UNISYS

System 80
Models 3-6 and 8-20
OS/3

Operations

**Quick-Reference
Guide**

UNISYS

System 80
Models 3-6 and 8-20
OS/3
Operations

Quick-Reference
Guide

PAGE STATUS SUMMARY
ISSUE: Update B - UP-9985 Rev. 1

	Page	Update	Part/Section	Number	Level
Cover		B	5	Tab Breaker	Orig.
				1, 2	Orig.
Title Page/Disclaimer		B		3	B
				4, 5	Orig.
PSS	iii	B		6	B
				7, 8	Orig.
About This Guide	v thru vii	Orig.		9	B
				10 thru 14	Orig.
Contents	ix, x	Orig.		15, 16	B
	xi thru xiii	B		17 thru 34	Orig.
	xiv	Orig.			
	xv	B	6	Tab Breaker	Orig.
				1, 2	Orig.
1	Tab Breaker	Orig.		3 thru 6	B
	1 thru 4	Orig.			
	5	B	7	Tab Breaker	Orig.
	6 thru 8	Orig.		1 thru 22	Orig.
2	Tab Breaker	Orig.	8	Tab Breaker	Orig.
	1 thru 6	Orig.		1	Orig.
				2 thru 5	B
3	Tab Breaker	Orig.			
	1 thru 18	Orig.	9	Tab Breaker	Orig.
				1, 2	Orig.
4	Tab Breaker	Orig.			
	1 thru 7	Orig.	Index	Tab Breaker	A
	8 thru 10	B		1 thru 10	B
	11 thru 15	Orig.			
	16 thru 18	B	User Comments Form		
	19, 20	B *			
			Back Cover		Orig.

* New pages   Technical changes are denoted by a change bar in the margin.

About This Guide

This guide is a summary of the procedures and commands used in the operation of the Unisys System 80 operated under control of the Unisys 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 Unisys systems.

Related Documents

The information presented herein has been condensed from the following documents within the OS/3 library; they are:

Note: *Throughout this document, when we refer you to another document, use the version that applies to the software level in use at your site.*

Operations Guide (UP-8859)

Describes the commands and operating procedures for the operator.

Spooling and Job Accounting Operating Guide (UP-9975)

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

Installation Guide (UP-8839)

Describes the function of the OS/3 supervisor.

Job Control Language Programming Guide (UP-9986)

Describes the OS/3 job control procedures and options.

Interactive Services Commands and Facilities Programming and Operations Quick-Reference Guide (UP-9972)

Describes the use of the workstation and the interactive services capabilities.

System Messages Reference Manual (UP-8076)

Describes the OS/3 system messages and operator actions.

Operator Maintenance Guide (UP-8915)

Describes the error definition and reporting procedures.

Organization

The system operations summary is organized as follows:

Section 1. General Information

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 Procedures

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 shut down the DCF, specify the segment size, activate and remove drives from the DCF, and display DCF statistics.

Contents

Contents

Section 4.   Job Processing

Contents

Section 5. Spooling Services

Contents

Contents

Section 6.   Integrated Communications Access Method

Section 7.   System Utility Symbionts

Section 8. Interactive Services

Section 9. Disk Cache Facility

Index

User Comments Form

Section 1
General Information

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 choices of entries.

- Brackets [ ]

    Represent optional entries.

- Ellipsis ...

    Represents an indefinite number of entries.

- Shading

    Represents a default option.

- Underlining __

    Represents the abbreviated form of the entry.

Message/Command Keyin Procedure

- UNLOCK MSG WAIT key (models 3 thru 6) and MSG WAIT key (models 8 thru 20)

  Pressing the key prior to typing command or message

  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 of the message or command.

  3. Issues start of entry (▶) signal.

  4. Sets cursor (⌐ or ◥) to position where typing is to begin.

- 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. *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.*

2. *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 thru 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 Programming and Operations Quick-Reference Guide* (UP-9972) for a description of all the interactive services provided to a workstation user.)

Switching from Console Operation to Workstation Operation

1. Press and hold the FUNCTION key

2. Press the SYS MODE key for system mode or the WS MODE key for workstation mode.

Switching from Workstation Operation to Console Operation

1. Press and hold the FUNCTION key

2. Press the C/CSL key for console mode or the D/SYS CONT key for control mode.

Displaying Informational Console Messages While Operating as a Workstation (CNSMSG Messages)

1. Observe the console workstation display screen. CNSMSG is displayed on indicator line (line 25).

2. Press and hold the FUNCTION key

3. Press the C/CSL key. Informational messages are displayed on line 2 of console workstation screen; CNSMSG is cleared.

Displaying Console Messages Requiring a Response While Operating as a Workstation (CNSREQ Messages)

1. Observe the console workstation display screen. CNSREQ is displayed on indicator line (line 25); the XMIT key locks against further workstation entries.

2. Press and hold the FUNCTION key

3. Press the C/CSL key. Messages requiring a response (or accumulated full screen of informational messages not previously displayed) are displayed on line 2 of the 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)

1. Observe the console workstation display screen. WSMSG is displayed on indicator line (line 25) for message concerning job initiated previously while operating as a workstation.

2. Press and hold the FUNCTION key.

3. Press the SYS MODE key. Informational messages are displayed on line 2 of the console workstation screen; WSMSG is cleared.

Displaying Workstation Messages Requiring a Response While Operating as the Console (WSREQ Messages)

1. Observe the console workstation display screen. 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.

2. Press and hold the FUNCTION key.

3. Press the SYS MODE key. Messages requiring a response are displayed on line 2 of the 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

```
▶ commandΔ ⎡ ⎡(did)        ⎤ ⎤ Δ[command-parameters]
           ⎢ ⎨([did],label)⎬ ⎢
           ⎣ ⎣(RDR,label)  ⎦ ⎦
```

Explanation:

▶

Start-of-entry symbol; automatically precedes all lines.

command

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

Δ

Represents a required space.

did

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

did,label

Required when a diskette is used as a card reader or a card punch. The label entry is 1 to 8 characters long. 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 long.

command-parameters

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

Format Characteristics of System Output Messages

nn $\left\{\begin{matrix} ? \\ \Delta \\ * \end{matrix}\right\}\left\{\begin{matrix} \text{jobnamez} \\ \text{synnnn} \end{matrix}\right\}$ message-text

Explanation

nn

> 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. A job issuing this type of message is in the yield state; a GO command is required from operator to reactivate the job.

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

synnnn
> 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

nnΔmessage-text

Explanation

nn
> The unique message number of the message you are responding to.

message-text
> The actual message reply.

Format Characteristics of Unsolicited Input Messages

```
┌ 00Δsymbname,   ┐   Δmessage-text
│ 00Δsymbid      │
│ 00Δsymbid(did) │
└ UNSΔjobname,   ┘
```

Explanation

00

Specifies that unsolicited message is for a symbiont.

UNS

Specifies that unsolicited message is for a user job Symbiont name.

symbname

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

symbid

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)

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

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

The name of the user job receiving the unsolicited message.

message-text

The actual message.

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

System Power Turn-On and Turn-Off Procedures for Models 3 thru 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 on 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 power 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 procedures, as well as how to select supervisor initialization options during the interactive IPL.

System Power Turn-On Procedures for Models 3 thru 6

1. Switch the MAIN POWER circuit breaker at the rear of the cabinet to ON. (This is performed at initial power turn-on only.)

2. Switch the expansion cabinet circuit breaker (rear of cabinet) to ON.

3. Switch the ON/OFF switch for nonintegrated peripheral subsystems to ON. (Workstations are turned on and off, as required, by the workstation user.)

4. Switch the SYS PWR ON/OFF switch to ON. The switch flashes during the power-on confidence test. Both the switch and the console screen light at completion of the power-on confidence test.

5. A loading message is displayed at the system state line (line 17).

   • If the LOAD *ERROR STOP* message is displayed, refer to the *System Messages Reference Manual* (UP-8076), identify the error code, and take appropriate operator action. Then turn to the IMPL procedure in Section 3 and retry the IMPL.

   • If the *CHECK STOP* message is displayed, press the POCLR button under the console workstation table on the right side. POCLR clears main storage and then initiates the automatic IMPL/IPL sequence. Proceed with the interactive IPL procedure in Section 3.

   • If the STOPPED *HPR* message is displayed, refer to the *System Messages Reference Manual* (UP-8076), identify the HPR code (INSTR=*hpr-instruction-code*), and take appropriate operator action. For an unrecoverable error, perform the entire IPL procedure described in Section 3.

6. Proceed with the interactive IPL procedure 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 Power Turn-Off Procedures for Models 3 thru 6

1. Enter the SJ SHUT command at the console workstation. A message indicating completed shutdown is displayed.

2. Set the SYS PWR ON/OFF switch to OFF. The SYS PWR switch and console screen lights go out.

3. Set the ON/OFF switch for nonintegrated peripheral subsystems to OFF. (Workstations are turned on and off as required by the workstation user.)

4. Set the MAIN POWER and expansion cabinet circuit breakers (rear of cabinets) to OFF. (Used only for an 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 Power Turn-On and Turn-Off Procedures for Models 8 thru 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 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 power 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 power 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 the configuration frame, you must perform the system power turn-on procedure manually with the IPL switch in the MNL position. Perform the IPL procedure manually when the automatic IMPL procedure is completed.

System Power Turn-On Procedures for Models 8 thru 20

1. Check the MAIN POWER circuit breaker located in the rear of the processor cabinet.

    •   If in ON position, go to step 4.

    •   If in OFF position, switch to ON. All indicators light.

2. Switch the MAIN POWER switch located in the rear of the I/O expansion cabinet (if used) to ON. The DC READY indicator lights.

3. Switch the circuit breaker located in the rear of the I/O expansion cabinet (if used) to ON.

4. Switch all peripheral devices* (except diskettes and workstations) to ON.

    •   Switch workstations on and off as required.

    •   Always set the console POWER ON/OFF switch to ON.

---

*Use the applicable hardware reference manual.

5.   Switch the IPL MNL/AUTO switch (for manual or automatic mode) to the mode you require. (To load a device for your configuration frame, always set to AUTO.)

6.   Switch the POWER ON/OFF switch located behind the control panel door to ON. It turns on the console, integrated disks, and all diskettes.

ON/OFF Indicators	Display	System Action
ON: SEQ1, SEQ2, SEQ3, P-SEQ	HEALTH CHECK RUNNING BPU IMPL W08	IMPL procedure is in progress.
Then OFF: P-SEQ ON: PWR	START BPU IMPL W09 START	
	DMUX IOMP START	IOMP loading in progress.
OFF: SEQ1, SEQ2, SEQ3		IMPL procedure completed.

7.   Check the IPL switch.

   •   If in AUTO position (to load supervisor), the IPL takes place automatically up to the interactive IPL phase.

   •   If in MNL position (to load a device not in the configuration frame), perform the IPL procedure.

ON/OFF Indicators	Display	System Action
ON: RUN, WAIT, POWER ON: STOP, POWER	IPL01 screen	Waits for operator to perform IPL procedure
	Configuration frame	

System Power Turn-Off Procedures for Models 8 thru 20

1. Enter the SJ SHUT command.

2. Switch off the POWER ON/OFF switch (behind control panel door) to off. 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 workstation 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 the circuit breaker at rear of processor cabinet to OFF.

5. Switch the circuit breaker at rear of I/O cabinet to OFF.

6. Switch the circuit breaker at rear of I/O expansion cabinet (if used) to OFF.

Section 3
System Initialization

Initial Microprogram Load (IMPL) Procedure for Models 3 thru 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 power turn-on procedure, 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.

1. Initiate the IMPL procedure.

    a. Press and hold the FUNCTION key.

    b. Press the IMPL key.

The following message appears below the system state line (line 17) on the console workstation display screen:

```
IMPL=CDD?
```

The 3-digit keyin of the IMPL load *did* (device address) is specified as follows:

Device Address			
Device	Channel	Subchannel	Device Number
SYSRES integrated disk	1	0	0
All other disks	1	0	1-7*
Diskettes	3	2	0-3*

*Represents the actual physical unit number assigned to a selected disk or diskette drive.

2. Identify the load device and load IMPL and IPL.

   a. To load IMPL (phases 1 and 2) and the IPL using SYSRES, key in *did* 100 and press XMIT. The loading message is displayed on the system state line. Observe for error message if IMPL or IPL is unsuccessful.

      • If LOAD *ERROR STOP* is displayed, refer to the *System Messages Reference Manual* (UP-8076) to identify the error code and take appropriate action. If the error condition persists, record the error code and refer to the *Operations Guide* (UP-8859) for error definition and reporting procedures.

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

- If the IPL is unsuccessful and STOPPED *HPR* is displayed, refer to the *System Messages Reference Manual* (UP-8076) to identify the HPR code (INSTR=*hpr-instruction-code*) and take appropriate operator action. For an unrecoverable error, perform the manual IPL procedure to retry the IPL. If the error condition persists, record the error code and refer to the *Operations Guide* (UP-8859).

Proceed to step 1 of the Interactive IPL procedure.

b. To load from an alternate device

1) For IMPL phase 1, key in the alternate device 3-digit *did* and press XMIT.

2) The loading message is displayed on the system state line. Observe for error message if IMPL is unsuccessful. If error condition occurs, take operator action described in step 2a.

3) When IMPL phase 1 is complete, the following message is redisplayed below the system state line:

   IMPL=CDD?

4) For IMPL phase 2 and for IPL, press the XMIT key to use SYSRES. (If the IMPL or IPL is unsuccessful, refer to step 2a.) Proceed to step 1 of the Interactive IPL procedure.

5) Otherwise, for the second IMPL phase, key in the alternate device 3-digit *did* and press XMIT.

The loading message is displayed on the system state line. If the IMPL is unsuccessful, refer to step 2a.

When the IMPL is complete, the following message appears below the system state line:

    IPL=CDD?

Proceed with step 3 of the Manual IPL procedure.

Initial Program Load (IPL) Procedure for Models 3 thru 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 then 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 power turn-on procedure or the manual IMPL using SYSRES), and the manual IPL steps are completed for you. Then you only need to 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 IPL*nn* 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 procedure.

Caution

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

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

1. When unrecoverable STOPPED *HPR*, LOAD *ERROR STOP*, or IPL*nn* retry message is displayed during IPL:

   a. Press and hold the FUNCTION key.

   b. Press the IPL key and then go to step 2.

   When the unrecoverable STOPPED *HPR* message is displayed during job processing:

   a. Press and hold the FUNCTION key.

   b. Press the RESTART key.

2. The following message appears below the system state line (line 17):

   ```
   IPL=CDD?
   ```

   The 3-digit keyin of the IPL load *did* (device address) is specified as follows:

Device Address			
Device	Channel	Subchannel	Device Number
SYSRES integrated disk	1	0	0
All other disks	1	0	1-7*
Diskettes	3	2	0-3*

*Represents the actual physical unit number assigned to a selected disk or diskette drive.

3. Identify the IPL load device.

    a. To load IPL using SYSRES, key in *did* 100 and press the XMIT
        key. IPL messages are displayed on the system state line.
        Observe for error messages if IPL is unsuccessful.

        •   If the LOAD *ERROR STOP* message is displayed, refer to
            the *System Messages Reference Manual* (UP-8076), identify
            the error code, and take the appropriate operator action.
            Retry the manual IPL. If the error condition persists,
            record the error code and refer to the *Operations Guide*
            (UP-8859) for error definition and reporting procedures.

        •   If the STOPPED *HPR* message is displayed, refer to the
            System Messages Reference Manual (UP-8076) to identify
            the HPR code (INSTR=*hpr-instruction-code*) and take the
            appropriate operator action. For an unrecoverable error,
            repeat the manual IPL. If the error condition persists,
            record the error code and refer to the *Operations Guide*
            (UP-8859).

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

    b. To use an alternate load device (other than *did* 100) for the IPL,
        key in the alternate 3-digit *did* and press the XMIT key. When
        the alternate device is a diskette, proceed with step 1 of the
        Interactive IPL procedure. (If the IPL is unsuccessful, refer to
        the operator action in step 3a.)

When the alternate load device is a disk, the following message is displayed with the IPL=CDD= message below the system state line:

```
CYL=CCC?
```

Press the XMIT key and proceed to step 1 of the Interactive IPL procedure.

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

After the IPL load device is selected (either automatically or through manual IPL), the following IPL01 screen is displayed above the system state line.

```
IPL01 KEY IN AND TRANSMIT
SUPERVISOR NAME          (DEFAULT=SY$STD)IMPL/IPL
  L=S/A LOAD, Q=QUICK    (DEFAULT=S)
LOAD DEVICE ADDRESS      (DEFAULT=did)
SY$STD,S,did
```

The default *did* is variable; the load *did* used for the IPL is displayed or the default *did* 100 (SYSRES integrated disk) is used.

Adjust the INTENSITY control for a comfortable viewing level (if required) and then proceed with step 1.

1. Press the XMIT key if the standard supervisor SY$STD (*nnnnnn*), normal supervisor load option S (o), and IPL load device address (the default conditions) are to be used.

    If an alternate supervisor, load option, or device address is required, enter the complete format. The cursor (▚) is positioned at the point where you enter your alternate selection according to the following format:

    ```
    nnnnnn.o.did
    ```

(For an explanation of this parameter, consult the *Operations Guide* (UP-8859).)

Once you've entered your selection, press the XMIT key.

2. Observe that the IPL*nn* messages are displayed below the system state line if the supervisor load is unsuccessful.

    •   If an IPL*nn* message is displayed, refer to the *System Messages Reference Manual* (UP-8076) for the explanation and the appropriate operator action to take. When directed, retry the manual IPL by setting the console workstation to control mode and proceed to load the IPL. If the error condition persists, record the IPL*nn* error message and then refer to the *Operations Guide* (UP-8859) for error definition and reporting procedures.

    •   If the STOPPED *HPR* message is displayed, refer to the *System Messages Reference Manual* (UP-8076) to identify the HPR code (INSTR=*hpr-instruction-code*) and take the appropriate operator action. For an unrecoverable error, set the console workstation to control mode and then repeat the manual IPL from the beginning. If the error condition persists, record the error code and refer to the *Operations Guide* (UP-8859).

    •   If the *CHECK STOP* message is displayed, press the POCLR button under the console workstation table on the right side. POCLR clears main storage and then initiates the automatic IMPL/IPL sequence. Proceed with the Interactive IPL procedure.

3. Set the console workstation to console mode and then select supervisor options.

    a. Press and hold the FUNCTION key.

    b. Press the C/CSL key.

    c. Once you enter the date on the console workstation display screen, the cursor automatically positions itself at the next statement. For example, after you complete the date, the cursor moves to the TIME field. Don't press XMIT until you've completed all the statements you'll be responding to. You can bypass any statement by pressing the RETURN key. When you press the RETURN key, you accept the default for the statement(s) you skipped over. The MSG WAIT key does not have to be pressed before initiating any keyin during this procedure.

    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.

```
**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)
```

4. Press the XMIT key after you have responded to all the information requested in the preceding message statements.

   •   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 *System Messages Reference Manual* (UP-8076) for details.

       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:

```
(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
```

   •   If Y or N was selected for the JOB QUEUE message, the following message is displayed:

```
JOB QUEUE RECOVERED - n JOBS QUEUED
```

   •   If N was selected for the ERROR LOG message, 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 thru 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 unrecoverable 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 thru 20

1. Press the ESC key and then the M key to display the manual frame.

2. Press the L key and then the XMIT key to display the manual frame. The system is now reset.

3. Enter the IMPL option.

    • 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)

4. Press the XMIT key to display the manual screen.

Initial Program Load (IPL) Procedure for Models 8 thru 20

The IPL procedure loads and initializes supervisor, the resident portion of OS/3, in main storage. During initialization, in 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. For 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 thru 20

1. Make sure the system is idle. Press the ESC key to display the configuration frame and then press the M key to display the manual frame. IMPL procedure is now complete.

2. Press the L key and then the XMIT key to display the manual frame. The system is now reset.

3. Press the N key, enter the *did* of the device you're loading from, and then press the XMIT key. The IPL01 frame is displayed (shows supervisor name, load option, and the device address you specified).

4. Press the XMIT key to accept the values in the IPL01 frame. The OS/3 VERSION XX.XX.XX.SUPNAM supervisor initialization frame appears.

5. Press the XMIT key again to accept all the defaults in the OS/3 supervisor initialization frame. The following message is displayed if the disk cache feature is configured for your system:

    ```
    CM01 ENTER THE NUMBER OF 1024 BYTE BLOCKS OF MEMORY FOR DISK
    CACHE OR NONE, VALID VALUES IN THE RANGE 16 10247?
    ```

6. Enter NONE to disable the disk cache operation, or enter a 4-digit number (from 0016 through 1024) to assign the number of 1,024-byte blocks.

7. Check the screen. The following message should appear if you configured your supervisor with the transient work area feature:

    ```
    TRANSIENT WORK AREA IS INITIALIZED
    ```

    The IPL procedure is now complete. If the message did not appear, enter the TW command. The message should appear. The IPL procedure is now complete.

8. The following message appears:

    ```
    SYSTEM 80 OS/3 VERSION NO SUPNAM (System date format) HH:MM:SS
    ```

    The system is ready to process your jobs.

Manual Frame

```
ENTER  □
PROG LOAD(0-BFF)              CONTROL
N NORMAL                      U RUN
C CLEAR                       Q STOP
R OPER RECOVERY(0-BFF)        RESET
                             L SYSTEM
                             B BPU


ADR STOP(0-FFFFFFFF)          COMPUTE CTRL
M NORMAL                      P NORMAL
I STOP IA                     S STEP
A STOP ANY
                             CHECK CTRL
T TRACE                       H NORMAL
                             K STOP
W SENSE SW(0000-1111)
 -0000-                       V STORE STATUS
BPU STATU =S           HPR=99080801 00000000
INS=41D0C8C94820    PSW=00000000 3003A2D8      RLF=00000000
```

Configuration (Display) Frame

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


   E FRAME CHANGE        BPU        ONLI MICRO REV=A00


   **SPECIAL MODE***                     IOP0   IOP1   IOP2   IOP2
                         CHC=0           LMUX   GSEL    -      -
                         CHC=1     -      -      -      -      -
   AUTO IPL       OFF
   AUTO BPU RECOV OFF
   REMOTE CNSL    OFF                    BLK0   BLK1   BLK2   BLK3
   WATCH DOG TMR  ON     MMU             ON     ON     ON     ON
   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)
```

Section 4
Job Processing

Job Initialization Commands

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

Filing Job Control Streams (FILE)

$$
\underline{FILE} \quad \left[\left\{ \begin{array}{l} \text{(did)} \\ \text{([did],label)} \\ \text{(RDR,label)} \end{array} \right\} \right] \quad \Delta
$$

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

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

Running Job Control Streams (RUN/RV)

$$\left\{\underline{RUN}\quad\left[\begin{matrix}(\text{did})\\([\text{did}],\text{label})\\(\text{RDR},\text{label})\end{matrix}\right]\quad\Delta\left[\begin{matrix}\text{mod-name}[(\text{new-name})]\\(\text{new-name})\end{matrix}\right]\right\}$$

RVΔmod-name[(new-name)]

$$\left[\begin{matrix}:\text{alt-filename}\\:/\text{alt-filename},\ \begin{pmatrix}\text{RES}\\\text{RUN}\\\text{vsn}\end{pmatrix}\\:/\text{alt-filename},\left[,\ \begin{pmatrix}\text{RES}\\\text{RUN}\\\text{vsn}\end{pmatrix}\right],\ \text{read-password}\end{matrix}\right]$$

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

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

The RV command initiates reading of a prefiled 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 the RV command.

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.

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 the RUN switch on the 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)

$$
\left\{
\begin{array}{l}
\text{SI} \quad \left[\begin{array}{l} \text{(did)} \\ \text{([did],label)} \\ \text{(RDR,label)} \end{array} \right] \quad \text{\&module-name[new-name)]} \\[2em]
\text{SC}
\end{array}
\right\}
$$

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

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

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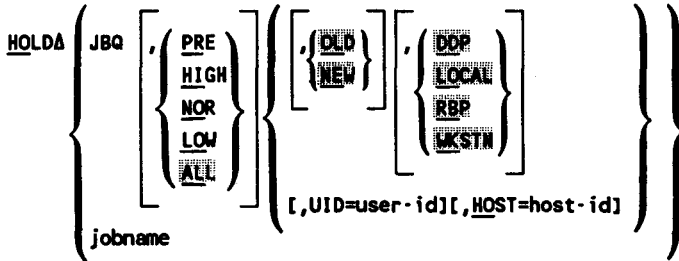
SC command initiates reading of job control stream that does not require use of input device to replace embedded data.

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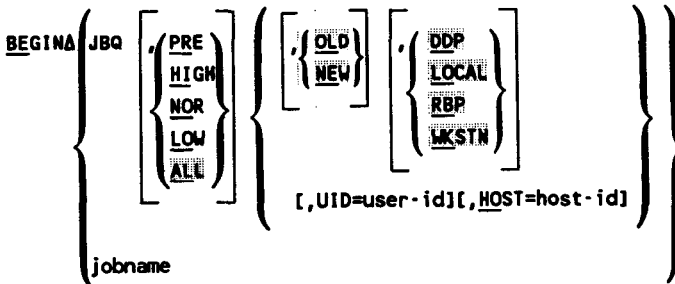
Job Scheduling Commands

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

Deferring Jobs Scheduled for Execution (HOLD)

```
HOLDΔ  | JBQ [ ,( PRE )] [,( OLD )] [,( DDP )]           |
       |    (  HIGH )     ( NEW )    ( LOCAL )           |
       {    (  NOR  )                ( RBP  )            }
       |    (  LOW  )                ( WKSTN )           |
       |    (  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 can be
interchanged. Scheduling remains deferred until jobs are reactivated via
BEGIN command.

Scheduling Deferred Jobs (BEGIN)

```
BEGINΔ | JBQ [ ,( PRE )] {[,( OLD )] [,( DDP )]}         |
       |    (  HIGH )      ( NEW )    ( LOCAL )          |
       {    (  NOR  )                 ( RBP  )           }
       |    (  LOW  )                 ( WKSTN )          |
       |    (  ALL  )                                    |
       |          [,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, locally, remotely, or workstation entered jobs. These additional parameters can be interchanged. Jobs remain deferred by HOLD command until specifically reactivated via BEGIN command.

Deleting Jobs from Scheduling Priority Queues (DELETE)

```
DELETE△ ⎧ JBQ, ⎧ PRE ⎫   ⎡ ⎧ , DDP  ⎫ ⎤              ⎫   [,LOG]
        ⎪      ⎪ HIGH ⎪   ⎢ ⎪   LOCAL ⎪ ⎥              ⎪
        ⎨      ⎨ NOR  ⎬   ⎢ ⎨   RBP   ⎬ ⎥              ⎬
        ⎪      ⎪ LOW  ⎪   ⎢ ⎩   WKSTN ⎭ ⎥              ⎪
        ⎪      ⎩ ALL  ⎭   ⎣                ⎦           ⎪
        ⎪                 [,UID=user-id][,HOST=host-id] ⎪
        ⎩ jobname                                       ⎭
```

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, locally, remotely, or workstation entered jobs may also be specified. Only jobs residing in a scheduling priority queue can be deleted. Specify the LOG command to print job log for all deleted jobs.

Displaying Jobs in Scheduling Priority Queues (DISPLAY)

```
DISPLAY△JBQ ⎡ , ⎧ 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 parentheses around jobname. Before a queue is displayed, a 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, a system output message stating that condition is displayed.

Changing Job Scheduling Priority (CHANGE)

$$\underline{\text{CHANGE}}\Delta \text{ jobname,} \left\{ \begin{array}{l} \underline{\text{PRE}} \\ \underline{\text{HIGH}} \\ \underline{\text{NOR}} \\ \underline{\text{LOW}} \end{array} \right\}$$

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)

PAUSEΔjobname[,jobstep-number]

Suspends processing of a job. This command may be issued at any time,
and job processing suspends immediately or following completion of the
specified jobstep number. Permits operator to mount new tape or disk
volume, replace paper in printer, or add cards to card reader. Suspended
job is reactivated via GO command.

Reactivating 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 job 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 a 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 priority.
(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 of a symbiont or transient.

Canceling Jobs in Progress (CANCEL)

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

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 the command is given. All subsequent job steps scheduled for job are also terminated. Job run library file for job is deleted. Specify D for dump, N for no dump; symbiont is a 2-character identification used to initiate the symbiont.

Soft Cancel of a User's Job (CJ)

$$\underline{CJ}\Delta \texttt{jobname} \left[, \left\{ \begin{array}{l} \texttt{D} \\ \texttt{N} \end{array} \right\} \right]$$

Terminates execution of a job only when it is executing under "normal" conditions. A normal condition means that the job is running under its own key, that no wait flags are set, and that external code is not being executed.

Stopping Execution of a Dump (END)

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

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

Terminating Jobs (STOP)

STOPΔjobname[,jobstep-number]

Provides an orderly termination of a specific job. If a jobstep number is
not specified, the job stops at the end of the current job step. If a jobstep
number is specified, the job stops after completion of the specified jobstep.

Selected Occasion Operator Commands

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

Displaying Portions of Main Storage (DISPLAY)

DISPLAYΔaddress[,jobname]

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

Displaying System Information (MIX)

$$
\text{MIX}\Delta
\begin{cases}
\text{DA} \left[, \begin{Bmatrix} \text{jobname} \\ \text{symbiont-name} \end{Bmatrix} \right] \\
\text{VI} \left[, \begin{Bmatrix} \text{did} \\ \text{c/ca/caa} \end{Bmatrix} \right] \\
\text{SQ} \\
\text{SI} \\
\text{DS[,did]} \\
\text{SC} \\
\text{FR} \\
\text{MM} \\
\text{EN} \\
\text{EL} \\
\text{HF (models 10, 15, and 20 only)}
\end{cases}
$$

Displays tables of different aspects of system information.

Reconstructing Console Display (REBUILD)

<u>REBUI</u>LD

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 Dayclock (SET CLOCK)

<u>SET</u>ΔC<u>L</u>OCK,hh:mm:ss

Resets time of day in system-simulated dayclock; for example, changes
from 24:00:00 to 00:00:00 at midnight.

Setting Date Field (SET DATE)

<u>SET</u>Δ<u>DA</u>TE,yy/mm/dd[,yyddd]

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).

Setting Error Log (SET ELOG)

$$\text{SET}\Delta\text{ELOG,} \left\{ \begin{array}{l} \left\{ \begin{array}{l} \text{ON} \\ \underline{\text{OFF}} \end{array} \right\} \left[, \left\{ \begin{array}{l} \underline{\text{ALL}} \\ \underline{\text{COMM}} \\ \underline{\text{MCHK}} \\ \text{IO} \\ \underline{\text{TERM}} \\ \underline{\text{CLOG}} \\ \underline{\text{RSTK}} \\ \underline{\text{MSE}} \\ \text{did} \end{array} \right\} \right] \\ \text{factor,} \left\{ \begin{array}{l} \underline{\text{RSTK}} \\ \underline{\text{MSE}} \end{array} \right\} \end{array} \right\}$$

Consult your Unisys 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 YELOG file on SYSRES. IPL procedure automatically turns on error logging and all error logging functions; previously entered changes to the error log are lost when the systems 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 suppressed. 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 YRUN file and the SYSRES disk must be similar device types (both 8414s, for example).

$$\left\{ \begin{array}{l} \text{RV\u0394ONUERL} \\ \text{RV\u0394ONELAN} \end{array} \right\}$$

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

Setting Physical Unit Blocks (SET IO)

$$\underline{\text{SET}}\Delta\text{IO,did,} \left\{ \begin{array}{l} \text{AV} \\ \underline{\text{CON}}\text{SOLE} \\ \underline{\text{DO}}\text{WN} \\ \text{EON} \\ \text{EOF} \\ \underline{\text{FE}}\text{A,type-code} \\ \underline{\text{HOM}}\text{E} \\ \text{NA} \\ \underline{\text{NO}}\text{SHARE} \\ \underline{\text{RD}}\text{R} \\ \underline{\text{SH}}\text{ARE} \\ \underline{\text{TY}}\text{PE,type-code} \\ \text{UP} \end{array} \right\} \left[\begin{array}{l} \text{,O} \\ \text{H} \end{array} \right]$$

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 the 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)

AVΔdid[,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 $\left\{ \begin{array}{l} JS[,jobname] \\ SY[,symbiont-name] \end{array} \right\}$

Displays on the console screen the 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)

SYSDUMP

Dumps entire contents of main storage to YDUMP file on SYSRES. Use SYSDUMP whenever system dump is required without supervisor reloading (no re-IPL required). After main storage dumps, the SYSDUMP*nn* job is automatically initiated to print the SYSDUMP file (where *nn* is a unique number assigned by the system). The SYSDUMP file locks until SYSDUMP*nn* completes.

UNISERVO is a registered trademark of Unisys Corporation.

To inhibit dump printing, enter NONE when SYSDMP*nn* message requests type of dump to print. If you delete SYSDMP*nn* from job queue or cancel it before SD01 output message, enter the SET SY command to unlock YDUMP file.

Setting the YDUMP File to Unlocked Condition (SET SY)

SET⌂SY,LOFF

Unlocks the YDUMP file after an SY command or system error locks it.

Setting Main Storage Condition (SET MEM)

$$\text{SET}\triangle\text{MEM,} \left\{ \begin{array}{l} \text{DOWN} \\ \text{UP} \end{array} \right\} \text{,address} \left[\text{,} \left\{ \begin{array}{l} \text{no-of-blocks} \\ \underline{1} \end{array} \right\} \right]$$

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.

Changing Resource Management Memory and Job Initiation Limits (LIMITS)

```
LIMITSΔ  ⎡SYMBMEM=⎡NLMT  ⎤⎤
         ⎢        ⎣5-100 ⎦⎢
         ⎣              ⎦

         ⎡,INTMEM=⎡NLMT  ⎤⎤
         ⎢        ⎣5-100 ⎦⎢
         ⎣              ⎦

         ⎡,JOBMEM=⎡NLMT  ⎤⎤
         ⎢        ⎣0-100 ⎦⎢
         ⎣              ⎦

         ⎡,MAXLOGONS=⎡1-99⎤⎤
         ⎢           ⎣5   ⎦⎢
         ⎣                ⎦

         ⎡,UPTERMINAL=⎡tttt⎤⎤
         ⎢            ⎣*ALL⎦⎢
         ⎣                 ⎦
         [,MAXJOBS=1-n]
         [,MAXWSJOBS=0-n]
         [,MAXSWSJOBS=0-n]
         [,MAXINTUSERS=0-255]
         [,MAXENTERS=0-255]
         [,MAXRUNSYMBS=1-10]
```

Changes the resource management limits for memory usage and job initiation that were set at SYSGEN. This command can also be used to reactivate (UP) one or all terminals.

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 can control are the percentage of main memory to be used for symbionts and interactive and batch jobs; the maximum number of concurrent jobs, concurrent workstation jobs, and concurrent jobs on any single workstation; the maximum number of logged-on interactive users; the maximum number of concurrent batch tasks initiated with the ENTER command; the maximum number of concurrently executing run symbionts; and the maximum number of invalid logon attempts before a terminal is deactivated.

The LIMITS command may be issued any time during the session.

Setting Unattended Console Feature (SET UNCON)

SETΔUNCON, $\begin{bmatrix} ON \\ OFF \\ time \end{bmatrix}$

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)

SHUTDOWNΔ $\begin{bmatrix} SYSTEM \\ DDP \end{bmatrix}$

Terminates system activity or distributed data processing (DDP) in an orderly manner. No new files, jobs, or functions are started. Shutdown occurs only when all current activities cease.

Verifying and Correcting the VTOC (VV)

```
VVΔ│did  │,┌END ┐│[,ALT]│
   │     │ │FIX │       │
   │     │ ┤ECnn├       │
   │     │ │COPY│       │
   │     │ └ALT ┘       │
```

Performs a thorough analysis of the VTOC, looking for any inconsistencies among the labels in the VTOC. See the *Operations Guide* (UP-8859).

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.

PACK indicates that the VTOC is to be packed (i.e., reorganized).

ALT directs all commands to alternate VTOC.

Verifying the VTOC during AVR (SET VV)

```
SETΔVV,┌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 *Installation Guide* (UP-8839).

Discarding System Messages (FLUSH)

FLUSHΔ [*ALL
         msg-prefix]

Discards messages queued for delivery to the workstation. To discard all messages, specify *ALL. To discard only messages with a specific prefix, specify the applicable message prefix.

Initiating a Transient Work Area Feature (TW)

TWΔ[sz=nnn]

Initiates the transient work area feature. This feature can improve system performance by storing the most recently used transients in an area of main storage. The optional *sz* parameter specifies the number of 1,024-byte blocks in the work area. If the *sz* parameter is omitted, a 65K work area is allocated by default.

Setting Memory Consolidation Conditions (SET MC)

SETΔMC, [ON
          OFF]

Enables or disables the memory consolidation (MEMCON) feature. When enabled, MEMCON causes movable jobs to be consolidated at the highest possible main storage addresses, thus creating the largest possible free regions. A job cannot be moved unless it is inactive.

A SET MC,OFF keyin does not affect ongoing MEMCON operations.

Setting Job Immovability Conditions (SET IM)

SETΔIM, [ON
          OFF]

Enables or disables the job immovability (IMVJOB) feature. When enabled, IMVJOB allows relocation of immovable jobs to more efficient main storage locations. IMVJOB requires ROLLOUT to be configured for the current supervisor.

Displaying Buffer Pool Information (DI BI)

DI BI

Displays system buffer pool information at the console. This information includes the expansion region size, disk cache buffer size, transient cache buffer size, job/symbiont buffer size, and various dynamic buffer usage information.

Enabling/Disabling the Console Alarm Beeper (SET AL)

SETΔALARM, $\begin{bmatrix} ON \\ OFF \\ ONE \end{bmatrix}$

Controls the operation of the console alarm beeper. The ON parameter causes the beeper to sound continuously when an alarm condition occurs. The OFF parameter disables the beeper. The ONE parameter causes the beeper to sound once when an alarm condition occurs.

Enabling/Disabling the Console Video Clock (SET VC)

SETΔVC, $\begin{bmatrix} ON \\ OFF \end{bmatrix}$

Enables and disables display of the time-of-day clock at the upper right corner of the console screen. The ON parameter displays the clock and enables clock incrementation every 10 seconds. The OFF parameter disables clock incrementation and blanks the clock display at model 8 through 20 consoles; the clock is not blanked out on model 3 through 6 consoles.

Section 5
Spooling Services

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 the following.

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.

> PRINT
>> Subfile output is to the designated printer.

> PUNCH
>> 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.

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:

$$\underline{ACCT}= \begin{Bmatrix} acctno \\ * \end{Bmatrix}$$
1-4 characters

BNumb=n

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

$$\underline{CART}= \begin{Bmatrix} cartridge-id \\ * \end{Bmatrix}$$
1-8 characters

DDPID=host-id

1-4 characters (output writer BX function only)

DVC= ⎡770 ⎤
or   ⎢776 ⎥
DEV= ⎢789 ⎥
     ⎢PPC ⎥
     ⎨9246 ⎬
     ⎢ANY ⎥
     ⎢CLASS1⎥
     ⎢CLASS2⎥
     ⎢CLASS3⎥
     ⎣AUX ⎦   NOTE: AUX is valid for DEV only.

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

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

UID= user-id
1-6 character identification of the user on whose behalf the spool subfile was created.

UID= OS3CTR (or CENTRAL)
Designates subfiles that were directed to a central printer. OS3CTR and CENTRAL are equivalent terms.

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)

$$
\underline{\text{BEGIN}}\Delta\text{ACT}\left[\text{ , }\begin{Bmatrix} \underline{\text{ALL}} \\ \text{LOG} \\ \underline{\text{PR}}\text{INT} \\ \underline{\text{PU}}\text{NCH} \end{Bmatrix}\right]
$$

Removes HOLD condition 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   )]  [,modifier-1,...,modifier-n]
            {  DDPPR   }
            {  DDPPU   }
            {  LOG     }
            {  PRINT   }
            {  PUNCH   }
            {  RBPPR   }
            {  RBPPU   }
            (  RDR     )

            [,OUT= {DID}]
            [      {NO }]
```

Removes HOLD condition 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 for 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.

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=*did* specifies the designated device that the output is to be sent to (printer, tape, disk, or punch).

OUT=NO specifies that output writer should not be called as a result of releasing the spool subfiles from a hold state. If this parameter is used, the command keyin can be up to 60 characters, including commas.

```
BEGINΔSPL  ⎡,⎡LOG  ⎤  ⎤ [,modifier-1,...,modifier-n],OUT=did
           ⎢  ⎨PRINT⎬  ⎢
           ⎣  ⎣PUNCH⎦  ⎦
```

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 condition 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)

<u>BRKPT</u>Δ $\left\{ \begin{matrix} P \\ I \end{matrix} \right\}$, $\left\{ \begin{matrix} \underline{PR}INT \\ \underline{PU}NCH \end{matrix} \right\}$,JOB=jobname[,modifier-1,...,modifier-n] [,<u>HO</u>LD]

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    ⎫⎤ [,HOLD]
            ⎢     ⎨ DISK    ⎬⎥
            ⎣     ⎩ DISKETTE ⎭⎦
```

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,ON command in effect).

Breakpointing the Workstation Log File (BRKPT LOG)

```
BRKPTΔLOG ⎡,OUT=⎧ TAPE    ⎫⎤[,HOLD]
          ⎢     ⎨ DISK    ⎬⎥
          ⎣     ⎩ DISKETTE ⎭⎦
```

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

```
[,COPIES=nnn] [,DVC=[770                    ]]
              [     [776                    ]]
              [     [789                    ]]
              [     [9246                   ]]
              [     [PPC                    ]]
              [    {ANY                     }]
              [     [CLASS 1                ]]
              [     [CLASS 2                ]]
              [     [CLASS 3                ]]
              [     [AUX,ID=[*       ]      ]]
              [     [       [user-id]       ]]
```

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.

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,
$$
\left[\left\{ \begin{array}{l} \underline{\text{ALL}} \\ \text{DDPPR} \\ \text{DDPPU} \\ \text{LOG} \\ \underline{\text{PR}}\text{INT} \\ \underline{\text{PU}}\text{NCH} \\ \text{RBPPR} \\ \text{RBPPU} \\ \text{RDR} \end{array} \right\} \right]
$$
[,modifier-1,...,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
$$
\left[, \left\{ \begin{array}{l} \underline{\text{ALL}} \\ \text{DDPPR} \\ \text{DDPPU} \\ \underline{\text{PR}}\text{INT} \\ \underline{\text{PU}}\text{NCH} \\ \text{RBPPR} \\ \text{RBPPU} \end{array} \right\} \right]
$$
[,modifier-1,...,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)

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

Displays the number of completed files (queued for processing, on hold, and in progress) 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.

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

Displaying the Console Log Status (DISPLAY CNSLG)

```
DISPLAYΔCNSLG
```

Displays the number of lines accumulated in current console log file.

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 $\left[\begin{array}{c} , \left\{ \begin{array}{l} \text{ALL} \\ \text{LOG} \\ \text{PRINT} \\ \text{PUNCH} \end{array} \right\} \end{array}\right]$

Places files on hold that are 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)

HOLDΔSPL
$$\left[, \left\{ \begin{array}{l} \text{ALL} \\ \text{DDPPR} \\ \text{DDPPU} \\ \text{LOG} \\ \underline{\text{PR}}\text{INT} \\ \underline{\text{PU}}\text{NCH} \\ \text{RBPPR} \\ \text{RBPPU} \\ \text{RDR} \end{array} \right\} \right]$$ [modifier-1,...,modifier-n]

Places closed files on hold 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
$$\left[, \left\{ \begin{array}{l} \text{ALL} \\ \text{LOG} \\ \underline{\text{PR}}\text{INT} \\ \underline{\text{PU}}\text{NCH} \end{array} \right\} \right]$$

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)

$$\underline{SET}\Delta SPL, \left\{ \begin{array}{l} \underline{BURST}[,modifier] \\ \underline{NB}URST \end{array} \right\}$$

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)

$$\underline{SET}\Delta SPL, \underline{CNSLG} \left[, \left\{ \begin{array}{l} ON \\ OFF \end{array} \right\} \right] \left[, \left\{ \begin{array}{l} \underline{RETAIN} \\ \underline{DE}LETE \end{array} \right\} \right] \left[, \left\{ \begin{array}{l} \underline{PRINT} \\ \underline{NO}PRINT \end{array} \right\} \right]$$

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 was issued.

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 Printing Specifications (SET SPL,NOACT/NOLOG/NOPRINT/PRINT)

```
SETΔSPL, ⌠NOACT   ⌡
         │NOLOG   │
         │NOPRINT │
         ⌡PRINT   ⌠
```

Specifies which job log records are to be printed at the end of each job. NOACT specifies not to print job accounting (A) records; NOLOG specifies not to print log (L) records; NOPRINT specifies not to print job accounting (A) and log (L) records; and PRINT specifies printing of all job log (A and L) records.

JOBACCT=YES must be specified at SYSGEN to control A record printing.

Setting Spool File Printout Formats (SET SPL, HEADER/NOHDR)

SET∆SPL, [HEADER]
[NOHDR]

Prints (HEADER) or suppresses (NOHDR) 3-page header preceding each spooled print file.

Setting Forms Change Messages (SET SPL,TEST/NOTEST)

SET∆SPL, [TEST]
[NOTEST]

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

$$IN[(did)]\Delta\left[\begin{Bmatrix} 51 \\ 66 \end{Bmatrix}\right]$$

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

```
IN([did],label)∆[RETAIN][,DELETE]
```

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.

Use only with single-volume input.

Spooling Tape Input Files

`IN(did)`

Loads input reader for spooling tape input. A // DATA job control statement must precede jobs or data files to be spooled.

Used only with single-volume input.

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

$$\left\{ \begin{array}{l} \text{PD} \\ \text{PR} \\ \text{PU} \end{array} \right\} \text{[(did)]}\Delta\text{[function-code][,modifier-1,...,modifier-n]}$$

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 a 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 the following paragraphs), or press XMIT key if no additional functions are required.

Command modifiers further identify files to be processed.

```
PRA[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 a 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 Operating Guide* (UP-9975) for more details) or press the XMIT 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 XMIT 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 the output writer is waiting for a response to a solicited message.

- Solicited message reply format

  `ΘiΔfunction-code`

  Used to respond to function request from output writer. Both job number (Θ) 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

```
00Δ ⎧ PD ⎫ [(did)] function-code
    ⎨ PR ⎬
    ⎩ PU ⎭
```

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

```
⎧ BURST ⎫ Δ[,modifier-1,...,modifier-3]
⎨ BX    ⎬
⎩       ⎭
```

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.

BYPASS

Terminates processing of the current file. Current file is closed and output writer continues processing next file. Bypassed files can be restarted later.

COPIES,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.

DELETE

Deletes the file being processed and proceeds with next file to be processed.

DEVICE[,did]

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 the same characteristics as the current device replaces the current device. The new device remains in use as long as the same copy of output writer remains in main storage.

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.

If some form of restart is to be performed prior to switching devices, enter the RESTART function before entering the DEVICE function.

DISPLAY

Displays the status of the current file on the console screen. The information displayed is

1. File name
2. Job name
3. Program name
4. Job step number

5. Current page (card) number
6. Total pages (cards) in file
7. Number of remaining copies
8. Existence of a breakpoint

Function is ignored if no file is open.

<u>HALT</u>

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.

<u>HOLD</u>

Places the current file in a HOLD condition and begins processing next file.

Files in HOLD condition are not available for processing until released by BEGIN command.

$$\text{INPUT,did[,B]} \quad \left[, \begin{cases} \text{RET} \\ \text{REL} \end{cases} \right]$$

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.

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.

Retains (RET) redirected print and punch output on disk or diskette after processing. Also releases (REL) redirected output previously retained. After processing, released files are deleted.

INPUT function cannot be used with PD.

<u>NBURST</u>

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.

<u>RETAIN</u>

Retains currently active file in a HOLD condition in spool file after it is processed. The retained file is unavailable for additional processing until released via the BEGIN command. (Otherwise, delete the retained file via the DELETE command.)

<u>RESTART</u> $\begin{bmatrix} ,nnn \\ ,\underline{PA}GE,nnnn \\ ,\underline{CA}RD,nnnn \end{bmatrix}$

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 the DEVICE function.

<u>SD</u>

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.

$$\underline{SK}IP \left[, \begin{cases} nnnn \\ \underline{PAGE},nnnn \\ \underline{CARD},nnnn \end{cases} \right]$$
$$\underline{LT} \quad ,nnnn \quad (lines \quad only)$$

Directs output writer to skip forward a specific number (*nnnn*) of pages or cards or to skip forward to a specific page number (PAGE,*nnnn*) or card number (CARD,*nnnn*). After positioning, request is made for another function.

SKIP cannot be used with PD.

<u>ST</u>OP[,<u>PAGE</u>]

Directs output writer to stop processing. If PAGE is omitted, output writer terminates immediately. If PAGE is included, output writer terminates after printing the entire 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 job 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 the 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$LOG program is executed by using the RUN command with a job control stream (named DUMPLOG for disk or DUMPLOGT for tape) supplied by Unisys. The operator also uses the RUN command to execute the JOBLOG program. Using the SYSLOG file as input, JOBLOG calls on the OS/3 independent sort/merge routine to create a sorted SYSLOG output file. After the sorting process is complete, JOBLOG uses the sorted file to produce the accounting report. For a detailed description of SL$LOG program, see the *Spooling and Job Accounting Operating Guide* (UP-9975).

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

RUNΔDUMPLOGT $\left[, \left[,D= \left\{ \begin{matrix} ACT \\ LOG \end{matrix} \right\} \right] \left[,V= \left\{ \begin{matrix} vsn \\ SYSLOG \end{matrix} \right\} \right] \left[,C= \left\{ \begin{matrix} Y \\ N \end{matrix} \right\} \right] \right]$

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

D= $\left\{ \begin{matrix} ACT \\ LOG \end{matrix} \right\}$

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

V= $\left\{ \begin{matrix} vsn \\ SYSLOG \end{matrix} \right\}$

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

C= $\left\{ \begin{matrix} Y \\ N \end{matrix} \right\}$

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 $\left[,D= \left\{ \begin{matrix} ACT \\ LOG \end{matrix} \right\} \right]$

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= $\left\{ \begin{matrix} \text{ACT} \\ \text{LOG} \end{matrix} \right\}$
> Specifies accounting (A) records (ACT) or log (L) and workstation (W and R) records (LOG) are transferred. If omitted, all are transferred.

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

RUNΔDUMPLOG $\left[,,D= \left\{ \begin{matrix} \text{ACT} \\ \text{LOG} \end{matrix} \right\} \right]$

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

D= $\left\{ \begin{matrix} \text{ACT} \\ \text{LOG} \end{matrix} \right\}$
> Specifies accounting (A) records (ACT) or log (L) and workstation (W and R) records (LOG) are transferred. If omitted, all are transferred.

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

RUNΔDUMPLOG,,F=INIT $\left[,D= \left\{ \begin{matrix} \text{ACT} \\ \text{LOG} \end{matrix} \right\} \right]$

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= $\left\{ \begin{matrix} \text{ACT} \\ \text{LOG} \end{matrix} \right\}$
> Specifies accounting A records (ACT) or log (L) and workstation (W and R) records (LOG) are transferred. If omitted, all are transferred.

Running JOBLOG Using Tape Input (RUN JBLOGT)

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

Sorts tape file input to produce job accounting report.

V= $\left\{ \begin{matrix} \text{vsn} \\ \text{SYSLOG} \end{matrix} \right\}$
> Identifies volume serial number of tape containing job accounting file. If omitted, SYSLOG is used.

S= $\left\{ \begin{matrix} A \\ B \\ C \end{matrix} \right\}$
> 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)

$$\underline{RUN}\Delta JBLOG \left[,,V=\begin{Bmatrix} vsn \\ RES \end{Bmatrix} ,L=\begin{Bmatrix} file\text{-}identifier \\ SYSLOG \end{Bmatrix} ,S=\begin{Bmatrix} A \\ B \\ C \end{Bmatrix} \right]$$

Sorts disk file input to produce job accounting report.

$V=\begin{Bmatrix} vsn \\ RES \end{Bmatrix}$

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

$L=\begin{Bmatrix} file\text{-}identifier \\ SYSLOG \end{Bmatrix}$

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

$S=\begin{Bmatrix} A \\ B \\ C \end{Bmatrix}$

  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 Tape for the Console Log SYSLOG File (RUN DUMPLOGT)

$$\underline{RUN}\Delta DUMPLOGT,,D=CON \left[,V= \left\{ \begin{array}{l} vsn \\ \mathbf{SYSLOG} \end{array} \right\} \right] \left[,C= \left\{ \begin{array}{l} \mathbf{Y} \\ N \end{array} \right\} \right]$$

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

D=CON
> Specifies only console log (C) records are transferred.

V= { vsn
     SYSLOG }
> Identifies volume serial number of tape to be used. If omitted, SYSLOG is used.

C= { Y
     N }
> Specifies whether checkpoint records are desired. If omitted, checkpoint records are specified.

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

$$\underline{RUN}\Delta DUMPLOG,,F=ALLOC,D=CON$$

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 only console log (C) records 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 only console log (C) records are transferred.

Section 6
Integrated Communications Access Method

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 SYSGEN. The command format to load ICAM is:

$$\left\{ \begin{matrix} Cn \\ Mn \end{matrix} \right\} \Delta[\text{KEEP}]$$

Loads the specified ICAM module to handle the communications task required, where n is a number from 1 to 9. After the module is loaded, the following output message is displayed:

```
ICAM X.X READY
```

Changing the ICAM Name (SET IC)

$$\underline{SET}\Delta IC, \begin{Bmatrix} Cn \\ Mn \\ C? \end{Bmatrix}$$

Changes the name of the ICAM symbiont (C1-C9 or 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 GUST program, ML$$GI, 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
can enter an unsolicited message to shut GUST down.

Running the Global User Service Task Job

$\underline{RUN}\Delta$jobname

Runs the GUST job (*jobname*) to initiate execution of ML$$GI program.

Respond to ML$$GI output messages to provide the information required
to initialize the global network.

Terminating the Global User Service Task Job

00Δ⎡Cn⎤ΔGUΔS,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:

00Δ⎡Cn⎤ΔCCΔf,⎡xxxx⎤,nnnn
　　⎣Mn⎦　　　⎣ccpp⎦

⎡Cn⎤
⎣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), terminal (T), or LOCAP (U) .

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

ccpp
   Is the 4-character address: *cc* is an input/output microprocessor (IOMP) channel number and *pp* is a single-line communications adapter (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:

00Δ ⎰Cn⎱ΔUPΔL,xxxx,nnnn
    ⎰Mn⎱
> Marks line specified as available (up).

00Δ ⎰Cn⎱ΔDOΔL,xxxx,nnnn
    ⎰Mn⎱
> Marks line specified as unavailable (down).

00Δ ⎰Cn⎱ΔUPΔT,xxxx,nnnn
    ⎰Mn⎱
> Marks terminal specified as available (up).

00Δ ⎰Cn⎱ΔDOΔT,xxxx,nnnn
    ⎰Mn⎱
> Marks terminal specified as unavailable (down) and aborts any current session.

00Δ ⎰Cn⎱ΔUPΔP,xxxx,nnnn
    ⎰Mn⎱
> Marks port specified as available (up).

00Δ ⎰Cn⎱ΔDOΔP,xxxx,nnnn
    ⎰Mn⎱
> Marks port specified as unavailable (down).

00Δ ⎰Cn⎱ΔCNΔL,xxxx,nnnn
    ⎰Mn⎱
> Notifies ICAM that dialing is completed on switched line specified.

00Δ ⎰Cn⎱ΔCNΔL,ALL,nnnn
    ⎰Mn⎱
> Notifies ICAM that dialing is completed on all switched lines.

00Δ ⎰Cn⎱ΔSTΔL,llll,cccc
    ⎰Mn⎱
> Displays status of a communications line (*llll*) in a CCA (*cccc*).

00Δ[Cn]ΔSTΔL,*ALL,cccc
   [Mn]

   Displays status of all communications lines in a CCA (*cccc*).

00Δ[Cn]ΔSTΔT,tttt,cccc
   [Mn]

   Displays status of a terminal/workstation (*tttt*) in a CCA (*cccc*).

00Δ[Cn]ΔSTΔU,uuuu,cccc
   [Mn]

   Displays status of a LOCAP file (*uuuu*) in a CCA (*cccc*).

Entering a Packet-Switched Public Data Network

Packet-switched public data network console keyins have the following format:

00Δ[Cn]ΔccccΔnnnn,llll,dddd
   [Mn]

[Cn]
[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 keyin.

The following are packet-switched public data network console keyins:

00Δ⌈Cn⌉ΔSTATΔnnnn,llll,dddd
⌊Mn⌋
    Displays the level 2 status of the link on the operator's console.

00Δ⌈Cn⌉ΔCONNΔnnnn,llll,dddd
⌊Mn⌋
    Establishes a connection to the level 2 link.

00Δ⌈Cn⌉ΔDISCΔnnnn,llll,dddd
⌊Mn⌋
    Drops a connection to the level 2 link.

00Δ⌈Cn⌉ΔTESTΔnnnn,llll,dddd
⌊Mn⌋
    Initiates level 2 self-testing procedures.

Section 7
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 8,189 to 32,767 bytes.

You can include the required function as a parameter with the SU/TU command. A spooling parameter can also be entred 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.

Initializing the System Utility Symbiont

$$\left\{ \begin{array}{l} SU \\ TU \end{array} \right\} \Delta \text{function-code} \left[, \left\{ \begin{array}{l} H \\ N \\ R \\ Y \end{array} \right\} \right]$$

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 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
(With Spooling) nn?SUnnnn ENTER REQUIRED FUNCTION AND SPOOL OPTION [,H,N,R,Y] DEFAULT=Y	nn function-code, $\begin{Bmatrix} H \\ N \\ R \\ Y \end{Bmatrix}$
If the SPOOL option is incorrectly entered, the message is displayed: nn?SUnnnn IS $\begin{Bmatrix} \text{PRINTED} \\ \text{PUNCHED} \end{Bmatrix}$ OUTPUT TO BE SPOOLED FROM SU H,N,R,Y	nn $\begin{Bmatrix} H \\ N \\ R \\ Y \end{Bmatrix}$
(Without Spooling) nn?SUnnnn ENTER REQUIRED FUNCTION	nn function-code

Terminating the System Utility Symbiont

Message Entry	Symbiont Response (Messages)	Description
nn EOJ	nnΔSUnnnn SYSTEM UTILITY SYMBIONT ENDED	Terminates symbiont. Reply is function request; ENTER REQ FUNCTION
00 {SU TU} EOJ	nnΔSUnnnn SYSTEM UTILITY SYMBIONT ENDED	Unsolicited entry used to terminate symbiont immediately (before function is completed)
00 {SU TU} END	nnΔSUnnnn 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

Function Codes

CC
Reproduces cards punched in Hollerith code.

CCB
Reproduces cards punched in binary and Hollerith code.

CCS

Reproduces and resequences source programs.

CT

Writes cards to tape in unblocked format.

CTR

Writes cards to tape in blocked format.

CP

Lists cards.

CH

Lists cards containing compressed mode.

JCP

Punches cards from the system console.

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:

      nnΔSUnnnn USE READER did

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

nnΔSUnnnn NO READER AVAILABLE

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

nnΔSUnnnn NO $\left\{\begin{array}{l} \text{PUNCH} \\ \text{TAPE} \\ \text{PRINTER} \end{array}\right\}$ AVAILABLE

Note: *All card input files must be terminated by a card with END OF DATA punched into columns 1 through 11.*

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 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.

Operator Communications (cont.)

Function Codes	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 END and transmit immediately.

Tape Utility Functions

Function Codes

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 a tape.

TC

Punches cards from a tape.

INT

Preps a tape.

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.

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.

Identifying Tape Unit to Symbiont (Tape Addressing)

Enter the tape unit identification code in the following format:

cuummb

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.)

Operator Communications

Function Codes	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).

continued

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
TT (cont.)	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.
	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.)	Enter the volume serial number for the new output tape.
	USER LABEL RESTRICTIONS APPLY. SEE UP-8072	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.
	nn?SUnnnn END OF VOLUME? Y OR N	Enter Y to write the second marked tape after the file. Enter N if it is not to be written.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
TH	nn?SUnnnn CUUMMB - INPUT TAPE B=BLK CNT	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.
	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 is 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 is printed.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
	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 format.
TPR	Identical to the THR function	Identical to the THR function except the output is in character format rather than character and hexadecimal format.
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 enter C if data is character.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
TRS (cont.)	nn?SUnnnn ENTER 10 BYTES, 1 CHAR PER BYTE	Enter the actual data 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 (1-6 digits). If less than 6 digits entered, the new volume serial number is left-justified and space-filled on the right.
	nnΔSUnnnn ENTER NEW FILE LABEL nn?SUnnnn XXXXXXXXXXXXXXXXX	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.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
BSF	nn?SUnnnn CUUMM - OUTPUT TAPE	Enter tape unit device address and mode setting of the tape to be spaced backward.
FSR	nn?SUnnnn CUUMM - OUTPUT TAPE	Enter tape unit device address and mode setting of the tape to be spaced forward.
	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).
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.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
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

Function Codes

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.

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.)

Operator Communications

Function Codes	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.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
DD (cont.)	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	Enter the volume serial number or the disk unit or the format label diskette device address of the disk pack whose VTOC is to be printed and the particular option desired: 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

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
SVT	nn?SUnnnn ENTER DVC OR VSN OR END	Enter the disk unit or the format label diskette device address or the volume serial number of the VTOC to be printed. Otherwise, enter END to terminate the SVT function.
AVX	nn?SUnnnn ENTER DEVICE ADDRESS	Enter the disk unit or the format label diskette device address of the disk pack or the format label diskette whose available extents are to be displayed.

Data Set Label Diskette Utility Functions

Function Code

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).

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 the DD diskette function code.

4. Enter spooling option; otherwise, default is Y. (Applicable if spooling is configured.)

Operator Communications

Function Codes	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.

Operator Communications (cont.)

Function Codes	Symbiont Message	Operator Reply
DD Printing Unblocked Format (cont.)		
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.
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.

Section 8
Interactive Services

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 Programming and Operations Quick-Reference Guide* (UP-9972). These commands and messages enable you to exercise control over the interactive OS/3, all jobs within the system, all workstation users (local locations), and all terminal users (local and terminal locations).

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.

Sending Messages to Users (TELL)

```
TELLΔ[ALL     ],'text'
     [user-id]
```

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

Asking Questions of Users (ASK)

```
ASKΔuser-id,'text'
```

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

Displaying System Status (STATUS)

```
STATUSΔ[ [JOBS          ] ]
        [ [FUNCTIONS     ] ]
        [ [RESOURCES     ] ]
        [ {TERMINALS     } ]
        [ [TERMINALS[,user-id]] ]
        [ [VOLUMES       ] ]
        [ [LIMITS        ] ]
```

Displays the volumes currently in use; the status of active workstations,
terminals, jobs, and functions; the status of system resources in use; and
system resource management limits. If a partial or complete user-id (one
to six characters) is entered following the TERMINALS parameter, status
is displayed for all terminals that are active with that partial or complete
user-id.

Running Interactive Sessions as Batch Jobs (ENTER)

The ENTER command is used to run a workstation or terminal user interactive session as a batch run. Sessions may be entered from a library file disk, 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 initiate interactive services for terminals when ICAM and GUST are ready and no workstation entry has automatically loaded them.

Displaying Log File (RECALL)

```
RECALLΔ[LASTΔnn          ][,prefix]
        [hh:mm:ss-hh:mm:ss]
```

Displays all or part of your log file. You can recall a number of messages (LAST *nn* parameter) or you can recall the entire log contents for a particular time period (minute (*mm*) and second (*ss*) entries are optional). The optional prefix parameter allows you to recall only those messages that begin with the prefix (up to eight characters).

RECALL only uses available lines on the screen.

Modifying Bulletin and/or Log Values (SET IS)

```
SETΔIS, ⎡BULLDEF⎤ , ⎡YES⎤
        ⎢BULLOVR⎥   ⎣NO ⎦
        ⎢WLOGDEF⎥
        ⎣WLOGOVR⎦
```

The BULLDEF and WLOGDEF parameters allow you to modify the bulletin and log default settings in the logon menu. The YES or NO parameter becomes the default setting.

The BULLOVR and WLOGOVR parameters allow you to specify whether interactive users can override the bulletin and log default settings in the logon menu.

Terminating User Tasks or Sessions (REMOVE)

```
REMOVEΔ ⎡task-id⎤
        ⎨user-id⎬
        ⎣ALL    ⎦
```

Terminates a single command for a specific task, a specific workstation or terminal user session, or all user sessions. Following termination, a cancellation message is displayed on the terminated user's screen.

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)

```
00ΔREMOVEΔ ⎡task-id⎤
           ⎨user-id⎬
           ⎣ALL    ⎦
```

Terminates specific workstation or terminal user session, all user sessions, or a single command for a 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 been completed. OPEN message can stop shutdown in progress; otherwise, IS command restarts terminated interactive services.

Controlling Interactive Services for Terminals (REMOTE Message)

```
00ΔISΔREMOTEΔ ┌ START    ┐
              ┤ SHUTDOWN ├
              └ CANCEL   ┘
```

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.

Section 9
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 1,024-byte blocks. Valid values are:

  64 - 1,024 for models 4 and 6
  160 - 8,192 for models 8 thru 20

  n

  is the cache segment size in 1,024 byte blocks. Valid values are:

  2 - 15 for models 4 and 6
  2 - 24 for models 8 thru 20

00 CM RESEG=n
  Resegments cache buffer with a different segment size than was allocated during DCF initialization (models 8 thru 20 only).

00 CM REMOVE dvc# (,dvc#,...dvc#)
  Removes specified drive from cache (models 8 thru 20 only).

00 CM ACTIVATE dvc# (,dvc#,...,dvc#)
  Activates specified drive to cache (models 8 thru 20 only).

00 CM SHUTDOWN

Removes DCF from the system.

00 CM STA

Displays DCF statistics.

00 CM STARES

Displays DCF statistics and resets all counters maintained by DCF.

00 CM STATIME=n

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

00 CM STARESTIME=n

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

00 CM STADISK=did

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

00 CM STARESDISK=did

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

00 CM TIMER=OFF

Turns off timer statistics set by STATIME or STARESTIME.

Index

NOTES

NOTES

NOTES

Help Us To Help You

Publication Title

Form Number _____ Date

Unisys Corporation is interested in your comments and suggestions regarding this manual. We will use them to improve the quality of your Product Information. Please check type of suggestion:

☐ Addition   ☐ Deletion   ☐ Revision   ☐ Error

Comments

Name

Title _____ Company
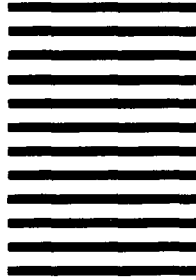
Address (Street, City, State, Zip)

Telephone Number

UNISYS

USER COMMENT CARD

We will use your comments to improve
subsequent editions.

NOTE: *Please do not use this*
           form as an order blank.

Thank you for your cooperation.

(No postage stamp is necessary
if mailed in the U.S.A.)

Document Title	Document No. / Rev. No. / Update Level

Comments:

Name of User:	Business Address

BUSINESS REPLY MAIL

FIRST CLASS   **PERMIT NO. 21**   **BLUE BELL, PA.**

POSTAGE WILL BE PAID BY ADDRESSEE

Unisys Corporation
E/MSG Product Information Development
PO Box 500 — E5-114
Blue Bell, PA 19422-9990

Help Us To Help You

Publication Title _____

Form Number _____ Date _____

Unisys Corporation is interested in your comments and suggestions regarding this manual. We will use them to improve the quality of your Product Information. Please check type of suggestion:

☐ Addition   ☐ Deletion   ☐ Revision   ☐ Error

Comments _____

_____

_____

Name _____

Title _____ Company _____

Address (Street, City, State, Zip) _____

Telephone Number _____

Help Us To Help You

Publication Title _____

Form Number _____ Date _____

Unisys Corporation is interested in your comments and suggestions regarding this manual. We will use them to improve the quality of your Product Information. Please check type of suggestion:

☐ Addition   ☐ Deletion   ☐ Revision   ☐ Error

Comments _____

_____

_____

Name _____

Title _____ Company _____

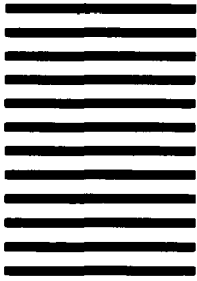Address (Street, City, State, Zip) _____

Telephone Number _____

BUSINESS REPLY MAIL

First Class   Permit No. 21   Blue Bell, PA

Postage Will Be Paid By Addressee

Unisys Corporation
OS/3 Systems Product Information Development
PO Box 500 - E5-114
Blue Bell, PA 19422-9990

BUSINESS REPLY MAIL

First Class   Permit No. 21   Blue Bell, PA

Postage Will Be Paid By Addressee

Unisys Corporation
OS/3 Systems Product Information Development
PO Box 500 - E5-114
Blue Bell, PA 19422-9990