SPERRY UNIVAC
Operating System/3
(OS/3)

# Operator/Programmer Spooling Summary

SPERRY UNIVAC

UP-8376
Rev. 3

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# Using the Input Reader

## Card Files

To enter card data into a spool file, use the DATA job control statement. It supplies the file identification information for the card data. The operator places the card data, preceded by the DATA control statement, in the card reader and issues the IN operator command.

This card file is retrieved by the control stream at a later time. If the control stream is filed in $Y$JCS and the scheduling of the job is desired as soon as possible, a control statement in the form of // RU jobname may appear anywhere within the data check to cause the scheduling of the specified job.

The format of the DATA job control statement is:

**//[symbol] DATA FILEID=file-name [,RETAIN]**

where:

**symbol**
Is reserved for future use.

**FILEID=file-name**
Associates the data file being placed on the spool file with a file defined in the control stream. If the device assignment for the file in the control stream contains an LBL control statement, you use the file identifier from this LBL control statement as the value for the FILEID parameter.

If an LBL control statement is not used, the value for the FILEID parameter is made up of a concatenation of the job name from the JOB control statement and the file name from the LFD control statement.

**RETAIN**
Is used to retain the spool file after the job has processed the file.

If RETAIN is specified, the only means of deleting the reader file is by issuing DE SPL, RDR.

The format of the IN operator command is:

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

where:

**51**
Must be specified for spooling 51-column cards.

**66**
Must be specified for spooling 66-column cards.

### Diskette Files

To use diskette files in a spooling environment, the operator issues the IN operator command.

The format of the IN operator command is:

**IN([did],label)**

where:

**did**
Is the physical I/O channel appended with the hardware address (three digits).

**label**
Is the file identifier (name used on the LBL job control statement).

*NOTE:*

*If SYSRDR is a diskette, did is not required.*

# Using the Output Writer

## Communicating With the Output Writer

Functions can be specified to the output writer in either of two modes:

1. Solicited

   Output writer requests a function from the operator.

2. Unsolicited

Output writer is interrupted while processing.

## Solicited Message

To enter a solicited message, type in:

**On function-code**

where:

**n**
Is the message number.

**function-code**
Is the function to be performed. (See Table 1.) *function-code* may not exceed 28 characters.

## Unsolicited Message

To enter an unsolicited message, type in:

**00** { **PD** / **PR** / **PU** } **[(did)] function-code**

where:

**PD**
Is the diskette output writer.

**PR**
Is the printer output writer.

**PU**
Is the punch output writer.

**(did)**

Is the channel and device address. If omitted, first copy of output writer is referenced.

**function-code**

Is the function to be performed. (See Table 1.) *function-code* may not exceed 28 characters.

Examples:

Solicited:

07 STOP

Unsolicited:

00 PR(002) STOP

Immediately terminate print output writer associated with device 002.

00 PR STOP

Immediately terminate first print output writer.

## Nonburst Mode Processing

The output writer processes print files at the conclusion of the job. The log is printed first, followed by all the print files associated with the job.

## Burst Mode Processing

The output writer processes print files when they are either closed between job steps or breakpointed, but before the job has terminated.

## Loading the Output Writers

Normally, the output writer is loaded when the files are available for processing. There may be multiple output writers running concurrently. The maximum number of printer output writers is equal to the numbers of printers available; the same limit applies to punch output writers.

The operator may also load an output writer. Additionally, function specifications may be part of the load request. The format of this load request is:

$$\left\{\begin{array}{l}\textbf{PD}\\\textbf{PR}\\\textbf{PU}\end{array}\right\}\textbf{[(did)] [function-code-1]}$$

Examples:

1. PR

   Load a print output writer and use the first available printer.

2. PU(003)

   Load a punch output writer and use the punch associated with device 003.

3. PR function-code-1

   Load a print output writer using the first available printer and perform the function specified by *function-code-1*. (See Table 1.)

## Loading Printer Output Writers in Burst Mode

Under certain circumstances, such as system set in the non-burst mode, an operator must load an output writer in the burst mode in order to print files. These conditions are:

1. Warm start, i.e., recovering files at IPL
2. BE SPL function (See Table 2.)
3. BR ACT function (See Table 2.)
4. Terminating an output writer from the system console using the STOP or HALT functions

## Miscellaneous Loading of an Output Writer

Output writers should be manually loaded in order to specify tape input (IN function).

*Table 1. Output Writer Function Codes*

| Format/Function/Description |
|---|

## BYPASS

*Terminates processing of current file*

The current file is closed, and the operator is requested to enter another function.

If no files are open, the function is ignored.

## BURST[,modifier-1...,modifier-n]

*Places output writer in burst mode*

Output writer is to function in burst mode, as optionally qualified by modifiers 1 through n. The operator is requested to enter another function.

Modifiers:

| | |
|---|---|
| JOB=jobname | (1—8 characters) |
| FILE=filename | (1—8 characters) |
| CART=cart-id | (1—8 characters) |

DEV= { 768 | 770 | 773 | 776 | 778 | 9300 }

| | |
|---|---|
| FORM=formname | (1—8 characters) |
| ACCT=acctno | (1—4 characters) |

Examples:

1. BU,JOB=XYZ
   Place output writer in burst mode and process all files whose job name is XYZ.

2. BU,FILE=PRNTR,ACCT=1234
   Place output writer in burst mode and process all files having a file name of PRNTR and an account number of 1234.

## COPIES,nnn

*Sets number of copies*

*nnn* specifies the number of copies. If 0 is specified, 1 is assumed. The number of copies specified is set, and the operator is requested to enter another function.

If no file is open, the function is ignored.

## DELETE

*Deletes current file*

The file being processed is deleted, and the operator is requested to enter another function.

If no file is open, the function is ignored.

## DEVICE[,did]

*Switches output device*

*did* specifies a new address. If *did* is specified, the current output device is deallocated and a new device is assigned to the output writer. The new device remains in use for the length of time that the same copy of the output writer is in main storage. If *did* is omitted, a device having the same characteristics as the current device replaces the current device. The operator is requested to enter another function.

Any open files are closed.

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

## DEVICE [,did] (cont)

Using this command with a tape address specified, or loading an output writer and assigning it to a tape, causes all subsequent files to be written to tape as long as that copy of the output writer remains in main storage. If the user wishes to place certain files on tape via the // SPL DUMP job control statement, the operator should not use the DEV command. The output writer, upon detection of the files destined to tape, assigns a tape device and, after verification by the operator, outputs the selected files to tape. Afterwards, if more files remain, the output writer resumes outputting to the assigned printer or punch.

## DISPLAY

*Displays current file status*

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 the file
7. Numbering of remaining copies
8. Existence of a breakpoint

The operator is then requested to enter another function.

If no file is open, the function is ignored.

## HALT

*Terminates output writer*

If a file is being processed, the output writer terminates upon completing the current file; if no file is being processed, the output writer terminates immediately.

If the file being processed has multiple copies, this function will cause the file to be closed after the current copy has been produced. Other copies will be processed when the output writer is reloaded.

## HOLD

*Places current file in hold*

The processing of the current file terminates immediately and file is placed in hold status. The operator is requested to enter another function.

If no file is open, the function is ignored.

## INPUT,did

*Defines tape input*

*did* specifies the tape device address. The input from the tape is printed or punched, depending upon the type of output writer loaded.

## NBURST

*Places output writer in nonburst mode*

Output writer is placed in nonburst mode, and the operator is requested to enter another function.

## RESTART

*Restarts file from beginning*

The file is repositioned to start of file, and the operator is requested to enter another function.

If no file is open, the function is ignored.

If RESTART is to be used in conjunction with DEVICE, enter RESTART first.

## RESTART,nnn

*Restarts file n pages (cards) from current position*

File is repositioned *nnn* pages (cards) back from current file position, and the operator is requested to enter another function.

If no file is open, the function is ignored.

If RESTART,nnn is to be used in conjunction with DEVICE, enter RESTART,nnn first.

**SKIP,** { **nnnn** / **PAGE,nnnn** / **CARD,nnnn** }

*Skips forward to page or card*

If only nnnn is entered, file is skipped nnnn pages or cards.

If PAGE,nnnn or CARD,nnnn is entered, file is positioned forward to that specific page or card.

After the file is positioned, the operator is requested to enter another function.

---

**STOP**

*Terminates output writer immediately*

The output writer is terminated.

---

**STOP,PAGE**

*Terminates output writer at end of page*

Upon completing the printing of the current page, terminate output writer.

---

**On end of transmission**

*Continues processing*

The operator replies with this message when no more functions are to be entered after being solicited for an output writer function. The output writer will determine the type of processing to be done; it will either continue processing or terminate.

---

# Spool File Command Format

Spool file commands permit the operator to display and manipulate the various subfiles in the spool file and change the operating mode of the spooling function. These commands have the following general format:

**command queue [,directory][,modifier-1...,modifier-n]**

*NOTE:*

*Command keyins cannot exceed 28 characters in length, including commas.*

where:

**command**
Is the name of the command being transmitted.

**queue**
Is either SPL to indicate that only the completed subfiles in the specified directory are being referenced, ACT to indicate that only the currently active subfiles in the specified directory are being referenced, or CN to indicate that only the console log is being referenced.

**directory**
Identifies one of the various directories that make up the spool file. If not specified, all of the directories accessible to the command are acted on.

The spool file directories are:

| Directory | Subfile Function |
|---|---|
| PRINT | Subfile output is to designated printer. |
| PUNCH | Subfile output is to designated card punch. |
| LOG | Subfile input or output is on designated log file. |
| RBPPR | Remote batch processing output is to printer. |

| Directory | Subfile Function |
|---|---|
| RBPPU | Remote batch processing output is to card punch. |
| RDR | Subfile input is from designated card reader. |
| ALL | All the directories are acted on. |

**odifier-1...,modifier-n**

Are used optionally to further identify the subfiles within the specified directory that are being referenced. Any number of modifiers may be specified. The various modifiers are:

JOB=jobname (1—8 characters)

FILE=filename (1—8 characters)

CART=cartridge-id (1—8 characters)

DEV= { 768 | 770 | 773 | 776 | 778 | 9300 }

FORM=formname (1—8 characters)

ACCT=acct no. (1—4 characters)

LBL=label (1—17 characters for reader)
(1—8 characters for diskette)

STEP=step no. (3 characters, left-justified with zeros)

VOL=vol serial no. (1—6 characters for diskette input files)

*Table 2. Spool File Commands*

| Format/Function/Description |
|---|

**BEGIN ACT** [ , { PRINT / PUNCH / LOG / ALL } ]

*Removes file from hold queue processing*

All files designated by the directory are placed on the spool queue in a normal status.

LOG does not affect remote job logs.

If modifiers are entered, the command is ignored.

**BEGIN SPL** [ , { PRINT / PUNCH / LOG / RBPPR / RBPPU / RDR / ALL } ]

**[,modifier-1...,modifier-n]**

*Removes file from the hold condition*

All files that meet the command specifications and that are in the hold condition are placed in the queued state. This function also schedules an output writer for loading.

If the system is in nonburst mode, the print output writers cannot access the released files. The operator must load an output writer in burst mode to process these files.

LOG does not affect remote job logs.

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

If no subdirectory or ALL is entered, the RBPPR, RBPPU, and the job logs destined for a remote device are not affected.

**BEGIN SPQ** [ , { PRINT / PUNCH / LOG / ALL } ]

*Removes hold queue processing and files from the hold condition*

This command is a combination of BE ACT and BE SPL. All files designated by the directory are placed on the spool queue in a normal status. Additionally, all files in the directory are removed from a hold condition.

LOG does not affect remote job logs.

If modifiers are entered, the command is ignored.

---

**BRKPT** { P / I } , { PR / PU } **,JOB=jobname**

**[,modifier-1...,modifier-n]**

*Breakpoints a file currently being created*

The parameters are:

**P**

Breakpoint the file at the end of the page.

**I**

Breakpoint the file immediately.

For punch files, either P or I may be entered.

This command is used to close files and make them available to the output writer. A new file is created that contains the remainder of the file. The operator should use this command whenever warning messages that indicate the spool file is nearly depleted appear on the system console.

After the breakpoint is taken, the operator should call in an output writer in burst mode.

After a command has been given, one of the following messages is displayed:

**FILE filename FOR JOB jobname HAS BEEN BREAKPOINTED**
Breakpoint has been successful.

**FILE filename FOR JOB jobname UNABLE TO BE BREAKPOINTED**
I/O error prevented successful breakpointing of the job.

**JOB NAME NOT SPECIFIED FOR BREAKPOINT**
Breakpoint was not taken because a job name was not entered.

**BREAKPOINT REQUEST INVALID**
Attempt was made to breakpoint a LOG, RDR, or RBPIN subdirectory entry.

**FILE NOT AVAILABLE FOR BREAKPOINT**
No file was found open to be breakpointed.

**BREAKPOINT ALREADY IN PROGRESS FOR JOB jobname**
A previous breakpoint function was entered and processing has not completed.

**JOB NOT AVAILABLE FOR BREAKPOINT**
Breakpoint issued and job is not in the system, or breakpoint issued while job is running under DBS.

## BRKPT CNSLG

*Breakpoints the console log file*

This command is used to close the console log file so that it can be printed. A new console log file will start with the first message after the breakpoint command.

After a BRKPT is issued for the console log file, the output writer is brought in automatically. The output writer will recognize the console log file and print it.

After the command has been given, one of the following messages is displayed:

**BREAKPOINT TAKEN FOR CONSOLE LOG**
Console log has been successfully breakpointed.

**CONSOLE LOGGING NOT ACTIVE**
Attempt was made to breakpoint the console log but the console logging was not active or not generated in the system.

**BREAKPOINT CONSOLE ERR-CONSOLE LOGGING SUSPENDED**
Error while breakpointing the console log. Console logging is suspended.

---

**DELETE SPL** [ { PRINT / PUNCH / LOG / RBPPR / RBPPU / RDR / ALL } ]

**[,modifier-1...,modifier-n]**

*Deletes files from spool queue*

All files that meet the command specifications are deleted. This may include files waiting to be processed by the output writer or files in the hold condition.

LOG does not affect remote job logs.

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

If no subdirectory or ALL is entered, the RBPU, the RBPPR, and the job logs destined for a remote device are not affected.

---

**DISPLAY ACT** [,{**PRINT** / **PUNCH** / **RBPPR** / **RBPPU** / **ALL**}]

**[,modifier-1...,modifier-n]**

*Displays active files (files in the process of being created)*

Same as DI SPL except that totals apply only to files currently being created by programs.

---

## DISPLAY CNSLG

*Displays number of accumulated lines*

This command is used to display the number of lines that have accumulated in the current console log file.

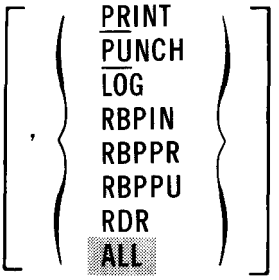
After the command has been given, one of the following messages is displayed:

**TOTAL CONSOLE LINES nnnnnnn**
Console logging is active.

**CONSOLE LOGGING NOT ACTIVE**
Console logging inactive or feature not configured.

---

## DISPLAY SPL




[,modifier-1...,modifier-n]

*Displays completed files*

Absence of queue name causes display of all queues.

After the command has been given, one of the following messages is displayed:

**DI01 status FILES=ffff PAGES=ppppp CARDS=ccccc**
One or more files existed for the requested display.

where:

**status**
QUEUED, HOLD, IN-PROGRESS

**ffff**
Number of files.

**ppppp**
Number of pages excluding log files.

**ccccc**
Number of punch images.

The following message is produced for each status containing a file count:

```
DIO2 SPOOL FILE DETAILS? ***
Y,N,Q,I,S,SQ,SH,SI***
```

where:

**Y**
Display all spool files.

**N**
Terminate display.

**Q**
Display all queued files.

**H**
Display all files in hold.

**I**
Display all files currently being processed by the output writer.

**S**
Abbreviated display of all files.

**SQ**
Abbreviated display of all queued files.

**SI**
Abbreviated display of all files in process.

**SH**
Abbreviated display of all files being held.

If Y, Q, H, or I is selected, the following information is displayed on the system console:

**DI04 JOB-NAME jobname FILE filename STATUS file status**

**DI05 TOTAL { PAGES / CARDS / LINES } nnnnn REMOTE-ID xxxxxx**

**COPIES nnn**

**DI06 STEP-NUMBER nnn DEVICE-TYPE xxxxx**

**BREAKPOINT { Y / N }**

**DI07 B AND-NAME xxxxxx FORM-NAME xxxxxxxx ACCT xxxx**

**DI08 PROGRAM-NAME xxxxxxxx CONTINUE? ***Y,N*****

After the file information is displayed, the operator is queried for a Y to continue the display, or an N to terminate the display.

If S, SQ, SH, or SI is selected, the following information is displayed on the system console:

**DI11 JOB=jobname PROG=program name**

**FORM=form name { PAGES / CARDS / LINES } =nnnnn**

After five lines have been produced, the following is displayed:

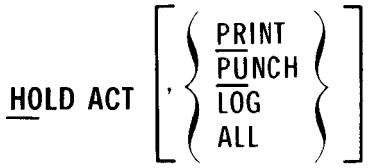
**DI12 CONTINUE SUMMARY? ***Y,N*****

If RDR is entered without the LBL=label modifier, the following will be displayed for all reader spool files:

**DI09 DEVICE-TYPE RDR TOTAL-CARDS nnnnn [vol, vvvvvv]**

**DI10 LABEL xxxxxxxxxxxxxxxxxx CONTINUE? ***Y,N*****

After the file information is displayed, the operator is queried for a Y to continue the display or an N to terminate the display.



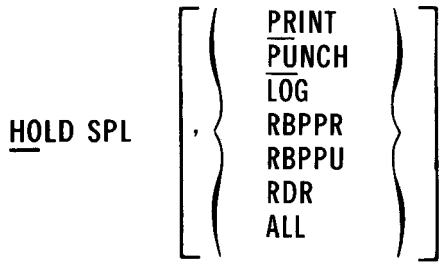

*Places files to be created in hold condition*

All files designated by the directory are placed into a hold condition when placed on the spool queue.

LOG does not reflect remote job logs.

Console logs that may be breakpointed and job logs where the job stream was found to be in error by the run processor are not affected.

If modifiers are entered, the command is ignored.




**[modifier-1...,modifier-n]**

*Places files in hold condition*

All queued files that meet the command specifications are placed in the hold condition.

If no subdirectory or ALL is entered, the RBPPR, RBPPU, and the logs destined for a remote device are not affected.

LOG does not affect remote job logs.

**HOLD SPQ** [,{PRINT / PUNCH / LOG / ALL}]

*Places spool queue in hold condition*

This command is a combination of HO SPL and HO ACT. Files designated by the directory are placed in a hold condition when placed in the spool queue. Files currently in the queue are also placed in the hold condition.

LOG does not affect remote job logs.

Console logs that may be breakpointed and job logs where the job stream was found to be in error by the run processor are not affected. If the logs are currently in the queue, they are placed in the hold condition.

If modifiers are entered, the command is ignored.

**SE SPL,BURST [,modifier]**

*Sets system spooling criterion to burst mode*

Sets the system spooling criterion to burst mode and all subsequent output writers loaded will run in the burst mode.

A modifier is used to refine the selection of files to be processed.

Any output writers loaded prior to the receipt of this command are not affected.

**SE SPL,CNSLG** [,{ON / OFF}] [,{RETAIN / DELETE}]

*Sets console log capability*

Allows the operator to turn the console log function on or off and to delete or retain the console log for SYSLOG accumulation.

If the last parameter is omitted, the console log file will remain in the same RETAIN or DELETE mode that it was in before the command. If the last parameter is specified without the ON or OFF parameter, the output mode of the file will change without changing the ON or OFF condition.

---

**SE SPL,** {DUMP / ENDDUMP}

*Sets system dump log capability*

The parameters are:

**DUMP**
Accumulate log files for future transfer to a tape or SYSLOG disk file.

**ENDDUMP**
End log file accumulation.

---

**SE SPL,NBURST**

*Sets system spooling criterion to nonburst mode*

Sets the system spooling criterion to nonburst mode. All subsequent output writers loaded will run in the nonburst mode.

Any output writers loaded prior to the receipt of this command are not affected.

---

**SE SPL,** { **NOACT** | **NOLOG** | **NOPRINT** | **PRINT** }

*Specifies type of log file printing to be performed by output writers*

The parameters are:

**NOACT**
Do not print job accounting records.

**NOLOG**
Do not print job log records.

**NOPRINT**
Do not print accounting or job log records.

**PRINT**
Print complete log subfile.

**SE SPL,** { **NOHDR** | **HEADER** }

*Specifies whether output writers are to suppress or print page separators between subfiles*

The parameters are:

**NOHDR**
Do not print page separator.

**HEADER**
Print page separator. (Note the full spelling of this parameter.)

**SE SPL,** { **TEST** / **NOTEST** }

*Specifies whether output writers are to suppress the test lines message if a change of form occurs*

The parameters are:

**TEST**
Provide test lines message where applicable.

**NOTEST**
Suppress test lines message.

# Spooling Considerations

## Generation of Spooling System

Spooling is established as an installation option at system generation. It may be specified at three levels:

1. Spool user output (print, punch, and diskette only)

2. Spool user input (reader and diskette)

3. Support remote batch processing (RBP)

If spooling is not generated into the system, no user action (JCL, operator, etc.) can force it. If spooling is in the system, user jobs utilize it with no changes to either user programs or JCL. In the case of 1, user printers and punches are spooled; in the case of 2, user readers are also spooled. Any spooling system also generates job logs that encompass:

- system messages directed on behalf of the job;
- JCL listing;
- accounting information (optional); or
- user snap and cancel dumps.

In a spooling system, a user may override spooling for a particular device assignment by specifying a physical device address on the DVC statement (positional parameter 2). All references within the job to this DVC will access the device directly.

The physical volume that contains the spool subfiles is generally allocated during the IPL sequence. The volume on which the file is allocated may be specified:

a. at IPL time;

b. at system generation; or

c. by default to the system resident device.

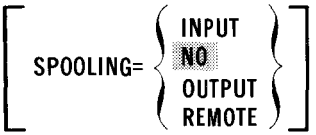
Here a overrides b, and b overrides c. The spool file size may be specified (in cylinders) at system generation; the default value is 50.

The spool file is limited by the spooling system to four physical extents. The file may be allocated (or scratched) by the user (the file-id is SYSPOOL). This should be done only under a nonspooling supervisor.

If IPL ever finds that the designated volume already contains a spool file, it utilizes this file and does *not* do any additional allocation.

## SUPGEN Parameters

The supervisor generation parameters are described in detail in the system installation user guide/programmer reference, UP-8074 (current version). The parameters relating to spooling are briefly described here.




where:

**INPUT**
Both the input readers and output writers are to be used for spooling.

**NO**
No spooling capability is to be incorporated in the supervisor being generated.

**OUTPUT**
Only the output writers are to be used for spooling.

**REMOTE**
Input readers, output writers, and remote batch processors are to be used for spooling. When REMOTE is specified, SPOOLICAM must also be specified.

$$\left[\text{SPOOLVSN=}\left\{\begin{matrix}\textbf{SYSRES}\\ \text{vsn}\end{matrix}\right\}\right]$$

where:

**vsn**

Specifies the volume serial number of the primary disk volume that the supervisor is to use for the spool file. If vsn is not specified, the primary spool file will be allocated on your SYSRES volume.

$$\left[\text{SPOOLVSNn=}\left\{\begin{matrix}\textbf{SYSRES}\\ *\\ \text{vsn}\end{matrix}\right\}\right]$$

Indicates that multivolume spooling is to be supported and identifies the nth sequential volume of the spool file. Up to eight disk volumes may be allocated for spooling. If omitted, the volume will be identified at IPL time. However, the last sequential volume must be specified.

$$\left[\text{SPOOLCYL=}\left\{\begin{matrix}\textbf{ALL}\\ \text{n}\\ \textbf{50}\end{matrix}\right\}\right]$$

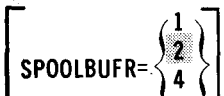
Specifies the number of cylinders to be initially allocated for the spool file on the primary spooling volume. If ALL is specified, all available cylinders on the primary spooling volume will be allocated. This option should be used only for a dedicated spooling volume.

$$\left[\text{SPOOLCYLn=}\left\{\begin{matrix}\textbf{ALL}\\ \text{n}\\ \textbf{50}\end{matrix}\right\}\right]$$

If multivolume spooling is specified by keyword parameter SPOOLVSNn, you may use SPOOLCYLn to specify the number of cylinders to be initially allocated on each volume being used for the spool file. If omitted, 50 cylinders will be allocated on each spooling volume.

$$\left[\text{SPOOLMAP=}\left\{\begin{matrix}\text{n}\\ \textbf{64}\end{matrix}\right\}\right]$$

Indicates the number of full words (four bytes) of main storage to be reserved for the resident spool file bit map. Spool file suballocation is controlled by the bit map. If multivolume spooling is being used, the spool file bit map size should be calculated on the total number of cylinders being reserved for the spool file.




Indicates the size of the spooler word buffer allocated to each job preamble in terms of the number of 256-byte blocks of main storage.

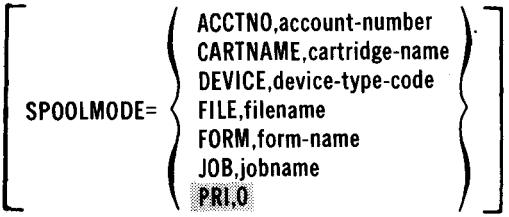

where:

**NO**

Output subfile processing by the output writers is done only at job termination.

**YES**

Output spooling is to function in the burst mode of operation, which enables the output files to be output before the job they are associated with is terminated, depending upon the criterion selected. This requires that an output processing criterion be configured to control the output writer's mode of processing for available output subfiles.




Establishes the output file processing criterion for the spooler when operating in the burst mode. All subfiles that satisfy the criterion specified are processed without operator intervention and are output by the output writer.

where:

**ACCTNO,account-number**

One to four alphanumeric characters indicating to the output writer that an account number (as specified on the JOB control statement) is the criterion to be used.

**CARTNAME,cartridge-name**

One to eight alphanumeric characters indicating to the output writer that the cartridge name (as specified on the LCB job control statement) is the criterion to be used.

**DEVICE,device-type-code**

Specifies the device type code as 768, 770, 773, 776, or 9300. Indicates to the output writer that the device type number is the criterion to be used.

**FILE,filename**

One to eight alphanumeric characters indicating to the output writer that a file name is the criterion to be used.

**FORM,form-name**

One to eight alphanumeric characters indicating to the output writer that the form name (as specified on the VFB job control statement) is the criterion to be used.

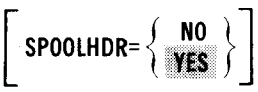
**JOB,jobname**

One to eight alphanumeric characters indicating to the output writer that the job name (as specified on the JOB control statement) is the criterion to be used.

**PRI,0**

Output is to be governed under a job priority basis, that is, preemptive, high, and normal priorities.


Indicates the name of the ICAM symbiont load module (C1 to C9 or M1 to M9) that is called by the spooler to service the remote batch mode of spooling. The keyword parameter SPOOLING=REMOTE must have been specified, and you must have configured the ICAM symbiont as described in the COMMCT section of system generation.



where:

**NO**

Spooled output files are to be printed without headers.

**YES**

A 3-page header will precede the printing of each spooled file.

$$\left[\text{SPOOLPRT=} \left\{ \begin{matrix} \underline{\text{ALL}} \\ \text{LOG} \\ \text{ACT} \\ \text{NO} \end{matrix} \right\}\right]$$

where:

**ALL**

Both job log and accounting records are to be printed when a job terminates.

**LOG**

Only log records are to be printed when a job terminates.

**ACT**

Only job accounting records are to be printed when a job terminates.

**NO**

Job log and accounting records are not to be printed.

$$\left[\text{JOBACCT=} \left\{ \begin{matrix} \underline{\text{NO}} \\ \text{YES} \end{matrix} \right\}\right]$$

Indicates whether the resident job account routines are to maintain a record of CPU time used by job and job step facilities, number of I/O requests made per device, number of supervisor requests generated, main storage usage, and transient function usage. May be specified only if spooling is configured.

$$\left[\text{SYSLOG=} \left\{ \begin{matrix} \underline{\text{NO}} \\ \text{YES} \end{matrix} \right\}\right]$$

Indicates whether job log subfiles are to be saved for future transfer to a user disk or tape file. May be specified only if spooling is configured.


Assigns a buffer area in main storage to accumulate messages appearing on the system console. These messages are copied onto the spool file when the buffer is filled. Subparameters indicate the size of the buffer assigned.

where:

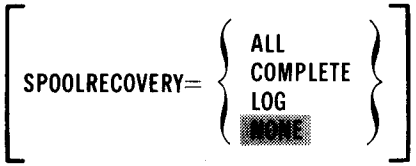
**NO**
No console log function requested.

**MIN**
Specifies a 304-byte buffer.

**NORM**
Specifies a 560-byte buffer.

**MAX**
Specifies a 1072-byte buffer.


Indicates whether the console message file is to be retained in the spool file after printing.




Specifies the level of recovery wanted for the spool file when necessary to reinitialize the supervisor.

where:

**ALL**
Specifies all spool files are to be recovered, whether complete or incomplete.

**COMPLETE**
Specifies only completed spool files are to be recovered.

**LOG**
Specifies only log files are to be recovered.

**NONE**
Specifies spool files are not to be recovered.

$$\left[\text{SPOOLTEST=} \left\{ \begin{matrix} \text{NO} \\ \text{YES} \end{matrix} \right\}\right]$$

Specifies whether a test lines message on the system console should be displayed when a change of form occurs.

where:

**NO**
Specifies no test lines message is displayed.

If omitted, test lines message is displayed.

## I/OGEN Parameters

If the supervisor was configured for spooling, you can allocate the number of virtual printers, readers, and punches to be used by the supervisor, provided you have identified real devices in separate sets of keywords. If virtual devices are configured, the supervisor will schedule jobs based on the number of virtual devices rather than the number of real devices. A maximum of 99 virtual devices of each type may be specified. If spooling was not configured or you have not identified a real device, virtual devices will not be created.

The following label parameters are specified for virtual printers, readers, and punches if spooling was specified in the SUPGEN section.

**[PRINTER]** [ **VIRTUAL=** { **2x number of job slots** / **0** (if spooling is not configured) / **n** } ]

Specifies the number of virtual printers you wish to use in your system.

where:

**n**

Is calculated by multiplying the number of jobs that can run simultaneously by the average number of printer files used for each job.

If omitted, the number of virtual printers created will be twice the number of job slots specified in the SUPGEN section.

**[READER]** [ **VIRTUAL=** { **1x number of job slots** / **0** (if input spooling is not configured) / **n** } ]

Specifies the number of virtual readers you wish to use in your system.

where:

**n**

Is calculated by multiplying the number of jobs that can run simultaneously by the average number of reader files used for each job.

If omitted, the number of virtual readers created will be equal to the number of job slots specified in the SUPGEN section.

**[PUNCH]** [ **VIRTUAL=** { **1x number of job slots** / **0** (if spooling is not configured) / **n** } ]

Specifies the number of virtual punches you wish to use in your system.

where:

n

Is calculated by multiplying the number of jobs that can be run simultaneously by the average number of punch files used for each job.

If omitted, the number of virtual punches created will be equal to the number of job slots specified in the SUPGEN section.

## Multivolume Spooling

You may request multivolume spooling at system generation, using a series of SPOOLVSNn keyword parameter entries that permit you to allocate up to eight disk volumes and specify the volume serial number for each volume. You may identify each volume or only the last sequential volume. If you omit the volume serial number, the volume will be identified at IPL time.

You may also specify the number of cylinders to be initially allocated on each volume being used for the spool file, using a series of SPOOLCYLn keyword parameter entries. The number of cylinders specified can also be changed at IPL time.

At supervisor initialization, the operator has the option of using the required volumes, or may override the SYSGEN configuration by mounting fewer volumes or volumes other than those specified.

## Accumulating Job Log Subfiles

Systems that are generated with the spooling option specified (SPOOLING=INPUT, OUTPUT, or REMOTE) maintain a spool log subfile for each job processed in the system. As each job is terminated, its associated spool log subfile is closed and automatically output to a high speed printer as soon as an output writer becomes available in the system. If the system was generated with the accumulate system log files option (SYSLOG=YES) or if the SET SPL,DUMP command was issued by the operator after the system was initialized, the job log subfile is marked as having been printed and then saved to allow further processing by user job accounting and bookkeeping programs. The system log accumulation utility (SL$LOG) is the routine that transfers selected portions of closed job log subfiles to a user disk file or a user tape.

You must supply a PARAM job control statement indicating whether log records, job accounting records, or both are to be written to the SYSLOG file and, if output is to tape, whether you want checkpoints after each subfile. Note that snap and cancel dumps are not transferred. Also, you must specify a DVC-LFD sequence for the LFD called SYSLOG (for disk) or SYSLOGT (for tape).

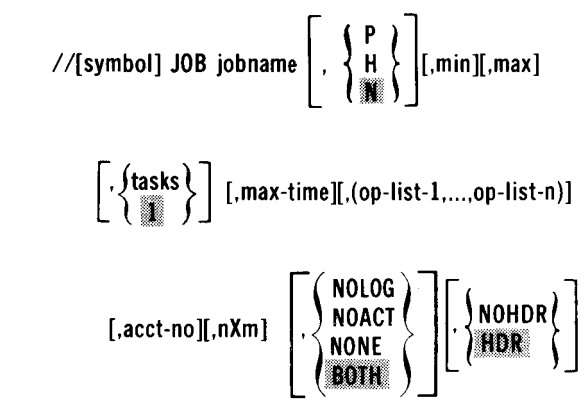
To enable the SL$LOG utility to be easily executed by the system operator, a canned job control stream (named DUMPLOG for disk or DUMPLOGT for tape) is supplied. These are described in the system service programs user guide, UP-8062 (current version). You can change the default processing options established for SL$LOG to execute under your own processing conditions by changing the DUMPLOG call statement to include the options you desire.

The SL$LOG utility is initiated by the operator through the system console using the RUN command. The RUN commands are described in the operations handbook, UP-8072 (current version).

## Explicit Control of Spooling Environment

While no change in user JCL is required to utilize spooling, you can modify your JCL and gain some control over the spooling environment. This is accomplished via several parameters of the JOB control statement and via the SPL job control statement. Both statements are described in detail in the job control user guide, UP-8065 (current version). Only selected portions are included here.

The JOB statement identifies the job and indicates the beginning of control information for the job. The statement format is:




The first parameter is a name of one to eight alphanumeric characters that identifies the job and is used to reference the control stream after it has been filed.

The second parameter specifies the priority at which the job is to be scheduled.

The third parameter specifies the minimum hexadecimal number of main storage bytes required to execute the largest job step of the job.

The fourth parameter specifies the maximum hexadecimal number of main storage bytes requested, but not required, to execute the largest job step of the job.

The fifth parameter specifies the maximum number of tasks that can be active simultaneously in any job step.

The sixth parameter specifies the maximum number of minutes this job should take for execution.

The seventh parameter specifies the options that are to be listed on the job log. If spooling is being used, the default is BASIC, indicating basic job control statements.

The eighth parameter is a job number of one to four alphanumeric characters, used in accounting procedures.

The ninth parameter specifies the size of the buffer pool to be set up for spooled files. The job log and any spooled files not having reserved buffers use this pool.

The tenth parameter specifies how you want the log subfiles printed; that is, print only job accounting records, only log records, both job accounting and log records, or none. If you enter BOTH or omit the parameter, the output writer prints both job accounting and log records.

The eleventh parameter specifies whether to print or omit a page separator prior to the log. If you enter HDR, or omit this parameter, the output writer provides page separators.

The SPL statement is used to control the spooling environment. When used, it must occur within the DVC-LFD sequence for the file to be spooled. If specified when there is no spooling, the statement is ignored. The statement format is:

```
//[symbol] SPL [ { HOLD   } ]
               [ { DUMP   } ] [,nXm]
               [ { RETAIN } ]

[,{no-cop  }] [,{no-skpcode}]
 {  1      }    {  7       }

[,{max-rec }] [,forms] [,{NOHDR}] [,NOTSTL]
 { 5120    }             { HDR }
```

The first parameter indicates the final disposition of the file, whether it be:

- dumped to tape;
- retained after printing; or
- held for later processing.

The second parameter allows specification of buffers dedicated to this file.

The third parameter allows more than one copy.

The fourth parameter (utilized for print files only) allows for a large number of skip codes.

The fifth parameter gives the expected maximum number of records in the file; default is 5120. If this maximum is exceeded, the spooler informs the operator and the file waits until the operator has indicated what should be done. The message to the operator is:

**nn?SPOOLED FILE IN JOB jobname HAS REACHED MAX RECORDS PBIC**

where:

**B**

Breakpoint the file immediately.

**P**

Breakpoint the file at the end of the page.

**I**

Ignore the error condition. The current maximum is doubled and processing continues.

**C**

Cancel the job.

For punch files, either B or P may be entered.

The sixth parameter specifies the paper form name or punched card type to be issued to the operator.

The seventh parameter specifies whether a page separator is to be printed prior to the file.

The last parameter specifies whether a test pattern page is to be printed when a change in form name is detected for the job log.

## Buffering Considerations

In all cases, buffers are specified as *nXm*, where *n* is a decimal number giving the number of buffers and *m* is a decimal number giving the size of each buffer in increments of 256. The valid values for *m* are 1, 2, 4, 8 (corresponding to buffer sizes of 256, 512, 1024, 2048 bytes).

Buffers may be specified for each file on the SPL statement. These buffers are used only for the file with which they are specified and are available any time the file may be logically opened. All files not having dedicated buffers share a common pool with the log. If the common pool is shared by the log and at least one other file, it is set up as two 512-byte (2X2) buffers. If only the log uses the common pool, it is one 256-byte (1X1) buffer. The size of the common pool may be explicitly given on the job card.

When you select buffers, the following considerations apply:

1. In general, if only one or two spooled files are active concurrently, more efficient operation should be realized by allowing all files to share the common

pool. The system keeps the currently active files in the available buffers.

2. Larger buffers reduce the number of accesses to the spool file. Even though a slight delay may occur when a single large buffer is transferred, the overall efficiency as compared to multiple small buffers is greater.

3. For a given file, more than two buffers are useful only if the data is transferred in short, separated bursts.

4. Preoperations are always issued on transfer of the last record of a buffer for reads to the spool file. They are issued, if possible, for the last user write to a buffer. "If possible" implies either:

   - another buffer exists associated with this file; or
   - the current record fills the current buffer to 96%.

   Preoperations do not suspend the requesting user.

## Spool File Saturation

As the spool file becomes saturated, three messages are issued to the operator. These messages are system messages and apply to no particular job.

**SPOOL FILE 75% DEPLETED**
**SPOOL FILE 90% DEPLETED**
**SPOOL FILE FULL — FILES REQUIRING ADDITIONAL SPACE WILL WAIT**

These messages are issued each time the file crosses the indicated threshold in the direction of less space.

If the messages are seen, the operator should take action to alleviate the saturation. Typical actions are:

- avoid scheduling of more jobs;
- print/punch files that are being HELD or RETAINED;
- dump logs using DUMPLOG job;
- dump large inactive files to tape; and
- breakpoint active files.

If the saturation is not alleviated, two actions occur:

1. Files that are active are suspended and they wait until space is available.

2. Jobs attempting to open new files are returned an error message at RDFCB or OPEN. For system components, this error results in cancellation of the job.

## Console Log

The console log is an optional software function that you can request by using the SUPGEN parameter CONSOLOG. If so, all messages written to and from the console will be recorded in a console log file. This file can be printed at any time by the operator and can also be retained for later use by the systems log accumulation program. The console log file is part of the spool file; therefore, there can be no console log function without spooling.

The operator can use the SE SPL,CNSLG spool command to turn the console log file on or off and to retain or delete the console log for SYSLOG accumulation.

The operator can print the log at any time by using the BRKPT CNSLG console command. After the output writer has printed the log, the log will be either deleted or retained, depending upon the RETAINLOG specification at SYSGEN or the console log spool command.

# Spooling Initialization Messages

### SI00 MOUNT SPOOL VOLUME vsn. ENTER DEVICE ADDR OR N

Request for mount of volume. If N is entered, no more spool devices will be considered.

### SI01 SI IGNORED-SYSTEM NOT IDLE

SI command ignored because system is not idle.

### SI02 SPOOL VOLUME ON did NOT AVAILABLE, SPOOLING UNAVAILABLE

Spool volume designated by did is not available for use. Spooling unavailable.

### SI03 SPOOL VOLUME SUBTYPES DIFFERENT. SPOOLING UNAVAILABLE

The volumes of the spool file have different subtypes. Spooling unavailable.

**SI04 DUPLICATE SPOOL DEVICE ADDRESSES. SPOOLING UNAVAILABLE**

A device address was entered twice for spooling devices. Spooling unavailable.

**SI05 vsn NOT VALID FOR RECOVERY. ***IC*****

Volume specified by vsn not valid during warm start due to one of the following:

- no spool file allocated on volume;
- incorrect volume sequence number; or
- volume not used during the original creation of the spool file.

Enter I to cause cold start processing or C to disable spooling.

**SI06 ALLOCATION ERROR ON vsn. SPOOLING UNAVAILABLE**

An allocation error occurred on the volume designated by vsn. Spooling unavailable.

**SI07 SAT ERROR code. SPOOLING UNAVAILABLE**

SAT error indicated while opening spool file. Spooling unavailable.

**SI08 WARM START DETECTED ERRORS. RECOVERY DOUBTFUL**

I/O errors detected while attempting recovery of files.

**SI09 xxxxx FILE: QUEUED=nnnnn HOLD=mmmmm**

Upon completion of a warm start, files xxxxx contain n subfiles queued and m subfiles in hold.

# Input Reader Messages

## IR01 MISSING OR INVALID // DATA STATEMENT

The input card deck is either missing a required // DATA card or the format of the // DATA card is invalid. The card file cannot be spooled until a valid // DATA card is provided.

## IR02 SPOOL FILE filename CREATED

Displayed each time a spooled input subfile is created successfully. The file name specified on the associated // DATA card is inserted into the message. No operator action is required.

## IR03 SPOOL FILE filename DELETED

Indicates that an I/O error, spooler error, or an error which prevented the successful closing of the named input subfile occurred; thus, the specified spooled input subfile was deleted from the spool file. Try to respool the card file. If the error condition persists, contact the Sperry Univac customer engineer.

## IR04 ERROR IN SPOOL FILE subfilename ENTER

Displayed when an input card file cannot be entered into the input spool subfile because of an I/O or internal spooler error. Try to respool the card file. If the error condition persists, contact the Sperry Univac customer engineer.

## IR05 ERROR // RU CARD IGNORED

The input card data contains an invalid // RUN job control statement. The // RUN statement should be corrected and then the card file respooled, or the // RUN statement may be deleted from the card file and the intended job initiated from the console.

## IR06 INPUT SPOOLER NOT CONFIGURED — COMMAND IGNORED

Displayed in response to an IN console command when the input reader spooling function is not supported by the supervisor in control of the system. If input spooling is to be used, a supervisor configured to support this function must be in control of the system.

## IR08 MOUNT NEXT DISKETTE VOLUME FOR FI .E ffffffff *YN*

End of volume has been detected while the input reader has been accessing the current diskette

containing the file specified by ffffffff. Mount next diskette volume that contains an allocated file ffffffff. Respond with Y if mount is acceptable or N if not acceptable. If N is entered, the spool subfile will be closed and indicated as the last entry within the logical file.

### IR09 FILE ffffffff WAS NOT ALLOCATED FOR THE DISKETTE VOLUME

After the mounting of a subsequent volume in response to an IR08 message, the input reader could not locate the desired data set label. An IR08 message will be displayed again.

### IR10 VOLUME SEQUENCE ERROR FOR FILE ffffffff ON VOL vvvvvv

After the mounting of a subsequent volume in respone to an IR08 message, the input reader detected a volume sequence error for the file specified by ffffffff on volume vvvvvv. An IR08 message will be displayed again.

## Output Writer Messages

$$\left\{\begin{matrix}\text{PR}\\\text{PU}\end{matrix}\right\}\ \text{(did)}\ \text{CURR}\ \left\{\begin{matrix}\text{PAGE}\\\text{CARD}\end{matrix}\right\}\text{=cccc,}$$

$$\text{TOTAL}\ \left\{\begin{matrix}\text{PAGES}\\\text{CARDS}\end{matrix}\right\}\text{=tttttt,}\quad \text{COPY=nnn,}$$

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

The second line of the output writer display function.

where:

**cccc**
Current card or page number.

**tttttt**
Total pages or cards in file.

**nnn**
Remaining copies to be punched or printed.

**{PR / PU} (did) DEVICE xxx NOT AVAILABLE. REENTER FUNCTION**

Device indicated by xxx is not available for use.

**{PR / PU} (did) DEVICE SWITCHED TO xxx**

Device indicated by xxx has been assigned to the output writer because of a DEVICE function or by internal control. Succeeding messages will use the new device identification. Previously assigned device is returned for system use.

**{PR / PU} (did) DISPLAY IGNORED—FILE NOT OPEN. ENTER FUNCTION.**

DISPLAY function entered and no file is currently open. Enter function.

**{PD / PR / PU} (did) ENTER OUTPUT WRITER FUNCTION**

This is a request by the output writer to perform a function. Key in a function or key in an end-of-transmission.

**{PR / PU} (did) EOV ON TAPE DOING xx FUNCTION. ENTER FUNCTION.**

End of volume detected while positioning input tape file for output writer function designated by xx. Enter function.

**{PD / PR / PU} (did) FILE=ffffffff, JOB=jjjjjjjj, PROG=pppppppp, STEP=nnn**

The first line of the output writer display function.

where:

**ffffffff**
File name.

jjjjjjjj
Job name.

ppppppp
Program name.

nnn
Job step number.

**{PD, PR, PU} (did) xx FUNCTION IGNORED — NO FILE OPEN. ENTER FUNCTION**

Output writer function designated by xx has been ignored because no subfile was open. Enter function.

**PU (did) HOLE COUNT ERROR RECOV FAILED. ENTER R OR FUNCTION**

Attempted 10 retries of hole count error recovery for 604 punch and could not successfully recover. Respond with R or enter a function.

**{PR, PU} (did) IN COMMAND INVALID WHILE FILE OPEN. ENTER FUNCTION.**

IN command was issued while output writer was processing a file. Enter a function.

**{PR, PU} (did) INPUT SPOOL TAPE INVALID. OUTPUT WRITER TERMINATED.**

Tape mounted was not a spool tape. Output writer terminated.

**{PD, PR, PU} (did) MESSAGE REJECTED. RESPOND TO TYPEOUT**

An unsolicited message has been entered while output writer was preparing to display a message. Respond to the output writer output message.

**{PD / PR / PU} (did) MODULE xxxxxxxx COULD NOT BE LOADED**

An error occurred while loading the module identified by xxxxxxxx. The output writer is terminated.

**{PR / PU} (did) MOUNT NEXT INPUT TAPE. REPLY R OR ENTER FUNCTION**

End of volume detected from input spool tape. Mount next tape on same tape drive and respond with R or enter a function.

**{PR / PU} (did) MOUNT OUTPUT TAPE ON xxx. Y,N**

Output writer request to mount output tape on tape indicated by xxx. Respond with Y if acceptable. Respond with N if mount is to be rejected.

**{PD / PR / PU} (did) NOT AN OUTPUT WRITER FUNCTION—REENTER**

The function keyed in is not an output writer function. Reenter the correct function.

**{PD / PR / PU} (did) OUTPUT WRITER TERMINATED ABNORMALLY WITH CODE xxx**

Output writer terminated abnormally due to a cancel or program check.

**PU (did) PLACE CARD NAME xxxxxxxx INTO PUNCH. REPLY R**

Place cards indicated by xxxxxxxx into the card punch and respond to the message with R to resume.

**PR (did) PRINTER NOT INITIALIZED. ENTER I OR FUNCTION**

The printer VFB or LCB was not loaded successfully. Enter I to ignore or enter an output writer function.

**PU (did) REMOVE xxx CARDS FROM REJECT STACKER. RESPOND I**

This is a notification from 604 hole count error recovery to operator to remove bad cards from reject stacker, then respond with I and continue.

**{PD / PR / PU} (did) SYNTAX ERROR FOR FUNCTION xx. REENTER FUNCTION**

A syntax error occurred for the function designated by xx. Enter the function correctly.

**{PR / PU} (did) TAPE INPUT AND OUTPUT INVALID. REENTER FUNCTION**

Attempt was made to have both tape input and tape output. Enter function.

**PR (did) TEST PAGE FOR FORM=ffffffff, JOB=jjjjjjjj **YN****

Enter Y to print a sample test lines page or enter N to continue processing.

## PD / PR / PU (did) UNRECOV ERR CLOSING SUB FILE. ENTER I OR FUNCTION

An unrecoverable error occurred while you were closing the subfile within the spool file. Enter I to ignore the error, or enter an output writer function.

## PR / PU (did) UNRECOV ERR OPENING OUTPUT TAPE. ENTER FUNCTION

An unrecoverable error occurred while opening the output tape. Enter an output writer function.

## PR (did) UNRECOV ERR PRINTING FORM SEP. ENTER I OR FUNCTION

An unrecoverable error occurred while printing the form separator. Enter I if you wish to ignore the condition and discontinue printing of the form separator, or enter an output writer function.

## PR (did) UNRECOV ERR PRINTING SAMPLE. ENTER I OR FUNCTION

An unrecoverable error occurred when printing the sample page. Enter I if you wish to ignore the condition and start normal printing or enter an output writer function.

## PU (did) UNRECOV ERR PUNCHING FILE SEP. ENTER I OR FUNCTION

An unrecoverable error occurred while punching the file separator. Enter I to ignore the error or enter an output writer function.

**{PR / PU} (did) UNRECOV TAPE. INPUT ERR. OUTPUT WRITER TERMINATED**

Unrecoverable error while opening file on an input tape. Output writer terminated.

**{PD / PR / PU} (did) UNRECOVERABLE INPUT ERROR. ENTER I OR FUNCTION**

An unrecoverable I/O error occurred while accessing the spool file. Enter I to ignore the error or enter an output writer function.

**{PD / PR / PU} (did) UNRECOVERABLE OUTPUT ERROR. ENTER I OR FUNCTION**

An unrecoverable I/O error occurred to the output device. Enter I to ignore the error or enter an output writer function.

**PR (did) VFB/LCB COULD NOT BE COPIED. ENTER I OR FUNCTION**

The VFB or LCB could not be written to the spool file because of an I/O error. Enter I to ignore the error or enter an output writer function.

**{PR / PU} (did) WRONG OUTPUT DEVICE. OUTPUT WRITER TERMINATED.**

Spooling tape file needs a printer or punch and output writer has been assigned a punch or printer, respectively. Output writer is terminated.

## PD (did) MOUNT DISKETTE VOLUME vvvvvv FOR FILE ffffffff *YN*

Output writer has requested a mount of a diskette volume specified by vvvvvv on device designated by did for file ffffffff. Respond with Y if acceptable or N if mount is to be rejected.

## PD (did) USING DISKETTE VOLUME vvvvvv FOR FILE ffffffff

Output writer is currently creating a file designated by ffffffff on the volume specified by vvvvvv. Informational message only.

## PD (did) ALLOCATION ERROR xx ON VOL vvvvvv FOR FILE ffffffff

A space management error designated by xx occurred while attempting to allocate space on volume specified by vvvvvv for the file ffffffff. The subfile is closed and placed in a hold status.

## PD (did) INSUFFICIENT SPACE ON VOL vvvvvv FOR FILE ffffffff

End of volume was detected on the last volume specified by vvvvvv for file ffffffff and more records remain to be processed. The spool subfile is placed into a hold condition.

## PD (did) OPEN/CLOSE ERROR xx ON VOLUME vvvvvv, FILE ffffffff

An error indicated by xx occurred while opening or closing the volume specified by vvvvvv for the file specified by ffffffff. The spool subfile is placed into a hold condition.

### PD (did) COMPLETED VOLUME vvvvvv FOR FILE ffffffff

Output writer has completed processing the file ffffffff on the volume specified by vvvvvv. Information message only.

### PD (did) NO SPACE ALLOCATED ON VOLUME vvvvvv, FILE ffffffff

File as indicated by ffffffff was not allocated on volume specified by vvvvvv. The spool subfile is placed into a hold condition.

## System Log Messages

### LOG01 INVALID PARAMETER

Parameter supplied has an invalid format. Program terminated.

### LOG02 MISSING PARAMETER

No parameter has been supplied. Program terminated.

### LOG03 ERROR ACCESSING LOG FILE, **IC**

I/O error detected while accessing spool file. Reply I to ignore or C to cancel.

### LOG04 ERROR ACCESSING SYSLOG FILE

I/O error detected while accessing the SYSLOG disk file. Program terminated.