RSX-11M-PLUS
Mini-Reference
Order No. AV-H435D-TC

RSX-11M-PLUS Version 3.0

digital equipment corporation · maynard, massachusetts
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PREFACE

Manual Objectives
This manual provides a quick reference guide to using specific parts of the RSX–11M–PLUS operating system. It describes the commands and procedures for operating the most commonly used parts of the system: the utilities, command line interpreters, and some other program development tools.

Intended Audience
This manual is intended as a quick reference for RSX–11M–PLUS users who are already familiar with the system. It assumes you are already familiar with the documentation in the manual set for the software you are using.

Structure of This Document
This document consists of sections describing each major component of an RSX–11M–PLUS system. They are:

On-Line Help Files
Utilities

- Bad Block Locator Utility (BAD)
- Backup and Restore Utility (BRU)
- File Compare Utility (CMP)
- File Dump Utility (DMP)
- Disk Save and Compress Utility (DSC)
- Line Text Editor (EDI)
- DEC Standard Editor (EDT)
- File Transfer Program (FLX)
- Disk Volume Formatter (FMT)
- Librarian Utility (LBR)
- Source Language Input Program (SLP)
- Object Module Patch Utility (PAT)
- Peripheral Interchange Program (PIP)
- Queue Manager—Print and Queue Utility (QMG)
- Task Image File Patch (ZAP)
Command Line Interpreters

- Monitor Console Routine (MCR)
- Digital Command Language (DCL)

System Management Tools

- Error Logging System
- Procedure for Halting a Job in a Print Queue

Programming Tools

- On-Line Debugging Tool (ODT)
- Task Builder (TKB)

RMS–11

- RMSBCK Utility Summary
- RMSCNV Utility Summary
- RMSDES Utility Summary
- RMSDSP Utility Summary
- RMSIFL Utility Summary
- RMSRST Utility Summary
- RMS–11 Completion Codes and Fatal Error Codes

Reference Information

- ASCII Character Set
- Directive Error Codes
- Executive Directive Summary in Alphabetical Order by Macro Call
- I/O Error Codes
- RADIX–50 Conversion Table
- Octal/Decimal Conversion Table
- Standard File Types
The Mini-Reference also includes blank pages in the back for you to make notes on other system information that you use often. The binder is designed so that the holes in line printer listings line up with the posts in the binder; therefore, you can also include your own listings in the book.
ON-LINE HELP FILES

Extensive help files for the utilities, MCR, DCL, and many other system components are available to you at your terminal.

For help in logging in to the system, type HELP HELLO (from MCR) or HELP LOGIN (from DCL or MCR). You'll need a user-ID and password to log in.

RSX-11M-PLUS systems have two major command interpreters or CLIs: MCR and DCL. Once you log in, your terminal is set to either MCR or DCL. All terminals are set to MCR prior to logging in.

From an MCR terminal, type HELP LIST for information on available help. From a logged-in DCL terminal, type HELP for information on available help.

The general form of the HELP command is as follows:

>HELP[/cli][/OUT[PUT]:filespec] topic [subtopic[s]]

>HELP[/qualifier][/OUT[PUT]:filespec] commandname [switch]

DCL users can also obtain help while entering a command by typing a question mark ( ? ) in response to any DCL prompt. Once the help text has been printed on the terminal, the prompt returns and you can continue to enter the command.

Normally, HELP text is displayed on your screen, but the /OUT[PUT]:filespec qualifier permits you to name a file to which the HELP text is to be written from a logged in terminal.

If you do not include a CLI qualifier to the HELP command, the default is the name of the CLI to which your terminal is set.

Except for /OUT[PUT], each of the following qualifiers has the effect of specifying a file where help can be found. The MCR form of these qualifiers is limited to the first 3 characters. The DCL form includes the entire qualifier name.

>HELP/LOC[AL] [parm[s]]

or

>HELP % [param[s]]

Specifies that the HELP text is in the file HELP.HLP in the default directory on the default volume. HELP/LOC and HELP % are the same.

>HELP/GRO[UP] [param[s]]

Specifies that the HELP text is in the file HELP.HLP in the directory [current group,1] on the default volume.
On-Line Help Files

>HELP/CLI:cliname [param[s]]
Specifies that the HELP text begins in the file LB:[1,2]cliname.HLP. This qualifier is for installations with alternate CLIs for which HELP is provided.

>HELP/MCR [param[s]]
Specifies that the HELP text begins in the file LB:[1,2]MCR.HLP. This is the default for terminals set to MCR.

>HELP/DCL [param[s]]
Specifies that the HELP text begins in the file LB:[1,2]DCL.HLP. This is the default for terminals set to DCL.

>HELP/FIL[E]:filenamespec [param[s]]
Specifies any file where HELP text is located. If you do not give a complete file specification, the defaults are LB:[1,2]filename.HLP.

>HELP/xxx [param[s]]
Specifies that the HELP text is located in the file LB:[1,2]xxx.HLP, where xxx is a 3-character file name.
BAD COMMAND SUMMARY

Command lines for the Bad Block Locator (BAD) use the following format:

BAD ddn: [/switch1.../switchn]

In this command line, ddn is the abbreviation for the volume on which BAD is being run and n is the unit number of the volume.

BAD switches are:

ALLOCATE BAD ddn:/ALO[volumelabel]
   Prompts you for blocks to be allocated to BADBLK.SYS and to be entered in the bad block descriptor file.

CSR ADDRESS BAD ddn:/CSR=nnnnn
   Specifies the CSR address of a device that is not in a standard location (stand-alone version of BAD only).

LIST BAD ddn:/LI
   Lists bad blocks as they are located.

MANUAL BAD ddn:/MAN
   Allows you to enter bad blocks, which are then included in the bad block descriptor file.

NOWRITECHECK BAD ddn:/NOWCHK
   Negates the effect of /WCHK (see below).

OVERRIDE BAD ddn:/OVR
   Creates the bad block descriptor file on a last-track device.

PATTERN BAD ddn:/PAT=m:n
   Specifies the double-word data pattern used to locate bad blocks.

RETRY BAD ddn:/RETRY
   Recovers soft errors.

UPDATE BAD ddn:/UPD
   Reads the bad block descriptor file and prompts for your entries.
BAD Command Summary

VECTOR  BAD ddn:/VEC=nnn
        Specifies the interrupt vector address of a device that is not in a standard location (stand-alone version of BAD only).

WRITECHECK  BAD ddn:/WCHK
        Causes a write-check operation to take place after each write operation (stand-alone version of BAD only). The switch is not valid for DT:-, DX:-, or DY:-type devices.
BRU COMMAND SUMMARY

Command lines for the Backup and Restore utility (BRU) use the following format:

[/qualifiers] indev1;...[filespec,...] outdev1;...[filespec,...]

In this command line, qualifier(s) are any of the command qualifiers listed below, indevices are the physical device or devices from which data is transferred, filespec is the particular file or category of file to be backed up or restored, and outdevice(s) are the output devices to which data is being transferred.

BRU qualifiers are as follows:

/APPEND

Appends new backup data to a magnetic tape, or to a disk if you are using the /IMAGE qualifier.

/BACKUP_SET:name

Specifies the name of the backup set to be placed on magnetic tape or disk.

/BAD: MANUAL
      AUTOMATIC
      OVERRIDE

Enters the locations of bad blocks on volumes. The default is /BAD:AUTO-
MATIC.

/BUFFERS:number

Specifies the default number of directory File Control Blocks (FCBs) kept by the ACP for the volume.

/COMPARE

Compares the data on the output volume to the data on the input volume and reports any differences.

/CREATED:

BEFORE:dd–mmm–yy
BEFORE:hh:mm:ss
BEFORE(dd–mmm–yy hh:mm:ss)
AFTER:dd–mmm–yy
AFTER:hh:mm:ss
AFTER:(dd–mmm–yy hh:mm:ss)

Directs BRU to process files created before or after a specified date and/or time.
BRU Command Summary

/DENSITY:number
  Specifies the data density at which BRU writes to tape.

/DIRECTORY
  Displays information (such as backup set names, file names, or volume number of a tape or disk) for a specified tape or disk volume.

/DISPLAY
  Displays at your terminal the UFD and file name of each file being backed up.

/ERRORS:number
  Specifies the number of nonfatal I/O errors BRU tolerates on magnetic tape reads during a restore operation before automatically terminating execution. The default is 25(decimal) errors.

/EXCLUDE
  Excludes selectively from a backup or restore operation all files specified on the command line.

/EXTEND:number
  Specifies the number of blocks by which a file is extended when that file has exhausted its allocated space.

/HEADERS:number
  Specifies the number of file headers to allocate initially to the index file.

/IMAGE:SAVE
/RESTORE
  Specifies that you want to do a multiple disk-to-disk backup or restore operation. Use the SAVE option for backup operations. Use the RESTORE option for restore operations.

/INITIALIZE
  Directs BRU to initialize the output disk before proceeding with the operation.

/INVOLUME:name
  Specifies the volume label of the input disk.
/LENGTH:number
   Specifies the length of the output magnetic tape in decimal feet.

/MAXIMUM:number
   Specifies the maximum number of files that can be placed on a volume as
determined by the number of file headers in the volume's index file.

/MOUNTED
   Allows you to back up files from a disk that is mounted (with the MCR or
   DCL MOUNT commands) as a Files-11 volume.

/NEW_VERSION
   Directs BRU to resolve conflicts resulting from files with identical file
   specifications by creating a new version of the file.

/NOINITIALIZE
   Specifies that you do not want to initialize the output disk because it is
   already in Files-11 format.

/NOPRESERVE
   Specifies that you do not want to preserve file identifiers.

/NOSUPERSEDE
   Specifies that where files on the input and output volumes have identical
   filespecs, the input files will not be transferred and the output files will not
   be superseded. The default is /NOSUPERSEDE.

/OUTVOLUME:name
   Specifies the volume label of the output disk. The label can be up to
   12(decimal) characters long.

/POSITION:
   BEGINNING
   MIDDLE
   END
   BLOCK:number
   Specifies the location of the index file on the output disk volume.
BRU Command Summary

/PROTECTION: SYSTEM:value
    OWNER:value
    GROUP:value
    WORLD:value

Specifies the default protection status for all files created on the output volume being initialized.

/REVISED:
    BEFORE:dd–mmm–yy
    BEFORE:hh:mm:ss
    BEFORE:(dd–mmm–yy hh:mm:ss)
    AFTER:dd–mmm–yy
    AFTER:hh:mm:ss
    AFTER:(dd–mmm–yy hh:mm:ss)

Directs BRU to process files revised before or after a specified date and/or time.

/REWRIND

Rewinds the first tape of a magnetic tape set before performing the operation.

/SUPERSEDE

Resolves file specification conflicts by deleting the old file on the output volume and replacing it with the file from the input volume. (The default is /NOSUPERSEDE.)

/TAPE–LABEL:label

 Specifies a 6-character ANSI volume identifier for identifying the magnetic tape volume.

/UFD

Directs BRU to create UFDs (if they do not already exist) on a mounted output volume, then copy into them the files from the same UFDs on the input volume.

/VERIFY

Copies data from the input volume to the output volume, compares the volumes, and reports any differences.

/WINDOWS:number

Specifies for the output disk the default number of mapping pointers allocated for file windows. The default number is the same as that for the input disk.
command lines for the file compare utility (cmp) use the following format:

 CMP [outfile]/sw...= infile1, infile2

in this command line, outfile is the file specification for the output file that
contains the comparison, sw is one or more of the cmp switches described
below, and infiles are the two files being compared.

if you do not specify an output file, cmp output defaults to ti: and is displayed
on your terminal. if you specify the equals (=) sign, but no output file, cmp
displays only the total number of differences it finds in the input files.

cmp switches, which always modify the output file specification or the default
output file specification, are as follows:

blank lines    [outfile]/[-]bl= infile1, infile2

specifies that blank lines in both files be included in compare processing.
if specified in the form /-bl, blank lines are not included in compare
processing. /-bl is the default switch.

change bars    [outfile]/[-]cb= infile1, infile2

specifies that cmp list infile2 with change bars, in the form of exclamation
marks (!), to denote each line that does not have a corresponding line
in infile1. /-cb is the default switch.

you can change the change bar character from the exclamation mark to
any character you wish by means of the /vb switch, described below.

when a section of lines in infile1 has been deleted in infile2 (the output
listing file), the first line after the deleted lines is marked.

comments    [outfile]/[-]co= infile1, infile2

specifies that cmp include comments (that is, text preceded by a semicolon)
in compare processing. /co is the default switch.

differences  [outfile]/[-]di= infile1, infile2

specifies that cmp list the differences between the two files (rather than
marking the lines in infile2). /di is the default switch.

/ cb and / di are mutually exclusive switches. if both are specified, / cb
overrides / di.
FORM-FEED  [outfile]/[-]FF=infile1,infile2

Specifies that CMP include records consisting of a single form-feed character in compare processing. /-FF is the default switch.

LINES  [outfile]/LI:n=infile1,infile2

Specifies that a number (n) of lines must be identical before CMP recognizes a match. If you do not specify this switch, CMP searches for three identical lines to match (/LI:3).

When it encounters a match, CMP prints all the preceding nonmatching lines, along with the first line of the matched sequence of lines, to help you find the location in the code where the match occurred.

LINE NUMBER  [outfile]/LN=infile1,infile2

Specifies that lines in the output file be preceded by their line number. Line numbers are incremented by one for each record read, including blank lines. /LN is the default switch. If you specify /SL (below), /LN is unnecessary.

MERGE BLANKS  [outfile]/[-]MB=infile1,infile2

Specifies that CMP include all blank and tab characters in a line in compare processing. If you specify /-MB, CMP interprets any sequence of blank and/or tab characters as a single blank character in compare processing. However, all spaces and tabs are printed in the output listing. /MB is the default switch.

SLP FILE  outfile/SL[:au]=infile1,infile2

Directs CMP to generate an output file suitable for use as SLP command input. When you specify /SL, CMP generates the SLP command input necessary to make infile1 identical to infile2. If a 1- to 8-character alphanumeric symbol is included (:au), an audit trail is specified for SLP input.

SPOOL  outfile/[-]SP[:n]=infile1,infile2

 Specifies that the output file be spooled on the line printer. You can optionally specify the number (in octal or decimal) of files to be spooled. /-SP is the default switch.

This switch applies only if you have the Queue Manager installed.
TRAILING BLANKS  
[outfile]/[−]TB=infile1,infile2

Specifies that CMP include all trailing blanks on a line in compare processing. If you specify /−TB, CMP ignores all blanks following the last nonblank character on a line. When you specify /−CO and /−TB together, blanks that precede a semicolon (;) are considered trailing blanks and are ignored. /TB is the default switch.

VERTICAL BAR  
outfile/VB:nnn=infile1,infile2

Specifies an octal character code for use as a change bar. You use this switch with the /CB switch. The value nnn specifies the octal character code. For example, you can specify /VB:174 for a vertical bar (if your printer is capable of printing the vertical bar character). /VB:041 (for the exclamation mark) is the default switch.
DMP COMMAND SUMMARY

Command lines for the File Dump Utility (DMP) use the following format:

[file|outfile][/switch(es)]=inspec[/switch(es)]

In this command line outfile specifies the output file dump, switch(es) is one or
more of the DMP switches described below, and inspec specifies the input device
and file or input device only.

The command line elements take the following defaults:

ASCII    outfile=Infile/AS
        Specifies that data be dumped one byte at a time in ASCII mode.

BASE ADDRESS    outfile/BA:n:m=Infile
        Specifies a 2-word base block address.

BLOCK   outfile=Infile/BL:n:m
        Specifies the first and last logical blocks to be dumped.

BYTE    outfile=Infile/BY
        Specifies that data be dumped in octal byte format.

DECIMAL outfile=Infile/DC=n
        Specifies that data be dumped in decimal word format.

DENSITY outfile=Infile/DENS:n
        Specifies density of an input magnetic tape when DMP is in device mode
        only. Values for n can be 800, 1600, or 6250.

FILE ID   outfile=Infile/Fl:filenumber:sequencenumber
        Specifies the input file with its file-ID instead of its name (File Mode only).

HEADER    outfile=Infile/HD:F
        outfile=Infile/HD:U
        Includes the file header in the data dumped. "F", the default, specifies a
        formatted Files-11 dump for the header. "U" specifies an unformatted
        octal dump.
DMP Command Summary

HEADER FILES-11 outfile=infile/ HF
Specifies the format for data blocks that have the Files-11 header structure. Other blocks are dumped as unformatted octal.

HEXADECIMAL outfile/HX=infile
Specifies that data be dumped in hexadecimal byte format.

IDENTIFICATION /ID
Causes the current version of DMP to be displayed or printed.

LOGICAL BLOCK outfile=infile/LB
Requests the starting (logical) block number and a contiguous or noncontiguous indication for the file to be displayed.

LOWERCASE outfile=infile/LC
Specifies that the data should be dumped in lowercase characters. This switch is valid only if the output device supports lowercase characters.

LONG WORD outfile=infile/LW
Specifies that data be dumped in hexadecimal double-word format.

MEMORY outfile/MD:[n]=infile
Controls line number sequencing during a memory image dump.

OCTAL outfile=infile/OCT
Specifies that the data should be dumped in octal format. If no DMP format switches are included, the default is octal format.

RECORD outfile=infile/RC
Dumps one record at a time in the specified format.

REWIND outfile/RW=infile[/RW]
Issues a rewind command to the tape driver before referencing a specifier tape. You can use the /RW switch at any time to reposition a tape a beginning-of-tape (BOT).
RADIX-50  outfile=infile/R5
  Dumps in Radix-50 word format.

SPACE BLOCKS  outfile=infile/SB:[-]n
  Specifies the number of blocks DMP spaces forward (n) or backwards (−n) on a tape.

SPACE FILES  outfile=infile/SF:[-]n
  Specifies the number of end-of-file (EOF) marks DMP spaces forward (n) or backward (−n) on a tape.

SPOOL  outfile/SP=infile
  Spools the dump file (the output file) to the line printer.

WORD  outfile=infile/WD
  Specifies that data be dumped in hexadecimal word format.
DSC COMMAND SUMMARY

Command lines for the Disk Save and Compress utility (DSC) use the following format:

DSC outdev[s]:[label][/switch(es)]=indev[s]:[label][/switch]

In this command line, outdev[s] is the physical volume or volumes to which data is copied, label identifies the volume id of the output or input device, switch(es) are the command switches described below, and indev[s] is the physical volume or volumes from which data is copied.

DSC switches are as follows:

**APPEND** outdev:/AP=inderv

Appends a DSC file to the first volume of a magnetic tape set that already contains a DSC file.

**BAD**

MAN
NOAUTO
outdev:/BAD=MAN:NOAUTO=inderv
OVR
MAN:OVR

Allows manual entry of bad block locations; can supplement, override, or ignore the disk's own bad block file.

**BLOCKS** outdev:/BL=n=inderv

Sets the number of 256-word blocks DSC can include in each of its two buffers.

**COMPARE** outdev:/CMP=inderv

Compares input and output volumes for differences.

**CSR** outdev:/CSR=nnnn=inderv

Specifies control status addresses for a specific Status Control Block (SCB). /CSR is valid only with the stand-alone version of DSC.

**DENSITY** outdev:/DENS=nnnn=inderv

Overrides the DSC default storage density for magnetic tapes of 800 bpi. The first form of the switch creates magnetic tapes at 1600 bpi density. The second form (the split density switch) creates magnetic tapes with volume header information at 800 bpi and the rest of the tape at 1600 bpi.
DSC Command Summary

REWIND outdev:/RW=indev
Rewinds all volumes in a magnetic tape set before execution of the current command line.

TM02 outdev/TM02=nn=indev
Specifies the physical unit number of the formatter on the RH11/RH70 controller (stand-alone version of DSC only).

UNIT outdev/UNIT=nn=indev
Specifies the physical unit that will be referenced by the indicated Unit Control Block (UCB). The /UNIT switch is valid only with the stand-alone version of DSC.

VERIFY outdev/VE=indev
Copies data from the input volume and compares it with the output volume following the data transfer.

VECTOR outdev/VEC=nnn=indev
 Specifies the vector address for a specific Status Control Block (SCB). The /VEC switch is valid only with the stand-alone version of DSC.
LINE TEXT EDITOR (EDI) COMMANDS

In this section, the following conventions are used:

The asterisk (*) can be used in place of any number in an EDI command. It is read as 32,767.

An ellipsis (…) can be used in many search strings to identify characters between the first and last characters of the string.

EDI allows the use of abbreviations in commands.

ADD     A string

Adds the text in the string to the end of the current line.

ADD AND PRINT  AP string

Adds the text in the string to the end of the current line and displays the entire line on the terminal.

ALTMODE (ALT)

or

ESCAPE (ESC)

In Line Mode, prints previous line and makes it the new current line. In Block Mode, exits from input mode.

BEGIN B

Sets the current line to the line preceding the top line in the file or block buffer. In Line Mode, creates a copy of the file.

BLOCK ON/OFF  BL

Changes from the EDI Block Mode to Line Mode or from Line Mode to Block Mode to access text.

BOTTOM BO

Moves the line pointer to the bottom of the current block (in Block Mode) or to the bottom of the file (in Line Mode).

CHANGE [n]C/string1/string2[/]

Replaces string 1 with string 2 in the current line n times.
CLOSE  CL [filespec]
Transfers the remaining lines in the block buffer and input file to the
output file, and closes all files. Renames output files to filespec.

CLOSE AND DELETE  CDL [filespec]
Transfers the remaining lines in the block buffer and the input file to the
output file, closes the output file, and deletes the input file.

CLOSE SECONDARY  CLOSES
Closes the secondary input file.

CONCATENATION CHARACTER  CC [letter]
Changes the concatenation character used to separate EDI commands on
one line to the character specified. (The default concatenation character is
&.)

CTRL/Z  
Closes all open files and terminates the editing session.

DELETE  D [n]  or  D [-n]
Deletes the current line and the next n−1 lines if n is a positive number.
Deletes n lines preceding the current line, but not the current line, if n is a
negative number. Negative numbers can only be used in Block Mode.

DELETE AND PRINT  DP [n]  or  DP [-n]
Deletes lines specified and prints the new current line.

END  E
Sets the last line in a file or block buffer as the current line.

ERASE  ERASE [n]
Erases the current line in Line Mode. Erases the current block buffer and
the next n−1 blocks in Block Mode.

ESCAPE  ESC
or
ALTMODE  ALT
In Line Mode prints the previous line and makes it the new current line. In
Block Mode, exits from Input Mode.
EXIT [filespec]

Transfers the remaining lines in the block buffer and input file to the output file. Closes files, renames the output file if specified, and terminates the editing session.

EXIT AND DELETE [filespec]

Transfers the remaining lines in the block buffer and input file to the output file, closes files, and renames the output file if specified. Deletes the input file and terminates the editing session.

FILE [filespec]

Transfers lines from the input file to both the output file and the specified file until a form feed or end-of-file is encountered. The original file remains intact. This command is only used in Line Mode.

FIND [n]F string

Finds the line in the current block starting with string, or the nth line, starting with string. A string must begin in the first column of the line to be a match.

FORM FEED FF

Inserts a form feed into the block buffer.

INSERT IN [string]

Enters the specified string immediately following the current line. If no string is specified, EDI enters Input Mode.

KILL KILL

Closes the input and output files and deletes the output file.

LINE CHANGE [n]LC/string1/string2/

Changes all occurrences of string 1 in the current line (and n−1 lines) to string 2.

LIST ON TERMINAL LI

Displays on the terminal all lines remaining in the block buffer or input file, starting with the current line.

LIST ON PSEUDO DEVICE LP

Displays on the Console Listing Device, CL:, lines remaining in the block buffer or input file, starting with the current line.
Line Text Editor (EDI) Commands

LOCATE \[n\]L string
Locates the nth or next occurrence of the specified string. In Block Mode,
the search stops at the end of the current block.

MACRO MACRO x definition
Defines the macro number x for the EDI commands in the definition. The
value x can be 1, 2, or 3.

MACRO CALL MC[\,n]
Retrieves a macro definition stored in the file MCALL[\,n].

MACRO EXECUTE \[n\]Mx [a]
Executes macro x n times, while passing numeric argument a to it. The
value x can be 1, 2, or 3.

MACRO IMMEDIATE \[n\] \(<\text{definition}>\)
Defines and executes a macro n times. Stores it as macro number 1.

NEXT \quad N \[n\] \quad or \quad N [-n]
Establishes a new current line n lines away from the current line.

NEXT AND PRINT \quad NP\[n\] \quad or \quad NP[-n]
Establishes a new current line and displays it on the terminal.

OPEN SECONDARY \quad OP \quad filespec
Opens the specified secondary input file.

OUTPUT ON/OFF \quad OU ON \quad or \quad OU OFF
Continues or discontinues a file transfer to output file in Line Mode.

OVERLAY \quad O \quad [n]
Deletes n lines, enters Input Mode, and inserts new lines, as typed, in place
of the deleted lines.

PAGE \quad PAG \quad n \quad or \quad -n
Enters Block Mode. Reads page n into current block buffer. If n is less than
the current page, EDI goes to the top of the file first. Pages are set by form
feed characters.
LINE TEXT EDITOR (EDI) COMMANDS

PAGE FIND [n]PF string
Searches successive block buffers for the nth occurrence of the string. The string must begin in the first column of the line.

PAGE LOCATE [n]PL string
Searches successive blocks for the nth occurrence of the string. The string can begin anywhere on the line.

PASTE PA/string1/string2[/]
Searches for all remaining lines in the input file or block buffer that contain string 1 and replaces them with string 2.

PRINT P [n]
Displays the current line and the next n−1 lines on the terminal. The last line printed becomes the current line.

READ REA n
Reads the next n blocks of text into the block buffer. If the buffer already contains text, the new text is appended to it.

RENEW REN [n]
Writes the current block to an output file and reads a new block n from an input file (Block Mode only).

RETURN RET
Displays the next line on the terminal and makes it the current line. Exits from Input Mode if it is entered as the first character of a line.

RETYPE R string
Replaces the current line with the specified string, or deletes the current line if no string is specified.

SAVE SA [n] [filespec]
Saves the current line and the next n−1 lines in the specified file. If no file is specified, saves the lines in SAVE.TMP.

SEARCH AND CHANGE SC/string1/string2[/]
Locates string 1 and replaces it with string 2.
Line Text Editor (EDI) Commands

SELECT PRIMARY  SP
Reestablishes the primary file as the input file.

SELECT SECONDARY  SS
Selects the secondary file that will be an input file.

SIZE  SIZE n
Specifies the maximum number of lines that can be read into a block buffer.

TAB  TA ON or TA OFF
Turns automatic tabbing on or off.

TOP  T[OP]
Sets the current line to the line preceding the top line in the file or block buffer. In Line Mode, creates a copy of the file.

TOP OF FILE  TOF
Returns to the top of the input file in Block Mode and saves all of the previously edited pages. Reads in a new block after writing the output file. This command creates a new version of the file each time it is executed in Line Mode.

TYPE  TY [n]
Displays the next n lines on the terminal. This command is identical to the PRINT command in Line Mode. However, in Block Mode, the line pointer remains at the current line unless EDI reached the end of a block.

UNSAVE  UNS [filespec]
Inserts all lines from the specified file following the current line. If no file name is used, EDI uses SAVE.TMP.

UPPER CASE  UC ON or UC OFF
Enables or disables conversion of lowercase letters to uppercase letters when they are entered at a terminal.
Line Text Editor (EDI) Commands

VERIFY V ON or V OFF
Selects whether the operation of the LOCATE and CHANGE commands will be verified (printed on the terminal) after the line is located or changed.

WRITE W
Writes the contents of the block buffer to the output file and erases the block buffer.
DIGITAL STANDARD EDITOR (EDT) COMMANDS

EDT lets you edit text in line mode and character mode, using the keypad or nokeypad functions.

LINE MODE COMMANDS

You can tell EDT is in line mode when you receive an asterisk prompt (*). You can then edit the text on a line-by-line basis. Enter a \texttt{\textasciicircum{Esc}} to exit from EDT. The following commands work from EDT line mode:

\textbf{CHANGE} \texttt{C [range]}

Starts either keypad or nokeypad character editing, depending upon the terminal type. EDT defaults to keypad character editing for VT52 and VT100 terminals and nokeypad editing for all other terminals. EDT puts the cursor ahead of the location you specify as range.

Entering a \texttt{\textasciicircum{Esc}} returns you to line mode.

\textbf{CLEAR} \texttt{CL textbuffer}

Deletes the contents of a text buffer, but does not delete the buffer itself.

\textbf{COPY} \texttt{CO [range--1] TO [range--2][/qualifier(s)]}

Copies text from range--1 to the location in front of the line you specify in range--2. EDT can copy from one buffer to another or from one place to another within a text buffer.

\textbf{Qualifiers:}

\texttt{QUERY} \hspace{1cm} Verifies each line to be inserted.

\texttt{DUPLICATE} \hspace{1cm} Inserts the range of text more than once.

\textbf{DEFINE KEY} \texttt{DEF K|[GOLD]|number : CONTROL letter| : GOLD character| AS `string`}

Redefines keypad keys in terms of nokeypad commands. The following table describes the command format:

- \texttt{Braces ||} You must choose one of the options.
- \texttt{OR \textasciicircum{^}} Separates choices.
- \texttt{Brackets [ ]} You can use GOLD to specify the alternate function of a keypad or control key.
- \texttt{number} Number of the keypad key.
Digital Standard Editor (EDT) Commands

Control letter Enter CONTROL and a character from A to Z.

GOLD The GOLD keypad key.

GOLD character Enter GOLD and any keypad character except 0–9, !, %, ’, and “.

string One or more nokeypad commands used to redefine the key.

DEFINE MACRO DEF M macroname
Assigns a name to a sequence of editor commands stored in the file macroname.

DELETE D [range][/qualifier]
Deletes the lines specified and displays a message stating the number of lines deleted. When you do not specify a range, deletes the current line.

Qualifier:

QUERY Verifies each line to be deleted

EXIT EX [filespec][/qualifier(s)]
Ends an editing session and moves the main text buffer to the output file specified. You can define the name of the output file in the command line that invokes EDT or in the EXIT command.

Qualifiers:

SEQ[UENCE][[:initial][:increment]] Assigns integer line numbers before the text transfer and places them in a fixed field in the file. You define the initial number and the increment between numbers.

SA[VE] Saves the journal file created during the editing session.

FIND F range
Locates the line or lines specified by range.

HELP H [topic[subtopic]]
Displays information on requested topics or subtopics.
INCLUDE INC filespec [range]

Copies disk files into text buffers. Filespec is the name of the file you want
to copy. EDT copies the file to the current text buffer in front of the first
line of the range.

INSERT I [range-1];[line to be inserted]

Inserts text into a buffer. When you specify a range, EDT inserts the text
before the first line of the range. If you do not specify a range, EDT inserts
the text before the current line.

MOVE M [range-1] TO [range+n2][/qualifier]

Moves the lines in range-1 to the location preceding range-2. Deletes the
text from range-1.

Qualifier:

QUERY: EDT prompts you to verify each line of range-1 to be moved.

null (Implied TYPE) [range][6]

Displays the next line of text. You can specify a range of text to be dis-
played. However, the REST, WHOLE, BEGIN, END, LAST, and ALL
range specifications must be preceded by a percent sign (%).

PRINT P filespec[range]

Copies text from a text buffer into a file. Range selects a portion of the
buffer to be copied. Without a range, the default is the current text buffer.

QUIT QUIT[/qualifier]

Ends the current editing session without saving the main text buffer.

Qualifier:

SAVE Saves the contents of the journal file under the name specified in
the command line to invoke EDT.

REPLACE R [range-1];[line to be inserted]

Deletes lines specified in range and inserts new text. EDT inserts the new
text at the first line in the range specification. Without a range, EDT
deletes the current line and inserts the new text in its place.
**Digital Standard Editor (EDT) Commands**

**RESEQUENCE**

**RES [range][/Qualifier]**

Assigns new line numbers to the contents of a buffer or the range of lines specified. Without a range, EDT resequences all lines in the current text buffer.

**Qualifier:**

SEQ[UENCE][:[initial][:increment]] Sets the first line resequenced to the initial value and increments succeeding numbers by the increment specified.

**SET**

**SET parameter**

Control the operating characteristics of EDT.

**Parameters:**

CASE [UPPER | LOWER | NONE]

EDT flags upper- or lowercase characters with a preceding apostrophe. The default is NONE, which does not flag any characters.

CURSOR top:bottom

Sets the number of lines over which the cursor moves on the display. Top is the number of lines for the upper limit and bottom is the number of lines for the lower limit.

ENTITY [WORD | SENTENCE | PARAGRAPH | PAGE] 'string'

Sets user-definable entities for character editing.

KEYPAD

Allows the keypad to control the character-editing operation.

LINES number

Sets the number of lines that EDT displays on the terminal during character editing.

MODE [LINE | CHANGE]

Used in a start-up command file to control the editing mode entered at the end of the initialization.

[NO]NUMBERS

Determines whether EDT displays line numbers in line editing. Default: NUMBERS

[NO]QUIET

Controls the ringing of the terminal bell when an error occurs in change mode editing. Default: NOQUIET
SCREEN width
Controls the maximum width of the line EDT displays. Default: 80 characters

SEARCH [EXACT:GENERAL]
EDT searches for exact comparisons of case or ignores case in searches. Default: GENERAL

[BOUNDED:UNBOUNDED]
EDT stops searching at the next page entity marker. Default: UNBOUNDED

-BEGIN:END-
EDT leaves the cursor at the end of the string when it is found. If the string is not found, the cursor does not move. Default: BEGIN

[TAB n:NOTAB]
Sets the number of spaces for the first tab stop in keypad editing. Remaining tabs are unchanged. Default: 8

TERMINAL [HCPY:VT52:VT100]
Determines the type of terminal in use. EDT gets the terminal type from the operating system and this command overrides that setting.

[NO]TRUNCATE
Ends display of a line at the value of SET SCREEN. Default: TRUNCATE

[NO]VERIFY
Enables or disables display of commands from command files and macro commands. Default: NOVERIFY

[NO]WRAP n
Sets or eliminates a line length limit of n character positions. Default: NOWRAP

SHOW

SHOW parameter
Displays the operating characteristics of EDT.

Parameters:

BUFFER
Lists the buffers in use during the current editing session and the number of lines of text in each.

CASE
Shows the current case setting.

CURSOR
Shows the current cursor range.
Digital Standard Editor (EDT) Commands

ENTITY [WORD : SENTENCE : PARAGRAPH : PAGE]
   Shows the current setting for the user-definable entity specified.

KEY [[GOLD][number : CONTROL letter] : GOLD character]
   Shows the definition of the specified key in change mode.

SCREEN
   Shows the current setting for screen width.

SUBSTITUTE   S[string–1/string–2/[range][/qualifier(s)]
   Replaces occurrences of string–1 with string–2 within the range specified.
   Without a range, EDT replaces the next occurrence of string–1 with string–2.
   EDT returns to the first line in the specified range at the end of the substitution.

   Qualifiers:
   B[RIEF][:n]   EDT displays the first n characters of the line containing
                  string–1. The default for n is 10.
   Q[QUERY]      EDT prompts you to verify each line of range–1 to be moved.
   NOT[TYP]      EDT does not display the lines on which it makes substi-
                  tutions.

SUBSTITUTE NEXT   [S] N[/string–1/string–2]
   EDT searches for the next occurrence of string–1 from the current location
   forward. The line on which the substitution is made becomes the current
   line.

   If you do not specify string–1 or string–2, EDT uses the strings specified in
   the last SUBSTITUTE command.

   TYPE   T [range][/qualifier(s)]
   Displays the specified range of lines, or all the lines in the current text
   buffer.

   Qualifiers:
   B[RIEF][:n]   EDT displays the first n characters of the selected lines. The
                  default for n is 10.
   S[TAY]        EDT does not change the cursor position.
WRITE WR filespec [range][/qualifier]
Copies the defined range of text from a text buffer to the specified file.
Does not change the contents of the text buffer. Without a range, EDT
copies the contents of the current text buffer to the file.

Qualifiers:
SEQ[ERENCE][[:initial[:increment]]] EDT writes the line numbers as a part
of the output file.

CHARACTER MODE KEYPAD EDITING COMMANDS
The keypad editing functions are those used when you enter Character Mode
with the EDT CHANGE command and set the terminal to use the keypad keys
with the SET KEYPAD command. You can also use all line mode commands
with the Gold Command keys.

DELETE Erases the character to the left of the cursor
GOLD integer Repeats any keypad function except SPECINS, DELETE, and
CTRL/U
LINE FEED Erases the word to the left of the cursor
CTRL/A Computes tab level
CTRL/C aborts the current command and returns EDT to keypad edit-
ing
CTRL/D Decreases tab level
CTRL/E Increases tab level
CTRL/K Defines key
CTRL/T Adjusts tabs
CTRL/U Deletes to start of line
CTRL/W Refreshes screen
CTRL/Z Returns to line-editing prompt

NOKEYPAD CHANGE MODE COMMANDS
No keypad commands have only one format, described below. They can be used
in a series without any delimiter between commands. However, no abbreviations
are allowed.
Digital Standard Editor (EDT) Commands

ADVANCE  [-]ADV
Sets all commands forward (to the right and down from the current cursor position). [-]ADV sets commands backward (to the left and up from the current cursor position).

APPEND  [+] [−][count]APPEND[+] [−][entity-count]
[+] [−][entity][=buffer]
Moves the specified entities to another text buffer and deletes the text from the current buffer. Buffer names the receiving text buffer. If no buffer is specified, EDT uses the PASTE buffer.

ASCII  [count]ASC
EDT displays an ASCII character when you specify the character's decimal number representation.

BACK  BACK
Sets all commands backward (to the left or up from the cursor). Override with a plus sign preceding another command.

CHANGE CASE  CHGC[entity]
Changes the case of the characters within an entity.

CUT  [+] [−][rep]CUT[+] [−][entity-count][+] [−][entity][=buffer]
Deletes the moved text from the current text buffer and moves it to the specified text buffer, or to the paste buffer if no other buffer is specified. Deletes previous contents of the receiving text buffer.

DELETE  [+] [−][rep]D[+] [−][entity-count][+] [−][entity][=buffer]
Deletes a specified number of entities.

DEFINE KEY  DEFK
Defines the keystrokes used in keypad editing in terms of nokeypad commands.

EXIT  EX
Exits EDT from nokeypad editing back to line editing.

EXTENDED  EXT
Enters line mode commands when EDT is in character mode. Returns to change mode after executing the command.
**FILL** \[+ \mid -\][rep][FILL][\(\pm \mid -\)][entity-count]\(+ \mid -\)[entity][\(\pm \mid -\)][buffer]

Places the maximum amount of text on each line within the limit determined by the SET WRAP command. Default: 80 characters.

**INSERT** \(+ \mid -\)[rep][INSERT][\(\pm \mid -\)][entity-count]\(+ \mid -\)[entity][\(\pm \mid -\)][buffer]

Prepares the current text buffer for insertion of text in front of the cursor position.

**NULL** \(+ \mid -\)[rep][NULL][\(\pm \mid -\)][entity-count]\(+ \mid -\)[entity][\(\pm \mid -\)][buffer]

Moves the cursor the specified number of entities.

**PASTE** **PASTE** \[\(\pm \mid -\)[rep][PASTE][\(\pm \mid -\)][entity-count]\(+ \mid -\)[entity][\(\pm \mid -\)][buffer]

Copies the contents of the specified text buffer in front of the current cursor location.

**QUIT** **QUIT**

Ends the editing session without saving any edits and returns to the monitor (CLI) prompt.

**REPLACE** **R** \[\(\pm \mid -\)[rep][R][\(\pm \mid -\)][entity-count]\(+ \mid -\)[entity][\(\pm \mid -\)][buffer]

Deletes the text specified and enters insert mode so that you can replace the deleted text. To exit from insert mode here, press \texttt{CTRL/Z}.

**REFRESH** **REF**

EDT refreshes the entire screen.

**SUBSTITUTE** \[\(\pm \mid -\)[count][S/s1/s2]

Replaces one string of characters with another. Count defines the number of substitutions and minus (-) indicates a backward search. Use any non-alphanumeric character as a delimiter, in place of the /.

**SELECT** **SEL**

Lets you select a range of text by entering SEL at one end and moving the cursor to the other end. The select range is the text between the cursor and the position marked by SEL.

**SHIFT LEFT** \[count][SHL]

Shifts the screen image to the left. The amount shifted is equal to the count you specify times 8 (one tab stop). The default count is 1.
Digital Standard Editor (EDT) Commands

SHIFT RIGHT  [count]SHR
Shifts the screen image to the right. The amount shifted is equal to the
count you specify times 8 (one tab stop).

SUBSTITUTE NXT  [+1][-][count]SN
Uses the s1 and s2 defined in the last substitute command to replace the
next occurrence of s1 with s2. Count defines the number of substitutions,
and a minus (-) sign indicates a backward search.

TAB   TAB
When no tab size is specified with SET TAB or when the cursor is not at
the beginning of a line, TAB inserts a tab character at the cursor position.

When a tab size is specified with SET TAB, and the cursor is at the
beginning of a line, TAB moves the cursor to the column position specified
in the SET TAB command.

TAB ADJUST  [+1][-][rep]TADJ[+1][-][entity-count]
            [+1][-][entity[=buffer]]
Adjusts the tab level for the selected range of lines.

TAB COMPUTE  TC
Sets the indentation level count to the value obtained by dividing the
current cursor column position by the SET TAB number.

TAB DECREMENT  [count]TD
Decreases the indentation level count.

TAB INCREMENT  [count]TI
Increases the indentation level count.

TOP   TOP
Places the current line at the top of the screen.

UNDELETE CHARACTER  [count]UND
Inserts the last character deleted by a DELETE CHARACTER command
into the current text buffer (in front of the cursor).

UNDELETE WORD  [count]UNDW
Inserts the last word deleted by a DELETE WORD command into the
current text buffer (in front of the cursor).
UNDELETE LINE [count]UNDL
Inserts the last line deleted by a DELETE LINE command into the current
text buffer (in front of the cursor).

CIRCUMFLEX [count]^[A...Z]
Inserts a control character in the text buffer.

LINE RANGES:
Most EDT commands allow you to specify a range of text on which the action of
the command is performed. These ranges are:

Single Line Ranges:
.(period) Current location of cursor.
number[.decimal] The line number specified.
- `string` : -"string" The most recent preceding line containing the string
specified. Without a string specification, EDT uses
the last search string.
[range]+[number] The line that is the specified number of lines after
the specified range.
[range]-[number] The line that is the specified number of lines before
the specified range.
BEGIN The first line in the text buffer.
END An empty line following the last line in the text
buffer.
LAST The last line in the most recent text buffer before the
current text buffer.
ORIGINAL number The line numbers assigned to the text in the main
text buffer from the primary input file. You can lo-
cate text by its original line number even after it has
been assigned new numbers.

Contiguous Line Ranges:
[range–1]:[range–2] The set of lines from range–1 through range–2 in-
clusive. Range–1 and Range–2 are any single line range
specification.
[range]#number: [range]FOR number The specified number of lines beginning with range,
where range is any single line range specification.
Digital Standard Editor (EDT) Commands

BEFORE
All lines preceding the current line in the current buffer.

REST
All lines after and including the current line.

WHOLE
The current text buffer.

Noncontiguous Ranges:

[range, range,...]!
All lines specified by each range, which must be single line range.

[range AND range...]

[range]All `string`
All lines in the range containing the specified string.

Text Buffer Ranges:

[=buffer][range]!
When you use a buffer without a range specification, the default is the entire text buffer and the cursor is placed at the first line in the text buffer.
FLX COMMAND SUMMARY

Command lines for the File Exchange utility (FLX) use the following format:

outfile/sw=infile(s)/sw

FLX assumes the following defaults if no switches are specified on the command line:

| Input volume | DOS-11       |
| Output volume | FILES-11    |

FLX switches are as follows:

**BLOCKS**  outfile/BL:n[.]=infile

Specifies the number of contiguous blocks (n) in octal or decimal to be allocated to the output file.

**BLOCK SIZE**  outfile/BS:n=infile

Specifies the block size (n) for cassette tape output.

**CONTIGUOUS**  outfile/CO=infile

Specifies that the output file is to be contiguous.

**DELETE**  outfile/DE=infile/[DE]

Deletes files from a DOS-11 or RT-11 (used with the /RT switch) volume.

**DIRECTORY**  outfile/DI=infile

Causes a directory listing of a cassette or DOS-11 volume or, when used with the /RT switch, of an RT-11 volume. The directory is placed in the specified output file.

**DENSITY**  outfile/DNS:n=infile

Specifies a density of 800, 1600, or 6250 bpi for a magnetic tape volume.

**DOS-11**  outfile/DO=infile/[DO]

Identifies the volume as a DOS-11 formatted volume.

**FORMATTED ASCII**  outfile/FA:n=infile

Specifies formatted ASCII transfer mode file format.
FLX Command Summary

FORMATTED BINARY  outfile/FB:n=infile

Specifies formatted binary transfer mode file format.

FORTRAN CONTROL  outfile/FC=infile

Specifies that FORTRAN carriage control conventions are to be used.

IDENTIFICATION  /ID

Displays the current version number of FLX.

IMAGE MODE  outfile/IM:n=infile

Specifies image mode (n is in decimal bytes).

LIST  outdevice/LI

Same as /DI.

NUMBER  outfile/ZE/NU:n[-].=infile

Used with /ZE and /RT switches; specifies the number of directory blocks (n) in octal or decimal to allocate when you are initializing an RT-11 disk or DECtape.

RSX FORMAT  outfile/RS=infile/[RS]

Identifies the volume as a Files-11 formatted volume.

RT FORMAT  outfile/RT=infile/[RT]

Identifies the volume as an RT-11 formatted volume.

REWIND  outfile/[-]RW=infile/[RW]

Specifies whether a magnetic tape will rewind before FLX begins the file transfer.

SPOOL  outfile/SP=infile

Specifies that the converted file is to be spooled by the print spooler or the Queue Manager.

UIE  outfile/UI=infile

 Specifies that the output file is to have the same UFD as the input file.
FLX Command Summary

VERIFY outfile/VE=infile

Verifies each record written to a cassette.

ZERO outfile/ZE=infile/RT

Initializes cassettes or DOS-11 volumes or, when used with the /RT switch, RT-11 volumes. Initializing erases any files already on the volume.
FMT COMMAND SUMMARY

Command lines for the Disk Volume Formatter (FMT) use the following format:

    FMT ddn:[/switch1.../switchn]

In this command line, ddn is the abbreviation for the volume being formatted and n is the unit number of the volume.

FMT switches are as follows:

BAD       ddn:/BAD
           Runs the Bad Block Locator Utility if it is installed. Note that you can use this switch only with operating systems that allow spawning of tasks. RSX-11M provides spawned tasks as a system generation option.

DENSITY   ddn:/DENS=n
           Selects high (double) or low (single) density for RX02 floppy diskettes. The value n can be 800 or 1600.

ERROR LIMIT ddn:/ERL=n
           Determines the maximum number of errors FMT allows on the volume.

MANUAL    ddn:/MAN
           Enters manual operating mode and formats the sector or track you specify.

NOVERIFY  ddn:/-VE
           Inhibits the default verification of a successful FMT operation.

OVERRIDE  ddn:/OVR
           Overrides or ignores the manufacturer's bad block sector file (MDBSF).

VERIFY    ddn:/VE
           Verifies that an FMT operation was successfully completed. This switch is the default.

WRITE LAST TRACK ddn:/WLT
           Rewrites the MDBSF (on the last track of the device) to add bad sectors found during an FMT operation.

INDIRECT  ddn:@Y
           Informs FMT that it is receiving input from an indirect command file. User intervention is not allowed during the operation.
LBR COMMAND SUMMARY

Command lines for the Librarian utility (LBR) use the following format:

`outfile[/sw][,listfile]=infile1[,infile2,...,infileN][/sw]`

LBR switches are as follows:

**COMPRESS**  `outfile/CO:size:ept:mnt=infile`

Compresses a library file by physically deleting logically deleted records, putting the free space at the end of the file, and making the free space available for new library module inserts.

**CREATE**  `outfile/CR:size:ept:mnt:libtype:infiletpe=infile[s]`

Allocates a contiguous library file on a direct access device (for example, a disk).

**DELETE**  `outfile/DE:module1[:module2...:modulen]`

Logically deletes library modules and their associated entry points from a file.

**DEFAULT**  `outfile/DF:type...`

or

`/DF:type`

Specifies the default library file type.

**DELETE GLOBAL**  `outfile/DG:global1[:global2,...:globalN]`

Deletes the specified library module entry points from the entry point table.

**ENTRY POINT**  `outfile[/EP]=infile[,...,infilen]`

or

`outfile=infile[/EP][,...,infilen[/EP]]`

Includes or excludes entries in the entry point table.

**EXTRACT**  `outfile=infiile/EX[:modulename1,...:modulenameN]`

Reads (extracts) one or more modules from a library and writes them into the specified output file.
LBR Command Summary

**INSERT**  outfile/IN=infile1[,infile2...,infileN]
or
    outfile=IN:name:op:op:op:op  (universal)

    Inserts library modules into a library file.

**LIST**  outfile[,listfile]/switch(es)

    Lists all modules in the library file plus additional information, depending
    on which form of the switch you use:

        /LI  Lists all modules in the library file.

        /LE  Lists all modules in the library file and their corresponding en-
             try points.

        /FU  Lists all modules in the library file and provides a full module
             description that includes the size, date of insertion, and
             module-dependent information.

**MODIFY HEADERS**  outfile/MH:module:op:op:op:op

    Modifies the optional user-specified information in the module header of a
    universal library.

**REPLACE**  outfile/RP=infile1[,infile2...,infileN] (global format)
               outfile=RP[infile1][RP][, ...][RP][, ...] (universal format)

    Replaces or, in certain cases, inserts library modules in a library file.

**SPOOL**  outfile,listfile/SP

    Spools the listing file for printing. This is the default setting; use /-SP to
    prevent the file from being printed.

**SELECTIVE**  outfile=IN=infile1[, infile2... , infileN] (global format)

    Sets the selective search attribute bit in the object module header.

**SQUEEZE**  outfile/SZ=infile1[, infile2... , infileN] (global format)
             outfile=SZ[infile1][SZ][, ...][SZ][, ...] (local format)

    Reduces the size of macro definitions by removing comments, blank lines,
    and trailing blanks and tabs from the macro text.
SLP COMMAND SUMMARY

Command lines for the Source Language Input Program (SLP) use only the following format:

```
outfile[/switch,]listfile[/SP or /-SP]=infile[/switch]
```

SLP switches have the same effect and can be used on either input or output file specifications, except for the /SP switch, which can only modify the listfile. These switches are:

**AUDIT TRAIL**

```
outfile[/-]AU=infile
    outfile=infile[/-]AU
```

Enables or disables the audit trail, which indicates the changes made during the most recent editing session.

**BLANK FILL**

```
outfile[/-]BF=infile
    outfile=infile[/-]BF
```

Enables or disables blank fill (right-justification) for an audit trail.

**COMPRESS**

```
outfile[/-]CM=infile
    outfile=infile[/-]CM
```

Deletes the audit trail and any trailing spaces or tabs, and truncates the text at the specified horizontal position.

**CHECKSUM**

```
outfile/CS[:n]=infile
    outfile=infile/CS[:n]
```

Calculates the checksum value for the edit commands.

**DOUBLESACE**

```
outfile[/-]DB=infile
    outfile=infile[/-]DB
```

Enables or disables double-spaced listings. /-DB is the default switch.

**NO SEQUENCE**

```
outfile/NS=infile
    outfile=infile/NS
```

Does not sequence lines in the output file. New lines are indicated by the audit trail (if specified). This switch overrides the /RS and /SQ switches.

**RESEQUENCE**

```
outfile/RS=infile
    outfile=infile/RS
```

Resequences the lines in the output file so that the line numbers are incremented for each line written to the output file.
SLP Command Summary

**SPOOL**  outfile, listfile/\[-]JSP=infile

Enables or disables the spooling of listing files to a line printer. This switch applies only if the print spooler task (RSX-11M) or the Queue Manager (RSX-11M/M-PLUS) is installed.

**SEQUENCE**  outfile/SQ=infile
               outfile=infile/SQ

Sequences the lines in the output file so that the numbers reflect the line numbers of the original input file.

**TRUNCATE**  outfile/TR=infile
               outfile=infile/TR

Specifies that a diagnostic error message occurs when lines are truncated by the audit trail.

SLP uses the following special operators, in edit mode, to perform specific functions:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Identifies the dash as the first character of a SLP edit command line</td>
</tr>
<tr>
<td>\</td>
<td>Suppresses audit trail processing</td>
</tr>
<tr>
<td>%</td>
<td>Reenables audit trail processing</td>
</tr>
<tr>
<td>@</td>
<td>Invokes an indirect file for SLP processing</td>
</tr>
<tr>
<td>/</td>
<td>Terminates the SLP edit session and returns to SLP command mode</td>
</tr>
<tr>
<td>&lt;</td>
<td>Allows characters in the input file that SLP would normally use as operators</td>
</tr>
</tbody>
</table>
PAT COMMAND SUMMARY

PAT command lines use the following format:

\[\text{[outfile]=[infil}e/\text{CS[>:number]}, \text{correctfile[)/CS[>:number]}\]

In this command line, outfile is the file specification for the output file, infile is the file specification for the input file containing one or more concatenated object modules, and correctfile is the specification for the correction file containing updates to be applied to one module in the input file.

The only PAT switch is the following:

**CHECKSUM** \[\text{[outfile}=\text{infil}e/\text{CS[>:n]}, \text{correctfile[)/CS[>:n]}\]

Directs PAT to calculate the checksum for all the binary data that constitutes the module. PAT displays this checksum in octal.
PERIPHERAL INTERCHANGE PROGRAM
(PIP) COMMANDS

Default Operation
The default PIP operation (with no switches) is to copy the specified files, using
the following format:

\[ \text{outfile} = \text{infil}(e, s)[/\text{subswitches}] \]

PIP allows the following parameters for this command:

- **outfile**
  - If the command does not specify a file name, file type, or
    version number, PIP uses the input name and type and the
    next highest version number.
  - If the command specifies a file name, file type, or version
    number, no other field can be a wildcard and the command
    line can only specify one input file.

- **infile**
  - If the command does not specify file name, file type, or ver-
    sion number, the default is \*.*;\*.

**subswitches:**

- **/BL:n[.]**
  - Specifies the number of contiguous blocks allocated for the
    output file, where n is octal or decimal.
  - If n is decimal, it is followed by a period (n.).

- **/CO, /-CO, or /NOCO**
  - Specifies a contiguous or noncontiguous output file.

- **/FO**
  - File ownership (output file UFD).

- **/NV**
  - Forces the output version number of the copied file to be 1
    higher than the current highest version.

- **/SU**
  - Copies the output file, superseding an existing file.

**APPEND**

\[ \text{outfile}[/FO] = \text{infil}(e, s)/\text{AP}[/FO] \]

Opens an existing file and appends the input files, infile(s), to the end of it.

PIP allows the following parameters for this command:

- **outfile**
  - Explicit file name and file type.

- **infile(s)**
  - Explicit file parameters; wildcard by default.

- **/FO**
  - File ownership is the output file UFD; without /FO, owner-
    ship is the UIC of the user running PIP.
Peripheral Interchange Program (PIP) Commands

**BLOCKSIZE** outfile/BS:\n = infile(.s)

Defines the block size for magnetic tape.

**CREATION DATE** outfile/CD = infile(.s)

outfile = infile/CD

Gives the output file the creation date of the input file rather than the date of the file transfer. (This switch cannot be used with the merge switch or with a magnetic tape as an output device.)

**DATE /DD:startdate:enddate**

Restricts file searches to files created during the specified period of time.

**DELETE infile(s)/DE[/LD]**

Deletes files. /LD is a subswitch that causes PIP to list the files it deletes.

**DEFAULT [ddn:]\[UFD]/DF**

Changes the default device and/or UFD for the current PIP task.

**END-OF-FILE** infile/EOF[\{block:byte\}]

Specifies the end-of-file pointers for a file. If values for block and byte are not entered, PIP places EOF at the last byte of the last block in the file.

**ENTER outfile = infile(s)/EN[/NV]**

Enters a synonym for a file in a directory on the same device, with an option to force the version number of the output file to 1 greater than the latest version for the file.

outfile The file name, file type, or file version can be explicit, a wildcard, or null. A field that is a wildcard or null assumes a corresponding input field.

infile Default for the file name, file type, and file version is *.*;*.

/NV Forces a new version of the file.

**EXCLUDE** filespec/EX

Excludes one file specification during a search.

**FILE ID** outfile = /FI:filenumber:sequencenumber

Accesses a file by its file identification number (file ID).
Peripheral Interchange Program (PIP) Commands

FREE [ddn:] /FR
Displays on the terminal the amount of space available on a volume, the largest block of contiguous space, the number of available file headers, and the number of headers used.

IDENTIFICATION /ID
Identifies the version number of PIP currently in use and whether PIP is linked to ANSFCS.

LIST [listfile = ]infile(s)/Li[/subswitch]
Lists the contents of one or more UFDs, with an option to specify formats for output directories.

outfile Listing file specifier; defaults to TI:.
infile Default is *.*:*.

The following subswitches determine what type of report is displayed.

/LI/BR or /BR Brief report.
/LI Limited report.
/LI/FU:n or /FU:n Full report (n specifies the decimal characters per line; the default is device buffer size).
/LI/TB or /TB Total blocks report.
/LI & /TD or /TD/Li Files created on current day. The /TD switch alone does not generate a directory listing.

MERGE outfile = infile(s)/ME[/subswitch(es)]
Creates one file by concatenating two or more files. The legal subswitches are as follows:

subswitches:

/BL:n[.] Specifies the number of contiguous blocks allocated for the output file, where n is octal or decimal.
If n is decimal, it is followed by a period (n.).
Peripheral Interchange Program (PIP) Commands

/CO, /-CO, or /NOCO Specifies a contiguous or noncontiguous output file.

/FO File ownership (output file UFD).

/NV Forces the output version number of the copied file to be 1 higher than the current highest version.

/SU Copies the output file, superseding an existing output file.

NO MESSAGE Infile(s)/NM[s]w] Causes certain PIP error messages not to be displayed: for example, the message NO SUCH FILE(S). The switches that can be used with the NM switch are as follows:

/LI Lists directory.

/DE Deletes file(s).

/PU Purges file(s).

/UN Unlocks file(s).

You can also use any subswitches of these switches.

PROTECTION SYMBOLIC: infilename/PR[/SY:RWED][/OW:RWED][/GR:RWED][/WO:RWED][/FO]

Alters the file protection for the file specified. The file name and file type must be explicit.

Symbolic protection codes assign privilege merely by their presence, using the following:

System = /SY:RWED
Owner = /OW:RWED
Group = /GR:RWED
World = /WO:RWED

The symbolic codes are as follows:

R read
W write
E extend
D delete

Numeric protection denies privilege by setting bits in a protection status word. Add octal values from the following list to deny privilege.
### Peripheral Interchange Program (PIP) Commands

<table>
<thead>
<tr>
<th>User Class</th>
<th>Privilege</th>
<th>Octal Code</th>
<th>Bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>R</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Owner</td>
<td>R</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>40</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>100</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>200</td>
<td>7</td>
</tr>
<tr>
<td>Group</td>
<td>R</td>
<td>400</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>1000</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>2000</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>4000</td>
<td>11</td>
</tr>
<tr>
<td>World</td>
<td>R</td>
<td>10000</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>20000</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>40000</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>100000</td>
<td>15</td>
</tr>
</tbody>
</table>

**PURGE infile(s) /PU[:n]//LD**

Deletes a specified range of versions of a file (but does not delete the latest version). Specification of a file version number is not necessary. Wildcards are valid for file name and file type.

When :n is specified, PIP deletes all but the n latest consecutively numbered versions. Without :n, PIP deletes all but the latest version.

**REMOVE infile(s) /RM**

Removes an entry from a UFD, but does not delete the file.

**RENAME outfile = infile(s)/RE[/NV]**

Changes the name of the file specified. Used with the /NV switch, /RE creates an output file with a version number 1 higher than the latest version of the file.

- **outfile**: A wildcard (*) or null field assumes the value of the corresponding field in the input file.
- **infiles**: Null file name, file type, and file version default to *.*;*.
- **/NV**: See COPY.
Peripheral Interchange Program (PIP) Commands

REWIND outfile/RW = infile
    outfile = infile /RW

    outfile Causes the magnetic tape on the specified unit to be rewound
    and erased.

    infile Causes the magnetic tape on the specified unit to be rewound
    before the input file is opened.

SELECTIVE DELETE infile(s)/SD

    Prompts for user response before deleting files.

SHARED READING infile(s)/SR

    Allows shared reading of a file that has already been opened for writing.

SPAN BLOCKS outdisk:outfile/SB = inmag:infile

    Allows output file records to cross block boundaries when ANSI tapes are
    being copied to Files-11 volumes.

SPOOL infile(s)/SP[:n]

    Specifies a list of files to be printed on a line printer. n is the number of
    copies. This switch applies only if you have the Serial Despooler or the
    Queue Manager. However, using it with the Queue Manager is not recom-
    mended.

TRUNCATE infile(s)/TR

    Truncates files to their logical end-of-file point.

USER FILE DIRECTORY ENTRY outfile(s)/UF/[FO] = infile(s)

    Creates a User File Directory entry in the Master File Directory on a
    volume.

    outfile specifies the UIC as [*,*] to transfer multiple infile UICs.

    /FO See APPEND.

UNLOCK infile(s)/UN

    Unlocks a file that was locked as a result of being closed improperly.
Peripheral Interchange Program (PIP) Commands

UPDATE FILE outfile = Infile(s)/UP[/FO]

Opens an existing file and writes new data (infile) in it, from the beginning.

outfile Must be explicitly identified.

infile Null parameters default to *. * . Input file(s) replace the current contents of output files.
QUEUE MANAGER

This section describes the Queue Manager commands for RSX-11M-PLUS. It includes syntax to use the commands from either DCL or MCR.

DELETE

Deletes queues or QMG jobs by name or by the job's unique entry number.

Format

DCL>DELETE/JOB queuename jobname[FILE__POSITION:n]
DCL>DELETE/ENTRY:nnn[/FILE__POSITION:n]
MCR>QUE queuename:jobname/FI:n/DEL
MCR>QUE /EN:nnn/FI:n/DEL

HOLD AND RELEASE

You can specify that a job be held when you issue your PRINT or SUBMIT command. You can also hold jobs with the HOLD command and release such jobs with the RELEASE command.

HOLD (QUE /HO) blocks a job in its queue until it is explicitly released.

RELEASE (QUE /RE) unblocks a job that has been held in queue.

Format

DCL>hold/JOB queuename jobname
DCL>hold/ENTRY:nnn
MCR>QUE queuename:jobname/HO
MCR>QUE /EN:nnn/HO
DCL>RELEASE/JOB queuename jobname
DCL>RELEASE/ENTRY:nnn
MCR>QUE queuename:jobname/REL
MCR>QUE /EN:nnn/REL

PRINT

Queues files for printing on a line printer or use on other output devices.

Format

DCL>PRINT/commandqualifier[s] file[s]/filequalifier[s]
MCR>PRI [queuename:]*[jobname][:/jobswitch][=/]file[s]/[=/filesswitch[s]]

DCL Command Qualifiers MCR Job Switches
/JOBCOUNT:n /CO:n
/QUEUE:queuename queuename:
/UPPERCASE /NOLO
/LOWERCASE /LO
Queue Manager

/[NO]HOLD /[NO]RES
/PAGE—COUNT:n /PA:n
/NAME:jobname jobname=
/PRIORITY:n /PRIO:n
/FORMS:n /FO:n
/LENGTH:n /LE:n
/[NO]RESTART /[NO]FL
/[NO]FLAG__PAGE /NOJO
/AFTER:(dd—mmm—yy hh:mm) /AF:hh:mm:dd—mmm—yy
/DEVICE:ddnn: queuname:
/NOJOBPAGE /NOJO

DCL File Qualifiers MCR File Switches
/[NO]DELETE /[NO]DEL
/COPIES:n /CO:n

SET QUEUE
Modifies attributes given to print jobs, batch jobs, or files that compose jobs in
queues. Such jobs and files have been entered in queues by the PRINT com-
mand.

Job Format

DCL>SET QUEUE queue:jobname/qualifier[/qualifier[s]]
DCL>SET QUEUE /ENTRY:nnn/qualifier[/qualifier[s]]
MCR>QUE queue:jobname/MOD/switch[/switch[s]]
MCR>QUE /EN:nnn/MOD/switch[/switch[s]]

DCL Qualifiers MCR Switches
/AFTER:(hh:mm dd—mmm—yy) /AF:hh:mm:dd—mmm—yy
/JOBCOUNT:n /CO:n
/FORMS:n /FO:n
/LENGTH:n /LE:N
/LOWERCASE /LO
/PAGE—COUNT:n /PA:n
/PRIORITY:n /PRIO:n
/[NO]RESTART /[NO]RE
/UPPERCASE /NOLO

File Format

DCL>SET QUEUE/ENTRY:nnn/FILE—POSITION:n/qualifier[/qualifier[s]]
DCL>SET QUEUE queue:jobname/FILE—
POSITION:n/qualifier[/qualifier[s]]
MCR>QUE /EN:nnn/MOD/FI:n/switch[/switch[s]]
MCR>QUE queue:jobname/MOD/FI:n/switch[/switch[s]]
SHOW PROCESSOR
Displays information about the initialized characteristics printers, and other devices under control of the Queue Manager.

Format
DCL>SHOW PROCESSOR/qualifier
MCR>QUE [processorname:]/switch

DCL Qualifiers                              MCR Switches
processornam[:e]                           /LI:DEV
/PRINT or /DEVICE                         /LI:DEV:P
/INPUT or /CARD:READER                     /LI:DEV:1

SHOW QUEUE
SHOW QUEUE displays information about QMG print jobs.

Format
DCL>SHOW QUEUE [queue:ename]/qualifier[s]
MCR>QUE [queue:ename][[uic]][job:ename]/switch[s]

DCL Qualifiers                              MCR Switches
/FULL                                       /FU
/FILES                                      /LI
/BRIEF                                      /BR
/DEVICE                                     /LI:P
/ENTRY:nnn                                  /EN:nnn
/FORMS[:n]                                  /FO[:n]
/NAME:job:ename                             job:ename
/OWNER:UIC:uic                              [uic]
/PRINT                                     /LI:P
ZAP COMMAND AND SWITCH SUMMARY

Invoke ZAP before you enter the ZAP command line, using the following format:

   ddnn:[ubd]filename,filtype;version[/sw...]

You cannot enter a file specification on the command line when you invoke ZAP.

In this command, the file specification is the task image file to be examined or modified. The default file type is .TSK and the default version is the latest one.

ZAP command lines use the following switches:

**ABSOLUTE**  ddnn:filespec/AB

   Specifies absolute mode.

**LIST**  ddnn:filespec/L1

   Displays the overlay segment table for an overlaid task image file.

**READ-ONLY**  ddnn:filespec/RO

   Specifies read-only mode.

**ZAP Open/Close Commands**

ZAP uses the following commands to examine or modify a task image file:

/ (slash)

   Opens a location, displays its contents in octal, and stores the contents of the location in the Quantity Register (Q). If the location is odd, it is opened as a byte.

" (quotation mark)

   Opens a location, displays the contents of the location as two ASCII characters, and stores the contents of the location in the Quantity Register (Q).

% (percent sign)

   Opens a location, displays the contents of the location in Radix-50 format, and stores the contents of the location in the Quantity Register (Q).

\ (backslash)

   Opens a location as a byte, displays the contents of the location in octal, and stores the contents of the location in the Quantity Register (Q).
ZAP Command and Switch Summary

' (apostrophe)
Opens a location, displays the contents as one ASCII character, and stores the contents of the location in the Quantity Register (Q).

<RET> (RETURN key)
Closes the current location as modified and opens the next sequential location if no other values or commands are on the command line. ZAP commands take effect only after you press the RETURN key.

^ or (circumflex or up arrow)
Closes the currently open location as modified and opens the preceding location.

_ (underscore)
Closes the currently open location as modified, uses the contents of the location, as an offset from the current location, and opens the new location.

@ (at sign)
Closes the currently open location as modified, uses the contents of the location as an absolute address, and opens that location.

> (right angle bracket)
Closes the currently open location as modified, interprets the low-order byte of the contents of the location as the relative branch offset, and opens the target location of the branch.

< (left angle bracket)
Closes the currently open location as modified, returns to the location from which the last series of underscore (_), at sign (@), and/or right angle bracket (>) commands began, and opens the next sequential location.

General-Purpose Commands

X
Exits from ZAP and returns control to the CLI.

K
Calculates the offset in bytes between an address and the value contained in a Relocation Register, displays the offset value, and stores it in the Quantity Register (Q).
O

Displays the jump and branch displacements from the current location to a target location.

=

Displays in octal the value of the expression to the left of the equal sign.

V

Verifies the contents of the current location.

R

Sets the value of a Relocation Register.
MONITOR CONSOLE ROUTINE (MCR) COMMANDS

In this section, (P) indicates that a command format or keyword is privileged.

ABORT ABO taskname [/keyword]

Keywords: /PMD
/TERM=TTn:n:

Terminates execution of the specified task from the issuing terminal, or from another terminal if the /TERM keyword is used by a privileged user. You can request a Postmortem Dump with the /PMD keyword.

ACTIVE ACT [/keyword]

Keywords: /ALL
/TERM=TTn:n:

Displays on the terminal all tasks issued from that terminal, all tasks active in the system, or all tasks issued from a specified terminal.

ACTIVE TASK LIST ATL [taskname]

Displays the name and status of all active tasks in the system, or the status of the particular task specified.

ALLOCATE ALL dd[nn:]][=llnn:][/keyword]

Keywords: /TERM=TTn:n:
/TYPE=dev

Establishes the specified device as the user’s private device on multiuser protection systems. Privileged users can allocate a device to any terminal, using the /TERM keyword, but nonprivileged users can only allocate devices to their own terminals.

Specifying dd allocates the first logical unit of the dd-type device (for example, DM1:). Specifying the /TYPE keyword allocates the first available dev-type device (for example, RK07). Specifying =llnn: creates a logical device name and assigns it to the physical device being allocated.

ALLOCATE CHECKPOINT SPACE (P) ACS ddnn:/BLKS=n.

Allocates or discontinues a checkpoint file on disk for systems that support the dynamic allocation of checkpoint space. The /BLKS keyword specifies the number of blocks to be allocated to the checkpoint file. Use n=0 to discontinue use of a checkpoint file.
Monitor Console Routine (MCR) Commands

**ALTER**  ALT taskname[/keyword]  (P)

**Keywords:**  /PRI=static and running priority
                /RPRI=running priority only
                /TERM=TTnn:  = task priority from a specified terminal

Changes the static or running priority of an installed task.

**ANCILLARY CONTROL DRIVER**  ACD function

**Functions (Privileged):**  INSTALL filename AS NUMBER n [ASSIGN logicalname]
                              REMOVE NUMBER n [logicalname]

Loads and unloads character translation routines so terminals that conform to other standards can use the DIGITAL Multinational Character Set (MCS).

**Functions (Nonprivileged):**  LINK tnn: TO NUMBER n [logicalname]
                                UNLINK tnn:

Links or unlinks the specified routine to the specified terminal.

**ASSIGN**  ASN pnn:=lInn: [/keyword]

**Keywords:**  /GR (P)
                /FINAL (P)
                /GBL (P)
                /LOGIN
                /TERM=TTnn:

Assigns, displays, or deletes logical name assignments if extended logical name support was selected during system generation or logical device assignments, as specified in the following list.

Note that pnn: is the physical device name or equivalence string, and lInn is the logical name being assigned.

**Local assign operations**

ASN pnn:=lInn:
ASN pnn:=lInn:/TERM=TTnn:  (P)

**Login assign operations**

ASN pnn:=lInn:/LOGIN  (P)
ASN pnn:=lInn:/LOGIN/TERM=TTnn:  (P)

**Group assign operations**

ASN pnn:=lInn:/GR (P)
Monitor Console Routine (MCR) Commands

Global assign operations
ASN pnn:=linn:/GBL (P)

Local display operations
ASN

Login display operations
ASN /TERM=TTnn: (P)

Group display operations
ASN /GR (P)

Global display operations
ASN /GBL (P)

Local delete operations
ASN =
ASN = linn:

Login delete operations
ASN = /LOGIN (P)
ASN = /LOGIN/TERM=TTnn: (P)
ASN = /TERM=TTnn: (P)
ASN = /linn:/TERM=TTnn: (P)
ASN = /linn:/LOGIN (P)
ASN = /linn:/LOGIN/TERM=TTnn: (P)

Group delete operations
ASN=/GR (P)

Global delete operations
ASN = /GBL (P)
ASN = linn:/GBL (P)

BLOCK BLK [taskname]/[TERM=TTnn:]

Declares that the specified task is ineligible to execute or to compete for memory resources. Nonprivileged users can block only tasks running from their own terminals. Privileged users can block any task. However, ACP tasks, CLI tasks, tasks being aborted, and halted tasks cannot be blocked.
Monitor Console Routine (MCR) Commands

BOOT BOO [filespec] (P)
Bootstraps a system that exists as a task image file on a Files-11 volume.

BREAKPOINT TO XDT (P) BRK
Passes control to the Executive Debugging Tool (XDT).

BROADCAST BRO TTnn: message
    BRO @filespec
    BRO ALL: message (P)
    BRO LOG: message (P)
    BRO user-name message
Displays the specified message at one terminal for a nonprivileged user, or at a number of terminals for a privileged user.

BYE [/keyword]
Keyword: /[NO]HOLD
Logs the user out of a multiuser protection system, optionally specifying that the full-duplex terminal driver not hang up a remote line or that DECnet not break the connection.

CANCEL CAN taskname
Cancels time-based initiation of a task. Privileged users can cancel any task, but nonprivileged users can cancel only tasks that they initiated.

COMMON BLOCK DIRECTORY CBD [common-region-name[/keyword]]
Keyword: /TASKS
Displays information about all entries or a specific entry in the Common Block Directory. Also, CBD with the /TASKS keyword displays the name of each task attached to a specific common region and the number of times the task has mapped to the region.

COMMAND LINE INTERPRETER CLI /keyword=cliname
Keywords: /DISABLE=cliname
/ELIM=cliname or ELIM=* 
/ENABLE=cliname
/INIT=cliname[/subkeyword(s)]
Subkeywords: /CPR="string"
/DPR="string"
/LGO
/MESSAGE
Monitor Console Routine (MCR) Commands

Subkeywords:
/NULL
/PRIV
/PROMPT
/QUIET
/RESTRICT
/SNGL
/TASK=taskname
/MESSAGE=cliname:"message-text"
/SHOW
/UNOVR

Sets up for use a command line interpreter other than MCR, such as DCL or a user-written CLI.

CLOCK QUEUE  CLQ[UEUE]
Displays on the entering terminal information about tasks currently in the clock queue.

DEALLOCATE  DEA [ddnn:]
Releases a private (allocated) device where ddnn: is the device name and unit number. Privileged users can deallocate any device, but nonprivileged users can only deallocate devices that they have allocated. If no device is specified, the command deallocates all of the user’s allocated devices.

DEBUG  DEB [taskname]
Allows you to debug a task by forcing the task to trap to a debugging aid. Nonprivileged users can debug only tasks that they initiated. Privileged users can debug any task.

DEFINE LOGICALS  DFL keyword
Defines, deletes, or displays logical name assignments.

Keywords:
/ALL
/FINAL (P)
/GBL or SYSTEM (P)
/TERM=TTnn: (P)

Local define operations
DFL pnn:=lInn: (P)
DFL pnn:=lInn:/TERM=TTnn: (P)

Group define operations
DFL pnn:=lInn:/GR (P)
Monitor Console Routine (MCR) Commands

Global define operations
DFL ppn:=lnnn:/GBL (P)
DFL ppn:=lnnn:/SYSTEM (P)

Local display operations
DFL
DFL /ALL

Group display operations
DFL /GR (P)

Global display operations
DFL /GBL or /SYSTEM (P)

Local delete operations
DFL =

Group delete operations
DFL =/GR (P)

Global delete operations
DFL =/GBL or /SYSTEM

DEVICES

DEV [/keyword]
DEV dd:
DEV ddnn:

Keyword: /LOG
Displays symbolic names of all devices or of all devices of a particular type, or the name of a specific device. The /LOG keyword displays all of the logged-in terminals as well as device characteristics.

DIGITAL COMMAND LANGUAGE DCL command-line

Allows you to issue DCL commands from a terminal that is set to MCR.

DISMOUNT

DMO ddnn: [/"label"] [/keyword(s)]
DMO /USER[/keyword(s)]

Keywords: /DEV (P)
/TERM=TTnn: (P)
/LOCK=option

Tells the file system to mark the volume for dismount and to release the control blocks. Privileged users can dismount any volume, but nonprivileged users can dismount only devices that they have mounted.
Monitor Console Routine (MCR) Commands

FIX IN MEMORY (P)  FIX taskname [/keyword]

Keywords:  /REG
             /RON

Loads and locks a task or a common task region into its memory (or
partition memory).

GROUP GLOBAL EVENT FLAGS  FLA[GS][ggg]/keyword]

Keywords:  /CRE
             /ELIM

For privileged users, creates or eliminates global event flags for any group.
For nonprivileged users, creates or eliminates group global flags only for
their own login group. Any user can display all of the group global event
flags.

HELLO/LOGIN  HEL [ulc[/password]]
             HEL [username[/password]]
             LOG [ulc[/password]]
             LOG [username[/password]]

Logs you in on a terminal to access a multiuser system.

HELP  HELP [/keyword] [qualifier][qualifier 2][...qualifier 9]
      HELP % [qualifier][qualifier 2][...qualifier 9]

Keywords:  /CLI:cliname
             /DCL
             /FIL:filspec
             /GRO
             /LOC
             /MCR
             /OUT:filspec

Displays the contents of a help file on the issuing terminal.

HOME  HOM ddnn:volume-label/keyword(s)

Keywords:  /DENS=density
             /EXT=block-count
             /FPRO=[system,owner,group,world]
             /LRU=directory-count
             /MXF=file-count
             /NAME=new-volume-label
             /OVR  (P)
             /OWNER=[g,m]
Monitor Console Routine (MCR) Commands

Keywords: /POS
/PRO=[system,owner,group,world]
/UIC=[g,m]
/VL
/WIN=retrieval-pointer-count

Modifies certain fields in the home block of a Files–11 disk volume.

INITIALIZE VOLUME  INI ddnn:["volume-label"] [/keyword(s)]

Keywords: /ACCESS="character"
/BAD=[option]
/DENS=density
/EXT=block-count
/FPRO=[system,owner,group,world]
/INDX=index-file-position
/INF=initial-index-file-size
/LRU=directory-count
/MXF=file-count
/OWNER=[g,m] or OWNER="owner"
/POS
/PRO=[system,owner,group,world]
/UIC=[g,m]
/VL
/WIN=retrieval-pointer-count

Produces a Files–11 volume on disk, magnetic tape, or DECtape. On multiuser protection systems, you can initialize volumes only on devices that you allocated.

INSTALL  INS [filespec[/keyword(s)]] (P)

Keywords: /AFF=[CPx,UBy]
/CKP=option
/CLI=option
/INC=size
/IOP=option
/PAR=pname
/PMD=option
/PRI=number
/PRO=[system,owner,group,world]
/RON=option
/ROPAR=pname
/SEC=option
/SLV=option
/SYNC=option
/TASK=taskname
Monitor Console Routine (MCR) Commands

Keywords:  /TIME=nM
            or
            /TIME=nS
            /UIC=[g,m]
            /WB=option
            /XHR=option

Makes a specified task known to the system.

LOAD   LOA dd:[/keyword(s)] (P)

Keywords:  /PAR=parname
            /CTB=cca[,b...]
            /SIZE=parsize
            /HIGH
            /VEC

Reads a nonresident device driver into memory and constructs the linkages required to allow access to the device.

LOGICAL UNIT NUMBERS   LUN[S] taskname

Displays the static LUN assignments for a specified task.

MOUNT

Allows the file system software access to a physical device.

Files–11 disk or DECTape format:

MOU ddnn:[label][/keyword(s)]

Keywords:  /ACP=option (P)
            /CACHE=option
            /DENS=density
            /EXT=block-count
            /FOR
            /FPRO=[system,owner,group,world]
            /LOCK=option
            /LRU=directory-count
            /OVR (P)
            /PARM="user parameters"
            /PRO=option
            /PUB
            /[NO]SHARE
            /UIC=[g,m]
            /UNL
            /VI
Monitor Console Routine (MCR) Commands

Keywords: /[NO]WAIT
/WIN=option
/[NO]WRITE

Files-11 (ANSI) magnetic tape format:

MOU device-list:[file-set-ID]/[keyword(s)]

Keywords: /ACP=option (P)
/BS=n
/CC=option
/DENS=density
/FOR
/FPRO=[system,owner,group,world]
/[NO]HDR3
/[NO]LABEL
/LOCK= option
/OVR (P)
/OVRACC (P)
/OVREXP (P)
/OVRFSID (P)
/PARM= "user parameters"
/PRO= option
/PUB
/RS=n
/[NO]SHARE
/TR= option
/UIC=[g,m]
/VI
/VOL= (list)
/[NO]WAIT
/[NO]WRITE

OPEN REGISTER (P) OPE[N] mem-addr[+/-n]/[keyword]
mem-addr /contents [ctrl-char][value]term

Keywords: /AFF=[CPx,UBy]
/CPU=CPx
/TASK=taskname
/TASKD
/TASKI
/PAR=partitionname
/KNL
/KNLD
Monitor Console Routine (MCR) Commands

Keywords:  /KNLI
/DRV=dd:
/REG=region-name

Allows examination and optional modification of a register in memory.

PARTITION DEFINITIONS  PAR[TITIONS]
Displays a description of each memory partition in the system.

REASSIGN  (P)  REA taskname lun ddnn:
Reassigns a task’s static logical unit numbers from one device to another.

REDIRECT  (P)  RED ndnn:=oddnn:
Redirects all I/O requests from one physical device unit to another (from 0 to n).

REMOVE  (P)  REM [ddnn:] taskname or REM region-name/keyword
Keyword:  /REG
Deletes an entry (task name) from the System Task Directory (STD) and thereby removes the task from the system. The optional device specification indicates the device from which the task was installed. The /REG keyword removes regions from the CBD.

RESUME  RES taskname [/keyword]
Keyword:  /TERM=TTnn:  (P)
Allows nonprivileged users to continue execution of a suspended task that was initiated from the entering terminal. Privileged users can resume any suspended task.

RUN  RUN taskname [/UIC=[g,m]]  (/UIC privileged keyword)  
RUN taskname dtime [/RSI=magu]/[UIC=[g,m]]  (P)  
RUN taskname sync [dtime]/[RSI=magu]/[UIC=[g,m]]  (P)  
RUN taskname atime [/RSI=magu]/[UIC=[g,m]]  (P)  
RUN [ddnn:]$ filespec [/keyword(s)]

Keywords:  /CKP=option  
/CMD="command-line"  
/EST=option  
/INC=size  
/IOP=option  
/PAR=pname  
/PMD=option
Monitor Console Routine (MCR) Commands

Keywords: /PRI=number (P)
/RPAR= pname
/SLV= option
/TASK= taskname
/TIME=nM or TIME=nS
/UIC=[g,m]

Initiates execution of a task, either immediately or at one of several time-dependent intervals.

SAVE (P) SAV [/keyword(s)]

Keywords: /WB
/MOU= "string"
/SFILE= "filespec"
/CSR=x

Copies the current system image into the system image file from which the current system was booted.

SET /keyword=values

Keywords: /[NO]ABAUD[=TTnn:]
/[NO]ANSI[=TTnn:]
/[NO]AVO[=TTnn:]
/[NO]BLKMOD[=TTnn]
/[NO]BOT=pname: value
/[NO]BRO[=TTnn:]
/BUF=ddnn:[size]
/[NO]CACHE=option
/CLI[=TTnn:[cli]
/COLOG
/CRASHDEV and CRASH__DEVICE:ddnn:[CSRaddr]
/[NO]CRT[=TTnn:]
/DCL[=TTnn:]
/[NO]DEC[TTnn:]
/DEF[="(ddnn:)[[directory]]
/[NO]DPRO[=protection codes]
/[NO]EBC[=TTnn:]
/[NO]ECHO[=TTnn:]
/[NO]EDIT[=TTnn:]
/[NO]ESSEQ[=TTnn:]
/[NO]FDX[=TTnn:]
/[NO]FORMFEED[=TTnn:]
/HFILL= TTnn: [value]
/[NO]HHT[=TTnn:]
/[NO]HOLD[=TTnn:]

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Monitor Console Routine (MCR) Commands

Keywords:
/HOST[=node[::]]
/[NO]HSYNC[=TTnn:]
/INQUIRE
/LIBUIC[=ulic]
/LINES=TTnn:[value]
/[NO]LOGON (P)
/[NO]LOWER[=ddnn:]
/[NO]MAIN[pname[:base:size:type]]
/NOPAR=pname
/MAXEXT[=size] (P)
/MAXPKT[=n]
/MCR[=TTnn:]
/[NO]NAMED
/NETUIC[=g.m]
/NOCSEX
/[NO]OPT[=ddnn:optyp:fairness-count]
/[NO]OVLP[=ccn]
/PAR=pname[:base:size[=type]]
/[NO]PARITY
/PASSWORD
/[NO]PASTHRU[=TTnn:]
/PLCTL[=high][=low][=frsiz][=basep]]] (P)
/POOL[=top]
/POOLSIZE=-size
/[NO]PRINTER__PORT[=TTnn:]
/[NO]PRIV[=TTnn:]
/[NO]PUB[=ddnn:]
/[NO]REGIS[=TTnn:]
/[NO]REMOTE[=TTnn:[speed]]
/RNDC[=nn]
/RNDH[=nn]
/RNDL[=nn]
/[NO]RPA[=TTnn:]
/SECPOL
/[NO]SERIAL[=TTnn:]
/[NO]SLAVE[=TTnn:]
/[NO]SOFT[=TTnn:]
/SPEED=TTnn:[recv:xmit]
/SWPC[=nn]
/SWPR[=nn]
/SYSUIC[=g.m]
/TERM=TTnn:[value]
/TOP=pname:value
/[NO]TSYNC[=TTnn:]
Monitor Console Routine (MCR) Commands

Keywords: /[NO]TYPEAHEAD [=TTnn[size]]
/UIC[=[g,m][:TTnn[:]]]
/UIC[=TTnn:]
/[NO]VFILL [=TTnn:]
/[NO]WCHK [=ddnn:]
/[NO]WRAP [=TTnn:]

Affects characteristics of the system, tasks, and devices. Privileged users can alter the characteristics of any device or task, but nonprivileged users can alter only characteristics for devices and tasks allocated to them. All users can display information.

SYSTEM SERVICE MESSAGE (P) SSM message

Inserts text into the error log file.

TASKLIST - ATL [taskname]

Displays the names and status of all tasks installed in the system or of a specific task.

TIME TIM [hrs:mins[ :secs]] [m1/day/year]
[hrs:mins[ :secs]] [day-m2-year]

For privileged users, sets and displays the date and time for the system. For nonprivileged users, only displays them.

USER FILE DIRECTORY UFD ddnn:[volume-label][g,m]/[keyword(s)]

Keywords: /ALLOC=number
/PRO=[system, owner, group, world]

Creates a User File Directory (UFD) on a Files-11 volume and enters its name into the Master File Directory (MFD). Privileged users can create UFDs on any mounted volume, but nonprivileged users can create UFDs only on a volume mounted on a device that they have allocated.

UNBLOCK UNB [taskname[/keyword]]

Keyword: /TERM=TTnn: (P)

Continues the execution of a previously blocked task. Nonprivileged users can unblock only tasks running from their own terminals. Privileged users can unblock any task.
Monitor Console Routine (MCR) Commands

UNFIX  UNF taskname or UNF region-name /keyword (P)
   Keywords:  /REG
              /RON

   Frees a fixed task or common task region from memory.

UNLOAD  UNL dd: (P)

   Removes a loadable device driver from memory.

UNS[TOP] taskname[/keyword]
   Keyword:  /TERM=TTnn:  (P)

   Continues execution of a task previously stopped internally by the Executive. Nonprivileged users can unstop only tasks running from their own terminals. Privileged users can unstop any task.
DIGITAL COMMAND LANGUAGE (DCL)

In this section, (P) indicates that a command format or keyword is privileged.

ABORT ABORT[/COMMAND[/qualifier[s]] commandname
ABORT/TASK[/qualifier] taskname

Command Qualifiers: /COMMAND
/TASK
/[NO]POSTMORTEM
/TERMINAL:ttnn: (P)

Default: /COMMAND
Forces an orderly end to a running task or to the action of a specific command.

ALLOCATE ALLOCATE[/qualifier[s]] dd[nn:] [logicalname]

Command Qualifiers: /TERMINAL:ttnn: (P)
/TYPE:devicetype

Default: NONE
Declares a specified device to be a private device. You can allocate devices by logical name or physical name. If you omit the unit number and colon, the first available device of that class is allocated.

ANALYZE/CRASH_DUMP ANALYZE/CRASH_DUMP
[/qualifier[s]]filespec[/qualifier[s]]

Command Qualifiers: /LIST:[listfilespec[/qualifiers]]
/ERROR_LIMIT
/PAGE_COUNT
/PAGE_LENGTH
/[NO]PRINTER
/EXIT:n
/LIMIT:n
/LINES:n
/[-]SP

/BINARY:binaryfilespec
/MEMORY_SIZE:n
/SYMBOLS:symbolfilespec
Filespec
Qualifiers:  /ACTIVE:(arg[...])
             DEVICE
             TASKS

             /ALL
             /DEVICES
             /TASKS
             /BLOCK:n
             /CLOCK_QUEUE
             /CONTROLLERS
             /DENSITY:n
             /DATA__STRUCTURES:(arg[...])
             COMMAND__PARSER
             DEVICE
             PARTITION
             STATUS
             TASK
             UNIT

             /DUMP:((START:n,END:n)[ADDRESS:n])
             /HEADERS
             /KERNEL:(arg[...])
             DATA:((START:n,END:n)
             INSTRUCTION:((START:n,END:n)
             REGISTERS

             /PARTITION
             /POOL:((START:n,END:n)
             /SECONDARY__POOL:((START:n,END:n))
             /NO_SYSTEM
             /TASKS:((arg[...])

             DIRECTORY
             ADDRESS:((NAME:name,START:n,END:n))
             DATA:((NAME:name,START:n,END:n))
             INSTRUCTION:((NAME:name,START:n,END:n)

Helps you determine the cause of system crashes by analyzing and formatting a memory dump created by the Executive Crash Dump Module. You must have the Advanced Programmer's Kit to use this command.

ANALYZE/MEDIA  ANALYZE/MEDIA[/qualifier[s]] ddnn:

Command
Qualifiers:  /ALLOCATE=label
             /BADDIRECTORY
             /BADDIRECTORY/EXERCISE
             /BADDIRECTORY/NOEXERCISE
             /[NO]EXERCISE:=(n,m)
             /OVERRIDE
             /RETRY
             /SHOW
DIGITAL Command Language (DCL)

Default: NONE

Allows you to identify and determine the number of bad blocks on a disk. ANALYZE/MEDIA determines if bad blocks exist on a disk volume and records their locations for use by the BACKUP and INITIALIZE commands.

APPEND APPEND[/qualifier[s]] infile[,s] outfile

Command Qualifiers: /DATE:dd-mmm-yy
/SINCE:dd-mmm-yy
/THROUGH:dd-mmm-yy
/TODAY
/EXCLUDE:filespec
/NOWARNINGS
/REPEAT
/SHARE

Default: NONE

Append to an existing sequential file records from one or more sequential files. The file specification for the EXCLUDE qualifier can include wildcards. Data range qualifiers, together with the /EXCLUDE qualifier, are also accepted on the COPY, DELETE, DIRECTORY, PURGE, RENAME, SET PROTECTION, TYPE, and UNLOCK commands.

ASSIGN ASSIGN[/qualifier[s]] equivalence__name logical__name

Command Qualifiers: /FINAL (P)
/GROUP: [g] (P)
/LOCAL
/LOGIN (P)
/GLOBAL (P)
/SYSTEM (P)                Synonym for GLOBAL
/TERMINAL:ttnn: (P)
/TRANSLATION:FINAL (P)    Synonym for FINAL

Default: /LOCAL

Equates a logical name to a physical Files-11 device name, to all or part of a Files-11 file specification, or to another logical name. ASSIGN checks the syntax of an equivalence name that is either a device or a file specification. All references to the logical name are resolved by the operating system. This format applies only to RSX-11M-PLUS operating systems that support extended logical names.
ASSIGN/QUEUE (P)  ASSIGN/QUEUE queuename processorname

Establishes a path between a queue and a processor in the Queue Manager subsystem.

ASSIGN/REDIRECT (P)  ASSIGN/REDIRECT olddnn: newdnn:

Redirects output from one physical device to another. You can also redirect a physical device to a pseudo device, or vice versa.

ASSIGN/TASK (P)  ASSIGN/TASK:taskname dnn: lun

Reassigns an installed task’s Logical Unit Numbers (LUNs) from one physical device to another. The reassignment overrides the static LUN assignments in the task’s disk image file. You cannot change the LUNs of an active task.

BACKUP  BACKUP[qualifier[s]] source:[filenames][dest:

Command Qualifiers:

Group 1:  Selective Backup and Restore

/AFTER:(dd−mmm−yy hh:mm)  /CREATED or with
/BEFORE:(dd−mmm−yy hh:mm)  /MODIFIED.
/CREATED
/EXCLUDE
/IMAGE:arg
SAVE
RESTORE
/MODIFIED
/NEW_VERSION
/[NO]REPLACE

Group 2:  Initialization

/ACCESSED:n  n is default number of FCBs on each volume
/BADBLOCKS:arg
  AUTOMATIC
  MANUAL
  OVERRIDE

/EXTENSION:n
/FILE_PROTECTION:code
/HEADERS:n
/INDEX:arg
  BEGINNING
  MIDDLE
  END

Default is 5
Default is same protection as input volume
Specifies location of INDEXF.SYS on volume; default is same position as in volume

Logical block n
DIGITAL Command Language (DCL)

Command Qualifiers:
Group 2: Initialization

/INITIALIZE
/MAXIMUMFILES:n
/SAVESET:name

/WINDOWS:n

Default is name of disk volume being backed up
Default is same number of mapping pointers (windows) as input volume

Group 3: Tape and Disk Control

/APPEND

/DENSITY:arg
  800
  1600

/ERRORLIMIT:n
/LABEL:TAPE:fileset-ID
/LENGTH:n

/REWRITE

Default density = 800 bpi (if unit supports two densities; otherwise default is density of the particular unit.)
Default n = 25

Rewinds first tape of tape set before executing the command line; may use with /APPEND

Group 4: Verification

/COMPARE
/VERIFY

Group 5: Display

/LIST
/[NO]LOG

/LOG goes to TL; default is /NOLOG
DIGITAL Command Language (DCL)

Command Qualifiers:
Group 6: Disk Processing

/APEND /DIRECTORY
/NONINITIALIZE
/LABEL:arg
    INPUT:volumelabel
    [OUTPUT:]volumelabel
/LABEL:OUTPUT is default; if the only volumelabel in command line is outvolume, /LABEL:volumelabel will do
/MOUNTED
/[NO]PRESERVE

Default /PRESERVE
Backs up and restores Files-11 volumes. Transfers files from a volume to a backup volume and retrieves files from the backup volume. BACKUP works through the Backup and Restore Utility (BRU).

BROADCAST
    BROADCAST tnn: message
    BROADCAST @indirectspec
    BROADCAST[/qualifier] message
    BROADCAST username message

Command
Qualifiers: /ALL (P)
            /LOGGED_IN (P)

Displays the specified message at one or more terminals.

CANCEL    CANCEL taskname
 Eliminates entries from the clock queue. CANCEL does not affect a currently executing task, but only the pending entries in the clock queue.

CONTINUE    CONTINUE[/qualifier] [taskname]
 Command
Qualifier: /TERMINAL:tnn: (P)

CONTINUE resumes execution of a previously suspended task. Taskname defaults to TTnn.

CONVERT    CONVERT[/qualifier[s]] infile outfile
 Command:
Qualifiers: /[NO]APPEND
            /BLOCK__SIZE:n
            /[NO]FIXED__CONTROL

Default is 512
Default is NOFIXED__
            CONTROL
DIGITAL Command Language (DCL)

Command Qualifiers:

/INDEXED
/KEY:[n] Default is NOIDENTIFICATION
/NOLOG__FILE[:filespec]
/[NO]MASS__INSERT
/MERGE
/PAD:[#]arg]
/RELATIVE
/[NO]REPLACE
/SEQUENTIAL
/[NO]TRUNCATE

Default is NOIDENTIFICATION
Outfile is indexed
Default=1
NOLOG__FILE is default.
Pad infile records to outfile length. Default pad character is blank.

Invokes the RMSCNV utility which moves records from one file to another.
RMSCNV reads records from an input file and writes them to an output file. The action of RMSCNV depends on the organization – sequential, relative, or indexed — of the two files, and on the qualifications you include in the CONVERT command. See the main text and the RMS-11 documentation supplied with your system for more information.

COPY  COPY Infile[s] outfile[s]

Command Qualifiers:

/ALLOCATION:n[.]
/BLOCK__SIZE:n
/[NO]CONTIGUOUS
/EXCLUDE:filespec
/[NO]NEW__VERSION
/NOWARNINGS
/OWN
/OVERLAY
/PRESERVE__DATE
/REPLACE
/REWIND
/SHARED
/UFD

n is octal unless terminated with a decimal point
n is octal unless terminated with decimal point
Suppresses automatic increment of version numbers
Suppresses error messages
Makes outfile UIC owner of copy
Preserves the creation date

Copies files. Unless specified otherwise, COPY preserves the file organization of the input file: that is, indexed files are copied as indexed files, and so forth. See also the CONVERT command. See APPEND command description for other qualifications.
DIGITAL Command Language (DCL)

CREATE CREATE filespec

Creates a sequential file in a directory on a file-structured device. After you issue the CREATE command, you can immediately enter text. If you want an empty file, enter a CTRL/Z.

CREATE/DIRECTORY CREATE/DIRECTORY[/qualifier] [ddnn:]
[directory]

Command
Qualifiers: /LOCATION:n
Entries for n files
/LABEL:volu melabel
/NOWARNINGS
/OWNER__UIC:[uic]
/PROTECTION:code

Creates a User File Directory (UFD) on a Files-11 volume and enters its name in the volume's Master File Directory (MFD). Nonprivileged users can create directories on mounted volumes only on their own private (allocated) devices.

DEALLOCATE DEALLOCATE[/qualifier] [ddnn:]

Command
Qualifiers: /ALL Frees all devices allocated by TI

/DEVICE
/TERMINAL:tnn: (P)

Counteracts ALLOCATE and frees a private device for access by others.

DEASSIGN DEASSIGN[/qualifier[s]] logical__name:

Command
Qualifiers: /ALL Combine with any other qualifier

/GLOBAL (P)
/GROUP:[g] (P)
/LOCAL Default
/LOGIN
/SYSTEM (P) Synonym for global
/TERMINAL:tnn: (P)

Deletes logical name assignments. DEASSIGN counteracts both the ASIGN and DEFINE commands.
DEASSIGN/QUEUE (P)  DEASSIGN/QUEUE queue name processor name

Counteracts ASSIGN/QUEUE. It is used to eliminate the path from a queue to a processor in the Queue Manager subsystem.

DEBUG  DEBUG [task name]

Forces a task to trap to a debugger by setting the T-bit in the task’s Processor Status Word. The task must have been built using the /DEBUG qualifier to the LINK command, or have issued an Executive directive specifying a debugger. Nonprivileged users can use this command only for nonprivileged tasks running from their own terminals. Privileged users can name any task, but the command must be issued from the terminal the task was run from. The default task name is TTnn.

DEFINE  DEFINE [/qualifier[s]] logical name equivalence name

Command
Qualifiers:  /FINAL (P)
/GLOBAL (P)
/GROUP[-g] (P)
/LOCAL
/LOGIN (P)
/SYSTEM (P)  Synonym for GLOBAL
/Terminal:tttnn: (P)
/TRANSLATION:FINAL (P)  Synonym for FINAL

Equates a logical name to a physical device name, to all or part of a file specification, or to another logical name. All references to the logical name are resolved by the operating system. Unlike the ASSIGN command, DEFINE does not check the syntax of equivalence name that is either a device or file specification.

DELETE  DELETE [/qualifier[s]]

Command
Qualifiers:  /[NO]LOG
/[NO]QUERY
/[NO]WARNINGS

Lists deleted files on T1:

Deletes specified versions of files and releases the storage space that the files occupy. See APPEND command description for other qualifiers.

DELETE/DIRECTORY  DELETE/DIRECTORY [ddnn:[directory]]

Deletes a directory on a Files-11 volume and removes its name from the volume’s Master File Directory (MFD). Nonprivileged users can only delete directories on mounted volumes on their own private (allocated) device.
DIGITAL Command Language (DCL)

DELETE/ENTRY

Command
Qualifier: /FILE__POSITION:n
Deleters QMG jobs by entry number.

DELETE/JOB

DELETE/JOB[/qualifier] queueame [[g,m]]jobname
Command
Qualifier: /FILE__POSITION:n
Deleters QMG jobs by queue name and job name.

DELETE/PROCESSOR (P)

DELETE/qualifiers processorname
Qualifiers: APPLICATIONS__PROCESSOR
          BATCH__PROCESSOR
          CARD__READER       Synonym for input
          DEVICE             Synonym for printer
          INPUT              Synonym for cardreader
          PRINTER            Synonym for device
          PROCESSOR

Deletes print processors, output despooiers, or batch processors from the
Queue Manager subsystem by processor name or device name. This com-
mand also sets the device unspooled.

DELETE/QUEUE (P)

DELETE/QUEUE queueame/ERASE
Deleters queues in the Queue Manager subsystem by name. See DE-
LETE/JOB and DELETE/ENTRY to delete jobs from queues.

DIFFERENCES

DIFFERENCES infile1 infile2
Command
Qualifier: /CHANGE__BAR[:n]

/IGNORE:arg
  BLANK__LINES
  COMMENTS
  FORM__FEEDS
  SPACING
  TRAILING__BLANKS

/LINES:n

n is alternative octal
ASCII code of change-
bar character.
Default is 041 (!)

Comments begin with
any group of tabs and
blanks equals one blank

The n lines specified must
be the same for a match.
DIGITAL Command Language (DCL)

Command
Qualifiers: /[NO]NUMBERS
/OUTPUT:filespec
/SLP:[audittrail]

Line numbers in output file
Names output file; Tl: is default.

Compares two ASCII (text) files line by line to determine if parallel records (lines) are identical, and produces a listing of the differences, if any, between the files.

DIRECTORY
DIRECTORY[/format]/[destination][otherqual[s]][filespec[s]]

Command
Qualifiers: Format
/ATTRIBUTES
/BRIEF
/FREE [ddnn:]
/FULL
/SUMMARY

RMS-11 attributes
Free blocks on volume;
default volume is SY:
Blocks used and allocated

Destination
/OUTPUT:filespec
/PRINTER

Names output file; Tl: is default
Output to printer

Other qualifiers
/DATE:dd-mmm-yy
/SINCE:dd-mmm-yy
/THROUGH:dd-mmm-yy
/TODAY
/EXCLUDE:filespec
/NOWARNINGS
/REWIND

Suppresses error messages

Displays information on files in directories (UFDs). See APPEND command
description for other qualifiers.

DISMOUNT
DISMOUNT ddnn: [label]

Command
Qualifiers: /TERMINAL:ttnn:(P)
/ALL

Dismounts volumes from another terminal
Dismount all devices mounted by user
DIGITAL Command Language (DCL)

Command
Qualifiers:  /PUBLIC (P)  Dismount all users from volume
             /SAVE (P)  Disk keeps spinning
             /[NO]UNLOAD  Affects magnetic tape devices only.
             /SYSTEM  Synonym for /PUBLIC

Marks the volume mounted on the specified device as logically off line and disconnected from the file system.

EDIT  EDIT[/qualifier] [edit-input]

Command
Qualifier:  /EDI  Line text editor
            /KED  Unbundled KED editor
            /K52  VT52 version of KED
            /MAKE  Unsupported TECO editor
            /MUNG  Unsupported TECO editor
            /OUTPUT:filespec  Use with KED and K52
            /CREATE  Use with KED and K52
            /SOS  Unsupported Son of Stopgap
            /TECO  Unsupported Text Editor and Corrector
            /USING:yyy  Unsupported user editor

Invokes an editor. See also EDIT/EDT and EDIT/SLP for those editors.

EDIT/EDT  EDIT/EDT[/qualifier[s]] filespec

Command
Qualifier:  /[NO]COMMAND[:filespec]  Default is COMMAND:
            EDTINI.EDT
            Default is CREATE
            /[NO]CREATE
            /[NO]JOURNAL[:filespec]
            /[NO]OUTPUT[:filespec]
            /[NO]READ_ONLY
            /[NO]RECOVER
            Default is NOREAD_ONLY
            Default is NORECOVER

Invokes EDT, the DIGITAL standard editor, and the default editor.

EDIT/SLP  EDIT/SLP[/qualifier[s]] filespec

Command
Qualifier:  /[NO]AUDIT[:argin[s]]  Default is /AUDIT:
            (POS:80:512Z:8)
            POSITION:n  n<=132.
            SIZE:n      n<=14.
**DIGITAL Command Language (DCL)**

**Command Qualifiers:**
- `/CHECKSUM[:n]`
- `/[NO]LIST[:filespec]`
- `/[NO]OUTPUT[:filespec]`
- `/[NO]REPORT`
  - Report truncation lines by audit trail
- `/[NO]TAB`
  - Right-justify with tabs or spaces. Default is NOTAB
- `/[NO]TRUNCATE[:n]`
  - Deletes audit trails and trailing characters

Invokes the Source Language Input Program (SLP), a program-maintenance editor.

**FIX (P) FIX taskname [/qualifier(s)]**

**Qualifiers:**
- `/READONLY__SEGMENT`
- `/REGION`

Causes an installed task or region to be loaded and locked into memory.

**HELP HELP[/qualifier[s]] [%] [parameter1] [...parameter9]**

**Command Qualifiers:**
- `/OUTPUT:filespec`
  - Default is /OUTPUT:TI:
- `/LOCAL`
  - Help file is in default UFD;
- `/GROUP`
  - Help file is in [g,1]; g is

- `/CLI:cliname`
  - your group number
- `/MCR`
  - Default for MCR terminals
- `/DCL`
  - Default for DCL terminals
- `/FILE:filespec`
  - Names file containing help text
- `/filename`
  - Defaults to LB:[1,2]filename.HLP

Displays information about your system. Help for MCR, DCL, and most utilities is supplied with the system. Your system may also have help for an alternate CLI, as well as local, group, or other special help.

**HOLD/ENTRY HOLD/ENTRY:n**

Holds a QMG job in its queue by entry number.

**HOLD/JOB HOLD/JOB queueame [[g,m]] jobname**

Holds a QMG job in its queue by queue name and job name.
DIGITAL Command Language (DCL)

**INITIALIZE**

`INITIALIZE[/qualifier[s]] ddn: volumelabel`

**Command Qualifiers:**
- `/ACCESSSED:n` Number of UFDs accessed simultaneously
- `/BAD__BLOCKS:arg`
  - AUTOMATIC
  - (AUTOMATIC, MANUAL)
  - MANUAL
  - NOAUTOMATIC
  - OVERRIDE
  - (OVERRIDE, MANUAL)
- `/DENSITY:arg`
  - 800
  - 1600
  - HIGH
  - LOW
- `/EXTENSION:n` Extend files by n blocks; default n=5.
- `/FILE__PROTECTION:(code)`
- `/HEADERS:n`
- `/INDEX:arg`
  - BEGINNING
  - MIDDLE
  - END
  - n Logical block n
- `/LABEL:VOLUME__ACCESSIBILITY:`
- `/MAXIMUM__FILES:n`
- `/NO:SHOW`
- `/OWNER:[uid]`
- `/PROFESSIONAL`
- `/PROTECTION:(code)`
- `/WINDOWS:n` Default n=7.

Extend a volume in File-11 format. See also INITIALIZE/UPDATE. You must mount the volume /FOREIGN. Nonprivileged users must allocate the device.

**INITIALIZE**

`INITIALIZE/processortype processorsname/qualifier[s]`

**processortype:**
- APPLICATIONS__PROCESSOR output
- BATCH__PROCESSOR input
- CARD__READER output
DIGITAL Command Language (DCL)

Processortype:  DEVICE  output
INPUT            input
PRINTER          output
PROCESSOR        output

Qualifiers:     /BATCH__QUEUE:queueuname  input
/CONSOLE:ddnn:   input
/FLAG__PAGE:n    output
/FORMS:n         output
/[NO]LOWERCASE   output
/[NO]SHAREABLE   output
/[NO]UPPERCASE   output
/PRINTER__QUEUE:queueuname input

INITIALIZE/QUEUE  INITIALIZE/QUEUE [/qualifier]  (P)

Command
Qualifiers:     /BATCH
/PRINTER
/NOWARNINGS

INITIALIZE/QUEUE creates, names, and starts a queue in the Queue Manager subsystem.

INITIALIZE/UPDATE INITIALIZE/UPDATE[/qualifier[s]] ddnn: volumelabel

Command
Qualifiers:     /ACCESSED:n
/DENSITY:arg
HIGH
LOW
/EXTENSION:n     .Extend full files by n blocks
/FILE__PROTECTION:code
/LABEL:newvolumelabel
/MAXIMUM__FILES:n
/OWNER:[uic]
/PROFESSIONAL    Initializes disk as Professional 300 series
/PROTECTION:code
/[NO]SHOW
/WINDOWS:n       Default is SHOW
                  Mapping pointers to file windows; default is 7.

Invokes the HOME utility to alter values in the Volume Home Block without affecting the other data on the volume. INITIALIZE/UPDATE is only for disks and DECTapes in Files–11 format. You must mount the volume /FOREIGN.
INSTALL [/QUALIFIER[S]] [/FILESPEC (P)]

Command Qualifiers:
- [/NO]CHECKPOINT
- [/COMMAND: "taskcommand"
- [/EXTENSION:n]
- [/MULTIUSER__PARTITION:parname Read-only portion
- [/PARTITION:parname
- [/NO]POSTMORTEM
- [/PRIORITY:n]
- [/NO]READONLY__COMMON
- [/NO]RESIDENT__HEADER
- [/NO]SLAVE
- [/TASK__NAME:taskname
- [/TRANSLATION__ROUTINE:n]
- [/UIC:[uic]]
- [/NO]WRITEBACK

Includes a task in the System Task Directory, thus making it known to the system.

LIBRARY LIBRARY[/operation] [/QUALIFIER[S]]
LIBRARY @FILESPEC

Creates and maintains user-written library files. The command has eight functions, each listed here as a separate command. See main text for more details on all functions and qualifiers.

LIBRARY/COMPRESS LIBRARY/COMPRESS:[(arg[,s])]/LIBRARY[newlib]

Arguments:
- GLOBAL:n Entry point table entries
- MODULES:n Module name table entries
- BLOCKS:n Size in 256-word blocks.

Physically deletes modules that have been logically deleted through LIBRARY/DELETE. You can rename the resulting compressed library. You can also use this command to copy a library and rename it.

LIBRARY/CREATE LIBRARY/CREATE:[(arg[,s])]/QUALIFIER[S]/LIBRARY[INFILE[S]]

Arguments:
- GLOBAL:n Entry point table entries
- MODULES:n Module name table entries
- BLOCKS:n Size in 256-word blocks
Command
Qualifiers: /[NO]GLOBALS
/MACRO
/OBJECT Identifies object library; default
/SELECTIVE SEARCH
/SQUEEZE
/UNIVERSAL

Creates a library and optionally inserts one or more modules into it.

LIBRARY/DELETE LIBRARY/DELETE libspec module[,module[,s]]

Deletes object modules from a library. See LIBRARY/REMOVE for removing global symbols (entry points) from a library.

LIBRARY/EXTRACT LIBRARY/EXTRACT[/qualifier] libspec module[,s]

Command
Qualifier: /OUTPUT[:filespec]

Reads one or more modules from a library and writes them to a specified output file. You can extract up to eight modules with a single command. If you extract more than one module, the modules are concatenated in the output file. Default output file is TI:

LIBRARY/INSERT LIBRARY/INSERT libspec filespec[s]

Command
Qualifiers: /[NO]GLOBALS
/SELECTIVE SEARCH
/SQUEEZE

Inserts modules from one or more files into a library.

LIBRARY/LIST LIBRARY/LIST[:filespec] libspec

Command
Qualifiers: /BRIEF
/FULL
/[NO]NAMES Names and global entry points

Lists the names of all modules in a library on your terminal or in an output file.

LIBRARY/REMOVE LIBRARY/REMOVE libspec global[,global[,s]]

Removes global symbols (entry points) from a library. See LIBRARY/DELETE for deleting object modules from a library.
DIGITAL Command Language (DCL)

LIBRARY/REPLACE LIBRARY/REPLACE libspec filespec[s]

Command
Qualifiers: /[NO]GLOBALS
/SELECTIVE__SEARCH
/SQUEEZE

Replaces a module in a library with a new modules of the same name and deletes the old module.

LINK LINK/[filespec]/filespec[/qualifier[s]][/filespec[s]]

Command
Qualifiers: /ANCILLARY__PROCESSOR[:n]
/[NO]CHECKPOINT:arg

SYSTEM Checkpoints to [1,2]
CORIMG.SYS Checkpoints to task

TASK image file

/CODE:(arg[s])

CLI
DATA__SPACE
EAE
FAST__MAPFast mapping
[NO]FPP
PIC

Same as POSITION__
INDEPENDENT

POSITION__INDEPENDENT Same as PIC

/COMPATIBLE
/[NO]CROSS__REFERENCE

/[NO]DEBUG[:filespec] Default is ODT

/ERROR__LIMIT:n Stops task build after n errors

/[NO]EXECUTABLE:filespec Same as /TASK

/[NO]EXTERNAL

/FAST

/FULL__SEARCH

/[NO]HEADER

/[NO]IO__PAGE

/LONG Long map

/MAP[:filespec]

/[NO]MEMORY__MANAGEMENT[:n] Default is MEM

/OPTIONS[:filespec]

/OVERLAY__DESCRIPTION

/POSTMORTEM

/[NO]PRINT

/[NO]PRIVILEGED Default is NOPRIV

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DIGITAL Command Language (DCL)

**Command Qualifiers:**

- **/[NO]RECEIVE**
- **/[NO]RESIDENT__OVERLAYS**
- **/SAVE** Saves indirect file
- **/[NO]SEGREGATE** Default is NOSEG
- **/SEQUENTIAL**
- **/SHAREABLE[:arg]** Multiuser; default argument is TASK
  - **COMMON**
  - **LIBRARY**
  - **TASK**
- **/SLAVE**
- **/SLOW**
- **/SYMBOL__TABLE[:filespec]** Default is NOSYS
- **/[NO]SYSTEM__LIBRARY__DISPLAY** Same as /EXECUTABLE
- **/[NO]TASK[:filespec]** Default is TKB
- **/TKB**
- **/TRACE**
- **/[NO]WARNINGS** Default is WARNINGS
- **/[NO]WIDE**

**File Qualifiers:**

- **/[NO]CONCATENATE** Names file to replace
- **/DEFAULT__LIBRARY** Default is GLOBALS
- **/[NO]GLOBALS**
- **/LIBRARY**
- **/INCLUDE:(module1,...,modulen)**
- **/OVERLAY__DESCRIPTION**
- **/SELECTIVE__SEARCH**

Invokes the Task Builder, which links object modules and routines from user and system libraries to form an executable task. See also LINK/C81.

**LOGIN ** Login userid password

Grants access to a multiuser protection system and establishes your privileges as a system user.

**LOGOUT ** LOGOUT[/qualification]

Command Qualifier: **/[NO]HOLD**

Holds remote line after logout; default is NOHOLD

Counteracts LOGIN. LOGOUT also aborts any nonprivileged tasks running from the terminal, and dismounts any volumes and deallocates any private devices allocated from the terminal.
DIGITAL Command Language (DCL)

MCR MCR mcrcommand
Enters an MCR command from a DCL terminal without leaving DCL.

MOUNT MOUNT[/qualifier[s]] ddnn: volumelabel
(Disks and other random-addressable devices)
MOUNT[/qualifier[s]] ddnn:[:ddnn:...] filesset-ID
(magnetic tapes)

Command Qualifiers for Both Disks and Tapes:
/CACHE:(option[,s])
  par=[]main__parname]:subparname:[size]
  [NO]DIRECTORY
  [NO]LOGICAL
  [NO]OVERLAY
  [NO]READ_AHEAD
  [NO]VIRTUAL
/NOCACHE
/DEFAULT:arg
SAVE
NOUNLOAD
UNLOAD
/FILE__PROTECTION:(code) Protection for files created during mount

/FOREIGN
/OVERRIDE:IDENTIFICATION (P)
/PARAMETERS:"user parameters"
/PROCESSOR:arg
  acpname
  UNIQUE
/PREVENTION:(code)
/PUBLIC (P)
/[NO]SHAREABLE
/[NO]SHOW
/SYSTEM
/[NO]WAIT
/[NO]WRITE

Command Qualifiers for Disks and Other Files–11 Devices:

/ACCESSED:n n is number of File Control Blocks
/EXTENSION:n Extend full files by n blocks
/OWNER:[uic]
/UNLOCK
/WINDOW:arg
  n (USER:n,INDEX:n)
  FULL
DIGITAL Command Language (DCL)

Command Qualifiers for ANSI and Unlabelled Tapes:

/BLOCK__SIZE:n
/CARRIAGE__CONTROL:arg
    FORTRAN
    LIST
    NONE

/DENSITY:arg
    800
    1600

/[NO]HDR3
/[NO]LABEL
/OVERRIDE:arg

/ACCESSIBILITY
/EXPIRATION__DATE
/IDENTIFICATION
/SET__IDENTIFICATION

/RECORD__SIZE:n
/TRANSLATE:arg
    EBCDIC
    NONE
    UT1
    UT2
    UT3

/VOLUME__IDENTIFICATION:(volume-ID[,volume-ID[s])

Declares a volume to be logically known to the system, on line, and available for use. Some qualifiers can be used with any MOUNT command; some are limited to mounting disks (and other random-addressable devices) and others are limited to mounting magnetic tapes.

PRINT PRINT[/qualifier[s] filespec[/qualifier[s]][,filespec[s]]

Command Qualifiers:  /AFTER:(dd--mmm--yy hh:mm)
                      /AFTER:TOMORROW
                      /COPIES:n
                      /[NO]DELETE
                      /DEVICE:ddnn:
                      /[NO]FLAG__PAGE Flag page on each file;
                          default is NOFLAG
                      n can be 0 through 256; default
                          is 0
                      /[NO]HOLD
                      /JOB__COUNT
                      /[NO]JOB__PAGE Flag page on job; default
                          is JOB__PAGE
Command
Qualifiers: /LENGTH:n
/[NO]LOWERCASE
/NAME:jobname
/[NO]TRANSFER
/PAGE_COUNT:n
/PRIORITY:n
1-9 characters
n is 1 through 150 nonprivileged
1 through 250 privileged
Default is 50

/QUEUE:queue_name
/[NO]RESTART
/[NO]UPPERCASE

File
Qualifiers: /COPIES:n
/[NO]DELETE
/[NO]TRANSFER

Queues files for printing on a line printer. PRINT can also queue jobs for
other output devices.

PURGE PURGE[/qualifier[s]] filespec[s]

Command
Qualifiers: /KEEP:n
/[NO]LOG
/NOWARNINGS
Lists files on TI as deleted
Suppresses error messages

Deletes all but the latest versions of files, and releases the storage space
that the deleted files occupy. See APPEND command description for other
qualifiers.

RELEASE/ENTRY RELEASE/ENTRY:n

Releases by entry number a print or batch job that has been held in its
queue. The variable n is the QMG entry number.

RELEASE/JOB RELEASE/JOB queue_name [[g,m]]jobname

Releases by queue name and job name a print or batch job that has been
held in its queue.

REMOVE REMOVE[/qualifier] taskname (P)

Qualifier: /REGION (P)
/TRANSLATION_ROUTINE:n (P)

Removes an ACD

Counteracts INSTALL. REMOVE takes a task name out of the System
Task Directory.
DIGITAL Command Language (DCL)

RENAME [RENAME[/qualifier[s]] oldfilespec newfilespec]

Qualifier: /NOWARNINGS Suppresses error messages.
Changes the name, type, or version number of an existing file. See APPEND command description for other qualifiers.

REQUEST REQUEST message
Sends a message to the operator’s console (CO:).

RUN uninstalltask RUN[/qualifier[s]] [S]filespec

Command
Qualifiers: /[NO]CHECKPOINT
/COMMAND:"taskcommand"
/EXTENSION:n
/PARTITION:parname
/[NO]POSTMORTEM
/PRIORITY:n (P)
/STATUS:arg
   TASK
   COMMAND
/TASK__NAME:taskname
/TIME__LIMIT:n[u]
/UIC:[uic] (P)

When used to run an uninstalled task from a task image file, RUN is a combination command, encompassing INSTALL, RUN, and REMOVE.

RUN installedtask RUN[/qualifier[s]] taskname

Command
Qualifiers: /[DELAY:nu (P)
/INTERVAL:nu (P)
/SCHEDULE:hh:mm:ss (P)
/STATUS:arg
   COMMAND
   TASK
/SYNCHRONIZE:u (P)
/UIC:[uic] (P)

Initiates the execution of installed tasks. Privileged users can use RUN to initiate the execution of installed tasks on a schedule by creating entries in the system clock queue.

SET [DAY]TIME (P) SET [DAY]TIME:[dd–mmm–yy] [hh:mm]

Sets the system date and time.
SET DEBUG[/QUALIFIER[s]]

Command Qualifiers:  /[NO]EXECUTE
/FULL

Translates, then executes the command
Display logical symbols and
translation

Displays the MCR translation of any DCL command.

SET DEFAULT

SET DEFAULT[NO]NAMED_DIRECTORY device_name[:]

Command Qualifiers:  /[NO]NAMED_DIRECTORY

Allows the system to accept either named or numbered directories

Default:  /NONAMED_DIRECTORY

Establishes your default device or directory, or both. With no arguments, SET DEFAULT returns a nonprivileged user to login device and UIC.

SET DEVICE (P)

SET DEVICE:ddnn:/QUALIFIER[s]

Command Qualifiers:  /CACHE:(option[s])

PAR=[main__parname]:subparname[size]
[NO]DIRECTORY
[NO]OVERLAY
[NO]VIRTUAL
[NO]LOGICAL
[NO]READ_AHEAD
/NOCACHE
/[NO]CHECKPOINT__FILE:[n]

n is number of decimal blocks in [0,0] CORIMG.SYS

/[NO]LOWERCASe
/[NO]PUBLIC
/[NO]SYSTEM

Default is NOPUBLIC
Synonym for /[NO]PUBLIC

/WIDTH:n (Nonprivileged for TI)

Establishes certain device attributes.
DIGITAL Command Language (DCL)

SET FILE /SET FILE[/qualifier[s]] filespec[/qualifier[s]]

Command
Qualifiers: /ENTER: synonym__filespec

Refers to a file by more than one name
Suppresses error messages

/NOWARNINGS
/REMOVE
/REWIND
/TRUNCATE

File
Qualifiers: /END__OF__FILE:(BLOCK:n, BYTE:n)

Establishes certain file characteristics. You can change an end-of-file marker, have an entry in one directory point to a file in another directory, remove an entry from a directory, or truncate files to their actual length.

SET GROUPFLAGS

SET GROUPFLAGS:n[/qualifier]

Command
Qualifiers: /CREATE

Default is CREATE

/DELETE

Creates and deletes group global event flags. Nonprivileged users can use the command for their own group. The variable n is the group number.

SET HOST

SET HOST nodename

Connects your terminal to another system. Both your current system and the remote system must run DECnet software.

SET LIBRARY/DIRECTORY (P)

SET LIBRARY/DIRECTORY:[directory]

Establishes the directory where the system utilities and other nonprivileged system tasks are kept.

SET [NO]PARTITION (P)

SET [NO]PARTITION: parname/qualifier[s]

Command
Qualifiers: /BASE:n

/DEVICE

/DIAGNOSTIC

Device common
DIGITAL Command Language (DCL)

Command
Qualifiers:  /SIZE:n  
/SYSTEM  
/TOP  
/[+]:n

Creates or eliminates a partition.

SET PASSWORD  SET PASSWORD
Allows nonprivileged users to change their passwords.

SET PRIORITY (P)  SET PRIORITY:n taskname
Alters the priority of an active task.

SET PROTECTION  SET PROTECTION:(code) [/qualifier[s]] filespec[s]
Command
Qualifier:  /[NO]DEFAULT  Establishes your personal default protection code for all files that you create after issuing com-
mand.

Establishes the protection status of files. Default is SY:RWED, 
OW:RWED,GR:RWED,W:R. See APPEND command description for 
other qualifiers.

SET QUEUE/ENTRY  SET QUEUE/ENTRY:n[/qualifier]
Command
Qualifiers:  /AFTER:(dd--mmm--yy hh:mm)  
/COPIES:n  
/[NO]DELETE  
/FILE—POSITION:n  
/FORMS:n  
/HOLD  
/JOBCOUNT:n  
/LENGTH:n  
/[NO]LOWERCASE  
/PAGE—COUNT:n  
/PRIORITY:n  
/RELEASE  
/[NO]RESTART  
/[NO]UPPERCASE

n is 1 through 150 nonprivileged; 1 through 250 privileged 
Default is 50.

Same as HOLD/QUEUE

Same as RELEASE/QUEUE

Modifies by entry number some attributes of print or batch jobs once they are in a queue. See SET QUEUE/JOB to modify by job name.
SET QUEUE/JOB

Command:

/QUALIFIER: (ddd-mmm-y y hh:mm)
/COPIES:n
/[NO]DELETE
/FILE__POSITION:n
/FORMS:n
/JOBCOUNT:n
/HOLD
/LENGTH:n
/[NO]LOWER CASE
/PAGE__COUNT:n
/PRIORITY:n

Same as HOLD/QUEUE

n is 1 through 150 nonprivileged;
1 through 250 privileged
Default is 50.

/RELEASE
/[NO]RESTART
/[NO]UPPER CASE

Same as RELEASE/QUEUE

Modifies by job name some attributes of print or batch jobs once they are
in a queue. See previous command to modify by entry number.

SET SYSTEM (P)

SET SYSTEM/qualifier

Command:

/QUALIFIER: /[NO]CRASH__DEVICE[:ddnn:]
/DIRECTORY:[directory] Sets directory where system
tasks are kept
/EXTENSION LIMIT:n Maximum size a task can be
extended
/[NO]LOGINS
/N NETWORK__UI C:[uic] Sets directory for
DECnet-related tasks
/PACKETS:n n is 0 through 15
/POOL:top:max:total Increases pool size
/POOL/LIMITS:arg

HIGH=n high pool limit
LOW=n low pool limit
MINIMUM__SIZE=n minimum size
of largest
free pool block required
TASK__PRIORITY=n lowest task priority

Establishes certain characteristics of the system.
DIGITAL Command Language (DCL)

SET TERMINAL

Command

Qualifiers:

Group 1: Common Use

/[NO]BROADCAST
/CLI:cliname
/[NO]CONTROL=C
/DCL
/[NO]HOLD__SCREEN
/INQUIRE
/[NO]LOWERCASE
/MCR
/[NO]PRIVILEGED (P)
/SPEED:(transmit, receive)
/[NO]UPPERCASE
/WIDTH:n

NOLOWER is default. Same as UPPER

Group 2: Terminal Setup

/[NO]ADVANCED__VIDEO
/[NO]ANSI__CRT
/[NO]AUTOBAUD
/ASR33
/ASR35
/[NO]BLOCK__MODE
/CRLFILL:n
/[NO]DEC__CRT
/DTC01
/[NO]EDIT__MODE
/[NO]FORM__FEED
/[NO]HARDCOPY
/[NO]HOSTSYNC
/KSR33
/KSR35
/LA12
/LA24
/LA30P
/LA30S
/LA34
/LA36
/LA38
/LA50
/LA100

n is 0 through 7.
DIGITAL Command Language (DCL)

Command Qualifiers:

Group 2: Terminal Setup
/LA120
/LA180S
/LA210
/LFFILL
/LN03
/LQP02
/LQP03
/MODEL:arg
/PAGE_LENGTH:n  Default is terminal hardware setting
/PRINTER_PORT
/PRO__SERIES
/[NO]REGIS
/[NO]SCOPE
/[NO]SOFT__CHARACTERS
/[NO]TAB
/TRANSLATION__ROUTINE:[arg]

n           ACD number
logical    logical name for ACD number

/[NO]TTSYNC
/VT05
/VT50
/VT52
/VT55
/VT61
/VT100
/VT101
/VT102
/VT105
/VT125
/VT131
/VT132
/VT200__SERIES

Group 3: Task Setup
/[NO]ECHO
/[NO]EIGHT__BIT
/[NO]ESCAPE
/[NO]FULL__DUPLEX
/[NO]INTERACTIVE
/[NO]LOCAL
DIGITAL Command Language (DCL)

Command Qualifiers:

Group 2: Terminal Setup

/[NO]PARITY[:type]
  ODD
  EVEN

/[NO]PASSALL
/[NO]PASTHRU
/[NO]REMOTE
/[NO]SERIAL
/[NO]SLAVE
/[NO]TYPE_AHEAD
/[NO]WRAP

SET TERMINAL sets various attributes of your terminal. Privileged users can set attributes for any terminal.

SET UIC (P)  SET UIC [g,m]

Changes your User Identification Code (UIC).

SHOW ACCOUNTING  SHOW ACCOUNTING/qualifier

Command Qualifiers:  /INFORMATION
                     /TRANSACTION[:infile] outfile

Displays current information on your terminal session for nonprivileged users. Privileged users can display information about any terminal session.

SHOW ASSIGNMENTS  SHOW ASSIGNMENTS[/qualifier[s]]

Command Qualifiers:  /ALL
                     /GLOBAL (P)  uic group number
                     /LOCAL        Default is LOCAL
                     /LOGIN (P)    Same as /GLOBAL
                     /SYSTEM (P)   
                     /TERMINAL:tnn: (P)

Displays at your terminal all local and login logical name assignments. Privileged users can display assignments from other terminals and global assignments.
SHOW CACHE    SHOW CACHE [ddnn:][/qualifer]
  Command
  Qualifier
  /RATE:n
  Displays disk data caching information.

SHOW CLOCK QUEUE    SHOW CLOCK QUEUE
  Displays information about tasks currently in the clock queue. This
  information consists of the task names, the next time each task is to be run, and
  each task's reschedule interval, if any.

SHOW COMMON    SHOW COMMON[:name] [/qualifer]
  Command
  Qualifier:  /TASK
  Displays the name of resident commons installed in the system, their PCB
  addresses, the number of attached tasks, and the status of the common.

SHOW [DAY]TIME    SHOW [DAY]TIME
  Displays the system time and date setting.

SHOW DEFAULT    SHOW DEFAULT
  Displays the current default device and UFD for your terminal, along with
  your terminal number.

SHOW DEVICES    SHOW DEVICES[/qualifer][dd[nn:]]
  Command
  Qualifiers:  /[NO]CACHE
               /[NO]PUBLIC
               /[NO]SYSTEM  Synonym for /[NO]PUBLIC
               /WIDTH
  Displays information about the devices included in the system.

SHOW GROUPFLAGS    SHOW GROUPFLAGS
  Displays the group global event flags currently in the system.

SHOW HOST    SHOW HOST
  Displays the name of the processor to which your terminal is currently
  connected.
DIGITAL Command Language (DCL)

SHOW LIBRARY

Displays the current library directory. This is the directory where nonprivileged system utilities are kept.

SHOW LOGICALS

SHOW LOGICALS[qualifiers[s]]

Command Qualifiers: /ALL (P) /GLOBAL (P) /GROUP[g] (P) /LOCAL /LOGIN (P) /SYSTEM (P) /TERMINAL:tnn: (P)

Displays at your terminal all local and login logical name assignments. Privileged users can display assignments from other terminals, from other groups, and global assignments.

SHOW MEMORY

SHOW MEMORY

Invokes the Resource Monitoring Display (RMDEMO), a dynamic display of the system's activities in memory.

SHOW PARTITIONS

SHOW PARTITIONS[:name]

Displays address and content information about the partitions in the system. You can display information about all partitions or about a single partition.

SHOW PROCESSOR

SHOW PROCESSOR [processor-name[/arg]]

Arguments: BATCH CARD__READER Same as INPUT DEVICE Output processor; same as printer INPUT Same as CARD__READER PRINTER Same as DEVICE

Displays information about the batch processors, printers, card readers, and other devices under control of the Queue Manager.

SHOW PROTECTION

Displays your personal default file protection code.
SHOW QUEUE

SHOW QUEUE[/qualifier] [queue name]

Command
Qualifiers:
/ALL All entries in all queues
/BATCH
/BRIEF Same as /PRINTER; all queues
/DEVICE
/ENTRY:n Files in each job; shorter than FULL
/FILES
/FORMS:n
/FULL
/NAME:jobname
/OWNER__UIC:[ulc]
/PRINTER Same as /DEVICE

Displays information about print jobs in queues.

SHOW SYSTEM

SHOW SYSTEM[/qualifier]

Command
Qualifiers:
/CLI
/CRASH__DEVICE Default; displays system directory
/DIRECTORY
/EXTENSION__LIMIT
/NETWORK__UIC
/PACKETS
/POOL
/POOL/LIMITS
/SECONDARY__POOL

Displays information about the current system.

SHOW TASKS

SHOW TASKS[:taskname]/qualifier[s]

Command
Qualifiers:
/ACTIVE[:ttnn:] Use only with /INSTALLED/BRIEF
/DEVICE:ddnn: 
/INSTALLED
/LOGICAL__UNITS
/BRIEF
/FULL
/ALL

Displays information about active or installed tasks.
DIGITAL Command Language (DCL)

SHOW TASKS/DYNAMIC

Format to display task header:

SHOW TASK:taskname/DYNAMIC[/qualifier]

Command Qualifier:  /RATE:n

Format to display Active Task List:

SHOW TASKS/ACTIVE/DYNAMIC[/qualifier[s]]

Command Qualifiers:  /OWNER:arg

Default
Default for n is 250
Rate in seconds for display
change; Default is 1.

Invokes RMD to display on a video terminal continuing changes to either a
single task header or to all or part of the Active Task List. On a hard-copy
terminal, SHOW TASKS/DYNAMIC provides a snapshot display.

SHOW TERMINAL

SHOW TERMINAL[:ttnn:][/qualifier]

Command Qualifiers:  /[NO]ANSI__CRT
/[NO]ADVANCED__VIDEO
/[NO]AUTOBAUD
/[NO]ASR33
/[NO]ASR35
/[NO]BLOCK__MODE
/[NO]BROADCAST
/[NO]CONTROL=C
/[NO]CRFILL
/DCL
/[NO]DEC__CRT
/DTC01
/[NO]ECHO
/[NO]EDIT__MODE
/[NO]EIGHT__BIT
/[NO]ESCAPE
/[NO]FORM__FEED
/[NO]FULL__DUPLEX
/[NO]HARDCOPY
/[NO]HOLD__SCREEN
/[NO]HOST__SYNC
/HT
/[NO]INTERACTIVE
DIGITAL Command Language (DCL)

Command Qualifiers:

/[NO]KSR33
/[NO]KSR35
/[NO]LA12
/[NO]LA24
/[NO]LA30P
/[NO]LA30S
/[NO]LA34
/[NO]LA36
/[NO]LA38
/[NO]LA50
/[NO]LA100
/[NO]LA120
/[NO]LA180S
/[NO]LA210
/[NO]LFFILL
/[NO]LN03
/[NO]LOCAL
/[LOGGED]_ON
/[NO]LOWERCASE
/[NO]LQP02
/[NO]LQP03
/MCR
/MODEL
/PAGE_LENGTH
/[NO]PARITY
/[NO]PASSALL
/[NO]PASTRU
/PRINTER_PORT
/[NO]PRIVILEGE
/[NO]PRO_SERIES
/[NO]REGIS
/[NO]REMOTE
/RT
/[NO]SCOPE
/[NO]SERIAL
/[NO]SLAVE
/SPEED
/[NO]SOFT_CHARACTERS
/[NO]TAB
/TI:
/TT
/[NO]TTYSNC
/[NO]TYPE_AHEAD
/[NO]UPPERCASE

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DIGITAL Command Language (DCL)

Command
Qualifiers:  /VT
/NO/VT05
/NO/VT50
/NO/VT52
/NO/VT55
/NO/VT61
/NO/VT100
/NO/VT101
/NO/VT102
/NO/VT105
/NO/VT125
/NO/VT131
/NO/VT132
/NO/VT200__SERIES
/WIDTH
/NO/WRAP

Displays information about your terminal and other terminals on your system.

SHOW UIC  SHOW UIC
Displays your User Identification Code (UIC).

SHOW USERS  SHOW USERS
Displays all currently logged-in terminals, including DECnet host terminals and virtual terminals, with the default UFD and login UIC for each.

START  START[/qualifier] [taskname]
Command
Qualifier:  /TERMINAL:ttnn:  (P)
Resumes execution of a task stopped by a STOP$S directive. Taskname defaults to TTnn.

START PROCESSORNAME (P) START/qualifier processorname/qualifier
Qualifiers:  APPLICATIONS__PROCESSOR
BATCH__PROCESSOR
CARD__READER  Same as INPUT
DEVICE  Same as PRINTER
INPUT  Same as CARD__READER
PRINTER  Same as DEVICE
PROCESSOR
Parameter
Qualifiers: /FORMS:n Override initialization value
/CONTINUE Default is CONTINUE
/RESTART
/NEXT
/TOP_OF_FILE
/BACKSPACE:n
/FORWARDSPACE:n
/PAGE:n
/ALIGN

Starts an output processor or cardreader processor.

START/QUEUE (P) START/QUEUE queue-name
Starts a queue.

START/QUEUE/MANAGER (P) START/QUEUE/MANAGER
Starts the Queue Manager.

START/UNBLOCK START/UNBLOCK[qualifier][taskname]
Command
Qualifier: /TERMINAL:tnn: (P)
Continues the execution of a task blocked by the STOP/BLOCK command. Nonprivileged users can unblock any task running from their own terminals. Privileged users can unblock any task.

STOP/ABORT STOP/ABORT printer[:]
Stops the current job on a line printer immediately. Privileged users can stop any job. Nonprivileged users can stop only their own jobs.

STOP/BLOCK STOP/BLOCK [/qualifier] [taskname]
Command
Qualifier: /TERMINAL:tnn: (P)
Blocks an installed running task. The task no longer executes or competes for memory. Nonprivileged users can block tasks running from their own terminals. Privileged users can block any task.

STOP PROCESSORNAME (P) STOP/processorname/qualifier
Qualifiers: APPLICATIONS_prepare PROCESSOR
BATCH_prepare PROCESSOR
CARD_prepare READER Same as INPUT
DIGITAL Command Language (DCL)

Qualifiers: DEVICE
INPUT
PRINTER
PROCESSOR

Parameter Qualifiers: /ABORT
/FILE_END
/JOB_END
/PAUSE

Stops a batch processor, card-reader processor, printer, or other output processor.

STOP/QUEUE (P) STOP/QUEUE/QUEUEname

Stops queues.

STOP/QUEUE/ MANAGER (P) STOP/QUEUE/ MANAGER[/qualifier]

Command Qualifier: /ABORT

Stops the Queue Manager after the current job. /ABORT stops the Queue Manager immediately.

SUBMIT SUBMIT[/qualifier[s]] filespec[s]

Command Qualifiers: /AFTER:TOMORROW
/AFTER:(dd-mmm-yy hh:mm)
/[NO]DELETE
/[NO]HOLD
/[NO]LOG_FILE
/NAME:jobname
/[NO]PRINTER:queue name
/PRIORITY:n

Deletes batch file after run; command or filespec qualifier
Default is NOHOLD;
/HOLD has same effect as HOLD command.

1-9 characters; default is first filename
Optionally name queue for log print job
n is 1 through 150 nonprivileged;
1 through 250 privileged;
default n=50.
Command
Qualifiers:  /QUEUE:queue
            /[NO]RESTART
            /[NO]TRANSFER

Queues QMG batch jobs consisting of one or more user batch jobs for
processing by a batch processor.

TYPE      TYPE [/qualifier[s] filespec[s]]

Prints selected files on your terminal. See APPEND command description
for other qualifiers.

UNFIX     UNFIX[/qualifier] taskname

Command
Qualifiers:  /REGION
            /READONLY---SEGMENT

Frees a fixed task or region from memory. Taskname can also be a region
name.

UNLOCK    UNLOCK [/qualifiers] filespec[s]

Unlocks locked files. Locked files are files that have been improperly
closed. They are identified by an L in the directory listing. See APPEND
command description for other qualifiers.
ERROR LOGGING SYSTEM

The Error Logging System records information about errors and events that occur on system hardware for immediate action or later analysis and reporting. The system consists of four tasks:

- The Error Logger (ERRLOG)
- The Error Log Interface (ELI)
- The Report Generator (RPT)
- The Control File Language Compiler (CFL)

This section describes the ELI commands that run ERRLOG and the RPT commands that generate error log reports.

ELI COMMANDS

The general format for an ELI command is:

[filespec]/switch1/[...switchn]

filespec
A device mnemonic or the name of an error log file, backup file, or file to append to the current error log file.

switches
Switches to set, change, or display ERRLOG operation. You must specify at least one switch on each ELI command line.

Using ELI Defaults:

ELI /LOG

This command starts ERRLOG, using LB:[1,6]LOG.ERR as the error log file and LB:[1,6]BACKUP.ERR as the backup file. It also starts error limiting on the error log devices.

Switches:

APPEND filespec/AP

Appends the specified file to the current error log file. Logging must be active for this switch to work.

BACKUP filespec/BA

Sets the name for a backup file to the next highest version of the file named. This file is used if the primary error log file becomes unusable.
Error Logging System

HARD ERROR LIMIT  device(s)/HL:n
Sets limit (n) for hard (unrecoverable) errors on a device or devices. If
limiting is turned on and the hard error limit is reached, logging of hard
errors for that device stops.

LIMITING    /LIM
Starts the use of error limiting, using either default limits or those set with
ELI switches.

LOGGING     [filespec]/LOG
Begins error logger operation, turns on error limiting, and, if you specify a
file name, overrides the default name of the error log file
(LB:[1,6]LOG.ERR).

NOLIMITING  /NOLIM /-LIM
Stops the use of error limiting.

NOLOGGING   /NOLOG /-LOG
Stops error logger operation and turns off error limiting.

RESET        device(s)/RE
Resets the QIO and error counts on the specified devices to 0. You may
specify up to 14 devices.

SHOW         [device(s)]/SH
Displays error logging information for the specified devices or, if you do not
specify device names, for all error logging devices on the system. Also
displays information about the current operating status of the error logging
system.

SOFT ERROR LIMIT  device(s)/SL:n
Sets limits (n) for soft (recoverable) errors on a device or devices. If limit-
ing is turned on and the soft error limit is reached, logging of soft errors for
that device stops.

SWITCH       filespec/SW
Copies the current error log file to the file specified and begins logging in
that file.
RPT COMMANDS

The general format for an RPT command is:

[reportfile]/[switch(es)]=[inputfile]/[switches]

reportfile

The name of the listing file that contains the Error Log Report.

switches

Optional switches to control how RPT selects and formats information from the error log file. You can use the switches with either the output report file specification or the input file specification.

Default:

RPT = @SET

The default command line selects the following RPT switches:

/F[ORMAT]:B[Rief]
/T[YPE]:A[ll]
/D[A]T[E]:R[ANGE]:*::
/P[ACKET]:*::
/D[evice]:A[ll]
/W[IDTH]:W[ide]

Switches:

DATE /DA: qualifier

Qualifiers: P[REVIOUS]:ndays
R[ANGE]:start:end
T[ODAY]
Y[ESTERDAY]

Allows you to select packets based on the date of their occurrence.

DEVICE /DE: qualifier

Qualifiers: (devicename(s))
A[ll]

Allows you to select packets for a particular device, for more than one device, or for all the devices on the system.
Error Logging System

FORMAT   F:qualifier

Qualifiers:  B[R]EF
             F[ULL]
             N[ONE]
             R[EGISTERS]

Allows you to specify the desired format for the packet-by-packet report.

PACKET NUMBER   /PA:bbbb.xxx:(bbbb.xxx)

Allows you to select a packet or range of packets by specifying the packet identification number. The value bbbb is the block number and xxx is the record number. A packet specified as * indicates open ended.

REPORT      /R:qualifier

Qualifiers:  D[AY]
             MONTH
             WEEK
             SYSTEM
             userstring

Invokes a predefined string of switches for RPT to use. The qualifier can be one of the DIGITAL-defined strings or a user-defined switch string.

The DIGITAL-defined strings and their switches are as follows:


SERIAL NUMBER   /SE:qualifier

Qualifiers:  D[RIVE]:number and/or
             P[ACK]:number

Selects packets based on drive or pack serial number.

SUMMARY      /SU:summary—type

Qualifiers:  HISTORY
             ERROR
             GEOMETRY
             ALL
             NONE

Allows you to select the type of summary reports that RPT generates. You cannot use the multiple summary syntax to specify more than one keyword if one of the keywords is ALL or NONE. That is, /SU:(ALL) is legal but /SU:(ALL,ERROR) is not. The default is /SU:NONE.
Error Logging System

TYPE  /T:qualifier

Qualifiers:  A[LL]
             C[ONTROL]
             E[RRORS]
             M[EMORY]
             P[E][PIPERAL]
             P[RoccoSSOR]
             S[YSTEM][INFO]

Selects packets based on packet type or types.

VOLUME LABEL  /V:volumelabel

Selects packets based on volume label.

WIDTH  /W:qualifier

Qualifiers:  N[ARROW]
             W[IDE]

Selects the width of the report RPT creates (80 or 132 characters).

Many RPT switches accept lists of qualifiers. The format for these lists is:

/switch:(qualifier 1, qualifier 2...)
PROCEDURE FOR HALTING A JOB IN A PRINT QUEUE

The following section describes the commands to stop a job on a print processor without actually disabling the processor or queue manager. The procedure is useful when you accidentally queue a large job that should not be printed.

STOP/ABORT (/KIL) deletes the active job on a given processor.

Privileged users can delete any job; nonprivileged users can delete their own jobs. You do not need to know the queue name or job name, but rather the name of the processor to delete the job.

Format

DCL>STOP/ABORT processorname
MCR>QUE processorname:/KIL

processorname

Specifies the processor whose active job you wish to delete. Note that the MCR command format requires a colon (:) after the processor name.

You can stop jobs running on any processor under the control of QMG.

Examples

DCL>STOP/ABORT
Processor? LP0

This example shows how to stop a print job on line printer LP0:. The currently active job is deleted from the queue and the next eligible job is queued up.

Notes

Use this command to stop a processor fast, such as a line printer printing nothing but form feeds.

As soon as the active job is deleted, QMG passes the next eligible job to the processor. The processor has not been aborted or killed, but only the active job on that processor.

You can also delete the active job on a card-reader processor with this command.
ON-LINE DEBUGGING TOOL (ODT) COMMANDS

OPEN/DISPLAY/MODIFY TASK LOCATIONS

address mode-symbol contents new-value terminator

address (a)

Specifies the effective address of the location (word or byte) to be opened. The address can be expressed absolutely or in relative form (see Relocatable Address). An odd address forces byte mode.

mode-symbol

Specifies the mode in which the location is to be opened or displayed. If the address is not specified, the last opened location is opened and displayed.

Symbol | Open/Display Location As:
-------|---------------------------------
/      | 6-digit octal word
\     | 3-digit octal byte
"     | 2 ASCII characters (word)
,     | 1 ASCII character (byte)
%     | 3 Radix-50 characters (word)

contents

Specifies the current contents of the opened location.

new-value [k]

Specifies the optional value to replace the current contents upon termination of the command line.

terminator

Closes the currently open location, replacing the current contents (if so directed). The terminators are:

Return (RET)

Terminates the current sequence, displays the ODT prompt (___), and waits for the next command.

Line feed (L)

Opens the next sequential location and prints its contents.
On-Line Debugging Tool (ODT) Commands

Circumflex (^) or up-arrow (↑)
Opens the preceding location in the current mode. If typed as an ODT prompt rather than as a terminator, opens the location that precedes the last-opened location in the same mode.

Underline (_) or back-arrow (←)
Opens the PC-relative location. The effective address equals the contents (previous or replaced) of the current location added to its address plus 2. Mode is the same, except that odd effective addresses force byte mode.

At sign (@)
Opens the location addressed absolutely by the contents (previous or replaced) of the current location. Mode is the same, except that odd effective addresses force byte mode.

Right angle bracket (>)
Opens the PC-relative branch-offset location. The effective-address calculation involves the low-order byte of the contents (previous or replaced) of the just-closed location. Byte, as a signed value, is multiplied by 2 and added to its effective address plus 2. Mode remains the same as when the location was opened.

Left angle bracket (<)
Reopens the location most recently opened by a /, <LF>, or ^. If the currently open location was not opened by a ←, @ or >, then < closes and reopens the current location.

COMMAND INPUT ERRORS

Individual characters in a command line cannot be corrected. In general, typing an illegal character or command (such as 8 or 9) causes ODT to ignore the input, print the question mark error indicator (?), and wait for a valid command.

RELOCATABLE ADDRESS

An effective address can be entered as an explicit value relative to (plus) the contents of a relocation register; typically the register contains the relocatable base address for the applicable program section or object module. ODT displays task addresses in relative form if a relocation register contains an address-offset value equal to or less than the address to be
displayed; if the Format Register ($F) contains 0, ODT also displays the
register's initialized state. Otherwise, ODT displays addresses in absolute
form. The relocation registers are identified as 0R through 7R; a null value
is taken as 0 when an offset is established. The registers initially contain
-1, the nonactive state.

Establishing Relocatable Address Offsets
value;nR Value replaces current contents of relocation register n.
n,value;nR Value is added to (subtracted from) current contents of relo-
cation register n.
$nR/$ Displays current contents of relocation register n. New value
is typed before terminator replaces current contents.

Inhibiting Relocatable Addressing
R Sets all active relocation registers to -1, the nonactive state.
nR Sets relocation register n to -1, the nonactive state.

Entering or Displaying Relative Address
Effective address is address relative to (plus) the current
contents of relocation register r.

BREAKPOINTS
A breakpoint must be set in the first word of an instruction. Breakpoints
are identified as 0B through 7B. (8B is reserved for use with single step
execution.) A breakpoint address can be entered in absolute or in relative
form (see Relocatable Address).

Inserting Breakpoints
r,address;nB Inserts breakpoint n at specified address.
r,address;B Inserts next unset breakpoint at specified address.

Removing Breakpoints
B Removes all inserted breakpoints.
nB Removes only breakpoint n.

Moving Breakpoints
r,address;nB Moves breakpoint n to new address, overriding previous ad-
dress.
On-Line Debugging Tool (ODT) Commands

Report of Breakpoint Occurrence

$nB:r, address$ Reports address at which breakpoint n suspended task execution.

Displaying Breakpoint Position

$\text{nB/}$ Displays current absolute address (or inactive state) of breakpoint n. Entering a replacement value alters the current contents of the breakpoint register.

CONTROL OF TASK EXECUTION

Go Command

G \(r, address \ G\) Initiates task at entry address.

Proceed Command

P \(r, address \ P\) Resumes task execution from current breakpoint suspension, and continues to a breakpoint or completion.

nP \(r, address \ nP\) Resumes task execution from current breakpoint suspension, and does not recognize this breakpoint again until its nth occurrence.

$\text{nC}$ Displays current contents of the proceed-count register associated with breakpoint n. New value typed before terminator replaces current contents.

Single-Instruction Command

S \(r, address \ S\) Executes PC-addressed instruction, suspends task, and prints address of next instruction.

nS \(r, address \ nS\) Executes next n instructions, suspends task, and prints address of next instruction.

8B:r,address \(8B:r, address \ 8B\) Specifies the next instruction's address.

FILL MEMORY BLOCK - F COMMAND

The memory-limit registers, low (\$L) and high (\$H), must contain the address boundaries of the affected memory area. Both contain 0 initially.

The following sequence establishes the address reference, which can be in relative or absolute form:
On-Line Debugging Tool (ODT) Commands

$\text{L (or } $H$)$/\text{contents new-address terminator}

\begin{itemize}
\item \text{value F} \quad \text{Places a value in search argument register (}$A$, and/or enters the current contents of (}$A$) in all memory locations from low limit (}$L$) through high limit (}$H$) in the same mode as the last-opened location. \\
\end{itemize}

\textbf{LIST MEMORY BLOCK - L COMMAND}

\begin{itemize}
\item \text{L} \quad \text{Prints memory locations within specified address limits on console listing device (CL:).}
\item \text{a};\text{n} \quad \text{Uses address value } a \text{ as a beginning location and initiates listing operation.}
\item \text{a};\text{kL} \quad \text{Uses address values } a \text{ and } k \text{ as beginning and ending addresses and initiates listing operation.}
\item \text{n};\text{a};\text{kL} \quad \text{All listing control arguments are specified in a single listing command; } n \text{ is the LUN register containing the address of the listing device.}
\end{itemize}

\textbf{CALCULATING OFFSETS - O COMMAND}

\text{Calculates positive or negative (2's complement) PC-relative and branch offsets between even (word) addresses.}

\textbf{From Open Location}

\text{address/contents/addressO pc-rel>branch}

\text{Example: 16126/001402/16134O 000004 > 000002}

\textbf{Between Two Specified Addresses}

\text{address;addressO pc-rel>branch}

\text{Example: 16126;16134O 000004>000002}

\textbf{GENERAL PURPOSE REGISTERS}

\textbf{C Constant Register}

\text{Contains user-specified 16-bit value (unsigned, absolute) for reference as \textquoteleft\textquoteleft C\textquoteright\textquoteright\ in any address or new-value expressions. $\text{C}$/ prints current contents. New value typed before $\text{C}$ replaces contents.}
On-Line Debugging Tool (ODT) Commands

**Q Quantity Register**
Always contains the last value printed for reference as “Q” in address or new value expressions.

**PROCESSOR STATUS WORD**

$S/$
Displays the task Processor Status Word (PSW). The new value typed before the terminator replaces the old PSW contents.

**DIRECTIVE STATUS WORD**

$W/$
Displays a task’s Directive Status Word ($DSW). The new value typed before the terminator replaces the old contents.

**MISCELLANEOUS SYMBOLS AND OPERATORS**

+ or space  Sums contiguous arguments.
-          Subtracts the following argument from the preceding one.
.          Equals address of the last explicitly opened location.
=          Calculates the 16-bit value (positive or 2’s complement) of the preceding argument string, prints it as 6 octal digits, and stores it in Q. Arguments can be signed or unsigned octal values, relocatable address expressions, or any valid ODT expression.

**TERMINATING ODT SESSION**

X  Terminates ODT and returns control to the system monitor.

For additional information, refer to the RSX–11M/M–PLUS and Micro/RSX Debugging Reference Manual.
TASK BUILDER (TKB) SWITCHES AND OPTIONS

The format for Task Builder commands is as follows:

>TKB
TKB>taskimagefile,memallocfile,symdeffile = inputfile(s)

For example, to task-build a program called Zebra, type the following:

>TKB
TKB>ZEVARA.TSK, ZEVARA.MAP, ZEVARA.STB = ZEVARA.OBJ....
TKB/>
ENTER OPTIONS:
TKB> optionname = argument(s)
...
TKB>/ (to end Task Builder operation)
or
TKB>/ (if you have another task to build)

The Task Builder file specification is as follows:

filespec = dev:[g,m]filename.typ; version/switch(es)
defaults = SY: [muc]filename.typ:n/switch

The Task Builder uses the following default file types for the files named:

- Task Image File .TSK
- Memory Allocation File .MAP
- Symbol Definition File .STB
- Object Module .OBJ
- Overlay Description .ODL
- Indirect Command .CMD
- Object Module Library .OLB

In the file specification above, n is the latest version number for an input file and the latest version plus 1 for an output file.
Task Builder (TKB) Switches and Options

SWITCHES

The following key is used in the description below to designate which input and output files can use the Task Builder switch specified:

[C] Common or Library (.TSK)*
[T] Task Image (.TSK)
[M] Task Builder Map (.MAP)
[S] Symbol Definition (.STB)
[I] Input (.OBJ,.OLB,.ODL,.CMD)

* Commons or libraries are specified with the /-HD switch, which produces a .TSK file without a header.

The default value for switches is negative (-sw) unless otherwise specified.

/AC:n

Specifies that the task is an Ancillary Control Processor (ACP); n specifies the base relocation register (allowable registers are 0, 4, or 5; default register is 5). Overrides /PR if applied to the same file. [T]

/AL

Makes the task image file checkpointable and allocates checkpoint space in the task image file. (Do not use with /CP in the same command line.) [T]

/CC

Specifies that the input file contains more than one object module. /-CC task-builds only the first object module. The LB (library) switch overrides /CC if it is applied to the same file. (Default is /CC.) [T]

/CL

Specifies that the task is a command line interpreter. [T]

/CM

Specifies a compatibility mode resident overlay structure. (Overlay segments are aligned on 256-word physical boundaries.) [T]

/CO

Causes the Task Builder to build a shared common. [C]
/CP
Makes the task image checkpointable and allows the task to be check-pointed to system checkpoint space. (Do not use in the same command line with /AL.) [T]

/CR
Appends a global cross-reference listing to the memory-allocation file. [M]

/DA
Includes a debugging aid in the task image (ODT) for a task image (output) file or a user-supplied debugging program (for an input file). [T,I]

/DL
Specifies a default library file (replacing SYSLIB.OLB) for global references that remain undefined after user-specified library files have been searched. (Can be applied to only one input file per task.) [I]

/EA
Specifies that the task uses the extended arithmetic element. (/FP overrides /EA if applied to the same file.) [T]

/EL
Specifies the maximum possible size for the library, according to the size specified in the PAR option. (The actual size of the library may be smaller.)

/FM
Causes the allocation of additional memory between the task and the external header for fast mapping. [T]

/FP
Specifies that the task uses the floating point processor. (Overrides /EA if applied to the same file.) [T]

/FU
Specifies a full search of all cotree segments for a matching definition or reference when processing modules from the default object module library. [T]
Task Builder (TKB) Switches and Options

/HD
Includes a header in the task image. (Default is /HD; /-HD is used with common blocks, resident libraries, loadable drivers, and system images.) [T,S]

/ID
This switch directs TKB to mark your task as one that uses I-space APRs and D-space APRs in user mode. TKB separates I-PSECTs from D-PSECTs.

/IP
Allows the Task Builder to inform INSTALL that the privileged task purposely overmaps the I/O page. Conversely, /-IP informs INSTALL that the privileged task is over 12K and does not map the I/O page. [T]

/LB
Without arguments: TKB uses the input file as a library of relocatable object modules and searches to resolve undefined global references. Includes in task image any modules found in the library that resolve the undefined references. [I]
With arguments: [/LB:mod-1mod-2.....] TKB inserts only the modules named in the command, regardless of references, into the task image. [I]

/LI
Causes the Task Builder to build a library shared region. Use the /-HD switch with /LI.

/MA
Includes information from the input file in the memory allocation listing (when applied to an input file) or controls the display of information about the default library and shared regions (when applied to a memory allocation file). (Default is /MA for input file or /-MA for a memory allocation file.) [M,I]

/MM[:n]
Specifies that the system on which the task is to run has memory management hardware. (Default to /MM if host system has memory management, or to /-MM if it does not.) [T]

n Used with /-MM to specify the highest physical address in K-words of the task or system being built. Specify as decimal numbers 28 or 30.
Specifies that the input file describes the task’s overlay (tree) structure; the input file is an .ODL file. [T]

The /MU switch specifies to TKB that the task is a multiuser task.

Tells the Task Builder not to print diagnostic messages. [T]

Specifies that only position-independent code or data is in the shared region. [T,S]

Produces a Postmortem Dump if the task is terminated with an SST abort. [T]

Specifies that the task has privileged access. /AC overrides /PR:n if applied to the same file; n specifies base relocation register (0, 4, or 5; default is 5). [T]

Enables recognition of the memory-resident overlay operator (!) in the overlay descriptor file (/MP). (Default is /RO.) [T]

Selects the slow Task Builder [T]

Specifies that the task can receive messages by means of the Executive SEND directive. (Default is /SE.). [T]

Allocates task program sections alphabetically by access code (RW followed by RO). [T]
Task Builder (TKB) Switches and Options

/SH

Produces a short form of the memory-allocation file without the file contents section. [M]

/SL

Specifies that the task is slaved to an initiating task. Slave task runs under the UIC and TI: of the sending task. (Applies only to systems with multiuser protection.) [T]

/SP

Lists the memory-allocation file on the printer via the spooler. (Default is /SP.) [M]

/SQ

Builds program sections in the task image in the order in which they are named, rather than in alphabetical order. (Cannot be used with FORTRAN I/O handling modules or FCS modules from SYSLIB.) [T]

/SS

Extracts a global symbol definition from the input file if the global symbol table has a matching undefined reference. [I]

/TR

Specifies that the task can be traced. [T]

/WI

Lists the memory-allocation file in 132-column (wide) format. (Default is /WI.) [M]

/-XH

The /XH switch informs TKB that the task is to have an external header.

/XT:n

Terminates the building of the task after n error diagnostics are detected; can be octal or decimal (decimal must be specified with a decimal point, for example, 8.).
OPTIONS

[H]
Option is of interest to high-level language programmers.

[M]
Option is of interest to MACRO-11 programmers.

[H,M]
Option is of interest to both high-level language and MACRO programmers.

Names used for option input can be 6 characters long, from the Radix-50 character set (A-Z, 0-9, and $).

ABORT = n
Terminates the current task-build operation and restarts the Task Builder for another. (The n satisfies the option syntax; it means nothing.) [H,M]

ABSPAT = seegname:address:value1...:value8
Patches the task image from a base address. Also patches the I-space part of an I- and D-space task. Eight values may be specified. [M]

ACTFIL = filemax (decimal integer)
Specifies the number of files that a task can have open simultaneously (the default is 4). [H]

ASG = devicename:un1...:un8
Assigns logical unit number(s) in decimal to specified physical device(s). [H,M]

CLSTR = library__1,library__2,...,library__n:switch:apr
Declares a cluster or group of system-owned resident libraries or commons (from two to six) to be accessed by the task and all residing at the same virtual address space in the task. [H, M]

Switch    Read-only or read-write access for the task (RO or RW)
APR       Which APR is to be used as the starting APR for the task
Task Builder (TKB) Switches and Options

CMPRT

Declares completion routine for supervisor-mode library \([H,M]\)

COMMON = name:access-code[:apr]

Declares that the task accesses a system-owned resident common area. Causes the common to be mapped with D-space APRs. The common can contain only data when linked to I- and D-space tasks. \([H,M]\)

DSPAT = segname:address:value1...:value8

Patches the task image from a base address. Also patches the D-space part of an I- and D-space task. Eight values may be specified.

EXTSCT = psectname:extension

If the program section has the concatenated attribute, this option extends the size of the named program section by the number of octal bytes specified in the extension. If the program section has the overlay attribute, it is extended only if the extension value exceeds the length of the section. \([H,M]\)

EXTTSK = n

Extends the D-space portion of an I- and D-space task. Extends the task memory allocation by the length n (in decimal words in the range \(0<n<65,535\)) when it is installed in a system-controlled partition. The extension is rounded to the closest 32-word boundary. The default is the extension to the total task size as specified by the PAR option length parameter. \([H,M]\)

FMTBUF = max-format (decimal integer)

Specifies the number of characters (in decimal bytes) in the longest format specification to be compiled at run time. The default is 132. \([M]\)

GBLDEF = symbol-name:symbol-value

Defines the named global symbol as having a value in the range of 0 through 177777 (octal). \([M]\)

GBLINC = symbolname,symbolname...,symbolname

Specifies the symbols to be included as undefined references in the symbol table file of a shared resident library. \([M]\)
Task Builder (TKB) Switches and Options

GBLPAT = segname: symname[+/- offset]: val1...: val8

Patches the task image from the location addressed by the global symbol plus or minus the octal offset value through 8 words. All values are octal. [M]

GBLREF = symbol-name: symbol-value

Declares the named symbol as a global symbol reference originating in the root segment of the task. [H, M]

GBLXCL = symbol-name: symbol-name:...: symbol-name

Specifies the symbols that are to be excluded from the symbol definition file of a resident library. [H, M]

LIBR = name: access-code[: apr]

Declares that the task accesses a system-owned resident library. Causes the library to be mapped with both I-space and D-space APRs when linked to an I- and D-space task. [H, M]

MAXBUF = max-record

Specifies the maximum allowable record buffer size (in decimal bytes) in any file processed by the task. [H]

ODTV = symbol-name: vector-length

Declares the named global symbol to be the address of the ODT synchronous system trap vector (SST). The global symbol must be defined in the main root segment. [M]

PAR = name[: base: length]

Identifies the partition for which the task is built. For a mapped system, a size of 0 implies a system-controlled partition, and a nonzero size implies a user-controlled partition. Base and length do not have to be expressed if the partition resides on the host system. The default is PAR = GEN. [H, M]

PRI = priority

Sets the priority at which the task executes; can be overridden when the task is installed. The priority is a decimal integer between 1 and 250. [H, M]

RESCOM = filespec/access-code[: apr]

Declares that the task accesses a user-owned resident common. Causes the common to be mapped with D-space APRs. When linked to I- and D-space tasks, the common can contain data only. [H, M]
RESLIB = filespec/access-code[:apr]
Declarations that the task accesses a user-owned resident library. Causes the library to be mapped with both I-space and D-space APRs when linked to an I- and D-space task. [H,M]

RESSUP
Declarations task’s intention to access a resident supervisor-mode library. [H,M]

ROPAR
Declarations partition in which read-only portion of multiuser task is to reside. [H,M]

SUPLIB
Declarations task’s intention to access a system-owned supervisor-mode library.

TASK = taskname
Names the task. [H,M]

TSKV = symbol-name:vector-length
Declarations a global symbol to be the address of the task synchronous system trap vector (SST). [M]

UIC = [g,m]
Declarations the UIC for time-based initiation of a task. The default is the UIC under which the Task Builder is running. [H,M]

UNITS = max-units
Declarations the number of logical units used by the task (a decimal number in the range of 0 through 250). The default is 6. [H,M]

VSECT = psectname:base:window[:physical-length]
Specifies the virtual base address, length of virtual memory address space (window), and length of physical memory allocated to the named program section. [H,M]

WNDWS = n
Declarations the number (0 through 7) of extra address windows required by the task. The number specified equals the number of simultaneously mapped regions that the task will use. [H,M]
RMSBCK utility summary

The RMS-11 File Back-Up Utility (RMSBCK) transfers the contents of an RMS-11 file to another file, on another device, to maintain the file should the original file be lost or damaged.

The command line for the RMSBCK utility is as follows:

    outfile[/switch...]=[infile[/switch...]][,infile[/switch...]]...

Type HELP or ? for a help message. See the RMS-11 Utilities manual for more information.

The RMSBCK switches are listed below.

**Global Switches**

`/ID`

Identifies the current version. Default: Provides no identification.

`/[NO]QU`

Enables or disables query mode. Default: Enables query mode.

`/SL[:file-spec]`

Provides summary listing to terminal or in file, if specified. Default: Provides no summary.

**Output File Switches**

`/NV`

Creates a new version of the output file (the default).

`/RA`


`/RC`


`/RW`

Rewinds magnetic tape before writing. Default: Does not rewind magtape.
RMSBCK Utility Summary

/SU


Input File Switches

/CD:dd–mmm–yy[:v]

Backs up files based on creation date: specify v as A to back up all files created after the date specified or as B to back up all files created before the date specified. If v is not specified, all files created on the date specified will be backed up. Default: Performs no date checking.

/RD:dd–mmm–yy[:v]

Backs up files based on revision date: specify v as A to back up all files revised after the date specified or as B to back up all files revised before the date specified. If v is not specified, all files revised on the date specified will be backed up. Default: Performs no date checking.
RMSCNV UTILITY SUMMARY

The RMS–11 File Conversion Utility (RMSCNV) reads records from an RMS–11 file of any organization and loads them into another RMS–11 file of any organization.

The command line for the RMSCNV utility is as follows:

[outfile[/switch...]]=infile[/switch...]

Type HELP or ? for a help message. See the RMS–11 Utilities manual for more information.

The RMSCNV switches are listed below.

Global Switches

/AP

Appends records to an existing sequential file. Default: Does not append.

/BL:[n]

Sets magnetic tape block size. Default: Uses 512 bytes.

/CA:[file-spec]

Creates an output file with the attributes of the existing input file. Default: Output file must exist or RMSCNV creates a sequential file.

/EO

Converts CTRL/Z EOF character in an ASCII stream file to null and pads the file with nulls to the physical EOF. Default: Assumes null-filled stream file.

/FO:x

Sets output file organization, where x is S, R, or I. Default: Uses sequential (S) organization.

/ID

Identifies the current version. Default: Provides no identification.

/IM

/KN: ["keyname"]
Reads an indexed file using the key of reference specified by keyname. Default: Reads file using primary key.

/KR:n
Reads an indexed file using the key of reference specified by n. Default: Reads file using primary key (0).

/LO
Honors bucket fill size when filling buckets in an indexed file. Default: Fills buckets to capacity.

/MA
Uses mass-insertion mode and sequential PUT operations. Default: No mass insertion; uses random PUT operations.

/ML:n
Explicitly sets limit of buffer allocation. Default: RMSCNV calculates the amount of memory available for allocation.

/PD: [: 

/PD: [\# \n]|x\n]|]
Pads input records to output record length, if necessary. Default: Does not pad records.

/SL: [file-spec]
Provides summary listing to terminal or in file, if specified. Default: Does not provide summary.

/SU
Supersedes existing sequential file. Default: Does not supersedes existing file.

/TR
Truncates input records to output record length, if necessary. Default: Does not truncate records.

/WF
Writes or reads fixed-control area. Default: Ignores fixed-control area.
RMSDES UTILITY SUMMARY

The RMS–11 File Design Utility (RMSDES) allows you to design and create sequential, relative, and indexed files.

The command line for the RMSDES utility is as follows:

```
DES filename[.typ] [kind]
```

See the RMS–11 Utilities manual for more information.

The following sections list the RMSDES attribute settings and commands.

<table>
<thead>
<tr>
<th>Section</th>
<th>Attribute Keyword and Variable</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>TARGET¹ argument</td>
<td>User's system</td>
</tr>
<tr>
<td></td>
<td>argument must be one of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RSX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RSTS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOURCE¹,²</td>
<td>User's system</td>
</tr>
<tr>
<td></td>
<td>FILE PLACEMENT¹ logical</td>
<td>NO</td>
</tr>
<tr>
<td>File</td>
<td>NAME string</td>
<td>FILE.DAT</td>
</tr>
<tr>
<td></td>
<td>ORGANIZATION argument</td>
<td></td>
</tr>
<tr>
<td></td>
<td>argument must be one of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEQUENTIAL</td>
<td>SEQUENTIAL</td>
</tr>
<tr>
<td></td>
<td>RELATIVE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INDEXED</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLUSTER_SIZE number</td>
<td>0 blocks</td>
</tr>
<tr>
<td></td>
<td>ALLOCATION number</td>
<td>0 blocks</td>
</tr>
<tr>
<td></td>
<td>EXTENSION number</td>
<td>0 blocks</td>
</tr>
<tr>
<td></td>
<td>BUCKET_SIZE number</td>
<td>1 block</td>
</tr>
<tr>
<td></td>
<td>PROTECTION string</td>
<td>System protection</td>
</tr>
</tbody>
</table>

1. Informational attribute.
2. Not user settable: RMSDES automatically notes the user's source system.
<table>
<thead>
<tr>
<th>Section</th>
<th>Attribute Keyword and Variable</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OWNER string</td>
<td>User's UIC</td>
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<tr>
<td></td>
<td>MAGTAPE__BLOCK__SIZE number</td>
<td>512 bytes</td>
</tr>
<tr>
<td></td>
<td>MAGTAPE__REWIND logical</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>MAX__RECORD__NUMBER number</td>
<td>0 records</td>
</tr>
<tr>
<td></td>
<td>CONTIGUOUS logical</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>SUPERSEDE logical</td>
<td>NO</td>
</tr>
<tr>
<td>Record</td>
<td>SIZE number</td>
<td>0 bytes</td>
</tr>
<tr>
<td></td>
<td>FORMAT argument</td>
<td></td>
</tr>
<tr>
<td></td>
<td>argument must be one of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VARIABLE</td>
<td>VARIABLE</td>
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<td>STREAM</td>
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<td>FIXED</td>
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</tr>
<tr>
<td></td>
<td>VFC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CONTROL__FIELD__SIZE number</td>
<td>2 bytes</td>
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<td></td>
<td>BLOCK__SPAN logical</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>CARRIAGE__CONTROL argument</td>
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</tr>
<tr>
<td></td>
<td>argument must be one of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CARRIAGE__RETURN</td>
<td>CARRIAGE__RETURN</td>
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<tr>
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<td>FORTRAN</td>
<td></td>
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<tr>
<td></td>
<td>PRINT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Key n³</td>
<td>NAME string</td>
<td>No name</td>
</tr>
<tr>
<td></td>
<td>TYPE argument</td>
<td></td>
</tr>
<tr>
<td></td>
<td>argument must be one of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STRING</td>
<td>STRING</td>
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<tr>
<td></td>
<td>BIN2</td>
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<tr>
<td></td>
<td>BIN4</td>
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</tr>
<tr>
<td></td>
<td>INT2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT4</td>
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<tr>
<td></td>
<td>DECIMAL</td>
<td></td>
</tr>
</tbody>
</table>

3. You must specify a number (n) for each key, key segment, and/or area that you define.
<table>
<thead>
<tr>
<th>Section Keyword</th>
<th>Attribute Keyword and Variable</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>NULL__KEY logical</td>
<td></td>
<td>NO</td>
</tr>
<tr>
<td>NULL__VALUE argument</td>
<td></td>
<td>(space)</td>
</tr>
<tr>
<td>Parent of:</td>
<td>argument must be one of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>An ASCII character</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A decimal number</td>
<td></td>
</tr>
<tr>
<td>DUPLICATES logical</td>
<td></td>
<td>NO (primary key)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>YES (alternate key)</td>
</tr>
<tr>
<td>SEGn__POSITION³ number</td>
<td></td>
<td>Byte 0</td>
</tr>
<tr>
<td>SEGn__LENGTH³ number</td>
<td></td>
<td>0 bytes</td>
</tr>
<tr>
<td>CHANGES logical</td>
<td></td>
<td>YES (alternate key)</td>
</tr>
<tr>
<td>DATA__FILL number</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>DATA__AREA number</td>
<td></td>
<td>Area 0</td>
</tr>
<tr>
<td>INDEX__FILL number</td>
<td></td>
<td>100</td>
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<tr>
<td>INDEX__AREA number</td>
<td></td>
<td>Area 0</td>
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<tr>
<td>LEVEL1__INDEX__AREA number</td>
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<td></td>
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<tr>
<td>LOCATION number</td>
<td></td>
<td>0 blocks</td>
</tr>
<tr>
<td>EXTENSION number</td>
<td></td>
<td>0 blocks</td>
</tr>
<tr>
<td>BUCKET__SIZE number</td>
<td></td>
<td>1 block</td>
</tr>
<tr>
<td>CONTIGUOUS logical</td>
<td></td>
<td>NO</td>
</tr>
<tr>
<td>POSITION argument</td>
<td>argument must be one of:</td>
<td>NONE</td>
</tr>
<tr>
<td></td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIRTUAL number</td>
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<td>LOGICAL number</td>
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</tr>
<tr>
<td>EXACT__POSITIONING logical</td>
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<td>NO</td>
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</tbody>
</table>

3. You must specify a number (n) for each key, key segment, and/or area that you define.
COMANDS

CLEAR ALL
Restores all attribute values in all sections to their default values.

CLEAR section ALL
Restores all attribute values in the specified section to their default values.

CLEAR section attribute
Restores the specified attribute value in the specified section to its default value.

CREATE [filename [.typ]]
Creates an empty data file that has the attribute values specified in the design buffer. For indexed files in which areas are not defined, RMSDES prompts for whether areas are to be defined by default.

If you do not specify a file name and type, the file will have those specified in the design buffer. If you did not specify a file name and type in the design buffer, the file will be created as FILE.DAT.

<CTRL/Z>
Terminates RMSDES without saving the design or creating an empty data file.

<ESC>
In response to any prompt, returns the RMSDES utility prompt and preserves all attribute values in the design buffer.

EXIT filename [.typ]
Stores the file design in the description file specified in the command line and terminates RMSDES. The default file type is .DES.

GET filename [.typ] [kind]
Reads the file design specified in a description file, and sets the appropriate attribute values in the design buffer. Reads the attribute values of a data file, and sets the appropriate attribute values in the design buffer. The default file type is .DES. If the file is a data file, kind (DAT) must be specified.
HELP
Lists all available help topics and gives instructions for displaying the text.

HELP command
Displays help text for the specified command.

HELP COMMANDS
Lists all valid commands.

HELP SECTIONS
Lists all available help topics for all sections and gives instructions for
displaying the text.

HELP section
Displays help text for the specified section and lists all available help
topics for all attributes in the specified section.

HELP section attribute
Displays help text for the specified attribute in the specified section.

?  
Displays help text for the section, attribute, or value for which you are
being prompted. Note also that you can type ? instead of HELP for any
form of the HELP command.

QUIT
Terminates RMSDES, without storing the design or creating an empty
data file.

SAVE filename[.typ]
Stores the file design in the description file specified in the command line.
The default file type is .DES.

SET ALL
Prompts for setting all attribute values in all sections. For indexed files in
which areas are not defined, prompts for whether areas are to be defined by
default.
SET section ALL
Prompts for setting all attribute values in the specified section.

SET section attribute value
Sets the specified attribute value in the specified section.

SHOW ALL
Displays all attribute values in all sections.

SHOW section ALL
Displays all attribute values in the specified section.

SHOW section attribute
Displays the specified attribute value in the specified section.

SHOW ID
Identifies the current level and patch version of RMSDES.
RMSDSP UTILITY SUMMARY

The RMS–11 File Display Utility (RMSDSP) produces a concise description of any RMS–11 file, including back-up files.

The command line for the RMSDSP utility is:

[outfile=]infile[/switch...][,infile[/switch...]]

Type HELP or ? for a help message. See the RMS–11 Utilities manual for more information.

The RMSDSP switches are listed below.

Global Switches

/ BP

Lists contents of back-up files. Default: Provides basic display only.

/ BR

Provides a brief display of attributes. Default: Provides basic display of file attributes and characteristics.

/ FU

Provides detailed display for indexed files or back-up files. Default: Provides basic display only.

/ ID

Identifies the current version. Default: Provides no identification.

/ SU

Supersedes existing output file. Default: Does not supersede an existing file.
RMSIFL UTILITY SUMMARY

The RMS-11 Indexed File Load Utility (RMSIFL) reads records from an RMS-11 file of any organization and loads them into an indexed file.

The command line for the RMSIFL utility is as follows:

outfile[/switch...] = infile[/switch...]

Type HELP or ? for a help message. See the RMS-11 Utilities manual for more information.

The RMSIFL switches are listed below.

Global Switch

/ID

Identifies the current version. Default: Provides no identification.

Output File Switches

/ER[:file-spec]

Writes primary keys of exception records to terminal if no file-spec; or writes exception records to the specified file. Default: Writes primary keys of exception records to terminal.

/NOER[:S]

Stops processing if input record is incompatible. Default: Writes primary keys of exception records to terminal.

/LO

Honors bucket fill size. Default: Fills buckets to capacity.

/PD:[[#]x]

Pads input records to output record length. Default: Handles input records as exception records if different lengths.

/TR

Truncates input records to output record length. Default: Handles input records as exception records if different lengths.
RMSIFL Utility Summary

Input File Switches

/DE:dvn1:[:dvn2:...dvn5:]
Reassigns devices for sort work files. Default: Creates and uses sort work files on SY:. 

/KR:n
Uses key of reference number. Default: Uses primary key (0).

/NOSO
Does not sort records before loading. Default: Sorts records in input file before loading.
RMSRST UTILITY SUMMARY

The RMS–11 File Restoration Utility (RMSRST) restores files that were backed up using RMSBCK and produces standard RMS–11 files as output, so your programs can access them.

The command line for the RMSRST utility is as follows:

outfile[/switch...]=[in|f|e|l|e|][/switch...][,in|f|e|l|e|][/switch...]...

Type HELP or ? for a help message. See the RMS–11 Utilities manual for more information.

The RMSRST switches are listed below.

Global Switches

/ID
Identifies the current version. Default: Provides no identification.

/[NO]CV
Enables or disables file version number conversion. Default: For RMSBCK V2.0 or later, conversion is enabled and /NOCV will disable it. For RMSBCK tapes prior to V2.0, conversion is disabled and /CV will enable it.

/[NO]QU
Enables or disables query mode. Default: Enables query mode.

/SL[:file-spec]
Provides summary listing to terminal or in file, if specified. Default: Provides no summary.

Output File Switches

/FR
Changes protection code. Default: Uses original protection.

/NV
Creates new version of output file (the default).
RMSRST Utility Summary

/RA

/RC

/SU
Supersedes existing files. Default: Does not supersede existing files.

**Input File Switches**

/BD:dd–mmm–yy
Restores disk files based on back-up date. Default: Performs no date checking.

/OA:[uic]
Restores files based on original account (UIC). Note that in this case, the square brackets are required syntax. Default: Applies no account criterion.

/SE:file-spec or
/SE:(file-spec1, file-spec2[,..., file-spec10])
Restores specified files from container file. Default: Restores all files on container file.
RMS–11 COMPLETION CODES AND FATAL ERROR CODES

The following sections list completions that are returned in the STS and STV fields of FABs and RABs, and fatal error completions.

For more information on these codes, see Appendix A of the RMS–11 Macro Programmer’s Guide.

COMPLETION CODES

SU$SUC  Operation succeeded  Octal:  000001  Decimal:  1
SU$DUP  Inserted record has duplicate key  Octal:  000002  Decimal:  2
SU$IDX  Error updating index  Octal:  000003  Decimal:  3
ER$ACC  File access error  Octal:  177740  Decimal:  –32
ER$ACT  Activity precludes operation  Octal:  177720  Decimal:  –48
ER$ALN  Bad mask in ALN field  Octal:  177660  Decimal:  –80
ER$ALQ  Bad value in ALQ field  Octal:  177640  Decimal:  –96
ER$ANI  Bad ANSI-format magtape file  Octal:  177620  Decimal:  –112
ER$AOP  Bad mask in AOP field  Octal:  177600  Decimal:  –128
ER$ATR  Error reading attributes  Octal:  177540  Decimal:  –160
ER$ATW  Error writing attributes  Octal:  177520  Decimal:  –176
ER$BKS  Bad value in BKS field  Octal:  177500  Decimal:  –192
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Octal</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER$BKZ</td>
<td>Bad value in BKZ field</td>
<td>177460</td>
<td>-208</td>
</tr>
<tr>
<td>ER$BOF</td>
<td>Beginning-of-file found</td>
<td>177430</td>
<td>-232</td>
</tr>
<tr>
<td>ER$BPA</td>
<td>Bad address in BPA field</td>
<td>177420</td>
<td>-240</td>
</tr>
<tr>
<td>ER$BPS</td>
<td>Bad value in BPS field</td>
<td>177400</td>
<td>-256</td>
</tr>
<tr>
<td>ER$CCR</td>
<td>RAB already in use</td>
<td>177340</td>
<td>-288</td>
</tr>
<tr>
<td>ER$CHG</td>
<td>Illegal record key change</td>
<td>177320</td>
<td>-304</td>
</tr>
<tr>
<td>ER$CHK</td>
<td>Bad bucket header</td>
<td>177300</td>
<td>-320</td>
</tr>
<tr>
<td>ER$CLS</td>
<td>File processor error</td>
<td>177260</td>
<td>-336</td>
</tr>
<tr>
<td>ER$COD</td>
<td>Bad code in COD field</td>
<td>177240</td>
<td>-352</td>
</tr>
<tr>
<td>ER$CRE</td>
<td>File processor error</td>
<td>177220</td>
<td>-368</td>
</tr>
<tr>
<td>ER$CUR</td>
<td>Undefined current-record context</td>
<td>177200</td>
<td>-384</td>
</tr>
<tr>
<td>ER$DAN</td>
<td>Bad value in DAN field</td>
<td>177140</td>
<td>-416</td>
</tr>
<tr>
<td>ER$DEV</td>
<td>Bad device specification</td>
<td>177100</td>
<td>-448</td>
</tr>
<tr>
<td>ER$DFW</td>
<td>File processor error</td>
<td>177070</td>
<td>-456</td>
</tr>
<tr>
<td>ER$DIR</td>
<td>Bad directory specification</td>
<td>177060</td>
<td>-464</td>
</tr>
<tr>
<td>ER$DME</td>
<td>Pool exhausted</td>
<td>177040</td>
<td>-480</td>
</tr>
<tr>
<td>ER$DNA</td>
<td>Bad address in DNA field</td>
<td>Octal: 177030</td>
<td>Decimal: -488</td>
</tr>
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<td>-------------</td>
<td>--------------------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>ER$DNF</td>
<td>No such directory</td>
<td>Octal: 177020</td>
<td>Decimal: -496</td>
</tr>
<tr>
<td>ER$DNR</td>
<td>Device not ready</td>
<td>Octal: 177000</td>
<td>Decimal: -512</td>
</tr>
<tr>
<td>ER$DPE</td>
<td>Device positioning error</td>
<td>Octal: 176770</td>
<td>Decimal: -520</td>
</tr>
<tr>
<td>ER$DTP</td>
<td>Bad code in DTP field</td>
<td>Octal: 176760</td>
<td>Decimal: -528</td>
</tr>
<tr>
<td>ER$DUP</td>
<td>Duplicate key not allowed</td>
<td>Octal: 176740</td>
<td>Decimal: -544</td>
</tr>
<tr>
<td>ER$ENT</td>
<td>File processor error</td>
<td>Octal: 176720</td>
<td>Decimal: -560</td>
</tr>
<tr>
<td>ER$ENV</td>
<td>Feature not in selected RMS-11 environment</td>
<td>Octal: 176700</td>
<td>Decimal: -576</td>
</tr>
<tr>
<td>ER$EOF</td>
<td>End-of-file reached</td>
<td>Octal: 176660</td>
<td>Decimal: -592</td>
</tr>
<tr>
<td>ER$ESA</td>
<td>Bad address in ESA field</td>
<td>Octal: 176650</td>
<td>Decimal: -600</td>
</tr>
<tr>
<td>ER$ESL</td>
<td>Bad value in ESL field</td>
<td>Octal: 176644</td>
<td>Decimal: -604</td>
</tr>
<tr>
<td>ER$ESS</td>
<td>ESS field value too small</td>
<td>Octal: 176640</td>
<td>Decimal: -608</td>
</tr>
<tr>
<td>ER$EXP</td>
<td>File expiration date not yet reached</td>
<td>Octal: 176630</td>
<td>Decimal: -616</td>
</tr>
<tr>
<td>ER$EXT</td>
<td>File processor error</td>
<td>Octal: 176620</td>
<td>Decimal: -624</td>
</tr>
<tr>
<td>ER$FAC</td>
<td>FAC field forbids operation</td>
<td>Octal: 176560</td>
<td>Decimal: -656</td>
</tr>
<tr>
<td>ER$FAL</td>
<td>Operation not supported by remote node</td>
<td>Octal: 176550</td>
<td>Decimal: -664</td>
</tr>
<tr>
<td>ER$FEX</td>
<td>File already exists</td>
<td>Octal: 176540</td>
<td>Decimal: -672</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Octal</td>
<td>Decimal</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>ER$FID</td>
<td>Bad value in FID field</td>
<td>177530</td>
<td>-680</td>
</tr>
<tr>
<td>ER$FLG</td>
<td>Bad mask in FLG field</td>
<td>176520</td>
<td>-688</td>
</tr>
<tr>
<td>ER$FLK</td>
<td>File locked by another task</td>
<td>176500</td>
<td>-704</td>
</tr>
<tr>
<td>ER$FNA</td>
<td>Bad address in FNA field</td>
<td>176470</td>
<td>-712</td>
</tr>
<tr>
<td>ER$FND</td>
<td>File processor error</td>
<td>176460</td>
<td>-720</td>
</tr>
<tr>
<td>ER$FNF</td>
<td>File not found</td>
<td>176440</td>
<td>-736</td>
</tr>
<tr>
<td>ER$FNM</td>
<td>Bad file name</td>
<td>176420</td>
<td>-752</td>
</tr>
<tr>
<td>ER$FOP</td>
<td>Bad mask in FOP field</td>
<td>176400</td>
<td>-768</td>
</tr>
<tr>
<td>ER$FUL</td>
<td>Device or file full</td>
<td>176360</td>
<td>-784</td>
</tr>
<tr>
<td>ER$IAN</td>
<td>Bad value in IAN field</td>
<td>176340</td>
<td>-800</td>
</tr>
<tr>
<td>ER$IDX</td>
<td>Index not initialized</td>
<td>176320</td>
<td>-816</td>
</tr>
<tr>
<td>ER$IFI</td>
<td>Bad value in IFI field</td>
<td>176300</td>
<td>-832</td>
</tr>
<tr>
<td>ER$IMX</td>
<td>Too many XABs of same type</td>
<td>176260</td>
<td>-848</td>
</tr>
<tr>
<td>ER$IOP</td>
<td>Illegal operation for file</td>
<td>176220</td>
<td>-880</td>
</tr>
<tr>
<td>ER$IRC</td>
<td>Illegal record found in sequential file</td>
<td>176200</td>
<td>-896</td>
</tr>
<tr>
<td>ER$ISI</td>
<td>Bad value in ISI field</td>
<td>176160</td>
<td>-912</td>
</tr>
<tr>
<td>ER$KBF</td>
<td>Bad address in KBF field</td>
<td>176140</td>
<td>-928</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Octal</td>
<td>Decimal</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>ER$KEY</td>
<td>Bad key</td>
<td>176120</td>
<td>-944</td>
</tr>
<tr>
<td>ER$KRF</td>
<td>Bad value in KRF field</td>
<td>176100</td>
<td>-960</td>
</tr>
<tr>
<td>ER$KSZ</td>
<td>Bad value in KSZ field</td>
<td>176060</td>
<td>-976</td>
</tr>
<tr>
<td>ER$LAN</td>
<td>Bad value in LAN field</td>
<td>176040</td>
<td>-992</td>
</tr>
<tr>
<td>ER$LBL</td>
<td>Bad magtape label</td>
<td>176020</td>
<td>-1008</td>
</tr>
<tr>
<td>ER$LBY</td>
<td>Logical channel busy</td>
<td>176000</td>
<td>-1024</td>
</tr>
<tr>
<td>ER$LCH</td>
<td>Bad value in LCH field</td>
<td>175760</td>
<td>-1040</td>
</tr>
<tr>
<td>ER$LEX</td>
<td>Extension not needed</td>
<td>175750</td>
<td>-1048</td>
</tr>
<tr>
<td>ER$LOC</td>
<td>Bad value in LOC field</td>
<td>175740</td>
<td>-1056</td>
</tr>
<tr>
<td>ER$MEM</td>
<td>Memory address rollover</td>
<td>175710</td>
<td>-1080</td>
</tr>
<tr>
<td>ER$MKD</td>
<td>File processor error</td>
<td>175700</td>
<td>-1088</td>
</tr>
<tr>
<td>ER$MRN</td>
<td>Bad value in MRN field or bad record number</td>
<td>175660</td>
<td>-1104</td>
</tr>
<tr>
<td>ER$MRS</td>
<td>Bad value in MRS field</td>
<td>175640</td>
<td>-1120</td>
</tr>
<tr>
<td>ER$NAE</td>
<td>Unmappable network access error</td>
<td>175630</td>
<td>-1128</td>
</tr>
<tr>
<td>ER$NEF</td>
<td>Context not end-of-file</td>
<td>175600</td>
<td>-1152</td>
</tr>
<tr>
<td>ER$NET</td>
<td>Network link lost</td>
<td>175570</td>
<td>-1160</td>
</tr>
</tbody>
</table>
RMS-11 Completion Codes and Fatal Error Codes

ER$NMF  No more matching files
       Octal: 175554
          Decimal: -1172

ER$NOD  Bad node name
       Octal: 175550
          Decimal: -1176

ER$NPK  No primary key for indexed file
       Octal: 175540
          Decimal: -1184

ER$ORD  Ordering of XABs illegal
       Octal: 175500
          Decimal: -1216

ER$ORG  Bad mask in ORG field
       Octal: 175460
          Decimal: -1232

ER$PLG  Error reading file prologue
       Octal: 175440
          Decimal: -1248

ER$PLV  File prologue version level unsupported
       Octal: 175430
          Decimal: -1256

ER$POS  Bad value in POS field
       Octal: 175420
          Decimal: -1264

ER$PRM  Bad file date read
       Octal: 175400
          Decimal: -1280

ER$PRV  Privilege violation
       Octal: 175360
          Decimal: -1296

ER$RAC  Bad mask in RAC field
       Octal: 175320
          Decimal: -1328

ER$RAT  Bad mask in RAT field
       Octal: 175300
          Decimal: -1344

ER$RBF  Bad address in RBF field
       Octal: 175260
          Decimal: -1360

ER$RER  File processor error
       Octal: 175240
          Decimal: -1376

ER$REX  Record already exists
       Octal: 175220
          Decimal: -1392

ER$RFA  Bad value in RFA field
       Octal: 175200
          Decimal: -1408

ER$RFM  Bad code in RFM field
       Octal: 175160
          Decimal: -1424
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Octal</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER$RLK</td>
<td>Record locked</td>
<td>175140</td>
<td>-1440</td>
</tr>
<tr>
<td>ER$RMV</td>
<td>File processor error</td>
<td>175120</td>
<td>-1456</td>
</tr>
<tr>
<td>ER$RNF</td>
<td>No such record</td>
<td>175100</td>
<td>-1472</td>
</tr>
<tr>
<td>ER$RNL</td>
<td>Record not locked</td>
<td>175060</td>
<td>-1488</td>
</tr>
<tr>
<td>ER$ROP</td>
<td>Bad mask in ROP field</td>
<td>175040</td>
<td>-1504</td>
</tr>
<tr>
<td>ER$RPL</td>
<td>File processor error</td>
<td>175020</td>
<td>-1520</td>
</tr>
<tr>
<td>ER$RRV</td>
<td>Bad internal pointer</td>
<td>175000</td>
<td>-1536</td>
</tr>
<tr>
<td>ER$RSL</td>
<td>Bad value in RSL field</td>
<td>174754</td>
<td>-1556</td>
</tr>
<tr>
<td>ER$RSS</td>
<td>Bad value in RSS field</td>
<td>174750</td>
<td>-1560</td>
</tr>
<tr>
<td>ER$RST</td>
<td>Bad address in RSA field</td>
<td>174744</td>
<td>-1564</td>
</tr>
<tr>
<td>ER$RSZ</td>
<td>Bad value in RSZ field</td>
<td>174740</td>
<td>-1568</td>
</tr>
<tr>
<td>ER$RTB</td>
<td>Record too big for user buffer</td>
<td>174720</td>
<td>-1584</td>
</tr>
<tr>
<td>ER$SEQ</td>
<td>Sequential insertion records not in order</td>
<td>174700</td>
<td>-1600</td>
</tr>
<tr>
<td>ER$SHR</td>
<td>Bad mask in SHR field</td>
<td>174660</td>
<td>-1616</td>
</tr>
<tr>
<td>ER$SIZ</td>
<td>Bad value in SIZ field</td>
<td>174640</td>
<td>-1632</td>
</tr>
<tr>
<td>ER$SUP</td>
<td>Operation not supported over network</td>
<td>174610</td>
<td>-1656</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Octal</td>
<td>Decimal</td>
</tr>
<tr>
<td>--------</td>
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<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>ER$SYS</td>
<td>System error</td>
<td>174600</td>
<td>-1664</td>
</tr>
<tr>
<td>ER$TRE</td>
<td>Index error</td>
<td>174560</td>
<td>-1680</td>
</tr>
<tr>
<td>ER$TYP</td>
<td>Bad file extension</td>
<td>174540</td>
<td>-1696</td>
</tr>
<tr>
<td>ER$UBF</td>
<td>Bad address in UBF field</td>
<td>174520</td>
<td>-1712</td>
</tr>
<tr>
<td>ER$UIN</td>
<td>Field value rejected by FAL</td>
<td>174510</td>
<td>-1720</td>
</tr>
<tr>
<td>ER$USZ</td>
<td>Bad value in USZ field</td>
<td>174500</td>
<td>-1728</td>
</tr>
<tr>
<td>ER$VER</td>
<td>Bad file version number</td>
<td>174460</td>
<td>-1744</td>
</tr>
<tr>
<td>ER$WCD</td>
<td>Illegal wildcard in merged string</td>
<td>174430</td>
<td>-1768</td>
</tr>
<tr>
<td>ER$WER</td>
<td>File processor error</td>
<td>174420</td>
<td>-1776</td>
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<tr>
<td>ER$WPL</td>
<td>Device write-locked</td>
<td>174400</td>
<td>-1792</td>
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<tr>
<td>ER$XAB</td>
<td>Bad address in XAB field</td>
<td>174360</td>
<td>-1808</td>
</tr>
<tr>
<td>ER$XTR</td>
<td>Extraneous data in file specification</td>
<td>174340</td>
<td>-1824</td>
</tr>
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<td>Code</td>
<td>Description</td>
<td>Octal</td>
<td>Decimal</td>
</tr>
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<td>--------</td>
<td>------------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>ER$ACT</td>
<td>Illegal concurrent operation</td>
<td>177720</td>
<td>-48</td>
</tr>
<tr>
<td>ER$AST</td>
<td>Illegal operation at AST level</td>
<td>177560</td>
<td>-144</td>
</tr>
<tr>
<td>ER$BUG</td>
<td>Error in RMS-11 internal data</td>
<td>177360</td>
<td>-272</td>
</tr>
<tr>
<td>ER$CPB</td>
<td>Bad parameter block</td>
<td>177230</td>
<td>-360</td>
</tr>
<tr>
<td>ER$FAB</td>
<td>Bad FAB</td>
<td>176600</td>
<td>-640</td>
</tr>
<tr>
<td>ER$LIB</td>
<td>Resident library not available</td>
<td>175744</td>
<td>-1052</td>
</tr>
<tr>
<td>ER$MAP</td>
<td>Error in internal buffer mapping data</td>
<td>175720</td>
<td>-1072</td>
</tr>
<tr>
<td>ER$RAB</td>
<td>Bad RAB</td>
<td>175340</td>
<td>-1312</td>
</tr>
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</table>
## ASCII CHARACTER SET

<table>
<thead>
<tr>
<th>Octal Code</th>
<th>Character</th>
<th>Octal Code</th>
<th>Character</th>
<th>Octal Code</th>
<th>Character</th>
<th>Octal Code</th>
<th>Character</th>
</tr>
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<tbody>
<tr>
<td>000</td>
<td>NUL</td>
<td>040</td>
<td>SP</td>
<td>100</td>
<td>@</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>001</td>
<td>SOH</td>
<td>041</td>
<td>!</td>
<td>101</td>
<td>A</td>
<td>141</td>
<td>a</td>
</tr>
<tr>
<td>002</td>
<td>STX</td>
<td>042</td>
<td>&quot;</td>
<td>102</td>
<td>B</td>
<td>142</td>
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<td>ETX</td>
<td>043</td>
<td>#</td>
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<td>EOT</td>
<td>044</td>
<td>$</td>
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<td>D</td>
<td>144</td>
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<td>005</td>
<td>ENQ</td>
<td>045</td>
<td>%</td>
<td>105</td>
<td>E</td>
<td>145</td>
<td>e</td>
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<td>006</td>
<td>ACK</td>
<td>046</td>
<td>&amp;</td>
<td>106</td>
<td>F</td>
<td>146</td>
<td>f</td>
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<td>007</td>
<td>BEL</td>
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<td>'</td>
<td>107</td>
<td>G</td>
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<td>010</td>
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<td>050</td>
<td>(</td>
<td>110</td>
<td>H</td>
<td>150</td>
<td>h</td>
</tr>
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<td>011</td>
<td>HT</td>
<td>051</td>
<td>)</td>
<td>111</td>
<td>I</td>
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<td>i</td>
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<td>LF</td>
<td>052</td>
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<td>112</td>
<td>J</td>
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</tr>
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<td>013</td>
<td>VT</td>
<td>053</td>
<td>+</td>
<td>113</td>
<td>K</td>
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<td>FF</td>
<td>054</td>
<td>,</td>
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<td>CR</td>
<td>055</td>
<td>-</td>
<td>115</td>
<td>M</td>
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<td>016</td>
<td>SO</td>
<td>056</td>
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<td>017</td>
<td>SI</td>
<td>057</td>
<td>/</td>
<td>117</td>
<td>O</td>
<td>157</td>
<td>o</td>
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<tr>
<td>020</td>
<td>DLE</td>
<td>060</td>
<td>0</td>
<td>120</td>
<td>P</td>
<td>160</td>
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<td>021</td>
<td>DC1</td>
<td>061</td>
<td>1</td>
<td>121</td>
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<td>023</td>
<td>DC3</td>
<td>063</td>
<td>3</td>
<td>123</td>
<td>S</td>
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<td>024</td>
<td>DC4</td>
<td>064</td>
<td>4</td>
<td>124</td>
<td>T</td>
<td>164</td>
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<td>NAK</td>
<td>065</td>
<td>5</td>
<td>125</td>
<td>U</td>
<td>165</td>
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<td>026</td>
<td>SYN</td>
<td>066</td>
<td>6</td>
<td>126</td>
<td>V</td>
<td>166</td>
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<td>067</td>
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<td>127</td>
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<td>CAN</td>
<td>070</td>
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<td>130</td>
<td>X</td>
<td>170</td>
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<td>EM</td>
<td>071</td>
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<td>131</td>
<td>Y</td>
<td>171</td>
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<td>032</td>
<td>SUB</td>
<td>072</td>
<td>:</td>
<td>132</td>
<td>Z</td>
<td>172</td>
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<td>033</td>
<td>ESC</td>
<td>073</td>
<td>;</td>
<td>133</td>
<td>[</td>
<td>173</td>
<td>{</td>
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<td>034</td>
<td>FS</td>
<td>074</td>
<td>&lt;</td>
<td>134</td>
<td>\</td>
<td>174</td>
<td></td>
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<tr>
<td>035</td>
<td>GS</td>
<td>075</td>
<td>=</td>
<td>135</td>
<td>]</td>
<td>175</td>
<td>}</td>
</tr>
<tr>
<td>036</td>
<td>RS</td>
<td>076</td>
<td>&gt;</td>
<td>136</td>
<td>^</td>
<td>176</td>
<td>~</td>
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<tr>
<td>037</td>
<td>US</td>
<td>077</td>
<td>?</td>
<td>137</td>
<td>—</td>
<td>177</td>
<td>DEL</td>
</tr>
</tbody>
</table>

*Equivalent to the Radix-50 character set.*
# DIRECTIVE ERROR CODES

Directives in the Directive Status Word ($DSW$) return the following error codes. The complete abbreviation for these codes is IE.xxx. Only partial abbreviations (xxx) are included in this list. The octal error number listed is the low-order byte of the complete word value (two’s complement of the decimal).

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Error Decimal</th>
<th>Number Octal</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>.UPN</td>
<td>- 1</td>
<td>377</td>
<td>Insufficient dynamic storage</td>
</tr>
<tr>
<td>.INS</td>
<td>- 2</td>
<td>376</td>
<td>Specified task not installed</td>
</tr>
<tr>
<td>.PTS</td>
<td>- 3</td>
<td>375</td>
<td>Partition too small for task</td>
</tr>
<tr>
<td>.UNS</td>
<td>- 4</td>
<td>374</td>
<td>Insufficient dynamic storage for send</td>
</tr>
<tr>
<td>.ULN</td>
<td>- 5</td>
<td>373</td>
<td>Unassigned LUN</td>
</tr>
<tr>
<td>.HWR</td>
<td>- 6</td>
<td>372</td>
<td>Device handler not resident</td>
</tr>
<tr>
<td>.ACT</td>
<td>- 7</td>
<td>371</td>
<td>Task not active</td>
</tr>
<tr>
<td>.ITS</td>
<td>- 8</td>
<td>370</td>
<td>Directive inconsistent with task state</td>
</tr>
<tr>
<td>.FIX</td>
<td>- 9</td>
<td>367</td>
<td>Task already fixed/unfixed</td>
</tr>
<tr>
<td>.CKP</td>
<td>-10</td>
<td>366</td>
<td>Issuing task not checkpointable</td>
</tr>
<tr>
<td>.TCH</td>
<td>-11</td>
<td>365</td>
<td>Task is checkpointable</td>
</tr>
<tr>
<td>.RBS</td>
<td>-15</td>
<td>361</td>
<td>Receive buffer too small</td>
</tr>
<tr>
<td>.PRI</td>
<td>-16</td>
<td>360</td>
<td>Privilege violation</td>
</tr>
<tr>
<td>.RSU</td>
<td>-17</td>
<td>357</td>
<td>Resource in use</td>
</tr>
<tr>
<td>.NSW</td>
<td>-18</td>
<td>356</td>
<td>No swap space available</td>
</tr>
<tr>
<td>.ILV</td>
<td>-19</td>
<td>355</td>
<td>Illegal vector specified</td>
</tr>
<tr>
<td>.ITN</td>
<td>-20</td>
<td>354</td>
<td>Illegal table number</td>
</tr>
<tr>
<td>.LNF</td>
<td>-21</td>
<td>353</td>
<td>Logical name not found</td>
</tr>
<tr>
<td>.AST</td>
<td>-80</td>
<td>260</td>
<td>Directive issued/not issued from AST</td>
</tr>
<tr>
<td>.MAP</td>
<td>-81</td>
<td>257</td>
<td>Illegal mapping specified</td>
</tr>
<tr>
<td>.IOP</td>
<td>-83</td>
<td>255</td>
<td>Window has I/O in progress</td>
</tr>
<tr>
<td>.ALG</td>
<td>-84</td>
<td>254</td>
<td>Alignment error</td>
</tr>
<tr>
<td>.WOV</td>
<td>-85</td>
<td>253</td>
<td>Address window allocation overflow</td>
</tr>
<tr>
<td>.NVR</td>
<td>-86</td>
<td>252</td>
<td>Invalid region ID</td>
</tr>
<tr>
<td>.NVW</td>
<td>-87</td>
<td>251</td>
<td>Invalid address window ID</td>
</tr>
<tr>
<td>.ITP</td>
<td>-88</td>
<td>250</td>
<td>Invalid TI parameter</td>
</tr>
<tr>
<td>.IBS</td>
<td>-89</td>
<td>247</td>
<td>Invalid send buffer size (greater than 255(decimal))</td>
</tr>
<tr>
<td>.LNL</td>
<td>-90</td>
<td>246</td>
<td>LUN locked in use</td>
</tr>
<tr>
<td>.IUI</td>
<td>-91</td>
<td>245</td>
<td>Invalid UIC</td>
</tr>
<tr>
<td>.IDU</td>
<td>-92</td>
<td>244</td>
<td>Invalid device or unit</td>
</tr>
<tr>
<td>.ITI</td>
<td>-93</td>
<td>243</td>
<td>Invalid time parameters</td>
</tr>
</tbody>
</table>
### Directive Error Codes

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Error Decimal</th>
<th>Number Octal</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>.PNS</td>
<td>-94</td>
<td>242</td>
<td>Partition/region not in system</td>
</tr>
<tr>
<td>.IPR</td>
<td>-95</td>
<td>241</td>
<td>Invalid priority (greater than 250 (decimal))</td>
</tr>
<tr>
<td>.ILU</td>
<td>-96</td>
<td>240</td>
<td>Invalid LUN</td>
</tr>
<tr>
<td>.IEF</td>
<td>-97</td>
<td>237</td>
<td>Invalid event flag (number)</td>
</tr>
<tr>
<td>.ADP</td>
<td>-98</td>
<td>236</td>
<td>Part of DPB out of user's space</td>
</tr>
<tr>
<td>.SDP</td>
<td>-99</td>
<td>235</td>
<td>DIC or DPB size invalid</td>
</tr>
</tbody>
</table>

For additional information, refer to the *RSX-11M/M-PLUS and Micro/RSX Executive Reference Manual.*
EXECUTIVE DIRECTIVE SUMMARY
ALPHABETICAL ORDER BY MACRO CALL

Abort Task

FORTRAN Call:

CALL ABORT (tsk,ids)

  tsk  = Name of task to be aborted (Radix-50)
  ids  = Directive status

Macro Call:

  ABRT$  tsk

  tsk  = Name of task to be aborted (Radix-50)

Assign Channel

FORTRAN Call:

CALL ACHN (mod,itbmsk,lun,fsbuf,fssz)

  mod  = Modifier for logical name table entries
  tbmsk = Inhibit mask to prevent a logical table from being searched.
         The following symbol definitions, when set, prevent a partic-
         ular table from being searched:
         System (IN.SYS) = 0
         Group (IN.GRP) = 1
         Session (IN.SES) = 2
         Task (IN.TSK) = 3

  lun  = LUN to be assigned

  fsbuf = Address of file specification buffer

  fssz  = Size (in bytes) of the file specification buffer
Macro Call:

ACHN$ mod, tbmsk, lun, fsbuf, fssz

mod = Modifier for logical name table entries

tbmsk = Inhibit mask to prevent a logical table from being searched. The following symbol definitions, when set, prevent a particular table from being searched:

- System (IN.SYS) = 0
- Group (IN.GRP) = 1
- Session (IN.SES) = 2
- Task (IN.TSK) = 3

lun = LUN to be assigned

fsbuf = Address of file specification buffer

fssz = Size (in bytes) of the file specification buffer

Alter Priority

FORTRAN Call:

CALL ALTPRI ([tsk],[ipri],[ids])

tsk = Active task name

ipri = A 1-word integer value equal to the new priority, from 1 to 250 (decimal)

ids = Directive status

Macro Call:

ALTP$ [tsk],[pri]

tsk = Active task name

pri = New priority, from 1 to 250 (decimal)

Assign LUN

FORTRAN Call:

CALL ASNLUN (lun, dev, unt,[ids])

lun = Logical unit number

dev = Device name (format: 1A2)

unt = Device unit number

ids = Directive status
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

ALUN$ lun,dev,unt

lun = Logical unit number
dev = Device name (two uppercase characters)
unt = Device unit number

AST Service Exit ($$ form recommended) ASTX$$

FORTRAN Call:

Neither the FORTRAN language nor the ISA standard permits direct linking to system-trapping mechanisms; therefore, this directive is not available to FORTRAN tasks.

Macro Call:

ASTX$$ [err]

err = Error routine address

Attach Region ATRG$

FORTRAN Call:

CALL ATRG (irdb[,ids])

irdb = An 8-word integer array containing a Region Definition Block
ids = Directive status

Macro Call:

ATRG$ rdb

rdb = Region Definition Block address

Connect To Interrupt Vector CINT$

FORTRAN Call:

Not supported

Macro Call:

CINT$ vec,base,ISR,edir,pri,ast

vec = Interrupt vector address — Must be in the range 60(octal) to highest vector specified during sysgen, inclusive, and must be a multiple of 4
Executive Directive Summary in Alphabetical Order by Macro Call

base = Virtual base address for kernel APR 5 mapping of the ISR, and enable/disable interrupt routines

ISR = Virtual address of the ISR, or 0 to disconnect from the interrupt vector

edir = Virtual address of the enable/disable interrupt routine

pri = Initial priority at which the ISR is to execute

ast = Virtual address of an AST routine to be entered after the fork-level routine queues an AST

Clear Event Flag

FORTRAN Call:

CALL CLREF (efn[,ids])

efn = Event flag number

ids = Directive status

Macro Call:

CLEFS ef

efn = Event flag number

Create Logical Name

FORTRAN Call:

CALL CRELOG (mod,ibnum,lns,lnssz,iens,ienssz,idsw)

mod = Modifier of the logical name within a table; if not specified, the nonzero value reserved by the system is placed in the DPB; if specified, nonzero values must correspond to the valid symbolic references used by the system

itbun = Logical name table number in the lower byte and the status byte in the upper byte, as follows:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Terminal status</td>
</tr>
<tr>
<td>2</td>
<td>Privileged status</td>
</tr>
</tbody>
</table>

lns = Character array containing the logical name string

lnssz = Size (in bytes) of the logical name string

iens = Character array to contain the returned equivalence string

ienssz = Size (in bytes) of the data area for the returned equivalence string

idsw = Integer to receive the Directive Status Word
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

CLOG$ mod,<prmlst>,lns,lnssz,ens

mod = Modifier of the logical name within a table; if not specified, the nonzero value reserved by the system is placed in the DPB; if specified, nonzero values must correspond to the valid symbolic references used by the system

<prmlst> = <[tbnm][,status]>

tbnum = Logical name table number. The following are the symbolic offsets for the table:

- LT.TSK  Task table
- LT.SES  Session table
- (LB.LOC and LB.LOG are both valid)
- LT.GRP  Group table
- LT.SYS  System table

status = Logical status definition value. The following are the valid bits for the value:

- LT.PRV  Privileged status
- LT.TER  Terminal logical

lns = Character array containing the logical name string

lnssz = Size (in bytes) of the logical name string

lens = Character to contain the returned equivalence string

lenssz = Size (in bytes) of the data area for returned equivalence string

Cancel Mark Time Requests

FORTRAN Call:

CALL CANMT ([efn][,ids])

efn = Event flag number
ids = Directive status

Macro Call:

CMKT$ [efn,ast,err]

efn = Event flag number
ast = Mark time AST address
err = Error routine address
Connect

FORTRAN Call:

CALL CNCT (rtnamex,[iefn],[iast],[iesb],[iparm],[ids])

rtnamex = Name (Radix-50) of the offspring task to be connected
iefn = Event flag to be set when the offspring task exits or emits status
iast = Name of an AST routine to be called when the offspring task exits or emits status
iesb = Name of an 8-word status block to be written when the offspring task exits or emits status
       Word 0 — Offspring task exit status
       Word 1-7 — Reserved
iparm = Name of a word to receive the status block address when an
       AST occurs
ids = Integer to receive the Directive Status Word

Macro Call:

CNCT$ tname, [efn],[east],[esb]

tname = Name (Radix-50) of the offspring task to be connected
efn = The event flag to be cleared on issuance and set when the
       offspring task exits or emits status
east = Address of an AST routine to be called when the offspring
       task exits or emits status
esb = Address of an 8-word status block to be written when the
       offspring task exits or emits status
       Word 0 — Offspring task exit status
       Word 1-7 — Reserved

Checkpoint Common Region

FORTRAN Call:

CALL CPCR (name,[ids])

name = Name (Radix-50) of the common region to be checkpointed
ids = Directive status
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

CPCRS name
   name = Name of the common region to be checkpointed

Create Address Window

FORTRAN Call:

CALL CRAW (iwdb,[,ids])
   iwdb = An 8-word integer array containing a Window Definition Block
   ids = Directive status

Macro Call:

CRAW$ wdb
   wdb = Window Definition Block address

Create Group Global Event Flags

FORTRAN Call:

CALL CRGF ([group][,ids])
   group = Group number for the flags to be created — If not specified, the task’s protection UIC (H.CUIIC+1) in the task’s header is used
   ids = Integer to receive the Directive Status Word

Macro Call:

CRGF$ [group]
   group = Group number for the flags to be created — If not specified, the task’s protection UIC (H.CUIIC+1) in the task’s header is used

Create Region

FORTRAN Call:

CALL CRRG (irdb[,ids])
   irdb = An 8-word integer array containing a Region Definition Block
   ids = Directive status

Macro Call:

CRRG$ rdb
   rdb = Region Definition Block address
Create Virtual Terminal

FORTRAN Call:

```
CALL CRVT\$ \{iast\},[ioast],[iaast],[imlen],iparm[,ids]
```

- `iast` = AST address at which input requests from offspring tasks are serviced
- `ioast` = AST address at which output requests from offspring tasks are serviced
- `iaast` = AST address at which the parent task may be notified of the completion of successful offspring attach and detach requests to the virtual terminal unit
- `imlen` = Maximum buffer length allowed for offspring I/O requests
- `iparm` = Address of 3-word buffer to receive information from the stack when an AST occurs
- `ids` = Integer to receive the Directive Status Word

Macro Call:

```
CRVT\$ \{iast\},[oast],[aast],[mlen]
```

- `iast` = AST address at which input requests from offspring tasks are serviced
- `oast` = AST address at which output requests from offspring tasks are serviced
- `aast` = AST address at which the parent task may be notified of the completion of successful offspring attach and detach requests to the virtual terminal unit (if this parameter is not specified, no notification of attaches and detaches are returned to the parent task)
- `mlen` = Maximum buffer length allowed for offspring I/O requests

Cancel Time-Based Initiation Requests

FORTRAN Call:

```
CALL CANALL (tsk[,ids])
```

- `tsk` = Task name
- `ids` = Directive status
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

CSRQ$  tsk

    tsk = Task name

Declare Significant Event (SS form recommended)  DECL$S

FORTRAN Call:

CALL DECLAR ((l,ids))

    ids = Directive status

Macro Call:

DECL$S [,err]

    err = Error routine address

Delete Logical Name  DLOG$

FORTRAN Call:

CALL DELLOG (mod,itbnum,lns,lnssz,idsw)

    mod = Modifier of the logical name within a table; if not specified, the nonzero value reserved by the system is placed in the DPB; if specified, the nonzero values must correspond to the valid symbolic references used by the system

    itbnum = Logical name table number. The tables and their corresponding numbers are:

    System (LT.SYS) = 0
    Group (LT.GRP) = 1
    Session (LT.SES) = 2
    Task (LT.TSK) = 3

    lns = Character array containing the logical name string

    lnssz = Size (in bytes) of the logical name string

    idsw = Integer to receive the Directive Status Word

Macro Call:

DLOG$ mod,itbnum,lns,lnssz

    mod = Modifier of the logical name within a table; if not specified, the nonzero value reserved by the system is placed in the DPB; if specified, the nonzero values must correspond to the valid symbolic references used by the system
Executive Directive Summary in Alphabetical Order by Macro Call

\[ \text{tbnum} \quad \text{Logical name table number. The tables and their corresponding numbers are:} \]
\[ \text{System (LT.SYS)} = 0 \]
\[ \text{Group (LT.GRP)} = 1 \]
\[ \text{Session (LT.SES)} = 2 \]
\[ \text{Task (LT.TSK)} = 3 \]

\[ \text{lns} \quad \text{Character array containing the logical name string} \]
\[ \text{lnsz} \quad \text{Size (in bytes) of the logical name string} \]

Disable AST Recognition ($S$ form recommended) \[ \text{DSAR$S$} \]
FORTAN Call:
\[ \text{CALL DSASTR [ids]} \]
\[ \text{ids} = \text{Directive status} \]

Macro Call:
\[ \text{DSAR$S$ [err]} \]
\[ \text{err} = \text{Error routine address} \]

Disable Checkpointing ($S$ form recommended) \[ \text{DSCP$S$} \]
FORTAN Call:
\[ \text{CALL DISCKP [ids]} \]
\[ \text{ids} = \text{Directive status} \]

Macro Call:
\[ \text{DSCP$S$ [err]} \]
\[ \text{err} = \text{Error routine address} \]

Detach Region \[ \text{DTRG$S$} \]
FORTAN Call:
\[ \text{CALL DTRG (irdb[,ids])} \]
\[ \text{irdb} = \text{An 8-word integer array containing a Region Definition Block} \]
\[ \text{ids} = \text{Directive status} \]

Macro Call:
\[ \text{DTRG$ [rdb]} \]
\[ \text{rdb} = \text{Region Definition Block address} \]
Eliminate Address Window

FORTRAN Call:

CALL ELAW (iwdbi [, ids])

iwdbi = An 8-word integer array containing a Window Definition Block
ids = Directive status

Macro Call:

ELAWS wdb

wdb = Window Definition Block address

Eliminate Group Global Event Flags

FORTRAN Call:

CALL ELGF ([group], [ids])

group = Group number of flags to be eliminated
ids = Integer to receive the Directive Status Word

Macro Call:

ELGF$ [group]

group = Group number of flags to be eliminated

Eliminate Virtual Terminal

FORTRAN Call:

CALL ELVT (iunum [, ids])

iunum = Virtual terminal unit number
ids = Integer to receive the Directive Status Word

Macro Call:

ELVT$ unum

unum = Unit number of the virtual terminal to be eliminated

Emit Status

FORTRAN Call:

CALL EMST ([rtnamex, istat], [ids])

rtname = Name of task connected to issuing task to which the status is to be emitted
Executive Directive Summary in Alphabetical Order by Macro Call

\[\text{istat} = \text{A 16-bit quantity to be returned to the connected task}\]
\[\text{ids} = \text{Integer to receive the Directive Status Word}\]

Macro Call:

\[\text{EMST} \{\text{tname}, \text{status}\}\]

\[\text{tname} = \text{Name of a task connected to the issuing task to which the status is to be emitted}\]
\[\text{status} = \text{A 16-bit quantity to be returned to the connected task}\]

**Enable AST Recognition (\$S form recommended)**

FORTRAN Call:

\[\text{CALL ENASTR (\{ids\})}\]
\[\text{ids} = \text{Directive status}\]

Macro Call:

\[\text{ENAR$S \{err\}}\]
\[\text{err} = \text{Error-routine address}\]

**Enable Checkpointing (\$S form recommended)**

FORTRAN Call:

\[\text{CALL ENACKP (\{ids\})}\]
\[\text{ids} = \text{Directive status}\]

Macro Call:

\[\text{ENCP$S \{err\}}\]
\[\text{err} = \text{Error-routine address}\]

**Exit If**

FORTRAN Call:

\[\text{CALL EXITIF (\text{efn}, \text{ids})}\]
\[\text{efn} = \text{Event flag number}\]
\[\text{ids} = \text{Directive status}\]

Macro Call:

\[\text{EXIF$ \text{efn}}\]
\[\text{efn} = \text{Event flag number}\]
Executive Directive Summary in Alphabetical Order by Macro Call

Task Exit ($S form recommended)  EXIT$S
FORTRAN Call:

CALL EXIT (istat)

istat  =  A 16-bit quantity to be returned to the parent task

Macro Call:

EXIT$S  {err}

err  =  Error routine address

Exit with Status  EXST$
FORTRAN Call:

CALL EXST (istat)

istat  =  A 16-bit quantity to be returned to parent task

Macro Call:

EXST$  status

status  =  A 16-bit quantity to be returned to parent task

Extend Task  EXTKS$
FORTRAN Call:

CALL EXTTSK ([inc],[ids])

| inc  =  A positive or negative number equal to the number of 32-word blocks by which the task size is to be extended or reduced (if omitted, task size defaults to installed task size)
| ids  =  Directive status

Macro Call:

EXTK$  {inc}

| inc  =  A positive or negative number equal to the number of 32-word blocks by which the task is to be extended or reduced (if omitted, task size defaults to installed task size)

Test for Specified System Feature  FEATS$
FORTRAN Call:

CALL FEAT ([sym],[ids])

| isym  =  Symbol for the specified system feature
| ids  =  Directive status

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Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

FEAT$ sym
sym = Symbol for the specified system feature

File Specification Scanner

FORTRAN Call:

CALL FSSFSS (fsbuf,fssz,prsbk,prssz,[reserv],[idsw])

fsbuf = Array containing the file specification buffer
fssz = Size (in bytes) of the file specification buffer
prsbk = Array containing the parse block
prssz = Size (in bytes) of the parse block
reserv = Reserved parameter (must not be specified)
idsw = Integer to receive the Directive Status Word

Macro Call:

FSS$ fsbuf,fssz,prsbk,prssz,reserv

fsbuf = Address of the file specification buffer
fssz = Size (in bytes) of the file specification buffer
prsbk = Address of the parse block
prssz = Size (in bytes) of the parse block
reserv = Reserved parameter (must be blank)

Get Command for Command Interpreter

Fortran Call:

CALL GTCMCI (icbf,icbf,$l,iibuf,$l,iibfl,$l,iaddr,$l,finclp,$l,ids)

icbf = Name of a byte to receive the command.
icbf = Integer containing the size of the icbf array in bytes.
iibuf = Name of an integer array to receive the optional information buffer.
iibfl = Name of an integer containing the length of the optional information buffer. If you specify a length shorter than the information buffer, as much information as will fit in the specified length is returned.
iaddr = Name of an integer that contains the address in pool of the command desired (this address was obtained by a previous call to GTCMCI with GC.CND specified).

incp = Name of an integer containing a value indicating the action to take if there is no command queued:

- GC.CCS (000) — Return with Carry set (default)
- GC.CEX (001) — Force CLI to exit instead of returning
- GC.CST (002) — Force CLI to stop instead of returning
- GC.CND (200) — Copy command into buffer, but do not dequeue it from the list

ids = Integer to receive the Directive Status Word.

Get Command Interpreter Information

FORTRAN Call:

CALL GETCII (ibuf,ibfl,[icli],[idev],[iunit],[ids])

- ibuf = Name of an integer array to receive the CLI information
- ibfl = Length in bytes of the integer array to receive the CLI information
- icli = Name of a 2-word array element containing the Radix-50 name of the CLI
- idev = Name of an integer containing the ASCII name of terminal (default = TI:)
- iunit = Name of an integer containing the octal unit number of terminal
- ids = Directive status

Macro Call:

GCIIS buf,bufl,cli,[dev],[unit]

- buf = Address of buffer to receive information
- bufl = Length of information buffer
- cli = Name (Radix-50) of the CLI on which information is requested
dev = ASCII name of terminal whose CLI should be used (default is T1)
unit = Octal unit number of terminal

Get Default Directory

FORTRAN Call:

CALL GETDDS (mod, iens, ienssz, [irdsize], [idsw])

mod = Modifier for the GDIR$ directive; specify one of the following values:

0 = Get Task default
GD.LOG = Get terminal default

iens = Character array containing the default directory string
ienssz = Size (in bytes) of the default directory string
irdsize = Buffer address of the returned default directory string size
idsw = Integer to receive the Directive Status Word

Macro Call:

GDIR$ [mod, ens, enssz[.rsize]]

mod = Modifier for the GDIR$ directive; specify one of the following values:

0 = Get Task default
GD.LOG = Get terminal default

ens = Buffer address of the default directory string
enssz = Size (in bytes) of the default directory string buffer
rsize = Buffer address to which the size of the default directory string is returned

Get LUN Information

FORTRAN Call:

CALL GETLUN (lun, dat[,ids])

lun = Logical unit number
dat = A 6-word integer array to receive the LUN information
ids = Directive status
Macro Call:

GLUN$ lun,buf

lun = Logical unit number
buf = Address of 6-word buffer that will receive the LUN information

Get MCR Command Line

FORTRAN Call:

CALL GETMCR (buf,ids)

buf = An 80-byte array to receive the command line
ids = Directive status

Macro Call:

GMCR$

Get Mapping Context

FORTRAN Call:

CALL GMCX (imcx,ids)

imcx = An integer array to receive the mapping context. The size of
the array is 8*n+1, where n is the number of window blocks in
the task’s header. (The maximum size is 8*24+1=193 on
RSX-11M-PLUS systems.)
ids = Directive status

Macro Call:

GMCX$ wvec

wvec = The address of a vector of n Window Definition Blocks, fol-
lowed by a terminator word; n is the number of window blocks
in the task’s header.

Get Partition Parameters

FORTRAN Call:

CALL GETPAR ([prt],buf,ids)

prt = Partition name
buf = A 3-word integer array to receive partition parameters
ids = Directive status
Macro Call:

GPRT$ [prt],buf

prt = Partition name
buf = Address of 3-word buffer

Get Region Parameters

FORTRAN Call:

CALL GETREG ((rid),buf,[ids])

rid = Region id
buf = A 3-word integer array to receive region parameters
ids = Directive status

Macro Call:

GREG$ [rid],buf

rid = Region id
buf = Address of 3-word buffer

Get Sense Switches ($S form recommended)

FORTRAN Call:

CALL READSW (isw)

isw = Integer to receive the console switch settings

The following FORTRAN call allows a program to read the state of a single switch:

CALL SWITCH (ibt,ist)

ibt = The switch to be tested (0 to 15)

ist = Test results where:

1 = switch on
2 = switch off

Macro Call:

GSSW$S [err]

err = Error-routine address
Get Time Parameters

FORTRAN Call:

CALL GETTIM (ibfl,ids)

ibfl = An 8-word integer array
ids  = Directive status

Macro Call:

GTIM$ buf
buf  = Address of 8-word buffer

Get Task Parameters

FORTRAN Call:

CALL GETTSK (buf,ids)

buf = An 18-word integer array to receive the task parameters
ids = Directive status

Macro Call:

GTSK$ buf
buf = Address of 18-word buffer

Inhibit AST Recognition ($S form recommended)

FORTRAN Call:

CALL INASTR [(ids)]

ids = Directive status

Macro Call:

IHAR$$ [err]
err = Error-routine address

Map Address Window

FORTRAN Call:

CALL MAP (iwdb,ids)

iwdb = An 8-word integer array containing a Window Definition Block
ids = Directive status
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

MAP$ wdb

wdb = Window Definition Block address

Mark Time

FORTRAN Call:

CALL MARK (efn,tmg,tnt,[ids])

efn = Event flag number

tmg = Time interval magnitude

tnt = Time interval unit

ids = Directive status

The ISA standard call for delaying a task for a specified time interval is also included:

CALL WAIT (tmg,tnt,ids)

tmg = Time interval magnitude

tnt = Time interval unit

ids = Directive status

Macro Call:

MRKT$ [efn],tmg,tnt,[ast]

efn = Event flag number

tmg = Time interval magnitude

tnt = Time interval unit

ast = AST entry point address

Map Supervisor D-Space

FORTRAN Call:

Not supported

Macro Call:

MSDS$ mask

mask = A 7-bit mask with one bit corresponding to each supervisor-mode D-space APR. If the bit is set, the APR is mapped to supervisor-mode I-space. If the bit is clear, the APR is mapped to user-mode D-space. The 7 bits are specified in bits 8 through 14 of the mask word.
Executive Directive Summary in Alphabetical Order by Macro Call

Move to/from User/Supervisor I/D-Space

FORTRAN Call:
Not supported

Macro Call:

\[ \text{MVTS}\$ \text{action,addr,val} \]
\[ \quad \text{buff} \]
\[ \quad \text{action} = \text{One of the following:} \]
\[ \quad \text{MV.TUI} \quad \text{— Moe to user I-space} \]
\[ \quad \text{MV.TUD} \quad \text{— Move to user D-space} \]
\[ \quad \text{MV.TSI} \quad \text{— Move to supervisor I-space} \]
\[ \quad \text{MV.TSD} \quad \text{— Move to supervisor D-space} \]
\[ \quad \text{MV.FUI} \quad \text{— Move from user I-space} \]
\[ \quad \text{MV.FUD} \quad \text{— Move from user D-space} \]
\[ \quad \text{MV.FSI} \quad \text{— Move from supervisor I-space} \]
\[ \quad \text{MV.FSD} \quad \text{— Move from supervisor D-space} \]

\[ \text{addr} = \text{Address of the location in the task} \]
\[ \text{buf} = \text{Buffer to receive the value fetched (for the move-from operations)} \]
\[ \text{val} = \text{Value to be stored in the location (for the move-to operations)} \]

FORTRAN Call:

\[ \text{CALL PFCS ((mod,[itbmsk],[lun],prbuf,prsz,rsbuf,rssz,[rslen],} \]
\[ \quad \text{[prsblk,prssz],[dfnbk,dfnsz],[rsmskl],[idsw])} \]
\[ \quad \text{mod} = \text{Modifier for logical name table entries; specify one of the} \]
\[ \quad \text{following values:} \]
\[ \quad \text{LB.LOC} = 1 \]
\[ \quad \text{LB.LOG} = 2 \]

Specifying one of these values indicates that matches in the logical table are based on the exact value. Not specifying a value indicates that the system will look for the first matching logical block, regardless of the modifier value.
itbmsk  =  Inhibit mask to prevent a logical table from being searched. The following symbol bit definitions, when set, prevent a particular table from being searched:

<table>
<thead>
<tr>
<th>System</th>
<th>IN.SYS</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>IN.GRP</td>
<td>4</td>
</tr>
<tr>
<td>Session</td>
<td>IN.SES</td>
<td>20</td>
</tr>
<tr>
<td>Task</td>
<td>IN.TSK</td>
<td>1</td>
</tr>
</tbody>
</table>

lun  =  LUN to be assigned

prbuf =  Array containing the primary file specification buffer; prbuf and prsz must both be specified or both omitted; if omitted, a comma between their positions must be present unless not other parameters follow

prsz  =  Size (in bytes) of the primary file specification buffer

rsbuf =  Array containing the resulting file specification buffer

rsz  =  Size (in bytes) of the resulting file specification buffer

rslen =  Integer to receive the resulting string size

prblk =  Array containing the parse block

prsz  =  Size (in bytes) of the parse block

dfnbk =  Array containing the default name block; dfnbk and dfnsz must both be specified or both omitted; if omitted, a comma between their position must be present unless no other parameters follow

dfnsz =  Size of the default name block; dfnbk and dfnsz must both be specified or both omitted; if omitted, a comma between their positions must be present unless no other parameters follow

rsmsk =  Mask of fields in the resulting string to suppress before returning the string. The bits currently defined are the same as those for the flag word in the parse block. The bits are FS$NOD, FS$DEV, FS$DIR, FS$NAM, FS$TYP, and FS$VER. If the bit FS$NDF is set, the device is not defaulted to and the LUN is not assigned. (FS$NDF has no meaning for the FSS$ directive.)

idsw =  Integer to receive the Directive Status Word.
Macro Call:

PFCS$ mod, tbmsk, lun, prbuf, prsz, rsbuf, rssz, rslen, prsblk, prssz, dfnbk, dfnsz, rmsk

mod = Modifier for logical name table entries; specify one of the following values:

   LB.LOC = 1
   LB.LOG = 2

Specifying one of these values indicates that matches in the logical table are based on the exact value. Not specifying a value indicates that the system will look for the first matching logical block, regardless of the modifier value.

tbmsk = Inhibit mask to prevent a logical table from being searched.
The following symbol bit definitions, when set, prevent a particular table from being searched:

   System  IN.SYS = 10
   Group    IN_GRP = 4
   Session  IN_SES = 20
   Task     IN.TSK = 1

lun = LUN to be assigned

prbuf = Address of the primary file specification buffer

prsz = Size (in bytes) of the primary file specification buffer

rsbuf = Address of the resulting file specification buffer

rssz = Size (in bytes) of the resulting file specification buffer

rslen = Address of a word to receive the resulting string size

prsblk = Address of the parse block

prssz = Size (in bytes) of the parse block

dfnbk = Address of the default name block

dfnsz = Size of the default name block

rmsk = Mask of fields in the resulting string to suppress before returning the string. The bits currently defined are the same as those for the flag word in the parse block. The bits are FS$NOD, FS$DEV, FS$DIR, FS$NAM, FS$TYP, and FS$VER. If the bit FS$NDF is set, the device is not defaulted to and the LUN is not assigned. (FS$NDF has no meaning for the FSS$ directive.)
Executive Directive Summary in Alphabetical Order by Macro Call

PRMS$ FORTRAN Call:

CALL PRSRMS ((mod), (itbmsk), (lun), prbuf, prsz, r
buf, rssz, [rslen], [prsblk, prssz],
[dbuf, dfsz], [rmsk], [idsw])

mod = Modifier for logical name table entries; specify on of the
following values:

LB.LOC = 1
LB.LOG = 2

Specifying one of these values indicates that matches in the
logical table are based on the exact value. Not specifying a
value indicates that the system will look for the first match-
ing logical block, regardless of the modifier value.

itbmsk = Inhibit mask to prevent a logical table from being searched.
The following symbol bit definitions, when set, prevent a
particular table from being searched:

System IN.SYS = 10
Group IN.GRP = 4
Session IN.SES = 20
Task IN.TSK = 1

lun = LUN to be assigned

prbuf = Array containing the primary file specification buffer; prbuf
and prsz must both be specified or both omitted; if omitted,
a comma between their positions must be present unless no
other parameters follow

prsblk = Array containing the parse block

prsz = Size (in bytes) of the resulting file specification buffer

rslen = Integer to receive the resulting string size

prssz = Size (in bytes) of the parse block
Executive Directive Summary in Alphabetical Order by Macro Call

dbuf = Address of the default file specification buffer; prbuf and prsz must both be specified or both omitted; if omitted, a comma between their positions must be present unless no other parameters follow

dfsz = Size (in bytes) of the default file specification buffer; prbuf and prsz must both be specified or both omitted; if omitted, a comma between their positions must be present unless no other parameters follow

rsmk = Mask of fields in the resulting string to suppress before returning the string. The bits currently defined are the same as those for the flag word in the parse block. The bits are FS$NOD, FS$DEV, FS$DIR, FS$NAM, FS$TYP, and FS$VER. If the bit FS$NDF is set, the device and directory are not defaulted to and the LUN is not assigned. (FS$NDF has no meaning for the FSS$ directive.)

idsw = Integer to receive the Directive Status Word.

Macro Call:

PRMS$ mod,tbmsk,lun,prbuf,prsz,rsbuf,rssz,rslen,prsblk,prssz,dbuf,dfsz,rsmk

mod = Modifier for logical name table entries; specify on of the following values:

   LB.LOC = 1
   LB.LOG = 2

Specifying one of these values indicates that matches in the logical table are based on the exact value. Not specifying a value indicates that the system will look for the first matching logical block, regardless of the modifier value.

tbmsk = Inhibit mask to prevent a logical table from being searched. The following symbol bit definitions, when set, prevent a particular table from being searched:

   System IN.SYS = 10
   Group IN.GRP = 4
   Session IN.SES = 20
   Task IN.TSK = 1

lun = LUN to be assigned

prbuf = Address of the primary file specification buffer
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>prsz</td>
<td>Size (in bytes) of the primary file specification buffer</td>
</tr>
<tr>
<td>rbuf</td>
<td>Address of the resulting file specification buffer</td>
</tr>
<tr>
<td>rssz</td>
<td>Size (in bytes) of the resulting file specification buffer</td>
</tr>
<tr>
<td>rslen</td>
<td>Address of a word to receive the resulting string size</td>
</tr>
<tr>
<td>prsbk</td>
<td>Address of the parse block</td>
</tr>
<tr>
<td>prsz</td>
<td>Size (in bytes) of the parse block</td>
</tr>
<tr>
<td>dfbuf</td>
<td>Address of the default file specification buffer</td>
</tr>
<tr>
<td>dfsz</td>
<td>Size (in bytes) of the default file specification buffer</td>
</tr>
<tr>
<td>rsmask</td>
<td>Mask of fields in the resulting string to suppress before returning the string. The bits currently defined are the same as those for the flag word in the parse block. The bits are FS$NOD, FS$DEV, FS$DIR, FS$NAM, FS$TYP, and FS$VER. If the bit FS$NDF is set, the device and directory are not defaulted to and the LUN is not assigned. (FS$NDF has no meaning for the FSS$ directive.)</td>
</tr>
</tbody>
</table>

**Queue I/O Request**

**FORTRAN Call:**

```
CALL QIO (fnc,lun,[efn],[pri],[isb],[prl],[ids])
```

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fuc</td>
<td>I/O function code</td>
</tr>
<tr>
<td>lun</td>
<td>Logical unit number</td>
</tr>
<tr>
<td>efn</td>
<td>Event flag number</td>
</tr>
<tr>
<td>pri</td>
<td>Priority (ignored, but parameter must be present in call)</td>
</tr>
<tr>
<td>isb</td>
<td>A 2-word integer array to receive final I/O status</td>
</tr>
<tr>
<td>prl</td>
<td>A 6-word integer array containing device-dependent parameters to be placed in parameter words 1 through 6 of the Directive Parameter Block (DPB). Fill in this array by using the GETADR routine</td>
</tr>
<tr>
<td>ids</td>
<td>Directive status</td>
</tr>
</tbody>
</table>

**Macro Call:**

```
QIOS fnc,lun,[efn],[pri],[isb],[ast],[prl]
```

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fnc</td>
<td>I/O function code</td>
</tr>
<tr>
<td>lun</td>
<td>Logical unit number</td>
</tr>
</tbody>
</table>

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Executive Directive Summary in Alphabetical Order by Macro Call

efn = Event flag number
pri = Priority (ignored, but Q.IDPR byte must be present in DPB)
isb = Address of I/O status block
ast = Address of AST service routine entry point
prl = Parameter list of the form <p1,...p6>

Queue I/O Request And Wait

FORTRAN Call:

CALL WTQIO (fnc,lun,efn,pri,isb,ast,prl,ids)

fnc = I/O function code
lun = Logical unit number
efn = Event flag number
pri = Priority (ignored, but parameter must be present in call)
isb = A 2-word integer array to receive final I/O status
prl = A 6-word integer array containing device dependent parameters to be placed in parameter words 1 through 6 of the DPB
ids = Directive status

Macro Call:

QIOW$ fnc,lun,efn,pri,isb,ast,prl

Receive Data Or Stop

FORTRAN Call:

CALL RCST (rtname,ibuf,ids)

rtname = Sender task name (if not specified, data may be received from any task)
ibuf = Address of 15-word buffer to receive the sender task name and data
ids = Integer to receive the Directive Status Word

Macro Call:
RCST$  (tname),buf

tname = Sender task name (if not specified, data may be received from any task)

buf = Address of a 15-word buffer to receive the sender task name and data

Receive Data
FORTRAN Call:
CALL RECEIV (tsk,buf,*,ids)

    tsk = Sender task name (if not specified, data may be received from any task)

    buf = A 15-word integer array for received data

    ids = Directive status

Macro Call:
RCVD$  (tsk),buf

    tsk = Sender task name (if not specified, data may be received from any task)

    buf = Address of 15-word buffer

Receive Data Or Exit
FORTRAN Call:
CALL RECOEX (tsk,buf,*,ids)

    tsk = Sender task name (if not specified, data may be received from any task)

    buf = A 15-word integer array for received data

    ids = Directive status
Macro Call:

RCVX$ [tsk],buf

tsk    = Sender task name (if not specified, data may be received from
        any task)
buf    = Address of 15-word buffer

Read All Event Flags

FORTRAN Call:

CALL READEF (efn,[ids])

efn    = Event flag number
ids    = Directive status

The Executive returns the status codes IS.SET (+02) and ISCLR (00) for
FORTRAN calls in order to report event-flag polarity.

Macro Call:

RDAF$  buf

buf    = Address of 4-word buffer

Read Event Flag

FORTRAN Call:

CALL READEF (iefn,[ids])

iefn    = Integer containing an event flag number
ids    = Integer variable to receive the Directive Status Word

The Executive returns the status codes IS.SET (+02) and ISCLR (00) for
FORTRAN calls in order to report event-flag polarity.

Macro Call:

RDEF$  efn

efn    = Event flag number
Read Extended Event Flags

FORTRAN Call:

A FORTRAN task can read only one event flag. The call is:

\[
\text{CALL READEF (efn, ids)}
\]

\begin{itemize}
  \item \texttt{efn} = Event flag number
  \item \texttt{ids} = Directive status
\end{itemize}

The Executive returns the status codes \texttt{IS.SET (+02)} and \texttt{IS CLR (00)} for FORTRAN calls in order to report event-flag polarity.

Macro Call:

\[
\text{RDXF$ \quad \text{buf}}
\]

\[
\text{buf} = \text{Address of six-word buffer}
\]

Recursive Translation of Logical Name (CALL RCTLON and RLOG$ are the preferred calls to use on RSX-11M-PLUS and Micro/RSX. CALL RCTLOG and RLOG$ are provided for compatibility with P/OS.)

FORTRAN Calls:

\[
\text{CALL RCTLON (mod, itbmsk, [status], lns, lnssz, iens, ienssz, [rsz], [rtbmod], [idsw])}
\]

\[
\text{CALL RCTLOG (mod, itbmsk, [status], lns, lnssz, iens, ienssz, [rsz], [rtbmod], [idsw])}
\]

\begin{itemize}
  \item \texttt{mod} = Modifier of the logical name within a table; restricted to LB.LOC or LB.LOG
  \item \texttt{itbmsk} = Inhibit mask to prevent a logical name table from from being searched. The following symbol bit definitions, when set, prevent a particular table from being searched:
    \begin{itemize}
      \item \texttt{System (IN.SYS)} = 10
      \item \texttt{Group (IN.GRP)} = 4
      \item \texttt{Session (IN.SES)} = 20
      \item \texttt{Task (IN.TSK)} = 1
    \end{itemize}
  \item \texttt{lns} = Character array containing the logical name string
\end{itemize}
status = Word to receive the logical status associated with the located logical name:

   LS.TRM = Terminal status bit
   LS.PRV = Privileged status

lnsz = Size (in bytes) of the logical name string

iens = Character array buffer to receive the returned equivalence-name string

ienssz = Size (in bytes) of the data area for the returned equivalence-name string

rsize = Word to receive the size of the equivalence-name string

rtbmod = Word to receive, in the lower byte, the table number and, in the higher byte, the modifier value of the located logical name

idsw = Integer to receive the Directive Status Word

Macro Calls:

RLON$ mod,[tbmsk],[status],lns,lnssz,ens,enssz,[rsize],[rtbmod]

RLOG$ mod,[tbmsk],[status],lns,lnssz,ens,enssz,[rsize],[rtbmod]

mod = Modifier of the logical name within a table; restricted to LB.LOC or LB.LOG

tbmsk = Inhibit mask to prevent a logical name table from being searched. The following symbol bit definitions, when set, prevent a particular table from being searched.

   System (IN.SYS) = 10
   Group (IN.GRP) = 4
   Session (IN.SES) = 20
   Task (IN.TSK) = 1

If no mask is specified, the tables are searched in the following order: user, session, group, system. The value defaults to 1 (LB.LOC).

lns = Character array containing the logical name string

lnsz = Size (in bytes) of the logical name string

ens = Character array buffer to receive the returned equivalence-name string
enssz = Size (in bytes) of the data area for the returned equivalence-name string
rsiz = Word to receive the size of the equivalence-name string
rtbmod = Word to receive, in the lower byte, the table number and, in the higher byte, the modifier value of the located logical name
status = Word to receive the logical status associated with the located logical name

Remove Affinity ($S$ form recommended)

FORTRAN Call:

CALL RMAF$ (ids)

ids = Integer receive the Directive Status Word

Macro Call:

RMAF$

Request and Pass Offspring Information

FORTRAN Call:

CALL RPOI (tname,[iugc],[iumc],[iparen],[ibuf],[ibfl],[isc],
[idenam],[iunit],[itask],[ocbad],[ids])

tname = Name of an array containing the actual name (in Radix-50) of the task to be requested and optionally chained to
iugc = Name of an integer containing the group code number for the UIC of the requested target chain task
iumc = Name of an integer containing the member code number for the UIC of the requested target chain task
iparen = Name of an array (or I*4 integer) containing the Radix-50 name of the parent task. This is returned in the information buffer of the GTCMCI subroutine.
ibuf = Name of an array that contains the command line text for the chained task
ibfl = Name of an integer that contains the number of bytes in the command in the ibuf array
Executive Directive Summary in Alphabetical Order by Macro Call

isc = Flag byte controlling the actions of this directive request when executed. The bit definitions of this byte (only the low-order byte of the integer specified in the call is ever used) are as follows:

RP.OEX = 128. Force this task to exit on successful execution of the RPOI$ directive.

RP.OAL = 1 Pass all of this task's connections to the requested task. (The default is none.)

RP.ONX = 2 Pass the first connection in the queue, if there is one

idnam = Name of an integer containing the ASCII device name of the requested task's TI: (must be the name of a physical device)

iunit = Name of an integer containing the unit number of the requested task's TI:

itask = Name of an array containing the Radix-50 name the requested task is to run under.

On RSX-11M-PLUS systems, any task may specify a new name for the requested task as long as the requested task is not a CLI task.

The requested task (specified in the tname parameter) must be installed in the ...tsk format.

ocbad = Name of an integer containing the internal pool address of the parent OCB. This value may be obtained only in the information buffer of the GTCMCI subroutine, which only a CLI can issue; therefore, only a CLI can specify this argument.

ids = Integer to receive the Directive Status Word

Macro Call:

RPOI$ tname,,,[ugc],[umc],[parent],[bufadr],[buflen],[sc],[idnam],
[unit],[task],[ocbad]

tname = Name of task to be chained to

ugc = Group code for UIC of the requested task

umc = Member code for UIC of the requested task
parent = Name of issuing task's parent task whose connection is to be passed.

bufadr = Address of buffer to be given to the requested task

buflen = Length of buffer to be given to requested task

sc = Flag bits:

RP.OEX — (200) Force issuing task to exit
RP.OAL — (1) Pass all connections (default is none)
RP.ONX — (2) Pass the first connection in the queue, if there is one.

dnam = ASCII device name for TI: (must be the name of a physical device)

unit = Unit number of task's TI:

task = Radix-50 name of task to be started.

On RSX-11M-PLUS systems, any task may specify a new name for the requested task as long as the requested task is not a CLI task.

The requested task (specified in the tname parameter) must be installed in the ...tsk format.

ocbad = Address of OCB to pass (CLIs only)

Request Task

FORTRAN Call:

CALL REQUEST (tsk,[opt1],[ids])

  tsk = Task name

  opt = A 4-word integer array:

    opt(1) = Partition name, first half (ignored, but must be present)

    opt(2) = Partition name, second half (ignored, but must be present)

    opt(3) = Priority (ignored, but must be present)

    opt(4) = User Identification Code

    ids = Directive status
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

RQST$  tsk,[prt],[pri],[ugc],[umc]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tsk</td>
<td>Task name</td>
</tr>
<tr>
<td>prt</td>
<td>Partition name (ignored, but must be present)</td>
</tr>
<tr>
<td>pri</td>
<td>Priority (ignored, but must be present)</td>
</tr>
<tr>
<td>ugc</td>
<td>UIC group code</td>
</tr>
<tr>
<td>umc</td>
<td>UIC member code</td>
</tr>
</tbody>
</table>

Receive By Reference

FORTRAN Call:

CALL RREF (iwdb,[isrb],[ids])

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>iwdb</td>
<td>An 8-word integer array containing a Window Definition Block (see Section 3.5.2.2).</td>
</tr>
<tr>
<td>isrb</td>
<td>A 10-word integer array to be used as the receive buffer. If the call omits this parameter, the contents of iwdb(8) are unchanged.</td>
</tr>
<tr>
<td>ids</td>
<td>Directive status</td>
</tr>
</tbody>
</table>

Macro Call:

RREF$  wdb

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wdb</td>
<td>Window Definition Block address</td>
</tr>
</tbody>
</table>

Receive By Reference or Stop

FORTRAN Call:

CALL RRST (iwdb,[isrb],[ids])

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>iwdb</td>
<td>An 8-word integer array containing a Window Definition Block (see Section 3.5.2.2).</td>
</tr>
<tr>
<td>isrb</td>
<td>A 10-word integer array to be used as the receive buffer. If the call omits this parameter, the contents of iwdb(8) are unchanged.</td>
</tr>
<tr>
<td>ids</td>
<td>Directive status</td>
</tr>
</tbody>
</table>

Macro Call:

RRST$  wdb

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>wdb</td>
<td>Window Definition Block address</td>
</tr>
</tbody>
</table>

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**Executive Directive Summary in Alphabetical Order by Macro Call**

**Resume Task**

FORTRAN Call:

```
CALL RESUME (tsk[,ids])
```

```
tsk = Task name
ids = Directive status
```

Macro Call:

```
RSUM$ tsk
```

```
tsk = Task name
```

**Run Task**

FORTRAN Call:

```
CALL RUN (tsk,[opt],smg,snt,[rmg],[rnt],[ids])
```

```
tsk = Task name
opt = A 4-word integer array:
    opt(1) = Partition name, first half (ignored, but must be present)
    opt(2) = Partition name, second half (ignored, but must be present)
    opt(3) = Priority (ignored, but must be present)
    opt(4) = User Identification Code
smg = Schedule delta magnitude
snt = Schedule delta unit (either 1, 2, 3, or 4)
rmg = Reschedule interval magnitude
rnt = Reschedule interval unit
ids = Directive status
```

The ISA standard call for initiating a task is also provided:

```
CALL START (tsk,smg,snt[,ids])
```

```
tsk = Task name
smg = Schedule delta magnitude
```
Executive Directive Summary in Alphabetical Order by Macro Call

snt = Schedule delta unit (either 0, 1, 2, 3, or 4)
ids = Directive status

Macro Call:

RUN$ tsk,[prt],[pri],[ugc],[umc],smg,snt[,rmg,rnt]
tsk = Task name
prt = Partition name (ignored, but must be present)
pri = Priority (ignored, but must be present)
ugc = UIC group code
umc = UIC member code
smg = Schedule delta magnitude
snt = Schedule delta unit (either 1, 2, 3, or 4)
rmg = Reschedule interval magnitude
rnt = Reschedule interval unit

Specify Command Arrival AST

FORTRAN Call:
Not supported

Macro Call:

SCAA$ [ast]
ast = AST service-routine entry point. Omitting this parameter disables command arrival ASTs for the issuing task until the directive is specified again.

Supervisor Call ($S form recommended)

FORTRAN Call:
Not supported

Macro Call:

SCALS$ saddr,caddr[,err]
saddr = Address of the called supervisor-mode routine
caddr = Address of the completion routine for return to the caller
err = Address of error routine
Set Command Line Interpreter

FORTRAN Call:

CALL SETCLI (icli,idev,iunit,[ids])

icli = A 2-word array element containing the name of the CLI to which the terminal is to be set
idev = Integer containing the ASCII name of the terminal to be set (default = TI:)
iunit = Integer containing the unit number of terminal
ids = Directive status

Macro Call:

SCLI$ cli,[dev],[unit]

cli = Name of the CLI to which the terminal is to be set
dev = ASCII name of the terminal to be set (default = TI:)
unit = Unit number of terminal

Send Data

FORTRAN Call:

CALL SEND (tsk,buf,[efn],[ids])

tsk = Task name
buf = A 13-word integer array of data to be sent
efn = Event flag number
ids = Directive status

Macro Call:

SDATS$ tsk,buf,[efn]

tsk = Task name
buf = Address of 13-word data buffer
efn = Event flag number
Set Default Directory

FORTRAN Call:

CALL SETDDS (mod,iens,ienssz,[idsw])

mod  = Modifier for the SDIR$ directive;
      0   = Modify task default
      SD.LOG= Modify terminal default
      SD.BYE= Delete terminal default
      SD.TI  = Set task default to terminal default

iens  = Character array containing the default directory string

ienssz = Size (in bytes) of the default directory string

idsw  = Integer to receive the Directive Status Word

Macro Call:

{ mod
  SDIR$ [iens,ienssz
   } (must choose one of these options)
   { mod,iens,ienssz

mod  = Modifier for the SDIR$ directive;
      0   = Modify task default
      SD.LOG= Modify terminal default
      SD.BYE= Delete terminal default
      SD.TI  = Set task default to terminal default

iens  = Buffer address of the default directory string; if not specified, the default directory string is deleted (iens and ienssz must be selected to modify the default)

ienssz = Size (in bytes) of the default directory string (ienssz and iens must be selected to modify the default)

Send, Request and Connect

FORTRAN Call:

CALL SDRC (rtname,ibuf,[jiefn],[iast],[iesb],[iparm],[ids])
CALL SDRCN (rtname, ibuf, [iefn], [iast], [iesb], [iparm], [ids])

rtname = Target task name of the offspring task to be connected

ibuf = Name of 13-word send buffer

iefn = Event flag to be set when the offspring task exits or emits status

iast = Name of an AST routine to be called when the offspring task exits or emits status (ignored for CALL SDRCN)

iesb = Name of an 8-word status block to be written when the offspring task exits or emits status:

   Word 0 — Offspring-task exit status
   Word 1 — TTKN abort code
   Word 2-7 — Reserved

iparm = Name of a word to receive the status block address when an AST occurs

ids = Integer to receive the Directive Status Word

Macro Call:

SDRC$ tname, buf, [iefn], [east], [esb]

tname = Target task name of the offspring task to be connected

buf = Address of a 13-word send buffer

iefn = The event flag to be cleared on issuance and when the offspring task exits or emits status

east = Address of an AST routine to be called when the offspring task exits or emits status

esb = Address of an eight-word status block to be written when the offspring task exits or emits status:

   Word 0 — Offspring-task exit status
   Word 1 — TTKN abort code
   Word 2-7 — Reserved

Send Data Request and Pass Offspring Control Block

FORTRAN Call:

CALL SDRP (task, ibuf, [ibfl], [iefn], [iflag], [iparen], [iocbad], [ids])

task = Name of an array (REAL, INTEGER, I*4) that contains the Radix-50 name of target task
ibuf = Name of an integer array containing data to be sent
ibfl = Name of an integer containing number of words (integers) in
      the array to be sent. On RSX-11M-PLUS systems, this ar-
      gument may be in the range of 1 to 255. If this argument is
      not specified, a default value of 12(10) is assumed.
ifeq = Name of an integer containing the number of the event flag
      to be set when this directive is executed successfully
iflag = Name of an integer containing flags bits controlling execu-
      tion of this directive. They are defined as follows:
      SD.REX = 128. Force this task to exit upon successful
      execution of this directive
      SD.RAL = 1 Pass all connections to the requested
      task (default is pass none); if you
      specify this flag, do not specify the
      parent task name
      SD.RNX = 2 Pass the first connection in the queue,
      if there is one, to the requested task; if
      you specify this flag, do not specify
      the parent task name
iparen = Name of array containing the Radix-50 name of the parent
        task whose connection should be passed to the target task.
        The name of the parent task was returned in the informa-
        tion buffer of the GTCMCI subroutine.
iocbad = Name of an integer containing pool address of the OCB to
        pass. This value was returned in the information buffer of
        the GTCMCI subroutine. Only CLI tasks may specify this
        parameter.
ids = Name of an integer to receive the contents of the Directive
      Status Word

Macro Call:
SDRP$ task,bufadr,[buflen],[efn],[flag],[parent],[iocbad]
task = Name of task to be chained to
bufadr = Address of buffer to be given to the requested task
buflen = Length of buffer to be given to requested task
efn = Event flag number
flag = Flag bits controlling execution of this directive (see iflag, above, for the definitions of the bits)

parent = Name of issuing task's parent task whose connection is to be passed. If not specified, all connections or no connections are passed, depending on the flag bit.

ocbad = Address of OCB to pass (CLIs only)

**Set Event Flag**

FORTRAN Call:

```
CALL SETEF (efn[,ids])
```

```
efn = Event flag number
ids = Directive status
```

Macro Call:

```
SETF$ efn
```

```
efn = Event flag number
```

**Specify Floating Point Exception AST**

FORTRAN Call:

Not supported

Macro Call:

```
SFPAS$ [ast]
```

```
ast = AST service routine entry point address
```

**Send Message**

FORTRAN Call:

```
CALL MSG (itgt,ibuf,ibufl,iprm,iprm1,ids)
```

```
itgt = Name of an integer containing the target object
ibuf = Name of an integer array containing the data to be inserted into the formatted data packet
ibufl = Name of an integer containing length of the ibuf array
iprm = Name of an integer array containing any additional parameters
```
Executive Directive Summary in Alphabetical Order by Macro Call

iprm1 = Name of an integer containing the number of parameters in the iprm array

ids = Name of an optional integer to receive the directive status

Macro Call:

SMG$ tgt,buf,len,<pri,...,prn>

tgt = Target identifier
buf = Address of optional data buffer
len = Length in bytes of optional data buffer
pri,...,prn = Target-specific (for the Error Logger) parameter list:
SMG$ SM.SER,buf,len,<typ,sub,lun,mask>
typ = Error Logger packet code
sub = Error Logger packet subtype code
lun = Logical unit number of device
msk = Control mask word

Send Next Command

FORTRAN Call:

CALL SNXC ([dnam],[iunit],[ids])
dnam = Device name (ASCII); if not specified, TI: is used
iunit = Unit number of the terminal from which the command is to be sent
ids = Integer to receive the Directive Status Word

Macro Call:

SNXC$ [dnam],[unum]
dnam = Device name (ASCII); if not specified, TI: is used
unum = Unit number of the terminal from which the command is to be sent
Specify Parity Error AST

FORTRAN Call:

Not supported

Macro Call:

SPEA$ [ast]
ast = AST service-routine entry-point address

Suspend ($S form recommended)

FORTRAN Call:

CALL SISPND (ids)
ids = Directive status

Macro Call:

SPND$$ [err]
err = Error-routine address

Specify Power Recovery AST

FORTRAN Call:

To establish an AST:

EXTERNAL sub
CALL PWRUP (sub)
sub = Name of a subroutine to be executed upon power recovery. The PWRUP subroutine will effect the following:

CALL sub (no arguments)

The subroutine is called as a result of a power recovery AST, and therefore may be controlled at critical points by using the DSASTR (or INASTR) and ENASTR subroutine calls.

To remove an AST:

CALL PWRUP

Macro Call:

SPRA$ [ast]
ast = AST service-routine entry-point address
EXECUTIVE DIRECTIVE SUMMARY IN ALPHABETICAL ORDER BY MACRO CALL

**Spawn**

**FORTRAN Call:**

\[
\text{CALL SPAWN} \quad (\text{rtname},[\text{iugc}],[\text{iucm}],[\text{iiefn}],[\text{iast}],[\text{iesb}],[\text{iparm}],
\text{[icmlin,icmlen],[iunit],[dnam]},[,\text{ids}])
\]

**CALL SPAWN**

\[
(\text{rtnname},[\text{iugc}],[\text{iucm}],[\text{iiefn}],[\text{iast}],[\text{iesb}],[\text{iparm}],
\text{[icmlin,icmlen],[iunit],[dnam]}[,\text{ids}])
\]

- **rtnname** = Name (Radix-50) of the offspring task to be spawned
- **iugc** = Group code number for the UIC of the offspring task
- **iucm** = Member code number for the UIC of the offspring task
- **iiefn** = Event flag to be set when the offspring task exits or emits status
- **iast** = Name of an AST routine to be called when the offspring task exits or emits status (ignored for CALL SPAWN)
- **iesb** = Name of an 8-word status block to be written when the offspring task exits or emits status:
  - Word 0 — Offspring-task exit status
  - Word 1 — TKTN abort code
  - Words 2-7 — Reserved
- **iparm** = Name of a word to receive the status block address when the AST occurs
- **icmlin** = Name of a command line to be queued for the offspring task
- **icmlen** = Length of the command line (255 (decimal) characters maximum)
- **iunit** = Unit number of terminal to be used as the TI: for the offspring task (if the optional dnam parameter is not specified, this parameter must be the unit number of a virtual terminal created by the issuing task; if a value of 0 is specified, the TI of the issuing task is propagated)
- **dnam** = Device name mnemonic (must be the name of a physical device)
- **ids** = Integer to receive the Directive Status Word
Macro Call:

SPWN$ tname,,,[ugc],[umc],[efn],[east],[esb],[cmdlin,cmdlen],[unum],[dnam]

- tname = Name (Radix-50) of the offspring task to be spawned
- ugc = Group code number for the UIC of the offspring task
- umc = Member code number for the UIC of the offspring task
- efn = The event flag to be cleared on issuance and set when the offspring task exits or emits status
- east = Address of an AST routine to be called when the offspring task exits or emits status:  
  - Word 0 — Offspring task exit status
  - Word 1 — TKTN abort code
  - Word 2-7 — Reserved
- cmdlin = Address of a command line to be queued for the offspring task
- cmdlen = Length of the command line (maximum length is 255 decimal)
- unum = Unit number of terminal to be used as the TI: for the offspring task (if the optional dnam parameter is not specified, this parameter must be the unit number of a virtual terminal created by the issuing task; if a value of 0 is specified, the TI: of the issuing task is propagated)
- dnam = Device name mnemonic (must be the name of a physical device)

Specify Receive Data AST

FORTRAN Call:

Neither the FORTRAN language nor the ISA standard permits direct linking to system-trapping mechanisms. Therefore, this directive is not available for FORTRAN tasks

Macro Call:

SRDASH [ast]

- ast = AST service-routine entry-point address
Executive Directive Summary in Alphabetical Order by Macro Call

Specify Requested Exit AST

FORTRAN Call:

CALL SREA (ast[,ids])

ast = Name of the externally declared AST subroutine
ids = Name of an optional integer to receive the Directive Status Word

CALL SREX (ast,ipblk,ipblkl,[dummy][,ids])

ast = Name of the externally declared AST subroutine
ipblk = Name of an integer array to receive the trap-dependent parameters
ipblkl = Number of parameters to be returned into the ipblk array
dummy = Reserved for future use
ids = Name of an optional integer to receive the Directive Status Word

Macro Call:

SREA$ [ast]
SREX$ [ast][,dummy]

ast = AST service-routine entry-point address
dummy = Reserved for future use

Send By Reference

FORTRAN Call:

CALL SREF (tsk,[efn],iwdb,[isrb][,ids])

tsk = A single-precision floating-point variable containing the name of the receiving task in Radix-50 format.

efn = Event flag number

iwdb = An 8-word integer array containing a Window Definition Block

isrb = An 8-word integer array containing additional information (If specified, the address of isrb is placed in iwdb(8); if isrb is omitted, the contents of iwdb(octal) remain unchanged.)

ids = Directive status
Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

SREF$ task,wdb,[efn]

  task   = Receiver task name
  wdb    = Window Definition Block address
  efn    = Event flag number

Specify Receive-By-Reference AST

FORTAN Call:

Neither the FORTAN language nor the ISA standard permits direct linking to system-trapping mechanisms. Therefore, this directive is not available for FORTAN tasks.

Macro Call:

SRRA$ [ast]

  ast   = AST service-routine entry-point address

Set Affinity

FORTAN Call:

CALL STAF (iaff[,ids])

  iaff  = Affinity mask word
  ids   = Integer to receive Directive Status Word

Macro Call:

STAF$ [cp!ub!ub...]

  cp    = CPU selected (A through D)
  ub    = UNIBUS run(s) selected (E through T)

Set System Time Directive

FORTAN Call:

CALL SETTIM (ibufn[,ibufpl[,ids])

  ibufn  = An 8-word integer array — new time specification buffer
  ibufp  = An 8-word integer array — previous time buffer
  ids    = Directive status
Macro Call:

STIM$ bufn,(bufp)

bufn = Address of new 8-word time-specification buffer
bufp = Address of 8-word buffer to receive the previous system time parameters

Stop for Logical OR of Event Flags

FORTRAN Call:

CALL STLOR (ief1,ief2,ief3, ... ief(n))

ief1 ... ief(n) = List of event flag numbers

Macro Call:

STLO$ grp, msk

grp = Desired group of event flags
msk = A 16-bit mask word

Stop (SS form recommended)

FORTRAN Call:

CALL STOP (lids)

lids = Integer to receive the Directive Status Word

Macro Call:

STOP$

Stop For Single Event Flag

FORTRAN Call:

CALL STOPFR (ifefn,ids)

ifefn = Event flag number
ids = Integer to receive Directive Status Word

Macro Call:

STSE$ efn

efn = Event flag number
Executive Directive Summary in Alphabetical Order by Macro Call

Specify SST Vector Table for Debugging Aid

FORTRAN Call:

Neither the FORTRAN language nor the ISA standard permits direct linking to system-trapping mechanisms. Therefore, this directive is not available for FORTRAN tasks.

Macro Call:

SVDB$ [adr],[len]

adr  =  Address of SST vector table
len  =  Length of (that is, number of entries in) table in words

Specify SST Vector Table for Task

FORTRAN Call:

Neither the FORTRAN language nor the ISA standard permits direct linking to system-trapping mechanisms. Therefore, this directive is not available for FORTRAN tasks.

Macro Call:

SVTK$ [adr],[len]

adr  =  Address of SST vector table
len  =  Length of (that is, number of entries in) table in words

Switch State

FORTRAN Call:

Not supported

Macro Call:

SWST$ base,addr

base  =  The base virtual address within the task for mapping the sub-
        routine through APR5
addr  =  Virtual address of the subroutine to be executed in system
        state by the directive

Test for Specified Task Feature

FORTRAN Call:

CALL TFEA (isym,ids)

isym  =  Symbol for the specified task feature
ids   =  Directive status
Macro Call:

`TFEAS$ sym`

sym = Symbol for the specified task feature

**Translate Logical Name**

**TLON$**

**TLOG$**

(CALL TRALON and TLON$ are the preferred calls to use on RSX-11M-PLUS and Micro/RSX. CALL TRALOG and TLOG$ are provided for compatibility with P/OS.)

**FORTRAN Calls:**

CALL TRALON (mod, tbmsk, [status], lns, lnssz, ens, ienssz,
( rsize), [rtbmod], [idsw])

CALL TRALOG (mod, tbmsk, [status], lns, lnssz, ens, ienssz,
( rsize), [rtbmod], [idsw])

**mod** = Modifier of the logical name within a table; restricted to LB.LOC or LB.LOG

**tbmsk** = Inhibit mask to prevent a logical name table from being searched. The following symbol bit definitions, when set, prevent a particular table from being searched:

- System (IN.SYS) = 10
- Group (IN.GRP) = 4
- Session (IN.SES) = 20
- User (IN.USR) = 1

If no mask is specified, the tables are searched in the following order: user, session, group, system.

**status** = Word to receive the logical status word:

- LS.TER = 1 Terminal status bit
- LS.PRV = 2 Privileged status

**lns** = Character array containing the logical name string

**lnssz** = Size (in bytes) of the logical name string

**ens** = Character array buffer to contain the returned equivalence string

**ienen** = Size (in bytes) of the data area for the returned equivalence name string

**rsize** = Word to receive the size of the returned equivalence name
rtbmod    = Word to receive, in the lower byte, the table number and, in the higher byte, the modifier value of the located logical name

idsw     = Integer to receive the Directive Status Word

Macro Calls:

TLON$ mod,[status]tbsmk,lns,lnssz,ens,enssz,[rsze],[rtbmod]

TLOG$ mod,[status]tbsmk,lns,lnssz,ens,enssz,[rsze],[rtbmod]

mod    = Modifier of the logical name within a table; restricted to LB.LOC or LB.LOG

tbsmk  = Inhibit mask to prevent a table from being searched. The following symbol bit definitions, when set, prevent a particular table from being searched:

      System (IN.SYS)    = 10
      Group (IN.GRP)     = 4
      Session (IN.SES)   = 20
      User (IN.USR)      = 1

If no mask is specified, the tables are searched in the following order: user, session, group, system.

status  = Word to receive the logical status:
           LS.TER  = 1    Terminal status bit
           LS.PRV  = 2    Privileged status

lns     = Character array containing the logical name string

lnssz   = Size (in bytes) of the logical name string

ens     = Character array to contain the returned equivalence string

enssz   = Size (in bytes) of the data area for the returned equivalence name string

rsze    = Word to receive the size of the returned equivalence name; this size is always the actual size of the equivalence name regardless of the string size specified with enssz

rtbmod  = Word to receive, in the lower byte, the table number and, in the higher byte, the modifier value of the located logical name
Unlock Group Global Event Flags ($$ form recommended)

FORTRAN Call:

CALL ULGF (ids)

ids = Directive status

Macro Call:

ULGF$$ [err]

err = Error-routine address

Unmap Address Window

FORTRAN Call:

CALL UNMAP (iwdb, ids)

iwdb = An 8-word integer array containing a Window Definition Block

ids = Directive status

Macro Call:

UMAP$ wdb

wdb = Window Definition Block address

Unstop Task

FORTRAN Call:

CALL USTP (rtname[,ids])

rtname = Name of task to be unstopped. (If not specified, CALL USTP will use the issuing task as its default.)

ids = Integer to receive directive status information

Macro Call:

USTP$ [tname]

tname = Name of task to be unstopped. (If not specified, CALL USTP will use the issuing task as its default.)

Variable Receive Data

FORTRAN Call:

CALL VRCD ([task],bufadr,buflen[,ids])

task = Sender task name
bufadr = Address of buffer to receive the sender task name and data (must be word-aligned (INTEGER*2))
buflen = Length of buffer (in words)
ids = Integer to receive the Directive Status Word

Macro Call:

VRCD$ [task],bufadr,[buflen],[ti]

<table>
<thead>
<tr>
<th>task</th>
<th>Sender task name</th>
</tr>
</thead>
<tbody>
<tr>
<td>bufadr</td>
<td>Buffer address</td>
</tr>
<tr>
<td>buflen</td>
<td>Buffer size (in words)</td>
</tr>
<tr>
<td>ti</td>
<td>TI: indicator (ignored)</td>
</tr>
</tbody>
</table>

Variable Receive Data Or Stop

FORTRAN Call:

CALL VRCS ([task],bufadr,[buflen],[ids])

<table>
<thead>
<tr>
<th>task</th>
<th>Sender task name</th>
</tr>
</thead>
<tbody>
<tr>
<td>buf</td>
<td>Address of buffer to receive the sender task name and data</td>
</tr>
<tr>
<td>buflen</td>
<td>Length of buffer</td>
</tr>
<tr>
<td>ids</td>
<td>Integer to receive the Directive Status Word</td>
</tr>
</tbody>
</table>

Macro Call:

VRCS$ [task],bufadr,[buflen],[ti]

<table>
<thead>
<tr>
<th>task</th>
<th>Sender task name</th>
</tr>
</thead>
<tbody>
<tr>
<td>bufadr</td>
<td>Buffer address</td>
</tr>
<tr>
<td>buflen</td>
<td>Buffer size (in words)</td>
</tr>
<tr>
<td>ti</td>
<td>TI: indicator (ignored)</td>
</tr>
</tbody>
</table>

Variable Receive Data Or Exit

FORTRAN Call:

CALL VRCX ([task],bufadr,[buflen],[ids])

<table>
<thead>
<tr>
<th>task</th>
<th>Sender task name</th>
</tr>
</thead>
<tbody>
<tr>
<td>buf</td>
<td>Address of buffer to receive the sender task name and data</td>
</tr>
<tr>
<td>buflen</td>
<td>Length of buffer</td>
</tr>
<tr>
<td>ids</td>
<td>Integer to receive the Directive Status Word</td>
</tr>
</tbody>
</table>

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Executive Directive Summary in Alphabetical Order by Macro Call

Macro Call:

\[
\begin{align*}
\text{VRCX$} & \quad \text{[task],[bufadr],[buflen],[ti]} \\
\text{task} & \quad \text{Sender task name} \\
\text{bufadr} & \quad \text{Buffer address} \\
\text{buflen} & \quad \text{Buffer size (in words)} \\
\text{ti} & \quad \text{TI: indicator (ignored)} \\
\end{align*}
\]

Variable Send Data

FORTRAN Call:

\[
\begin{align*}
\text{CALL VSDA ([task],[bufadr],[buflen],[efn],[spri],[ti])} \\
\text{task} & \quad \text{Receiver task name} \\
\text{buf} & \quad \text{Address of buffer to receive the sender task name and data} \\
\text{bufadr} & \quad \text{Address of the buffer to receive the sender task name and data (must be word-aligned (INTEGER*2))} \\
\text{buflen} & \quad \text{Length of buffer (in words)} \\
\text{efn} & \quad \text{Event flag number} \\
\text{idsw} & \quad \text{Integer to receive the Directive Status Word} \\
\end{align*}
\]

Macro Call:

\[
\begin{align*}
\text{VSDA$} & \quad \text{[task],[bufadr],[buflen],[efn],[spri],[ti]} \\
\text{task} & \quad \text{Receiver task name} \\
\text{bufadr} & \quad \text{Buffer address} \\
\text{buflen} & \quad \text{Buffer size (in words)} \\
\text{efn} & \quad \text{Event flag number} \\
\text{spri} & \quad \text{Send priority (ignored)} \\
\text{ti} & \quad \text{TI: indicator (ignored)} \\
\end{align*}
\]

Variable Send, Request, and Connect

FORTRAN Calls:

\[
\begin{align*}
\text{CALL VSRC \ (rtname,ibuf,[ibuflen],[iefn],[iast],[iesb],[iparm][idsw])} \\
\text{CALL VSRCN \ (rtname,ibuf,[ibuflen],[iefn],[iast],[iesb],[iparm][idsw])} \\
\text{rtname} & \quad \text{Target task name of the offspring task to be connected} \\
\end{align*}
\]
**Executive Directive Summary in Alphabetical Order by Macro Call**

ibuf = Name of send buffer  
ibuflen = Length of the buffer  
iefn = Event flag to be set when the offspring task exits or emits status  
ias = Name of an AST routine to be called when the offspring task exits or emits status (ignored for CALL VSRCN)  
iesb = Name of an 8-word status block to be written when the offspring task exits or emits status:  
   Word 0 — Offspring-task exit status  
   Word 1 — TTKN abort code  
   Words 2-7 — Reserved  
iparm = Name of a word to receive the status block address when an AST occurs  
ids = Integer to receive the Directive Status Word

Macro Call:  
VSRC$: tname,buf{,buflen],[efn],[east],[esb]  
tname = Target task name of the offspring task to be connected  
buf = Address of send buffer  
buflen = Length of buffer  
efn = The event flag to be cleared on issuance and set when the offspring task exits or emits status  
east = Address of an AST routine to be called when the offspring task exits or emits status  
esb = Address of an 8-word status block to be written when the offspring task exits or emits status:  
   Word 0 — Offspring task exit status  
   Word 1 — TTKN abort code  
   Words 2-7 — Reserved
Wait for Significant Event ($S form recommended)

FORTRAN Call:
CALL WFSNE

Macro Call:
WSIG$S [err]
err = Error-routine address

Wait for Logical OR of Event Flags

FORTRAN Calls:
CALL WFLOR (efn1,efn2,efn3...,efn)

CALL WFLORS (idsw,efn1,efn2,efn3...,efn)
  efn = List of event flag numbers taken as the set of flags to be specified in the directive
  idsw = Integer to receive the Directive Status Word
  ef1...efn = List of event flag numbers taken as the set of flags to be specified in the directive

Macro Call:
WTLO$ grp,msk
  grp = Desired group of event flags
  msk = A 16-bit flag mask word

Wait for Single Event Flag

FORTRAN Call:
CALL WAITFR (efn[ids])
  efn = Event flag number
  ids = Directive status

Macro Call:
WTSE$ efn
  efn = Event flag number
### I/O ERROR CODES

The table below lists RSX-11M-PLUS I/O error codes. Only partial abbreviations (xxx) are listed; the complete abbreviation is IE.xxx. The octal number listed is the low-order byte of the complete word value (two’s complement of the decimal number).

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Error</th>
<th>Number</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>.BAD</td>
<td>- 1</td>
<td>377</td>
<td>Bad parameters</td>
</tr>
<tr>
<td>.IFC</td>
<td>- 2</td>
<td>376</td>
<td>Invalid function code</td>
</tr>
<tr>
<td>.DNR</td>
<td>- 3</td>
<td>375</td>
<td>Device not ready</td>
</tr>
<tr>
<td>.VER</td>
<td>- 4</td>
<td>374</td>
<td>Parity error on device</td>
</tr>
<tr>
<td>.ONP</td>
<td>- 5</td>
<td>373</td>
<td>Hardware option not present</td>
</tr>
<tr>
<td>.SPC</td>
<td>- 6</td>
<td>372</td>
<td>Illegal user buffer</td>
</tr>
<tr>
<td>.DNA</td>
<td>- 7</td>
<td>371</td>
<td>Device not attached</td>
</tr>
<tr>
<td>.DAA</td>
<td>- 8</td>
<td>370</td>
<td>Device already attached</td>
</tr>
<tr>
<td>.DUN</td>
<td>- 9</td>
<td>367</td>
<td>Device not attachable</td>
</tr>
<tr>
<td>.EOF</td>
<td>-10</td>
<td>366</td>
<td>End-of-file detected</td>
</tr>
<tr>
<td>.EOV</td>
<td>-11</td>
<td>365</td>
<td>End-of-volume detected</td>
</tr>
<tr>
<td>.WLK</td>
<td>-12</td>
<td>364</td>
<td>Write attempted to locked unit</td>
</tr>
<tr>
<td>.DAO</td>
<td>-13</td>
<td>363</td>
<td>Data overrun</td>
</tr>
<tr>
<td>.SRE</td>
<td>-14</td>
<td>362</td>
<td>Send/receive failure</td>
</tr>
<tr>
<td>.ABO</td>
<td>-15</td>
<td>361</td>
<td>Request terminated</td>
</tr>
<tr>
<td>.PRI</td>
<td>-16</td>
<td>360</td>
<td>Privilege violation</td>
</tr>
<tr>
<td>.RSU</td>
<td>-17</td>
<td>357</td>
<td>Shareable resource in use</td>
</tr>
<tr>
<td>.OVR</td>
<td>-18</td>
<td>356</td>
<td>Illegal overlay request</td>
</tr>
<tr>
<td>.BYT</td>
<td>-19</td>
<td>355</td>
<td>Odd byte count (or virtual address)</td>
</tr>
<tr>
<td>.BLK</td>
<td>-20</td>
<td>354</td>
<td>Logical block number too large</td>
</tr>
<tr>
<td>.MOD</td>
<td>-21</td>
<td>353</td>
<td>Invalid UDC module number</td>
</tr>
<tr>
<td>.CON</td>
<td>-22</td>
<td>352</td>
<td>UDC connect error</td>
</tr>
<tr>
<td>.NOD</td>
<td>-23</td>
<td>351</td>
<td>Caller’s nodes exhausted</td>
</tr>
<tr>
<td>.DFU</td>
<td>-24</td>
<td>350</td>
<td>Device full</td>
</tr>
<tr>
<td>.IFU</td>
<td>-25</td>
<td>347</td>
<td>Index file full</td>
</tr>
<tr>
<td>.NSF</td>
<td>-26</td>
<td>346</td>
<td>No such file</td>
</tr>
<tr>
<td>.LCK</td>
<td>-27</td>
<td>345</td>
<td>Locked from read/write access</td>
</tr>
<tr>
<td>.HFU</td>
<td>-28</td>
<td>344</td>
<td>File header full</td>
</tr>
<tr>
<td>.WAC</td>
<td>-29</td>
<td>343</td>
<td>Accessed for write</td>
</tr>
<tr>
<td>.CKS</td>
<td>-30</td>
<td>342</td>
<td>File header checksum failure</td>
</tr>
<tr>
<td>.WAT</td>
<td>-31</td>
<td>341</td>
<td>Attribute control list format error</td>
</tr>
<tr>
<td>.RER</td>
<td>-32</td>
<td>340</td>
<td>File processor device read error</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Error Decimal</td>
<td>Number Octal</td>
<td>Meaning</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>.WER</td>
<td>-33</td>
<td>337</td>
<td>File processor device write error</td>
</tr>
<tr>
<td>.ALN</td>
<td>-34</td>
<td>336</td>
<td>File already accessed on LUN</td>
</tr>
<tr>
<td>.SNC</td>
<td>-35</td>
<td>335</td>
<td>File ID, file number check</td>
</tr>
<tr>
<td>.SQC</td>
<td>-36</td>
<td>334</td>
<td>File ID, sequence number check</td>
</tr>
<tr>
<td>.NLN</td>
<td>-37</td>
<td>333</td>
<td>No file accessed on LUN</td>
</tr>
<tr>
<td>.CLO</td>
<td>-38</td>
<td>332</td>
<td>File was not properly closed</td>
</tr>
<tr>
<td>.NBF</td>
<td>-39</td>
<td>331</td>
<td>Open — No buffer space available for file</td>
</tr>
<tr>
<td>.RBG</td>
<td>-40</td>
<td>330</td>
<td>Illegal record size</td>
</tr>
<tr>
<td>.NBK</td>
<td>-41</td>
<td>327</td>
<td>File exceeds space allocated, no blocks</td>
</tr>
<tr>
<td>.ILL</td>
<td>-42</td>
<td>326</td>
<td>Illegal operation on File Descriptor Block</td>
</tr>
<tr>
<td>.BTP</td>
<td>-43</td>
<td>325</td>
<td>Bad record type</td>
</tr>
<tr>
<td>.RAC</td>
<td>-44</td>
<td>324</td>
<td>Illegal record access bits set</td>
</tr>
<tr>
<td>.RAT</td>
<td>-45</td>
<td>323</td>
<td>Illegal record attribute bits set</td>
</tr>
<tr>
<td>.RCN</td>
<td>-46</td>
<td>322</td>
<td>Illegal record number-too large</td>
</tr>
<tr>
<td>.ICE</td>
<td>-47</td>
<td>321</td>
<td>Internal consistency error</td>
</tr>
<tr>
<td>.2DV</td>
<td>-48</td>
<td>320</td>
<td>Rename-two different devices</td>
</tr>
<tr>
<td>.FEX</td>
<td>-49</td>
<td>317</td>
<td>Rename-a new file name already in-use</td>
</tr>
<tr>
<td>.BDR</td>
<td>-50</td>
<td>316</td>
<td>Bad directory file</td>
</tr>
<tr>
<td>.RNM</td>
<td>-51</td>
<td>315</td>
<td>Cannot rename old file system</td>
</tr>
<tr>
<td>.BDI</td>
<td>-52</td>
<td>314</td>
<td>Bad directory syntax</td>
</tr>
<tr>
<td>.FOP</td>
<td>-53</td>
<td>313</td>
<td>File already open</td>
</tr>
<tr>
<td>.BNM</td>
<td>-54</td>
<td>312</td>
<td>Bad file name</td>
</tr>
<tr>
<td>.BDV</td>
<td>-55</td>
<td>311</td>
<td>Bad device name</td>
</tr>
<tr>
<td>.BBE</td>
<td>-56</td>
<td>310</td>
<td>Bad block on device</td>
</tr>
<tr>
<td>.DUP</td>
<td>-57</td>
<td>307</td>
<td>Enter-duplicate entry in directory</td>
</tr>
<tr>
<td>.STK</td>
<td>-58</td>
<td>306</td>
<td>Not enough stack space (FCS or FCP)</td>
</tr>
<tr>
<td>.FHE</td>
<td>-59</td>
<td>305</td>
<td>Fatal hardware error on device</td>
</tr>
<tr>
<td>.NFI</td>
<td>-60</td>
<td>304</td>
<td>File ID was not specified</td>
</tr>
<tr>
<td>.ISQ</td>
<td>-61</td>
<td>303</td>
<td>Illegal sequential operation</td>
</tr>
<tr>
<td>.EOT</td>
<td>-62</td>
<td>302</td>
<td>End-of-tape detected</td>
</tr>
<tr>
<td>.BVR</td>
<td>-63</td>
<td>301</td>
<td>Bad version number</td>
</tr>
<tr>
<td>.BHD</td>
<td>-64</td>
<td>300</td>
<td>Bad file header</td>
</tr>
<tr>
<td>.OFL</td>
<td>-65</td>
<td>277</td>
<td>Device off line</td>
</tr>
<tr>
<td>.BCC</td>
<td>-66</td>
<td>276</td>
<td>Block check, CRC, or framing error</td>
</tr>
<tr>
<td>.ONL</td>
<td>-67</td>
<td>275</td>
<td>Device on line</td>
</tr>
<tr>
<td>.NNN</td>
<td>-68</td>
<td>274</td>
<td>No such node</td>
</tr>
<tr>
<td>.NFW</td>
<td>-69</td>
<td>273</td>
<td>Path lost to partner</td>
</tr>
<tr>
<td>.DIS</td>
<td>-69</td>
<td>273</td>
<td>Path lost to partner</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Error Decimal</td>
<td>Number Octal</td>
<td>Meaning</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>.BLB</td>
<td>-70</td>
<td>272</td>
<td>Bad logical buffer</td>
</tr>
<tr>
<td>.TMM</td>
<td>-71</td>
<td>271</td>
<td>Too many outstanding messages</td>
</tr>
<tr>
<td>.NDR</td>
<td>-72</td>
<td>270</td>
<td>No dynamic space available</td>
</tr>
<tr>
<td>.URJ</td>
<td>-73</td>
<td>267</td>
<td>Connection rejected by user</td>
</tr>
<tr>
<td>.NRJ</td>
<td>-74</td>
<td>266</td>
<td>Connection rejected by network</td>
</tr>
<tr>
<td>.EXP</td>
<td>-75</td>
<td>265</td>
<td>File expiration date not reached</td>
</tr>
<tr>
<td>.BTF</td>
<td>-76</td>
<td>264</td>
<td>Bad tape format</td>
</tr>
<tr>
<td>.NNC</td>
<td>-77</td>
<td>263</td>
<td>Not ANSI “D” format byte count</td>
</tr>
<tr>
<td>.NDA</td>
<td>-78</td>
<td>262</td>
<td>No data available</td>
</tr>
<tr>
<td>.NLK</td>
<td>-79</td>
<td>261</td>
<td>Task not linked to specified ICS/ICR interrupts</td>
</tr>
<tr>
<td>.NST</td>
<td>-80</td>
<td>260</td>
<td>Specified task not installed</td>
</tr>
<tr>
<td>.AST</td>
<td>-80</td>
<td>260</td>
<td>No AST specified in connect</td>
</tr>
<tr>
<td>.FLN</td>
<td>-81</td>
<td>257</td>
<td>Device off line when off-line request was issued</td>
</tr>
<tr>
<td>.IES</td>
<td>-82</td>
<td>256</td>
<td>Invalid escape sequence</td>
</tr>
<tr>
<td>.PES</td>
<td>-83</td>
<td>255</td>
<td>Partial escape sequence</td>
</tr>
<tr>
<td>.ALC</td>
<td>-84</td>
<td>254</td>
<td>Allocation failure</td>
</tr>
<tr>
<td>.ULK</td>
<td>-85</td>
<td>253</td>
<td>Unlock error</td>
</tr>
<tr>
<td>.WCK</td>
<td>-86</td>
<td>252</td>
<td>Write check failure</td>
</tr>
<tr>
<td>.NTR</td>
<td>-87</td>
<td>251</td>
<td>Task not triggered</td>
</tr>
<tr>
<td>.REJ</td>
<td>-88</td>
<td>250</td>
<td>Transfer rejected by receiving CPU</td>
</tr>
<tr>
<td>.FLG</td>
<td>-89</td>
<td>247</td>
<td>Event flag already specified</td>
</tr>
<tr>
<td>.DSQ</td>
<td>-90</td>
<td>246</td>
<td>Disk quota exceeded</td>
</tr>
<tr>
<td>.IQU</td>
<td>-91</td>
<td>245</td>
<td>Inconsistent qualifier usage</td>
</tr>
<tr>
<td>.RES</td>
<td>-92</td>
<td>244</td>
<td>Circuit reset during operation</td>
</tr>
<tr>
<td>.TML</td>
<td>-93</td>
<td>243</td>
<td>Too many links to task</td>
</tr>
<tr>
<td>.NNT</td>
<td>-94</td>
<td>242</td>
<td>Not a network task</td>
</tr>
<tr>
<td>.TMO</td>
<td>-95</td>
<td>241</td>
<td>Timeout on request</td>
</tr>
<tr>
<td>.CNR</td>
<td>-96</td>
<td>240</td>
<td>Connection rejected</td>
</tr>
<tr>
<td>.UKN</td>
<td>-97</td>
<td>237</td>
<td>Unknown name</td>
</tr>
<tr>
<td>.SZE</td>
<td>-98</td>
<td>236</td>
<td>Unable to size device</td>
</tr>
<tr>
<td>.MII</td>
<td>-99</td>
<td>235</td>
<td>Media inserted incorrectly</td>
</tr>
<tr>
<td>.SPI</td>
<td>-100</td>
<td>234</td>
<td>Spindown ignored</td>
</tr>
</tbody>
</table>

For additional information, refer to the RSX-11M-PLUS and Micro/RSX I/O Operations Reference Manual.
# RADIX-50 CONVERSION TABLE

To convert 1 to 3 characters to their Radix-50, 6-digit octal equivalent, add the appropriate octal codes from the following table, based on the positions (that is, first, second, or third) of the characters in the string.

<table>
<thead>
<tr>
<th>Character Set</th>
<th>First Character Code</th>
<th>Second Character Code</th>
<th>Third Character Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space</td>
<td>000000</td>
<td>000000</td>
<td>000000</td>
</tr>
<tr>
<td>A</td>
<td>003100</td>
<td>000050</td>
<td>000001</td>
</tr>
<tr>
<td>B</td>
<td>006200</td>
<td>000120</td>
<td>000002</td>
</tr>
<tr>
<td>C</td>
<td>011300</td>
<td>000170</td>
<td>000003</td>
</tr>
<tr>
<td>D</td>
<td>014400</td>
<td>000240</td>
<td>000004</td>
</tr>
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<td>E</td>
<td>017500</td>
<td>000310</td>
<td>000005</td>
</tr>
<tr>
<td>F</td>
<td>022600</td>
<td>000360</td>
<td>000006</td>
</tr>
<tr>
<td>G</td>
<td>025700</td>
<td>000530</td>
<td>000007</td>
</tr>
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<td>H</td>
<td>031000</td>
<td>000500</td>
<td>000010</td>
</tr>
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<td>I</td>
<td>034100</td>
<td>000550</td>
<td>000011</td>
</tr>
<tr>
<td>J</td>
<td>037200</td>
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<td>000012</td>
</tr>
<tr>
<td>K</td>
<td>042300</td>
<td>000670</td>
<td>000013</td>
</tr>
<tr>
<td>L</td>
<td>045400</td>
<td>000740</td>
<td>000014</td>
</tr>
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<td>001060</td>
<td>000016</td>
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<td>O</td>
<td>056700</td>
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<td>000017</td>
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<td>001200</td>
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<td>001250</td>
<td>000021</td>
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<td>073300</td>
<td>001370</td>
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<td>T</td>
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<td>001440</td>
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<td>002520</td>
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<td>Character Set</td>
<td>First Character Code</td>
<td>Second Character Code</td>
<td>Third Character Code</td>
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<td>003030</td>
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</table>
## OCTAL/DECIMAL CONVERSION TABLE

<table>
<thead>
<tr>
<th>Bits</th>
<th>Octal</th>
<th>Decimal</th>
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<td>8192</td>
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<td>2560</td>
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</tr>
<tr>
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<td>0</td>
</tr>
</tbody>
</table>

### Octal to Decimal

For each position of the octal value, locate the octal digit and its decimal equivalent in the conversion table. Add the decimal equivalents to obtain the decimal value.

Example:

\[
\begin{align*}
53702(8) &= ?(10) \\
n(8) &= n(10) \\
50000 &= 20480 \\
3000 &= 1536 \\
700 &= 448 \\
0 &= 0 \\
\hline
2 &= 2 \\
53702(8) &= 22466(10)
\end{align*}
\]

### Decimal to Octal

Locate in the conversion table the decimal value closest to, but not exceeding, the decimal value to be converted. Record the octal equivalent. Subtract the table decimal value from the decimal value to be converted. Repeat the process until the subtraction balance equals 0. Add the octal equivalents to obtain the octal value.

Example:

\[
\begin{align*}
22466(10) &= ?(8) \\
\hline
20480 &= 50000 - 20480 \\
1536 &= 3000 - 1536 \\
448 &= 700 - 448 \\
\hline
2 &= 2 - 2 \\
22466(10) &= 53702(8) = 0
\end{align*}
\]
RSX–11M–PLUS uses the standard 3-letter file types used by all DIGITAL-supplied software. These names indicate the actual contents of the files. Although any combination of three letters can be used, DIGITAL recommends that the standard types be used whenever possible. (Compilers and other system programs that refer to these file types look for the standard name as a default. For example, if the command FOR ADD = ADD is issued, the FORTRAN IV compiler looks for ADD.FTN; but if the file is named ADD.FOR, the compiler reports that there is no such file.)

<table>
<thead>
<tr>
<th>Type</th>
<th>File Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>.BAS</td>
<td>A BASIC–11 language source program</td>
</tr>
<tr>
<td>.BAT</td>
<td>Batch file (default)</td>
</tr>
<tr>
<td>.BLD</td>
<td>Indirect command files used as input to syngen</td>
</tr>
<tr>
<td>.B2S</td>
<td>A BASIC–PLUS–II language source program</td>
</tr>
<tr>
<td>.CBL</td>
<td>A COBOL language source program</td>
</tr>
<tr>
<td>.CDA</td>
<td>Crash dump binary file</td>
</tr>
<tr>
<td>.CFS</td>
<td>Error Logging control file string</td>
</tr>
<tr>
<td>.CLB</td>
<td>Indirect Command Processor command library</td>
</tr>
<tr>
<td>.CMD</td>
<td>MCR or task commands (an indirect command file)</td>
</tr>
<tr>
<td>.CNF</td>
<td>An Error Logging language source file</td>
</tr>
<tr>
<td>.COR</td>
<td>A SLP correction file</td>
</tr>
<tr>
<td>.DAT</td>
<td>File containing data (as opposed to a program)</td>
</tr>
<tr>
<td>.DIR</td>
<td>Directory file</td>
</tr>
<tr>
<td>.DMP</td>
<td>File Dump Utility output file</td>
</tr>
<tr>
<td>.ERR</td>
<td>Error Logger output file</td>
</tr>
<tr>
<td>.FTN</td>
<td>FORTRAN IV, FORTRAN IV–PLUS or FORTRAN–77 language source file</td>
</tr>
<tr>
<td>.HLP</td>
<td>Help file</td>
</tr>
<tr>
<td>.ICF</td>
<td>An Error Logging intermediate form file output from Control File Language compiler</td>
</tr>
<tr>
<td>.LOG</td>
<td>Batch or console log file</td>
</tr>
<tr>
<td>.LST</td>
<td>A listing file</td>
</tr>
<tr>
<td>.MAC</td>
<td>A MACRO–11 source program</td>
</tr>
<tr>
<td>.MAP</td>
<td>A Task Builder memory allocation map</td>
</tr>
<tr>
<td>.MLB</td>
<td>A macro library</td>
</tr>
<tr>
<td>.OBJ</td>
<td>An object program (output from either the MACRO–11 Assembler or a compiler)</td>
</tr>
<tr>
<td>.ODL</td>
<td>A Task Builder overlay descriptor</td>
</tr>
<tr>
<td>.OLB</td>
<td>An object module library</td>
</tr>
<tr>
<td>.PAT</td>
<td>Correction file used by assembler to create a patched object module</td>
</tr>
<tr>
<td>.PMD</td>
<td>Postmortem or snapshot dump file</td>
</tr>
<tr>
<td>Type</td>
<td>File Contents</td>
</tr>
<tr>
<td>------</td>
<td>---------------</td>
</tr>
<tr>
<td>.POB</td>
<td>Patched object module used by the PAT utility</td>
</tr>
<tr>
<td>.SML</td>
<td>The system macro library</td>
</tr>
<tr>
<td>.STB</td>
<td>Symbol table file</td>
</tr>
<tr>
<td>.SYM</td>
<td>An Error Logging symbol file</td>
</tr>
<tr>
<td>.SYS</td>
<td>A bootable system image or other system file</td>
</tr>
<tr>
<td>.TMP</td>
<td>A temporary file</td>
</tr>
<tr>
<td>.TSK</td>
<td>A task image file</td>
</tr>
<tr>
<td>.TXT</td>
<td>A text file</td>
</tr>
<tr>
<td>.ULB</td>
<td>A universal file library</td>
</tr>
</tbody>
</table>