

HP 3000 Series II Computer System



FCOPY Reference Manual



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This manual describes the HP 3000 File Copier, FCOPY/3000, which enables you to copy files or selected portions of files from any supported input device to any supported output device. FCOPY runs under the control of either the Multiprogramming Executive operating system (MPE-C) on an HP 3000 Computer System or the Multiprogramming Executive II operating system (MPE-II) on an HP 3000 Series II Computer System. This manual applies to both operating environments.

In order to use FCOPY you should have a working knowledge of the following:

- How to run jobs and sessions
- The HP 3000 accounting structure (the relationship between accounts, groups, and files)
- File/device relationships
- File security (file access restrictions and lockwords)
- The various file characteristics and how to specify or modify them.

In addition, if you are using a system which is not attended by a console operator you should be familiar with some of the console operator commands and how to enter them through the system console.

You may need to consult the following manuals:

- *Using the HP 3000* (HP part number 03000-90121) provides a beginner's tutorial introduction to the use of the HP 3000.
- *MPE/3000 Operating System Reference Manual* (32000-90002) describes the MPE-C operating system.
- *MPE/3000 Console Operator's Guide* (32000-90004) describes the MPE-C console operator's capabilities and commands.
- *HP 3000 Series II Computer System General Information Manual* (30000-90008) provides an overview of the HP 3000 Series II Computer System and the MPE-II environment.
- *MPE Commands Reference Manual* (30000-90009) describes the MPE-II commands.
- *MPE Intrinsic Reference Manual* (30000-90010) describes the MPE-II system intrinsic.
- *HP 3000 Series II Computer System Console Operator's Guide* (30000-90013) describes the MPE-II console operator's capabilities and commands.
- *KSAM/3000 Reference Manual* (30000-90079) includes a description of the use of FCOPY with KSAM files.

This manual is arranged in four sections and two appendices. Section I introduces you to FCOPY, summarizes its capabilities, and presents some examples illustrating the use of FCOPY. Section II describes all of the functions which can be specified in an FCOPY command and includes examples of the use of each function. Section III presents nine complete examples illustrating the use of FCOPY in both batch jobs and interactive sessions. Section IV presents all of the FCOPY warning and error messages and includes a brief description of each message's meaning and the recommended corrective action. Appendix A describes how to use FCOPY in conjunction with HP 2644A Interactive Display Terminal peripherals (the magnetic tape cartridges and the optional line printer). Appendix B summarizes the default file definition values that are used when FCOPY opens a specified "from" or "to" file.

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INTRODUCING FCOPY/3000

SECTION

I

FCOPY/3000 is a utility program within an HP 3000 Multiprogramming Executive operating system environment that makes it possible for you to copy data from one file to another. With FCOPY you can copy the content of an entire file or a selected portion of a file from any supported input device to any supported output device. FCOPY is very convenient for making multiple copies of files, for making account-independent magnetic tape copies of disc files (this makes it easier to move files from one HP 3000 to another), or for transferring programs or data from one medium to another (such as from punched cards or magnetic tape to disc). In addition, FCOPY has several powerful features that extend its usefulness far beyond these basic functions. The various FCOPY functions are summarized in Table 1-1 and some of the more important ones are discussed in the following paragraphs.

The FCOPY subset function allows you to perform operations using a specified portion of a file. You may designate the file subset as being a range of contiguous records (such as records 40 through 75) or as being all records that contain a certain data item (such as all records that contain the character string PASTDUE in columns 60 through 66). This makes it possible for you to copy or display only the desired records of a file or to divide an existing file into several separate files.

Occasionally you may encounter a disc file or a magnetic tape whose contents are unknown. The FCOPY display functions (OCTAL, CHAR, and HEX) are particularly useful in that they allow you to examine the contents of such files either at a terminal or by way of a line printer listing.

FCOPY also provides a code translate function that converts data from ASCII to EBCDIC or BCDIC, and vice versa, as part of a copying operation. This makes it easy for you to prepare magnetic tapes to be used at different computer installations or to incorporate magnetic tapes from other computer installations into your HP 3000 computer system.

Each file on magnetic tape is terminated by an end-of-file (EOF) mark. The FCOPY skip end-of-file function gives you great control over FCOPY operations involving magnetic tape in that it allows you to position the tape at the desired place for either reading or writing. For example, to copy the third file from a magnetic tape to disc you can use the skip end-of-file function to skip over the first two files on the tape. Similarly, if you have a tape that already contains four files and you want to add a fifth file to it you can use the skip end-of-file function to skip over the existing four files on the tape. You can also use the skip end-of-file function for skipping over volume and header labels on a magnetic tape.

A compiled and prepared version of FCOPY/3000 resides in the file FCOPY in the public group of the system account. To use FCOPY, you must first bring it into memory and pass control to it. You do this with the following command:

```
:RUN FCOPY.PUB.SYS
```

NOTE

In a session the colon prompt is automatically issued by MPE. You do *not* type it. In a job you must type the entire command (including the colon) with the colon appearing in column 1.

Table 1-1. FCOPY Functions

Action To Be Performed	FCOPY Function Specified in <i>functionlist</i>	Syntax Example	Text Discussion
Copy data from one file to another without performing any of the other FCOPY functions listed below.	(none)	FROM=A;TO=B	2-3
Change character codes from ASCII to EBCDIC (or BCDIC) or vice versa.	EBCDICIN BCDICIN EBCDICOUT BCDICOUT	FROM=A;TO=B;EBCDICIN	2-5
Convert any lower-case characters to upper case.	UPSHIFT	FROM=A;TO=B;UPSHIFT	2-20
Use only a specified portion of a file in an FCOPY operation.	SUBSET="characterstring" [, [column] [, EXCLUDE]] SUBSET=#patternlist# [, [column] [, EXCLUDE]] SUBSET=[starting-record-number] [, number-of-records] SUBSET=[starting-record-number] [:last-record-number] SUBSET	FROM=A;TO=B;SUBSET="MALE",15,EXCLUDE	2-17
Skip end-of-file (EOF) marks on either or both the "from" and "to" files on magnetic tape.	SKIPEOF=[from-eofs] [, to-eofs]	FROM=*A;TO=*B;SKIPEOF=2,6	2-16
Ignore bad records in the "from" file on magnetic tape and report each bad record so ignored.	IGNERR=number-of-errors	FROM=*A;TO=B;IGNERR=15	2-14
Open a new "to" disc file under the specified name.	NEW	FROM=A;TO=B;NEW	2-15
Verify the accuracy of a copy immediately after creating it, where both files are on disc or magnetic tape.	VERIFY [=number-of-errors]	FROM=A;TO=B;VERIFY=3	2-21
Compare, without copying or changing the contents, the "from" and "to" files.	COMPARE [=number-of-errors]	FROM=A;TO=B;COMPARE=15	2-7
Display octal images of the records of a file on a word-by-word basis.	OCTAL[;CHAR] [;NORECNUM] [;TITLE="title"]	FROM=A;TO=B;OCTAL;NORECNUM	2-12
Display character images of the records of a file on a word-by-word basis.	CHAR[;OCTAL or ;HEX] [;NORECNUM] [;TITLE="title"]	FROM=A;TO=B;CHAR;TITLE="ABCDE"	2-8
Display hexadecimal images of the records of a file on a word-by-word basis.	HEX[;CHAR] [;NORECNUM] [;TITLE="title"]	FROM=A;TO=B;HEX;CHAR;NORECNUM	2-10

Table 1-1. FCOPY Functions (continued)

Action To Be Performed	FCOPY Function Specified in <i>functionlist</i>	Syntax Example	Text Discussion
When copying KSAM files, specify the location of a key whose value determines the sequence in which the file is copied.	KEY = character location	FROM=KSAM; TO=B; KEY=1	2-22
When copying KSAM files, copy the data file without regard to any key value and also include deleted records.	NOKSAM	FROM=KSAM; TO=B; NOKSAM	2-23

If you are copying files to or from devices other than disc, you must define the files and their associated devices with MPE :FILE commands prior to calling FCOPY. For example, if a file is to be copied from punched cards to magnetic tape you could define the two files as follows:

```
:FILE FILE1;DEV=CARD
:FILE FILE2;DEV=TAPE;REC=-80,25,F,ASCII
:RUN FCOPY.PUB.SYS
```

where FILE1 and FILE2 are the formal file designators you will be supplying to FCOPY when you actually perform the copying operation, CARD is the device class name for a card reader, and TAPE is the device class name for a magnetic tape unit. Note that device class names are defined by each installation at system configuration time and may vary from one installation to another. The MPE :FILE command is described in Section VI of the *MPE Commands Reference Manual* (HP part number 30000-90009).

Once you have called FCOPY in an interactive session, it prompts you by printing a greater-than symbol (>) in column 1 of the next line. You now enter an FCOPY command that defines an operation to be performed and then press the return key. FCOPY performs the operation and then prompts you for another command. This cycle continues until you enter EXIT, at which time FCOPY terminates and returns control to the MPE Command Interpreter.

If you are using FCOPY in a batch job, you do *not* supply the FCOPY prompt character (>) and the FCOPY commands begin in column 1 of each record.

The FCOPY command has the following format:

$$FROM = \left\{ \begin{array}{c} fromfile \\ * \\ (empty) \end{array} \right\} ; TO = \left\{ \begin{array}{c} tofile \\ * \\ (empty) \end{array} \right\} [; functionlist]$$

where: braces { } indicate one entry must be selected.
 brackets [] indicate an optional entry.
fromfile is the name of the input file.
tofile is the name of the output file.
 * (an asterisk) specifies "continue using the file specified in the preceding FCOPY command at the next record after the record where the preceding FCOPY operation stopped."
 (empty) i.e., no entry, specifies the job/session input device \$STDIN for the "from" file or the job/session list device \$STDLIST for the "to" file.
 functionlist is one or more entries to specify one or more FCOPY functions (see Table 1-1).

Some examples of FCOPY commands are as follows:

In a Job:

FROM=;TO=	Copy from \$STDIN to \$STDLIST.
FROM=DISCFILE; TO=*ANYFILE;CHAR;OCTAL	List the content of the disc file named DISCFILE in both character and octal formats on the device defined for the formal file designator ANYFILE, as defined on a previous :FILE card.
FROM=*;TO=NEWFILE;NEW	Copy the content of the "from" file specified in the preceding FCOPY command to a newly-created disc file named NEWFILE (FCOPY interacts with the MPE File System to create NEWFILE).

In a Session:

>FROM=DISC1;TO=DISC2	Copy the content of the disc file named DISC1 to the disc file named DISC2.
>FROM=*;TO=DISC3;NEW	Copy the content of the "from" file specified in the preceding FCOPY command to a newly-created disc file named DISC3 (FCOPY interacts with the MPE File System to create DISC3).
>FROM=MYFILE;TO=*MAGTP; SUBSET="OVERDUE",35,SKIPEOF=,2	Position the magnetic tape defined for the formal file designator MAGTP following the second end-of-file mark on the tape and then copy only those records in the disc file named MYFILE which contain the character string OVERDUE starting in character position 35 to the magnetic tape.

The previous examples illustrate the syntax of the FCOPY command. Complete examples of the use of FCOPY are presented in the remainder of this section and in Section III of this manual.

1-1. EXAMPLES

The remainder of this section presents four annotated examples, two showing how to use FCOPY from a batch job and two showing how to use it from an interactive session. For more examples, see Section IV.

1.2 CARD READER TO LINE PRINTER (Batch Job)

This example shows a batch job in which FCOPY reads a deck of cards and then lists them on a line printer.

The job deck is as follows:

		:JOB USER.ACCOUNT
		:RUN FCOPY.PUB.SYS
		FROM=; TO=
Card deck to be listed	{	THIS IS CARD 1.
		THIS IS CARD 2.
		THIS IS CARD 3.
		THIS IS CARD 4.
		THIS IS CARD 5.
		THIS IS CARD 6.
		:EOD
		:EOJ

The FCOPY command FROM=;TO= specifies (by default) that the "from" file is the standard job input device \$STDIN, in this case a card reader, and the "to" file is the standard job listing device \$STDLST, in this case a line printer. The job produces output on the line printer as shown below.

```
:JOB      USER.ACCOUNT, PUB
PRI= DS;  INPRI= 8 ;  TIME= ?
JOB NUMBER = #J59
TUE, APR 13, 1976,  3:01 PM
HP32002A.00.49

:RUN FCOPY.PUB.SYS
```

```
PAGE 1  HEWLETT-PACKARD 32212X.0.04 FILE COPIER  TUE, APR 13, 1976,  3:02 PM
FROM=;TO=
```

```
WARNING: FROMFILE RECSIZE IS 80 BYTES, TOFILE RECSIZE IS 133 BYTES.
```

```
THIS IS CARD 1.
THIS IS CARD 2.
THIS IS CARD 3.
THIS IS CARD 4.
THIS IS CARD 5.
THIS IS CARD 6.
EOF FOUND IN FROMFILE AFTER RECORD 5
```

NOTE

FCOPY considers the first record to be record 0.

```
6 RECORDS PROCESSED *** 0 ERRORS
```

```
END OF PROGRAM
:EOJ
```

```
CPU (SEC) = 2
ELAPSED (MIN) = 2
TUE, APR 13, 1976,  3:02 PM
END OF JOB
```

1-3. DISC TO LINE PRINTER (Batch Job)

This example shows a batch job in which FCOPY displays (in octal) the content of several disc files via a line printer.

The job deck is as follows:

```
:JOB USER.ACCOUNT
:RUN FCOPY.PUB.SYS
FROM=DISC1;TO=;OCTAL
```

NOTE

```
.
```

The standard job list output and octal listings are shown only for DISC1 and DISC7.

```
FROM=DISC7;TO=;OCTAL
EXIT
:EOJ
```

The above job deck produces a series of listings on the line printer: the standard job list output followed by the octal file listings.

```
:JOB    USER.ACCOUNT, PUB
PRI= DS;  INPRI= 14;  TIME= ?
JOB NUMBER = #J73
TUE, APR 13, 1976,  4:13 PM
HP32002A.00.49

:FILE LIST;DEV=LP
:RUN FCOPY.PUB.SYS
```

```
PAGE 1  HEWLETT-PACKARD 32212X.0.04 FILE COPIER  TUE, APR 13, 1976,  4:14 PM

FROM=DISC1;TO=*LIST;OCTAL
EOF FOUND IN FROMFILE AFTER RECORD 5

6 RECORDS PROCESSED *** 0 ERRORS

FROM=DISC7;TO=*LIST;OCTAL
EOF FOUND IN FROMFILE AFTER RECORD 3

4 RECORDS PROCESSED *** 0 ERRORS

EXIT

END OF PROGRAM
:EOJ

CPU (SEC) = 3
ELAPSED (MIN) = 8
TUE, APR 13, 1976,  4:16 PM
END OF JOB
```

STANDARD JOB LIST OUTPUT

DISC1.PUB.ACCOUNT RECORD 0 (%0)

000000: 052110 044523 020111 051440 046111 047105 020061 027040
 000010: 020124 044105 020070 026504 044507 044524 020116 052515
 000020: 041105 051123 020101 052040 052110 042440 051111 043510
 000030: 052040 040522 042440 052110 042440 020040 020040 020040
 000040: 020040 020040 020040 020040 030060 030060 030460 030060

DISC1.PUB.ACCOUNT RECORD 1 (%1)

000000: 052105 054124 020105 042111 052117 051040 046111 047105
 000010: 020116 052515 041105 051123 027040 020116 047524 042440
 000020: 052110 040524 020124 044105 020122 042503 047522 042040
 000030: 047125 046502 042522 051440 020040 020040 020040 020040
 000040: 020040 020040 020040 020040 030060 030060 031060 030060

DISC1.PUB.ACCOUNT RECORD 2 (%2)

000000: 051525 050120 046111 042504 020102 054440 043103 047520
 000010: 054440 051524 040522 052040 040524 020132 042522 047440
 000020: 053510 044514 042440 052110 042440 052105 054124 020105
 000030: 042111 052117 051040 046111 047105 020040 020040 020040
 000040: 020040 020040 020040 020040 030060 030060 031460 030060

OCTAL LISTING OF DISC1

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DISC7.PUB.ACCOUNT RECORD 0 (%0)

000000: 052110 044523 020111 051440 046111 047105 020117 047105
 000010: 027040 020124 044111 051440 042530 040515 050114 042440
 000020: 051510 047527 051440 040440 041510 040522 040503 052105
 000030: 051040 042111 051520 046101 054440 020040 020040 020040
 000040: 020040 020040 020040 020040 030060 030060 030460 030060

DISC7.PUB.ACCOUNT RECORD 1 (%1)

000000: 052523 044516 043440 052110 042440 047117 051105 041516
 000010: 052515 020117 050124 044517 047056 020040 040507 040511
 000020: 047040 052110 042522 042440 044523 020116 047440 052111
 000030: 052114 042456 020040 044506 020040 020040 020040 020040
 000040: 020040 020040 020040 020040 030060 030060 031060 030060

DISC7.PUB.ACCOUNT RECORD 2 (%2)

000000: 052110 042440 042111 051520 046101 054440 041510 040522
 000010: 040503 052105 051123 020106 052516 041524 044517 047040
 000020: 044523 020116 047524 020103 047515 041111 047105 042040
 000030: 053511 052110 020117 041524 040514 020040 020040 020040
 000040: 020040 020040 020040 020040 030060 030060 031460 030060

OCTAL LISTING OF DISC7

1-4. DISC TO DISC (Interactive Session)

This example shows part of an interactive session in which FCOPY is used to copy a file from one account (ACCT1) to another (ACCT2). The file in ACCT2 is created by FCOPY and has the same attributes as the file in ACCT1. The commands entered by the user are underscored. The FCOPY portion of the session is as follows:

```
.  
.  
  
:RUN FCOPY.PUB.SYS  
  
HP32212A.0.03 FILE COPIER  
  
>FROM=MASTER.GRP1.ACCT1; TO=MASTER.GRP1.ACCT2; NEW  
EOF FOUND IN FROMFILE AFTER RECORD 679  
  
680 RECORDS PROCESSED *** 0 ERRORS  
  
>EXIT  
  
END OF PROGRAM  
  
.  
.
```

1-5. DISC TO TERMINAL (Interactive Session)

This example shows part of an interactive session in which FCOPY is used to display five records (records 30 through 34) of a disc file at the user's log-on terminal. In this example the disc file is an ASCII character file called CUSTDATA containing the names and addresses of customers. Since it is desired to display the content of the five records in the simplest and most easy to read format the user has specified the display characters function (CHAR) with the NORECNUM option (this option suppresses the printing of the file name and record numbers). The commands entered by the user are underscored. The FCOPY portion of the session is as follows:

```
.  
.  
  
:RUN FCOPY.PUB.SYS  
  
HP32212X.0.04 FILE COPIER  
  
>FROM=CUSTDATA; TO=; SUBSET=29:33; CHAR; NORECNUM  
XYZ MANUFACTURING CO. 131 PINE STREET SF  
WIDGET, INC. 43721 OAK STREET DET  
ROBERT ALCOTT & ASSOCIATES 752 SURF AVENUE CHI  
WILLIAM LEWIS & SON 3217 W. MADISON AVENUE NY  
SUPER GIZMO OF NEVADA, INC. 431 S. JACKPOT LANE RENO  
5 RECORDS PROCESSED *** 0 ERRORS  
  
>EXIT  
  
END OF PROGRAM  
  
.  
.
```

In the FCOPY command, the parameter TO= specifies (by default) that the standard session list device \$STDLIST (the user's log-on terminal) is the "to" file. Note that FCOPY considers the first record to be record 0. The parameter SUBSET=29:33 specifies that only records 30 through 34 are to be displayed.

This section describes all of the functions that you can specify in an FCOPY command. The various functions can be used individually or in combination. Included in the description of each is a set of annotated examples. Since the intent of these examples is to illustrate the proper FCOPY command syntax for using the particular function, the associated MPE :FILE commands (if required) are not shown. Complete examples are presented in Section IV.

2-1. FILE ATTRIBUTE REQUIREMENTS

FCOPY imposes a few requirements as to the attributes of the “to” and “from” files. The requirements vary according to the FCOPY function being used and are as follows:

Function	Restrictions
Copy, or Character Translate, or Subset, or Upshift	The “from” file must have read access, the “to” file must have write access; or, to append a copy onto a file, the “to” file must have append access.
Skip End-of-File	<i>Either or both</i> the “from” file and the “to” file device must be a magnetic tape unit, whichever is to use this function; the “from” file must have read access, the “to” file must have write access.
Ignore Errors	The “from” file device must be a magnetic tape unit with read access, the “to” file must have write access.
New File	The “from” file must have read access.
Verify	Both the “from” file and the “to” file devices must be a disc drive or a magnetic tape unit; the “from” file must have read access, the “to” file must have read/write access.
Compare	The “from” file and the “to” must both have read access; the “to” file record size must equal that of the “from” file or both files must have variable-length records.
Display Characters, or Display Octal, or Display Hexadecimal	The “from” file must have read access, the “to” file must have write access. Further, the “to” file, normally, a list device such as \$STDLIST, can be another device for intermediate storage of the data. The record size for such an intermediate storage device should be that of the list device that ultimately will print the data and must be ≥ 60 bytes (30 words).

2-2. INTERRUPTING FCOPY

In a session you can prematurely terminate an FCOPY operation by entering a CONTROL-Y (press and hold the CONTROL key and press Y). FCOPY terminates the operation and then prompts you for another command.

Once you have called FCOPY, you can temporarily return control to the MPE Command Interpreter by pressing the BREAK key. The command interpreter responds by issuing a colon (:) prompt. You may then enter MPE commands (:FILE, :BUILD, :LISTF, and so forth). When you are ready to continue with the interrupted FCOPY processing, enter :RESUME.

COPY

FROM = ;TO =

2-3. COPY

To copy the content of one file to another without performing any of the other FCOPY functions, use an FCOPY command with the following format:

FROM=[*fromfile*] ;TO=[*tofile*]

where: *fromfile* specifies the file to be copied. This can be an actual file designator, a formal file designator, or an asterisk (*). An asterisk specifies the "from" file designated in the immediately preceding FCOPY command. If *fromfile* is omitted, the standard job/session input device \$STDIN is assumed.

tofile specifies the file to receive the data. This can be an actual file designator, a formal file designator, or an asterisk (*). An asterisk specifies the "to" file designated in the immediately preceding FCOPY command. If *tofile* is omitted, the standard job/session list device \$STDLIST is assumed.

For example, to copy the contents of a disc file named DISC1 into another disc file named COPY1 use the following FCOPY command:

```
FROM=DISC1; TO=COPY1
```

There are many FCOPY functions that can also be specified in an FCOPY command. They are described in the remainder of this section. If additional functions are included in the FCOPY command, they are separated from each other (and from the TO= parameter) by semicolons. For example, consider the following command:

```
FROM=*TAPE; TO=DISCFIL; SUBSET; EBCDICIN; SKIPEOF=2; NEW
```

The above command specifies that one EBCDIC file (the third file on the tape) is to be copied from the magnetic tape *TAPE to a new permanent disc file (named DISCFIL) created by FCOPY. The data being transferred is converted from EBCDIC to ASCII during the course of the copying operation.

2-4. COMMENTS

The following guidelines apply to the use of FCOPY commands.

1. If you are copying files to or from devices other than disc, you should define the files and their associated devices with MPE :FILE commands prior to issuing the FCOPY command.

COPY

FROM = ; TO =

2. The "to" file definition (:FILE command) can specify a different blocking factor than that of the "from" file.
3. The "to" file definition (:FILE command) can specify access type APPEND, to append the "from" file contents onto the end of the "to" file.
4. When FCOPY functions are combined in one command they may appear in any order.
5. There are two limitations on combining FCOPY functions:
 - a. COMPARE can be combined only with SKIPEOF, SUBSET, or IGNERR.
 - b. CHAR, OCTAL, and HEX *cannot* be combined with VERIFY, NEW, EBCDICOUT, or BCDICOUT.
6. You may include blanks between the elements of an FCOPY command for clarity:

```
>FROM=TAPE; TO=MEN; SUBSET="MALE",30; SKIPEOF=2
```

7. Each FCOPY command may be continued on more than one line (record). To do this, use an ampersand (&) as the final character in each line except the last:

```
>FROM=DATAFILE; &  
>TO=WOMEN; &  
>SUBSET="FEMALE",30; &  
>SKIPEOF=2
```

8. More than one FCOPY command can be issued during a given job or session, with one restriction: \$STDIN (the standard job/session input device) can be used as the "from" file only once, for the last or only FCOPY command. Data input through \$STDIN must be terminated by a line or record containing only :EOD. The :EOD command terminates FCOPY and returns control to the MPE Command Interpreter.
9. Numeric parameters in FCOPY commands can be supplied in either octal or decimal form. To signify that a numeric parameter is in octal, merely precede it with a percent sign (%). Otherwise the parameter is assumed to be in decimal.

CHARACTER TRANSLATE

EBCDICIN
EBCDICOUT
BCDICIN
BCDICOUT

2-5. CHARACTER TRANSLATE

The character translate function converts characters from ASCII to EBCDIC, ASCII to BCDIC, EBCDIC to ASCII, or BCDIC to ASCII as part of a copying operation. This makes it easy for you to prepare magnetic tapes to be used at different computer installations or to incorporate magnetic tapes from other computer installations into your HP 3000 computer system.

The character translate function has the following four formats:

EBCDICIN	Translate from EBCDIC to ASCII
BCDICIN	Translate from BCDIC to ASCII
EBCDICOUT	Translate from ASCII to EBCDIC
BCDICOUT	Translate from ASCII to BCDIC

2-6. EXAMPLES

```
>FROM=*TAPE; TO=DISC1; SUBSET; EBCDICIN
```

In the above example, all characters are converted from EBCDIC to ASCII as the first file on the magnetic tape *TAPE is copied to the disc file DISC1. The content of the magnetic tape remains unchanged.

```
>FROM=*TAPE; TO=DISC7; SKIPEOF=3; SUBSET; BCDICIN
```

In the above example, all characters are converted from BCDIC to ASCII as the fourth file on the magnetic tape *TAPE is copied to the disc file DISC7. The content of the magnetic tape remains unchanged.

```
>FROM=DISC1; TO=*TAPE; EBCDICOUT
```

In the above example, all characters are converted from ASCII to EBCDIC as the disc file DISC1 is copied to the magnetic tape *TAPE starting at the load point. The content of DISC1 remains unchanged.

```
>FROM=DISC5; TO=*TAPE; SKIPEOF=,2; BCDICOUT
```

In the above example, all characters are converted from ASCII to BCDIC as the disc file DISC5 is copied to the magnetic tape *TAPE following the second end-of-file mark on the tape. The content of DISC5 remains unchanged.

CHARACTER TRANSLATE

EBCDICIN
EBCDICOUT
BCDICIN
BCDICOUT

2-7. COMMENTS

The FCOPY character translate function applies to the following character codes: ASCII, EBCDIC, and BCDIC.

In BCDIC there are four character codes which can be interpreted in either of two ways. FCOPY translates them as follows:

BCDIC	ASCII
▣ and)	)
& and +	+
% and (	(
# and =	=

Two ASCII characters, ! (exclamation point) and | (vertical bar), are both translated to the EBCDIC character | (vertical bar).

COMPARE

COMPARE =

2-8. COMPARE

The compare function compares the content of the “from” file against the content of the “to” file, record-by-record, without changing either. The two files may reside on any devices; however, the record characteristics of the two must be identical (record size, record format (fixed/variable/undefined), blocking factor, record type (ASCII/binary)). The compare function may be combined only with the subset, skip end-of-file, and ignore errors functions.

The compare function has the following format:

COMPARE=number-of-errors

where *number-of-errors* is an integer specifying the maximum number of comparison errors to be tolerated. If this number is exceeded, the operation terminates. If *number-of-errors* is omitted, the default value is 1.

Each time FCOPY detects an error during a compare operation, it prints a message on the standard listing device (your terminal in a session or a line printer in a job) specifying the number of the “from” file record in which the error occurred.

2-9. EXAMPLES

```
>FROM=FILEA; TO=DUP1; COMPARE
```

In the above example, FCOPY compares the content of the disc file FILEA against the content of the disc file DUP1. If it finds an error, FCOPY prints a message on the standard listing device and terminates the operation.

```
>FROM=*TAPE4; TO=DISC2; SUBSET; COMPARE=5
```

In the above example, FCOPY compares the content of the first file on the magnetic tape *TAPE against the content of the disc file DISC2. Each time it finds an error, FCOPY prints a message on the standard listing device. The sixth error terminates the operation.

DISPLAY CHARACTERS

CHAR

2-10. DISPLAY CHARACTERS

The display characters function allows you to display the content of a file, record-by-record, in the form of ASCII characters. Normally the "to" file is a line printer. However, it can be a keyboard display terminal or an intermediate disc file to be listed at a later time. If the display is being routed to an intermediate disc file, the record size of the intermediate disc file must be at least 60 bytes (30 words) in length.

Non-printing characters are displayed as a period. Note that some devices are only capable of displaying uppercase alphabetic characters. For these devices, the device controller automatically converts lowercase alphabetic characters to uppercase. In such instances it may be desirable to combine the character and octal or hexadecimal display functions to obtain the actual (unaltered) character codes in addition to the character images.

The display characters function has the following format:

$$\text{CHAR} \left[\left[\begin{array}{l} ;\text{OCTAL} \\ ;\text{HEX} \end{array} \right] \right] \left[;\text{NORECNUM} \right] \left[;\text{TITLE}=\text{"title"} \right]$$

where:	OCTAL	specifies that the display octal and display characters functions are to be combined.
	HEX	specifies that the display hexadecimal and display characters functions are to be combined.
	NORECNUM	specifies that the file identification, record numbers, and word offset numbers are to be omitted from the display.
	<i>title</i>	is an ASCII character string to be used as the title of the display. If the "to" file is a line printer, the title is printed at the top of each page. Otherwise the title is written only once, at the beginning of the "to" file. The TITLE= parameter may only be used in conjunction with the FCOPY display functions (CHAR, OCTAL, and/or HEX). <i>title</i> may contain up to 70 characters and continuation (from one line or record to another) should not be used.

2-11. EXAMPLES

```
>FROM=TEXT1; TO=*LP; CHAR
```

The above example produces the following type of display:

DISPLAY CHARACTERS

CHAR

```
TEXT1.PUB.ACCOUNT RECORD 0 (%0)
000000:  THIS IS LINE 1.  THE 8-DIGIT NUMBERS AT THE RIGHT ARE THE      00001000
TEXT1.PUB.ACCOUNT RECORD 1 (%1)
000000:  TEXT EDITOR LINE NUMBERS.  NOTE THAT THE RECORD NUMBERS      00002000
TEXT1.PUB.ACCOUNT RECORD 2 (%2)
000000:  SUPPLIED BY FCOPY START AT ZERO WHILE THE TEXT EDITOR LINE      00003000
TEXT1.PUB.ACCOUNT RECORD 3 (%3)
000000:  NUMBERS START AT ONE.  THIS EXAMPLE SHOWS A CHARACTER          00004000
TEXT1.PUB.ACCOUNT RECORD 4 (%4)
000000:  DISPLAY WHICH INCLUDES THE FILE IDENTIFICATION, RECORD          00005000
TEXT1.PUB.ACCOUNT RECORD 5 (%5)
000000:  NUMBERS, AND WORD NUMBERS.  THERE IS NO TITLE.                  00006000
```

The file TEXT1.PUB ACCOUNT is an ASCII file created using the HP 3000 Text Editor. Note that the record numbers supplied by FCOPY start at zero while the text editor line numbers start at one. The octal word number at the start of each line of data specifies the sequential number within the record of the first word of data in the line. In this particular example, the word number is of no assistance to you because it is always 000000.

```
>FROM=TEXT2; TO=*LP; CHAR; NORECNUM
```

The above example produces the following type of display:

```
THIS IS LINE ONE.  THIS EXAMPLE SHOWS A CHARACTER DISPLAY      00001000
USING THE NORECNUM OPTION.  AGAIN THERE IS NO TITLE.  AS      00002000
IN THE PREVIOUS EXAMPLE, THE 8-DIGIT NUMBERS AT THE RIGHT      00003000
ARE THE TEXT EDITOR LINE NUMBERS.  IF THE DISPLAY CHAR-        00004000
ACTERS FUNCTION IS NOT COMBINED WITH OCTAL OR HEX, THIS        00005000
IS THE MOST COMMONLY USED FORMAT.                              00006000
```

TEXT2 is also an ASCII file created using the text editor.

DISPLAY HEXADECIMAL

HEX

2-12. DISPLAY HEXADECIMAL

The display hexadecimal function allows you to display the content of a file, record-by-record, in hexadecimal representation. Normally the “to” file is a line printer. However, it can be a keyboard terminal or an intermediate disc file to be listed at a later time. If the display is being routed to an intermediate disc file, the record size of the intermediate disc file must be at least 60 bytes (30 words) in length.

The display hexadecimal function has the following format:

```
HEX [;CHAR] [;NORECNUM] [;TITLE="title"]
```

where: CHAR specifies that the display characters and display hexadecimal functions are to be combined.

NORECNUM specifies that the file identification information, record numbers, and word offset numbers are to be omitted from the display.

title is an ASCII character string to be used as the title of the display. If the “to” file is a line printer, the title is printed at the top of each page. Otherwise the title is written only once, at the beginning of the “to” file. The TITLE= parameter may only be used in conjunction with the FCOPY display functions (CHAR, OCTAL, and/or HEX). *title* may contain up to 70 characters and continuation (from one line or record to another) should not be used.

2-13. EXAMPLES

```
>FROM=TEXT3; TO=*LP; HEX
```

The above example produces the following type of display:

TEXT3.PUB.ACCOUNT RECORD 0 (%0)

```
000000: 5448 4953 2049 5320 4C49 4E45 2031 2E20 2054 4845 2038 2D44 4947 4954 204E 554D
000020: 4245 5253 2041 5420 5448 4520 5249 4748 5420 4152 4520 5448 4520 2020 2020 2020
000040: 2020 2020 2020 2020 3030 3030 3130 3030
```

TEXT3.PUB.ACCOUNT RECORD 1 (%1)

```
000000: 5445 5854 2045 4449 544F 5220 4C49 4E45 204E 554D 4245 5253 2E20 204E 4F54 4520
000020: 5448 4154 2054 4845 2052 4543 4F52 4420 4E55 4D42 4552 5320 2020 2020 2020 2020
000040: 2020 2020 2020 2020 3030 3030 3230 3030
```

TEXT3.PUB.ACCOUNT RECORD 2 (%2)

```
000000: 5355 5050 4C49 4544 2042 5920 4643 4F50 5920 5354 4152 5420 4154 205A 4552 4F20
000020: 5748 494C 4520 5448 4520 5445 5854 2045 4449 544F 5220 4C49 4E45 2020 2020 2020
000040: 2020 2020 2020 2020 3030 3030 3330 3030
```

DISPLAY HEXADECIMAL

HEX

The file TEXT3.PUB.ACCOUNT is an ASCII file created using the HP 3000 Text Editor. The octal word number at the start of each line of data specifies the sequential number within the record of the first word of data in the line. The same file is used in the next example (a combination hexadecimal and character display).

```
>FROM=TEXT3; TO=*LP; HEX; CHAR; &  
>TITLE="TITLE LINE FOR CHAR/HEX DISPLAY EXAMPLE."
```



The above example produces the following type of display:

TITLE LINE FOR CHAR/HEX DISPLAY EXAMPLE.

TEXT3.PUB.ACCOUNT RECORD 0 (%0)

```
000000: 5448 4953 2049 5320 4C49 4E45 2031 2E20 THIS IS LINE 1.  
000010: 2054 4845 2038 2D44 4947 4954 204E 554D THE 8-DIGIT NUM  
000020: 4245 5253 2041 5420 5448 4520 5249 4748 BERS AT THE RIGH  
000030: 5420 4152 4520 5448 4520 2020 2020 2020 T ARE THE  
000040: 2020 2020 2020 2020 3030 3030 3130 3030 00001000
```

TEXT3.PUB.ACCOUNT RECORD 1 (%1)

```
000000: 5445 5854 2045 4449 544F 5220 4C49 4E45 TEXT EDITOR LINE  
000010: 204E 554D 4245 5253 2E20 204E 4F54 4520 NUMBERS. NOTE  
000020: 5448 4154 2054 4845 2052 4543 4F52 4420 THAT THE RECORD  
000030: 4E55 4D42 4552 5320 2020 2020 2020 2020 NUMBERS  
000040: 2020 2020 2020 2020 3030 3030 3230 3030 00002000
```

TEXT3.PUB.ACCOUNT RECORD 2 (%2)

```
000000: 5355 5050 4C49 4544 2042 5920 4643 4F50 SUPPLIED BY FCOP  
000010: 5920 5354 4152 5420 4154 205A 4552 4F20 Y START AT ZERO  
000020: 5748 494C 4520 5448 4520 5445 5854 2045 WHILE THE TEXT E  
000030: 4449 544F 5220 4C49 4E45 2020 2020 2020 DITOR LINE  
000040: 2020 2020 2020 2020 3030 3030 3330 3030 00003000
```

DISPLAY OCTAL

OCTAL

2-14. DISPLAY OCTAL

The display octal function allows you to display the content of a file, record-by-record, in octal representation. Normally the “to” file is a line printer. However, it can be a keyboard display terminal or an intermediate disc file to be listed at a later time. If the display is being routed to an intermediate disc file, the record size of the intermediate disc file must be at least 60 bytes (30 words) in length.

The display octal function has the following format:

```
OCTAL [;CHAR] [;NORECNUM] [;TITLE="title"]
```

where: CHAR specifies that the display characters and display octal functions are to be combined.

NORECNUM specifies that the file identification information, record numbers, and word offset numbers are to be omitted from the display.

title is an ASCII character string to be used as the title of the display. If the “to” file is a line printer, the title is printed at the top of each page. Otherwise the title is written only once, at the beginning of the “to” file. The TITLE= parameter may only be used in conjunction with the FCOPY display functions (CHAR, OCTAL, and/or HEX). *title* may contain up to 70 characters and continuation (from one line or record to another) should not be used.

2-15. EXAMPLES

```
>FROM=TEXT3; TO=*LP; OCTAL
```

The above example produces the following type of display:

TEXT3.PUB.ACCOUNT RECORD 9 (%11)

```
000000: 052110 044523 020111 051440 046111 047105 020061 027040
000010: 020124 044105 020070 026504 044507 044524 020116 052515
000020: 041105 051123 020101 052040 052110 042440 051111 043510
000030: 052040 040522 042440 052110 042440 020040 020040 020040
000040: 020040 020040 020040 020040 030060 030061 030060 030060
```

TEXT3.PUB.ACCOUNT RECORD 10 (%12)

```
000000: 052105 054124 020105 042111 052117 051040 046111 047105
000010: 020116 052515 041105 051123 027040 020116 047524 042440
000020: 052110 040524 020124 044105 020122 042503 047522 042040
000030: 047125 046502 042522 051440 020040 020040 020040 020040
000040: 020040 020040 020040 020040 030060 030061 030460 030060
```

TEXT3.PUB.ACCOUNT RECORD 11 (%13)

```
000000: 051525 050120 046111 042504 020102 054440 043103 047520
000010: 054440 051524 040522 052040 040524 020132 042522 047440
000020: 053510 044514 042440 052110 042440 052105 054124 020105
000030: 042111 052117 051040 046111 047105 020040 020040 020040
000040: 020040 020040 020040 020040 030060 030061 031060 030060
```

On System #2:

```
.  
. .  
:  
:BUILD FUTIL;DISC=298,1,1;CODE=PROG  
:BUILD DUMPER;DISC=406,1,1;CODE=PROG  
:BUILD SPOOLER;DISC=387,1,1;CODE=PROG  
:FILE T;DEV=TAPE  
:RUN FCOPY.PUB.SYS  
  
HP32212X.0.04 FILE COPIER  
  
>FROM=*T;TO=FUTIL;SUBSET  
EOF FOUND IN FROMFILE AFTER RECORD 297  
  
298 RECORDS PROCESSED *** 0 ERRORS  
  
>FROM=*;TO=DUMPER;SKIPEOF=1;SUBSET  
EOF FOUND IN FROMFILE AFTER RECORD 405  
  
406 RECORDS PROCESSED *** 0 ERRORS  
  
>FROM=*;TO=SPOOLER;SKIPEOF=1;SUBSET  
EOF FOUND IN FROMFILE AFTER RECORD 386  
  
387 RECORDS PROCESSED *** 0 ERRORS  
  
>EXIT
```

NOTE: SKIPEOF=1
because FCOPY left the
tape positioned just be-
fore the EOF found by
the previous command.

Example 7. During a job, three ASCII character data files on disc called DATA1, DATA2, and DATA3 (containing 611, 712, and 473 records, respectively) are to be concatenated onto one file on magnetic tape. The record size is 80 bytes and the magnetic tape is to have a blocking factor of 20 records per block. In this example, TAPE is the device class name of a magnetic tape unit.

```
.  
. .  
:  
:FILE T;DEV=TAPE;REC=-80,20,F,ASCII  
:RUN FCOPY.PUB.SYS  
FROM=DATA1;TO=*T  
FROM=DATA2;TO=*  
FROM=DATA3;TO=*  
EXIT
```

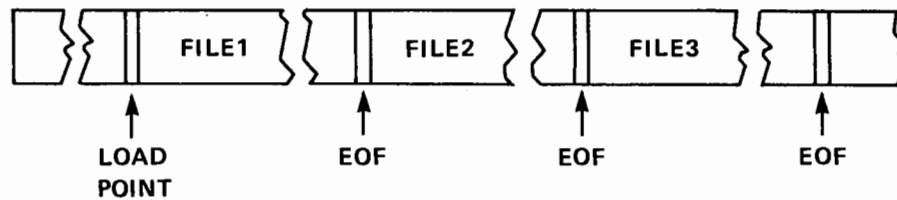
The following messages appear in the job output printed on the standard job listing device \$STDLIST:

```

EOF FOUND IN FROMFILE AFTER RECORD 610
611 RECORDS PROCESSED *** 0 ERRORS
EOF FOUND IN FROMFILE AFTER RECORD 711
712 RECORDS PROCESSED *** 0 ERRORS
EOF FOUND IN FROMFILE AFTER RECORD 472
473 RECORDS PROCESSED *** 0 ERRORS

```

Example 8. Three ASCII character files on magnetic tape look like this:



During a session, two subsets extracted from FILE1 and all of FILE3 are to be copied into an ASCII character disc file called AMALGUM. In this example, TAPE is the device class name of a magnetic tape unit.

```

:FILE AMALGUM;ACC=APPEND
:FILE T;DEV=TAPE;REC=-80,1,F,ASCII
:RUN FCOPY.PUB.SYS

HP32212X.0.04 FILE COPIER

>FROM=*T;TO=*AMALGUM;SUBSET=4:12

9 RECORDS PROCESSED *** 0 ERRORS

>FROM=*;TO=*;SUBSET=19,16

16 RECORDS PROCESSED *** 0 ERRORS

>FROM=*;TO=*;SKIPEOF=2;SUBSET
EOF FOUND IN FROMFILE AFTER RECORD 302

303 RECORDS PROCESSED *** 0 ERRORS

>EXIT

```

Example 9. A magnetic tape reel contains only one file (containing 7439 records) which has a record length of 58 bytes and a blocking factor of one record per block. During a job, the file is to be copied to another reel to change only the blocking factor to 20 records per block. In this example TAPE is the device class name for a pair of magnetic tape units.

```
.  
.   
.   
  
:FILE T1;DEV=TAPE;REC=-58,1,F,ASCII  
:FILE T2;DEV=TAPE;REC=-58,20,F,ASCII  
:RUN FCOPY.PUB.SYS  
FROM=*T1;TO=*T2;SUBSET  
EXIT  
  
.   
.   
. 
```

The following messages appear on the job output printed on the standard job listing device \$STDLIST:

```
EOF FOUND IN FROMFILE AFTER RECORD 7438  
  
7439 RECORDS PROCESSED *** 0 ERRORS
```


FCOPY WARNING AND ERROR MESSAGES

SECTION

IV

FCOPY can detect two types of faults in an operation:

1. Potential problems, such as a conflict between the characteristics of the “from” file and those of the “to” file.
2. Errors, such as incorrect syntax or parity errors while reading or writing.

In an interactive session, FCOPY displays the number of the error or warning message, as, for example,

54

To request the complete message, type any printing character (except a colon) and then press RETURN. For example,

*54*L

SYNTAX ERROR: UNKNOWN OPTION NAME

To skip the message, merely press return.

In a batch job the complete error or warning message is always displayed on the standard job listing device.

Potential problems are treated in either of the following ways:

1. In a session, FCOPY follows the warning message with a request for a user decision as to whether or not the operation should be performed:

DO YOU WISH TO CONTINUE THIS OPERATION? (IF SO, ANSWER Y OR YES)

>

If the user enters Y or YES, FCOPY attempts to perform the requested operation despite the potential problem. If the user enters NO, FCOPY aborts the operation and prompts for another command.

2. In a job, FCOPY assumes that the command records have been submitted as intended and attempts to perform the requested operation despite the potential problem.

Table 4-1 lists the warning and error messages in numerical order along with a brief description of each message’s meaning and the recommended corrective action.

4-1. FILE INFORMATION DISPLAY

Some of the FCOPY messages are followed by an MPE file information display. The file information display is described in Section X of the *MPE Intrinsic Reference Manual* (HP part number 30000-90010).

Table 4-1. FCOPY Warning and Error Messages

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
None	<CONTROL Y>	Acknowledges receipt of a CONTROL-Y entered during a session.	None.
None	READ ERROR FROM COMMAND INPUTFILE	An error occurred while reading an FCOPY command from \$STDIN.	<i>In a job:</i> Re-submit the job. <i>In a session:</i> Re-enter the command.
None	WRITE ERROR TO COMMAND LISTFILE	An error occurred while writing an FCOPY message to \$STDLIST.	More than likely nothing serious has occurred and all FCOPY operations have been performed successfully. If you want to be sure, however, do the following: <i>In a job:</i> Re-submit the job. <i>In a session:</i> Re-enter the most recent FCOPY command.
3	SYNTAX ERROR: IN SUBSET OPTION	The subset function was not specified properly.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
4	SYNTAX ERROR: IN TITLE OPTION	The title option of the display function was not specified properly.	
5	SYNTAX ERROR: IN IGNERR OPTION	The ignore errors function was not specified properly.	
6	SYNTAX ERROR: IN VERIFY OPTION	The verify function was not specified properly.	
7	SYNTAX ERROR: IN SKIPEOF OPTION	The skip end-of-file function was not specified properly.	
8	SYNTAX ERROR: IN COMPARE OPTION	The compare function was not specified properly.	
9	SYNTAX ERROR: IN NEW OPTION	The new file function was not specified properly.	
10	SYNTAX ERROR: IN HEX OPTION	The display hexadecimal function was not specified properly.	
11	SYNTAX ERROR: IN EBCDICOUT OPTION	The EBCDICOUT character translate function was not specified properly.	
12	SYNTAX ERROR: IN CHAR OPTION	The display character function was not specified properly.	

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
13	SYNTAX ERROR: IN OCTAL OPTION	The display octal function was not specified properly.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
14	SYNTAX ERROR: IN UP-SHIFT OPTION	The upshift function was not specified properly.	
15	SYNTAX ERROR: IN BCDICIN OPTION	The BCDICIN character translate was not specified properly.	
16	SYNTAX ERROR: IN NORECNUM OPTION	The NORECNUM option of the display function was not specified properly.	
17	SYNTAX ERROR: IN EBCDICIN OPTION	The EBCDICIN character translate function was not specified properly.	
18	SYNTAX ERROR: IN BCDICOUT OPTION	The BCDICOUT character translate function was not specified properly.	
19	SYNTAX ERROR: INVALID FORM OF EXIT COMMAND	The EXIT command was not specified properly.	None. FCOPY terminates.
51	SYNTAX ERROR: IN QUOTED STRING	The <i>characterstring</i> specified for the subset function is not valid.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
52	SYNTAX ERROR: IN BIT PATTERN	The <i>patternlist</i> specified for the subset function is not valid.	
53	SYNTAX ERROR: INVALID INTEGER	An integer specified is outside the range allowed for the particular FCOPY function.	
54	SYNTAX ERROR: UNKNOWN OPTION NAME	One of the specified functions was unrecognizable.	
55	SYNTAX ERROR: IN FROM-FILE SPECIFIER	The "from" file was not specified properly.	
56	SYNTAX ERROR: IN TOFILE SPECIFIER	The "to" file was not specified properly.	
57	SYNTAX ERROR: ILLEGAL COMBINATION OF OPTIONS	Two or more <i>functionlist</i> entries conflict with one another.	
58	SYNTAX ERROR: FROM-FILE AND TOFILE NOT BOTH SPECIFIED	FROM= and TO= were not both specified in the FCOPY command.	
59	SYNTAX ERROR: ILLEGAL USE OF NEW	The context used to specify a new "to" file is not valid.	

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
60	SYNTAX ERROR: ILLEGAL USE OF *	The context used to specify * as a "from" file or "to" file is not valid.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
62	SYNTAX ERROR: FILE NAME TOO LONG	The "from" or "to" file name specified is longer than the 35 characters allowed in a fully-qualified file name with lockword.	
102	CAN'T CLOSE FROMFILE	MPE can't close the "from" file. This message is followed by an MPE file information display containing (among other things) an error number.	Look up the error number in the File System Error Table in the <i>MPE Intrinsic Reference Manual</i> (HP part number 30000-90010) and act accordingly.
103	CAN'T CLOSE TOFILE	MPE can't close the "to" file. This message is followed by an MPE file information display containing (among other things) an error number.	
104	CAN'T SAVE NEW TOFILE	MPE can't close the "to" file as a permanent file. Either you do not have SF capability or there is not enough group, account, or system file space.	If you don't have SF capability, you can't perform the operation. If there is not enough file space, purge some unneeded files to free some file space.
105	CAN'T OPEN FROM FILE	MPE can't open the "from" file. This message is followed by an MPE file information display containing (among other things) an error number.	Look up the error number in the File System Error Table in the <i>MPE Intrinsic Reference Manual</i> (HP part number 30000-90010) and act accordingly.
106	CAN'T OPEN TOFILE	MPE can't open the "to" file. This message is followed by an MPE file information display containing (among other things) an error number.	
107	VERIFY OR COMPARE OPTION: CAN'T GET READ ACCESS TO TOFILE	MPE can't get read access to the "to" file for a verify or compare operation. The read access specified in the file label has been overridden by an MPE :FILE command containing ACC=APPEND, ACC=OUT, or ACC=OUTKEEP.	Reset the particular :FILE command (using the MPE :RESET command) and re-try the operation.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
108	ERROR IN CALLING FGETINFO FOR FROMFILE	An error prevented MPE from obtaining information from the "from" file's label. This message is followed by an MPE file information display containing (among other things) an error number.	Look up the error number in the File System Error Table in the <i>MPE Ininsics Reference Manual</i> (HP part number 30000-90010) and act accordingly.
109	ERROR IN CALLING FGETINFO FOR TOFILE	An error prevented MPE from obtaining information from the "to" file's label. This message is followed by an MPE file information display containing (among other things) an error number.	
110	IGNERR OPTION: FROMFILE NOT TAPE	The "from" file's device is not a magnetic tape unit.	The ignore errors function cannot be used in this case.
111	CAN'T GET READ ACCESS TO FROMFILE	MPE can't get read access to the "from" file. The read access specified in the file label has been overridden by an MPE :FILE command containing ACC=APPEND, ACC=OUT, or ACC=OUTKEEP.	Reset the particular :FILE command (using the MPE :RESET command) and re-try the operation.
112	CAN'T GET WRITE ACCESS TO TOFILE	MPE can't get write access to the "to" file. The write access specified in the file label has been overridden by an MPE :FILE command containing ACC=IN.	
113	SKIPEOF OPTION: FROMFILE NOT TAPE	The skip end-of-file function was specified for the "from" file and the "from" file device is not a magnetic tape unit.	If the intended "from" or "to" file is on magnetic tape, check the associated MPE :FILE command and the back reference to it.
114	SKIPEOF OPTION: TOFILE NOT TAPE	The skip end-of-file function was specified for the "to" file and the "to" file device is not a magnetic tape unit.	
115	SUBSET OPTION: STRING FALLS OUTSIDE OF FROMFILE RECSIZE	The <i>characterstring</i> or <i>patternlist</i> specified is greater than the record size of the "from" file. No such subset can exist in the specified "from" file.	Change the specified subset definition to a valid one and try the operation again.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
116	CAN'T GET LARGE ENOUGH BUFFER	There is not enough data space for the buffers needed by the requested operation. FCOPY uses the DL-DB area for variable sized buffers.	Ask the system manager what size data area was specified when FCOPY was prepared and rerun FCOPY specifying a larger MAXDATA= parameter. Also make sure that the system configuration will accommodate your record size in the maximum allowed data segment size.
117	SKIPEOF OPTION: ERROR WHILE SKIPPING IN FROMFILE	An error occurred while skipping end-of-file marks in the "from" file.	Retry the operation.
118	SKIPEOF OPTION: ERROR WHILE SKIPPING IN TOFILE	An error occurred while skipping end-of-file marks in the "to" file.	
119	SUBSET OPTION: ERROR WHILE SPACING IN FROMFILE	An error occurred while spacing through the "from" file.	
120	SUBSET OPTION: SUBSET STARTS OVER EOF BOUNDARY	The subset specified extends over an end-of-file mark or a tape mark boundary.	Change the specified subset definition to a valid one and try the operation again.
123	SUBSET OPTION: THIS INPUT DEVICE DOES NOT BACKSPACE	The specified subset requires backspacing in the "from" file but the device for that file is not a disc or magnetic tape.	Check the MPE :FILE command associated with the "from" file and the back reference to it.
124	READ ERROR IN FROM-FILE AT RECORD <i>recnum</i>	An error occurred while spacing through the "from" file in search of the start of a subset.	Retry the operation.
125	SUBSET OPTION: NUMERIC SUBSET IS EMPTY	A subset specified by <i>starting-record-number</i> , <i>number-of-records</i> , and/or <i>last-record-number</i> does not exist or contains no data.	Change the specified subset definition to a valid one and try the operation again.
126	VERIFY OPTION: ERROR WHILE REWINDING FROMFILE	An error occurred while spacing backward to the beginning of the "from" file at the start of a verify operation.	Retry the operation.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
127	VERIFY OPTION: ERROR WHILE REWINDING TOFILE	An error occurred while spacing backward to the beginning of the "to" file at the start of a verify operation.	Retry the operation.
128	EOF FOUND WHILE SPACING IN FROMFILE	An end-of-file mark was encountered while spacing through the "from" file in search of the start of a subset. This most often occurs when the "from" file is a blocked magnetic tape. For a blocked magnetic tape, the record numbers supplied in the SUBSET= parameter are used as block numbers.	Retry the operation specifying block numbers instead of record numbers. OR Reblock the tape so each block contains one record and then retry the operation.
129	EOF FOUND WHILE SPACING IN TOFILE	An end-of-file mark was encountered while spacing through the "to" file in search of the start of a subset during a compare or verify operation.	<i>Compare operation:</i> The "from" and "to" files are not identical. Display the "to" file to determine what it actually contains. <i>Verify operation:</i> The copy operation was not performed correctly. Retry the operation.
131	ERROR WHILE WRITING EOF TO TOFILE	An error occurred while writing an end-of-file mark in the "to" file.	Retry the operation.
132	VERIFY OPTION: ERROR WHILE SPACING IN THE FROMFILE	An error occurred while spacing through the "from" file during a verify operation.	
133	VERIFY OPTION: ERROR WHILE SPACING IN THE TOFILE	An error occurred while spacing through the "to" file during a verify operation.	
134	WARNING: FOUND EOF IN TOFILE	FCOPY has performed the specified operation but has filled the "to" file before completing the operation.	The "to" file was not large enough. Use the MPE :LISTF filename,2 command to determine the "to" file's size and then increase its size (using the MPE :PURGE and :BUILD commands) and retry the operation.
135	WRITE ERROR TO TOFILE	An error occurred while writing to the "to" file	Retry the operation.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
136	READ ERROR FROM TOFILE	An error occurred while reading from the "to" file during a compare or verify operation.	<i>Compare operation:</i> Retry the operation. If the error persists, you must try to recreate the "to" file. <i>Verify operation:</i> Retry the operation.
137	WARNING: AN UNLABELLED TAPE OPERATION ENDS ON AN ERROR	An operation involving a magnetic tape "from" file was terminated by reading beyond the end of valid data rather than by sensing an end-of-file mark.	This is not an error. You can avoid this message by reading the "from" tape one file at a time and using the keyword SUBSET.
138	TITLE OPTION: TITLE TOO LONG	The title specified for the list function is longer than the 70 characters allowed or it extended over more than one line (record).	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
139	DUMP OPTION: TOFILE RECSIZE NOT WITHIN LEGAL LIMIT	A file display was directed to an intermediate storage device with an incorrect record size. That record size must be ≥ 60 bytes (30 words).	Change the record size of the intermediate storage file (using the MPE :PURGE and :BUILD commands) so that it is within the allowed range and then retry the operation.
140	COMPARE OR VERIFY OPTION: OPERATION FAILS; DIFFERENT FIXED RECSIZES	The compare or verify operation was not attempted because the record sizes of the "to" and "from" files are not identical.	<i>Compare operation:</i> None. The compare operation revealed that the fixed record sizes of the two files are not identical. <i>Verify operation:</i> Change the record size of the "to" file (using the MPE :PURGE and :BUILD commands) so that it is the same as that of the "from" file and then retry the operation.
141	COMPARE BEGINS	The comparison phase of a verify operation has begun.	None.
143	WARNING: FROMFILE IS EMPTY	The "from" file contained no data. Nothing was copied or compared.	None. You may have accidentally specified the wrong file as the "from" file.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
144	NEW OPTION: FILE ALREADY EXISTS	The "to" file named for the new file function already exists in the specified (or implied) group and account.	Change the name of the "to" file and try the operation again.
145	BACKSPACE ERROR IN FROMFILE	An error occurred while spacing backward to the beginning of the "from" file or a subset within it.	Retry the operation.
200	WARNING: FROMFILE RECSIZE IS <i>number type</i> , TOFILE RECSIZE IS <i>number type</i>	The record sizes of the "from" and "to" files are not identical	<i>In a job:</i> FCOPY performs the specified operation despite the conflict. <i>In a session:</i> You are given the choice whether or not to continue the operation. Note that if the "from" record size is larger than the "to" record size, the "from" records would be truncated. If the "to" record size is larger than the "from" record size, the content of the excess byte positions in the "to" records is unpredictable.
201	WARNING: FROMFILE IS ASCII, TOFILE IS BINARY or WARNING: FROMFILE IS BINARY, TOFILE IS ASCII	The data formats of the "from" and "to" files are not identical.	<i>In a job:</i> FCOPY performs the operation despite the conflict. <i>In a session:</i> You are given the choice whether or not to continue the operation.
301	READ ERROR IN FROMFILE AT RECORD <i>recnum</i>	An error occurred while reading from the "from" file at the record number displayed (<i>recnum</i>).	Retry the operation. If the error persists, use the subset function to copy all of the file except the erroneous record.
302	VERIFY OPTION: RAN OUT OF VERIFY ERRORS AT FROMFILE RECORD <i>recnum</i>	The verify function was terminated because the specified maximum number of errors has been exceeded at the record number displayed (<i>recnum</i>).	Retry the operation specifying a larger <i>number-of-errors</i> parameter.



Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
304	COMPARE OPTION: RAN OUT OF COMPARE ERRORS AT FROMFILE RECORD <i>recnum</i>	The compare function was terminated because the specified maximum number of errors has been exceeded at the record number displayed (<i>recnum</i>).	Retry the operation specifying a larger <i>number-of-errors</i> parameter.

HP 2644A TERMINAL PERIPHERALS

APPENDIX

A

The following discussion of FCOPY enhancements for use with the HP 2644A Interactive Display Terminal applies only to the HP 3000 Series II Computer System. These features cannot be used with the pre-Series II HP 3000 computer systems.

The HP 2644A Interactive Display Terminal consists of a keyboard, a cathode ray tube (CRT) display, two cartridge tape units, and an optional line printer. FCOPY has been enhanced to recognize the cartridge tape units and line printer of an HP 2644A terminal as individual devices. These enhancements apply only to the particular HP 2644A terminal being used in an interactive session.

The cartridge tape units are identified as \$CTUL (left unit) and \$CTUR (right unit); the line printer is identified as \$HARD. These identifiers are currently recognized only by FCOPY and they are used as the "from" and "to" file designators in FCOPY commands.

All FCOPY functions can be used in conjunction with HP 2644A terminal peripherals. However, the notation "*" cannot be used to specify a prior use of \$CTUL, \$CTUR, or \$HARD.

Although these enhancements allow both the "from" and "to" files to be HP 2644A terminal peripherals, the user is advised that such applications can be performed more rapidly by using the local capabilities of the terminal rather than by using FCOPY.

The HP 2644A terminal should be set to half duplex, with echo off, and with automatic carriage return and line feed off. Parity should be set to "off" as well.

NOTE

FCOPY has no way to determine whether or not the user is actually using an HP 2644A terminal. Consequently, the effects of using these enhancements with any other type of terminal are unpredictable.

A-1. EXAMPLES

```
>FROM=$CTUR; TO=DISC1; SUBSET
```

In the above example, the first file on the right cartridge tape unit is copied to the disc file named DISC1.

```
>FROM=DISC4; TO=SHARD; OCTAL; CHAR
```

In the above example, the disc file named DISC4 is displayed on the HP 2644A terminal line printer in both octal and character formats.

```
>FROM=MAGTP; TO=$CTUL; SKIPEOF=3; SUBSET
```

In the above example, the fourth file from the magnetic tape unit defined by the formal file designator MAGTP is copied to the left cartridge tape unit.

On System #2:

```
.  
. .  
:  
:BUILD FUTIL;DISC=298,1,1;CODE=PROG  
:BUILD DUMPER;DISC=406,1,1;CODE=PROG  
:BUILD SPOOLER;DISC=387,1,1;CODE=PROG  
:FILE T;DEV=TAPE  
:RUN FCOPY.PUB.SYS  
  
HP32212X.0.04 FILE COPIER  
  
>FROM=*T;TO=FUTIL;SUBSET  
EOF FOUND IN FROMFILE AFTER RECORD 297  
  
298 RECORDS PROCESSED *** 0 ERRORS  
  
>FROM=*;TO=DUMPER;SKIPEOF=1;SUBSET  
EOF FOUND IN FROMFILE AFTER RECORD 405  
  
406 RECORDS PROCESSED *** 0 ERRORS  
  
>FROM=*;TO=SPOOLER;SKIPEOF=1;SUBSET  
EOF FOUND IN FROMFILE AFTER RECORD 386  
  
387 RECORDS PROCESSED *** 0 ERRORS  
  
>EXIT
```

NOTE: SKIPEOF=1
because FCOPY left the
tape positioned just be-
fore the EOF found by
the previous command.

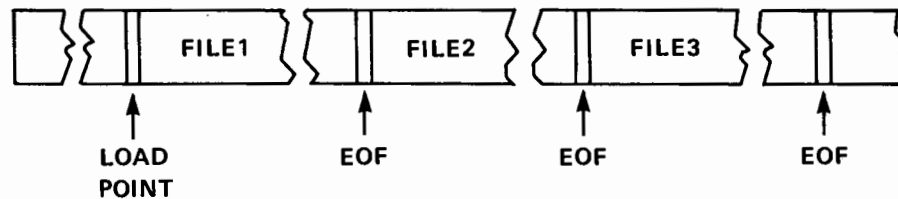
Example 7. During a job, three ASCII character data files on disc called DATA1, DATA2, and DATA3 (containing 611, 712, and 473 records, respectively) are to be concatenated onto one file on magnetic tape. The record size is 80 bytes and the magnetic tape is to have a blocking factor of 20 records per block. In this example, TAPE is the device class name of a magnetic tape unit.

```
.  
. .  
:  
:FILE T;DEV=TAPE;REC=-80,20,F,ASCII  
:RUN FCOPY.PUB.SYS  
FROM=DATA1;TO=*T  
FROM=DATA2;TO=*  
FROM=DATA3;TO=*  
EXIT
```

The following messages appear in the job output printed on the standard job listing device \$STDLIST:

```
EOF FOUND IN FROMFILE AFTER RECORD 610
611 RECORDS PROCESSED *** 0 ERRORS
EOF FOUND IN FROMFILE AFTER RECORD 711
712 RECORDS PROCESSED *** 0 ERRORS
EOF FOUND IN FROMFILE AFTER RECORD 472
473 RECORDS PROCESSED *** 0 ERRORS
```

Example 8. Three ASCII character files on magnetic tape look like this:



During a session, two subsets extracted from FILE1 and all of FILE3 are to be copied into an ASCII character disc file called AMALGUM. In this example, TAPE is the device class name of a magnetic tape unit.

```
.
.
:FILE AMALGUM;ACC=APPEND
:FILE T;DEV=TAPE;REC=-80,1,F,ASCII
:RUN FCOPY.PUB.SYS

HP32212X.0.04 FILE COPIER

>FROM=*T;TO=*AMALGUM;SUBSET=4:12

9 RECORDS PROCESSED *** 0 ERRORS

>FROM=*;TO=*;SUBSET=19,16

16 RECORDS PROCESSED *** 0 ERRORS

>FROM=*;TO=*;SKIPEOF=2;SUBSET
EOF FOUND IN FROMFILE AFTER RECORD 302

303 RECORDS PROCESSED *** 0 ERRORS

>EXIT
```

Example 9. A magnetic tape reel contains only one file (containing 7439 records) which has a record length of 58 bytes and a blocking factor of one record per block. During a job, the file is to be copied to another reel to change only the blocking factor to 20 records per block. In this example TAPE is the device class name for a pair of magnetic tape units.

```
      .  
      .  
      .  
  
      :FILE T1;DEV=TAPE;REC=-58,1,F,ASCII  
      :FILE T2;DEV=TAPE;REC=-58,20,F,ASCII  
      :RUN FCOPY.PUB.SYS  
      FROM=*T1;TO=*T2;SUBSET  
      EXIT  
  
      .  
      .  
      .
```

The following messages appear on the job output printed on the standard job listing device \$STDLIST:

```
      EOF FOUND IN FROMFILE AFTER RECORD 7438  
  
      7439 RECORDS PROCESSED *** 0 ERRORS
```


FCOPY WARNING AND ERROR MESSAGES

SECTION

IV

FCOPY can detect two types of faults in an operation:

1. Potential problems, such as a conflict between the characteristics of the “from” file and those of the “to” file.
2. Errors, such as incorrect syntax or parity errors while reading or writing.

In an interactive session, FCOPY displays the number of the error or warning message, as, for example,

```
*54*
```

To request the complete message, type any printing character (except a colon) and then press RETURN. For example,

```
*54*L  
SYNTAX ERROR: UNKNOWN OPTION NAME
```

To skip the message, merely press return.

In a batch job the complete error or warning message is always displayed on the standard job listing device.

Potential problems are treated in either of the following ways:

1. In a session, FCOPY follows the warning message with a request for a user decision as to whether or not the operation should be performed:

```
DO YOU WISH TO CONTINUE THIS OPERATION? (IF SO, ANSWER Y OR YES)  
>
```

If the user enters Y or YES, FCOPY attempts to perform the requested operation despite the potential problem. If the user enters NO, FCOPY aborts the operation and prompts for another command.

2. In a job, FCOPY assumes that the command records have been submitted as intended and attempts to perform the requested operation despite the potential problem.

Table 4-1 lists the warning and error messages in numerical order along with a brief description of each message’s meaning and the recommended corrective action.

4-1. FILE INFORMATION DISPLAY

Some of the FCOPY messages are followed by an MPE file information display. The file information display is described in Section X of the *MPE Intrinsic Reference Manual* (HP part number 30000-90010).

Table 4-1. FCOPY Warning and Error Messages

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
None	<CONTROL Y>	Acknowledges receipt of a CONTROL-Y entered during a session.	None.
None	READ ERROR FROM COMMAND INPUTFILE	An error occurred while reading an FCOPY command from \$STDIN.	<i>In a job:</i> Re-submit the job. <i>In a session:</i> Re-enter the command.
None	WRITE ERROR TO COMMAND LISTFILE	An error occurred while writing an FCOPY message to \$STDLIST.	More than likely nothing serious has occurred and all FCOPY operations have been performed successfully. If you want to be sure, however, do the following: <i>In a job:</i> Re-submit the job. <i>In a session:</i> Re-enter the most recent FCOPY command.
3	SYNTAX ERROR: IN SUBSET OPTION	The subset function was not specified properly.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
4	SYNTAX ERROR: IN TITLE OPTION	The title option of the display function was not specified properly.	
5	SYNTAX ERROR: IN IGNERR OPTION	The ignore errors function was not specified properly.	
6	SYNTAX ERROR: IN VERIFY OPTION	The verify function was not specified properly.	
7	SYNTAX ERROR: IN SKIPEOF OPTION	The skip end-of-file function was not specified properly.	
8	SYNTAX ERROR: IN COMPARE OPTION	The compare function was not specified properly.	
9	SYNTAX ERROR: IN NEW OPTION	The new file function was not specified properly.	
10	SYNTAX ERROR: IN HEX OPTION	The display hexadecimal function was not specified properly.	
11	SYNTAX ERROR: IN EBCDICOUT OPTION	The EBCDICOUT character translate function was not specified properly.	
12	SYNTAX ERROR: IN CHAR OPTION	The display character function was not specified properly.	

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
13	SYNTAX ERROR: IN OCTAL OPTION	The display octal function was not specified properly.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
14	SYNTAX ERROR: IN UP-SHIFT OPTION	The upshift function was not specified properly.	
15	SYNTAX ERROR: IN BCDICIN OPTION	The BCDICIN character translate was not specified properly.	
16	SYNTAX ERROR: IN NORECNUM OPTION	The NORECNUM option of the display function was not specified properly.	
17	SYNTAX ERROR: IN EBCDICIN OPTION	The EBCDICIN character translate function was not specified properly.	
18	SYNTAX ERROR: IN BCDICOUT OPTION	The BCDICOUT character translate function was not specified properly.	
19	SYNTAX ERROR: INVALID FORM OF EXIT COMMAND	The EXIT command was not specified properly.	None. FCOPY terminates.
51	SYNTAX ERROR: IN QUOTED STRING	The <i>characterstring</i> specified for the subset function is not valid.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
52	SYNTAX ERROR: IN BIT PATTERN	The <i>patternlist</i> specified for the subset function is not valid.	
53	SYNTAX ERROR: INVALID INTEGER	An integer specified is outside the range allowed for the particular FCOPY function.	
54	SYNTAX ERROR: UNKNOWN OPTION NAME	One of the specified functions was unrecognizable.	
55	SYNTAX ERROR: IN FROM-FILE SPECIFIER	The "from" file was not specified properly.	
56	SYNTAX ERROR: IN TOFILE SPECIFIER	The "to" file was not specified properly.	
57	SYNTAX ERROR: ILLEGAL COMBINATION OF OPTIONS	Two or more <i>functionlist</i> entries conflict with one another.	
58	SYNTAX ERROR: FROM-FILE AND TOFILE NOT BOTH SPECIFIED	FROM= and TO= were not both specified in the FCOPY command.	
59	SYNTAX ERROR: ILLEGAL USE OF NEW	The context used to specify a new "to" file is not valid.	

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
60	SYNTAX ERROR: ILLEGAL USE OF *	The context used to specify * as a "from" file or "to" file is not valid.	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
62	SYNTAX ERROR: FILE NAME TOO LONG	The "from" or "to" file name specified is longer than the 35 characters allowed in a fully-qualified file name with lockword.	
102	CAN'T CLOSE FROMFILE	MPE can't close the "from" file. This message is followed by an MPE file information display containing (among other things) an error number.	Look up the error number in the File System Error Table in the <i>MPE Intrinsic Reference Manual</i> (HP part number 30000-90010) and act accordingly.
103	CAN'T CLOSE TOFILE	MPE can't close the "to" file. This message is followed by an MPE file information display containing (among other things) an error number.	
104	CAN'T SAVE NEW TOFILE	MPE can't close the "to" file as a permanent file. Either you do not have SF capability or there is not enough group, account, or system file space.	If you don't have SF capability, you can't perform the operation. If there is not enough file space, purge some unneeded files to free some file space.
105	CAN'T OPEN FROM FILE	MPE can't open the "from" file. This message is followed by an MPE file information display containing (among other things) an error number.	Look up the error number in the File System Error Table in the <i>MPE Intrinsic Reference Manual</i> (HP part number 30000-90010) and act accordingly.
106	CAN'T OPEN TOFILE	MPE can't open the "to" file. This message is followed by an MPE file information display containing (among other things) an error number.	
107	VERIFY OR COMPARE OPTION: CAN'T GET READ ACCESS TO TOFILE	MPE can't get read access to the "to" file for a verify or compare operation. The read access specified in the file label has been overridden by an MPE :FILE command containing ACC=APPEND, ACC=OUT, or ACC=OUTKEEP.	Reset the particular :FILE command (using the MPE :RESET command) and re-try the operation.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
108	ERROR IN CALLING FGETINFO FOR FROMFILE	An error prevented MPE from obtaining information from the "from" file's label. This message is followed by an MPE file information display containing (among other things) an error number.	Look up the error number in the File System Error Table in the <i>MPE Intrinsic Reference Manual</i> (HP part number 30000-90010) and act accordingly.
109	ERROR IN CALLING FGETINFO FOR TOFILE	An error prevented MPE from obtaining information from the "to" file's label. This message is followed by an MPE file information display containing (among other things) an error number.	
110	IGNERR OPTION: FROMFILE NOT TAPE	The "from" file's device is not a magnetic tape unit.	The ignore errors function cannot be used in this case.
111	CAN'T GET READ ACCESS TO FROMFILE	MPE can't get read access to the "from" file. The read access specified in the file label has been overridden by an MPE :FILE command containing ACC=APPEND, ACC=OUT, or ACC=OUTKEEP.	Reset the particular :FILE command (using the MPE :RESET command) and re-try the operation.
112	CAN'T GET WRITE ACCESS TO TOFILE	MPE can't get write access to the "to" file. The write access specified in the file label has been overridden by an MPE :FILE command containing ACC=IN.	
113	SKIPEOF OPTION: FROMFILE NOT TAPE	The skip end-of-file function was specified for the "from" file and the "from" file device is not a magnetic tape unit.	If the intended "from" or "to" file is on magnetic tape, check the associated MPE :FILE command and the back reference to it.
114	SKIPEOF OPTION: TOFILE NOT TAPE	The skip end-of-file function was specified for the "to" file and the "to" file device is not a magnetic tape unit.	
115	SUBSET OPTION: STRING FALLS OUTSIDE OF FROMFILE RECSIZE	The <i>characterstring</i> or <i>patternlist</i> specified is greater than the record size of the "from" file. No such subset can exist in the specified "from" file.	Change the specified subset definition to a valid one and try the operation again.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
116	CAN'T GET LARGE ENOUGH BUFFER	There is not enough data space for the buffers needed by the requested operation. FCOPY uses the DL-DB area for variable sized buffers.	Ask the system manager what size data area was specified when FCOPY was prepared and rerun FCOPY specifying a larger MAXDATA= parameter. Also make sure that the system configuration will accommodate your record size in the maximum allowed data segment size.
117	SKIPEOF OPTION: ERROR WHILE SKIPPING IN FROMFILE	An error occurred while skipping end-of-file marks in the "from" file.	Retry the operation.
118	SKIPEOF OPTION: ERROR WHILE SKIPPING IN TOFILE	An error occurred while skipping end-of-file marks in the "to" file.	
119	SUBSET OPTION: ERROR WHILE SPACING IN FROMFILE	An error occurred while spacing through the "from" file.	
120	SUBSET OPTION: SUBSET STARTS OVER EOF BOUNDARY	The subset specified extends over an end-of-file mark or a tape mark boundary.	Change the specified subset definition to a valid one and try the operation again.
123	SUBSET OPTION: THIS INPUT DEVICE DOES NOT BACKSPACE	The specified subset requires backspacing in the "from" file but the device for that file is not a disc or magnetic tape.	Check the MPE :FILE command associated with the "from" file and the back reference to it.
124	READ ERROR IN FROM-FILE AT RECORD <i>recnum</i>	An error occurred while spacing through the "from" file in search of the start of a subset.	Retry the operation.
125	SUBSET OPTION: NUMERIC SUBSET IS EMPTY	A subset specified by <i>starting-record-number</i> , <i>number-of-records</i> , and/or <i>last-record-number</i> does not exist or contains no data.	Change the specified subset definition to a valid one and try the operation again.
126	VERIFY OPTION: ERROR WHILE REWINDING FROMFILE	An error occurred while spacing backward to the beginning of the "from" file at the start of a verify operation.	Retry the operation.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
127	VERIFY OPTION: ERROR WHILE REWINDING TOFILE	An error occurred while spacing backward to the beginning of the "to" file at the start of a verify operation.	Retry the operation.
128	EOF FOUND WHILE SPACING IN FROMFILE	An end-of-file mark was encountered while spacing through the "from" file in search of the start of a subset. This most often occurs when the "from" file is a blocked magnetic tape. For a blocked magnetic tape, the record numbers supplied in the SUBSET= parameter are used as block numbers.	Retry the operation specifying block numbers instead of record numbers. OR Reblock the tape so each block contains one record and then retry the operation.
129	EOF FOUND WHILE SPACING IN TOFILE	An end-of-file mark was encountered while spacing through the "to" file in search of the start of a subset during a compare or verify operation.	<i>Compare operation:</i> The "from" and "to" files are not identical. Display the "to" file to determine what it actually contains. <i>Verify operation:</i> The copy operation was not performed correctly. Retry the operation.
131	ERROR WHILE WRITING EOF TO TOFILE	An error occurred while writing an end-of-file mark in the "to" file.	Retry the operation.
132	VERIFY OPTION: ERROR WHILE SPACING IN THE FROMFILE	An error occurred while spacing through the "from" file during a verify operation.	
133	VERIFY OPTION: ERROR WHILE SPACING IN THE TOFILE	An error occurred while spacing through the "to" file during a verify operation.	
134	WARNING: FOUND EOF IN TOFILE	FCOPY has performed the specified operation but has filled the "to" file before completing the operation.	The "to" file was not large enough. Use the MPE :LISTF filename,2 command to determine the "to" file's size and then increase its size (using the MPE :PURGE and :BUILD commands) and retry the operation.
135	WRITE ERROR TO TOFILE	An error occurred while writing to the "to" file	Retry the operation.



Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
136	READ ERROR FROM TOFILE	An error occurred while reading from the "to" file during a compare or verify operation.	<i>Compare operation:</i> Retry the operation. If the error persists, you must try to recreate the "to" file. <i>Verify operation:</i> Retry the operation.
137	WARNING: AN UNLABELLED TAPE OPERATION ENDS ON AN ERROR	An operation involving a magnetic tape "from" file was terminated by reading beyond the end of valid data rather than by sensing an end-of-file mark.	This is not an error. You can avoid this message by reading the "from" tape one file at a time and using the keyword SUBSET.
138	TITLE OPTION: TITLE TOO LONG	The title specified for the list function is longer than the 70 characters allowed or it extended over more than one line (record).	<i>In a job:</i> Correct the command and re-submit the job. <i>In a session:</i> Re-enter the command using the correct format.
139	DUMP OPTION: TOFILE RECSIZE NOT WITHIN LEGAL LIMIT	A file display was directed to an intermediate storage device with an incorrect record size. That record size must be ≥ 60 bytes (30 words).	Change the record size of the intermediate storage file (using the MPE :PURGE and :BUILD commands) so that it is within the allowed range and then retry the operation.
140	COMPARE OR VERIFY OPTION: OPERATION FAILS; DIFFERENT FIXED RECSIZES	The compare or verify operation was not attempted because the record sizes of the "to" and "from" files are not identical.	<i>Compare operation:</i> None. The compare operation revealed that the fixed record sizes of the two files are not identical. <i>Verify operation:</i> Change the record size of the "to" file (using the MPE :PURGE and :BUILD commands) so that it is the same as that of the "from" file and then retry the operation.
141	COMPARE BEGINS	The comparison phase of a verify operation has begun.	None.
143	WARNING: FROMFILE IS EMPTY	The "from" file contained no data. Nothing was copied or compared.	None. You may have accidentally specified the wrong file as the "from" file.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
144	NEW OPTION: FILE ALREADY EXISTS	The "to" file named for the new file function already exists in the specified (or implied) group and account.	Change the name of the "to" file and try the operation again.
145	BACKSPACE ERROR IN FROMFILE	An error occurred while spacing backward to the beginning of the "from" file or a subset within it.	Retry the operation.
200	WARNING: FROMFILE RECSIZE IS <i>number type</i> , TOFILE RECSIZE IS <i>number type</i>	The record sizes of the "from" and "to" files are not identical	<i>In a job:</i> FCOPY performs the specified operation despite the conflict. <i>In a session:</i> You are given the choice whether or not to continue the operation. Note that if the "from" record size is larger than the "to" record size, the "from" records would be truncated. If the "to" record size is larger than the "from" record size, the content of the excess byte positions in the "to" records is unpredictable.
201	WARNING:FROMFILE IS ASCII, TOFILE IS BINARY or WARNING: FROMFILE IS BINARY, TOFILE IS ASCII	The data formats of the "from" and "to" files are not identical.	<i>In a job:</i> FCOPY performs the operation despite the conflict. <i>In a session:</i> You are given the choice whether or not to continue the operation.
301	READ ERROR IN FROMFILE AT RECORD <i>recnum</i>	An error occurred while reading from the "from" file at the record number displayed (<i>recnum</i>).	Retry the operation. If the error persists, use the subset function to copy all of the file except the erroneous record.
302	VERIFY OPTION: RAN OUT OF VERIFY ERRORS AT FROMFILE RECORD <i>recnum</i>	The verify function was terminated because the specified maximum number of errors has been exceeded at the record number displayed (<i>recnum</i>).	Retry the operation specifying a larger <i>number-of-errors</i> parameter.

Table 4-1. FCOPY Warning and Error Messages (Continued)

ERROR NO.	MESSAGE	CAUSE	CORRECTIVE ACTION
304	COMPARE OPTION: RAN OUT OF COMPARE ERRORS AT FROMFILE RECORD <i>recnum</i>	The compare function was terminated because the specified maximum number of errors has been exceeded at the record number displayed (<i>recnum</i>).	Retry the operation specifying a larger <i>number-of-errors</i> parameter.

HP 2644A TERMINAL PERIPHERALS

APPENDIX

A

The following discussion of FCOPY enhancements for use with the HP 2644A Interactive Display Terminal applies only to the HP 3000 Series II Computer System. These features cannot be used with the pre-Series II HP 3000 computer systems.

The HP 2644A Interactive Display Terminal consists of a keyboard, a cathode ray tube (CRT) display, two cartridge tape units, and an optional line printer. FCOPY has been enhanced to recognize the cartridge tape units and line printer of an HP 2644A terminal as individual devices. These enhancements apply only to the particular HP 2644A terminal being used in an interactive session.

The cartridge tape units are identified as \$CTUL (left unit) and \$CTUR (right unit); the line printer is identified as \$HARD. These identifiers are currently recognized only by FCOPY and they are used as the "from" and "to" file designators in FCOPY commands.

All FCOPY functions can be used in conjunction with HP 2644A terminal peripherals. However, the notation "*" cannot be used to specify a prior use of \$CTUL, \$CTUR, or \$HARD.

Although these enhancements allow both the "from" and "to" files to be HP 2644A terminal peripherals, the user is advised that such applications can be performed more rapidly by using the local capabilities of the terminal rather than by using FCOPY.

The HP 2644A terminal should be set to half duplex, with echo off, and with automatic carriage return and line feed off. Parity should be set to "off" as well.

NOTE

FCOPY has no way to determine whether or not the user is actually using an HP 2644A terminal. Consequently, the effects of using these enhancements with any other type of terminal are unpredictable.

A-1. EXAMPLES

```
>FROM=$CTUR; TO=DISC1; SUBSET
```

In the above example, the first file on the right cartridge tape unit is copied to the disc file named DISC1.

```
>FROM=DISC4; TO=HARD; OCTAL; CHAR
```

In the above example, the disc file named DISC4 is displayed on the HP 2644A terminal line printer in both octal and character formats.

```
>FROM=MAGTP; TO=SCTUL; SKIPEOF=3; SUBSET
```

In the above example, the fourth file from the magnetic tape unit defined by the formal file designator MAGTP is copied to the left cartridge tape unit.

DEFAULT FILE DEFINITION VALUES

APPENDIX

B

This appendix summarizes the default file definition values that are used when FCOPY opens a specified “from” or “to” file. The shaded items are the ones which are most likely to cause problems when copying from one type of device to another. When opening an existing disc file, the information in the file’s label always prevails (neither you nor FCOPY can override it). In all other cases, including the new file function, you can override the specified values by supplying the desired values in a :FILE command prior to issuing the particular FCOPY command.

FROM=card reader

Formal File Designator: the “from” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

Record Format: undefined

Access Type: read only

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? no (shared access)

Inhibit Buffering? no

Record Size: 80 bytes (same as physical record size defined during system configuration)

Device: a byte array containing logical device number or device class name from :FILE command

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

FROM=paper tape reader.

Formal File Designator: the “from” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

***Record Format:* undefined**

Access Type: read only

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? no (shared access)

Inhibit Buffering? no

Record Size: 80 bytes (same as physical record size defined during system configuration)

Device: a byte array containing logical device number or device class name from :FILE command

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

FROM=magnetic tape

Formal File Designator: the “from” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): binary

Record Format: undefined

Access Type: read/write

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

Record Size: 256 bytes (same as physical record size defined during system configuration)

Device: a byte array containing logical device number or device class name from :FILE command

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

FROM=named disc file

Formal File Designator: the “from” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: old permanent or temporary

Record Type (ASCII/binary): (as specified when the file was created)

Record Format: (as specified when the file was created)

Access Type: read/write

Carriage Control? (as specified when the file was created)

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

Record Size: (as specified when the file was created)

Device: (as specified when the file was created)

Userlabels: (as specified when the file was created)

Blocking Factor: (as specified when the file was created)

Number of Buffers: 2

File Size: (as specified when the file was created)

Initial Allocation: (as specified when the file was created)

File Code: (as specified when the file was created)

Allow :FILE Command? yes

FROM=\$CTUL or \$CTUR

Formal File Designator: (empty)

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

Record Format: fixed

Access Type: input/output

Carriage Control? yes

Multirecord Access? yes

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? yes

Record Size: 256 bytes

Device: logical device number of log-on terminal (left-justified ASCII number)

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: 1023 records

Initial Allocation: 1

File Code: 0

Allow :FILE Command? yes

TO=card punch

Formal File Designator: the “to” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

Record Format: undefined

Access Type: write only

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

Record Size: 80 bytes (same as physical record size defined during system configuration)

Device: a byte array containing logical device number or device class name from :FILE command

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

TO=paper tape punch

Formal File Designator: the “to” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

***Record Type (ASCII/binary):* ASCII**

***Record Format:* undefined**

Access Type: write only

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

***Record Size:* 80 bytes (same as physical record size defined during system configuration)**

Device: a byte array containing logical device number or device class name from :FILE command

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

TO=magnetic tape

Formal File Designator: the “to” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): binary

Record Format: undefined

Access Type: read/write

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

Record Size: 256 bytes (same as physical record size defined during system configuration)

Device: a byte array containing logical device number or device class name from :FILE command

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes



TO=named disc file

Formal File Designator: the “to” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: (see note 1)

Record Type (ASCII/binary): (as specified when the file was created)

Record Format: (as specified when the file was created)

Access Type: (see note 2)

Carriage Control? (as specified when the file was created)

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? (see note 3)

Inhibit Buffering? no

Record Size: (as specified when the file was created)

Device: (as specified when the file was created)

Userlabels: (as specified when the file was created)

Blocking Factor: (as specified when the file was created)

Number of Buffers: 2

File Size: (as specified when the file was created)

Initial Allocation: (as specified when the file was created)

File Code: (as specified when the file was created)

Allow :FILE Command? yes

Note 1. *For CHAR, OCTAL, and HEX functions:* old permanent or temporary
For all other functions: old permanent

Note 2. *For COMPARE function:* read only
For VERIFY function: input/output
For all other functions: write only

Note 3. *For COMPARE function:* no (shared access)
For all other functions: yes

TO=named disc file;NEW

Formal File Designator: the “to” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): same as “from” file

Record Format: same as “from” file

Access Type: read/write

Carriage Control? same as “from” file

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

Record Size: same as “from” file

Device: a byte array containing DISC

Userlabels: 0

Blocking Factor: same as “from” file

Number of Buffers: 2

***File Size:* (see note 1)**

Initial Allocation: 1

File Code: same as “from” file

Allow :FILE Command? yes

Note 1. If “from” file is *not* a disc file and SUBSET is *not* used, the default file size is 1023 records.

If “from” file is a disc file and SUBSET is *not* used, one extent the size of the “from” file is allocated and 15 extra unallocated extents are made available.

If SUBSET is used (with *any* “from” file) and is specified by *starting-record-number: last-record-number* or *starting-record-number, number-of-records*, one extent the size of the number of records is allocated and 15 extra unallocated extents are made available.

TO=line printer

Formal File Designator: the “to” file name in the FCOPY command

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

Record Format: undefined

Access Type: write only

Carriage Control? no

Multirecord Access? no

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? no

Record Size: 132 bytes (same as physical record size defined during system configuration)

Device: A byte array containing logical device number or device class name from :FILE command

Userlabels: (not applicable)

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

TO=\$CTUL or \$CTUR

Formal File Designator: (empty)

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

Record Format: fixed

Access Type: input/output

Carriage Control? yes

Multirecord Access? yes

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? yes

Record Size: 266 bytes (256 bytes of data plus a 10-byte escape sequence)

Device: logical device number of log-on terminal (left-justified ASCII number)

Userlabels: 0

Blocking Factor: default (divide 266 into configured physical record size)

Number of Buffers: 2

File Size: 1023 records

Initial Allocation: 1

File Code: 0

Allow :FILE Command? yes

TO=\$HARD

Formal File Designator: (empty)

Default File Designator: actual file designator is same as formal file designator

Domain: new

Record Type (ASCII/binary): ASCII

Record Format: fixed

Access Type: input/output

Carriage Control? yes

Multirecord Access? yes

Dynamic Locking? no

Exclusive Access? yes

Inhibit Buffering? yes

Record Size: 86 bytes (80 bytes of data plus a 6-byte escape sequence)

Device: logical device number of log-on terminal (left-justified ASCII number)

Userlabels: 0

Blocking Factor: 1

Number of Buffers: 2

File Size: (not applicable)

Initial Allocation: (not applicable)

File Code: (not applicable)

Allow :FILE Command? yes

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