

UNISYS

OS/3

**System
Operations**

**Quick-Reference
Guide**

Relative to Release
Level 11.0

August 1987

Priced Item

Printed in U S America
UP-9985



UNISYS OS/3
System
Operations
**Quick-Reference
Guide**

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Summary

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Preface

This document is a summary of the procedures and commands used in the operation of the SPERRY System 80 operated under control of the SPERRY Operating System/3 (OS/3). It is designed for use as a quick-reference guide by the system administrator and experienced operators and programmers who are familiar with the operations of SPERRY systems.

The information presented herein has been condensed from the current versions of several source documents within the OS/3 library; they are:

- System 80 operations handbook operator reference, UP-8859

Describes the commands and operating procedures for the operator

- Spooling and job accounting concepts and facilities, UP-9975

Describes the spooling capabilities and controls provided for the system administrator and the programmers and operator

- System installation user guide/programmer reference, UP-8839

Describes the system installation procedures and options

- Supervisor user guide, UP-8075

Describes the functions of the OS/3 supervisor

- Job control user guide, UP-9986

Describes the OS/3 job control procedures and options

- Interactive services commands and facilities user guide/programmer reference, UP-9972

Describes the use of the workstation and the interactive services capabilities

- System messages programmer/operator reference, UP-8076
Describes the OS/3 system messages and operator actions
- System 80 operator maintenance guide, UP-8915
Describes the error definition and reporting procedures

The system operations summary is organized as follows:

- Section 1. General

Contains information of a general nature, such as conventions used to illustrate the commands and messages appearing in this manual, the procedures for entering commands and messages from the console, the procedures for operating the System 80 console workstation, and the general format characteristics of system commands and system messages.

- Section 2. System Power Turn-On and Turn-Off

Describes the procedures for applying and removing power from the system.

- Section 3. System Initialization

Describes the procedures for manual microprogram loading and initial program loading.

- Section 4. Job Processing

Describes the commands used to initiate, schedule, execute, and terminate jobs. Also provides the commands used to perform specific job-related functions during job processing.

- Section 5. Spooling Services

Describes the commands and procedures associated with the use of spooled files.

- Section 6. Integrated Communications Access Method

Describes the commands and procedures for loading the ICAM symbiont, changing the ICAM name, initializing and terminating the global user service task, and directing communications operations.

- Section 7. System Utility Symbionts

Describes the commands used to initialize and terminate the system utility symbiont provided by OS/3. Includes the function codes to initiate the card, tape, disk, and diskette functions.

- Section 8. Interactive Services

Describes the extended set of commands and messages for operator use in controlling the interactive environment.

- Section 9. Disk Cache Facility

Describes the commands used to initialize and shutdown DCF, specify the segment size, activate and remove drives from DCF, and display DCF statistics.



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9. DISK CACHE FACILITY

USER COMMENT SHEET

STATEMENT CONVENTIONS

| | |
|---|--|
| Capital letters, parentheses, and punctuation marks | Must be entered exactly as shown |
| Lowercase letters and terms | Represent variable information that is either displayed or entered by the operator |
| Braces { } | Represent alternate choices of information |
| Brackets [] | Represent optional entries |
| Ellipsis ... | Represents an indefinite number of entries |
| Shading  | Represents a default option |
| Underlining <u> </u> | Represents the abbreviated form of the entry |

MESSAGE/COMMAND KEYIN PROCEDURE

| Key/Control | Action/Description |
|---|---|
| UNLOCK MSG WAIT key MSG WAIT key | Pressing the key prior to typing command or message <ol style="list-style-type: none">1. notifies system that a message or command is to be entered;2. opens a display line on the screen of the system console for display message/command;3. issues start of entry (▷) signal; and4. sets cursor (⏏ or ⏑) to position where typing is to start. |
| Message keys | Enter command or message - observe the format conventions when making your entry. |
| XMIT key | Press after your command or message entry is completed. Initiates transmittal of the command or message entered |

NOTES:

1. Boxed key pertains to models 8/10/20 hardware. Unboxed key pertains to Models 3-6 hardware.
2. Commands are acted upon immediately or placed in a queue for future processing; they are never ignored or lost. Therefore, commands entered more than once will be acted upon more than once.
3. Unaccepted commands and messages result in a negative acknowledgment (NAK) error message from the system. Error messages of this type are identified by a blinking error symbol (▽) displayed at each end of the message. Reenter the message or command correctly.

CONSOLE WORKSTATION OPERATIONAL PROCEDURES (MODELS 3-6)

The following procedures enable the console workstation operator to switch from console operation to workstation operation, return to console operation, and display messages concerning the type of operation (console or

workstation) not currently in effect. (Refer to the interactive services commands and facilities user guide/programmer reference for a description of all interactive services provided to a workstation user.)

■ Switching from Console Operation to Workstation Operation

| Key/Control | Action/Description |
|--------------------------------|---|
| FUNCTION key | Press and hold. |
| SYS MODE key or WS MODE key | Press for system mode. Press for workstation mode. |

■ **Switching from Workstation Operation to Console Operation**

| Key/Control | Action/Description |
|--------------------------------|--|
| FUNCTION key | Press and hold. |
| C/CSL key or D/SYS CONT key | Press for console mode. Press for control mode. |

■ **Displaying Informational Console Messages while Operating as a Workstation (.MSG Messages)**

| Key/Control/Display | Action/Description |
|------------------------------------|---|
| Console workstation display screen | Observe. CNSMSG is displayed on indicator line (line 25). |
| FUNCTION key | Press and hold. |
| C/CSL key | Press. Informational messages are displayed on line 2 of console workstation screen; CNSMSG extinguishes. |

■ **Displaying Console Messages Requiring a Response while Operating as a Workstation (CNSREQ Messages)**

| Key/Control/Display | Action/Description |
|------------------------------------|--|
| Console workstation display screen | Observe. CNSREQ is displayed on indicator line (line 25); XMIT key locks against further workstation entries. |
| FUNCTION key | Press and hold. |
| C/CSL key | Press. Messages requiring a response (or accumulated full screen of informational messages not previously displayed) are displayed on line 2 of console workstation screen; CNSREQ is cleared. After you respond to message, you may switch back to workstation operation. XMIT key unlocks for workstation entries. |

■ **Displaying Informational Workstation Messages while Operating as the Console (WSMSG Messages)**

| Key/Control/Display | Action/Description |
|------------------------------------|---|
| Console workstation display screen | Observe. WSMSG is displayed on indicator line (line 25) for message concerning job initiated previously while operating as a workstation. |

| | |
|--------------|--|
| FUNCTION key | Press and hold. |
| SYS MODE key | Press. Informational messages are displayed on line 2 of console workstation screen; WSMSG is cleared. |

■ **Displaying Workstation Messages Requiring a Response while Operating as the Console (WSREQ Messages)**

| Key/Control/Display | Action/Description |
|------------------------------------|--|
| Console workstation display screen | Observe. WSREQ is displayed on indicator line (line 25) for message concerning job initiated previously while operating as a workstation. XMIT key does not lock; further console entries are permitted. |
| FUNCTION key | Press and hold. |
| SYS MODE key | Press. Messages requiring a response are displayed on line 2 of console workstation screen; WSREQ is cleared. (Use REBUILD command if message rolls off screen before you have had a chance to display and answer it.) |

FORMAT CHARACTERISTICS OF SYSTEM COMMANDS

▷command $\left[\begin{array}{l} (did) \\ ([did], label) \\ (RDR, label) \end{array} \right] \Delta [command\text{-parameters}]$

△

Start of entry symbol; automatically precedes all lines

command

2-8 alphabetical characters (2 minimum) that identify the system command to be processed

did

3-character device address to identify the device used to carry out the command

did, label

Required when a diskette is used to function as a card reader or a card punch. The label entry is 1 to 8 characters. Must be data set label diskette with unblocked and unspanned records 128 bytes or less in size.

RDR, label

Device address to be used is the input reader spool file. The label entry is 1 to 8 characters.

command-parameters

Optional positional parameters used to tailor the effect of the command issued

FORMAT CHARACTERISTICS OF SYSTEM OUTPUT MESSAGES

$$nn \begin{cases} (?) \\ \Delta \\ * \end{cases} \left\{ \begin{array}{l} \text{jobnamez} \\ \text{synnnn} \end{array} \right\} \text{message-text}$$

nn

Is a unique message number from 11 to 73 (numbers 1 through 10 are reserved for other system uses). This number serves as the message identification.

?

Identifies an output message that requires a response before the job that issued the message can continue. Output messages requiring replies are not rolled off the screen until they are answered.

Δ

Identifies an information only message; does not require an operator reply. Input messages (solicited and unsolicited) must include a space between the message-id and message text.

*

Identifies a message requiring an operator action. Job issuing this type message is in yield state; a GO command is required from operator to reactivate job.

jobnamez

Is the name of the user job sending the message. This name is the 8-character name taken from the job preamble.

synnnn

Is the name of the symbiont sending the message. This 6-character name is composed of a 2-character symbiont identification concatenated with a 4-digit binary job number inserted at task initiation.

message-text

Actual message. Content is limited to a maximum of 60 characters.

FORMAT CHARACTERISTICS OF SOLICITED INPUT MESSAGES

| | |
|------------------------|---|
| <p>nnΔmessage-text</p> | <p>nn Is the unique message number of the message you are responding to.</p> <p>message-text The actual message reply</p> |
|------------------------|---|

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FORMAT CHARACTERISTICS OF UNSOLICITED INPUT MESSAGES

| | | |
|---|----------------|-----------------|
| { | 00Δsymbname, | } Δmessage-text |
| { | 00Δsymbid | |
| { | 00Δsymbid(did) | |
| { | UNSAjobname, | |

00

Specifies that unsolicited message is for a symbiont.

UNS

Specifies that unsolicited message is for a user job symbname

symbname

Is the 8-character name of the symbiont receiving the message. For instance, the symbiont name of the output writer is SL\$\$OW00.

symbid

Is the 2-character symbiont identification used to invoke the symbiont receiving the message. For instance, the symbiont identification of the output writer is PR.

symbid(did)

Is the 2-character symbiont identification currently used to invoke the symbiont receiving the message, along with the address of the device used or controlled by a specific copy of the symbiont in main storage. For instance, the symbiont identification of the output writer using the printer located at device address 160 is PR (600).

did

Is the device allocation (must be in parentheses) for the symbiont receiving the unsolicited message. This message is not acknowledged if the device is not assigned to the symbiont.

jobname

Is the name of the user job receiving the unsolicited message.

message-text

The actual message



SYSTEM TURN-ON AND TURN-OFF PROCEDURES FOR MODELS 3-6

Normally, circuit breakers on the processor cabinet, expansion cabinet, and all peripheral devices where the circuit breaker is separate from the ON/OFF switch are left in the ON position. Power is controlled (applied and removed) through the main system circuit breaker. Once power is applied, the console workstation, integrated disks, and all diskettes are turned on and off by using the SYSTEM POWER switch; all other peripheral subsystems, such as printers and additional disk subsystems, are turned on and off at the specific device. Before turning system power on or off, be sure that files are protected at each disk drive or portions of data will be erased.

Whenever power has been removed from the system, the initial microprogram

load (IMPL) and initial program load (IPL) procedures must be performed each time power is reapplied. The system turn-on procedure, using the system resident (SYSRES) integrated disk, automatically initiates the IMPL procedure to load the resident portion of OS/3 (the supervisor). Operator action is not required until interactive IPL, when you select how the supervisor is initialized. To use another load device for the IMPL and IPL, initiate the manual IMPL when the automatic IMPL/IPL sequence completes. Section 3 provides instructions on how to manually initiate the IMPL and IPL procedure, as well as how to select supervisor initialization options during the interactive IPL.

■ Power Turn-On Procedures for Models 3-6

| Key/Control/Display | Action/Indication |
|--|---|
| MAIN POWER circuit breaker (rear of cabinet) | Switch ON. (Performed at initial power turn-on only.) |
| Expansion cabinet circuit breaker (rear of cabinet) | SWITCH ON. |

| Key/Control/Display | Action/Description |
|---|--|
| ON/OFF switch for nonintegrated peripheral subsystems | Switch ON. (Workstations are turned on and off, as required, by the workstation user.) |
| SYS PWR ON/OFF switch | Switch ON. SYS PWR switch flashes during power-on confidence test. SYS PWR switch and console screen: Light at completion of power-on confidence test. |
| Console workstation display screen | System state line (line 17): Loading message is displayed. Proceed with interactive IPL (Section 3). Whenever LOAD *ERROR STOP* is displayed (1) refer to the OS/3 system messages manual, (2) identify the error code display, and (3) take appropriate operator action. Then turn to the IMPL procedure (Section 3) and retry the IMPL. Whenever *CHECK STOP* is displayed, press the POCLR button under the console workstation table on the right-hand side. POCLR clears main storage and then initiates the automatic IMPL/IPL sequence. Proceed with interactive IPL (Section 3). |

Whenever STOPPED *HPR* is displayed refer to the OS/3 system messages manual, identify the HPR code (INSTR=hpr-instruction-code), and take appropriate operator action. For a nonrecoverable error, perform the entire IPL procedure described in Section 3.

NOTE:

The automatic IMPL and IPL use SYSRES for the load device. If another IMPL or IPL device is to be used, specify that device by manually initiating the IMPL or IPL procedure after the initial phase of the IPL completes.

■ System Turn-off Procedure for Models 3-6

| Key/Control | Action/Indication |
|--|--|
| Console workstation | Enter the command: SJ SHUT Message indicating completed shutdown is displayed. |
| SYS PWR ON/OFF switch | Set to SYS PWR OFF. SYS PWR switch and console screen lights go out. |
| ON/OFF switch for nonintegrated peripheral subsystems | Set to OFF. (Workstations are turned on and off, as required, by the workstation user.) |
| MAIN POWER and expansion cabinet circuit breakers (rear of cabinets) | Set to OFF. (Used only for emergency or as a normal site requirement.) |

CAUTION

Do not open the processor cabinet doors to operate other circuit breakers. Air has been purged in the processor cabinet to maintain efficient operation of the internal disk drive.

SYSTEM TURN-ON AND TURN-OFF PROCEDURES FOR MODELS 8/10/20

Normally, circuit breakers on the processor cabinet, I/O cabinet, and I/O expansion cabinet (if configured), as well as the circuit breakers on all peripheral devices where the circuit breaker is separate from the ON/OFF switch are left in the ON position. Power is controlled (applied and removed) through the main system circuit breaker. Once power is applied, the console, integrated disks, and all diskettes are turned on and off by using the POWER switch on the control panel; all other peripheral subsystems, such as printers and additional disk subsystems, are turned on and off at the specific device. Before turning system power on or off, be sure that files are protected at each disk drive or portions of data will be erased.

Whenever power has been removed from the system, the initial microprogram load (IMPL) and initial program load (IPL) procedures must be performed each time power is reapplied. The system turn-on procedure automatically performs the IMPL procedure to load and initialize control storage. When the IPL switch on the control panel is in the AUTO position, the system turn-on procedure also initiates the IPL procedure to load the resident portion of the OS/3 (the supervisor). In this case, operator action is not required until interactive IPL, when you select how the supervisor is initialized. However, if the device you want to use for IPL is not the one identified in your configurator frame, you must perform the system turn-on procedure manually with the IPL switch in the MNL position. Perform the IPL procedure manually when the automatic IMPL procedure is completed.

■ Power Turn-on for Models 8/10/20

| Step | Control/Device | Operator Action | Indicators, ON/OFF | Display | System Action |
|------|---|-----------------|-----------------------|---------|---------------|
| 1 | MAIN POWER circuit breaker (rear of processor cabinet) | Check. | | | |
| | a. If in ON position | Go to step 4. | | | |
| | b. If in ON position | Switch ON. | ON: All lights | | |
| 2 | MAIN POWER switch (rear of I/O cabinet) | Switch ON. | ON: DC READY | | |
| 3 | Circuit breaker (rear of I/O expansion cabinet, if used) | Switch ON. | | | |

| Step | Control/Device | Operator Action | Indicators, ON/OFF | Display | System Action |
|------|--|---|-----------------------|---------|---------------|
| 4 | All peripheral devices (except diskettes and workstations) | Switch ON.* | | | |
| | a. Workstations | Switch ON/OFF, as required | | | |
| | b. Console POWER ON/OFF switch | Always set to ON position | | | |
| 5 | IPL MNL/AUTO switch (for manual or automatic mode) | Switch to IPL mode you require.** | | | |

* Use applicable hardware reference manual.

** To load a device from your configuration frame, always set to AUTO (for automatic IPL procedure).

■ Power Turn-on for Models 8/10/20 (continued)

| Step | Control/Device | Operator Action | Indicators, ON/OFF | Display | System Action |
|------|--|---|---|---|---|
| 6 | POWER ON/OFF switch (behind control panel door) | Switch ON. (Turns on console, integrated disks, and all diskettes) | ON: SEQ1, SEQ2, SEQ3, P-SEQ Then, OFF: P-SEQ ON: PWR OFF: SEQ1, SEQ2, SEQ3 | HEALTH CHECK RUNNING BPU IMPL W08 START BPU IMPL W09 START DMUX IOMP START | IMPL procedure is in progress. IOMP loading in progress. IMPL procedure completed. |

| Step | Control/Device | Operator Action | Indicators, ON/OFF | Display | System Action |
|------|---|--------------------------|--|--|--|
| 7 | IPL switch | Check. | | | |
| | a. If in AUTO position (to load SUPERVISOR) | | | Configuration frame | IPL performed automatically up to interactive IPL phase. |
| | b. If in MNL position (to load device not in configuration frame) | Perform IPL procedure | ON: RUN, WAIT, POWER ON: STOP, POWER | IPL01 screen Configuration frame | Waits for operator to perform IPL procedure. |

* Use applicable hardware reference manual.

** To load a device from your configuration frame, always set to AUTO (for automatic IPL procedure).

■ **Power Turn-off for Models 8/10/20**

1. Enter command SJ SHUT.
2. Switch OFF the POWER ON/OFF switch (behind control panel door). This turns off console, integrated disks, and all diskettes. Console screen clears. POWER light on console keyboard goes OFF. All lights on control panel go OFF.
3. Switch OFF all peripherals (except diskettes) using applicable hardware reference manuals. However: Always leave console POWER ON/OFF switch in ON position. Note that workstations are turned ON or OFF by their users.

If and only if complete power shutdown is required, then proceed with steps 4 through 6.

4. Switch OFF circuit breaker at rear of processor cabinet.
5. Switch OFF circuit breaker at rear of I/O cabinet.
6. Switch OFF circuit breaker at rear of I/O expansion cabinet (if used).

INITIAL MICROPROGRAM LOAD (IMPL) PROCEDURE FOR MODELS 3-6

The IMPL procedure is used to manually load and initialize control storage. Control storage must be manually loaded and initialized from the device you select whenever a LOAD *ERROR STOP* message is displayed during an IMPL or during an automatic IMPL/IPL (initiated by the system turn-on, POCLR button use, or a previous manual IMPL using SYSRES), or when the IPL cannot be completed successfully. The IMPL loads and initializes control storage in two phases from the load device you specify. When SYSRES is the load device for the first IMPL phase, SYSRES is automatically the load

device for the second IMPL phase and for the IPL. When you specify an alternate load device for the first IMPL phase, you have the option of specifying an alternate device for the second IMPL phase and for the IPL.

The console workstation must be operating in control mode to initiate an IMPL. To set the console workstation to control mode if another operating mode is currently in effect, press and hold the FUNCTION key, then press the D/SYS CONT key. Proceed with step 1 of the IMPL procedure.

| Step | Control/Display | Action/Indication |
|------|--|---|
| 1. | | (Initiating the IMPL procedure) |
| a. | FUNCTION key | Press and hold. |
| b. | IMPL key Console workstation display screen | Press. The following message appears below the system state line (line 17): IMPL=CDD? |

(continued)

INITIAL MICROPROGRAM LOAD (IMPL) PROCEDURE FOR MODELS 3-6 (continued)

| Step | Control/Display | Action/Indication | | | | | | | | | | | | | | | | | | | | |
|------------------------|-----------------|--|-----------------------|--|--|--|---------------|----------------|-------------------|-------------------|------------------------|---|---|---|-----------------|---|---|--------|-----------|---|---|--------|
| | | <p>The 3-digit keyin of the IMPL load did (device address) is specified as follows:</p> <table border="1" data-bbox="897 270 1930 601"> <thead> <tr> <th colspan="4" data-bbox="1327 270 1533 308"><u>DEVICE ADDRESS</u></th> </tr> <tr> <th data-bbox="897 342 982 381"><u>Device</u></th> <th data-bbox="1327 342 1425 381"><u>Channel</u></th> <th data-bbox="1494 342 1632 381"><u>Subchannel</u></th> <th data-bbox="1666 342 1793 381"><u>Device No.</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="897 415 1184 453">SYSRES Integrated Disk</td> <td data-bbox="1327 415 1345 453">1</td> <td data-bbox="1494 415 1515 453">0</td> <td data-bbox="1666 415 1687 453">0</td> </tr> <tr> <td data-bbox="897 487 1081 526">All Other Disks</td> <td data-bbox="1327 487 1345 526">1</td> <td data-bbox="1494 487 1515 526">0</td> <td data-bbox="1666 487 1758 526">1 - 7*</td> </tr> <tr> <td data-bbox="897 560 1012 598">Diskettes</td> <td data-bbox="1327 560 1345 598">3</td> <td data-bbox="1494 560 1515 598">2</td> <td data-bbox="1666 560 1758 598">0 - 3*</td> </tr> </tbody> </table> <p>*Represents the actual physical unit number assigned to the selected disk or diskette drive</p> | <u>DEVICE ADDRESS</u> | | | | <u>Device</u> | <u>Channel</u> | <u>Subchannel</u> | <u>Device No.</u> | SYSRES Integrated Disk | 1 | 0 | 0 | All Other Disks | 1 | 0 | 1 - 7* | Diskettes | 3 | 2 | 0 - 3* |
| <u>DEVICE ADDRESS</u> | | | | | | | | | | | | | | | | | | | | | | |
| <u>Device</u> | <u>Channel</u> | <u>Subchannel</u> | <u>Device No.</u> | | | | | | | | | | | | | | | | | | | |
| SYSRES Integrated Disk | 1 | 0 | 0 | | | | | | | | | | | | | | | | | | | |
| All Other Disks | 1 | 0 | 1 - 7* | | | | | | | | | | | | | | | | | | | |
| Diskettes | 3 | 2 | 0 - 3* | | | | | | | | | | | | | | | | | | | |
| 2. | a. XMIT key | <p>(Identifying the load device)</p> <p>Loading from SYSRES (did 100).</p> | | | | | | | | | | | | | | | | | | | | |

XMIT key

For the IMPL (phase one and two) and the IPL:

Console workstation display screen

Press to use SYSRES. Proceed with interactive IPL step 1.

System state line: Loading message is displayed. Observe for error message displayed if IMPL or IPL is unsuccessful.

Whenever LOAD *ERROR STOP* is displayed, refer to the OS/3 system messages manual, identify the error code display, and take appropriate operator action. Retry the IMPL beginning with step 1. If the error condition persists, record the error code and refer to the System 80 operator maintenance guide for error definition and reporting procedures.

Whenever *CHECK STOP* is displayed, press the POCLR button under the console workstation table on the right-hand side. POCLR clears main storage and then initiates the automatic IMPL/IPL sequence. Proceed with interactive IPL.

Whenever the IPL is unsuccessful and STOPPED *HPR* is displayed, refer to the OS/3 system messages manual to identify the HPR code (INSTR=hpr-instruction-code) and take appropriate operator action. For a nonrecoverable error, perform the manual IPL procedure to retry the IPL. If the error condition persists, record the error code and refer to the System 80 operator maintenance guide.

(continued)

INITIAL MICROPROGRAM LOAD (IMPL) PROCEDURE FOR MODELS 3-6 (continued)

UP-9985

SPERRY OS/3
SYSTEM OPERATIONS

3-4

| Step | Control/Display | Action/Indication |
|------|---|--|
| b. | <p>XMIT key</p> <p>Console Workstation display screen</p> | <p>Loading from an alternate device.</p> <p>For the first IMPL phase</p> <p>Keyin the alternate device 3-digit did and then press XMIT.</p> <p>System state line: Loading message is displayed. Observe for error message displayed if IMPL is unsuccessful. If error condition occurs, refer to operator action described in step 2.a.</p> <p>At the completion of the first IMPL phase, the following message is redisplayed below the system state line:</p> <p style="text-align: center;">IMPL = CDD?</p> |

XMIT key

Console workstation display screen

For the second IMPL phase and for the IPL:

Press to use SYSRES. Proceed with interactive IPL step 1. (If the IMPL or IPL is unsuccessful, refer to step 2.a.)

Otherwise, for the second IMPL phase:

Key in the alternate device 3-digit did and then press XMIT.

System state line: Loading message is displayed. If the IMPL is unsuccessful, refer to step 2.a.

At the completion of the IMPL, the following message appears below the system state line:

IPL=CDD?

Proceed with step 2 of the manual IPL procedure.

INITIAL PROGRAM LOAD (IPL) PROCEDURE FOR MODELS 3-6

Upon completion of the initial microprogram load (IMPL), the initial program load (IPL) is performed from the console workstation to load and initialize the resident portion of OS/3 (the supervisor) in main storage. The IPL procedure contains the steps required to manually initiate the IPL, and select the load device, followed by the steps required to complete the IPL and interactively select how the supervisor is initialized. Usually you will use the automatic IMPL/IPL (initiated either by the system turn on or the manual IMPL using SYSRES) and the manual IPL steps are completed for you. Then you need only use the interactive IPL procedure to select supervisor options.

You use the manual IPL procedure whenever a STOPPED *HPR* message is displayed with an unrecoverable error, when a LOAD *ERROR STOP* message is displayed during a manually initiated IPL, or when you are directed to retry the IPL for an IPLnn message.

The console workstation must be operating in control mode to initiate an IPL. To set the console workstation to control mode if another operating mode is in effect, press and hold the FUNCTION key and then press the D/SYS CONT key. Proceed with step 1 of the manual IPL.

CAUTION

Make certain the system is in the idle condition (no jobs are active) before you perform the IPL procedure. Otherwise, the SYSRES volume table of contents (VTOC) may be left in a nonrecoverable state requiring that a new SYSRES volume be generated.

■ Manual IPL - Selecting the IPL Load Device (Models 3-6)

| Step | Control/Display | Action/Indication |
|------|-----------------|---|
| 1. | | (Initiating the IPL) |
| a. | FUNCTION key | When unrecoverable STOPPED *HRP*, LOAD *ERROR STOP*, or IPLnn retry message is displayed <i>during IPL</i> : Press and hold. |
| | IPL key | Press. Go to 1.c. |
| b. | FUNCTION key | When unrecoverable STOPPED *HPR* is displayed during job processing: Press and hold. |
| | RESTART key | Press. |

(continued)

■ Manual IPL - Selecting the IPL Load Device (Models 3-6) (continued)

| Step | Control/Display | Action/Indication | | | | | | | | | | | | | | | | | | | | |
|------------------------|------------------------------------|---|-----------------------|--|--|--|---------------|----------------|-------------------|-------------------|------------------------|---|---|---|-----------------|---|---|--------|-----------|---|---|--------|
| c. | Console workstation display screen | <p>The following message appears below the system state line (line 17):</p> <p style="text-align: center;">IPL = CDD?</p> <p>The 3-digit keyin of the IPL load did (device address) is specified as follows:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4" style="text-align: center;"><u>DEVICE ADDRESS</u></th> </tr> <tr> <th style="text-align: center;"><u>Device</u></th> <th style="text-align: center;"><u>Channel</u></th> <th style="text-align: center;"><u>Subchannel</u></th> <th style="text-align: center;"><u>Device No.</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">SYSRES Integrated Disk</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">All Other Disks</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1 - 7*</td> </tr> <tr> <td style="text-align: center;">Diskettes</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">0 - 3*</td> </tr> </tbody> </table> <p>*Represents the actual physical unit number assigned to the selected disk or diskette drive</p> | <u>DEVICE ADDRESS</u> | | | | <u>Device</u> | <u>Channel</u> | <u>Subchannel</u> | <u>Device No.</u> | SYSRES Integrated Disk | 1 | 0 | 0 | All Other Disks | 1 | 0 | 1 - 7* | Diskettes | 3 | 2 | 0 - 3* |
| <u>DEVICE ADDRESS</u> | | | | | | | | | | | | | | | | | | | | | | |
| <u>Device</u> | <u>Channel</u> | <u>Subchannel</u> | <u>Device No.</u> | | | | | | | | | | | | | | | | | | | |
| SYSRES Integrated Disk | 1 | 0 | 0 | | | | | | | | | | | | | | | | | | | |
| All Other Disks | 1 | 0 | 1 - 7* | | | | | | | | | | | | | | | | | | | |
| Diskettes | 3 | 2 | 0 - 3* | | | | | | | | | | | | | | | | | | | |

2.

- a. Console workstation display screen
XMIT key

(Identifying the IPL load device)

To use SYSRES (did 100) for the IPL load device:

Press. Proceed with interactive IPL step 1.

System state line: IPL messages are displayed. Observe for error message displayed if IPL is unsuccessful.

Whenever LOAD *ERROR STOP* is displayed, refer to the OS/3 system messages manual, identify the error code display, and take appropriate operator action. Retry the manual IPL. If the error condition persists, record the error code and refer to the System 80 operator maintenance guide for error definition and reporting procedures.

Whenever STOPPED *HPR* is displayed, refer to the OS/3 system messages manual to identify the HPR code (INSTR=hpr-instruction-code) and take appropriate operator action. For a nonrecoverable error, repeat the manual IPL. If the error condition persists, record the error code and refer to the System 80 operator maintenance guide.

(continued)

■ Manual IPL - Selecting the IPL Load Device (Models 3-6) (continued)

| Step | Control/Display | Action/Indication |
|------|---|--|
| b. | <p>XMIT key</p> <p>Console workstation display screen</p> | <p>Whenever *CHECK STOP* is displayed, press the POCLR button under the console workstation table on the right-hand side. POCLR clears main storage and then initiates the automatic IMPL/IPL sequence. Proceed with interactive IPL.</p> <p>To use an alternate load device (other than did 100) for the IPL:</p> <p>Press, after keying in the alternate 3-digit did. When the alternate device is a diskette, proceed with interactive IPL step 1. (If the IPL is unsuccessful, refer to the operator action described in step 2.a.)</p> <p>When the alternate load device is a disk, the following message is displayed with the IPL=CDD= message below the system state line:</p> <p style="text-align: center;">CYL=CCC?</p> |
| c. | XMIT key | Press to proceed with interactive IPL. |

■ Interactive IPL - Selecting Supervisor Initialization Options (Models 3-6)

| Step | Control/Display | Action/Indication |
|------|--|--|
| 1. | Console workstation display screen and INTENSITY control | <p>After the IPL load device is selected (either automatically or through manual IPL), the IPL01 screen is displayed above the system state line. Adjust the INTENSITY control for a comfortable viewing level (if required), then proceed with step 2.</p> <p>IPL01 KEY IN AND TRANSMIT SUPERVISOR NAME (DEFAULT=SY\$STD) OPTION S=STD, D=DEBUG, L=S/A LOAD, Q=QUICK (DEFAULT=S) LOAD DEVICE ADDRESS (DEFAULT=did) SY\$STD,S,did</p> <p>The default did is variable; the load did used for the IPL is displayed or the default did 100 (SYSRES integrated disk) is used.</p> |

(continued)

■ Interactive IPL - Selecting Supervisor Initialization Options (Models 3-6) (continued)

| Step | Control/Display | Action/Indication |
|------|-----------------|--|
| 2. | XMIT key | <p>Press if standard supervisor SY\$STD (nnnnn), normal supervisor load option S (o), and IPL load device address (the default conditions) are to be used.</p> <p>If an alternate supervisor, load option, or device address is required, enter the complete format.</p> <p>The cursor (␣) is positioned at the point where you enter your alternate selection according to the format:</p> <p style="text-align: center;">nnnnn.o.did</p> <p>(For an explanation of this parameter, consult the operations handbook, UP-8859 (current version))</p> <p>Once you've entered your selection , press the XMIT key.</p> |

Console workstation display screen

Below the system state line: Observe; IPLnn messages are displayed if the supervisor load is unsuccessful.

Whenever IPLnn error message is displayed, refer to the OS/3 system messages manual for the explanation and appropriate operator action. When directed, retry the manual IPL by setting the console workstation to control mode and proceeding with step 1. If the error condition persists, record the IPLnn error message and refer to the System 80 operator maintenance guide, for error definition and reporting procedures.

System state line: Observe; error message is displayed if IPL is unsuccessful.

Whenever STOPPED *HPR* is displayed, refer to the OS/3 system messages manual to identify the HPR code (INSTR=hpr-instruction-code) and take appropriate operator action. For a nonrecoverable error, set the console workstation to control mode and repeat the manual IPL beginning with step 1. If the error condition persists, record the error code and refer to the System 80 operator maintenance guide.

Whenever *CHECK STOP* is displayed, press the POCLR button under the console workstation table on the right-hand side. POCLR clears main storage and then initiates the automatic IMPL/IPL sequence. Proceed with step 1 of the interactive IPL.

(continued)

■ Interactive IPL - Selecting Supervisor Initialization Options (Models 3-6) (continued)

| Step | Control/Display | Action/Indication |
|------|------------------------------------|--|
| 3. | | <p>Setting the console workstation to console mode and selecting supervisor options.</p> |
| a. | FUNCTION key | Press and hold. |
| b. | C/CSL key | Press. |
| c. | Console workstation display screen | <p>Once you enter the date, the cursor automatically positions itself at the next statement. For example, after you complete the date, the cursor moves to the TIME field. <i>DON'T press XMIT until you've completed all the statements you'll be responding to.</i> You can bypass any statement by pressing the RETURN key. By doing so, you accept the default for the statement(s) you skipped over. The UNLOCK/MSG WAIT key need not be pressed before initiating any keyin during this procedure.</p> |

CAUTION

Be sure to respond to all statements before pressing the XMIT key. Otherwise, the questions and answers are lost and the entire procedure must be restarted if the procedure was not performed correctly.

OS/3 VERSION nn*

DATE? ({ YY/MM/DD }) ___/___/___
 ({ MM/DD/YY })
 ({ DD/MM/YY })

TIME? (HH/MM/SS) ___:___:___

RUN LIBS DEVICE ADDR?

(DEFAULT=system-generation-option)___

RECOVER FILES?

JOB QUEUE (N, Y, H DEFAULT=system-generation-option)

ERROR LOG (N, Y DEFAULT=Y)

SPOOL FILES (N, A, C, L, H)

DEFAULT=system-generation-option)

SPOOLING DVC ADDR?/DEFAULT= ({ blank }) ___
 ({ vsn })
 ({ SYSRES })

MODIFY SUPERVISOR? (N, Y DEFAULT=N)

(continued)

| Step | Control/Display | Action/Indication |
|------|-----------------|---|
| 4. | XMIT key | <p>Press after you have responded to all the information requested in the preceding message statements.</p> <p>If Y was selected for the MODIFY SUPERVISOR message in step 3, enter the required modifications by responding to system output messages. Refer to the operations handbook for details.</p> <p>When the selected supervisor has been loaded and initialized, the system is ready to process user jobs when the following header and message are displayed:</p> <pre> (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) System 80 OS/3 version-no supnam yy/mm/dd hh:mm:ss </pre> <p>If Y or H was selected for the JOB QUEUE message in step 3, the following message is displayed:</p> <pre> JOB QUEUE RECOVERED - n JOBS QUEUED </pre> |

If N was selected for the ERROR LOG message in step 3, the following message is displayed.

ERROR LOG NOT RECOVERED

If you configured your supervisor with the transient work area during SYSGEN, your system should display the message TRANSIENT WORK AREA IS INITIALIZED as soon as the IPL procedure completes. If it doesn't, then initiate the transient work area feature yourself at this time. To do this, initiate the TW command.

During the IPL operation, the system automatically sets all devices or

subsystems, except workstations, not online (not turned on) to not available. The devices or subsystems are not available for system use until you identify them as available via the SET IO command or, for a disk drive, until you mount a disk pack and initialize the drive. You can review the availability status for devices by using the MIX command. Jobs requiring more than the available devices are terminated with an R277 message.

INITIAL MICROPROGRAM LOAD (IMPL) PROCEDURE FOR MODELS 8/10/20

The IMPL procedure loads your system's control storage. It is the first step in initializing your system. The IMPL procedure is performed automatically when you apply power to your system. You

must perform it manually in other cases such as when nonrecoverable errors occur. The IMPL procedure must also be performed manually when an error occurs during the IPL procedure.

■ **Simplified Manual Initial Microprogram (IMPL) Procedure for Models 8/10/20**

| Step | Control/Device | Operator Action | Display | System Condition |
|------|-------------------|---------------------|--------------|------------------|
| 1 | ESC key M key | Press. Press. | Manual frame | |
| 2 | L key XMIT key | Press. Press. | | Reset |
| 3 | | Enter IMPL option.* | | |
| 4 | XMIT key | Press. | Manual frame | |

*IMPL options - T0: Reloads all the microcode (Manual frame shows: ALL)
 T1: Reloads only CPU's microcode (Manual frame shows: BPU)
 T2: Reloads only I/O processor's microcode (Manual frame shows: DMUX)

INITIAL PROGRAM LOAD (IPL) PROCEDURE FOR MODELS 8/10/20

The IPL procedure loads and initializes SUPERVISOR, the resident portion of OS/3, in main storage. During initialization, the first IPL phase, you select your load device. In the second, or interactive phase, you select your own supervisor and load options, and you indicate how the supervisor is initialized.

The automatic feature of the IPL switch is effective only when the system is turned on. You must start and complete the IPL manually in all other cases.

Example: The following error messages appear:

- STOPPED *HPR* (unrecoverable error)
- CHECK STOP (load device other than the one in the configuration frame is needed)

A simplified system initialization procedure follows:

■ System Initialization Procedure for Models 8/10/20

| Step | Control/Device | Operator Action | Display | System Condition |
|------|-------------------|---|--|------------------------------|
| 1 | ESC key M key | Make sure system is idle. Press. Press. | Configuration screen Manual frame | IMPL procedure is completed. |
| 2 | L key XMIT key | Press Press. | Manual frame | Reset |

■ System Initialization Procedure for Models 8/10/20 (continued)

| Step | Control/Device | Operator Action | Display | System Condition |
|------|---|---|--|------------------|
| 3 | N key Device you're loading from XMIT key | Press. Enter its id. Press. | IPL01 screen (shows SUPERVISOR name, load option, device address you specified) | |
| 4 | XMIT key | Press (to accept values in IPL01 screen). | OS/3 VERSION XX.XX.XX. SUPNAM SUPERVISOR INITIALIZATION screen | |
| 5 | XMIT key | Press (to accept all defaults in SUPERVISOR INITIALIZATION screen). | CM01 ENTER THE NUMBER OF 1024 BYTE BLOCKS OF MEMORY FOR DISK CACHE OR NONE, VALID VALUES IN THE RANGE 16 1024? (Appears if disk cache feature is configured in your system.) | |

| | | | | |
|---|--|--|--|-----------------------------|
| 6 | | Enter NONE (to disable disk cache operation), or Enter 4-digit number (from 0016-1024 to assign the number of 1024 byte blocks). | | |
| 7 | | Check screen. | TRANSIENT WORK AREA IS INITIALIZED (Appears if you configured your SUPERVISOR with transient work area feature.) | IPL procedure is completed. |
| 8 | | Enter TW command. (if last screen didn't appear.) | TRANSIENT WORK AREA IS INITIALIZED | IPL procedure is completed. |
| 9 | | | SYSTEM 80 OS/3 VERSION - NO SUPNAM (System date format) HH:MM:SS | Ready to process your jobs. |

Manual Frame

ENTER

PROG LOAD(0-BFF)

N NORMAL

C CLEAR

R OPER RECOVERY(0-BFF)

ADR STOP(0-FFFFFFF)

M NORMAL

I STOP IA

A STOP ANY

T TRACE

W SENSE SW(0000-1111)

-0000-

BPU STATU =S

INS=41D0C8C94820

HPR=99080801 00000000

PSW=00000000 3003A2D8

CONTROL

U RUN

Q STOP

RESET

L SYSTEM

B BPU

COMPUTE CTRL

P NORMAL

S STEP

CHECK CTRL

H NORMAL

K STOP

V STORE STATUS

RLF=00000000

■ Configuration (Display) Frame

```

ENTER
=CONFIGURATION(A00)=
***PROCESSOR CONFIGURATION***

E FRAME CHANGE      BPU      ONLI MICRO REV=A00

*SPECIAL MODE***
                    IOP0   IOP1   IOP2   IOP2
                    LMUX   GSEL   -      -
CHC=0
                    -      -      -      -
CHC=1

AUTO IPL            OFF
AUTO BPU RECOV     OFF
REMOTE CNSL        OFF
WATCH DOG TMR      ON
                    MMU
                    ON    ON    ON    ON
                    BLK0   BLK1   BLK2   BLK3

AUTO IPL ADRS -0380

                    MEMORY SIZE = 080000

**CNSL LAMP AND SWITCH**
                    SYSTEM CNSL ON
SEQ1 OFF  TM  OFF  IPL NML  SLAVE CNSL OFF  FD#0=A02,OP0
SEQ2 OFF  TEST ON  UNLOCK  REMOTE CNSL OFF  FD#1=A02,MD0
SEQ3 OFF  BAT  ON

```

■ OS/3 Supervisor Initialization Frame

OS/3 VERSION XX.XX.XX SUPNAME SUPERVISOR INITIALIZATION

A) DATE: SYSGEN date format TIME: HH:MM:SS

B) RUN LIBS DVC ADDR: XXX (SYSRES)

C) FILE RECOVERY

JOB QUEUE (N,Y,H) DEFAULT=N

ERROR LOG (N,Y) DEFAULT=Y

SPOOL FILES (N,A,C,L,H) DEFAULT=N

D) MODIFY SUPERVISOR? DEFAULT=N

E) SPOOLING DVC ADDR: XXX (SYSRES)

JOB INITIALIZATION COMMANDS

The following commands allow you to file a job control stream for future use or process the job control stream immediately.

■ Filing Job Control Streams (FILE)

```
FILE [ (did) ] Δ
      [ ([did],label) ]
      [ (RDR,label) ]
```

```
[ ( :alt-filename
  ( :alt-filename, (RES
                    RUN
                    vsn)
  ( :alt-filename, [RES], write-password )
                    [RUN]
                    vsn) ) ]
```

Files jobs and JPROCs (read from an input device) into permanent job control stream library file (\$Y\$JCS) or an alternate library file. A disk or format label diskette can be used for alternate file. Diskette input must be data set label mode.

■ Running Job Control Streams (RUN/RV)

$$\left\{ \begin{array}{l} \text{RUN} \left[\left\{ \begin{array}{l} (\text{did}) \\ \left\{ \begin{array}{l} ([\text{did}], \text{label}) \\ (\text{RDR}, \text{label}) \end{array} \right\} \end{array} \right\} \right] \Delta \left[\left\{ \begin{array}{l} \text{mod-name}[(\text{new-name})] \\ (\text{new-name}) \end{array} \right\} \right] \\ \text{RV} \Delta \text{mod-name}[(\text{new-name})] \end{array} \right\}$$

$$\left[\begin{array}{l} : \text{alt-filename} \\ : (\text{alt-filename}, \left\{ \begin{array}{l} \text{RES} \\ \text{RUN} \\ \text{vsn} \end{array} \right\}) \\ : (\text{alt-filename}, \left[\begin{array}{l} \text{RES} \\ \text{RUN} \\ \text{vsn} \end{array} \right], \text{read-password}) \end{array} \right]$$

Reads job control stream from either an input device, $\$Y\JCS , or alternate job control library file and stores it in scheduling priority queue for execution. The RUN command initiates reading of job control stream that requires use of input device (card reader, data set label diskette, or spool file). Input device must be available when RUN is issued, regardless of whether job control stream being read needs one. Otherwise, the command is not accepted.

RV command initiates reading of a prefled job control stream that does not contain a // CR statement, indicating input to be read and inserted into stream. Therefore, you must include a module name (usually the same as the job name) when you enter RV.

For data set label diskette and spool file input, the last // FIN job control statement is not necessary. // FIN statements that separate groups of card images read with // CR statements are still necessary. Jobs input from data set label diskette to spool file must be single volume. Alternate library file may be on disk or format label diskette. New name cannot contain blanks.

$\left. \begin{array}{l} \text{PRE} \\ \text{HIGH} \\ \text{LOW} \\ \text{NOR} \end{array} \right\} [\text{time}+n] [, \text{key}-1=\text{val}-1, \dots, \text{key}-n=\text{val}-n]$

Remember, when a system card reader is placed online, the RUN command to read a job control stream from cards in the hopper is initiated when RUN switch on card reader is pressed or when the RUN command is entered at the console. Use one method or the other but not both. Otherwise, an error condition is created.

■ Running Saved Job Control Streams (SI/SC)

$$\left\{ \begin{array}{l} \text{SI} \left[\begin{array}{l} (\text{did}) \\ \left\{ \begin{array}{l} [(\text{did}], \text{label}) \\ (\text{RDR}, \text{label}) \end{array} \right\} \end{array} \right] \Delta \text{module-name}[(\text{new-name})] \\ \text{SC} \end{array} \right\}$$

$$\left[\begin{array}{l} : \text{alt-filename} \\ : (\text{alt-filename}, \left\{ \begin{array}{l} \text{RES} \\ \text{RUN} \\ \text{vsn} \end{array} \right\}) \\ : (\text{alt-filename}, \left\{ \begin{array}{l} \text{RES} \\ \text{RUN} \\ \text{vsn} \end{array} \right\}, \text{read-password}) \end{array} \right]$$

$$\left[\begin{array}{l} \text{PRE} \\ \text{HIGH} \\ \text{LOW} \\ \text{NOR} \end{array} \right] [\text{time+n}]$$

Initiates running of expanded job control stream from \$\$\$SAVE MIRAM library file or an alternate library file, then stores it in scheduling priority queue for execution. SI command initiates reading of job control stream that requires replacement of embedded data from input device (card reader, data set label diskette, or spool file). When issued, SI is accepted only if input device is available.

SC command initiates reading of job control stream that does not require use of input device to replace embedded data.

For data set label diskette and spool file input, last // FIN job control statement is not necessary. New name cannot contain blanks.

JOB SCHEDULING COMMANDS

The following commands allow you to control jobs waiting to be scheduled for execution.

■ Deferring Jobs Scheduled for Execution (HOLD)

```

HOLD Δ JBQ [ PRE ] [ , [ OLD ] [ , [ DDP ] ] ] ] ]
          [ HIGH ] [ NEW ] [ LOCAL ]
          [ NOR ] [ ] [ RBP ]
          [ LOW ] [ ] [ MKSTN ]
          [ ALL ] [ , UID=user-id ] [ , HOST=host-id ]
jobname
  
```

Defers scheduling of all jobs in all queues or in a specific queue, a specific job within a queue, a specific workstation user's jobs in all queues or a specific queue, or a specific host's jobs in all queues or a specific queue. Additional parameters permit the operator to defer either currently residing (old) or newly entered jobs and to defer locally, remotely, or workstation-entered jobs. These additional parameters (parameters 3 and 4) can be interchanged. Scheduling remains deferred until jobs are reactivated via BEGIN command.

■ Scheduling Deferred Jobs (BEGIN)

```

BEGIN Δ ( J B Q , { PRE
                { HIGH
                { NOR
                { LOW
                {   } ) ( [ {   } ] [ {   } ] ) )
                [ , UID=user - id ] [ , HOST=host - id ] )
        jobname
  
```

Reinstitutes scheduling for execution of a currently deferred job within a queue, all jobs in all queues or in a specific queue, a specific workstation user's jobs in all queues or a specific queue, or a specific host's jobs in all queues or a specific queue. Additional parameters permit the operator to reinstitute scheduling of either currently residing (old) or newly entered jobs and to reinstitute DDP, local, remote, or workstation-entered jobs. These additional parameters (parameters 3 and 4) can be interchanged. Jobs remain deferred by HOLD command until specifically reactivated via BEGIN command.

■ Deleting Jobs from Scheduling Priority Queues (DELETE)

DELETEA { JBQ, { PRE } { { DDP } LOCAL } REP } WKSTN } [, LOG]
 { HIGH }
 { NOR }
 { LOW }
 { ALL } { [, UID=user-id] [, HOST=host-id] }
 jobname

DE JO=VTOC

Deletes specific job from a scheduling queue, all jobs in all queues or in a specific queue, a specific workstation user's jobs in all queues or a specific queue, or a specific host's jobs in all queues or a specific queue. DDP, local, remote, or workstation-entered jobs may also be specified. Only jobs residing in a scheduling priority queue can be deleted. Specify LOG to print job log for all deleted jobs.

■ **Displaying Jobs in Scheduling Priority Queues (DISPLAY)**

```

DISPLAYΔJBQ { (PRE) } { (DDP) }
              { (HIGH) } { (LOCAL) }
              { (NOR) } { (RBP) }
              { (LOW) } { (WKSTN) }
              { (ALL) } { [,UID=user-id][,HOST=host-id] }
    
```

Displays contents of any or all job scheduling queues on console screen. The display format depends on the parameters specified. All jobs requested are displayed; those in deferred status (via HOLD) are displayed with parenthesis around jobname. Before a queue is displayed, system output message is displayed specifying that request was for LOCAL, RBP, DDP, WKSTN, or all jobs (QUEUED); the PRE, HIGH, or NOR queue display to follow; and whether or not a HOLD LOCAL (HL), HOLD REMOTE (HR), HOLD WORKSTATION (HW), or HOLD DDP (HD) command is currently in effect for that queue. If no jobs are found in queue requested, system output message stating that condition is displayed.

■ Changing Job Scheduling Priority (CHANGE)

| | |
|--|---|
| <u>C</u> HANGEΔjobname, $\left. \begin{array}{l} \underline{P}RE \\ \underline{H}IGH \\ \underline{N}OR \\ \underline{L}OW \end{array} \right\}$ | Changes scheduling priority of a specific job |
|--|---|

JOB EXECUTION COMMANDS

The following commands allow you to control the processing of a job under execution.

■ Suspending Jobs in Progress (PAUSE)

| | |
|-----------------------|--|
| <u>P</u> AUSEΔjobname | Suspends processing of a job. This command may be issued at any time, and job processing suspends immediately. Permits operator to mount new tape or disk volume, replace paper in printer, or add cards to card reader. Suspended job is reactivated by GO command. |
|-----------------------|--|

■ Activating Suspended Jobs (GO)

GOΔjobname

Reactivates a job suspended by PAUSE command or by job control operations. Also required as response to a message from the system preceded by an asterisk (*).

Jobs started at a workstation and paused at the system console can be restarted with a GO command at the system console only.

■ Changing Job Switching Priority (SWITCH)

SWITCHΔjobname, {+number-of-priority levels} [, ALL]
 {-number-of-priority levels}

Changes switching priority level for job under execution. The switching priority level is changed either for the currently executing job step or for the current job step and all subsequent job steps. If priority is changed for current step only, subsequent job steps execute under priority established (via // EXEC job control statement or default to lowest level), unless changed by another SWITCH command. A job assigned higher level has priority over lower level jobs for control of central processor. Levels are from 1 to n, where 1 is highest priority and n is lowest. (Total number of levels in your system is determined at SYSGEN.)

JOB TERMINATION COMMANDS

The following commands allow you to terminate the processing of a job, or a symbiont or transient.

- **Cancelling Jobs in Progress (CANCEL)**

$$\underline{\text{CANCEL}} \Delta \left\{ \begin{array}{l} \text{jobname } \left[\begin{array}{l} \{ D \} \\ \{ N \} \end{array} \right] \\ \text{symbiont, S[, N] \end{array} \right\}$$

Immediately halts all processing of a job or symbiont. May be issued at any time during processing of job and results in immediate termination of job step being executed at the time command is given. All subsequent job steps scheduled for job are terminated also. Job run library file for job is deleted. Specify D for dump, N for no dump; symbiont is a 2-character ID used to initiate the symbiont.

- **Stopping Execution of a Dump (END)**

$$\underline{\text{END}} \Delta \text{DUMP, jobname}$$

Terminates execution of a cancel or end of job dump for a particular job

■ Terminating Jobs (STOP)

STOPΔjobname

Terminates a specific job at end of currently executing job step; provides for orderly information of job

SELECTED-OCCASION OPERATOR COMMANDS

The following commands allow you to perform certain functions during the course of processing a job.

■ Displaying Portions of Main Storage (DISPLAY)

DISPLAYΔaddress [, { jobnumber }]

Displays selected areas of main storage on console screen. The addr is a hexadecimal number used for a specific (absolute) main storage address or a job-relative main storage address. The job number identifies a job-relative address for the job; otherwise, an absolute address is displayed.

■ Displaying System Information (MIX)

```

MIXΔ { DA [ , { jobname
      { symbiont-name }
      VI [ , { did
      { c/ca/caa }
      SQ
      SI
      DS [ , did ]
      SC
      FR
      MM
      EN
      EL
      HF (models 10/20 only)
  }
  
```

Displays tables of different aspects of system information.

■ Reconstructing Console Display (REBUILD)

REBUILD

Clears all information from console, then restores job number header lines and rewrites all outstanding question and action request output messages on the screen. All displays other than unanswered questions and action requests are lost.

■ **Setting Simulated Day Clock (SET CLOCK)**

| | |
|--|--|
| <p><u>SET</u><u>C</u><u>LOCK</u>, hh:mm:ss</p> | <p>Resets time of day in system-simulated day clock; for example, changes from 24:00:00 to 00:00:00 at midnight.</p> |
|--|--|

■ **Setting Date Field (SET DATE)**

| | |
|--|--|
| <p><u>SET</u><u>A</u><u>DATE</u>, yy/mm/dd[,yyddd]</p> | <p>Resets calendar date in system information block date field and resets job date for every job currently in main storage (except jobs containing // SET DATE job control statement).</p> |
|--|--|

■ Setting Error Log (SET ELOG)

```

SETΔELOG, { ON } , { ALL }
           { OFF}  { COMM }
                    { MCHK }
                    { IO   }
                    { TERM }
                    { CLOG }
                    { RSTK }
                    { MSE  }
                    { did  }
           factor, { RSTK }
                   { MSE  }
  
```

Consult your Sperry customer engineer before using SET ELOG command.

Turns on or off communications, I/O device, machine check, and I/O termination record error logging into $\$Y\$ELOG$ file on SYSRES. IPL procedure automatically turns on error logging and all error logging functions; previously entered changes to all-on condition are lost when system reloaded. SET ELOG is also used to specify a 1- to 3-character decimal value used to redefine main storage error (MSE) or retry stack error (RSTK) limits. When limit is exceeded, error is repressed. Factor value entered is multiplied by 32 to redefine millisecond time factor (F) in error limit formula $F*S:E$, where S is size or number of MSE, or RSTK errors and E is elapsed time since last interrupt of same type.

■ **Running ONUERL (RV/RUN ONUERL)**

When the LOG FILE IS NEARLY FULL message appears on the console screen, run the system-supplied ONUERL job using either the preset options or overriding them with other options. To override preset options, respond to program messages at the console.

Remember that the disk containing the \$\$\$RUN file and the SYSRES disk must be similar device types (both 8414s, for example).

{ RVΔONUERL }
{ RVΔONELAN }

Executes ONUERL program with preset parameters; or executes ONUERL with ONELAN error log analysis graphs.

■ Setting Physical Unit Blocks (SET IO)

$\underline{\text{SET}}\Delta\text{IO}, \text{did}, \left(\begin{array}{l} \text{AV} \\ \underline{\text{CONSOLE}} \\ \underline{\text{DOWN}} \\ \text{EON} \\ \text{EOF} \\ \underline{\text{FEA}}, \text{type-code} \\ \underline{\text{HOME}} \\ \text{NA} \\ \underline{\text{NOSHARE}} \\ \underline{\text{RDR}} \\ \underline{\text{SHARE}} \\ \underline{\text{TYPE}}, \text{type-code} \\ \text{UP} \end{array} \right) \left[\begin{array}{l} \text{,O} \\ \text{H} \end{array} \right]$

Sets specific bits in physical unit blocks, which define operational characteristics and assignments of I/O devices. There is one physical unit block comprised of a 3- or 4-character did for each physical device in system. All devices or subsystems must be set DOWN before attempting operations such as forms loading changing ribbon, etc. Required if processor is to continue operation with other peripheral devices while subject device is undergoing isolated operations. Before a procedure is performed or when power is turned off for the device, enter SET IO,did,DOWN. After offline procedure is completed or after turning on power independently of processor, enter SET IO,did,UP.

■ Reading Mounted Volume Serial Number (AVR)

AVRΔdid[,did][,did]

Reads volume serial number of premounted prepped disk pack, diskette, or magnetic tape volume and stores it in device physical unit block. (Required when disk pack or magnetic tape is mounted on unit that does not have attention interrupt capability, such as UNISERVO VI-C Magnetic Tape Subsystems.)

■ Displaying Job Status (DISPLAY JS)

DISPLAYΔ { JS[,jobname]
 { SY[,symbiont-name] } }

Displays on the console screen status of jobs in system or tasks attached to symbiont. Command allows you to display status of specific job or all jobs in main storage, specific job in scheduling priority queue, or a job being processed by the RUN or OCL processor. Includes job name and CPU time used, reason why job is not executing or job's scheduling priority queue, and status of subtasks attached to a job.

■ Dumping the Contents of Main Storage (SYSDUMP)

| | |
|----------------|--|
| <u>SYSDUMP</u> | <p>Dumps entire contents of main storage to \$Y\$DUMP file on SYSRES. Use SYSDUMP whenever system dump is required without supervisor reloading (no re-IPL required). After main storage dumps, the SYSDMPnn job is automatically initiated to print the SYSDUMP file (where nn is a unique number assigned by the system). The SYSDUMP file locks until SYSDMPnn completes.</p> <p>To inhibit dump printing, enter NONE when SYSDMPnn message requests type of dump to print. If you delete SYSDMPnn from job queue or cancel it before SD01 output message, enter the SET SY command to unlock \$Y\$DUMP file.</p> |
|----------------|--|

■ Setting the \$Y\$DUMP File to Unlocked Condition (SET SY)

| | |
|---|---|
| <u>SET</u> <u>ASY</u> , <u>L</u> <u>OFF</u> | Unlocks the \$Y\$DUMP file after an SY command or system error locks it |
|---|---|

■ **Setting Main Storage Condition (SET MEM)**

```
SETΔMEM, {DOWN}, address [ , {no-of-blocks} ]  
          {UP}
```

Sets one or more main storage blocks up or down. Normally, main storage is in up (usable) condition. System automatically sets unusable block down and displays listing of all blocks currently set down on console screen. Initialize the error log (at IPL) if adding main storage or taking system-resident pack from smaller system to larger system or the additional storage will be unusable. Normally, SET MEM command is used to set a block up after your customer engineer corrects condition that made it unusable.

■ **Setting the Unattended Console Feature (SET UNCON)**

```
SETΔUNCON, {ON }  
           {OFF }  
           {time }
```

Sets the unattended console feature, which is a SYSGEN option. To remove the previously specified (at SYSGEN) option, specify OFF. To reactivate the previously removed option, specify ON. Specify a specific time (in minutes) to change the unattended console auto-answer time.

■ Terminating System Activity (SHUTDOWN)

SHUTDOWNΔSYSTEMΔ[DDP]

Terminates system activity in an orderly manner. No new files, jobs, or functions are started. Specify DDP to terminate distributed data processing only (when its activity ceases).

■ Changing Resource Management Memory and Job Initiation Limits (LIMITS)

LIMITSΔ {
 SYMBMEM= { NLMT }
 { 5-100 }
 [, INTMEM= { NLMT }
 { 5-100 }
 [, JOBMEM= { NLMT }
 { 0-100 }
 [, MAXJOBS=1-n]
 [, MAXWSJOBS=0-n]

Changes the resource management limits for memory usage and job initiation that were set at SYSGEN.

OS/3 resource management provides a means to balance batch job turnaround time and workstation response time. This is done by controlling main memory allocation and the number and types of jobs initiated. The balance among these factors was set at SYSGEN and may be adjusted to meet changing requirements. The factors that resource management may control are the percentage of main memory to be used for symbionts, interactive and batch jobs; and the maximum number of total jobs, jobs initiated from workstations, jobs initiated from any single workstation,

$$\left. \begin{array}{l} [,MAX_SWS_JOBS=0-n] \\ [,MAX_INT_USERS=0-255] \\ [,MAX_ENTERS=0-255] \end{array} \right\}$$

[,MAX_RUNSYMBS=1-10]

logged-on interactive users, batch tasks initiated with the ENTER command, and the maximum number of concurrently executing run symbionts. The LIMITS command may be issued any time during the session.

■ Verifying and Correcting the VTOC (VV)

$$VV \left[did \left(\begin{array}{l} END \\ FIX \\ ECnn \\ COPY \\ ALT \end{array} \right) [,ALT] \right]$$

Performs a thorough analysis of a VTOC, looking for any inconsistencies among the labels in the VTOC. See the operations handbook, UP-8859 (current version).

The value did is the device address of the VTOC to verify, correct, or copy.

END terminates the verify routine upon completion.

FIX calls the VTOC correction routine.

ECnn automatically takes a dump when error condition occurs.

COPY copies VTOC to alternate VTOC.

ALT directs all commands to alternate VTOC.

■ **Verifying the VTOC during AVR (SET VV)**

SET VV { ON }
 { OFF }

ON performs automatic VTOC verification at AVR time.

OFF does not perform automatic VTOC verification at AVR time. This overrides the VVAVR SYSGEN specification, described in the system installation user guide, UP-8839 (current version).



GENERAL SPOOLING COMMANDS

Used to display and manipulate subfiles in the spool file; also used to change the operating mode of the spooling function.

The formats for these commands may include:

■ Spool File Directories

directory

Identifies the specific spool file directory acted upon. When ALL is entered in place of a directory, all directories accessible to the command are acted upon. Allowable entries are:

DDPPR

Distributed data processing output is to printer.

DDPPU

Distributed data processing output is to card punch.

LOG

Job, workstation, and console log input and output data is in designated job log file.

PPRINT

Subfile output is to the designated printer.

PPUNCH

Subfile output is to the designated card punch or data set label diskette.

RBPIN

Remote batch processing input is from card reader.

RBPPR

Remote batch processing output is to printer.

(continued)

RBPPU

Remote batch processing output is to card punch.

RDR

Subfile input is from designated card reader, tape, or data set label diskette.

■ **Spool File Command Modifiers**

modifier-1, ..., modifier-n

Optionally used to further identify, within specified directory, the subfiles being referenced. Any number of modifiers may be specified. Allowable modifiers are:

ACCT={acctno}
*
1-4 characters

BNumb=n
Binary job number, 1-5 characters
(BE SPL, DE SPL, HO SPL,
PR BX, RP BX only)

CART={cartridge-id}
*

Print cartridge identification, 1-8 characters

DDPID=host-id

1-4 characters (output writer BX function only).

DEV={770}
{776}
{789}
*

Any device of the type designated that is available.

FILE= { filename }
*
1-8 characters

FORM= { formname }
*
1-8 characters

ID=remote-id
1-6 characters (output writer BX
function only)

JOB= { jobname }
*
1-8 characters

LBL=label name
1-8 characters for data set label
diskette; 1-17 characters for card
reader

STEP=stepno
3 characters (left-justified with zeros)

VOL=volno
1-6 characters (diskette only)

NOTES:

1. Command keyins cannot exceed 28 characters in length, including commas.
2. Enter * and a modifier type to group spool file contents for processing on a first-in, first-out basis. Provides a complete spool file listing, grouped according to the modifier specified.

■ Removing Active Files from Hold Condition (BEGIN ACT)

```
BEGINΔACT [ ( ALL
             LOG
             PRINT
             PUNCH ) ]
```

Removes hold status from files currently being created in directory named.

LOG does not affect remote batch or distributed data processing job logs.

Command is ignored if modifiers entered.

■ Removing Closed Files from Hold Condition (BEGIN SPL)

```
BEGINΔSPL [ ( ALL
              DDPFR
              DDPFU
              LOG
              PRINT
              PUNCH
              RBPPR
              RBPFU
              RDR ) ] [,modifier-1,...,modifier-n]
```

Removes hold status from closed files in the directory named, according to modifiers specified. Also loads output writer automatically to process files in burst mode. Loads output writer for central printer as well as auxiliary printer.

The file is printed on an auxiliary printer only if the BE SPL command comes from the workstation that initiates the job and if that workstation has an auxiliary printer attached.

If the BE SPL command is entered from the console, the RP output writer (for an auxiliary printer) is not called.

ALL cannot be specified with OUT= DID.

$$[, \text{OUT} = \begin{cases} \text{DID} \\ \text{NO} \end{cases}]$$

$$\text{BEGINASPL } [, \begin{cases} \text{LOG} \\ \text{PRINT} \\ \text{PUNCH} \end{cases}] [, \text{modifier-1}, \dots, \\ \text{modifier-n}], \text{OUT} = \text{did}$$

LOG does not affect remote job logs.

If RDR is entered without LBL=label modifier, all reader spooled files are removed from hold condition.

If no directory or ALL is entered only LOG, PRINT, PUNCH, and RDR are affected.

OUT=NO specifies that output writer should not be called as a result of releasing the spool subfiles from a held state. Enter maximum of 60 characters.

Removes hold status from closed files in directory named, according to modifiers specified. Also loads output writer automatically to process files in burst mode. The output is printed on the device specified by OUT=did.

The file is printed on an auxiliary printer only if the BE SPL command comes from the workstation that initiates the job and if that workstation has an auxiliary printer attached.

If the BE SPL command is entered from the console, the RP output writer (for an auxiliary printer) is not called.

LOG does not affect remote batch or distributed data processing job logs.

■ Removing Active and Closed Files from Hold Condition (BEGIN SPQ)

```

BEGINΔSPQ { ALL
            { LOG
              PRINT
              PUNCH }
  
```

Combines BE ACT and BE SPL commands. Removes hold status from both currently active and closed files in directory named. Also loads output writer automatically to process files in burst mode.

LOG does not affect remote batch or distributed data processing job logs.

Command is ignored if modifiers entered.

■ Breakpointing an Active File (BRKPT)

```

BRKPTΔ { P } , { PRINT } , JOB=jobname [, modifier-1, ...
        { I }   { PUNCH }
        modifier-n] [, HOLD]
  
```

Breakpoints printer or punch file currently being created by job name and modifiers specified. P Breakpoints file at end of the page; I breakpoints file immediately. Diskette files cannot be breakpointed.

HOLD holds the file after breakpoint.

This command closes files and makes them available to output writer. New file is created that contains remainder of file. You should use this command whenever warning messages indicating spool file is nearly depleted appear on console screen.

After breakpoint is taken, you should load output writer in burst mode to process the file.

If a print file is breakpointed with the HOLD option, all subsequent subfiles for the breakpointed file are also held.

■ **Breakpointing the Console Log File (BRKPT CNSLG)**

```
BRKPTΔCNSLG [ ,OUT={ TAPE
                  { DISK
                  { DISKETTE } } ] [ ,HOLD ]
```

Breakpoints console log file and prints it or redirects it to specified output device. New console log file starts with first message or command after breakpoint command.

HOLD holds the file after breakpoint.

After BRKPT is issued for console log file, output writer is loaded automatically. Output writer recognizes the console log file and prints it.

If HOLD is specified for a console log file, the breakpointed log file is held but the newly opened log subfile is not held unless HOLD is specified by subsequent commands.

Console log record collection must be set to ON with option to permit printing (specified via SET SPL, CN command in effect).

■ Breakpointing the Workstation Log File (BRKPT LOG)

```
BRKPTΔLOG [ ,OUT={ TAPE
                  DISK
                  DISKETTE } ] [ ,HOLD ]
```

Breakpoints workstation log file and prints it or redirects it to specified output device. New workstation log file starts with first message or command after breakpoint command.

HOLD holds the file after breakpoint.

If HOLD is specified for a workstation log file, the breakpointed log file is held but the newly opened log subfile is not held unless HOLD is specified by subsequent commands.

■ Changing the Device Type and/or Number of Copies (CHANGE SPL)

```
CHANGEΔSPL, { ALL
              LOG
              PRINT } [ ,modifier-1 ... modifier-n ]
```

Changes device type and (or) number of copies of closed spool subfiles, either queued or held, but not of active subfiles. Up to 60-character keyins are permitted. Change parameters are required; there are no defaults.

ALL includes LOG and PRINT directories only.


```
[,COPIES=nnn][,DVC={770  
776  
PPC  
ANY  
CLASS 1  
CLASS 2  
CLASS 3  
AUX, ID={*  
user-id}]
```

If no modifiers are included, the search for subfiles is based on the user who issued the command.

When AUX is specified, user-id must be given.



■ Deleting Closed Files (DELETE SPL)

DELETEΔSPL, (ALL) [,modifier-1,....,

DDPPR

DDPPU

LOG

PPRINT

PPUNCH

RBPPR

RBPPU

RDR

modifier-n]

Deletes closed files in directory named according to modifiers specified. Includes queued files (waiting for output writer processing) and files in hold condition. Active files and files in progress (being processed) cannot be deleted.

LOG does not affect remote batch or distributed data processing job logs.

If RDR is entered without LBL=label modifier, all reader spooled files are deleted.

If ALL is entered, LOG, PRINT, PUNCH, and RDR are affected.

■ Displaying the Status of Active Files (DISPLAY ACT)

DISPLAYΔACT [(ALL)] [,modifier-1,....,
DDPPR
DDPPU
PRINT
PUNCH
RBPPR
RBPPU]
modifier-n]

Displays the number of files currently being created in directory named, according to modifiers specified.

Solicited messages are used to direct and terminate display. Includes option to display further information about some or all of files specified in detailed or abbreviated format.

■ **Displaying the Status of Completed Files (DISPLAY SPL)**

| | |
|---|---|
| <p><u>DIS</u>PLAYΔSPL [<u>ALL</u>] [modifier-1,..., DDPPR DDPPU LOG <u>PRINT</u> <u>PUNCH</u> RBPIN RBPPR RBPPU RDR] modifier-n]</p> | <p>Displays the number of completed files (queued for processing, on hold, and in progress) in directory named, according to modifiers specified.</p> <p>Solicited messages are used to direct and terminate display. Includes option to display further information about some or all of files specified in detailed or abbreviated format.</p> <p>LOG does not affect remote batch or distributed data processing job logs.</p> |
|---|---|

■ **Displaying the Console Log Status (DISPLAY CNSLG)**

| | |
|------------------------------------|--|
| <p><u>DIS</u>PLAYΔ<u>CNS</u>LG</p> | <p>Displays the number of lines accumulated in current console log file.</p> |
|------------------------------------|--|

■ **Displaying the Spooling Mode of Operation (DISPLAY SPL, STATUS)**DISPLAYΔSPL, STATUS

Displays burst or nonburst mode of operation currently in effect. For burst mode, includes selection criteria when specified. A message displays the percentage of spool file still available.

■ **Placing Active Files in Hold Condition (HOLD ACT)**HOLDΔACT { ALL
LOG
PRINT
PUNCH }

Places on hold files currently being created in directory named.

LOG does not affect remote batch or distributed data processing job logs.

Job logs for jobs found in error by run processor are not affected.

Command is ignored if modifiers entered.

■ Placing Closed Files in Hold Condition (HOLD SPL)

```

HOLDASPL [ , ALL ] [ , modifier-1, ...,
          {
            DDPPR
            DDPPU
            LOG
            PRINT
            PUNCH
            RBPPR
            RBPPU
            RDR
          }
modifier-n]

```

Places on hold closed files in directory named, according to modifiers specified.

LOG does not affect remote batch or distributed data processing job logs.

If ALL is entered or implied by default, all directories are affected.

■ **Placing Active and Closed Files in Hold Condition (HOLD SPQ)**

```
HOLDΔSPQ { ALL
           LOG
           PRINT
           PUNCH }
```

Combines HO SPL and HO ACT commands. All closed files in directory named are immediately placed in hold condition; all active and future files in directory are placed on hold when closed.

LOG does not affect remote batch or distributed data processing job logs.

Job logs for active jobs found in error by run processor are not affected; job logs for closed jobs that were found in error are held.

Command is ignored if modifiers entered.

■ **Setting Spooling System Operating Mode (SET SPL,BURST/NBURST)**

```
SETΔSPL, { BURST[,modifier]
          NBURST }
```

Sets spooling system operating mode for processing output files to burst or nonburst (NBURST). All subsequently loaded output writers run in mode selected. Previously loaded output writers are not affected.

A modifier tailors file selection for burst mode processing.

■ Setting Console Log and Workstation Log File Specifications (SET SPL,CNSLG)

SETASPL, CNSLG [{ ON }] [{ RETAIN }] [{ PRINT }]
 [{ OFF }] [{ DELETE }] [{ NOPRINT }]

Turns console log and workstation log record collection function on and off, deletes or accumulates (RETAIN) console log for transfer to SYSLOG, and prints or does not print console log.

Must be set to ON to accumulate or print console log or to accumulate or print workstation log via SET SPL,PRINT and SET SPL,DUMP commands respectively.

If any optional parameters are omitted, console log file remains in same condition or mode for that parameter that it was in before the command.

Blinking marker symbol (▼) in rightmost position of console line indicates message not written to console log.

■ Setting Accumulation of Job Log and Workstation Log Files (SET SPL,DUMP/ENDDUMP)

SETΔSPL, {
 DUMP
 ENDDUMP }

Deletes or accumulates job log and workstation log files after printing for transfer to SYSLOG. DUMP specifies files are accumulated for later routing to SYSLOG tape or disk file; ENDDUMP specifies no accumulation.

The SET SPL,CN,ON command must be in effect to accumulate workstation logs.

■ Setting Job Log and Workstation Log Printing Specifications (SET SPL,NOACT/NOLOG/NOPRINT/PRINT)

SETΔSPL, {
 NOACT
 NOLOG
 NOPRINT
 PRINT }

Specifies what job log and workstations log records are to be printed; job log (L and A) records at end of job and workstation log (W and R) records at breakpoint or end of session. NOACT specifies not to print accounting (A) records; NOLOG specifies not to print log (L) records and workstation (W and R) records; NOPRINT specifies not to print job accounting (A) and log (L) records, and workstation (W and R) records; and PRINT specifies printing all job log (A and L) and workstation log (W and R) records.

JOBACCT=YES must be specified at SYSGEN to control A record printing; SET SPL,CN,ON command must be in effect to control W record printing.

■ **Setting the Spool File Printout Format (SET SPL,NOHDR/HEADER)**

SETΔSPL, { HEADER }
 { NOHDR }

Suppresses (NOHDR) or prints (HEADER) 3-page header preceding each spooled print file.

■ **Setting Forms Change Message (SET SPL,TEST/NOTEST)**

SETΔSPL, { NOTEST }
 { TEST }

Displays (TEST) or suppresses (NOTEST) console message indicating a forms change with option to print test lines.

INPUT READER COMMANDS

Used to load an input reader symbiont to transfer a card or data set label diskette file into the RDR spool directory.

■ Spooling Punched Card Input Files

```
IN[(did)]Δ  $\left\{ \begin{array}{l} 51 \\ 66 \end{array} \right\}$ 
```

Loads input reader for spooling punched card input. Specify either 51- or 66-column punched cards; if omitted, 80-column (or 96-column, if configured) punched cards are read.

A // DATA job control statement must precede jobs or data files to be spooled. Punched cards are read until a // FIN or another // DATA statement is detected.

If no device (did) is specified, first available card reader (SYSRDR) is expected to contain input file.

■ Spooling Data Set Label Diskette Input Files

| | |
|--|--|
| <code>IN([did],label)Δ[RETAIN][,DELETE]</code> | <p>Loads input reader for spooling diskette input. Label must match LBL job control statement file name with maximum of 8 characters. RETAIN specifies spooled file is retained after job processing. Retained file is available for additional processing until deleted via DELETE command or via the DELETE parameter in a subsequent introduction of a spooled subfile having the same label.</p> <p>Use only with single volume input.</p> |
|--|--|

■ Spooling Tape Input Files

| | |
|----------------------|--|
| <code>IN(did)</code> | <p>Loads input reader for spooling tape input. A // DATA job control statement must precede jobs or data files to be spooled.</p> <p>Used only with single volume input.</p> |
|----------------------|--|

OUTPUT WRITER COMMANDS

Used to load an output writer symbiont according to the operating mode and selection criteria specified. Solicited and unsolicited messages are used to direct the operation of output writers that are active in the system.

Output writers are loaded under three conditions:

1. Automatically by system when files require processing and appropriate device is available.
2. Automatically when operator enters BEGIN spooling command.
3. Manually by operator using output writer commands and messages. Function codes and modifiers are included to change operating mode, select criteria, and tailor processing.

Under certain conditions, such as system set in nonburst mode, the operator manually loads output writers in order to have files printed. Other conditions include:

1. Warm start (recover files at IPL) if set to nonburst at SYSGEN
2. BR function if system is in nonburst mode
3. STOP or HALT function previously entered from console and printing a job's files is incomplete
4. IN function when reintroducing redirected tape, disk, or format label diskette output

■ Manually Loading Output Writer

```
{ PD } [(did)]Δ[function-code][,modifier-1,...,  
{ PR }  
{ PU }  
  
modifier-n]
```

Loads output writer for printer (PR), punch (PU), or data set label diskette (PD) file processing.

If did (device address) is omitted, system assumes only one device is available and selects first available device. When device address is tape, disk, or diskette unit, output file is redirected to that device (not valid with PD). PD does not require device address; job control device assignment set provides diskette location to be used.

Function-code specifies output writer mode of operation and processing criteria. (Function codes are described in later paragraph.) If omitted, output writer is loaded in mode (burst or nonburst) assigned at SYSGEN. After function is entered and request is completed, system usually requests entry of another function. Enter function that is using solicited message reply format (described in following paragraphs), or press transmit key if no additional functions are required.

Command modifiers further identify files to be processed.

■ Manual Loading Output Writer (continued)

PRΔ[function-code],UID=user-id[,modifier-1,
...,modifier-n]

Loads output writer for nonauxiliary destined print files created on behalf of a workstation user identified by UID.

Function-code specifies output writer mode of operation and processing criteria. (Function codes are described in later paragraph.) If omitted, output writer is loaded in mode assigned at SYSGEN. After the function is entered and the request is completed, the system usually requests another function. Enter the function using solicited message reply format (see spooling and job accounting, concepts and facilities, UP-9975 (current version), for more detail) or press the transmit key if no additional functions are required. UID is a 1- to 6-character left-justified identification that was entered with the LOGON command at the workstation.

Command modifiers further identify files to be processed.

RPΔBX,UID=user-id[modifier-1,...,modifier-n]

Loads output writer to print output, specified as destined for the auxiliary printer (via // SPOOL jproc, // ROUTE job control statement, and OPTION job control statement), at the central site rather than at the auxiliary printer.

BX specifies that the output writer is to function in the burst mode.

After the function is entered, the system usually requests another function. Enter the function using solicited message format (described in the following paragraphs) or press the transmit key if no additional functions are required.

UID is a 1- to 6-character, left-justified identification that was entered with the LOGON command at the workstation.

Modifiers further identify the files to be processed.

■ Directing Active Output Writer

Used to change operating mode or processing criteria of active output writer. Messages are either solicited (output writer requests function from operator) or unsolicited (operator interrupts output writer

processing to enter a function). Unsolicited messages cannot be entered if output writer is waiting for response to solicited message.

Solicited Message Reply Format

$\emptyset i \Delta$ function-code

Used to respond to function request from output writer. Both job number (0) and message-id (i) must be included in reply. Message-id corresponds to the message-id transmitted by requesting output writer.

Allowable functions are described under output writer function codes.

Unsolicited Message Reply Format

$\emptyset \emptyset \Delta \left\{ \begin{array}{l} \text{PD} \\ \text{PR} \\ \text{PU} \end{array} \right\} [(did)]$ function-code

Used to interrupt active output writer to issue a function change. The job number and message-id (00) are used to communicate with output writer (via the supervisor).

PD (diskette), PR (printer), or PU (punch) identifies the output writer to be interrupted. If the did is omitted, system assumes output writer is active at first available device.

Allowable functions are described in list of output writer function codes. Use the DEV function code to redirect output currently being processed.

■ Output Writer Function Codes

| | |
|---|--|
| $\left\{ \begin{array}{l} \underline{\text{BURST}} \\ \underline{\text{BX}} \end{array} \right\} \Delta [, \text{modifier-1}, \dots, \text{modifier-3}]$ | <p>Places the output writer in burst mode. Functions can be further qualified by optional modifiers 1 through 3. Modifiers that may be specified are listed in the description of general spooling commands. (STEP, LBL, and VOL are not used with BU and BX.) If BX is entered with modifiers, the output writer terminates after processing all files that satisfy the modifiers. If BU is entered, the output writer requests another function if more files exist that do not satisfy modifiers.</p> |
| <p><u>BYPASS</u></p> | <p>Terminates processing of the current file. Current file is closed and output writer continues processing next file. Bypassed files can be restarted later.</p> |

■ Output Writer Function Codes (continued)

| | |
|----------------------|--|
| <u>COPIES</u> ,nnn | Sets the number of copies the output writer is to produce for each file it processes. One to 255 copies (nnn) may be specified. If 0 is specified, 1 is assumed. File closed when processing is completed. This function cannot be used with diskette (PD) output writer. |
| <u>DELETE</u> | Deletes the file being processed, and proceeds with next file to be processed. |
| <u>DEVICE</u> [,did] | <p>Indicates that output writer is to change device it is currently using to print (punch) its output. If a new did is specified, it is assigned to the output writer and current device is deallocated. If the did is omitted, a device having same characteristics as current device replaces the current device. The new device remains in use as long as same copy of output writer remains in main storage.</p> <p>If output is to be redirected, specify the tape, disk or diskette device (did) in the function code, and all subsequent output files are redirected to that device, as long as that copy of output writer is active. Redirected output to diskette is recorded in format label mode.</p> <p>If some form of restart is to be performed prior to switching of device, enter the RESTART function before entering DEVICE function.</p> |

| | | | | | | | | | |
|--------------------|--|--------------|-------------------------------|-------------|--------------------------------|-----------------|-------------------------------|--------------------|------------------------------|
| <u>DISPLAY</u> | <p>Displays the status of current file on the console screen. The information displayed is:</p> <table><tr><td>1. File name</td><td>5. Current page (card) number</td></tr><tr><td>2. Job name</td><td>6. Total pages (cards) in file</td></tr><tr><td>3. Program name</td><td>7. Number of remaining copies</td></tr><tr><td>4. Job step number</td><td>8. Existence of a breakpoint</td></tr></table> <p>Function is ignored if no file is open.</p> | 1. File name | 5. Current page (card) number | 2. Job name | 6. Total pages (cards) in file | 3. Program name | 7. Number of remaining copies | 4. Job step number | 8. Existence of a breakpoint |
| 1. File name | 5. Current page (card) number | | | | | | | | |
| 2. Job name | 6. Total pages (cards) in file | | | | | | | | |
| 3. Program name | 7. Number of remaining copies | | | | | | | | |
| 4. Job step number | 8. Existence of a breakpoint | | | | | | | | |
| <u>HALT</u> | <p>Terminates output writer after current file (if any) is processed. If file being processed has multiple copies, remaining copies are produced when output writer is reloaded.</p> | | | | | | | | |
| <u>HOLD</u> | <p>Places the current file in a hold state and begins processing next file.</p> <p>Files in hold state are not available for processing until released by BEGIN command.</p> | | | | | | | | |

■ Output Writer Function Codes (continued)

| | |
|---|--|
| <p><u>INPUT</u>,did[,B] [{RET } {REL }]</p> | <p>Directs output writer to accept input from tape, disk, or diskette unit (did) identified in function code. Used to reintroduce redirected output so that it can be printed or punched.</p> <p>If input is from disk or format label diskette, the B option may be included to permit specific files to be selected. When B is entered with function, a message is displayed requesting another function. Enter BX function with modifiers to specify particular files to be printed or punched.</p> <p>Retains (RET) redirected print and punch output on disk or diskette after processing. Also releases (REL) redirected output previously retained. After processing, release files are deleted.</p> <p>INPUT function may not be used with PD.</p> |
| <p><u>NBURST</u></p> | <p>Places output writer in nonburst mode. If specified while output writer is processing a file, function does not take effect until file processing is completed.</p> |

| | |
|---|---|
| <u>RETAIN</u> | Retains currently active file in a HOLD state in spool file after it is processed. The retained file is unavailable for additional processing until released via BEGIN command. (Otherwise, delete the retained file via DELETE command.) |
| <u>RESTART</u> [,nnn , <u>PAGE</u> ,nnnn , <u>CARD</u> ,nnnn] | Restarts processing of currently active file from a number of pages or cards. If number is not specified, output writer restarts processing from beginning of file. If only nnn is entered, file processing is restarted nnn pages or cards back from current position of file. If PA or CA is entered with nnnn, file is positioned back to page or card identified by nnnn. RESTART cannot be used with PD. Enter RESTART,nnn first if used in conjunction with DEVICE. |



| | |
|---|--|
| SD | <p>Provided for debugging purposes only. The message Enter SPOOL DEBUG COMMAND requires a reply of LOG, PRINT, RDR, or ALL to print the directories of the various queues of the spool file. When printing completes, enter HALT at the debug command prompt to terminate spool debug or to enter another debug command.</p> |
| <p><u>SKIP</u> [{ nnnn PAGE, nnnn CARD, nnnn }]</p> | <p>Directs output writer to skip forward a specific number (nnnn) of pages or cards or to skip forward to specific page number (PAGE,nnnn) or card number (CARD,nnnn). After positioning, request is made for another function.</p> <p>SKIP cannot be used with PD.</p> |

■ Output Writer Function Codes (continued)

STOP[, PAGE]

Directs output writer to stop processing. If PAGE is omitted, output writer terminates immediately. If PAGE is included, output writer terminates after printing the complete current page.

File being processed is closed but not deleted. When accessed by another output writer, file is processed from point at which it was closed.

PROCESSING THE SPOOL LOG FILE

Systems that are generated with spooling maintain a log subfile in the spool LOG file for each job processed in the system. The job log subfile contains the job's messages and job control statements (L records) and, when JOBACCT=YES was included during SYSGEN, the job's accounting (A) records. Spooling also maintains a workstation log subfile in the spool LOG file, provided the CONSOLOG parameter was included during SYSGEN. The workstation log subfile contains a record of all system messages written to and read from the workstation.

As each job or workstation session terminates, its associated job log subfile is closed and usually output to a high-speed printer as soon as the device becomes available. If the system is generated with the accumulate system job and workstation log files option (SYSLOG=YES) or if the operator issues the SET SPL,DUMP command after system initialization, the job and workstation log subfiles are marked as having been printed and then accumulated to allow further processing by user job accounting and bookkeeping programs.

A record of all messages written to and read from the console and workstation is also maintained in the spool LOG file, provided console logs are specified with the CONSOLOG parameter during SYSGEN. Console logs can be printed at any time by the operator and can also be accumulated for future use. They are accumulated when either the SYSGEN parameter RETAINLOG has been specified or the operator enters the SET SPL,CNSLG command with the RETAIN parameter included.

Two programs are provided to assist in spool LOG file processing: the SL\$LOG program for system log accumulation and the JOBLOG program for job logs. SL\$LOG transfers selected portions of accumulated job log or console log subfiles from the spool LOG file to a SYSLOG file on disk or tape. After SL\$LOG execution, the SYSLOG file is available for processing.

Usually SL\$LOG is used to dump the job log subfiles so they can be used as input to the JOBLOG program. The JOBLOG program generates a job accounting report based on the job logs in the SYSLOG file. Since the SL\$LOG program may also be used to dump the console log subfiles to SYSLOG, the following steps should be performed in the sequence shown to ensure the integrity of SYSLOG output:

1. Execute the SL\$LOG program to dump the accumulated job log records.
2. Execute the JOBLOG program to produce a job accounting report.
3. Execute the SL\$LOG program to dump the accumulated console log records.
4. Execute a user-written program to process the console log output.

The SL\$LOG program is executed by using the RUN command with a job control stream (named DUMPLOG for disk or DUMPLOGT for tape) supplied by Sperry. The operator also uses the RUN command to execute the JOBLOG program. Using the SYSLOG file as input, JOBLOG calls on the OS/3 independent sort/merge routine to create a sorted SYSLOG output file. After the sorting process is complete, JOBLOG uses the sorted file to produce the accounting report. For a detailed description of SL\$LOG program see spooling and job accounting, concepts and facilities, UP-9975 (current version).

■ Using Tape for the Job and Workstation Log SYSLOG File (RUN DUMPLOGT)

RUNADUMPLOGT [, [D= { }] [, V= { vsn }] [, C= { N }]]

Establishes SYSLOG file on tape and transfers accumulated job and workstation log records from spool LOG file into SYSLOG.

D= { }
LOG

Specifies accounting (A) records (ACT) or log (L) and workstation (W and R) records (LOG) are transferred. If omitted, all records are transferred.

V= { vsn }
SYSLOG

Identifies volume serial number of tape to be used. If omitted, SYSLOG is used.

C= { }
N

Specifies whether checkpoint records are desired. If omitted, checkpoint records are specified.

■ Using Disk for the Job and Workstation Log SYSLOG File (RUN DUMPLOG)

RUNΔDUMPLOG, , F=ALLOC [, D={ACT
LOG}]

Establishes SYSLOG file on disk and transfers accumulated job and workstation log records from spool LOG file into SYSLOG.

F=ALLOC

Specifies SYSLOG file space is allocated on disk.

D={ACT
LOG}

Specifies accounting (A) records (ACT) or log (L) and workstation (W and R) records (LOG) are transferred. If omitted, both are transferred.

■ Adding Job and Workstation Log Subfiles to SYSLOG File on Disk (RUN DUMPLOG)

RUNΔDUMPLOG [, , D={ACT
LOG}]

Adds additional accumulated job and workstation log subfiles to existing SYSLOG file.

D={ACT
LOG}

Specifies accounting (A) records (ACT) or log (L) and workstation (W and R) records (LOG) are transferred. If omitted, both are transferred.

■ Reinitializing Job and Workstation Log SYSLOG File on Disk (RUN DUMPLOG)

RUNΔDUMPLOG,,F=INIT [,D={
 ACT
 LOG}]

Reinitializes (effectively erases) SYSLOG file and transfers new accumulated job and workstation log subfiles from spool LOG file to SYSLOG.

F=INIT

Specifies SYSLOG file space is reinitialized on disk.

D={
 ACT
 LOG}

Specifies accounting A records (ACT) or log (L) and workstation (W and R) record (LOG) are transferred. If omitted, both are transferred.

■ Running JOBLOG Using Tape Input (RUN JBLOGT)

$$\left\{ \begin{array}{l} \underline{\text{RUN}} \\ \text{RV} \end{array} \right\} \Delta \text{JBLOGT} \left[, , V = \left\{ \begin{array}{l} \text{vsn} \\ \text{SYSLOG} \end{array} \right\} , S = \left(\begin{array}{l} \text{A} \\ \text{B} \\ \text{C} \end{array} \right) \right]$$

Sorts tape file input to produce job accounting report.

$$V = \left\{ \begin{array}{l} \text{vsn} \\ \text{SYSLOG} \end{array} \right\}$$

Identifies volume serial number of tape containing job accounting file. If omitted, SYSLOG is used.

$$S = \left(\begin{array}{l} \text{A} \\ \text{B} \\ \text{C} \end{array} \right)$$

Specifies sort option. The A option sorts jobs in order submitted; B sorts jobs in accounting number and job name order (default condition), with subtotals taken whenever accounting number and job name sequence changes; C sorts jobs in accounting number and job name order, with subtotals taken whenever accounting number field changes.

■ Running JOBLOG Using Disk Input (RUN JBLOG)

RUNJBLOG [, , V={vsn} , L={file-identifier} , S={A}]
 {RES} {SYSLOG} {■} {C}

Sorts disk file input to produce job accounting report.

V={vsn}
 {RES}

Identifies volume serial number of disk containing job accounting file. If omitted, SYSRES (RES) is used.

L={file-identifier}
 {SYSLOG}

Identifies file name of job accounting file. If omitted, SYSLOG is name used.

S={A}
 {■} {C}

Specifies sort option. The A option sorts jobs in order submitted; B sorts jobs in accounting number and job name order (default condition), with subtotals taken whenever accounting number and job name sequence changes; C sorts jobs in accounting number and job name order, with subtotals taken whenever accounting number field changes.

■ Using Disk for the Console Log SYSLOG File (RUN DUMPLOG)

RUNΔDUMPLOG, , F=ALLOC, D=CON

Establishes SYSLOG file on disk and transfers accumulated console log records from spool LOG file into SYSLOG.

F=ALLOC

Specifies SYSLOG file space is allocated on disk.

D=CON

Specifies console log (C) records only are transferred.

■ Adding Console Log Subfiles to SYSLOG File on Disk (RUN DUMPLOG)

RUNΔDUMPLOG, , D=CON

Adds additional accumulated console log subfiles to existing SYSLOG file.

D=CON

Specifies console log (C) records only are transferred.

■ Reinitializing Console Log SYSLOG File on Disk (RUN DUMPLOG)

__RUNΔDUMPLOG,,F=INIT,D=CON

Reinitializes (effectively erases) SYSLOG file and transfers new accumulated console log subfiles from spool LOG file to SYSLOG.

F=INIT

Specifies SYSLOG file space is reinitialized on disk.

D=CON

Specifies console log (C) records only are transferred.



INTEGRATED COMMUNICATIONS ACCESS METHOD (ICAM) PROCEDURES

The ICAM symbiont handles data communications tasks. Each symbiont may contain multiple network definitions (CCAs), and each CCA can handle one or more communications lines. One or more ICAM symbionts can be configured during SYSGEN. Each symbiont satisfies specific communications network requirements. A single ICAM symbiont can be configured to satisfy all communications requirements. You must load the appropriate ICAM symbiont before the programs requiring it can be executed or before

interactive services can start for terminals. In addition, when interactive services or global networks are required, you must initiate the running of the global user service task (GUST) after loading ICAM. The ICAM symbiont remains in main storage until GUST is shut down. Then ICAM shuts itself down unless the system operator loaded ICAM with a KEEP operand. In this case, ICAM must be terminated with a CANCEL command.

LOADING THE ICAM SYMBIONT (Cn/Mn)

ICAM symbionts are named C1-C9 or M1-M9, and are assigned during system generation. The command format to load ICAM is:

| | |
|--|--|
| $\left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta [KEEP]$ | <p>Loads the specified ICAM module to handle the communications task required, where n is 1 to 9. After the module is loaded, the following output message is displayed:</p> <p style="text-align: center;">ICAM X.X READY</p> |
|--|--|

CHANGING THE ICAM NAME (SET IC)

```

SETΔIC, { Cn
           { Mn
           { C?
  
```

Changes the name of the ICAM symbiont (C1-C9, M1-M9) that is loaded if remote batch output has output ready and ICAM is not loaded. C? causes the system to ask the operator to supply the symbiont name to be used the next time output is ready and ICAM is not loaded.

INITIALIZING AND TERMINATING THE GLOBAL USER SERVICE TASK

You must initialize the global user service task (GUST) before starting interactive services for terminals or before executing user programs requiring global networks. You initiate the running of the job that executes the global user service task program ML\$\$\$G1 through a console workstation or console

command entry. See your system administrator for the name of the GUST job to initiate. When global network processing is no longer required for interactive services at terminals or for user programs, you enter an unsolicited message to shut GUST down.

- **Running the Global User Service Task Job**

```

RUNΔjobname
  
```

Runs the GUST job (jobname) to initiate execution of ML\$\$\$G1 program.

Respond to ML\$\$\$G1 output messages to provide information required to initialize global network.

■ Terminating the Global User Service Task

00Δ { Cn } ΔGUS, network-name, nnnn
 { Mn }

Unsolicited message cancels GUST job to end global network processing.

Include name of currently loaded ICAM symbiont (C1-C9 or M1-M9), the 4-character name of active global network (network-name), and the GUST job number nnnn.

DIRECTING ICAM OPERATIONS

On occasion, you may be required to enter an unsolicited message to mark up or down the lines, terminals, or ports in an ICAM symbiont. The general format for these messages is:

$$\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta cc \Delta f, \left\{ \begin{array}{l} xxxx \\ ccpp \end{array} \right\}, nnnn$$

Cn and Mn

Specifies name of ICAM symbiont (C1-C9 or M1-M9).

cc

Is command code for action required.

f

Is facility type: line (L), port (P), or terminal (T).

xxxx

Is 1- to 4-character line/terminal name defined in label field of LINE or TERM macroinstruction.

ccpp

Is the port number on the communications adapter or the SLCA number.

nnnn

Is the name of the network specified in the label field of the CCA macroinstruction.

The following are unsolicited messages to ICAM:

| | |
|---|---|
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta UP\Delta L, xxxx, nnnn$ | Marks line specified as available (up) |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta DO\Delta L, xxxx, nnnn$ | Marks line specified as unavailable (down) |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta UP\Delta T, xxxx, nnnn$ | Marks terminal specified as available (up) |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta DO\Delta T, xxxx, nnnn$ | Marks terminal specified as unavailable (down) |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta UP\Delta P, ccpp, nnnn$ | Marks port specified as available (up) |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta DO\Delta P, ccpp, nnnn$ | Marks port specified as unavailable (down) |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta CN\Delta L, xxxx, nnnn$ | Notifies ICAM that dialing is completed on switched line specified. |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta CN\Delta L, ALL, nnnn$ | Notifies ICAM that dialing is completed on all switched lines |

ENTERING A PACKET SWITCHED PUBLIC DATA NETWORK

Packet switched public data network console typeins have the following format:

$\Delta\Delta\Delta\left\{\begin{array}{l} Cn \\ Mn \end{array}\right\}\Delta cccc\Delta nnn, llll, dddd$

Cn and Mn

Specifies name of ICAM symbiont (C1-C9 or M1-M9).

cccc

Is command code for action required.

nnnn

Is the job number.

llll

Is the 1- to 4-character label of the VLINE macroinstruction for this line.

dddd

Is the 1- to 4-character label of the PDN macroinstruction that identifies the packet switched public data network affected by this typein.

The following are packet switched public data network console typeins:

| | |
|---|--|
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta STAT \Delta nnnn, llll, dddd$ | <p>Display the level 2 status of the link on the operator's console.</p> |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta CONN \Delta nnnn, llll, dddd$ | <p>Establishes a connection to the level 2 link.</p> |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta DISC \Delta nnnn, llll, dddd$ | <p>Drops a connection to the level 2 link.</p> |
| $\emptyset\emptyset\Delta \left\{ \begin{array}{l} Cn \\ Mn \end{array} \right\} \Delta TEST \Delta nnnn, llll, dddd$ | <p>Initiates level 2 self testing procedures.</p> |



SYSTEM UTILITY SYMBIONTS

You use the system utility symbiont (SL\$\$\$SU) to request and control the performance of many different functions using cards, tapes, disks, and diskettes.

The SU/TU command loads the system utility symbiont. SU and TU can be used interchangeably for all functions. However, we recommend you use TU for tape operations since TU increases the buffer size for all selector channel tapes from 8189 to 32,767 bytes.

■ Initializing the System Utility Symbiont

| Command Entry | Description |
|---|---|
| $\left\{ \begin{array}{l} \text{SU} \\ \text{TU} \end{array} \right\}^{\Delta}$ function-code $\left[\left\{ \begin{array}{l} \text{H} \\ \text{N} \\ \text{R} \end{array} \right\} \right]$ | <p>The 2- or 3-character function codes are described later under the appropriate CARD, TAPE, DISK, or DISKETTE UTILITY FUNCTIONS headings. H specifies output is placed on HOLD before it is printed or punched. N specifies output is not spooled. R specifies output is placed on HOLD after printing or punching. Y specifies output is spooled. When Y is specified or taken as the default condition, the output writer automatically prints or</p> |

(continued)

You can include the required function as a parameter with the SU/TU command. A spooling parameter can also be entered with the command, if spooling is configured in your system. When you enter the command alone to load the symbiont, enter the function as a solicited message.

After the symbiont is loaded, control it by responding with solicited messages. Use unsolicited messages only to terminate the symbiont or current symbiont functions on certain occasions.

■ **Initializing the System Utility Symbiont (continued)**

| Command Entry | Description |
|----------------------|--|
| | punches any spooled output at the end of each SU function. All possible function codes that are recognized by either symbiont can be displayed on the system console by entering XXX in place of the function code. Following this display, the symbiont requests that you enter the required function code. |

When the symbiont is loaded, the following message is displayed:

| | |
|---|---|
| nnΔSUNNNN SYSTEM UTILITY SYMBIONT LOADED | If a function code was included in the command entry, the symbiont completes the requested function, then requests that you enter another function. If a function code is omitted, the symbiont requests that you enter a function. |
|---|---|

The ENTER REQUIRED FUNCTION message is displayed as follows:

| Message Display | Operator Reply |
|--|--|
| <p>(With Spooling)</p> <p>nn?SUnnnn ENTER REQUIRED FUNCTION AND SPOOL OPTION [,H,N,R,Y] DEFAULT=Y</p> | <p>nn function-code, $\left. \begin{matrix} H \\ N \\ R \\ Y \end{matrix} \right\}$</p> |
| <p>If the spool option is incorrectly entered, the message is displayed:</p> <p>nn?SUnnnn IS $\left\{ \begin{matrix} PRINTED \\ PUNCHED \end{matrix} \right\}$ OUTPUT TO BE SPOOLED FROM SU H,N,R,Y</p> | <p>nn $\left\{ \begin{matrix} H \\ N \\ R \\ Y \end{matrix} \right\}$</p> |
| <p>(Without Spooling)</p> <p>nn?SUnnnn ENTER REQUIRED FUNCTION</p> | <p>nn function-code</p> |

■ Terminating the System Utility Symbiont

| Message Entry | Symbiont Response (Messages) | Description |
|-----------------------|---|---|
| nn EOJ | nn△SUnnnn SYSTEM UTILITY SYMBIONT ENDED | Terminates symbiont. Reply is made to function request; ENTER REQ FUNCTION |
| 00 {SU} OJ { TU } | nn△SUnnnn SYSTEM UTILITY SYMBIONT ENDED | Unsolicited entry used to terminate symbiont immediately (before function is completed) |
| 00 {SU} END { TU } | nn△SUnnnn ENTER REQ FUNCTION | Unsolicited entry used to terminate only the current function but not the symbiont |

NOTE:

When message replies are entered incorrectly or a reply cannot be honored, the symbiont requests you to reenter the information. If no determination can be made as to why the entry is not accepted, use the unsolicited command entry to terminate either the current function or the symbiont.

■ Card Utility Functions

A. Function Codes

| Function Code | Function Performed |
|---------------|---|
| CC | Reproduces cards punched in Hollerith code |
| CCB | Reproduces cards punched in binary and Hollerith code |
| CCS | Reproduces and resequences source programs |
| CT | Writes card to tape in unblocked format |

| Function Code | Function Performed |
|---------------|--|
| CTR | Writes card to tape in blocked format |
| CP | Lists cards |
| CH | Lists cards containing compressed mode |
| JCP | Punches cards from the system console |

■ **Card Utility Functions (continued)**

B. Procedure

To request specific card functions, you must:

1. Enter the SU symbiont.
2. Enter the desired function code.
3. Enter spooling option; otherwise, default is Y. (Applicable if spooling is configured.)
4. If card file is to be read, place it in the card reader designated as the system reader (SYSRDR).
 - a. If system reader is not available, the following message is displayed to identify the reader assigned to read the card file:

nn△SUnnnn USE READER did

- b. If no card readers are available, the function is aborted and the following message is displayed:

nn△SUnnnn NO READER AVAILABLE

- c. If no output device is available, the function code is aborted and the following message is displayed:

**nn△SUnnnn NO { PUNCH } AVAILABLE
 { TAPE }
 { PRINTER }**

NOTE:

All card input files must be terminated by a card with END OF DATA punched into columns 1-11.

C. Operator Communications

| Function Codes | Symbiont Message | Operator Reply |
|----------------|---|--|
| CC | Refer to step 4 of the procedure. | Refer to step 4 of the procedure. |
| CCB | Refer to step 4 of the procedure. | Refer to step 4 of the procedure. |
| CCS | Refer to step 4 of the procedure. | Refer to step 4 of the procedure. |
| CT | nn?SUnnnn CUUMMB OUTPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of the output tape. |
| | nn?SUnnnn MOUNT NEXT OUTPUT TAPE. REPLY R OR END | Enter END to terminate the CT function. Dismount the unloaded tape, mount next output tape, and then enter R if the function is to continue. |
| | nn?SUnnnn DOES USER WISH TO PREP THIS TAPE? REPLY YES OR NO (This message issued only if operator did not enter END for previous message.) | Enter N if no tape prep is required; CT function resumes. Enter Y to prep the tape. Tape prep function is activated; CT function resumes when prep is completed. |

(continued)

■ Card Utility Functions (continued)

| Function Code | Symbiont Message | Operator Reply |
|---------------|---|--|
| CTR | nn?SUnnnn BLK FACTOR | Enter blocking factor (1-100 for SU, 1-400 for TU). |
| | nn?SUnnnn CUUMMB OUTPUT TAPE B=BLK CNT | Enter tape unit device address and mode setting of the output tape. |
| | nn?SUnnnn OUTPUT EXCEEDS ALLOCATED BUFFER | Reenter the function and blocking factor because the factor supplied exceeded maximum allowed and the function was terminated. |
| CP | Refer to step 4 of the procedure. | Refer to step 4 of the procedure. |
| CH | Refer to step 4 of the procedure. | Refer to step 4 of the procedure. |

JCP

Refer to step 4 of the procedure.

If 60 or more columns are needed, position cursor under the 0-60 in the scale message and transmit. If having a blank in column 1 or 61 is required, enter a right parenthesis instead of a blank in that column.

To terminate the JCP function, enter the message END and transmit immediately.

■ **Tape Utility Functions**

A. Function Codes

| Function Code | Function Performed |
|---------------|---|
| TT | Copies a tape to another tape |
| TH | Prints a tape in character and hexadecimal format |
| THR | Prints a tape in character, hexadecimal, deblocked format |
| TP | Prints a tape containing only standard characters |
| TPR | Prints a tape in character and deblocked format |
| TRS | Locates a specific record on tape |
| TC | Punches cards from tape |
| INT | Preps a tape |

| Function Code | Function Performed |
|---------------|--------------------------------------|
| FSF | Forward spaces to a specific file |
| BSF | Backward spaces to a specific file |
| FSR | Forward spaces to a specific record |
| BSR | Backward spaces to a specific record |
| WTM | Writes tape marks |
| REW | Rewinds a tape |
| RUN | Rewinds a tape with interlock |
| ERG | Erases a portion of a tape |

B. Procedure

To request specific tape functions, you must:

1. Enter the TU symbiont (or SU symbiont if block size does not exceed 8192 bytes).
2. Enter the desired tape function code.
3. Enter spooling option; otherwise, default is Y. (Applicable if spooling is configured)
4. Place the input tape on the available tape unit and identify the tape unit to the symbiont.

C. Identifying Tape Unit to Symbiont (Tape Addressing)

Enter the tape unit identification code in the following format:

cuumb

where:

cuu

Is the device address (channel, subchannel, and unit).

mm

Is the tape mode setting. (SYSGEN settings are assumed if specification is blank, 00, or omitted.)

b

Is the tape block count characteristics. (Block count is not assumed if specification is omitted.)

■ Tape Utility Functions (continued)

D. Operator Communications

| Function | Symbiont Message | Operator Reply |
|----------|---|--|
| TT | nn?SUnnnn CUUMMB - INPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of input tape. |
| | nn?SUnnnn CUUMMB - OUTPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of output tape. |
| | nn?SUnnnn #FILES 1-99 | Enter number of files or marked files to be copied (1 through 99). |
| | nn?SUnnnn MOUNT NEXT OUTPUT TAPE. REPLY R OR END | Enter END to terminate the TT function. Dismount the unloaded tape, mount next output tape, then enter R if the function is to continue. |

| | | |
|----|---|--|
| | <p>nnΔSUnnnn SUPPLY VOLUME SERIAL NUMBER FOR NEW OUTPUT TAPE nn?SUnnnn XXXXXX (This message is issued only if operator did not enter END for previous message.)</p> | <p>Enter the volume serial number for the new output tape.</p> |
| | <p>USER LABEL RESTRICTIONS APPLY. SEE UP-8072</p> | <p>Informational message. Cautions user that SU/TU does not generate user trailer or header labels for multivolume output in addition to those encountered on input tape.</p> |
| | <p>nn?SUnnnn END OF VOLUME? Y OR N</p> | <p>Enter Y to write the second marked tape after the file. Enter N if it is not to be written.</p> |
| TH | <p>nn?SUnnnn CUUMMB - INPUT TAPE B=BLK CNT</p> | <p>Enter tape unit device address, mode setting, and block count characteristics of input tape. If block count is entered, data is considered to begin in position 3, relative to position 0, for a length of blocksize minus 3 bytes.</p> |

(continued)

■ Tape Utility Functions (continued)

D. Operator Communications

| Function Code | Symbiont Message | Operator Reply |
|-------------------|---|--|
| TH (continued) | nn?SUnnnn #BLKS OR END | Enter END to print entire tape. Enter the number of blocks to be printed if only a specific portion of tape is to be printed. Function is terminated if end-of-file code is detected before specified number of blocks are printed. |
| THR | nn?SUnnnn CUUMMB - INPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of the input tape. |
| | nn?SUnnnn #BLKS OR END | Enter END if entire tape is to be printed. Enter the number of blocks to be printed if only a specific portion of the tape is to be printed. Function is terminated if end-of-file code is detected before specified number of blocks are printed. |
| | nn?SUnnnn LOGICAL REC LNTH | Enter logical record length. |

| | | |
|-----|---|---|
| TP | Identical to the TH function | Identical to the TH function except the output is in character format rather than character and hexadecimal. |
| TPR | Identical to the THR function | Identical to the THR function except the output is in character format rather than character and hexadecimal. |
| TRS | nn?SUnnnn CUUMMB - INPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of the input tape. |
| | nn?SUnnnn LOGICAL REC LENGTH | Enter (in bytes) the length of the logical record. |
| | nn?SUnnnn LENGTH ARGUMENT (1-30) | Enter (in bytes) the scan argument (data field) length. |
| | nn?SUnnnn STARTING DATA POSITION IN REC | Enter the byte position at which the data begins. |
| | nn?SUnnnn ENTER IN HEX-H, CHAR-C | Enter H if data is hexadecimal or C if data is character. |

(continued)

■ Tape Utility Functions (continued)

| Function Code | Symbiont Message | Operator Reply |
|--------------------|---|--|
| TRS (continued) | nn?SUnnnn ENTER 10 BYTES, 1 CHAR PER BYTE | Enter the actual data needed as requested. |
| | nn?SUnnnn CONTINUE SCAN? Y/N | Enter Y to continue scan; enter N if scan is to end. |
| TC | nn?SUnnnn CUUMMB - INPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of the input tape. (The function is terminated when two consecutive tape marks are encountered.) |
| INT | nn?SUnnnn CUUMMB - OUTPUT TAPE B=BLK CNT | Enter tape unit device address, mode setting, and block count characteristics of the output tape. |
| | nnΔSUnnnn ENTER NEW VOL# Rnn?SUnnnnΔXXXXXX | Enter VOL1 record number (1-6 digits). If less than six digits entered, the new volume serial number is left justified and spaced filled on the right. |

| | | |
|-----|--|--|
| | nnΔSUnnnn ENTER NEW FILE LABEL nn?SUnnnn XXXXXXXXXXXXXXXXXXXX | Enter new file identifier (1-17 characters). |
| FSF | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of the tape to be spaced forward. |
| BSF | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of the tape to be spaced forward. |
| FSR | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of the tape to be spaced backward. |
| | nn?SUnnnn #BLKS | Enter the number of blocks to be advanced (9999 maximum). |
| BSR | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of tape to be backspaced. |
| | nn?SUnnnn #BLKS | Enter number of blocks to be backspaced (9999 maximum). |

(continued)

■ Tape Utility Functions (continued)

D. Operator Communications

| Function Code | Symbiont Message | Operator Reply |
|---------------|-------------------------------|--|
| WTM | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of tape to be marked. |
| REW | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of tape to be rewound. |
| RUN | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of tape (UNISERVO 16 or 20) to be rewound. |
| ERG | nn?SUnnnn CUUMM - OUTPUT TAPE | Enter tape unit device address and mode setting of the tape to be erased. |

■ Disk and Format Label Diskette Utility Functions**A. Function Codes**

| Function Code | Function Performed |
|---------------|--|
| DD | Prints a disk or format label diskette in unblocked format |
| VTP | Prints the volume table of contents (VTOC) |
| SVT | Prints short format VTOC file |
| AVX | Displays available extents on console screen |

B. Procedure

When operating the system utility on disk or format label diskettes, remember that data length on an end-of-file record is in binary zeros (not applicable to IDA disk subsystems).

To request a specific disk or format label diskette function, you must:

1. Place the subject volume on an available disk unit.
2. Enter the SU command.
3. Enter the desired function code.
4. Enter spooling option; otherwise, default is Y. (Applicable if spooling is configured)

■ Disk and Format Label Diskette Utility Functions (continued)

C. Operator Communications

| Function Code | Symbiont Message | Operator Reply |
|---------------|---|---|
| DD | nn?SUnnnn ENTER DVC ADDRESS | Enter device address of the disk pack or format label diskette to be displayed. |
| | nn?SUnnnn CCCHH - BEGIN OR FILE-ID | Enter (in decimal) the beginning cylinder (CCC) and head (HH) to be displayed, or the file identifier (1-44 characters) as used on the LBL job control statement when the file was created. If you enter less than 44 characters, the file ID is padded with blanks on the right. |
| | nn?SUnnnn CCCHH - END | Enter the last cylinder (CCC) and the head (HH) to be displayed. |
| | nn?SUnnnn NO OF TRACKS TO PRINT UP TO 9 | If file ID entered, now enter number of tracks to be printed. |

| | | |
|-----|---|---|
| VTP | nn?SUnnnn ENTER DVC/VSN, DI, ALL, FILE-ID, END, OR EOJ | <p>Enter the volume serial number or the disk unit or format label diskette device address of the disk pack whose VTOC is to be printed and the particular option desired:</p> <p>DI For a listing of device-only information FILE-ID For a listing of up to 44 characters as used on the LBL statement when the file was created ALL For a full VTOC listing END To terminate the VTP function EOJ To terminate SU</p> |
| SVT | nn?SUnnnn ENTER DVC OR VSN OR END | <p>Enter the disk unit or format label diskette device address or the volume serial number of the VTOC to be printed. Otherwise, enter END to terminate the SVT function.</p> |
| AVX | nn?SUnnnn ENTER DEVICE ADDRESS | <p>Enter the disk unit or format label diskette device address of the disk pack or format label diskette whose available extents are to be displayed.</p> |

■ Data Set Label Diskette Utility Functions**A. Function Code**

| Function Code | Function Performed |
|---------------|--|
| DD | Prints a data set label diskette (single-sided or double-sided) in unblocked format |
| VTP | Prints the volume table of contents (VTOC) of a data set label diskette (single-sided or double-sided) |

B. Procedure

To request specific diskette functions, you must:

1. Place subject data set label diskette volume on the available diskette unit.
2. Enter the SU command.
3. Enter DD diskette function code.
4. Enter spooling option; otherwise, default is Y. (Applicable if spooling is configured)

C. Operator Communications

| Function Code | Symbiont Message | Operator Reply |
|-------------------------------------|-----------------------------|--|
| DD Printing Unblocked Format | | |
| DD Single-sided diskette | nn?SUnnnn ENTER DVC ADDRESS | Enter diskette unit device address of the data set label diskette to be displayed. |
| | nn?SUnnnn TTRR-BEGIN | Enter (in decimal) beginning track (TT) and sector (RR) to be displayed. |
| | nn?SUnnnn TTRR-END | Enter (in decimal) last track and sector (RR) to be displayed. |
| DD Double-sided diskette | nn?SUnnnn ENTER DVC ADDRESS | Enter diskette unit device address of the data set label diskette to be displayed. |
| | nn?SUnnnn CCCHH-BEGIN | Enter (in decimal) the beginning cylinder (CCC) and head (HH) to be displayed. |
| | nn?SUnnnn CCCHH-END | Enter the last cylinder (CCC) and the head (HH) to be displayed. |

■ Data Set Label Diskette Utility Functions (continued)

| Function Code | Symbiont Message | Operator Reply |
|------------------------------------|-----------------------------|--|
| DD Printing VTOC | | |
| DD Single- sided diskette | nn?SUnnnn ENTER DVC ADDRESS | Enter diskette unit device address of the data set label diskette whose VTOC is to be printed. |
| | nn?SUnnnn TTRR - BEGIN | Enter 0008. |
| | nn?SUnnnn TTRR - END | Enter 0026. |
| DD Double- sided diskette | nn?SUnnnn ENTER DVC ADDRESS | Enter diskette unit device address of the data set label diskette whose VTOC is to be printed. |
| | nn?SUnnnn CCCHH - BEGIN | Enter 00000. |
| | nn?SUnnnn CCCHH - END | Enter 00001. |

INTERACTIVE SERVICES COMMANDS

You use interactive services with an extended set of commands and messages to control the interactive system environment. (For a description of all interactive services commands, see the interactive services commands and facilities user guide/programmer reference, UP-9972 (current version).) These commands and messages enable you to exercise control over the interactive OS/3 operating system, all jobs within the system, all workstation users (local locations) and all terminal users (local and terminal locations).

■ Sending Messages to Users (TELL)

```
TELLΔ{ALL  
      {user-id}}, 'text'
```

The interactive services components are loaded automatically whenever required by the system operator and workstation users. Provided ICAM and the global user service task (GUST) are ready, a workstation user's interactive entry or your command loads interactive services for terminal users.

The following extended set of commands is available from the console.

Sends message not requiring a response to specific workstation or terminal user, or to all users.

■ Asking Questions of Users (ASK)

ASKΔuser-id,'text'

Sends message requiring a response to specific workstation or terminal user, accepts reply, and displays reply on console screen.

■ Displaying System Status (STATUS)

STATUSΔ {
 JOBS
 FUNCTIONS
 RESOURCES
 TERMINALS
 VOLUMES
 LIMITS
 }

Displays the volumes currently in use; the statuses of active workstations, terminals, jobs, and functions; and the statuses of system resources in use and the limitations of those available.

■ Running Interactive Sessions as Batch Jobs (ENTER)

The ENTER command is used to run a workstation or terminal user's interactive session as a batch run. Sessions may be entered from a library file disk or diskette or the spool file. Output from the session is always directed to a printer. A listing of the session as it was entered, followed by the output it produced, is printed at the

conclusion of the session run.

When a batch session on cards is to be spooled, a // DATA job control statement must precede the first session card. The session cards are read into the spool file until a // FIN or another // DATA card is detected.

■ Starting Interactive Services (IS)

ISΔ[REMOTEΔSTART]

Used to manually start interactive services after completed interactive services shutdown, or used with REMOTE START to start interactive services for terminals when ICAM and GUST are ready and no workstation entry has automatically loaded them.

INTERACTIVE SERVICES MESSAGES

You use unsolicited messages provided by interactive services for additional control over the interactive environment. The following extended set of messages is available only from the console.

■ Terminating User Sessions (REMOVE Message)

ØØΔISΔREMOVEΔ { user-id
 { ALL
 { task-id

Terminates specific workstation or terminal user session, all user sessions, or a single command for specific task.

■ Restricting New User Sessions (CLOSE Message)`00ΔISΔCLOSE`

Restricts new workstation and terminal user sessions from starting. Does not affect currently active sessions.

■ Releasing New User Session Restrictions (OPEN Message)`00ΔISΔOPEN`

Removes previously entered CLOSE or reverses incomplete SHUTDOWN to permit new workstation and terminal user sessions to start.

■ Terminating Interactive Services (SHUTDOWN Message)`00ΔISΔSHUTDOWN`

Terminates interactive services after all sessions have completed. OPEN message can stop shutdown in progress; otherwise, IS command restarts terminated interactive services.

■ Controlling Interactive Services for Terminals (REMOTE Message)

| | |
|----------------------------|---|
| <code>00ΔISΔREMOTEΔ</code> | $\left\{ \begin{array}{l} \text{START} \\ \text{SHUTDOWN} \\ \text{CANCEL} \end{array} \right.$ |
|----------------------------|---|

Provides additional control over interactive services for terminals. Starts interactive services for terminals after ICAM and GUST are ready, terminates interactive services after last terminal session completes, or terminates interactive services for terminals immediately.

8



DISK CACHE FACILITY

The disk cache facility (DCF) reads into a reserved cache storage area all or a portion of a track being read, eliminating subsequent reads of that

same disk area.

CM [SIZ=m] [SEG=n]

Initializes DCF, if not initialized during IPL.

m is the cache buffer size in 1024 byte blocks. Valid values are:

64 - 1024 for odels 4/6.

100 - 2048 for models 8/10/20.

n is the cache segment size in 1024 byte blocks. Valid values are 2 - 15.

00 CM RESEG=n

Resegments cache buffer with a different segment size than was allocated during DCF initialization (models 8/10/20 only).

00 CM REMOVE dvc# (,dvc#, ...dvc#)

Removes specified drive from cache (models 8/10/20 only).

00 CM ACTIVATE dvc# (,dvc#, ...,dvc#)

Activates specified drive to cache (models 8/10/20 only).

00 CM SHUTDOWN

00 CM STA

00 CM STARES

00 CM STATIME=n

00 CM STARESTIME=n

00 CM STADISK=did

00 CM STARESDISK=did

00 CM TIMER=OFF

Removes DCF from the system.

Displays DCF statistics.

Displays DCF statistics and resets all counters maintained by DCF.

Displays DCF statistics every n minutes. Valid values are 1 - 999 minutes.

Displays DCF statistics and resets all counters, except disk stat counters, every n minutes. Valid values are 1 - 999 minutes.

Displays DCF statistics for the specified disk (models 8/10/20 only).

Displays DCF statistics and resets all counters maintained by DCF for the specified disk (models 8/10/20 only).

Turns off timer statistics set by STATIME or STARESTIME.







