SNUMB in question
- found - can be any of the following:
 - EXECUTION (FOUND IN SD.SNB)
 - SYSOUT (found in SD.JOT)
 - BACKDOOR (found in SD.JOT with the BACKDOOR flag set)
 - SCHEDULER (found in scheduler's \$C file)
- userid - the USERID that owns the SNUMB
- project - the PROJECT_NAME that owns the SNUMB
- person - the PERSON_ID associated with the PROJECT_NAME
- ident - columns 13-72 of the \$IDENT card

Informative messages.

** (.Mxxxx) WHOSE -sssss ; DUPLICATES FOUND. USE -ALL TO SHOW ALL JOBS

where:

- xxxx - the module generating this message. It can be either CUXM or SCHD.
- sssss - the SNUMB in question

More than one job with the given SNUMB exists. WHOSE will print the identification information for the first job it encounters, searching SD.SNB, SD.JOT and scheduler's \$C file, in that order. The -ALL option can be used to print the identification information for every occurrence of the SNUMB.

Operator Action: None, or reenter the command with the -ALL option

W
INPUT MESSAGES

W
INPUT MESSAGES

*** (.MCUXM) WHOSE sssss ; SYSTEM JOB DOES NOT HAVE IDENT INFORMATION

where:

sssss - the SNUMB in question

System jobs such as \$CALC, \$PALC, TS1\$, etc., do not have identification information.

Operator Action: None

Error Messages.

*** (.MSPMA) ERROR PROCESSING CONSOLE VERB
xxxx....xxxx

where:

xxxx....xxxx - an error message, up to 80 characters long, returned to module SPMA from module CUXM. The message may be any of the following:

*** (.MCUXM) WHOSE - SYNTAX IS "WHOSE SNUMB [-ALL]"

The WHOSE verb was not followed by a SNUMB

Operator Action: Enter the command correctly

*** (.MCUXM) WHOSE - TOO MANY ARGUMENTS SUPPLIED

Too many arguments were entered on the command line.

Operator Action: Enter the command correctly

W
INPUT MESSAGES

W
INPUT MESSAGES

*** (.MCUXM) WHOSE - SECOND ARGUMENT WAS NOT -ALL

A second argument was supplied, but it was not -ALL

Operator Action: Enter the command correctly

*** (MCUXM) WHOSE - SNUMB GREATER THAN 5 CHARACTERS

A snumb was entered, but it was more than 5 characters long

Operator Action: Enter the command correctly

*** (.MCUXM) WHOSE - SNUMB CANNOT BE 00000

A snumb of 00000 was entered

Operator Action: Enter the command correctly

*** (.MCUXM) WHOSE - CANNOT FIND BACKDOOR ENTRY

The job is marked as BACKDOOR, but its entry cannot be found in SD.BDI

Operator Action: Inform the Site Administrator

*** (.MCUXM) WHOSE - BDI SEGMENT CORRUPTED

While searching for the job, SD.BDI was found to be corrupted

Operator Action: Prepare for system crash

*** (.MCUXM) WHOSE - SNUMB MISMATCH ON J*

The SNUMB read from the J* file associated with that job does not match the SNUMB given on the Whose command line

Operator Action: Inform the Site Administrator

*
W
INPUT MESSAGES

W
INPUT MESSAGES

*** (.MCUXM) WHOSE - JOB OUTPUT TABLE BUSY; TRY LATER

SD.JOT is currently marked busy (system flushing SYSOUT space, etc.)

Operator Action: Try the command later

*** (.MCUXM) WHOSE - SCHD QUEUE FULL; TRY LATER

A queue entry could not be put on SD.SCQ

Operator Action: Try the command later

*** (.MCUXM) WHOSE - CANNOT WIRE/UNWIRE MEMORY

The memory needed for the J* read could not be wired (marked I NOT SWAP), or unwired

Operator Action: Inform the Site Administrator

*** (.MCUXM) WHOSE - CANNOT READ J*

A bad status was returned after an attempt to read the J* file

Operator Action: Inform the Site Administrator

*** (.MCUXM) WHOSE - ZERO SCT/STARTING LLINK

A zero SCT address or zero starting llink number was supplied when attempting to read the J* file

Operator Action: Inform the Site Administrator

The following messages may be generated by module SCHD while processing the \$C file

W

INPUT MESSAGES

W

INPUT MESSAGES

*** (.MSCHD) WHOSE - sssss ; IRRECOVERABLE I/O ERROR READING BLOCK n

where:

sssss - the SNUMB in question

n - J* block number

A bad status was returned while attempting to read block "n" of the J* file associated with this SNUMB

Operator Action: Inform the Site Administrator

*** (.MSCHD) WHOSE - sssss ; SNUMB MISMATCH ON J*

The SNUMB read from the J* file associated with this job did not match the SNUMB entered on the WHOSE command line

Operator Action: Inform the Site Administrator

	{	blank	}		}
	{LIST	{ALL	}		}
WORKST	{	{workstation name}	}		}
	{		}		}
	{ABORT	{ALL	}	{T2	}
	{	{WORKSTATION NAME}	}	{TYPE2}	}

Operator Interface Message. Operator requests to list or abort known workstations in the system. The first option must be either LIST or ABORT. If LIST is requested, the second option may be:

blank - List the names of all workstations in the system
ALL - List the names of all workstations in the system
workstation name - List all the SNUMBs in the specified workstation

If ABORT is requested, the second option may be:

ALL - All workstations in the system are aborted.
workstation name - Only the specified workstation is aborted.

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If ABORT is requested, the third option may be:

T2 or TYPE2 - Normally, an abort request is not honored for a process executing in a TYPE2 critical section. This option allows the operator to override this constraint. This option can only be used in extreme cases, as it may cause GCOS crashes or process disasters.

NOTES: 1. The second and third options may be reversed.

2. "ALL" is a keyword in the WORKST command syntax and must not be used as a workstation name.

System Replies Possible:

For LIST - KNOWN WORKSTATIONS w...w

or

- SNUMBS FOR WORKSTATION w...w: sssss

C
OUTPUT MESSAGES

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If the process was left hung, then the following warning message will be printed:

*** PROCEED WITH CAUTION - NOTIFY TAC ***

Operator Action: Having a process left hung could produce negative consequences. It is of upmost importance that a qualified expert evaluate the failure. In some cases, the process may be aborted after resetting its execution bit (PS.EXC) in the PST. Other cases may require that the system be rebooted to clear the failure.

*CPU-x NO CONNECTABILITY FOUND
EITHER THE CPU WAS NOT CONFIGURED IN THE SERVICE PROCESSOR CONFIG FILE OR MAY HAVE BEEN RELEASED/DETACHED BY THE SERVICE PROCESSOR.
TYPE YES TO RELEASE AND CONTINUE; NO TO TERMINATE:

Startup Message. The \$ CIU statement specified a CPU for which no connectability was found from the DPS-88 CIU or DPS-8000 SCU.

Operator Action: To continue without the specified CPU, enter YES and startup will mark the CPU as released, otherwise correct the DPS-88 ICON file or the DPS-8000 service processor config file to assign the CPU and then reboot from switches.

*CPU n NOT FOUND, CHECK \$ MCT CARD

Startup Message. There is a lapse in the CPU configuration. The \$ MCT statement must define CPU-0 and all defined CPUs must be contiguous.

n - Processor (CPU) number

Operator Action: Check the \$ MCT statements in the startup program for inconsistencies.

C
OUTPUT MESSAGES

C
OUTPUT MESSAGES

*CPU-x PORT-y SCU-z PORT SIZE MISMATCH
PORT SIZE SETTING POSSIBLY WRONG

Startup Message. The CPU port size switches do not reflect the SCU size as defined on the \$ MCT statement.

Operator Action: Correct the \$ MCT statement or correct the CPU port size switches and re-boot startup from switches.

*CPU-n RELEASED, NOT CONFIGURED ON SSF

Startup Message. Startup detected a Central Processing Unit (CPU) that is configured in the GCOS system but not in the System Support Facility (SSF). Startup will not abort.

Operator Action: Use the System Maintainability Availability Software (SMAS) Integrated Firmware and Diagnostics (IFAD) facility to configure the CPU or delete the CPU from the \$ CIU statement.

*.CRMTP RCVRY ERR-LOST-SIEVE LIMITS
SET FROM CONSOLE IN PRIOR BOOT

Rollcall Message. SIEVE LIMIT data could not be recovered. The SIEVE LIMITS will be set to the system defaults or to those provided via \$ INFO data.

Operator Action: Reenter the SIEVE LIMITS that had been sent via the console.

CROSS COPY QUEUE ENTRY ERROR FOR LINES x. yy

Time Sharing Message. One copy of TSS received a queue entry to switch terminal line xx to UST with line id yy. TSS was unable to accomplish the switch.

Operator Action: None

C
OUTPUT MESSAGES

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OUTPUT MESSAGES

*CS-: CS ERROR nnn IN DFLT IDENT

where: nnn = CS error code

Default IDENT message. CS returned an error while retrieving the site parameter record during IDENT processing. Check CS error codes for more details.

Operator Action: Inform the Site Administrator.

*CS-: IDENT ERROR PARSING xxxx yyyy

Default IDENT message.

where: xxxx and yyyy are as follows:

xxxx yyyy

LEXP Error detected by the lexical parser. Check the number of arguments, strings correctly enclosed in quotes, line continuation.

SYNP Error detected by the syntax parser. Check the number of arguments, strings correctly enclosed in quotes, line continuation.

RCSZ nnnn
The record size is greater than Default IDENT can handle (currently 1024 characters). nnnn is the number of characters CS has calculated are in the record.

LOGN cccc
LOGN was not followed by a valid parameter. cccc are the characters Default IDENT tried to interpret as the parameter.

TSS cccc
TSS was followed by an invalid parameter (cccc).

DAC The list of DAC names could not be parsed. Check DAC names, embedded blanks, line continuation, list correctly enclosed in quotes or apostrophes.

UNKN aaaa
The unknown argument aaaa was encountered.

Operator Action: Inform the Site Administrator.

C

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*CS-: IDENT INITIALIZED LOGN=a, TSS=b, DFLT=cccc, DAC=dddd(nn)

where:

a = Logon Default (Y/N)
b = TSS Subsystem Default (Y/N)
cccc = System Default IDENT (SITE/DFLT/NONE)
dddd = DAC Name Table (SITE/DFLT/NONE)
nn = number of DAC names in the DAC Name Table

Default IDENT message. IDENT initialization code has completed - if any errors have been encountered, those error messages will have already been printed.

Operator Action: None

G

OUTPUT MESSAGES

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***** \$GEOT DISASTER - YOU HAVE 5 MINUTES *****
***** FOR AN ORDERLY SHUT DOWN & DUMP *****
***** OTHERWISE \$GEOT WILL TAKE IT DOWN *****

Disaster Message. Generally the result of either an unplanned error (memory fault, IPR, etc.) or a planned disaster after a message with the attribute set to abort GEOT. Upon completion of the message, all GEOT processing ceases, including queue processing.

Operator Action: Warn all TSS users to prepare for system shutdown. Wrapup journal tapes and perform other acts which allow a shutdown without data loss.

*GEPOP QUEUE FULL, TRY GEIN LATER

GPOP Message. The Memory Allocator queue is full and temporarily cannot accept a request to bring card reader System Input into memory.

GEPOP - Memory allocation program
GEIN - System Input

Operator Action: Wait until Memory Allocator can accept a request to bring card reader System Input into memory.

sssss-a GET REEL#rrrrr FOR MT i ccc dd
(filename, file Ser.#Reel seq.#)

Sort/Merge Message. Identifies the next reel to be used as input to the file named in the message. The message occurs only in the case of multiple-reel collation output in the immediately preceding Sort phase.

Operator Action: Mount the reel as specified.

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*GET S# sssss PRJ= Pppppppppppp PER= pppppppppppp
Tape#nnnnn [filename]

*GET S# sssss UID= UUUUUUUUUUUU
Tape#nnnnn [filename]

where: Pppppppppppp = Project Name
ppppppppppppp = Person_ID
UUUUUUUUUUUUU = USERID
nnnnn = Tape number

Peripheral Allocator Message. The file serial number(s) specified is required in order to run this job.

NOTE: This message is simply one variation of the "*GET" message which includes the form, PACK#, and TRAIN variations as well. The first line of the "*GET" message (the header) includes the Project Name and Person_ID if the PID option is in effect, or the USERID if the PIL option is not in effect. The "*GET" message is a multi-line message. Each line following the header describes the requested medium. More than one medium may be described in one "*GET" message. Also, more than one type of medium (i.e., form/PACK/TAPE/TRAIN) may be described in one *GET message.

Operator Action: If the tape(s) is available, enter a RUN sssss reply. If the tape(s) is not available, enter an ABORT sssss option reply. Responding RUN LIMBO causes all jobs with this status to be released for allocation.

G
OUTPUT MESSAGES

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*GET S# sssss PRJ= PPPPPPPPPPPP PER= pppppppppppp
TRAIN xxxx

*GET S# sssss UID= UUUUUUUUUUUU
TRAIN xxxx

where: PPPPPPPPPPPP = Project Name
pppppppppppp = Person_ID
UUUUUUUUUUUU = USERID
xxxxx = TRAIN ID/NAME

Peripheral Allocator Message. A specified train ID/name was indicated on the \$PRINT statement. The job will not be run until the operator issues the RUN command.

NOTE: This message is simply one variation of the "*GET" message which includes the form, PACK#, and TAPE# variations as well. The first line of the "*GET" message (the header) includes the Project Name and Person_ID if the PID option is in effect, or the USERID if the PID option is not in effect. The "*GET" message is a multi-line message. Each line following the header describes the requested medium. More than one medium may be described in one "*GET" message. Also, more than one type of medium (i.e., form/PACK/TAPE/TRAIN) may be described in one "*GET" message.

Operator Action: If the specified train is not currently mounted, mount it before giving the RUN command.

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W8.0.0

10-10.2 JDSSC WWMCCS Change DH13-04-W1

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MGEOT INFO(091) IS AN INVALID SYSTEM NUMBER

SYSOUT Message. Transport of a job to another system was denied because the system number specified was outside the range 0 to 3.

Operator Action: Re-issue input message with the correct system number.

MGEOT INFO(092) INTERSYSTEM COMMANDS INVALID IN A NON-SHARED SYSTEM

SYSOUT Message. A move all (MVALL) request was made in a non-shared system.

Operation Action: None.

MGEOT INFO(093) OFFLINE? i-ccc-dd

SYSOUT Message. Card punch device adapter could not communicate with the unit record MPC.

Operator Action: Run out the device i-ccc-dd, remove the last card punched, and ready device.

MGEOT INFO(152) --sssss FINISHED ON STA-xx

SYSOUT Message. Job sssss has finished printing on the remote line printer whose line id is xx.

Operator Action: None

MGEOT ERROR(180)

MGEOT ERROR(181) - (message text varies depending on the error)

SYSOUT Message. Contains the error message from Common Security that describes an unexpected error condition. Refer to the GCOS 8 OS Security User's Guide for information on error message text.

Operator Action: Submit a System Technical Action Request (STAR) with a dump of HCM and system program 3 (P/03). A GEOT disaster procedure will be invoked.

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MGEOT ERROR(204)-REMOTE WILL NOT FIT IN SUBPROGRAM

SYSOUT Message. DNET illegally requested another remote to be connected to a GEOT subprogram.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(205)-REMOTE INTERRUPTED TABLE FULL

SYSOUT Message. The table which maintains a list of the remotes, which were disconnected while delivering output, is full. The current table size accommodates 10 interrupted remotes.

Operator Action: None. Be aware that the remote operator will not be able to do a \$*%CUTC. Message #207 will identify the station.

MGEOT ERROR(206)-PROCESSING JOB THAT WAS NEVER STARTED

SYSOUT Message. GEOT encountered an error while building a remote interrupted table entry.

Operator Action: Submit a System Technical System Request (STAR) will dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT INFO(207)-sssss INTERRUPTED ON STA-xx

SYSOUT Message. Job sssss was being delivered to station xx when a disconnect was received.

Operator Action: None. The remote operator should to a \$*%CUTC after reconnecting.

MGEOT ERROR(208)-ILLEGAL REMOTE TCB MEDIA CODE

SYSOUT Message. During the processing of performed SYSOUT (TCB), GEOT encountered a logic error.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

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MGEOT INFO(209)-REDRC Ixx ONL RECEIVED

SYSOUT Message. The remote output was redirected to an online printer.

Operator Action: None.

MGEOT INFO(250)--RLP WHOSE ID=xx NEEDS ATTENTION

SYSOUT Message. An interruption has occurred on the remote line printer or an alternate remote line printer has been assigned to print any further output.

Operator Action: Use one of the RLP command options to continue the output.

MGEOT INFO(251)--RLP WHOSE ID=xx NEEDS COMMAND TO RESUME

SYSOUT Message. A remote line printer exchange has taken place and the new printer requires a command to continue printing.

Operator Action: Use one of the RLP command options to continue the output.

MGEOT ERROR(252)--RLP WHOSE ID=xx cnt SYSOUT CAN'T

SYSOUT Message. A command to continue output was given for a remote printer which was not currently interrupted or line id "xx" does not exist.

cnt = RLP console command option

Operator Action: None

MGEOT INFO(253)--REMOTE LINE PRINTER TABLE FULL

SYSOUT Message. The table of remote printers known to SYSOUT is full.

Operator Action: Release unwanted printers using RLP Ixx REL.

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MGEOT INFO(254)--RLP WHOSE ID=yy EXCHANGED FOR ID=xx

SYSOUT Message. An interrupted remote line printer whose ID=yy was successfully exchanged for another remote line printer whose ID=xx.

Operator Action: None.

MGEOT INFO(255)--RLP WHOSE ID=yy IS AN ALTERNATE FOR ID=xx

SYSOUT Message. A remote line printer with a line ID of "yy" has been designated an alternate for the remote line printer with a line ID of "xx".

Operator Action: None.

MGEOT INFO(256)--RLP WHOSE ID=xx-cnt- HAS BEEN PROCESSED

SYSOUT Message. A command to continue output for an interrupted remote line printer has been received.

cnt = RLP console command option

Operator Action: None

MGEOT INFO(257)--RLP WHOSE ID=xx IS NOW KNOWN TO SYSOUT

SYSOUT Message. An entry has been made in the table of remote line printers known to SYSOUT.

Operator Action: None.

MGEOT INFO(258)--RLP WHOSE ID=xx NOW HAS NO ALTERNATE SPECIFIED

SYSOUT Message. The alternate line ID entry has been removed from the remote line printer table entry of line ID "xx".

Operator Action: None.

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MGEOT INFO(259)--RLP WHOSE ID=xx IS NOW UNKNOWN TO SYSOUT

SYSOUT Message. An entry has been removed from the table of remote line printers known to SYSOUT.

Operator Action: None.

MGEOT INFO(260)-- RLP STATION ID
MGEOT INFO(261)-- Ixx

SYSOUT Message. An RLP command requesting a list of remote printer line IDs known to SYSOUT has been processed. Message 261 will be repeated for each remote line printer found where "xx" = line id.

If no remote line printer id's are found, the following message is also displayed:

 MGEOT INFO(262)-- NONE FOUND

Operator Action: None

MGEOT INFO(263)--RLP WHOSE ID=xx
MGEOT INFO(264)--STATUS FLAGS=.....
MGEOT INFO(265)--CONT. STATUS FLAGS.....
MGEOT INFO(266)--REPOSITIONING COMMAND=aaa bbb
MGEOT INFO(267)--ALTERNATE STATION ID=xx
MGEOT INFO(268)--TIME OF INTERRUPTION=hh mm

SYSOUT Message. An RLP command requesting the status of a specific line id has been processed.

Operator Action: None.

MGEOT ERROR(269)--RLP WHOSE ID=xx IS UNKNOWN TO SYSOUT

SYSOUT Message. An RLP command requesting the status of a line id which is not known to SYSOUT was received.

Operator Action: None.

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MGEOT ERROR(270)--THERE ARE NO RLPS KNOWN TO SYSOUT

SYSOUT Message. An RLP request for the status of all remote line printers was received, but the remote line printer table was empty.

Operator Action: Power on the remote line printer.

MGEOT ERROR(271)--THERE ARE NO REMOTE LINE PRINTERS CONFIGURED

SYSOUT Message. An RLP console command was input, but GEOT did not detect any remotes during initialization.

Operator Action: None

MGEOT INFO(301)-FOUND nnnnn BLINKS x PRINTER(S) y PUNCH(ES) & (NO) REMOTES

SYSOUT Message. This is a normal GEOT initialization message.

nnnnn = Number of configured blinks
x = Number of configured printers (maximum of 8)
y = Number of configured punches (maximum of 8)
() = Indicates optional output.

REMOTES or NO REMOTES depends solely upon whether or not FNP(s) are configured. The initialization message, on previous releases, indicating that a backdoor file was found, is no longer applicable.

Operator Action: None.

MGEOT ERROR(302)-BAD SD.JOT DURING INITIALIZATION

SYSOUT Message. An error occurred during POPM system initialization.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

MGEOT ERROR(303)-BAD SD.BDI DURING INITIALIZATION

SYSOUT Message. An error occurred during POPM system initialization.

Operator Action: Submit a System Technical Action Request (STAR) with dump of HCM,P03. A GEOT disaster procedure will be invoked.

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TSn - 254K IS THE MAX S/S CACHE SIZE

Time Sharing Message. The Subsystem cache option was specified with more than 254K. The S/S cache is set to 254K.

n - 1, 2, 3, or 4

Operator Action: Contact designated site personnel.

TSn - 254K IS MAX SY** SEGMENT SIZE

Time Sharing Message. A request for in memory SY** buffer specified a size larger than 254K. Size is set to 254K.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn AUTOMATIC ERR RCVY NO DUMP

Time Sharing System Message. A system error occurred and a dump may be taken to the Statistical Collection File if the error was not in courtesy call. The types of errors which cause the message are:

<u>Error Code</u>	<u>Meaning of Error</u>	<u>Times Error Recovery Attempted</u>	<u>Snapshot Dump Taken?</u>
ZOP	Illegal procedure	*	Yes
MEMF	Memory fault	*	Yes
FLT	Fault code fault	*	Yes
DIVC	Divide check fault	*	Yes
OVF	Overflow fault	*	Yes
DRL	Derail fault	*	Yes
FATL	Lockup, ONC, parity fault	0	N/A
PLEC	Software error	0	N/A

n - 1, 2, 3, or 4

* - Error recovery is attempted unless five errors occurred within a 5-minute period.

Operator Action: None.

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TSn - BAD STATUS DURING SUBSYSTEM LOADING FC=xx

Time Sharing Message. An I/O error occurred during a MME GEINOS on file xx. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

TSn\$ - "CALL NAME MISSING" FOR USER DRL xxxxxx

Time Sharing Message. The user-written derail processor xxxxxx cannot be found.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn\$ - CAN'T ALLOCATE MINUSDRL - FMS CODE xx

Time Sharing Message. TSS could not allocate the MINUSDRL file.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - CANNOT ACCESS INIT FILE (SMC BUSY) - RESTART TSS

Time Sharing Message. TSS could not access the INIT file because the SMC was busy. TSS will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

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TSn\$ - CHECKSUM ERROR LOADING USER DRL xxxxxx

Time Sharing Message. A checksum error occurred loading user-written derail processor xxxxxx.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - COMMENT FILE WRITE ERROR

Time Sharing Message. A write to the COMMENT backdoor file was unsuccessful. Writing to the COMMENT backdoor file is ended.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - DEFERRED CATALOG CHECKSUM ERROR - (A)BT, (C)ONT, OR (I)NIT

Time Sharing Message. Content of a deferred file is inconsistent. Console options are abort, continue, or initialize the deferred file.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - FMS UNABLE TO ATTACH INIT FILE-FMS STATUS=xx

Time Sharing Message. TSS cannot access the initialization file
INIT file processing is bypassed.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - FMS UNABLE TO ATTACH PRMFL-xxx FMS STATUS=yy

Time Sharing Message. FMS cannot allocate one of the TSS files.
The file named xxx was assigned as a permanent file by site option
applied to .TSFDV. Both the numeric error status and the text
supplied by FMS are issued. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the
designated site personnel.

TSn - FORMAT ERROR FOR PATCH CONTAINED IN INIT FILE (rrr)

Time Sharing Message. An error occurred during the syntax scan of
patch in the \$PATCH section of the INIT file. The reason for the
error, rrr, may be one of the following:

(NON-OCTAL DIGIT)	
(COL-7 NUMERIC)	Column 7 must be alphabetic in the range A- if non-blank.
(COL-7 BLANK)	Relocation of the patch contents was selected without giving a module identifier (A-0).
(MODULE ID ERROR)	The character in column 7 is not in the range A-0.
(PATCH LENGTH)	The patch content is larger than 12 octet digits.
(UNMATCHED MODULE)	The contents of columns 73-78 did not match .MTIMS or a valid subsystem name.
(PATCH BEYOND EXEC)	Patch location is beyond TSSO limits.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn\$ - GECALL ERROR CODE yy FOR USER DRL xxxxxx

Time Sharing Message. A GECALL error occurred loading user-written derail processor xxxxxx.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - GEMORE MEMORY REQUEST DENIED DURING LOAD OF ROUTINE ppp

Time Sharing Message. Loading of subsystem ppp required more memory. The GEMORE for more memory was denied five times. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing contact the designated site personnel.

TSn - INIT ERRORS ABORT (S)YSTEM OR (T)Sn ONLY

Time Sharing Message. A fatal error occurred during TSS initialization. Concurrently "FASTBT" is on, "ERROR ABORT=SYSTEM" is indicated in the INIT file, and "ACALL/TSn" was indicated in STARTUP. These concurrent conditions could cause recurrent TSS abort, System abort, System restart, and TSS restart. Console options are abort System, or abort Time Sharing only.

n = 1 Standard Time Sharing
n = 1, 2, 3 or 4 Multicopy Time Sharing

Operator Action: Contact the designated site personnel.

TSn - INIT FILE \$ INFO ERROR TRYING TO RESET CACHE FOR ppp

Time Sharing Message. TSS was unable to find a program descriptor for ppp. The \$INFO directive to reset cache for ppp is ignored.

n - 1, 2, 3 or 4

Operator Action: Contact the designated site personnel.

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TSN - INIT File \$ INFO ERROR TRYING TO SET CACHE FOR ppp

Time Sharing Message. TSS was unable to find a program descriptor for ppp. The \$INFO directive to set CACHE for ppp is ignored.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn\$ - NOT ENOUGH MEMORY TO LOAD USER DRL xxxxxx

Time Sharing Message. An I/O error occurred loading user-written derail processor xxxxxx.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - MAX # INCORE SY** USERS = 406

Time Sharing Message. The value for the TSS Initialization file directive #SY**BUFFERS, which represents the number of in-memory buffers to use for TSS Collector files, was specified with a value greater than the maximum of 406. The maximum value of 406 is used for this directive.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn MAXIMUM MEMORY SIZE = xxxx

Time Sharing Message. The \$INFO directive TSS MAX SIZE specifies a size larger than the size specified by \$ INFO EXTTSS startup directive. The value on the \$ INFO EXTTSS will be used.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - .MPOPM QUEUE FULL

Time Sharing System Message. An attempt has been made to start a copy of TSS. When an entry to POPMs queue, telling it to start TSS was attempted, the queue was full. The startup of TSS will not be attempted.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing

Operator Action: Wait for activity to die down and attempt to start TSS again.

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TSn - NEED AT LEAST 6K OF S/S CACHE

Time Sharing Message. The subsystem cache option has been specified with less than 6K. This is not practical. The cache option is ignored.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel

TSn\$ - NOT ENOUGH BUFFER SPACE TO LOAD USER DRL xxxxxx

Time Sharing Message. There is not enough buffer space available to load the user-written derail processor xxxxxx.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - # NO FNP AVAILABLE CHECK CONFIG

Time Sharing System Message. An attempt has been made to start a copy of TSS. However, there are no Front-end Processors configured on the system. The startup of TSS will not be attempted.

n - 1 Standard Time Sharing
n - 1,2,3, or 4 Multicopy Time Sharing

Operator Action: Check the Startup Deck \$CONFIG section to make sure that there is a FNP configured and restart TSS.

TSn - NUMBER OF EBM BUFFERS >256, RESET TO 16

Time Sharing Message. The number of EBM buffers requested is more than 256. The number is set to the default value of 16.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

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TSn - POSSIBLE CACHE OPTION ERROR (LOWER=NONZERO)

Time Sharing Message. The S/S cache option word in TSS communication region does not have a zero in its lower half. Error is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

TSn - Possible SY** OPTION ERROR (LOWER=NONZERO)

Time Sharing Message. The SY** option word in TSS communication region must have a zero in its lower half. Option is ignored.

n - 1, 2, 3, or 4

Operator Action. Contact the designated site personnel.

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TSn - UNABLE TO BUILD CACHE SEGMENT--STATUS=xxx

Time Sharing Message. An attempt to create a segment for S/S cache has failed. xxx is the reason. The cache option is turned off.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - UNABLE TO BUILD SY** SEGMENT--STATUS=xxx

Time Sharing Message. An attempt to build a segment for in-memory SY** buffers has failed. xxx is the reason. The in-memory SY** is reset.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - UNABLE TO EXPAND WORK SET--STATUS=xxx

Time Sharing Message. An attempt to create a working space for in-memory SY** buffers or S/S cache failed. xxx is the status returned. Those two options are skipped.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn - UNABLE TO INITIALIZE SUB-DISPATCH QUEUE

Time Sharing Message. The Dispatcher rejected an attempt to establish TSS sub-dispatching. Time Sharing will abort.

n - 1, 2, 3, or 4

Operator Action: Before restarting Time Sharing, contact the designated site personnel.

T
OUTPUT MESSAGES

T
OUTPUT MESSAGES

TSn - UNABLE TO STRUCTURE WORKING SPACE--STATUS=xxx

Time Sharing Message. An attempt to structure the working space assigned for S/S cache and in memory SY** buffers failed. xxx is the reason. The working space will be released.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

TSn\$ - USER DRL NUMBER < 1 or > 36

Time Sharing Message. The \$INFO directive USER DRL specifies a user derail outside the valid range of 1 through 36.

n - 1, 2, 3, or 4

Operator Action: Contact the designated site personnel.

*TSn mmddy tt.ttt uuu USERS ccck

Time Sharing System Message. Indicates the number of Time Sharing System (TSS) users and of the size of the TSS area. This message is output when TSS requests more memory from GCOS, or each quarter-hour on the clock.

n - 1, 2, 3, or 4

uuu - Number of TSS users
ccck - Current size of TSS memory area

Operator Action: None

*TSn mmddy tt.ttt uuu USERS
*TSn MEMORY SIZES ccck=CUR.nnnK=CHG.mmmK=MAX.sssK=SWAP.111K=LGST.
*TSn URGENT USERS xxx=URG. iiii STA.ID. www=SEC. yyyK=SIZE
*TSn - USAGES tt.tt=PROC TIME gggqk NEEDED BY zzz USERS aaa=%USED

Time Sharing System Message. Indicates the status of the Time Sharing System. This message is an output upon operator request.

n - 1, 2, 3, or 4

T
OUTPUT MESSAGES

T
OUTPUT MESSAGES

mmddy - Date of message (month, day, year)
tt.ttt - Time of day of message
uuu - Number of users currently on Time Sharing
ccck - Current size of Time Sharing System memory allotted
nnnK - New size memory allocation requested of GCOS
mmmK - Authorized maximum memory size of Time Sharing System
sssK - Core swap size of Time Sharing System

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W8.0.0

23-54.2 JDSSC WWMCCS Change DH13-04-W1

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