

NOS Full Screen Editor

User's Guide

This product is intended for use only as described in this document. Control Data cannot be responsible for the proper functioning of undescribed features and parameters.

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This revision includes the following major changes:

- The addition of the TeleVideo TV924, TV950, and TV955 terminals.
- Changes to the header line of the FSE display screen.

Miscellaneous technical and editing changes reflect the new enhancements.

Technical changes in this manual are indicated by bars in the margins. If an entire page is affected, a dot is placed near the page number.

This edition obsoletes all previous editions.

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Contents

About This Manual	5	QUIT	4-45
Audience	5	REPLACE	4-49
Organization	5	SET	4-56
Conventions	7	TEACH	4-65
Related Publications	9	UNDO	4-67
Ordering Manuals	9	UNMARK	4-68
Submitting Comments	10	VIEW	4-69
In Case of Trouble	10	. (Dot)	4-71
		- (Dash)	4-73
		— (Comment)	4-77
		/ (Slash)	4-78
1. Introduction	1-1		
FSE Capabilities	1-1		
Terminals	1-2		
2. Screen Editing	2-1	5. Sample Screen Editing	
Getting Started	2-1	Session	5-1
Sample Display Screen	2-6	Starting FSE	5-2
Sample Editing Session	2-8	Copying Lines Between	
Viking 721 Terminal		Files	5-3
Function Keys	2-30	Word Processing	5-8
Entering Directives	2-38	Changing the Lines	
		Displayed	5-13
		Stopping FSE	5-14
		Restarting FSE	5-15
3. FSE Command	3-1		
4. FSE Directives	4-1	6. Advanced FSE	
Directive Syntax	4-1	Functions	6-1
Common Parameters	4-4	Editing Two Files at the	
ALTER	4-8	Same Time	6-2
BACK	4-11	Creating and Using FSE	
COPY	4-12	Procedures	6-4
DATA	4-14	Redefining Programmable	
DELETE	4-16	Function Keys	6-18
EDIT	4-21	Labeling Programmable	
FSE	4-23	Function Key Prompts	6-25
GET	4-25	Changing Your Screen	
HELP	4-29	Format	6-26
INSERT	4-32		
LOCATE	4-35	7. Line Editing	7-1
MOVE	4-41	Getting Started	7-1
PRINT	4-43	Editing	7-3

**8. Using Other
Terminals 8-1**

A. Code Set Conversion ... A-1

**B. Error Recovery and
Diagnostic Messages .. B-1**

Error Recovery B-1
Diagnostic Messages..... B-4

C. Glossary C-1

**D. Terminal Support
Information D-1**

CDC 722 D-2
CDC 722-30 D-7
DEC VT100 D-13
Zenith Z19/Z29 or
 Heathkit H19 D-18
IBM 3270 D-23
Lear Siegler ADM3A..... D-27
Lear Siegler ADM5 D-32
Tektronix 4115 D-36
TeleVideo 924/950/955 D-41

**E. Function Key Directive
Strings E-1**

Viking 721 Function Key
 Settings E-2
CDC 722 Function Key
 Settings E-3
CDC 722-30 Function Key
 Settings E-4
DEC VT100 Function Key
 Settings E-5
Zenith Z19/Z29 and Heathkit
H19 Function Key
 Settings E-6
IBM 3270 Function
 Key Settings E-7
Lear Siegler ADM3A Function
 Key Settings E-8
Lear Siegler ADM5 Function
 Key Settings E-9
Tektronix 4115 Function Key
 Settings E-10
TeleVideo 924/950/955 Key
 Settings E-11

**F. Viking 721 Terminal
Settings F-1**

Index Index-1

About This Manual

The CONTROL DATA® Network Operating System (NOS) enables you to edit files page-by-page. The CDC® NOS Full Screen Editor (FSE) enables you to edit sequenced and unsequenced files both page-by-page (screen mode) and line-by-line (line mode).

This manual explains how to access and use FSE in both line mode and screen mode. The text incorporates examples and illustrations.

Audience

This guide is written for persons familiar with the interactive use of NOS. Some knowledge of NOS file types is helpful but is not required. All examples use the CONTROL DATA Viking 721 terminal. Familiarity with this terminal is helpful but not essential. For information on the interactive use of NOS, refer to the *NOS Version 2 Reference Set, Volume 1, Introduction to Interactive Usage*. For detailed hardware descriptions of the Viking 721 terminal, refer to the *721-10/20/30 Hardware Reference Manual*.

Organization

Section 1 introduces FSE and its capabilities. It describes the Viking 721 terminal and the differences between the Viking and other terminals. Section 2 describes the basic screen editing functions. Section 3 describes the FSE command that starts FSE. Section 4 describes the FSE directives. Section 5 presents a sample session, using many of the advanced FSE functions. Section 6 describes the advanced FSE functions. Section 7 describes how to use FSE as a line editor. Section 8 contains worksheets to help you use FSE on terminals other than the Viking 721.

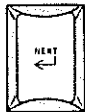
The order in which you read these sections depends on the mode of editing you use. For screen editing, read the manual from section 1 through section 7. For line editing, read section 1 followed by sections 3, 4, and 7.

Appendix A gives a code conversion chart for the ASCII character sets. Appendix B lists FSE diagnostic messages and explains how to recover from screen editing errors. Appendix C defines terms used in this manual. Appendix D describes how to use FSE with the CDC722 and 722-30; DEC VT100; Zenith Z19 and Z29; Heathkit H19; IBM 3270; Lear Siegler ADM3A and ADM5; Tektronix 4115; and TeleVideo TV924; TV950, and TV955 terminals.† Appendix E lists the directive strings for the various FSE functions. Appendix F describes the Viking 721 terminal settings needed to ensure proper operation of FSE.

† DEC VT100 is a product of the Digital Equipment Corporation. Zenith Z19 and Z29 are products of the Zenith Radio Corporation. Heathkit H19 is a product of the Heath Company. IBM 3270 is a product of International Business Machines Corporation. Lear Siegler ADM3A and ADM5 are products of the Lear Siegler Corporation. Tektronix 4115 is a product of the Tektronix Corporation. TeleVideo TV924, TV950, and TV955 are products of TeleVideo Systems, Inc.

Conventions

This manual uses simplified symbols to represent actual keys when instructing you to press a key. For example,



is represented as



and



is shown as



When two keys appear side by side, hold down the first key while pressing the second. For example,



means hold down  and press .

When you have to press more than one key in succession to execute a certain function, this is indicated with a + sign. For example,



means hold down , press , release both, then press .

NOTE

The Viking 721 terminal keyboard is used as a model in describing keys and functions.

Function keys appear on the screen accompanied by labels. For example, the **(F1)** key has the following screen label.

F1 **MARK**

This manual includes the screen label when instructing you to press a function key.

Keys are sometimes combined. For example, to page backward on the DEC VT100 terminal, you use:

(SHIFT) F1 **(BKN)** + **(RETURN)**

Descriptions of directives or parameters use the following printing conventions:

Underscore	Indicates the shortest valid abbreviation (usually the first letter).
UPPERCASE	Indicates a parameter that must be entered exactly as shown. Examples show directives and parameters abbreviated in uppercase letters. To improve readability, spaces are left between many parameters, although they are not required. (A directive entered as M20 50T100 would appear in examples as M20 50T 100.)
lowercase	Indicates a variable parameter.
<i>italics</i>	Indicates an optional parameter. In most cases, it appears that all parameters are optional. This is technically true, but once a particular parameter is included, others may no longer be optional.
blue	Indicates an entry made by the operator.
shading	Indicates cursor position. Blue shading is used for operator action. Gray shading is used for system action. A white vertical bar is used when cursor position is on a blue screen display.

Related Publications

The following Control Data publications are available if you want additional information on NOS or the Viking 721 terminal.

Control Data Manual	Publication Number
NOS Version 2 Reference Set, Volume 1, Introduction to Interactive Usage	60459660
NOS Version 2 Reference Set, Volume 2, Guide to System Usage	60459670
NOS Version 2 Reference Set, Volume 3, System Commands	60459680
NOS Screen Formatting Reference Manual	60460430
Software Publications Release History	60481000
721 Display Terminal Operator's Guide/Installation Instructions	62940019
721-10/20/30 Hardware Reference Manual	62940020
721-21/31 Owner's Manual	62950101
Loose Leaf Binder (6" x 9") for manuals	60086200

Ordering Manuals

Control Data manuals are available through Control Data Sales offices or through Control Data Corporation Literature Distribution Services (308 North Dale Street, St. Paul, Minnesota 55103).

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St. Paul, Minnesota 55103

or call (612) 292-2101. If you are a Control Data employee, call (612) 292-2100.

Introduction

1

FSE Capabilities	1-1
Terminals	1-2
Viking 721 Terminal	1-3
Other Terminals	1-5

10

11

12

13

14

15

When you use the NOS Full Screen Editor (FSE) on a video display terminal, you can display a page of text on the screen, move through a file page-by-page, and make most of your changes with the touch of a key. To be used as a screen editor, FSE must be placed in screen mode.

When you work on a printing terminal, you must use FSE's other editing capability, line editing. In contrast to screen editing, you see only a limited number of lines at any one time. Line editing is also available on video display terminals. To be used as a line editor on any type of terminal, FSE must be placed in line mode.

In either mode, you can edit both sequenced and unsequenced files.

FSE Capabilities

Using FSE, you can:

- Create or change a file.
- Undo changes you made to a file during your current terminal session.
- Display and edit two files (or two sections of the same file) on one screen.
- Search for and replace text according to the column in which the text appears.
- Move or copy parts of a file within the same file or into another file.
- Search for and replace words.
- Create FSE procedures using FSE directives.
- Manipulate words, lines (of up to 250 characters), and paragraphs of text with the FSE word processing directives.
- Access a tutorial file and practice editing.

These and the many other FSE capabilities are described in detail in this manual.

Terminals

FSE supports almost all display terminals. First, however, the terminal type must be defined to the system. Some terminals are already defined by Control Data. Others are defined by the site or by the user.

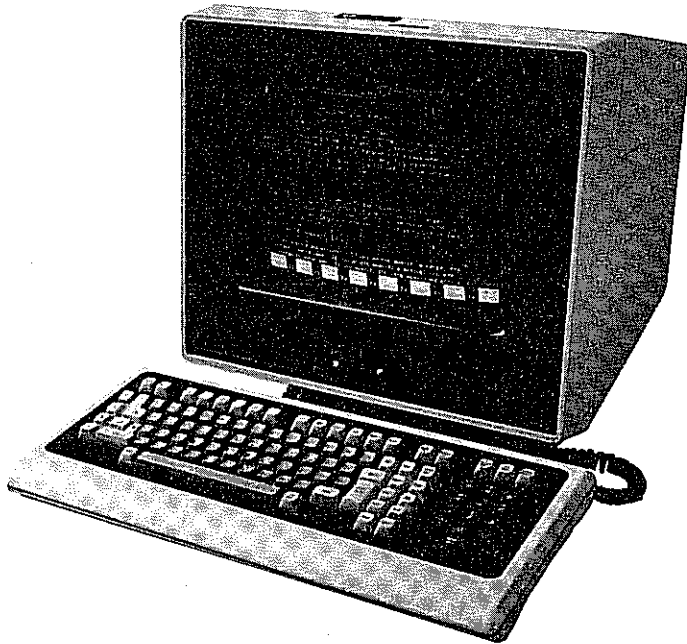
Control Data has defined the following terminals.

- CDC Viking 721.
- CDC Viking 721 Version 3.
- CDC 722.
- CDC 722-30.
- DEC VT100.
- Zenith Z19/Z29.
- Heathkit H19.
- IBM 3270.
- Lear Siegler ADM3A.
- Lear Siegler ADM5.
- Tektronix 4115.
- TeleVideo 924/950/955.

A terminal other than one of these may have been defined by the site. If not, you may be able to define it yourself. The process is described in the next section under *Getting Started*.







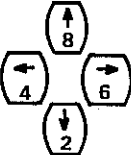
Viking 721 Terminal

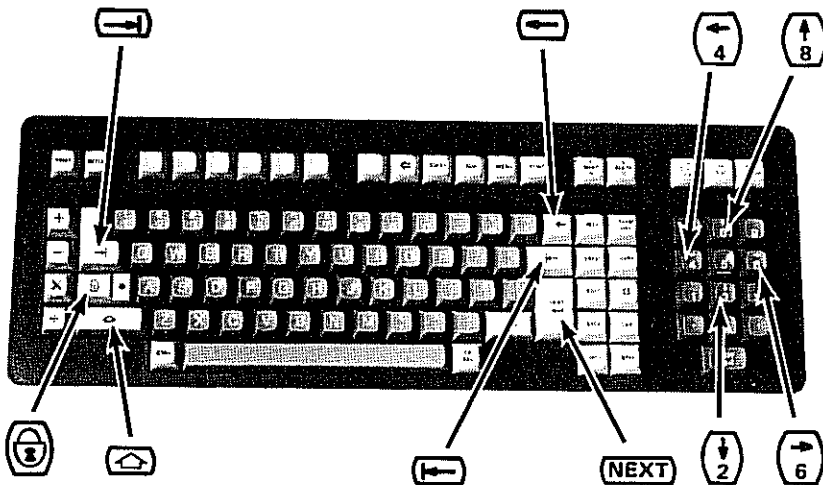
The Viking 721 is one of the terminals already defined to the system. This manual uses the Viking 721 as a model in describing keys and functions.



To log in to NOS and start FSE, the Viking 721 must be set up correctly. Appendix F explains the setup procedure. However, if your terminal has been used with NOS before, try using it without changing the settings.

The most-used keys on the Viking 721 are:

Key	Function
	Return, carriage return, or new line.
	Backspace.
	Shift.
	Shift lock.
	Tab forward.
	Tab backward.
	Cursor movement.



Other Terminals

If you are using a terminal other than the Viking 721, you may have to substitute other keys for those used in the examples. If you have one of the Control Data-defined terminals listed previously, refer to appendix D, *Terminal Support Information*, for a list of the keys on your terminal that are equivalent to the Viking 721 keys. Section 8, *Using Other Terminals*, has worksheets for recording equivalent keys.

The following list shows typical differences between the Viking 721 and other terminals.

Viking 721	Typical Equivalent
(NEXT)	(RETURN) or (CR)
(↑)	(SHIFT)
(F1) through (F16)	(PF1) through (PF16) or (1) through (16)
(↑) (F1) through (↑) (F16)	Shifted keys on a keypad or no equivalent keys.

The **(F1)** through **(F16)** keys are programmable function keys and are described later. Many terminals require you to press **(RETURN)**, **(NEW LINE)**, or **(CR)** after a programmable function key. For example:

Viking 721	Equivalent on Zenith Z19
(F1)	(F1) + (RETURN)

()

()

()

()

()

Getting Started	2-1
Establishing Screen Mode	2-1
Selecting a Character Set	2-3
Starting FSE	2-4
Sample Display Screen	2-6
Sample Editing Session	2-8
Setting Screen Mode	2-9
Starting FSE	2-10
Positioning the Cursor	2-11
Typing Over Text	2-12
Inserting Characters	2-13
Deleting Characters	2-13
Inserting Lines	2-14
Deleting Lines	2-15
Paging Forward and Backward	2-16
Moving Lines	2-18
Copying Lines	2-19
Undoing Changes Made to a File	2-20
Undoing Marks	2-21
Accessing Online Help	2-22
Stopping FSE and Returning to NOS	2-24
Stopping FSE and Making Your Changes Permanent	2-24
Restarting FSE	2-24
Editing Sequenced Files	2-28
Creating Multi-Record and Multi-File Files	2-29
Viking 721 Terminal Function Keys	2-30
Editing Keys	2-30
CDC Standard Function Keys	2-32
Programmable Function Keys	2-34
Entering Directives	2-38



2

3

4

5

6

Getting Started

To get started on FSE, you must be logged in to NOS. For information on NOS login procedures, refer to the *NOS Version 2 Reference Set, Volume 2, Guide to System Usage*.

Establishing Screen Mode

After you are logged into NOS, use the following command to identify your terminal type and tell NOS that you want to be in screen editing mode whenever possible.

```
SCREEN,model
```

where `model` represents the name that identifies your terminal type. If you have one of the following terminals, use the model name shown (Control Data has defined the terminals to the system and assigned the model name).

Most models have a type-ahead feature. To specify type-ahead, enter the model name followed by a T. (Type-ahead allows you to press a function key two or more times in quick succession, rather than pressing it once and waiting for the system to execute it before pressing it a second time.)

NOTE

Screen editing mode remains in effect for the entire terminal session, even if you change editing modes while using FSE.

If you do not enter a SCREEN command prior to starting FSE, FSE will act as a line editor (the default mode). Refer to section 7, *Line Editing*, for information about this function.

Terminal	Model	Model with Type-Ahead
Viking 721	721	721T
Viking 721 Version 3	721V3	721V3T
CDC 722	722	722T
CDC 722-30	72230	72230T
DEC VT100	VT100	VT100T

<u>Terminal</u>	<u>Model</u>	<u>Model with Type-Ahead</u>
Zenith Z19/Z29 and Heathkit H19	Z19	Z19T
IBM 3270	3270	
Lear Siegler ADM3A	ADM3A	ADM3AT
Lear Siegler ADM5	ADM5	ADM5T
Tektronix 4115	T4115	T4115T
TeleVideo 924	TV924	TV924T
TeleVideo 950	TV950	TV950T
TeleVideo 955	TV955	TV955T

To establish screen mode for the Viking 721 terminal, you enter:

```
SCREEN,721
```

and press:

```
(NEXT)
```

Other terminals may be defined to the system by the site. To determine if this is the case, access your site's terminal file library (model is the name of a compiled and stored terminal definition file). Enter the following commands:

```
GET,TERMLIB/UN=LIBRARY
CATALOG,TERMLIB,R,U,N
```

If your terminal is not defined, you can define it by using the Terminal Definition Utility (TDU). Enter the commands:

```
ATTACH,TDUFILE/UN=LIBRARY
FSE,TDUFILE,A
```

(Section 3 describes the FSE command and its parameters.)

You will get a file containing pretyped terminal definition statements. Edit the file to define your terminal. You will also need to define your programmable function keys (these keys are described later in this section.) For details, refer to the *NOS Screen Formatting Reference Manual*.

Selecting a Character Set

To move or copy uppercase and lowercase text to or from the file you are editing, you must enter the NOS command

ASCII

before starting FSE. This command allows you to use the ASCII 95-character set. If you do not enter the ASCII command before starting FSE, the text you want to copy is placed in uppercase only (the ASCII 64-character set).

NOTE

To edit a file in uppercase and lowercase (when you do not intend to move or copy text to or from another file), you may specify the ASCII 95-character set on a parameter of the FSE command (refer to section 3, FSE Command).

Starting FSE

Having established the screen mode and character set for your terminal session, you can start FSE and specify the name of the file you want to edit. For example, to start FSE and specify that you want to edit a local file named MYFILE, you enter:

```
FSE,MYFILE
```

and press:

```
(NEXT)
```

If MYFILE does not already exist as a local file, it is created. Your screen then clears and displays the following.

NOS FULL SCREEN EDITOR

Upper Case File MYFILE Empty (No Changes)

MRKCHR	ONECPY	DELB	LAST	UNMARK		LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Sample Display Screen

The following sample display screen contains an uppercase file called MYFILE. This file will be used in the demonstrations of editing techniques that follow. It contains intentional errors, which will be corrected later. MYFILE is not released with the system. If you want to practice as you read, you can create this file and enter the appropriate text.

The numbers to the left of the screen have been added to help you locate lines referenced in the exercises on the following pages.

```

1  NDS FULL SCREEN EDITOR
2  Upper Case File MYFILE Lines 1 - 25 Size 293 (No Changes)
3  PROGRAM INDEX
4  C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
5  C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
6  C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
7  C CONTINUATION LINES.
8  C
9  C IMPLICIT INGETER (A-Z)
10 C PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
11 C PARAMETER ((MSC=50)
12 C PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
13 C CHARACTER*40 COND
14 C CHARACTER*1 CO,CN
15 C CHARACTER*40 COND
16 C CHARACTER*10 SLANTS
17 C CHARACTER*12 FMTST
18 C CHARACTER*(MAXILEN) INPLIN
19 C CHARACTER*7 PVAL,PNAME
20 C CHARACTER*7 INPFILE,OUTFILE
21 C CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
22 C DIMENSION TAB(3)
    DATA PENTRY/" /,SENTRY/" /,TENTRY/" /,BLANK/" /
    DATA OUTFILE/"OUTPUT",INPFILE/"INPUT"/
    DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/
5  MRKCHR  ONECPY  DELB  LAST  UNMARK  LOCNXT  80COL
F1 MARK F2 MOVE F3 INSB F4 FIRST F5 UNDO F6 QUIT F7 LOCATE F8 132COL
  
```

- Sample Display Screens
- ① Directive Line. The line on which you enter FSE directives. To position the cursor at this line, press **(HOME)** or the equivalent key for your terminal.
 - ② Message Line. The line on which FSE displays messages and prompts.
 - ③ File Header. The file name, lines currently displayed, total number of lines in the file, and the status of the file ((No Changes), (Changed), (Read-Only)). If the file is uppercase, the prefix Upper Case appears on this line. If the file is lowercase, no prefix appears.
 - ④ File Text. The contents of the file.
 - ⑤ Programmable Function Key Prompts. The labels currently assigned to function keys **(F1)** through **(F8)** and shifted **(F1)** through shifted **(F8)**. These keys, along with the eight other programmable function keys, are described later in this section.
 - ⑥ Cursor. Your current position in the file, where text may be entered or edited.

Sample Editing Session

You can do most of your editing by positioning the cursor at the text to be changed and typing the corrections over the old text. Other editing functions can be performed with only the touch of a key.

Using basic screen editing techniques, the errors in the previously introduced sample file (MYFILE) will now be corrected. Use this session for an overview of basic screen editing. More advanced aspects of screen editing, including descriptions of function keys and FSE directives, appear later in this manual. In the sample session you will:

- Set screen mode.
- Start FSE.
- Position the cursor.
- Type over text.
- Insert and delete characters.
- Insert and delete lines.
- Page forward and backward.
- Move lines.
- Copy lines.
- Undo changes made to a file.
- Access the FSE online help file.
- Stop and restart FSE.
- Make changes permanent.
- Edit sequenced files.
- Create multi-record and multi-file files.

Setting Screen Mode

After you log in to NOS on a Viking 721 terminal, enter one of the following commands to set screen mode.

SCREEN,721

or

SCREEN,721T

Starting FSE

Enter the following command to start FSE and to specify that you want to edit file MYFILE.

```
FSE,MYFILE
```

FSE accesses file MYFILE. If MYFILE does not already exist as a local file, it is created.

If MYFILE is already a permanent file but is not local, enter the following FSE command to make MYFILE local and start FSE.

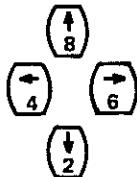
```
FSE,MYFILE,G
```


The following screen appears.

```
NOS FULL SCREEN EDITOR
Upper Case File MYFILE Lines 1 - 25 Size 293 (No Changes)
PROGRAM INDEX
C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C
C IMPLICIT INGETER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER ((MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
CHARACTER*40 COND
CHARACTER*1 CD,CN
CHARACTER*40 COND
CHARACTER*10 SLANTS
CHARACTER*12 FMTST
CHARACTER*(MAXILEN) INPLIN
CHARACTER*7 PVAL,PNAME
CHARACTER*7 INPFILE,OUTFILE
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
DIMENSION TAB(3)
C
DATA PENTRY/' ','SENTRY/' ','TENTRY/' ','BLANK/' '
DATA OUTFILE/'OUTPUT',INPFILE/'INPUT'
DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/
MRKCHR  ONECPY  DELB  LAST  UNMARK  LOCNXT  B0COL
F1  MARK  F2  MOVE  F3  INSB  F4  FIRST  F5  UNDO  F6  QUIT  F7  LOCATE  F8  132COL
```

Positioning the Cursor

To move the cursor around on the screen, use the arrow keys. On the Viking 721, these keys are located on the numeric keypad to the right of the main keyboard, and appear as:



You do not have to press  to use these keys. When you hold them down, they automatically repeat.

NOTE

These characteristics of the terminal are set during terminal installation. If the nonvolatile memory in the terminal fails, they will no longer be available. Information on resetting them is in the CDC 721-21/31 *Owner's Manual*.

Typing Over Text

You can make most corrections to text by positioning the cursor at the text to be corrected and typing the correction over the existing text. For example, in the eighth line of MYFILE, you can change INGETER to INTEGER by positioning the cursor at the G:

```
IMPLICIT INGETER (A-Z)
```

and typing T.

```
IMPLICIT INTETER (A-Z)
```

(When you type the T, the cursor moves one character forward.)

Then, position the cursor at the second T and type G.

```
IMPLICIT INTEGER (A-Z)
```

Inserting Characters

Position the cursor where you want to insert a character and press:

INSRT

For example, the 24th line of file MYFILE is missing a / following 'OUTPUT'.

```
DATA OUTFILE/'OUTPUT',INPFILE/'INPUT'/
```

To add the slash, position the cursor at the comma following 'OUTPUT'. Then press:

INSRT

FSE inserts a blank where the cursor is positioned. Type the slash into this blank.

```
DATA OUTFILE/'OUTPUT' /,INPFILE/'INPUT'/
```

(After you type the slash, the cursor again moves one character forward.)

Deleting Characters

Position the cursor at the character you want to delete. For example, file MYFILE has an extra parenthesis on the 10th line.

```
PARAMETER ((MSC=50)
```

Position the cursor at the extra parenthesis. Then press:

DELETE

The result is:

```
PARAMETER (MSC=50)
```

Inserting Lines

The line:

```
LOGICAL PARMERR
```

needs to be inserted in file MYFILE between the following two lines (lines 20 and 21).

```
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
DIMENSION TAB(3)
```

To do this, position the cursor at the beginning of the second line.

```
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
DIMENSION TAB(3)
```

Then press:



FSE inserts a blank line above the line the cursor was on and positions the cursor on the blank line.

```
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
DIMENSION TAB(3)
```

Type the new line in the blank line space.

```
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
LOGICAL PARMERR
DIMENSION TAB(3)
```

Deleting Lines

In file MYFILE, the 14th line duplicates the 12th line.

```
CHARACTER*40 COND
CHARACTER*1 CO,CN
CHARACTER*40 COND
CHARACTER*10 SLANTS
```

To delete the second of these duplicate lines, position the cursor anywhere on the line to be deleted. Then press:



DLETE

The result is:

```
CHARACTER*40 COND
CHARACTER*1 CO,CN
CHARACTER*10 SLANTS
```

Each time you delete a line, the lines below it move up, leaving a blank space at the end of your text on the screen. FSE fills in the blank space with appropriate lines from your file when you press:

NEXT

Paging Forward and Backward

Pressing:

FWD

advances the screen display to the next page forward in the file. The bottom line of the page you were on carries over and reappears at the top of the new display. The following screen is the second page of sample file MYFILE.

Upper Case File MYFILE Lines 25 - 49 Size 293 (Changed)

DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/ ← This is the last line of
DATA SLANTS"/"/////////" the first page of MYFILE.

C

C

```
5 ERR=0
  PARMERR=.FALSE.
  CALL GETPARM(PNAME,PVAL,ERR)
  IF(ERR)4,3,5
```

C

```
3 IF(PVAL.EQ.BLANK)GO TO 5
  IF(PNAME.EQ.'P') THEN
    INPFILE=PVAL
  ELSE IF(PNAME.EQ.'N') THEN
    OUTFILE=PVAL
  ELSE IF(PNAME.EQ.'T1') THEN
    READ(PVAL,'(I1)') TAB(1)
  ELSE IF(PNAME.EQ.'T2') THEN
    READ(PVAL,'(I1)') TAB(2)
  ELSE IF(PNAME.EQ.'T3') THEN
    READ(PVAL,'(I1)') TAB(3)
  ELSE IF(PNAME.EQ.'SEP') THEN
    READ(PVAL,'(I1)') SEPCNT
    IF(SEPCNT.LT.2 .OR. SEPCNT.GT.5) THEN
      COND='SEP MUST BE 2, 3, 4, OR 5.'
    PARMERR=.TRUE.
```

MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	BOCOL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE
F8 132COL						

To see the previous page, press:

(BKW)

FSE displays the previous page.

Upper Case File MYFILE Lines 1 - 25 Size 293 (Changed)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C
C IMPLICIT INTEGER (A-Z)
C PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
C PARAMETER (MSC=50)
C PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
C CHARACTER+40 COND
C CHARACTER+1 CO,CN
C CHARACTER+10 SLANTS
C CHARACTER+12 FMTST
C CHARACTER+(MAXILEN) INPLIN
C CHARACTER+7 PVAL,PNAME
C CHARACTER+7 INPFILE,OUTFILE
C CHARACTER+50 PENTRY,SENTRY,TENTRY,BLANK
C LOGICAL PARMERR
C DIMENSION TAB(3)

DATA PENTRY/' ',SENTRY/' ',TENTRY/' ',BLANK/' '
DATA OUTFILE/'OUTPUT',INPFILE/'INPUT'
DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/

MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE F8 132COL

Moving Lines

In sample file MYFILE, the following lines must be moved.

```
IMPLICIT INTEGER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER (MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
```

To do this, place the cursor on the first line of the group to be moved (line 8).

```
IMPLICIT INTEGER (A-Z)
```

Then press:

F1 **MARK**

This marks the line as the beginning of a group of lines to be moved. Then place the cursor on the last line of the group (line 11).

```
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
```

Again press:

F1 **MARK**

This marks the line as the last of the group to be moved. The entire block is highlighted as inverse video display.

```
IMPLICIT INTEGER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER (MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
```

(If you want to move just one line, only one mark is needed.)

The block is to be relocated between lines 20 and 21.

```
LOGICAL PARMERR
DIMENSION TAB(3)
```

Position the cursor anywhere on the DIMENSION TAB(3) line. Then press:

F2 **MOVE**

The screen now appears as:

```
LOGICAL PARMERR
IMPLICIT INTEGER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER (MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
DIMENSION TAB(3)
```

The lines you marked no longer exist at their old location, and are no longer highlighted.

Copying Lines

If you want to copy lines without deleting them from their previous location, follow the steps described for moving lines, but press:

COPY instead of F2 **MOVE**

After the copy is complete, the copied lines are still at their original location and are still highlighted. Therefore, the group of lines may be copied to several places in the file without re-marking the group of lines after each copy. You need only position the cursor where you want each copy to be inserted and press:

COPY

To turn off the highlighting, press:

UNMARK

NOTE

To continue to copy or move sections of text, you need not explicitly cancel the previous highlighting. When you mark the new text, the previous highlighting automatically turns off.

Undoing Changes Made to a File

Suppose at this point, you realize that the lines should not have been moved. Rather than marking the lines again to move them back to their original position, all you need to do is press:

F5 **UNDO**

FSE cancels the previous operation. In this example, the lines are moved back to their original position.

C

```

IMPLICIT INTEGER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER (MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
CHARACTER*40 COND

```

F5 **UNDO** will undo all the changes you made to file MYFILE during the current editing session in the reverse order in which they were made. Just press:

F5 **UNDO**

once for each change you made. You can repeat the step until the original file is restored.

NOTE

To turn off the UNDO command, use the SET directive (SET UNDO NO). For details, refer to the description of the SET directive in section 4.

Undoing Marks

To turn off highlighting after copying text, press:



(The cursor need not be positioned on the highlighted text.) The highlighting is turned off and the message:

MARKS CANCELLED

appears.

NOTE

To continue to copy or move sections of text, you need not explicitly cancel the previous highlighting. When you mark the new text, the previous highlighting automatically turns off.

Accessing Online Help

To access online FSE information, press:

(HELP)

FSE splits the screen in half, with the FSE help file on the lower half of the screen.

Upper Case File MYFILE Lines 1 - 12 Size 293 (Changed)

PROGRAM INDEX

C

C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C

IMPLICIT INTEGER (A-2)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File FSEHELP Lines 1 - 12 Size 868 (Read-Only)

FULL SCREEN EDITOR HELP (for more information see the FSE User's Guide)

FSE directives tell FSE what to do. For help, enter HELP and the directive or its abbreviation. For example: HELP VIEW or HV. You may also abbreviate a parameter. HVN, for example, takes you to the NEXT parameter of the VIEW directive. If no help exists for a parameter that you enter, you will be positioned back to this screen. FSE has the following directives:

ALTER	BACK	COPY	DATA	DELETE	EDIT	FSE	GET
HELP	INSERT	LOCATE	MOVE	PRINT	QUIT	REPLACE	SET
TEACH	UNDO	UNMARK	VIEW	.(DOT)	-(DASH)	&(MICRO)	/(SLASH)
MRKCHR	ONECPY	DELB	LAST	UNMARK		LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

By changing the position of the cursor, you can manipulate each half of a split screen separately. For example, to page forward in the help file without disturbing MYFILE, move the cursor to the help file text and press:

FWD

For practice, you can edit MYFILE while reading FSE help. To return to MYFILE only, either press:

EDIT

or enter **EDIT** on the directive line.

The FSE help screen is a read-only file. Therefore, any changes you might make to it are not permanent.

Stopping FSE and Returning to NOS

To return to NOS, press:

F6 **QUIT**

Any files you have edited, including changes, remain as local files, ready for use by compilers or other programs. The exception is a direct access file attached in write mode. In this case, any changes are immediately made permanent.

Stopping FSE and Making Your Changes Permanent

To complete your editing session and make any changes to your files permanent, press:

(HOME)

This moves the cursor to the FSE directive line. To save the files you've edited as permanent files and to stop FSE, enter:

QUIT REPLACE

or its abbreviation:

QR

When you stop FSE, the following messages appear, informing you whether the changes to your file(s) are permanent.

```
FILE: MYFILE (PERMANENT)
FILE: FSEPROC (NO CHANGES) (NOT REPLACED)
FILE: FSEHELP (NO CHANGES) (READ-ONLY) (NOT REPLACED)
```

You access the FSEPROC file every time you start FSE. The file is described in detail in section 6, *Advanced FSE Functions*.

Restarting FSE

Having stopped FSE, you can, during your current terminal session, return to editing a file where you left off. To do this, enter the FSE command without parameters.

FSE

For example, suppose you finish editing MYFILE at the point shown by the cursor.

Upper Case File MYFILE Lines 1 - 25 Size 293 (Changed)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

CHARACTER*1 CO,CN

CHARACTER*10 SLANTS

CHARACTER*12 FMTST

CHARACTER*(MAXILEN) INPLIN

CHARACTER*7 PVAL,PNAME

CHARACTER*7 INPFILE,OUTFILE

CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK

LOGICAL PARMERR

DIMENSION TAB(3)

C
DATA PENTRY/' ',SENTRY/' ',TENTRY/' ',BLANK/' '
DATA OUTFILE!'OUTPUT!',INPFILE!'INPUT!'
DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/

MRKCHR	ONECPY	DELB	LAST	UNMARK		LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

You then press:

(HOME)

and enter:

QR + (NEXT)

stopping FSE and making your changes to the file permanent. The following messages appear.

FILE: MYFILE (PERMANENT)

FILE: FSEPROC (NO CHANGES)

After doing other things on NOS, you want to return to editing MYFILE.

Enter:

FSE + **NEXT**

You are returned to the exact point at which you left MYFILE.

The file header line now reads, No Changes, since you have not yet changed the file in this editing session.

Upper Case File MYFILE Lines 1 - 25 Size 293 (No Changes)

```

PROGRAM INDEX
C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C
C IMPLICIT INTEGER (A-Z)
C PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
C PARAMETER (MSC=50)
C PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
C CHARACTER*40 COND
C CHARACTER*1 CO,CN
C CHARACTER*10 SLANTS
C CHARACTER*12 FMTST
C CHARACTER*(MAXILEN) INPLIN
C CHARACTER*7 PVAL,PNAME
C CHARACTER*7 INPFILE,OUTFILE
C CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
C LOGICAL PARMERR
C DIMENSION TAB(3)
C
C DATA PENTRY/' ','SENTRY/' ','TENTRY/' ','BLANK/' '
C DATA OUTFILE/'OUTPUT'/,INPFILE/'INPUT'
C DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/

```

MRKCHR	ONECPY	DELB	LAST	UNMARK		LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

NOTE

If you make any changes to another file between FSE editing sessions, be sure to specify the file name when you reenter FSE. For example, enter:

FSE,MYFILE

rather than

FSE

If you do not specify the file name, the FSE command returns you to the local file you were editing when last in FSE. This local file will not contain the changes you made to the file outside of FSE.

Editing Sequenced Files

When you create or edit a sequenced file in the BASIC or FORTRAN subsystem, FSE assumes the file is a numbered sequenced file. Within directives, you can refer to the lines by their sequence numbers, rather than the numbers FSE assigns.

NOTE

If the first line of your sequenced file does not begin with a sequence number, FSE assumes the file is not a numbered sequenced file. If only the first line of your file begins with a number, FSE assumes the file is a numbered sequenced file only if the file was created under the BASIC or FORTRAN subsystem.

If you change a sequence number by typing over it, FSE does not allow you to make that number less than the preceding nor greater than the following sequence number. If you try to do so, FSE deletes the sequence number. For example, lines 00140 through 00160 appear as:

```
00140 Line 1
00150 Line 2
00160 Line 3
```

If you type 00165 over 00150, the lines appear as:

```
00140 Line 1
      Line 2
00160 Line 3
```

In this example, the same happens if you try to type a sequence number less than 00140.

Refer to the description of the SET NUMBER directive in section 4 for more information on manipulating sequence numbers.

Creating Multi-Record and Multi-File Files

FSE automatically inserts an end-of-record (EOR) or end-of-file (EOF) mark after every single-record file you create. These are internal file structure marks that are not visible on your screen.

If you want to create multi-record or multi-file files, you must insert the EOR and EOF marks between the records and files yourself. Type these marks on a separate line beginning in column 1, as shown in the following sample file. (The marks can be deleted in the same way you delete any other text.)

File SAMPLE FILE Lines 1 - 14 Size 14 (No Changes)

John Jones 1234 Happy Street Harmonious, USA (EOR)	} First Record
Esther Bluebonnet 5678 Happy Street Harmonious, USA (EOR)	} Second Record
Carl Smiles 9012 Happy Street Harmonious, USA	} Third Record

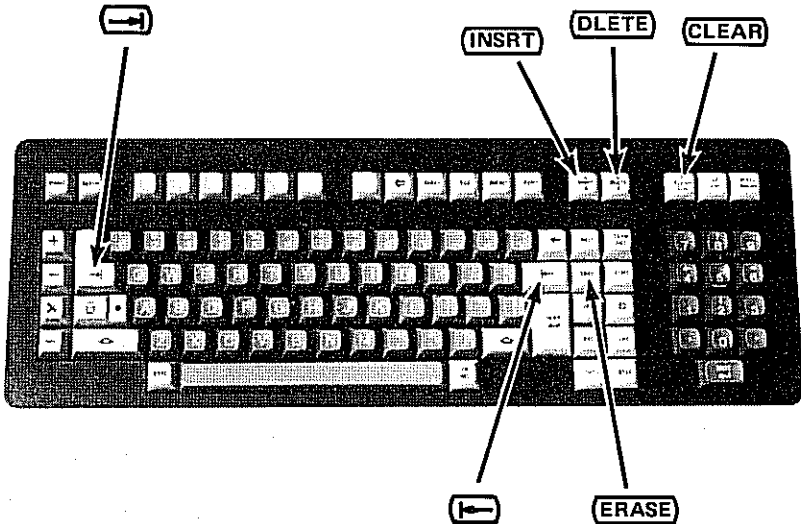
MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE
						F8 132COL

Viking 721 Terminal Function Keys






In addition to the standard ASCII character keys, like **A** and **5**, FSE supports three types of function keys: editing, CDC standard, and programmable.

Editing Keys

The editing keys are:

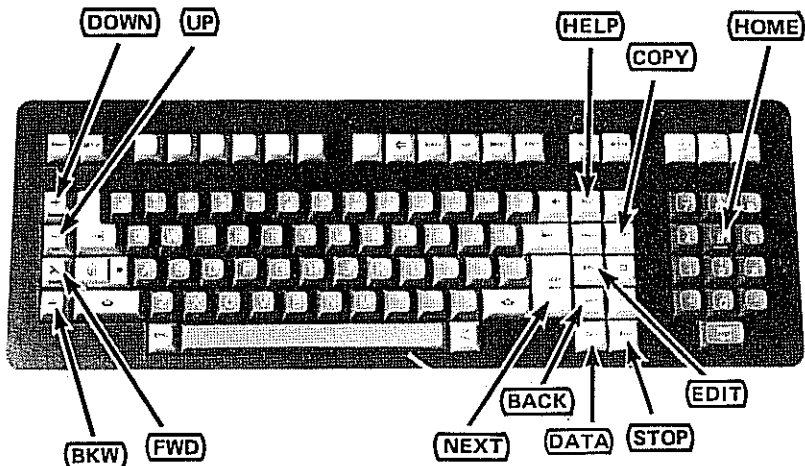


The editing keys usually perform their functions locally (in your terminal) and instantaneously. The editing key functions are:

Key	Function
INSRT	Inserts a blank space for a character.
 INSRT	Inserts a blank line.
DLETE	Deletes the current character.
 DLETE	Deletes the current line and moves the following lines up. Press: NEXT to fill in the lines at the bottom of the screen.
ERASE	Backspaces a single character and deletes it. When shifted, it deletes the current line and moves the cursor back to the first column.
	Moves the cursor forward to the next tab. Default tab settings are 1, 7, and 72. Refer to the SET directive description in section 4 for information on setting tabs.
	Moves the cursor backward to the immediately preceding tab.
CLEAR	Deletes all characters from the cursor to the end of the line.
 CLEAR	Clears the entire screen (useful when you suspect the text on the screen has been garbled). To rewrite the screen, press: NEXT

CDC Standard Function Keys

The CDC standard function keys are:



The CDC standard function keys perform operations that are used for nearly all applications. Specific operations are assigned either to a key or a combination of keys on all supported terminals.

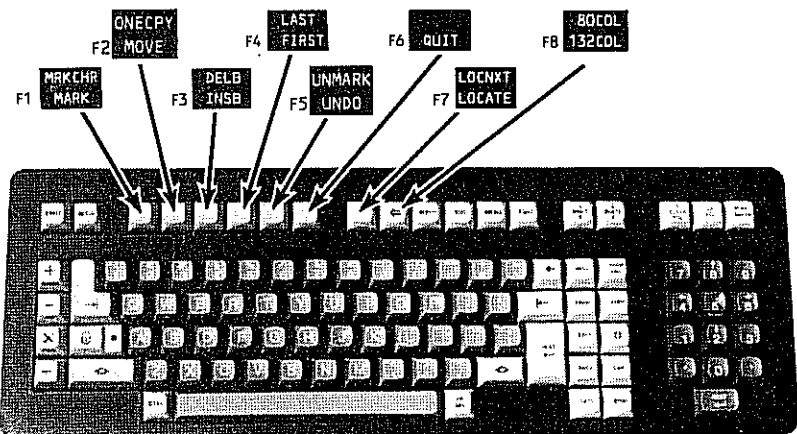
The functions are:

Key	Function
FWD	Advances screen one page.
↶ FWD	Advances to the last screen of the file.
BKW	Moves screen backward one page.
↶ BKW	Moves backward to the first screen of the file.
UP	Moves the current line (the line the cursor is on) to the top of the screen.
DOWN	Moves the current line (the line the cursor is on) to the bottom of the screen.
HELP	Displays the FSE help file in the lower half of a split screen.
EDIT	Terminates split screen mode, returning the top half of the screen to full screen. If you are not in split screen mode, EDIT returns to the initial FSE file with which you started this editing session.
BACK	Returns to the section of a file you marked with the DATA key or with your last BACK key.
COPY	Copies the marked text (or the line the cursor is on if there are no marks) to the present position of the cursor.
DATA	Marks a section of the file to which you can return with the BACK key.
STOP	In screen mode, STOP switches your terminal to line mode. In line mode, it stops a search or replacement in progress.
NEXT	Terminates an input line.
HOME	Moves cursor to the directive line, enabling you to enter directives.

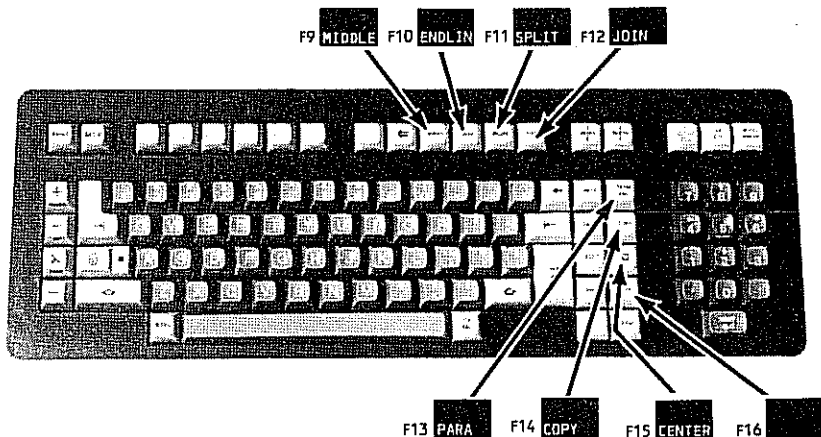
Programmable Function Keys

The programmable function keys can be defined to execute any of the FSE directives (refer to section 6, *Advanced FSE Functions*). The default functions of the programmable function keys are displayed at the bottom of your screen.

Usually, only the F1 through F8 function key prompts are displayed. The default prompts and their corresponding keys are:



The F9 through F16 prompts are displayed using the SET PROMPT directive described in section 4. The default prompts and their corresponding keys are:



The lower line of the prompt indicates the unshifted key function. The upper line indicates the shifted key function. Some of the programmable function keys also have labels on the keys. These labels are used for other applications and have no significance within FSE. The default functions for the Viking 721 programmable function keys are:

Key	Description
-----	-------------

F1	MRKCHR MARK	Pressed once, marks a line for future use with another function. Pressed twice, marks a range of lines. If you accidentally mark the wrong line or line range, press:
----	------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------

F5 **UNDO**

to unmark the line or range.

When shifted,

F1 **MRKCHR**

marks a character. Pressed twice, it marks a character range.

F2	ONECPY MOVE	Moves the range of lines set by the MARK function, or characters set by the MRKCHR function, to the position marked by the cursor. After the move operation is complete, the marks are automatically turned off.
----	------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

When shifted,

F2 **ONECPY**

copies the range of lines or characters set by the MARK or MRKCHR functions. After the copy operation is complete, the marks are automatically turned off.

F3	DELB INSB	Inserts a number of blank lines at the position marked by the cursor. The number inserted depends on the number of lines presently displayed on your screen.
----	----------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------

When shifted,

F3 **DELB**

deletes blank lines, starting with the line the cursor is at, until a nonblank line is encountered.

Key	Description
F4 LAST FIRST	Positions the cursor at the first line in the file. When shifted, F4 LAST positions the cursor to the last line in the file.
F5 UNMARK UNDO	Cancels the most recent change made to your file during your current editing session (does not cancel marks). Pressing: F5 UNDO again removes the next most recent change, and so on. When shifted, F5 UNMARK cancels any marks you have set.
F6 QUIT	Stops the current editing session. If your file is an indirect access file, the changes you make do not become permanent when you end the terminal session. If your file is direct access, the changes become permanent.
F7 LOCNXT LOCATE	Prompts you to enter the text you want to locate. When you enter the text and press: NEXT FSE locates the text, positioning the cursor at the first character of the text string. When shifted, F7 LOCNXT locates the next occurrence of the last text located.

Key	Description
F8 132COL	Sets the terminal to 132-column mode.
F8 80COL	When shifted, sets the terminal to 80-column mode (default).
F9 MIDDLE	Positions the line the cursor is at to the middle of the screen.
F10 ENDLIN	Moves the cursor to the end of the line it is on.
F11 SPLIT	Splits the line the cursor is on into two lines. If the cursor is at the beginning of the line, it inserts a blank line above it. Otherwise, it splits the line at the cursor position.
F12 JOIN	Joins the line the cursor is at with the next line.
F13 PARA	Reformats the paragraph the cursor is within to conform to margins set with the SET WORD FILL directive (default margins are 1 and 65). Paragraphs are delimited by blank lines. Refer to the description of the SET WORD FILL directive in section 4 for more information.
F14 COPY	Copies the lines or characters set by the MARK or MRKCHR function. (If no marks are set, it copies the line the cursor is on.) The marks remain on, allowing you to copy the marked area repeatedly.
F15 CENTER	Centers the line the cursor is on according to the boundaries set by the SET WORD FILL directive (described in section 4). Default margins are 1 and 65.
F16	Undefined.

For instructions on defining or redefining programmable function keys, refer to section 6, *Advanced FSE Functions*.

For information on default programmable function key settings for other supported terminals, refer to appendix D, *Terminal Support Information*.

Entering Directives

For the occasions when the previously described terminal keys do not meet your editing needs, FSE provides a number of directives. (These directives are described in detail in section 4, *FSE Directives*).

To enter a directive, press:

HOME

This positions the cursor on the FSE directive line at the top of the screen. There you enter the FSE directive followed by:

NEXT

The directive uses the position the cursor was in just before you pressed:

HOME

If you enter an invalid FSE directive, FSE positions the cursor at the point where the directive becomes unrecognizable. For example, suppose you enter a misspelled form of the QUIT directive.

QYIT

FSE positions the cursor at the Y because that is the point at which it could not recognize the entry.

~~Q~~YIT

Type the correction over the mistake and press:

NEXT

to try again. If you press:

NEXT

without making a correction, FSE ignores the incorrect directive and erases the directive line. Check the spelling of the directive and try again.

6

6

6

6

6

The FSE command starts the Full Screen Editor. (This FSE command is not the same as the FSE directive of the same name documented in section 4.) The FSE command tells NOS which file is to be edited, and gives other, optional, information. The optional parameters are shown in italics in the following descriptions. The shortest valid abbreviations for the values are underlined.

You can use two formats for the FSE command. The first format is order-independent, that is, you can enter parameters in any order. The format is:

FSE, FN=filename, OP=access, I=input, L=output, IP=procedure, WF=workfile.directive(s)

The second is order-dependent, that is, you must enter the parameters in the order shown. The format is:

FSE, filename, access, input, output, procedure, workfile.directive(s)

You can enter the optional FSE parameters in either uppercase or lowercase letters. FSE interprets both forms as uppercase letters.

Parameter	Description
<i>FN=filename</i>	Specifies the file you want to edit. filename must be a local file, unless you specify the OP=GET parameter. If you do not include a file name on the FSE command, FSE either resumes your previous editing session or, if you had no previous editing session, prompts you for a file name.
<i>OP=access</i>	Specifies the character set and/or the location of the file to be edited. The following are valid access parameter entries.
<u>Value</u>	<u>Description</u>
<u>DISPLAY</u>	Specifies the ASCII 64-character set, internally represented in 6-bit display code.
<u>NORMAL</u>	Specifies the ASCII 64-character set, internally represented in 6-bit display code (default if your terminal is in normal mode).
<u>ASCII</u>	Specifies the ASCII 95-character set, internally represented in NOS 6/12-bit display code (default if your terminal is in ASCII mode).

Parameter	Description						
	<table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><u>ASCII8</u></td> <td>Specifies the ASCII 128-character set, internally represented in 7-bit ASCII code right-justified in a 12-bit byte.</td> </tr> <tr> <td><u>GET</u></td> <td>Accesses the specified file by either getting an indirect access file or attaching a direct access file in write mode.</td> </tr> </tbody> </table> <p>Both character set and location can be specified as single-letter abbreviations, and must not be separated by commas, for example:</p> <p style="padding-left: 40px;">OP=GA or GA</p> <p>When you specify access, you must also specify a file name.</p>	Value	Description	<u>ASCII8</u>	Specifies the ASCII 128-character set, internally represented in 7-bit ASCII code right-justified in a 12-bit byte.	<u>GET</u>	Accesses the specified file by either getting an indirect access file or attaching a direct access file in write mode.
Value	Description						
<u>ASCII8</u>	Specifies the ASCII 128-character set, internally represented in 7-bit ASCII code right-justified in a 12-bit byte.						
<u>GET</u>	Accesses the specified file by either getting an indirect access file or attaching a direct access file in write mode.						
<i>I=input</i>	Specifies an input (directive) file other than the default file INPUT.						
<i>L=output</i>	Specifies an output (listing) file other than the default file OUTPUT.						
<i>IP=procedure</i>	Enables you to change the default procedure library from FSEPROC to the file of your choice.						
<i>WF=workfile</i>	Enables you to specify a work file other than the default file ZZZWORK. This file is not to be used as a permanent file. The permanent file version of your edited file is specified by the FN=filename parameter.						
<i>directive(s)</i>	Allows you to enter FSE directives within the FSE command itself. This parameter must be preceded by a period. To enter more than one directive on the FSE command, separate them with a semicolon. The directives can use all of the command line. If you have sequence numbers on the right end of command lines, terminate the last directive on the line with the delimiters ;--.						

If neither the input file nor output file you specify is assigned to your terminal, FSE executes in batch mode.

NOTE

When FSE executes with noninteractive input (in other words, in batch mode), the input file must be in the ASCII 95-character set format. To increase the efficiency of batch processing, set the undo feature to NO. (For details, refer to the description of the UNDO parameter of the SET directive in section 4).

Before entering the FSE command, you determine the editing mode by entering either the NOS SCREEN or the NOS LINE command. During an editing session, you can change to the other mode of editing by using the SET directive (described in section 4). This directive affects only the editing session during which it is entered. The NOS command you entered before starting FSE is still in effect for subsequent editing sessions, including any editing session that you resume.

For example, suppose you enter the NOS SCREEN command and start FSE, editing file MYFILE. Then, within FSE you use the SET LINE directive to switch to line editing. After line editing for a while, you enter the QUIT directive. The next time you enter the FSE directive without parameters (to resume your FSE editing session), you are returned to file MYFILE in screen mode (your original NOS SCREEN command is still in effect).

10

11

12

13

14

Directive Syntax	4-1
Abbreviations and Spaces	4-1
Parameter Order	4-2
String Delimiters	4-2
Misspelled Directives	4-3
Combining Directives	4-3
Common Parameters	4-4
ALTER	4-8
BACK	4-11
COPY	4-12
DATA	4-14
DELETE	4-16
EDIT	4-21
FSE	4-23
GET	4-25
HELP	4-29
INSERT	4-32
LOCATE	4-35
MOVE	4-41
PRINT	4-43
QUIT	4-45
REPLACE	4-49
SET	4-56
TEACH	4-65
UNDO	4-67
UNMARK	4-68

VIEW	4-69
. (Dot).....	4-71
- (Dash)	4-73
— (Comment)	4-77
/ (Slash)	4-78

FSE directives tell FSE what to do. When screen editing, you enter directives on the directive line. When line editing, you enter directives after the ?? prompt. In both modes, you must press:

(NEXT)

after the directive to begin execution.

Directive Syntax

Most directives begin with a verb, followed by qualifiers called directive parameters. (Some directives begin with a special character followed by a verb.)

You can often figure out how to specify a directive by thinking of it as a sentence. For example:

Sentence	Directive
Locate all occurrences of <i>abc</i> .	LOCATE ALL /abc/
Move line 12 to just after line 50.	MOVE 12 TO 50
Delete the next three lines.	DELETE NEXT 3

Abbreviations and Spaces

In directives, you can abbreviate words (other than file names) by specifying either the first letter or the first three letters. An entry can use uppercase letters, lowercase letters, or a combination. For example, you can enter LOCATE as:

L
Loc
locate

Although spaces or commas are required between numbers, they are not required between words. Using abbreviations and eliminating unnecessary spaces results in compact entries, as in the following examples.

<u>Long Version</u>	<u>Compact Version</u>
COPY 20 TO 50	C20T50
MOVE 20 50 TO 100	M20 50T100
LOCATE ALL WORD/XVAR/	LAW/XVAR/

Parameter Order

With few exceptions, you can specify directive parameters in any order. For example, the following directives all locate each occurrence of the word XVAR.

LAW/XVAR/

L/XVAR/AW

LW/XVAR/A

String Delimiters

In the preceding directives, slashes serve as delimiters for the string XVAR. However, if a string is the last parameter on a directive line, and the string does not end in a blank, you can omit the closing string delimiter, as, for example, in the directive:

LAW/XVAR

For other valid string delimiters, refer to the string parameter under *Common Parameters* in this section.

NOTE

In batch jobs and FSE procedures, do not omit the closing string delimiter.

Misspelled Directives

FSE does not recognize that a directive is misspelled. Instead, it assumes that any directive it does not recognize is abbreviated and reads as parameters any characters following the first. For example, suppose you enter the following misspelled COPY directive.

```
CORY 10 TO 50
```

Because FSE does not recognize a directive, it assumes you used the C abbreviation for COPY and it then tries to read the O as a parameter. In this case, there is no COPY parameter that can be abbreviated to O, so FSE displays an error message.

Combining Directives

By separating directives with semicolons, you can enter more than one directive on a line. The following example combines the LOCATE and VIEW directives.

```
L/SUBROUTINE;/V
```

If there is an error in the syntax of a directive, FSE stops and displays an error message. It does not execute any subsequent directives.

Common Parameters

Most directives use at least one parameter from the following common set. How to use these parameters with a particular directive is described later in this section. The following table describes the possible values for each parameter.

Parameter	Description								
direction	Specifies the direction FSE is to move through the file, and the number of times it is to execute the directive. The defaults are forward and 1, respectively. Possible values and their descriptions are: <table><thead><tr><th>Value</th><th>Meaning</th></tr></thead><tbody><tr><td><u>N</u>EXT num</td><td>Instructs FSE to move forward through the file, beginning the specified operation on the next line and executing it on num number of lines (when num is greater than 1). When num is 1 (the default setting), the specified operation is executed only once.</td></tr><tr><td><u>P</u>REVIOUS num</td><td>Instructs FSE to move backward through the file, beginning the specified operation on the previous line and executing it on num number of lines (when num is greater than 1). When num is 1 (the default setting), the specified operation is executed only once.</td></tr><tr><td><u>R</u>EPEAT num</td><td>Specifies the number of times an operation is to be executed starting at the current line. REPEAT always moves forward. The default setting for num is 1.</td></tr></tbody></table>	Value	Meaning	<u>N</u> EXT num	Instructs FSE to move forward through the file, beginning the specified operation on the next line and executing it on num number of lines (when num is greater than 1). When num is 1 (the default setting), the specified operation is executed only once.	<u>P</u> REVIOUS num	Instructs FSE to move backward through the file, beginning the specified operation on the previous line and executing it on num number of lines (when num is greater than 1). When num is 1 (the default setting), the specified operation is executed only once.	<u>R</u> EPEAT num	Specifies the number of times an operation is to be executed starting at the current line. REPEAT always moves forward. The default setting for num is 1.
Value	Meaning								
<u>N</u> EXT num	Instructs FSE to move forward through the file, beginning the specified operation on the next line and executing it on num number of lines (when num is greater than 1). When num is 1 (the default setting), the specified operation is executed only once.								
<u>P</u> REVIOUS num	Instructs FSE to move backward through the file, beginning the specified operation on the previous line and executing it on num number of lines (when num is greater than 1). When num is 1 (the default setting), the specified operation is executed only once.								
<u>R</u> EPEAT num	Specifies the number of times an operation is to be executed starting at the current line. REPEAT always moves forward. The default setting for num is 1.								
(file)	Specifies a NOS local file name. NOS file names can be seven or fewer alphanumeric characters. The default is the current file. The parentheses are required.								

Parameter	Description
-----------	-------------

line	Specifies the line or lines affected by the directive. The default line setting is the current line. Possible values are:
------	---------------------------------------------------------------------------------------------------------------------------

Value	Meaning
-------	---------

line number	The number of a particular line within the file.
-------------	--------------------------------------------------

In an unsequenced file, line number 1 is the first line of the file, line number 10 is the 10th, and so on.

In a sequenced file, line number is the sequence number of the line. For example, line number 20 is the line assigned the sequence number 20, rather than the 20th line of the file. (They may be the same, but not necessarily.)

ALL

All lines in the file.

direction

One of the direction parameter values:

NEXT num

PREVIOUS num

REPEAT num

When num is greater than 1, num is the number of lines on which the directive is executed. When num is 1 or unspecified, the directive is executed once.

CURRENT

The current line, that is, either the line the cursor is on (for screen editing) or the last line displayed (for line editing).

<u>Value</u>	<u>Meaning</u>
<u>FIRST</u>	The first line in the file.
<u>LAST</u>	The last line in the file.
line + num	<p>The number of a particular line plus a specified value. For example, in an unsequenced file, 38 + 45 specifies the 83rd line in the file. In a sequenced file, 38 + 45 specifies the 45th line after the line with the sequence number 38 (this may not be the 83rd line).</p> <p>For both file types, C + 10 specifies the 10th line after the current line.</p>
line - num	<p>The number of a particular line minus a specified value. For example, in an unsequenced file, 83 - 45 specifies the 38th line in the file. In a sequenced file, 83 - 45 specifies the 45th line before the line with the sequence number 83 (this may not be the 38th line).</p> <p>For both file types, L - 1 specifies the next to last line in the file.</p>
X or Y or Z	Specifies the X, Y, and Z position pointers, which can be used to reference lines by their numbers within your file. If two pointers are specified in a range parameter, the lines referenced by the pointers must be in the same file. The line number you assign to a pointer remains in effect throughout your current editing session, unless you reset the pointer to another line number. Refer to the SET directive for more information on the X, Y, and Z pointers.
line (file)	Specifies a line from another file. Any of the line parameter values can be followed by a file name. The parentheses are required.

Parameter	Description
-----------	-------------

range Specifies either a line or a range of lines affected by the directive. The default is the current line. Valid range parameter entries are:

Value	Meaning
line	One of the line parameter values.
line line	A group of lines delimited by two line parameter values.
<u>MARK</u>	Lines marked with the F1 MARK key or the SET MARK directive.
<u>SCREEN</u>	Lines appearing on the current screen (screen mode only).

string Specifies a text string. The default string parameter is the last specified string. If a string parameter is the last parameter on a directive, you do not need a closing delimiter. Valid string parameter entries are:

Value	Meaning
/text/	Specifies the string text.
"text"	Specifies the string text.
'text'	Specifies the string text.
\te/xt\	Specifies the string te/xt.
/text1/.../text2/	Specifies the string beginning with text1 and ending with text2 on the same line and including any text between.

The remainder of this section lists the FSE directives in alphabetical order, shows their formats, and describes their parameters. For a parameter that is part of the common set, refer to one of the following:

- *Common Parameter Index* (inside the back cover of this manual), for lists of possible entries
- *Common Parameters* (discussed earlier in this section), for detailed descriptions

ALTER

Enables you to change lines by entering either a string or one of the modification characters (described later).

Without Parameters

When you are screen editing and you enter ALTER with no parameters, FSE prompts you with:

```
ALTER WHAT?
```

You then enter the text or modification character to change the current line. The modification characters are:

Modification

Character	Effect
#	Deletes a character.
&	Replaces a character with a space.
!	Erases the current character and any subsequent characters. Anything entered after ! is moved to the end of the shortened line.
~characters#	Inserts string characters before the character under which the ~ is positioned.

When you enter an alphanumeric character other than those listed here, it replaces the existing character.

When you are line editing and you enter ALTER with no parameters, FSE displays the current line and prompts you for changes, as for example:

```
75 DIMENSION TAB(33))xx
A??
```

You then space over to the position under the character to be edited and use one of the modification characters to make your change.

In this example, you could make the following changes.

```
75 DIMENSION TAB(33))xx
A??      N      )!
```

The line appears as:

```
75 DIMENSION TAB(3)
```

Format

ALTER END *direction string range* QUIET

Parameters

END

Adds a string at the end of a line. For example,

```
A E/abc/
```

adds the string abc to the end of the current line.

direction

Specifies the direction ALTER is to move and the number of times the directive is to be executed. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

The following ALTER directive:

```
A P 2/#/
```

deletes the first character of the two previous lines.

string

Specifies the text or modification characters to change or replace the current line. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

For a description of the modification characters, refer to *Without Parameters* at the beginning of the ALTER description in this section.

A ~ at the end of an ALTER string tells FSE to change the line, then prompt you for more changes.

range

Specifies the lines to be altered. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

The following ALTER directive:

```
A A/^ #/
```

inserts a space at the beginning of all lines in the file.

If you specify a group of lines on an ALTER directive, you are prompted only once. The same corrections are made to all the lines in the group.

A primary use of ALTER during screen editing is to indent blocks of text. For example, the following ALTER directives perform the described function on lines you have previously marked.

<u>Directive</u>	<u>Function</u>
A M/###/	Deletes the three leftmost characters from all marked lines.
A M/^ #/	Inserts three spaces at the beginning of the marked lines.

QUIET

Instructs FSE not to display the results of the ALTER directive.

BACK

Returns you either to a section of a file you marked with the DATA directive, or to the position where you last entered the BACK directive. The BACK directive does not become operative until you enter the DATA directive. For more information on BACK, refer to the DATA directive in this section.

Format

BACK

COPY

Copies lines from one location to another, either within a file or between two files.

Without Parameters

If you do not specify parameters, the copied line appears immediately below the original.

Format

COPY *range (file1)* TO *line (file2)* QUIET

Parameters

range

Specifies the lines to be copied. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

(file1)

Specifies the file containing the lines to be copied. Any NOS file name is valid. The default is the current file.

TO

Separates the copied lines from their destination.

line

Specifies the line after which the copied lines appear. This can be either a line in the current file or, when combined with the *(file2)* parameter, a line in another file. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

For example, to copy lines 17 through 25 immediately after line 65, enter:

```
C 17 25 TO 65
```

When you are line editing, FSE displays the copied lines with their new line numbers.

```
66 6 IF (.NOT.PARMERR) GO TO 5
67 OPEN(3,FILE='OUTPUT')
68 WRITE(3,*) COND
69 STOP 'INVALID PARAMETER.'
70 C
71 4 IF (TAB(1).GT.TAB(2) .OR. TAB(2).GT.TAB(3)) THEN
72     COND='INVALID TABS (T1>T2 OR T2>T3).
73     GO TO 6
74     ENDIF
```

NOTE

When you are screen editing, FSE automatically moves the cursor to the first copied line in its new position in the file. If you specify the (file2) parameter, the cursor is moved to the first copied line in the destination file (file2).

When you are screen editing and use the **(COPY)** key, it copies before, not after, the line indicated, because **(COPY)** executes the following directive.

```
C M TO P (COPY MARK TO PREVIOUS)
```

(file2)

Specifies the file (any NOS file name) to which the lines are to be copied. Used only if the destination is other than (file1). For example, the following directive copies all of file X to the end of file Y.

```
C A (X) TO L (Y)
```

To specify the line after which the copied lines are to appear, include the line parameter before the (file2) parameter. For example, to copy lines 10 through 50 of file MYFILE (the current file) to after line 20 of file Y, enter:

```
C 10 50 TO 20 (Y)
```

QUIET

Instructs FSE not to display the results of the COPY directive.

DATA

Marks a section of your file for easy reference during an FSE editing session. Once you have marked a section with the DATA directive you can return to that section from a different file by entering the BACK directive (this also applies if your file is in split-screen mode). Thus, you enter the DATA directive only once to mark a section of a file. The BACK directive works in conjunction with the DATA directive, returning you to the last defined DATA reference.

Format

DATA

Example

You are editing file MYFILE, but you would like to edit file FOOT1 briefly and then return to your work on MYFILE. On the page of MYFILE you want to return to, either enter DATA on the directive line or press

DATA

on the Viking 721 terminal. The message

FILE DATA STORED FOR USE WITH 'BACK'

appears. You can now leave file MYFILE (by entering FSE FOOT1 on the directive line) and begin editing file FOOT1.

NOTE

The DATA and BACK directives are not intended to move from point A to point B within the same file.

When you want to return to MYFILE from file FOOT1, either enter the BACK directive or press

BACK

on the Viking 721 terminal. The MYFILE screen at which you entered the DATA directive is displayed (the line on which the cursor was positioned when you entered DATA is now the first line of the screen). If you enter BACK again, you are returned to the position of file FOOT1 at which you first entered BACK.

DATA

However, if you then begin editing a third file (file FOOT2), and you enter BACK from file FOOT2, you are returned to file MYFILE, not FOOT1 (unless you specified DATA in FOOT1). The next BACK directive, from MYFILE, returns you to FOOT2. Remember, BACK returns you to the last defined DATA reference.

NOTE

The DATA directive cannot be abbreviated. If you enter D, FSE executes the DELETE command, deleting the line at your present cursor position. If you enter DA, all the lines in your file are deleted.

The BACK directive moves you from your current line in a file (FOOT2) to the line in another file where you executed the DATA directive (MYFILE). If you press **BACK** a second time, you will return to the line in the first file (FOOT2). Once the DATA directive has marked a line, the BACK directive allows you to easily swap between two files. For more information on BACK, refer to the BACK directive in this section.

DELETE

Deletes one or more lines.

Without Parameters

If you do not specify any parameters, the current line is deleted.

Format

DELETE *range* BLANK WORD IN tab QUIET

Parameters

range

Specifies the lines to be affected by the directive. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

For example, to delete lines 30 through 33, enter:

```
D 30 33
```

In line editing mode, lines 30 through 33 are then printed, showing you the lines you have deleted.

```
30   5  ERR=0
31   PARMERR=. FALSE.
32   CALL GETPARM(PNAME,PVAL,ERR)
33   IF(ERR)4,3,5
```

When you are screen editing, the lines just disappear.

After a **DELETE** directive, the current line is the line just before the deleted lines. In the preceding example, this is line 29.

When you are screen editing, a quick way to delete a group of lines is to mark the first and last lines of the group using:

```
F1 MARK
```

Then enter:

```
D M
```

and the marked lines are deleted.

DELETE followed by INSERT can be used to replace lines. For example,

D;I

deletes the current line and prompts you to insert new lines in its place.

BLANK

Deletes all blank lines, from the current cursor position to the first nonblank line.

In the following example, to delete all the blank lines but one, you position the cursor on the second blank line and enter DELETE BLANK (or press F3 **DELB**).

Upper Case File MYFILE Lines 1 - 25 Size 307 (Changed)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C
C

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	BOCOL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE
F8 132COL						

The following screen results:

Upper Case File MYFILE Lines 1 - 25 Size 293 (Changed)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

CHARACTER*1 CO,CN

CHARACTER*10 SLANTS

CHARACTER*12 FMTST

CHARACTER*(MAXILEN) INPLIN

CHARACTER*7 PVAL,PNAME

CHARACTER*7 INPFILE,OUTFILE

CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK

LOGICAL PARMERR

DIMENSION TAB(3)

C

DATA PENTRY/' ',SENTRY/' ',TENTRY/' ',BLANK/' '

DATA OUTFILE/'OUTPUT'/,INPFILE/'INPUT'/

DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/

MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	80COL	
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

WORD

Deletes characters within a line without deleting the line. Its exact function depends on where the cursor is positioned.

If the cursor is on a blank, DELETE WORD deletes that blank and any blanks immediately after it.

If the cursor is on an alphanumeric character, DELETE WORD deletes that character, any alphanumeric characters immediately after it, and any blanks immediately after that.

If the cursor is on any other kind of character, only that character is deleted.

For example, you want to delete the first occurrence of the word *provides* on the following screen. Position the cursor at the *p* in *provides*.

File TEXT Lines 1 - 25 Size 103 (No Changes)

This document provides provides information in addition to that available in the help file. You should read the entire help file before using this study guide. To access the help file, press HELP.

This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the topic-search capability of the HELP or TEACH directive.

(TOPICS) (TOPIC)

Study Guide: Directory of Topics

DIRECTIVE	How directives are processed
FUNC	Using function keys
SETKEY	How to redefine function keys
RANGE or RANGES	All the syntax options for range parameters
PROC or PROCS	How to make procedures
WORD	Word processing
GLOBAL	Global (menu-driven) searching
FORMAT	How to change screen format
POINTER	User-defined pointer registers
BOUND	Line-oriented versus character-oriented boundaries

MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	80COL	
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Then press:

(HOME)

and enter:

D W

The first occurrence of the word *provides* is deleted.

This document provides information in addition to that available in the help file. You should read the entire help file before using this study guide. To access the help file, press HELP.

For information on deleting one character at a time, refer to the *(Dot)* directive later in this section.

IN tab

Deletes a specified tab field. For example, if you set tabs to 1, 7, and 72,

D IN 1

deletes columns 1 through 6 in the current line and shifts the remaining text left six columns.

QUIET

Instructs FSE not to display the results of a deletion.

NOTE

To delete all lines containing a string, use the following FSE procedures. (These procedures may already be on your system-supplied FSEPROC. For information on FSE procedures, refer to section 6, *Advanced FSE Functions*.)

REMOVE

-- REMOVE DELETES LINES CONTAINING A SPECIFIED STRING.

SX

L/&?/1; -REMOVE 2

QP

REMOVE2

-- REMOVE2 IS USED BY REMOVE.

D; PN; L; -REMOVE2

VX

SA/LINES REMOVED FROM FILE/

QP

EDIT

Terminates split-screen mode, returning the file in the upper half of the screen to full-screen length.

Format

EDIT

Example

You are editing file MYFILE and enter

HELP

This accesses the FSE help file and prints the first 12 lines in split-screen mode.

USE "EDIT" TO UNSPLIT SCREEN

Upper Case File MYFILE Lines 1 - 12 Size 293 (Changed)

PROGRAM INDEX

C

C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C

IMPLICIT INTEGER (A-2)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File FSEHELP Lines 1 - 12 Size 868 (Read-Only)

FULL SCREEN EDITOR HELP (for more information see the FSE User's Guide)

FSE directives tell FSE what to do. For help, enter HELP and the directive or its abbreviation. For example: HELP VIEW or HV. You may also abbreviate a parameter. HVN, for example, takes you to the NEXT parameter of the VIEW directive. If no help exists for a parameter that you enter, you will be positioned back to this screen. FSE has the following directives:

ALTER	BACK	COPY	DATA	DELETE	EDIT	FSE	GET
HELP	INSERT	LOCATE	MOVE	PRINT	QUIT	REPLACE	SET
TEACH	UNDO	UNMARK	VIEW	.(DOT)	-(DASH)	&(MICRO)	/(SLASH)
MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	80COL	
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

To erase the FSE help file from the screen and return to editing file MYFILE only, enter either the EDIT directive or press

EDIT

on the Viking 721 terminal. It makes no difference where the cursor is positioned when you enter the EDIT directive.

Refer to the FSE directive description for another way to exit split-screen mode.

FSE

Specifies a different file to edit. The cursor is positioned at the first line of the file. If you were previously editing the file, the line you were working on is moved to the top of screen.

Without Parameters

You must specify a file parameter on the FSE directive.

Format

FSE *file* charset GET READ SPLIT

Parameters

file

Specifies the name of the file you want to edit. Any NOS file name is valid.

If you do not specify the GET or READ parameters, FSE uses its latest copy of the file. If the file does not exist, FSE creates a new file with the specified name.

charset

Specifies the character set to be used by FSE. Enter one of the following:

Entry	Character Set and Internal Code
DISPLAY	ASCII 64-character set, internally represented in 6-bit display code (default).
NORMAL	ASCII 64-character set, internally represented in 6-bit display code.
ASCII	ASCII 95-character set, internally represented in 6/12-bit display code.
ASCII8	ASCII 128-character set, internally represented in 7-bit ASCII code, right-justified in a 12-bit byte.

GET

Instructs FSE to retrieve a permanent file and refreshes the editor workspace. A *GET* retrieves indirect access files. *ATTACH* retrieves direct access files. Any changes made that are not permanent are lost. If there is no permanent copy of the file, FSE reads a local copy.

READ

Refreshes the file image in the editor workspace without a *GET* or *ATTACH* operation. Whatever is local (indirect access) or attached (direct access) is read. All changes that are not permanent are lost.

SPLIT

Divides the screen horizontally to allow editing of two different files. The current file is displayed in the upper half of the screen. The file specified with the FSE directive is displayed in the lower half. You can split one file to edit different parts of it. To do this, specify the current file name in the FSE directive. If the two displays overlap the same text, changes are made to both simultaneously.

The *SET VIEW SPLIT* directive allows you to specify the number of lines in the second portion of the screen. The default is half the screen.

GET

Either displays information on the files you are editing or lists the column numbers.

Without Parameters

You must specify either STATUS or ALIGN.

Format

GET STATUS ALIGN

Parameters

STATUS

Displays information on the files you are editing. Following is an example of the information you receive when you enter GET STATUS in screen mode.

PRESS NEXT TO CONTINUE

EDITOR STATUS INFORMATION:

FILES:	NAME	LOCK	CHANGE	CHARSET	NUMBERED	SIZE	POSITION
	FILE1	NO	YES	DISPLAY	NO	293	1
	FSEPROC	NO	NO	DISPLAY	NO	405	1
	FSEHELP	YES	NO	ASCII	NO	867	34
(CURRENT)	TEXT	NO	YES	ASCII8	NO	103	9

TAB COLUMNS: 7 72

SET VIEW WARN: 160 SET UNDO: YES TAB CHARACTER: (NONE)

SET VIEW EDIT: 250 SET JUMP: NO SET WORD FILL: 1 65 5 JUSTIFY: NO

FUNCTIONS:	KEY	LABEL	DIRECTIVES	KEY	LABEL	DIRECTIVES
	F1	MARK	SM	SHIFT F1	MRKCHR	SMW
	F2	MOVE	MMTP	SHIFT F2	ONECPY	CMTF;UM;SA
	F3	INSB	IBP	SHIFT F3	DELB	DB
	F4	FIRST	PF	SHIFT F4	LAST	VL
	F5	UNDO	UNDO	SHIFT F5	UNMARK	UM
	F6	QUIT	QUIT			
	F7	LOCATE	L/?/?	SHIFT F7	LOCNXT	LN
	F8	132COL	SVC132	SHIFT F8	80COL	SVC80
	F9	MIDDLE	V			
	F10	ENDLIN	.END			
	F11	SPLIT	.S			
	F12	JOIN	.J			
	F13	PARA	.F			
	F14	COPY	CMTF			
	F15	CENTER	.C			
	F16					

Field	Description
NAME	Local files you have been editing. The current file is prefixed with (CURRENT).
LOCK	Read-only status. YES means a read-only file: you cannot make changes. NO means you can make changes.
CHANGE	Specifies whether you made any changes to the file. YES means you have. NO means you have not.
CHARSET	Character set currently in effect for the specified file. Possible entries are:
DISPLAY	
ASCII	
ASCII8	
NUMBERED	Line number status. YES means it is a sequenced file. NO means it is not a sequenced file.
SIZE	Total number of lines in the file.
POSITION	Line number of the current cursor position in the file. For local files not currently being edited, this is the position at which the cursor is located when you reenter the file.
TAB COLUMNS	Column numbers of the current tabs.
SET VIEW WARN	Current line length warning limit.

Field	Description
SET UNDO	Current undo status. YES activates the UNDO feature. NO disables it.
TAB CHARACTER	Current soft tab character. Default is \.
SET VIEW EDIT	Current editing limit.
SET JUMP	Current auto-indentation status. YES activates the JUMP feature. NO disables it.
JUSTIFY	Right justify status for .FILL directive. YES activates flush right margin. NO disables it.
SET WORD FILL	Current margins set for use by the .FILL and .CENTER directives [refer to the . (Dot) directive]. The first two numbers are the left and right margins. The third number is the column in which the first line of a paragraph begins.
FUNCTIONS	Current labels and directives associated with the programmable function keys.

When screen editing, press:

NEXT

to return to the screen you were editing.

ALIGN

Writes the column numbers of the current line over the text on the line. The alignment information has no effect on the line over which it is written. The following example shows the information you receive when you enter GET ALIGN.

```

IMPLICIT INTEGER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER (MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
1234567890123456789012345678901234567890123456789012345678901234567890
CHARACTER*1 CO,CN
CHARACTER*10 SLANTS
CHARACTER*12 FMTST
CHARACTER*(MAXILEN) INPLIN
  
```

When you are screen editing, the alignment information is written on the current line and stays on the screen until that part of the screen is rewritten.

HELP

Displays the FSE help file, which describes the FSE directives and their parameters.

Without Parameters

If a directive is not specified, the cursor is positioned at the first line of the help file.

Format

HELP *directive*

Parameters

directive

Specifies the name of a directive. The cursor is positioned at the first occurrence of the directive in the help file.

For example, to locate information on the REPLACE directive, enter:

H REPLACE

The cursor is then positioned at the description of the REPLACE directive within the help file. You can also abbreviate the directive for which you want help. For example, HELP REPLACE can be entered as:

HR

If FSE cannot find the help directive you specify, the cursor is positioned at the first line of the help file.

When you enter the HELP directive (or press **HELP**) while screen editing, the screen is split into two equal parts, with the help file displayed on the lower half of the screen.

USE "EDIT" TO UNSPLIT SCREEN

Upper Case File MYFILE Lines 1 - 12 Size 293 (Changed)

PROGRAM INDEX

C
 C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
 C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
 C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
 C CONTINUATION LINES.
 C
 C IMPLICIT INTEGER (A-Z)
 C PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
 C PARAMETER (MSC=50)
 C PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
 C CHARACTER*40 COND

File FSEHELP Lines 1 - 12 Size 868 (Read-Only)

FULL SCREEN EDITOR HELP (For more information see the FSE User's Guide)

FSE directives tell FSE what to do. For help, enter HELP and the directive or its abbreviation. For example: HELP VIEW or HV. You may also abbreviate a parameter. HWN, for example, takes you to the NEXT parameter of the VIEW directive. If no help exists for a parameter that you enter, you will be positioned back to this screen. FSE has the following directives:

ALTER	BACK	COPY	DATA	DELETE	EDIT	FSE	GET
HELP	INSERT	LOCATE	MOVE	PRINT	QUIT	REPLACE	SET
TEACH	UNDO	UNMARK	VIEW	.(DOT)	-(DASH)	&(MICRO)	/(SLASH)
F1 MRKCHR	F2 ONECPY	F3 DELB	F4 LAST	F5 UNMARK	F6	F7 LOCNXT	F8 80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Remarks

When you use the **HELP** directive while line editing, FSE not only accesses the help file, but also prints several lines of text. You are then positioned in the help file so you can display more text with **PRINT** directives.

By default the help file is a direct access, public, read-only, permanent file. The default name is **FSEHELP** from user name **LIBRARY**. You can, however, assign any file you want as the default help file. To do this, create a local file named **FSEHELP** and, when the **HELP** directive is entered (or the **HELP** key is pressed) your local copy of **FSEHELP** is used as the default help file.

To exit the help file, either enter the **EDIT** directive or press **EDIT** .

INSERT

Inserts text.

Without Parameters

When you are screen editing and enter the INSERT directive without parameters, you are prompted with the following message.

```
INSERT WHAT?
```

You then enter the text you want to insert. This text appears as a line after the current line.

When you are line editing and enter the INSERT directive without parameters, you are prompted to enter new lines of text until you enter either a line with a tab character at the end or an empty line (**NEXT** only.) In the following example, the current line is line 31.

```
?? I
32? inserted line 1
33? inserted line 2
34? inserted line 3
35? NEXT          (The user ends the insert.)
??
```

If you want the inserted line to begin at a certain tab, include the appropriate number of tab characters before the text you insert. For example, if tabs are set at columns 7 and 72 and you want the inserted line 32 to begin at column 7, enter:

```
32?\ inserted line 1
```

\ is the soft tab character. Refer to the SET CHAR directive for information on the soft tab character.

Format

INSERT *line* PREVIOUS *string* BLANK WORD

Parameters

line

The lines affected by the insert. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.) The text of the insert (*string*) appears as a new line following the line you specify, unless you also specify the PREVIOUS parameter.

PREVIOUS

Specifies that you want the insertion before a character or line rather than after.

string

The text you want to insert. When you specify a string, the string is inserted as a single line after the current or specified line. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

NOTE

If you want to insert a string within a line rather than on a separate line, use the .INSERT directive (refer to *.DOT*) later in this section).

BLANK

When you are screen editing, this parameter inserts blank lines after the current or specified line (useful for entering large amounts of text). Lines of text are left at the top and bottom of the screen. When you are line editing, this parameter inserts nine blank lines in front of the current line. To remove excess blank lines, position the cursor at the first blank line you want to eliminate and use DELETE BLANK (all subsequent blank lines are deleted also).

You cannot specify both BLANK and WORD.

WORD

Inserts 30 blank characters at the current cursor position. When you are screen editing, this is sometimes more convenient than repeatedly pressing INSERT. To delete excess blank characters, position the cursor at the first blank character you want to remove and enter:

DELETE WORD

All subsequent blank characters are also deleted.

You cannot specify both **BLANK** and **WORD**.

LOCATE

Locates a specified character string.

Without Parameters

If you enter **LOCATE** without parameters, the last **LOCATE** string you specify is used. If you have not entered a **LOCATE** directive, you are prompted to enter the text you want to locate.

Format

LOCATE WORD *direction string range* IN *tab* UPPER QUIET

Parameters

WORD

Instructs FSE to search for a word (defined as the specified string when it is contained within either nonalphanumeric characters or blanks).

If you are line editing, it positions the cursor on the line containing the string.

If you are screen editing, it positions the cursor at the first character in the found string. For example, suppose you want to locate the word *topic* in the following text.

■ This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the topic-search capability of the HELP or TEACH directive. Be sure your topic is listed in this file.

Press:

(HOME)

and enter:

L W/topic

FSE positions the cursor at the first character of the specified string.

This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the Hopic-search capability of the HELP or TEACH directive. Be sure your topic is listed in this file.

Note that FSE passes the word topics in the first line because it is plural. It would not do so, had you not specified WORD.

direction

Specifies the direction in which LOCATE is to move in the file to find the specified string. FSE searches forward by default, beginning at the current cursor position.

(This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

When you specify the NEXT parameter, FSE begins its search at the next occurrence of the string.

When you specify PREVIOUS, FSE searches backward, beginning at the current cursor position.

The number used with the NEXT, PREVIOUS, and REPEAT parameters refers to the number of lines located, not the number of strings. The lines located need not be consecutive. For example,

```
L N 2 /abc/
```

means locate the next two lines containing abc, no matter how many times abc occurs on each line and regardless of whether or not the second line containing abc immediately follows the first line.

If you do not specify a number,

```
LOCATE NEXT/abc/
```

finds the next occurrence of abc, and

```
LOCATE PREVIOUS/abc/
```

finds the previous occurrence of abc (even if it appears on the current line).

For example, you are positioned at line 36 when line editing.

36 This is the first and the last of the located lines

You then enter:

L N /the/

You remain at line 36 because the line contains more than one occurrence of the string *the*.

string

Specifies the string you want to locate. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

The following directive locates the string abc.

L/abc

If the search is successful, LOCATE moves the cursor to the first character of the located string. If the search is unsuccessful, the cursor is not moved and the message NOT FOUND is displayed.

If the line located is on the screen already, the cursor is simply positioned at that line. Otherwise, the screen is rewritten with the located line at the top. If you prefer to display the located line in the middle of the screen, follow the LOCATE directive with a VIEW directive.

L/abc;/V

If you do not specify a string, FSE locates the string on the most recently specified LOCATE directive. If you have not previously entered a LOCATE directive in your editing session, you are prompted with:

LOCATE WHAT?

You then enter the string you want to find.

To save effort when searching for a long string contained on one line, you can use the ellipsis search technique. If, for example, you want to locate the following string:

I will inform you next Monday if a meeting is necessary.

you can enter:

L/I/./ary./

rather than specifying the entire string. You are then positioned at the first character of the specified string.

range

Specifies the lines in which you want FSE to search for the specified string. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

When you are screen editing and locate more than one occurrence of a string, FSE displays a directory of all the lines affected. For example, if you were to enter:

```
L A/PARAMETER/
```

the screen might display:

```
ENTER LINE NUMBER OR PRESS NEXT
File MYFILE   Displaying located lines
   9          PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
  10          PARAMETER (MSC=50)
  11          PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
  62          COND= 'INVALID PARAMETER - ' // PNAME
  69          STOP 'INVALID PARAMETER.'
```

You then press:

NEXT

either to view another page of affected lines or, if there are no more pages, to position the cursor in the file at the last line affected.

If you either enter a line number on the directive line or position the cursor at a line in the directory and then press:

NEXT

the cursor is positioned at that line in the file.

IN tab

Locates a specified string appearing within a field bounded by tabs (tab represents the tab field). For example, if tabs are set at columns 5, 20, and 40, the tab fields are:

Tab Field	Columns
1	1 through 4
2	5 through 19
3	20 through 39
4	40 through the end of the line

To locate all occurrences of the string ABC in columns 20 through 39 (tab field 3), you enter:

```
L A/ABC/IN 3
```

Refer to the SET directive description for information on setting tabs.

UPPER

Instructs FSE to search the file as if it were all capitalized. For example, if you enter:

```
L U/the/N 3
```

FSE might display:

```
14 The first occurrence
43 THE second occurrence
87 the third occurrence
```

The UPPER parameter is the default setting for display code files. For ASCII files, you must enter the exact string you want to locate.

QUIET

Instructs FSE not to display the located lines and positions the cursor at the last line located.

Remarks

If **LOCATE** is unsuccessful from within an FSE procedure, no more directives are read from that procedure line. The procedure continues at the start of the next line in the procedure. You can use this to conditionally execute parts of a procedure (for examples, refer to *Conditional Processing in Procedures*, section 6).

Examples

The following entries are all valid **LOCATE** directives.

Entry	Meaning
L F/abc	Locates first occurrence of abc in the file.
L\ab/c	Locates the string ab/c.
L 20 50/abc	Locates all occurrences of abc in lines 20 through 50.
L/abc/20 50	Locates all occurrences of abc in lines 20 through 50.
L A/abc	Locates all occurrences of abc in the edit file.
L/abc/././xyz/	Locates the text string that begins with abc and ends with xyz on the same line.
L A/abc/IN 2	Locates all occurrences of abc between the first and second tab (tab field 2).
L P 3/abc	Locates the previous three lines containing abc. Positions the cursor at the first occurrence of abc on the third line.
L N	Locates the next line in which the previously specified string occurs.
L W/boat	Word-oriented search. Finds the next occurrence of the word boat.

MOVE

Moves text from one place to another within a file or between two files.

Without Parameters

If you do not specify a parameter, nothing happens.

Format

MOVE *range (file1)* TO *line (file2)* QUIET

Parameters

range

Specifies the lines to be moved. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

(file1)

Specifies the file containing the lines to be moved. It can be any NOS file name. The default is the current file.

TO

Separates the lines to be moved from their destination.

line

Specifies the line after which the moved lines will appear. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

This parameter can designate a line either from the current file or from another file. The default is the last line of the file.

For example, to move lines 45 through 50 immediately after line 20, enter:

```
M 45 50 TO 20
```

When you are line editing, FSE displays the moved lines with their new line numbers.

```
21      READ(PVAL,'(I1)') TAB(3)
22      ELSE IF(PNAME.EQ.'SEP') THEN
23      READ(PVAL,'(I1)') SEPCNT
24      IF(SEPCNT.LT.2 .OR. SEPCNT.GT.5) THEN
25      COND='SEP MUST BE 2, 3, 4, OR 5.'
26      PARMERR=.TRUE.
```

When you are screen editing, the cursor is positioned at the first moved line. If you use the F2 **MOVE** key when screen editing, the lines are moved before, rather than after, the indicated line, because F2 **MOVE** executes the following directive.

```
M M TO P (MOVE MARK TO PREVIOUS)
```

(file2)

Specifies the file to which the lines are to be moved. Used only if the destination is other than (file1). Any NOS file name is valid.

For example, the following directive moves lines 20 through 50 of file MYFILE to the end of file Y.

```
M 20 50 (MYFILE) TO L(Y)
```

The default is the current file.

QUIET

Instructs FSE not to display the changes, only the resulting text.

PRINT

Either prints (displays) a range of lines (line editing) or positions the cursor (screen editing).

Without Parameters

If you do not specify a parameter, the current line is printed.

Format

PRINT *range* QUIET

Parameters

range

Specifies either the lines to be printed (line editing) or the position of the cursor (screen editing). (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

For example, to print the next three lines when line editing, you enter:

```
P N 3
```

If you are positioned on line 30, lines 31 through 33 are printed.

```
31 5 ERR=0
32 PARMERR=.FALSE.
33 CALL GETPARM(PNAME,PVAL,ERR)
```

To print the current line (line 30) plus the next two, you enter:

```
P R 3
```

Lines 30 through 32 are printed.

```
30 LOGICAL PARMERR
31 5 ERR=0
32 PARMERR=.FALSE.
```

When you are screen editing, rather than printing the lines, the **PRINT** directive positions the cursor at the last line of the range you specify.

The following example illustrates the difference between line editing and screen editing when specifying the PRINT directive.

When line editing, if you specify:

```
P 10 15
```

lines 10 through 15 are printed.

```
10      PARAMETER (MSC=50)
11      PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
12      CHARACTER*40 COND
13      CHARACTER*1 CO,CN
14      CHARACTER*10 SLANTS
15      CHARACTER*12 FMTST
```

When screen editing, if you specify the same directive:

```
P 10 15
```

the cursor is positioned at line 15.

```
CHARACTER*40 COND
CHARACTER*1 CO,CN
CHARACTER*10 SLANTS
CHARACTER*12 FMTST
CHARACTER*(MAXILEN) INPLIN
CHARACTER*7 PVAL,PNAME
CHARACTER*7 INPFILE,OUTFILE
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
LOGICAL PARMERR
```

When screen editing, think of the PRINT directive as a positioning directive, because it positions the cursor at a specified line. The following PRINT directives may be useful during screen editing.

- P L Positions you to the last line of the file.
- P F Positions you to the first line of the file.
- P n where n is a line number you specify. This directive positions you to line n, which is displayed at the top of the screen.

QUIET

Instructs FSE not to print the specified lines, but instead to position the cursor at the last line specified.

QUIT

Exits FSE or an FSE procedure.

Without Parameters

If you enter QUIT without parameters, you exit FSE, changing only the local copies of your files. The exception is when you have attached a direct access file in write mode. In this case, entering QUIT without parameters makes your changes permanent.

Format

QUIT REPLACE QUIET UNDO PROC *range/command*

Parameters

REPLACE

Instructs FSE to make your changes permanent by defining, replacing, or copying to permanent storage as necessary. If you have created a new file within FSE, use the REPLACE parameter to make it permanent.

The REPLACE and UNDO parameters cannot be included in the same QUIT directive.

QUIET

Instructs FSE not to print the file status messages.

UNDO

Cancels all changes made during your current editing session. If you specify the UNDO parameter, all changes made since the last time you entered FSE are lost. It also becomes impossible to return to the point at which you stopped FSE during this editing session.

The REPLACE and UNDO parameters cannot be included in the same QUIT directive.

NOTE

You must spell out the UNDO parameter.

PROC range

Has two uses:

- Used in place of an EOR mark to separate procedures (without the range parameter).
- Used to stop processing the current procedure without exiting FSE (with or without the range parameter).

The range parameter specifies the line number range in which the procedure is to operate (such as QP CL, where C stands for current line and L for last line). Once the procedure can no longer operate within the range (in this case, once the end-of-file has been reached), the range condition fails and QP executes, terminating the procedure.

There is no default value for range. For a complete list of values that can be specified for range, refer to the *Common Parameters Index* inside the back cover of this manual.

When used to separate procedures, QP must be on a line by itself, without the range parameter. For an example, refer to *Creating and Using FSE Procedures* in section 6.

When used to stop processing the current procedure under specified conditions, QP can be used with or without the range parameter. Without the range parameter, QP terminates the procedure when the directives to its left on the same line have successfully executed. (There is no default value for range.)

When QP is used with the range parameter, however, two conditions must be met before the procedure terminates:

- The directives to the left of QP on the same line (if any) must successfully execute.
- The range specified by the range parameter must be exceeded.

The PROC parameter cannot be included with any other parameter (such as REPLACE or UNDO) in the same QUIT directive.

For a discussion of the use of QP in FSE procedures, with examples, refer to *Conditional Processing in Procedures* in section 6.

/command

Performs the function specified by the NOS command you enter. For example, to stop FSE, replace changed files, and reenter FSE, enter:

Q R/FSE

Anything on the line following the / is considered part of the NOS command.

Remarks

When you exit FSE using the QUIT directive, a message of the following type appears.

FILE: filename (status)

Field	Description
filename	Name of a file you have accessed during your editing session.
status	May be any of the following.
LOCAL	Either you have created a file and have not made it permanent (it will disappear when you log off NOS) or you have changed a permanent file and have not made the changes permanent (the changes will not be there the next time you access the file). To make a file (or changes to a file) permanent, enter the QUIT REPLACE directive (QR).
LOCAL - COULD NOT BE SAVED	The file could not be saved because of a permanent file error or your validation limits: either the file is too long or you have exceeded your allowable number of files.
NO CHANGES	The file has not been changed.
PERMANENT	You have replaced the permanent copy of the file with the changed local copy.
READ-ONLY	You may not change the permanent copy of the specified file.
NOT REPLACED	The file did not change during the edit session. Therefore, it was not replaced.
REBUILDING	Informative message indicating FSE is still processing. One of the other status messages will appear on the next line when FSE completes its processing.

For example, if you enter the **QUIT REPLACE** directive to stop FSE while editing file **MYFILE**, the following messages might appear.

```
FILE: MYFILE (PERMANENT)
FILE: FSEPROC (NO CHANGES) (NOT REPLACED)
FILE: FSEHELP (NO CHANGES) (READ-ONLY) (NOT REPLACED)
```

The **PERMANENT** message tells you the changes you made to file **MYFILE** are permanent. This message appears when you use the **REPLACE** parameter.

File **FSEPROC** is always one of the files FSE accesses. In this example, the **NO CHANGES** message means you have not changed file **FSEPROC**. Therefore, it is not replaced.

File **FSEHELP** is the online help file available to FSE when you enter the **HELP** directive or press **(HELP)**. The **READ-ONLY** message means you cannot make permanent changes to the file.

If you do not want these messages displayed when you stop FSE, include the **QUIET** parameter.

REPLACE

Replaces one text string with another.

The REPLACE directive works much like the LOCATE directive. The difference is that the REPLACE directive locates the string you specify and then replaces it with another string (that you also specify).

Without Parameters

If you do not specify a parameter, REPLACE uses the last string specified and executes the directive. If you have not previously specified a REPLACE string, you are prompted for the intended text.

Format

REPLACE WORD *direction string1 string2 range*
IN *tab* UPPER QUIET

Parameters

WORD

Instructs FSE to search for and replace a word (word is defined as string1 when it is contained within either nonalphanumeric characters or blanks). For example, to replace the word *topic* with the word *subject* in the following text:

■ This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the topic-search capability of the HELP or TEACH directive. Be sure your topic is listed in this file.

press:

HOME

and enter:

R W/topic/subject/

FSE replaces the first occurrence of the word *topic* with the word *subject*.

This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the subject-search capability of the HELP or TEACH directive. Be sure your topic is listed in this file.

Notice that FSE passed the word *topics* in the first line, because it is plural. It would not have done so, had you not specified **WORD**.

direction

The direction in which REPLACE is to move in the file. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

FSE searches forward by default, beginning at the current cursor position.

When you specify NEXT, FSE begins its replacement at the next occurrence of string1.

When you specify PREVIOUS, FSE searches backward, beginning at the current cursor position and skipping the last string1 located.

Using a number greater than 1 with the NEXT, PREVIOUS, and REPEAT parameters specifies the number of lines on which to make the replacement (rather than the number of occurrences to replace). The lines need not be consecutive.

For example:

```
R N 2 /abc/xyz/
```

replaces all occurrences of abc with xyz on the first two lines on which abc is found, beginning with the line on which the cursor is positioned. If the cursor is positioned on line 1, and there are two occurrences of abc on line 1, none on line 2, and one occurrence on line 3, the occurrences of abc on lines 1 and 3 are replaced with xyz.

On the other hand,

```
R N /abc/xyz/ or R N 1 /abc/xyz/
```

replaces the next single occurrence of abc with xyz, no matter how many occurrences of abc there are on the first line containing abc.

```
R C C /abc/xyz
```

replaces all occurrences from one end of the current line to the other.

Examples:

Suppose that the cursor is positioned at the beginning of the following lines.

- A line of abc,abc,abc.
- A second line of def,def,def.
- A third line of abc,abc.

Press:

HOME

and enter:

R N /abc/xyz/ (or R N 1 /abc/xyz/)

and you get:

A line of xyz,abc,abc.
A second line of def,def,def.
A third line of abc,abc.

Now enter:

R N 2 /abc/xyz/

and you produce:

A line of xyz,xyz,xyz.
A second line of def,def,def.
A third line of xyz,xyz.

Then, with the cursor positioned on the third line, enter:

R C C /xyz/abc/

and the result is:

A line of xyz,xyz,xyz.
A second line of def,def,def.
A third line of abc,abc.

string1

The string you want replaced. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

If you do not specify *string1*, FSE uses *string1* on the most recently specified REPLACE directive. If, however, you have not previously entered a REPLACE directive in your editing session, you are prompted to enter the intended text.

REPLACE

To replace a long string on a line, use the ellipsis search technique. This allows you to replace a long string without typing it out entirely. For example, you want to replace the string:

I will inform you next Monday if a meeting is necessary.

with the string:

No meeting is necessary.

Rather than specifying the entire first string, enter:

R/I/./ary./No meeting is necessary./

The first string is then replaced with the second.

If FSE cannot find string1, it displays the message NOT FOUND. If FSE cannot find string1 while executing from within an FSE procedure, no more directives are read from this procedure line (if the line contains more than one directive). Execution continues at the start of the next line in the procedure.

string2

The string you want to substitute for string1. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

For example, suppose the cursor is positioned at a line containing an error, as in the following sentence:

I illl inform you next Monday if a meeting is necessary.

and you want to replace the first i with w, enter:

R/i/w

FSE locates the first line containing i and replaces the first i with w. The following line results:

I will inform you next Monday if a meeting is necessary.

When you are screen editing, if the line affected by REPLACE is on the screen, the cursor is positioned at that line. Otherwise, the screen is rewritten with the affected line at the top. If you prefer to display the affected line in the middle of the screen, follow the REPLACE directive with a VIEW directive, as follows:

R/abc/xyz/ ; V

range

Specifies the lines to be affected by the REPLACE directive. (This is a common parameter. For a list of all possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

When you are screen editing and replace more than one occurrence of a string, FSE displays a directory of all the lines affected. For example, if you were to enter:

```
R A/PARAMETER/PARAM/
```

the screen might display:

```
ENTER UNDO OR PRESS NEXT TO END
File MYFILE   Displaying changed Lines
   9          PARAM (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
  10          PARAM (MSC=50)
  11          PARAM (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
  62          COND= 'INVALID PARAM - ' // PNAME
  69          STOP 'INVALID PARAM.'
```

Press:

NEXT

either to view another page of affected lines or, if there are no more pages, to position the cursor in the file at the last line affected.

If you enter a line number on the directive line and press:

NEXT

the cursor is positioned at that line in the file. If you either enter:

UNDO

or press:

F5 **UNDO**

the REPLACE operation is undone.

IN tab

Replaces text appearing only in certain tab fields. *tab* represents a tab field. For example, if tabs are set at columns 5, 20, and 40, the tab fields are:

Tab Field	Columns
1	1 through 4
2	5 through 19
3	20 through 39
4	40 through the end of the line

To replace all occurrences of *abc* with *xyz* in columns 20 through 39 (tab field 3), enter:

```
R A/abc/xyz/ IN 3
```

Refer to the SET directive description for information on setting tabs.

UPPER

Instructs FSE to search the file as if it were all uppercase, that is, capitalization is ignored. If, for example, you enter:

```
R U/abc/xyz/N3
```

REPLACE replaces each of the following lines with *xyz*.

```
14 ABC
43 Abc
87 abc
```

The UPPER parameter is always in effect for display code files.

QUIET

Instructs FSE to display the results of the changes without displaying the lines that changed. Positions the cursor at the last line replaced.

Examples

The following are all valid REPLACE directives.

Entry	Meaning
R/abc/xyz	Replaces next occurrence of abc with xyz.
R A/abc/xyz	Replaces all occurrences of abc in the file with xyz.
R\ab/c\c/pm	Replaces the string ab/c with the string c/pm.
R 20 50/abc/xyz	Replaces all occurrences of abc in lines 20 through 50 with xyz.
R/abc/.../xyz/1234/	Replaces text string beginning with abc and ending with xyz with the string 1234.
R/abc/xyz/IN 2	Replaces the next occurrence of abc with xyz in tab field 2.
R N 3/abc/xyz	Replaces all occurrences of abc with xyz on the next 3 lines on which abc is found (beginning with the current line).
R/abc//	Deletes the next occurrence of abc.
R//xyz/	Replaces the previously specified REPLACE string with xyz.
R	Uses both previously specified strings and performs another REPLACE.
R/abc/xyz/M	Replaces abc with xyz on marked lines.
R/abc/xyz/S	Replaces abc with xyz on all lines currently on the screen.

SET

Sets various FSE and file parameters.

Without Parameters

You must enter a keyword after the SET directive.

Format

SET keyword

Parameters

There are many valid keywords you can use with the SET directive. The following list of keywords is in alphabetical order.

ANNOUNCE/string/

Enables you to display prompts or messages, usually from within FSE procedures. The string you specify is displayed on the FSE message line before the next input is accepted. A dollar sign (\$) cannot be included in this string.

CHAR character

Sets the specified punctuation character as the soft tab character. The reverse slant (\) is the default soft tab character.

If you want to specify the semicolon, use SEMI.

If you want to specify the blank character, use BLANK.

If you want no soft tab character (as is often appropriate when screen editing), specify SET CHAR either with no parameter or followed by a semicolon.

DCOLON value

Tells FSE how to handle display code colons that appear in an ASCII file. If value is YES, FSE leaves the colons in display code format. If value is NO, FSE changes the colons to ASCII code format.

FILENAME file

Changes the name of the current file. Using this parameter, you can change a file and then have FSE copy the changed version to a new file, keeping the original file intact.

HEADER value

Tells FSE how to display the title line. If value is YES, FSE displays the entire title line (also the default). If value is NO, FSE abbreviates the title line to the file name.

INCREMENT number

Sets the line number increment for lines inserted into BASIC or interactive FORTRAN sequenced files. The default increment is 100. For information on sequenced files, refer to the NUMBER keyword.

JUMP value

Enables (value=YES) or disables (value=NO) automatic indentation of the cursor to the first character of the current line (if striking over text) or the previous line (if adding new text). This is useful when entering higher level language programs or other column-dependent data. Default is NO.

KEY number SHIFT string LABEL string

Redefines a programmable function key to execute the directive or directives you specify with the string parameter.

number is a number from 1 through 16 (the numbers of the function keys).

Including the *SHIFT* parameter defines the shifted function key (you can define up to 32 functions).

To separate directives, use a semicolon. The following SET KEY directive redefines function key F1 to execute the LOCATE NEXT and VIEW directives.

```
S K 1/L N;V
```

If you do not include the LABEL and string parameters, the key label is the same as the directive string. If you do not include the directive string, but do include the LABEL and string parameters, the label changes but the directive executed by the key remains the same. The directive string can be up to 244 characters. The label string can be up to six characters. For example, the following default function keys for the Viking 721 terminal are set as follows:

```
S K 1/S M/L/MARK/
```

```
S K 2/M M T P/L/MOVE
```

```
S K S 2/C M T P/L/COPY/
```

Function key F2 **MOVE** can be redefined to move lines after instead of before the current line by entering:

```
S K 2/M M/
```

You can include blanks in a function key label to make the label more readable. A good rule is to leave a space before labels of five or fewer characters.

LINE

Sets line mode for the current editing session. It does not affect other editing sessions or other parts of your terminal session. To set the line mode for your job, rather than for just the current editing session, set it to function either by default or by entering a NOS LINE command before starting FSE. (Refer to section 7, *Line Editing*.)

While you are editing a file in screen mode, the **(STOP)** key on the Viking 721 terminal (or **(CTRL)(T)** on any terminal) can also be used to set line mode for the current editing session.

MARK range WORD

Sets one or two temporary markers to be used with another directive.

When you are screen editing, the SET MARK directive performs the same function as the F1 **MARK** key, while the SET MARK WORD directive performs the same function as the shifted F1 **MRKCHR** key. Refer to section 2, *Screen Editing*, for an example using the F1 **MARK** key.

By default, SET MARK marks an entire line or range of lines. You can then refer to these lines in a later directive by using the MARK parameter. For example,

```
S M 5 10
```

marks lines 5 through 10. Later, the directive:

```
C M T 50
```

copies lines 5 through 10 immediately after line 50.

SET MARK is frequently used in screen editing to mark the current line for later copying, moving, and so forth. A single SET MARK directive marks the current line. A second SET MARK directive marks the current line and all lines between the first and second marks.

The WORD parameter has two effects. The first causes characters to be marked instead of lines. The second causes any later operations using the MARK parameter to perform character-oriented operations instead of line-oriented operations. For example, the word *character* is marked in the following text.

The **character** mark causes later operations to affect only characters within lines.

A DELETE MARK directive results in:

The **█** mark causes later operations to affect only characters within lines.

The UNMARK directive clears any previously set marks.

NUMBER type

Instructs FSE whether to treat a file as sequenced or unsequenced. The types are:

<u>type</u>	<u>Function</u>
<u>AUTO</u>	Instructs FSE to treat the file as if it were unsequenced (default). In line editing, FSE automatically generates line numbers when lines are displayed. These numbers are for reference and are not part of the text of the file.
<u>BASIC</u>	Instructs FSE to assume the file is sequenced. If you are creating a file and you number the lines, FSE adds zeros to increase the number to five digits and automatically inserts a blank. For example, when you type 10The first line, the line is printed as:

```
00010 THE FIRST LINE
```

If you don't number the lines, for example The first line, FSE prints only the text.

```
THE FIRST LINE
```

If you insert text using the INSERT directive, FSE automatically generates a sequence number. For lines added to the end of a file, it adds 100 (the default increment value) to the last number. For example, assume the following lines are the last two lines in a file.

```
00010 THE FIRST LINE
00020 THE SECOND LINE
```

If you position the cursor at line 00020 (the last line) and use the INSERT directive to specify the new line, FSE writes:

```
00010 THE FIRST LINE
00020 THE SECOND LINE
00120 THE NEW LINE
```

For lines inserted between existing lines, FSE adds half the value of the preceding line. If you position the cursor at line 00010 in the preceding example and follow the same procedure, FSE prints:

```
00010 THE FIRST LINE
00015 THE NEW LINE
00020 THE SECOND LINE
```

type	Function
<u>FORTRAN</u>	The same as BASIC except that it doesn't insert a space between the line number and the first character.
<u>NONE</u>	Instructs FSE to treat the file as if it were unsequenced. When line editing, FSE displays lines without generating line numbers.

PROMPT value

Enables you to specify whether you want the programmable function key prompts to be displayed on the screen. Values can be:

value	Description
0	Instructs FSE not to display programmable function key prompts.
1	Instructs FSE to display the first eight programmable function key prompts (default).
2	Instructs FSE to display all 16 programmable function key prompts.

REWRITE value

Allows you to set (value=YES) or clear (value=NO) the changed flag for the current file (unless the file is read-only).

The changed status of the file (as shown on the file header) indicates whether the file will be rewritten when you exit FSE.


SCREEN

Sets screen editing mode and rewrites the screen if you are already in screen mode.

TAB col₁ col₂ col₃...col₂₀

Sets the tab stop at the specified column number (col_n). Default tab settings are 7 and 72. You are allowed up through 20 tab settings. If no column numbers are specified, all tabs are cleared. You cannot add tabs to existing tab settings. For example, if you need to add a tab at column 15 between 7 and 72, enter:

S T 7 15 72

When you are screen editing, FSE sets a hardware tab at column 1, allowing you to use the  key to position the cursor at the beginning of the line. This does not affect the SET TAB values.

UNDO value

Sets the UNDO feature on or off. Values can be YES or NO. YES enables you to use the UNDO directive as described previously in this section.

When you specify NO, you cannot use the UNDO directive. However, with the UNDO feature off, massive changes to files use less system resources and are completed more quickly. This is particularly important if you are doing batch processing. The default is YES.

VIEW value

Enables you to change the format of your screen. Valid value entries are:

<u>value</u>	<u>Function</u>
<u>COLUMN num</u>	Specifies the number of columns (num) to be displayed. The default is 80 columns. SET VIEW COLUMN is a hardware option and a software option. It tells your terminal to display the number of columns you specify. For example, on a Viking 721 terminal, SET VIEW COLUMN 81 sets the terminal to 132-column mode, and all 132 columns of text are displayed. The minimum allowable value is 10. SET VIEW COLUMN affects only the text displayed, not the FSE header and function key prompt lines.
<u>EDIT num</u>	Defines a column width (num) of text that can be edited. The number specified is always the right margin and 1 is always the left margin. For example, to limit yourself to editing only columns 1 through 20, enter 20 as the EDIT value. Any column following column 20 will not be affected by succeeding edit functions.
<u>LINE num</u>	Specifies the number of lines (num) to be displayed. The default is the capacity of your terminal.
<u>OFFSET num</u>	Changes the leftmost column displayed so you can view wide lines. num represents the column number of the new left margin. The maximum allowable value for num is 171 (the maximum line length within FSE is 250 characters). To return to the default column range of 1 through 72, enter:

S V O 1

value	Function
<u>SPLIT</u> num	Specifies the number of lines (num) used for the bottom half of a split screen edit. The default is one-half the capacity of your terminal.
<u>WARN</u> num	Specifies a line length limit. The default limit is 160. If, in the course of directive processing, a line is encountered that exceeds the SET WARN limit, directive processing stops and a warning message is displayed.

Refer to *Changing Your Screen's Format* in section 6 for more examples of SET VIEW directives.

WORD value

The SET WORD directive enables you to set character attributes and specify margins. Valid value entries are:

value	Function
<u>CHAR</u> character	<p>Defines the character attribute of the character you specify as alphanumeric or punctuator. The directive reverses the current attribute of the indicated character and issues a status message.</p> <p>A space cannot be redefined. It is treated as a filler and punctuator for the DELETE WORD option.</p> <p>The semicolon can be redefined using the directive:</p> <p style="text-align: center;">S W C SEMI</p> <p>The character attribute value affects the UPPER and WORD options of the LOCATE and REPLACE directives, the WORD option of the DELETE directive, and the &W micro symbol.</p>

value

Function

The UPPER option of the LOCATE and REPLACE directives accepts the following pairs of lowercase to uppercase mappings (provided both characters have been defined by a S W C directive as alphanumeric).

{ }

} }

\

- -

\ @

FILL margin1 margin2
margin3 value

Sets margins other than the default settings (1, 65, and 5) for use with the .CENTER and .FILL directives. The first entry, margin1, sets the left margin. Margin2 sets the right margin. Margin3 sets the paragraph indentation. value can be YES or NO and specifies if the right margin is to be justified on the .FILL directive. Refer to section 5, *Sample Screen Editing Session*, for examples of word processing functions. For information on the .CENTER and .FILL directives, refer to *(DOT)* later in this section.

X line WORD

Y line WORD

Z line WORD

Sets the X, Y, or Z pointer to the specified line value. These pointers can be used in any directive in which a line parameter is allowed. If two pointers are specified in a range parameter, the lines the pointers reference must be in the same file. These pointers are permanent (as compared with those set by the MARK function) but can be reset at any time.

The WORD parameter sets the pointer to a character position rather than a line value. Any subsequent directives that use a pointer directive are character-oriented rather than line-oriented. Refer to the SET MARK directive for more information.

TEACH

Provides a practice file named FSTEACH on which you can try some of the FSE operations. If you have a Viking 721 terminal, the file also includes a tutorial to guide you through the basic editing functions.

If your site has defined terminal-specific tutorial files, you can also use the TEACH directive.

Without Parameters

If you enter TEACH with no parameter specified, the cursor is positioned to the first line of the FSTEACH file.

Format

TEACH parameter

Parameters

The parameters are titles of topics. When you specify a parameter (applicable only to Viking 721 terminals), the cursor is positioned at the first occurrence of the topic in the FSTEACH file. If you enter an unrecognized parameter, the cursor is positioned at the beginning of the FSTEACH file. Valid parameters are:

BKSPACE	KEYS	WORDPRO
BKTAB	LOCATE	F1
BKW	LOCNXT	SHIFTF1
CENTER	MARK	F2
COPY	MOVE	SHIFTF2
CURSOR	MRKCHR	F5
DLETE	PARA	F6
SHIFTDL	QUIT	F7
FWD	REPLACE	SHIFTF7
HOME	SHIFT	F12
INSRT	TAB	F13
SHIF TIN	UNDO	F15
JOIN		

Remarks

To return to the file you were editing, press:

(EDIT)

or enter **EDIT** on the directive line.

Unlike the **HELP** file, the **FSTEACH** file is not protected. Its purpose is to teach you how various features work, and you are encouraged to change it as much as you like.

The tutorial accessed for the Viking 721 terminal does not cover every feature of **FSE**. Its purpose is to acquaint you with the basics of screen editing.

UNDO

Cancels changes made to the current file.

Format

UNDO

Remarks and Examples

Successive UNDO directives work backward through the file to restore it to previous conditions. For example, suppose you made changes to the current file in the following order.

1. Replaced all a's with b's.
2. Moved the first three lines of the file to the end of the file.
3. Changed a line of text by overtyping the correction.

The first time you enter UNDO, the changed line of text is restored to its original form.

The second time you enter UNDO, the three lines now at the end of the file are returned to the beginning of the file.

The third time you enter UNDO, the b's are restored to a's.

UNDO can undo your changes if you exit FSE using the QUIT or QUIT REPLACE directives. Just enter the FSE command without parameters and enter UNDO as many times as needed.

The UNDO directive provides an element of security. If you can't quite recall how a directive works, you can try it out. If you don't like the results, undo them.

To unmark characters or lines, refer to the UNMARK directive.

UNMARK

Cancels marks you have set on characters or lines of text. Only the UNMARK directive can cancel marks. The UNDO directive cancels previous operations but does not cancel marks.

Format

UNMARK

Remarks

- The cursor need not be positioned on the marked (highlighted) text when you enter the UNMARK directive.
- After the marks are cancelled, the message

MARKS CANCELLED

appears on the message line.

- For information on setting marks, refer either to the SET MARK directive in this section, or to F1 **MARK** under *Programmable Function Keys* in section 2.

VIEW

Allows you to view a group of lines.

Without Parameters

If you do not specify a parameter while line editing, the four preceding lines, the current line, and the four succeeding lines are displayed. If you do not specify a parameter while screen editing, the current line is centered vertically on the screen.

Format

VIEW *line direction* SCREEN HOME

Parameters

line

Specifies the line you want to view. (This is a common parameter. For a list of possible entries, refer to the *Common Parameter Index* inside the back cover of this manual.)

direction

Specifies the direction you want to view. The direction parameter can only be NEXT or PREVIOUS (described in *Common Parameters*, earlier in this section).

When you are line editing, the VIEW directive enables you to look at a number of lines at once. The following are valid line mode VIEW directives.

Entry	Meaning
V	Displays the current line, the four preceding lines, and the four succeeding lines.
V N	Displays the current line and the next eight lines.
V P	Displays the previous eight lines and the current line.

Successive VIEW NEXT or VIEW PREVIOUS directives page through the file.

SCREEN

Available only when screen editing. Enables you to view the previous or next screen.

HOME

Available only when screen editing. Moves the cursor to the FSE directive line without changing your view of the file text.

Examples

When you are screen editing, VIEW is used to position text on the screen. The following are valid screen mode VIEW directives.

Entry	Meaning
V	Vertically centers the current line on the screen.
V N	Positions the current line at the top of the screen. Same as the UP key.
V P	Positions the current line at the bottom of the screen. Same as the DOWN key.
V N S	Moves forward one screen. Same as the FWD key.
V P S	Moves backward one screen. Same as the BKW key.
V H	Moves the cursor to the directive line. Same as the HOME key.

. (DOT)

Performs word processing functions according to the specified parameter.

Format

.parameter

Parameters

CENTER

Centers the current line horizontally within preset margins. The default margin settings are 1 and 65. Use the SET WORD FILL directive to change these margins.

DELETE

Deletes the current character.

END

Moves the cursor to the end of the current line.

FILL

Adjusts the words or sentences within a paragraph of text to bring line lengths as close as possible to preset margins. A paragraph of text is a group of lines that does not contain a blank line. Margin defaults are 1, 65, and 5. Use the SET WORD FILL directive to change these margins.

INSERT

Inserts one blank character before the current cursor position.

INSERT/string

Inserts a string before the current cursor position.

JOIN

Combines the current line with the line following it.

POS n

Moves the cursor position to column n of the current line.

SPLIT

Divides one line into two. The line is split at the cursor position.

NOTE

During line editing, only the .CENTER and .FILL directives function visibly as indicated. The other directives do not function visibly; you see the results when the file is listed. For this reason, they are not useful for line editing. For more information on word processing functions in line editing, refer to section 7, *Line Editing*.

- (DASH)

Calls an FSE procedure. An FSE procedure is one or more directives in a named record in a file. More information on FSE procedures follows the parameter descriptions.

Format

-procname (*file*)

Parameters

procname

The name of the FSE procedure you want to execute.

(*file*)

Calls a procedure from a local or permanent file other than the default file FSEPROC. You always have an FSEPROC file. If there is no local file named FSEPROC, a NOS GET command is executed. If there is no indirect access FSEPROC file, a system default FSEPROC file is retrieved from the user name LIBRARY.

To call procedure FIND from local file PROCFIL, enter:

-FIND (PROCFIL)

FSE goes to file PROCFIL and executes the FIND procedure.

Remarks

An FSE procedure must begin with its name alone on the first line, followed by one or more lines of FSE directives. The procedure must then end with either an end-of-record (EOR) line or a QUIT PROC directive. (You cannot leave comment lines between procedures.) For example, the following two procedures delete all lines containing a specified string.

```
DELALL
S A/DELETE WHAT?/
L F/&?/; -DA
QP
DA
D;L;-DA
(EOR)
```

Assuming these records are in your FSEPROC file, you can call the first procedure by entering:

```
-DELALL
```

The procedure then prompts you with DELETE WHAT?. You enter a string and all lines in the current file containing that string are deleted.

Each directive in a procedure is executed in sequence. If a directive attempts to position the cursor outside the current file or to locate a string that does not exist, FSE stops executing that line of the procedure and continues with the next line. FSE returns to your editing session whenever it encounters (EOR) or a QUIT PROC directive.

Procedure calling is only one level deep. That is, the - directive jumps to the named procedure, terminating the execution of any current procedure.

The procedure named STARTUP in FSEPROC is executed each time you start FSE, but not when you resume a previous session. You must create your own STARTUP procedure.

When certain two-character sequences, called micros, are in FSE procedures or programmable function key strings, FSE interprets them in a particular way. They are not interpreted when they are entered as directives or when they are in your files.

Micro Interpreted as

- &C** Column number of the current character position beginning at 1.
- &F** Name of the current file.
- &L** Number of the current line beginning at 1.
- &T** Current terminal type (721, 722, VT100, Z19, and so forth).
- &W** The word on which the cursor is positioned, or, if the cursor is not positioned on a word, the next word to the right.
- &Z** The name of the current workfile, ZZZWORK by default, unless specified on the initial FSE command.
- &n** The nth parameter of a procedure call, for example, &2. (In a procedure, a parameter consists of either a series of nonblank characters or a string.)
- &?** A prompt for you to enter input. (Your input replaces the &?.)
- &&** &

For example, suppose you have a procedure in FSEPROC defined as:

```
FCOMP
/FTN5,I=&F,L=0.
QP
```

To compile the current file as a FORTRAN 5 program, you enter:

```
-FCOMP
```

For added convenience, the procedure can be assigned to a programmable function key. To define the F9 key as -FCOMP, enter:

```
S K 9 /-FCOMP/L/FORT/
```

Whenever you press:

```
F9 FORTRAN
```

the current file is compiled as a FORTRAN 5 program (FCOMP).

Procedure parameters are taken from the directive that calls the procedure. A parameter is a consecutive sequence of nonblank characters or a string. For example, in the following procedure call:

```
-XYZ /hi there/ bye now
```

micro &1 within procedure XYZ is replaced by /hi there/. &2 is replaced by bye. &3 is replaced with now.

Refer to section 6, *Advanced FSE Functions*, for more examples of FSE procedures.

NOTE

If you use a procedure to redefine a function key with a micro, the ampersand contained in the micro must be written twice. At the time the procedure is executed, the double ampersand is reduced to a single ampersand and stored in the function key. When the function key is pressed, the single ampersand and letter are identified as the correct micro.

Failure to double the ampersand in the procedure results in the micro being processed at start up time rather than when the function key is pressed (that is, you will have redefined the key incorrectly).

-- (COMMENT)

Enables you to include comments following FSE directives.

Format

-- comment

Example and Remarks

comment is the remark you want to make after an FSE directive, for example:

```
L L 2
-- Locate last two procedures
S A/LAST TWO OF WHAT?/  -- Prompt user
L L P 2/&?/              -- Locate specified string
Q P
```

These comments have no effect.

NOTE

Comments cannot appear on the line containing the procedure name, the QUIT PROC directive, or the (EOR) line.

/ (SLASH)

Exits FSE and executes the characters following the slash as a NOS command.

NOTE

Some NOS commands will not work with the / directive. These include LIB, NOSORT, RUN, the -procname format of the BEGIN command, and primary file editing commands (refer to the *NOS Version 2 Reference Set, Volume 3*).

Format

/command

Examples and Remarks

command is the NOS command you want to execute. For example, to enter the NOS CATLIST command while you are editing a file, enter:

```
/CATLIST
```

To reenter your editing session at the point you entered the NOS command, enter the FSE command with no parameters.

```
FSE
```

If the / directive is used to execute a NOS procedure that ends with the following command, the procedure automatically reenters when it is finished.

```
REVERT,EX.FSE.
```

The / directive is simply shorthand for the QUIT directive with a string parameter. That is,

```
/command
```

is equivalent to:

```
Q/command
```

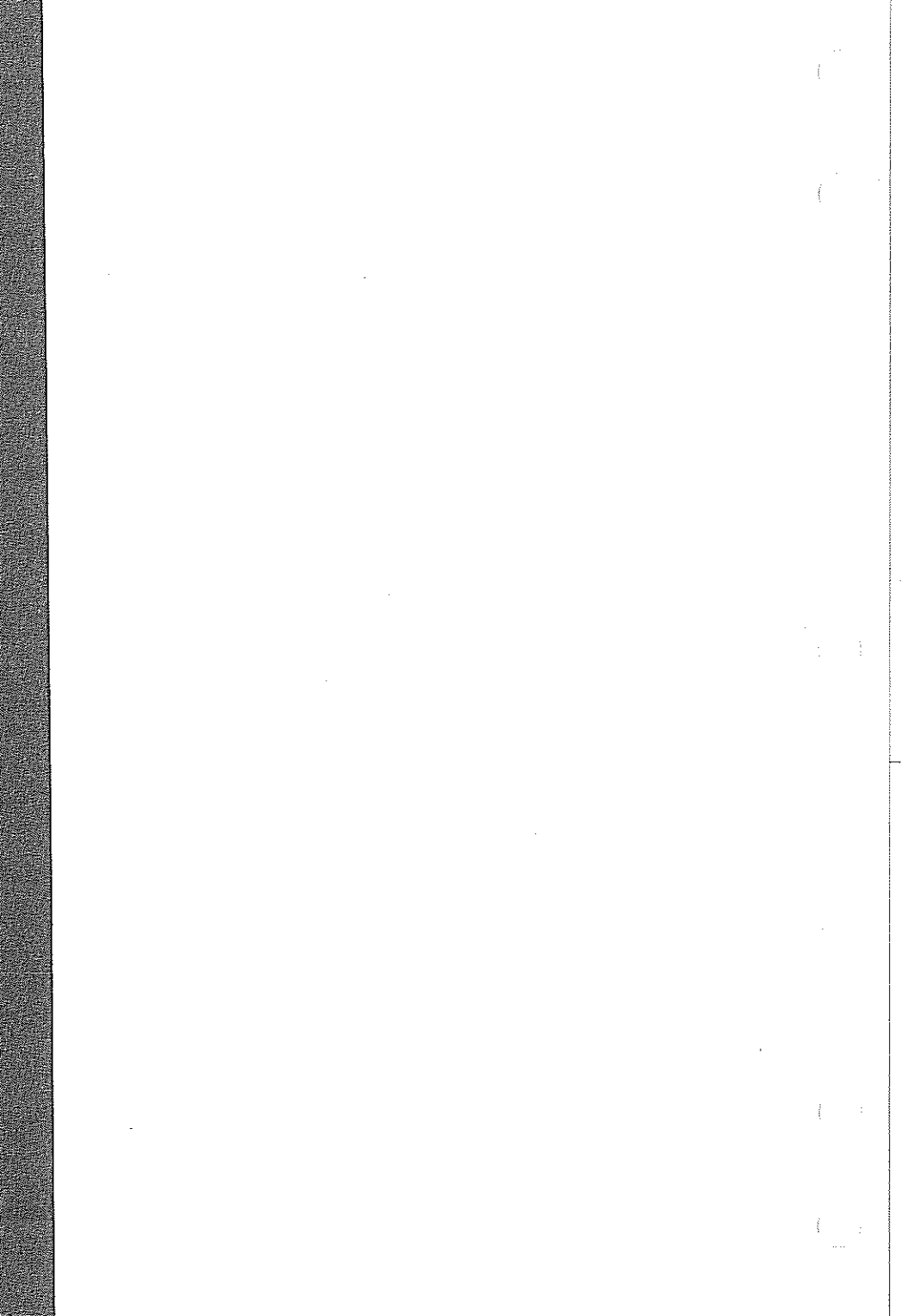
You can use the Q/command format to specify other QUIT parameters. For example,

```
QR/FSE
```

replaces all changed files and restarts FSE.

Sample Screen Editing Session 5

Starting FSE.....	5-2
Copying Lines Between Files	5-3
Word Processing	5-8
Changing the Lines Displayed	5-13
Stopping FSE	5-14
Restarting FSE	5-15



Sample Screen Editing Session 5

In this section, sample files will be edited using some of the advanced screen editing functions, including:

- Copying lines between files using split-screen editing.
- Performing word processing functions.
- Changing your screen's format.

The editing session does not include all the advanced functions. For a comprehensive description, refer to section 6, *Advanced FSE Functions*.

NOTE

For each task, sample display screens show you how a hypothetical file looks before and after editing. The sample files are not released with the system. You must create your own files if you want to perform the tasks in the examples.

Starting FSE

Suppose you want to edit file MYFILE. To start FSE and get your file out of permanent storage, enter:

```
FSE,MYFILE,G
```

The file is displayed on the screen.

```

NOS FULL SCREEN EDITOR
Upper Case File MYFILE Lines 1 - 25 Size 293 (No Changes)
-----
PROGRAM INDEX
C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C
C
C IMPLICIT INTEGER (A-Z)
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
PARAMETER (MSC=50)
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
CHARACTER*40 COND
CHARACTER*1 CO,CN
CHARACTER*10 SLANTS
CHARACTER*12 FMTST
CHARACTER*(MAXILEN) INPLIN
CHARACTER*7 PVAL,PNAME
CHARACTER*7 INPFILE,OUTFILE
CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
LOGICAL PARMERR
DIMENSION TAB(3)
C
DATA PENTRY/" "/,SENTRY/" "/,TENTRY/" "/,BLANK/" "/
DATA OUTFILE/"OUTPUT",INPFILE/"INPUT"/
DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/
MRKCHR      ONECPY      DELB      LAST      UNMARK      QR      LOCNXT      80COL
F1 MARK F2 MOVE F3 INSB F4 FIRST F5 UNDO F6 QUIT F7 LOCATE F8 132COL

```

Notice that the label for function key F6 is different from that described in section 2. The default setting:

F6 **QUIT**

has been redefined to include the shifted F6 function QUIT REPLACE, abbreviated QR. (Redefining programmable function keys is described in section 6.)

Copying Lines Between Files

To copy lines from file MYFILE to file PARTS, use split-screen editing.

First, display file PARTS on the lower half of the screen by pressing:

(HOME)

and entering the FSE directive:

F PARTS A S

A specifies the ASCII 95-character set, and S specifies a split screen. The following screen results.

Upper: Case File MYFILE: Lines 1 - 12 Size 293 (No Changes)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C

IMPLICIT INTEGER (A=2)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File PARTS: Lines 1 - 3 Size 3 (No Changes)

This file contains a part of another file copied directly from the other file. The following text is taken from file MYFILE:

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Then, position the cursor at the first line of the range to be copied.

Upper Case File MYFILE Lines 1 - 12 Size 293 (No Changes)

PROGRAM INDEX

C

C

C

C

C

C

C

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=5D)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File PARTS Lines 1 - 3 Size 3 (No Changes)

This file contains a part of another file copied directly from the other file. The following text is taken from file MYFILE:

MRKCHR	ONECPY	DELB	LAST	UNMARK	GR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Press:

F1 **MARK**

FSE highlights the marked line.

IMPLICIT INTEGER (A-Z)

Then, move the cursor to the last line of the range to be copied.

Upper Case File MYFILE Lines 1 - 12 Size 293 (No Changes)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C
IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File PARTS Lines 1 - 3 Size 3 (No Changes)

This file contains a part of another file copied directly from
the other file. The following text is taken from file MYFILE:

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	BOCOL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Press:

F1 **MARK**

again and F5E highlights the range of lines marked.

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

Next, move the cursor to the point in file PARTS at which you want the lines from file MYFILE to be inserted.

Upper Case File MYFILE Lines 1 - 12 Size 293 (No Changes)

PROGRAM INDEX

C

C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)


CHARACTER*40 COND

File PARTS Lines 1 - 3 Size 3 (No Changes)

This file contains a part of another file copied directly from
the other file. The following text is taken from file MYFILE:

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

Press:

 F2 **ONECOPY**

to insert the lines in file PARTS.†

Upper Case File MYFILE Lines 1 - 12 Size 293 (No Changes)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File PARTS Lines 1 - 9 Size 9 (Changed)

This file contains a part of another file copied directly from
the other file. The following text is taken from file MYFILE:

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

MRKCHR	ONECOPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

To return to editing file MYFILE only, either press:

EDIT

or enter the EDIT directive.

† After shifted F2 **ONECOPY** is pressed and the marked lines are copied, the marks are automatically unmarked. To copy the same marked text to more than one location without having to re-mark the text after each copy, use F14 **COPY** instead of shifted F2 **ONECOPY**. For more information on all 16 programmable function keys on the Viking 721 terminal, refer to section 2.

Word Processing

This editing example requires the use of function key prompts that contain word processing functions. To display the additional prompts, press:

HOME

and enter:

S P 2

which stands for:

SET PROMPT 2

FSE displays all 16 function key prompts.

F1	MRKCHR MARK	F2	ONECPY MOVE	F3	DELB INSB	F4	LAST FIRST	F5	UNMARK UNDO	F6	QR QUIT	F7	LOCNXT LOCATE	F8	BOCOL 132COL
F9	MIDDLE	10	ENDLIN	11	SPLIT	12	JOIN	13	PARA	14	COPY	15	CENTER	16	

To edit a permanent file called TEXT, created in the ASCII 95-character set, you press:

HOME

and enter:

F TEXT A G

File TEXT Lines 1 - 25 Size 103 (No Changes)

This document provides information in addition to that available in the help file. You should read the entire help file before using this study guide.

This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the topic-search capability of the HELP or TEACH directive.

(TOPICS) (TOPIC)

Study Guide: Directory of Topics

DIRECTIVE	How directives are processed
FUNC	Using function keys
SETKEY	How to redefine function keys
RANGE or RANGES	All the syntax options for range parameters
PROC or PROCS	How to make procedures
WORD	Word processing
GLOBAL	Global (menu-driven) searching
FORMAT	How to change screen format

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

To insert a paragraph between the first and second paragraphs, position the cursor between them and press:

F3 **INSB**

This document provides information in addition to that available in the help file. You should read the entire help file before using this study guide.

This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the topic-search capability of the HELP or TEACH directive.

FSE inserts blank lines over which you can type your new paragraph.

File TEXT Lines 5 - 26 Size 121 (Changed)

the help file. You should read the entire help file before using this study guide.

This document is organized by topics, like the help file. If you

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL
F9 MIDDLE	10 ENDLIN	11 SPLIT	12 JOIN	13 PARA	14 COPY	15 CENTER	16

Type the new paragraph.


To access the help file, press HELP or enter the HELP directive described in the FSE manual. Further help is available in this file.

Position the cursor anywhere in the new paragraph and press:

F13 **PARA**

to ensure that the lines conform to the boundaries set by the SET WORD FILL directive (defaults are 1, 65, 5, and NO).

To delete the unused blank lines, press:

 F3 **DELE**

File TEXT Lines 1 - 22 Size 106 (Changed)

This document provides information in addition to that available in the help file. You should read the entire help file before using this study guide.

To access the help file, press HELP or enter the HELP directive described in the FSE manual. Further help is available in this file.

This document is organized by topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, you can use the topic-search capability of the HELP or TEACH directive.

(TOPICS) (TOPIC)

Study Guide: Directory of Topics

DIRECTIVE How directives are processed

FUNC Using function keys

SETKEY How to redefine function keys

RANGE or RANGES All the syntax options for range parameters

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

F9 MIDDLE	10 ENDLIN	11 SPLIT	12 JOIN	13 PARA	14 COPY	15 CENTER	16
-----------	-----------	----------	---------	---------	---------	-----------	----

To enter a heading above the new paragraph, position the cursor at the first line of the new paragraph.

To access the help file, press HELP or enter the HELP directive described in the FSE manual. Further help is available in this file.

Press:

 **INSRT**

twice. Then enter the heading.

Paragraph Number 2 

To access the help file, press HELP or enter the HELP directive described in the FSE manual. Further help is available in this file.

To center this heading, position the cursor anywhere on the heading line.

Press:

F15 **ENTER**



Paragraph Number 2

To access the help file, press HELP or enter the HELP directive described in the FSE manual. Further help is available in this file.

To return the screen to displaying only the first line of programmable function key prompts, press:

HOME

and enter:

S P 1

Changing the Lines Displayed

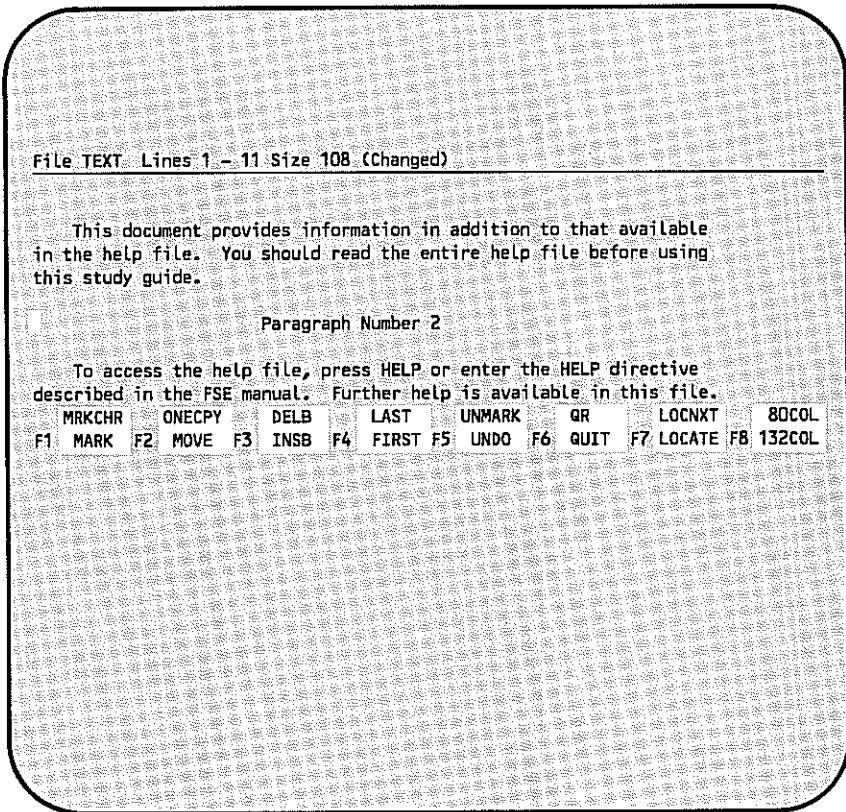
You might prefer to display a smaller number of lines on the screen than the default number. For example, to limit the screen to only 16 lines, including the directive line, message line, file header, and function key prompts, press:

HOME

and enter the SET VIEW LINE directive.

S V L 16

The first screen for file TEXT would then appear as:

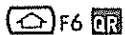


The remaining space on the screen is left blank and is not used by FSE.

Note that the SVL directive enforces a minimum of 10 lines.

Stopping FSE

To stop FSE and make the changes to files TEXT and PARTS permanent, enter the QUIT REPLACE directive by pressing:



The following messages appear.

```
FILE: MYFILE (NO CHANGES) (NOT REPLACED)
FILE: PARTS (PERMANENT)
FILE: TEXT (PERMANENT)
FILE: FSEPROC (NO CHANGES) (NOT REPLACED)
```

Restarting FSE

During a terminal session, you can return to editing a file at the exact spot you left it by restarting FSE. For example, to return to sample file TEXT, enter:

FSE

The screen appears just as you left it when you changed the number of lines displayed.

You can then continue editing. For example, to delete the paragraph heading, position the cursor on the heading line and press:

 **DLETE**

Press:

 **DLETE**

again to remove the extra blank line. The following screen results.

File TEXT Lines 1 - 11 Size 106

This document provides information in addition to that available in the help file. You should read the entire help file before using this study guide.

To access the help file, press HELP or enter the HELP directive described in the FSE manual. Further help is available in this file.

MRKCHR	ONECPY	DELB	LAST	UNMARK	QR	LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

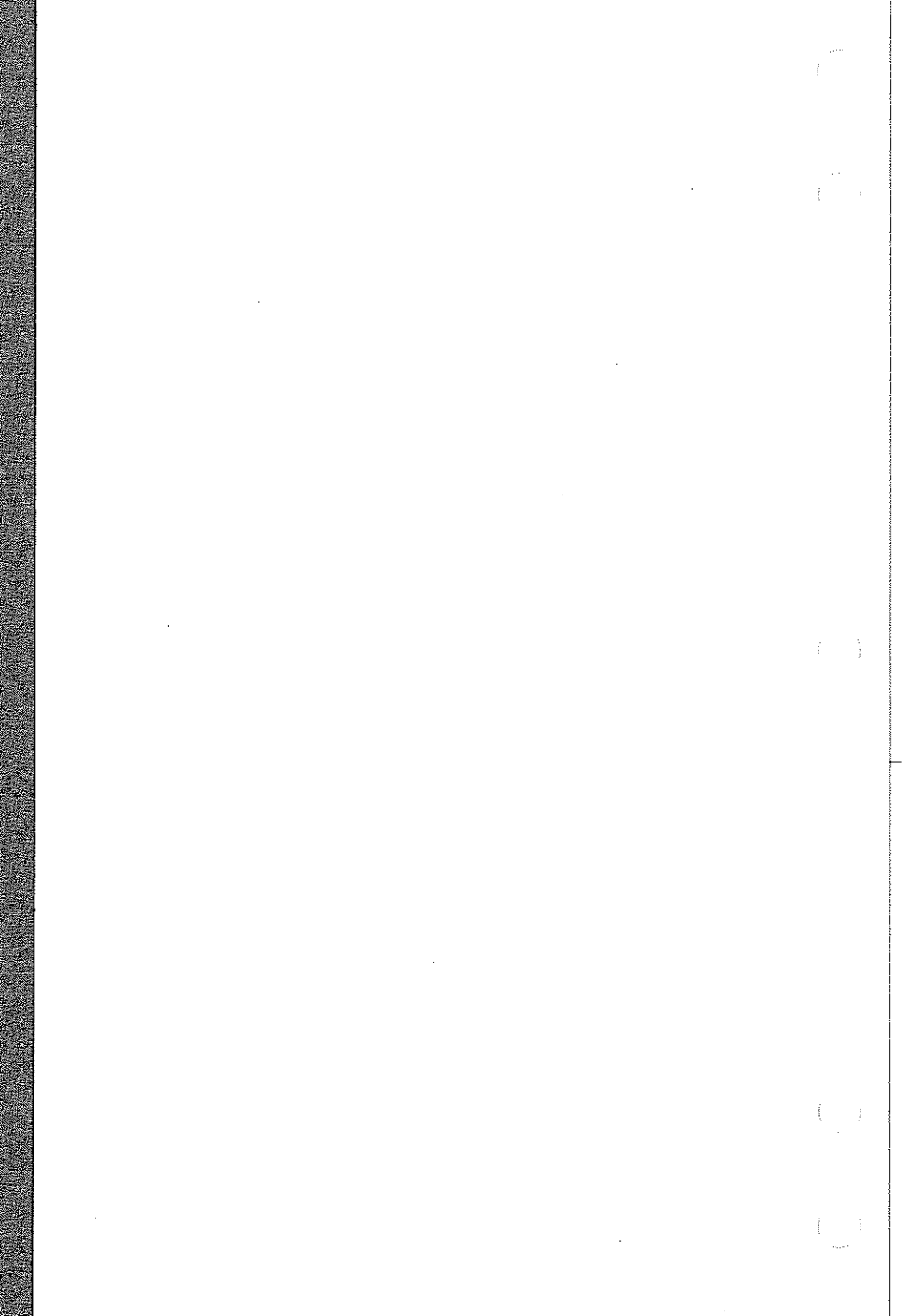
To stop FSE and make the change to file TEXT permanent, either press:

HOME

and enter QR, or (if you have redefined it) press:

 F6 **QR**

Editing Two Files at the Same Time	6-2
Creating and Using FSE Procedures	6-4
SET ANNOUNCE Directive	6-6
Micros	6-7
Specifying the Current Column Number (&C)	6-7
Specifying the Current File (&F)	6-8
Specifying the Current Line (&L)	6-8
Specifying the Current Terminal Type (&T)	6-9
Specifying the Current Word (&W)	6-10
Specifying the Current Workfile (&Z)	6-10
Specifying the nth Parameter of a Procedure Call (&n)	6-11
Entering Parameters Interactively (&?)	6-11
Micro Values	6-12
Conditional Processing in Procedures	6-13
Procedure Looping	6-13
Using the QUIT Directive	6-15
Recovering from Errors in FSE Procedures	6-17
Redefining Programmable Function Keys	6-18
Redefining Keys to Call Procedures	6-20
Defining Layers of Function Keys	6-21
Labeling Programmable Function Key Prompts	6-25
Changing Your Screen Format	6-26
Specifying the Number of Lines Displayed	6-26
Specifying the Number of Columns Displayed	6-27
Specifying the Number of Lines for Split-Screen Editing	6-27
Specifying the Number of Columns for Editing	6-27
Changing the Line Length Limit	6-28
Changing the First Column Displayed	6-28



This section describes the following advanced features of FSE.

- Editing two files at the same time.
- Creating and using FSE procedures. (You should be familiar with the directives before attempting to create FSE procedures.)
- Redefining programmable function keys.
- Labeling programmable function key prompts.
- Changing your screen's format.

NOTE

For each task, sample display screens show you how a hypothetical file looks before and after editing. The sample files are not released with the system. You must create your own file if you want to perform the tasks in the examples.

Editing Two Files at the Same Time

In screen editing mode, FSE allows you to simultaneously display two files or two parts of one file. To do so, you must enter the FSE directive with the SPLIT parameter. For example, suppose you are editing file MYFILE, and you also want to edit permanent file TEXT in ASCII mode. Enter:

```
F TEXT A G S
```

FSE splits the screen, displaying file TEXT in the bottom half of the screen in the ASCII 95-character set.

You can edit and page through the two files independently of each other. For example, if the cursor is positioned in the MYFILE text area and you press **(FWD)**, only file MYFILE is advanced one page.

```
Upper Case File MYFILE Lines 1 - 12 Size 293 (Changed)
```

```
PROGRAM INDEX
```

```
C
```

```
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY  
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,  
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE  
C CONTINUATION LINES.
```

```
C
```

```
IMPLICIT INTEGER (A-Z)
```

```
PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
```

```
PARAMETER (MSC=50)
```

```
PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
```

```
CHARACTER*40 COND
```

```
File TEXT Lines 1 - 12 Size 106 (No Changes)
```

This document is intended to provide background information to add to the body of knowledge provided by the Help file. You should read and understand the entire Help file as a prerequisite to using this study guide.

To access the HELP file, press HELP or enter the HELP directive described in the FSE manual. Further HELP is available in this file.

This document is simply organized as topics, like the help file. If you assign this file as either FSEHELP or FSTEACH, then you can use the

MRKCHR	ONECPY	DELB	LAST	UNMARK	LOCNXT	80COL	
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

To display different parts of the same file, specify the name of the current file on the FSE directive with the SPLIT parameter. For example, to display different parts of file MYFILE at the same time, enter:

```
F MYFILE S
```

FSE splits the screen, showing the first page of file MYFILE on the bottom half of the screen. Changes you make to one copy of the file are made simultaneously to the other.

You can page through each copy independently by positioning the cursor in the copy you want to edit. In the sample screen, the first page of MYFILE is on the top half; another part of file MYFILE is on the bottom half.

```
Upper Case File MYFILE Lines 1 - 12 Size 293 (Changed)
PROGRAM INDEX
C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.
C
C IMPLICIT INTEGER (A-2)
C PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
C PARAMETER (MSC=50)
C PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
C CHARACTER*40 COND
Upper Case File MYFILE Lines 23 - 34 Size 293 (Changed)
DATA PENTRY/' '/,SENTRY/' '/,TENTRY/' '/,BLANK/' '/
DATA OUTFILE/'OUTPUT',INPFILE/'INPUT'/
DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/
DATA FMTCNT/0/,SEPCNT/3/
DATA SLANTS/'////////'/
C
C
5 ERR=0
  PARMERR=.FALSE.
  CALL GETPARM(PNAME,PVAL,ERR)
  IF(ERR)4,3,5
C
MRKCHR  ONECPY  DELB  LAST  UNMARK  LOCNXT  80COL
F1 MARK F2 MOVE F3 INSB F4 FIRST F5 UNDO F6 QUIT F7 LOCATE F8 132COL
```

Creating and Using FSE Procedures

FSE enables you to create procedures containing any of the FSE directives described in section 4. Each procedure is usually on a separate record in a file named FSEPROC. If you do not have a local file or a permanent file by this name, FSE accesses a site-defined version of it and makes it local each time you start. You may alter this copy and save it to use during editing.

The first line of each procedure must be the procedure's name (from one through seven characters). Procedures must be separated by either an end-of-record (EOR) statement or a QUIT PROC (QP) directive. For example, an FSEPROC file could contain the following procedures.

```
STARTUP
SKS5/LP/
(EOR)
PROC1
SKS1/LP/
QP
PROC2
LN;V
QP
```

NOTE

Because a record requires a minimum of one PRU, using the QP directive to separate procedures may save disk space.

To execute the procedures within FSEPROC, use the - (dash) directive. For example, you have the following procedure on file FSEPROC.

```
PROC1
SKS6/LN2/
QP
```

To execute PROC1 enter:

HOME

-PROC1

FSE goes to file FSEPROC and looks for procedure PROC1. When PROC1 is executed, the shifted F6 key is redefined to execute the LOCATE NEXT 2 (L N 2) directive.

To call a procedure from a local or permanent file other than FSEPROC, include the other file name in parentheses. The following example executes procedure SEARCH from file ALTFILE.

HOME

-SEARCH (ALTFILE)

If you have certain functions you want executed every time you start FSE, use the procedure name STARTUP in your FSEPROC file. Each time you start (but not restart) FSE, it looks for the record named STARTUP on FSEPROC and executes the FSE directives.

For example, to redefine the shifted F5 key as the LOCATE PREVIOUS function, create the following procedure.

```
STARTUP
SKS5/LP/
QP
```

Each time you start FSE, the STARTUP procedure redefines the shifted F5 key.

NOTE

To greatly increase the efficiency and speed of batch processing operations, move the procedures that will be used most often to the beginning of FSEPROC (or your own procedure file) and use comments (—) sparingly.

SET ANNOUNCE Directive

The SET ANNOUNCE directive enables you to specify, within a procedure, the prompts or messages to be displayed on the FSE message line.

For example, suppose you have a procedure called TOP that appears as:

```
TOP
P 1
QP
```

This procedure positions you at the first line of a file. If you want the message:

```
FIRST LINE OF THE FILE
```

to be printed each time this procedure is executed, add the following line to the procedure.

```
S A/FIRST LINE OF THE FILE/
```

From now on, every time you use the TOP procedure to go to the first line of a file,

```
FIRST LINE OF THE FILE
```

is printed on the FSE message line.

This message disappears when you perform the next function. The maximum message length is 78 characters, and the dollar sign (\$) cannot be used. Refer to section 4 for more information on the SET directive.

Micros

Micros enable you to specify the current character, word, line, or file as a parameter either in an FSE procedure or in a directive string assigned to a programmable function key. You can also create your own prompts for input or specify different parameters each time you call a procedure. These micros, all preceded by an ampersand (&), are:

Micro	Function
&C	Specifies the current column number.
&F	Specifies the current file name.
&L	Specifies the current line number.
&T	Specifies the current terminal type (Viking 721, CDC 722, VT100, and so forth).
&W	Specifies the word on which the cursor is positioned, or, if the cursor is not positioned on a word, the next word to the right.
&Z	Specifies the current workfile (normally ZZZWORK) that was specified on the initial FSE command.
&n	Specifies the nth parameter of a procedure call.
&?	Enables you to enter procedure parameters interactively.
&&	Specifies an ampersand (&).

Specifying the Current Column Number (&C)

To specify the current column number, use the &C micro. For example, the following procedure uses the current column number as the parameter in a SET VIEW OFFSET directive.

```
COL  
S V O &C  
QP
```

When you enter:

```
-COL
```

the current column number becomes the left margin on the screen.

Specifying the Current File (&F)

To specify the current file, use the &F micro. For example, the following procedure compiles the current file as a FORTRAN 5 program, no matter what the current file is.

```
FTN  
/FTN5,I=&F,L=0.  
QP
```

Each time you enter:

```
-FTN
```

the current file is compiled as a FORTRAN 5 program. To return to the point in the file where you entered -FTN, enter:

```
FSE
```

Specifying the Current Line (&L)

To specify the current line of a file, use the &L micro. For example, the following procedure copies the current line to end of the file.

```
CPYL  
COPY&L TO LAST  
QP
```

When you enter:

```
-CPYL
```

the current line is copied to the end of the file.

Specifying the Current Terminal Type (&T)

To create a procedure whose execution depends on the type of terminal used, use the &T micro. For example, using this micro you can create the following STARTUP procedure, which calls a second procedure based on the current terminal type.

```
STARTUP
-XX&T
QP
XX721
S K S 6/GET STATUS/
S A/STATUS IS ON SHIFT-F6/
QP
XX722
S K S 9/GET STATUS/
S A/STATUS IS ON SHIFT-F9/
QP
```

This STARTUP procedure automatically changes the keyboard functions, depending on whether a Viking 721 or a CDC 722 terminal is used.

An identical STARTUP procedure could be written for any of the supported terminal types (refer to the beginning of section 2 for supported terminals and model names).

Specifying the Current Word (&W)

To specify the current word of a file, use the &W micro. For example, the following procedure locates the next occurrence of the current word and centers vertically on the screen the line containing it.

```
NW
L N/&W;/V
QP
```

If the cursor is positioned at the word INTEGER and you enter:

```
-NW
```

FSE locates the next occurrence of INTEGER and centers the line in which it appears.

Specifying the Current Workfile (&Z)

To specify the current workfile, use the &Z micro. For example, the following procedure displays your current workfile.

```
WF
SA/Current workfile is &Z/
QP
```

The FSE message line prints the message showing the current workfile name. The workfile name defaults to ZZZWORK, which is a parameter on the FSE command.

Specifying the nth Parameter of a Procedure Call (&n)

To specify different parameters for a procedure each time the procedure call is used, use the &n micro (n is the number of the parameter you want to specify). For example, the following procedure is on FSEPROC.

```
TOEND
C &1 &2 TO L
QP
```

This procedure copies the range you specify to the end of the file. Using this procedure, you can copy lines 20 through 30 to the end of the file by entering:

```
-TOEND 20 30
```

The next time you can specify a different range by including it on the call to the TOEND procedure.

Entering Parameters Interactively (&?)

To create a procedure that prompts you for input, use the &? micro. For example, the following FIND procedure prompts you to enter the string you want to find and then centers the line containing the string.

```
FIND
L/&?;/V
QP
```

When you enter:

```
-FIND
```

the prompt:

```
ENTER TEXT
```

appears in the FSE message area. If you then enter DATA, FSE locates the next occurrence of DATA and centers the line containing it on the screen.

ENTER TEXT is the default prompt. To create your own prompts, include a SET ANNOUNCE directive in your procedure before the directive containing the &? micro. For example, to create the prompt FIND WHAT? in the FIND procedure, insert the SET ANNOUNCE directive as follows:

```
FIND
S A/FIND WHAT?/
L/&?;/V
QP
```

Now when you enter:

```
-FIND
```

you are prompted with FIND WHAT? instead of ENTER TEXT.

Micro Values

You may write a procedure in which the value of a micro changes within the procedure, as for example in:

```
PROC1
.P3
.P&C+4
.P&C+7
.P&C+3
QP
```

FSE changes the value of the &C micro (which represents the current column) at the end of each line of the procedure and, therefore, positions itself sequentially at columns 3, 7, 14, and 17. Even though value &C is sequentially repositioned, the only current column (cursor) position you see is 17.

The procedure just described has only one directive per line. Suppose you write a procedure combining two or more directives on one line.

```
PROC1A
.P10
.P20;SA/&C/;.P40
.P&C+10
QP
```

PROC1A positions FSE at columns 10, 40, and 50 in addition to displaying 10 on the FSE message line (SA/&C/). When two or more directives (including directives associated with the same micro) are combined on one line, FSE interprets all the micros and directives on that line before executing the line.

On line 2 (.P20;SA/&C/;.P40) of PROC1A, FSE substitutes the micro (&C) with the determining value (.P10) from the preceding line. FSE then interprets the remaining directives (.P20 and .P40) for final evaluation. Since .P40 is the last directive of the current line, its value then becomes the determining value for the next line of directives.

Conditional Processing in Procedures

Conditional processing in procedures depends on the occurrence of a specific condition or event (for example, on the end of the file, or on pointer X being greater than pointer Y, or on the location of specific characters). The following are examples of conditional processing.

Procedure Looping

Within FSE, you can create a procedure that repeats itself as long as certain conditions are met. This is called procedure looping.

The following are two versions of an identical procedure, both of which create loops, but only one of which functions correctly.

Version A	Version B
PROC1	PROC1
R/abc/xyz/;-PROC1	R/abc/xyz/
QP	-PROC1
	QP

In both versions of this procedure, abc is replaced with xyz (R/abc/xyz/), and the recursive procedure call (a procedure call to itself) causes the same procedure to be executed again (-PROC1).

The versions differ in that version A of the procedure provides for an eventual exit from the procedure, while version B causes an infinite loop. The reason lies in the way FSE executes directives that occur on the same line of a procedure. If it is unable to execute a directive, it ignores all the following directives on that line, and immediately proceeds to the next line. This allows the conditional repetition of the procedure: the procedure call is executed only if all the directives to its left on the same line are executed first.

In version A, if it cannot execute either the position directive or the replace directive (that is, if there are no more occurrences of abc to replace), it skips the call to PROC1 (-PROC1) and executes the QUIT PROC (QP) directive. (Note that directives on the same line must be separated by semicolons.)

In version B, if it is unable to execute a directive, it proceeds to the next line (eventually to -PROC1) and never reaches the QP directive.

The general rule is: If you have a recursive call to a procedure, place the exit condition on the same line as the recursive call.

In the following example, procedure FNNDEL deletes all lines containing the phrase *go away*, beginning with the current one. (Both LOCATE and DELETE are required, because the DELETE directive alone cannot select lines with a specified string.)

Procedure	Description
FNNDEL	Procedure name.
L/go away/;D;PN;-FNNDEL	Locate the first occurrence of <i>go away</i> , starting with the current line. Delete the line on which it is found (DELETE). If possible, position the cursor on the next line (PRINT NEXT). Execute procedure FNNDEL again. When another occurrence of <i>go away</i> cannot be found, or when the last line of the file has been reached, ignore the rest of this line.
PF	Move the cursor to the first line of the file.
QP	

When FSE is unable to execute one of several directives on the same line of a procedure, it ignores any following directives on that line and goes to the next line. Procedure FNNDEL executes a second and third time, etc., only if another instance of *go away* is found and if the cursor can be moved to the next line (that is, is not at end-of-file).

In the next example, procedure DELALT deletes every other line in the file. The recursive calls to the procedure depend on PRINT NEXT being executed twice.

Procedure	Description
DELALT	Procedure name.
D;PN;PN;-DELALT	Delete the current line and, if possible, advance one line. Advance a second line, if possible. If both line advances have occurred, repeat the procedure.
QP	

Using the QUIT Directive

You can use the QUIT directive to explicitly terminate a procedure. To do so, you must specify the PROC parameter. The range parameter is optional: QUIT PROC range. (For the complete format of the QUIT directive, refer to QUIT in section 4.) In the previous examples, the procedures simply terminated when the last line of the procedure was reached (QP).

Without the Range Parameter

When QP is used without the range parameter, QP terminates the procedure only when all directives to its left on the same line can be executed.

Procedure	Description
DELCUR	Procedure name.
LCC/don't shoot/;QP D QP	Search for the phrase <i>don't shoot</i> on the current line (LOCATE CURRENT CURRENT). If it is found, quit the procedure (QUIT PROC). If it is not found, exit this line of the procedure, delete this line of the file (DELETE), and terminate the procedure.

The execution of QP in the line

```
LCC/don't shoot/;QP
```

depends on the execution of the LOCATE directive on the same line, just as, in a previous example, the execution of -FNNDL depends on the successful execution of LOCATE and PRINT NEXT. Thus, when used at the end of a line of directives (without the range parameter), QP is only executed when the other directives on the same line can be executed.

With the Range Parameter

When QP is used with the range parameter, QP executes only when its range parameter is exceeded.

In the following procedure, the range parameter consists of one pointer (C+10). When the condition expressed by a single pointer is false (that is, when the range it specifies is exceeded), the procedure terminates. As long as the range is not exceeded, the procedure does not terminate.

Procedure	Description
DELTEN	Procedure name.
QP C+10	If there are 10 or more lines after the current line
D	(CURRENT + 10), go to the next line of the procedure and
QP	delete the current line of the file. If there are not at least 10
	lines after the current line (if the range parameter fails),
	terminate the procedure.

In the following procedure DELLIN, which is a variation of the previous example, two values define the range parameter: C and Y. C and Y are line pointers establishing a range in the file in which procedure DELLIN deletes a line. The procedure executes only if C does not exceed Y. (For more information on line pointers, refer to the line parameter under *Common Parameters* at the beginning of section 4.)

Procedure	Description
DELLIN	Procedure name.
QP CY	If the current line is less than or equal to Y (if the
D	line specified by Y is not exceeded),
QP	do not terminate the procedure. Go to the next line of the
	procedure and delete the current line of the file. If the
	current line is greater than Y, terminate the procedure.

Summary

The QUIT directive with the PROC parameter may be used in conditional processing in two ways:

- As one of several directives on a single procedure line, to be executed only if the directives to its left on the same line are all executed.
- As a directive with one or two range values to its right, to be executed only if the specified range is exceeded.

Recovering from Errors in FSE Procedures

If you run a procedure containing an error, FSE accesses the file containing the procedure (FSEPROC or any other file) and positions you at the error. For example, assume FSEPROC contains the following procedure.

```
LOCPRE
LP*V
QP .
```

The * is not a valid directive separator and causes an error in the LOCPRE procedure. Suppose that, while editing file MYFILE, you want to locate the previous occurrence of a string and center it on the screen. You enter:

```
-LOCPRE
```

FSE reads procedure LOCPRE and determines that it contains an error. FSE then displays file FSEPROC on the lower half of a split screen and positions the cursor at the error (the *).

TOO MANY PARAMETERS

Upper Case File MYFILE Lines 1 - 12 Size 293 (Changed)

PROGRAM INDEX

C
C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
C CONTINUATION LINES.

C

IMPLICIT INTEGER (A-Z)

PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)

PARAMETER (MSC=50)

PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)

CHARACTER*40 COND

File FSEPROC Lines 49 - 51 Size 51 (Changed)

LOCPRE

LP*V

QP

MRKCHR	ONECPY	DELB	LAST	UNMARK		LOCNXT	80COL
F1 MARK	F2 MOVE	F3 INSB	F4 FIRST	F5 UNDO	F6 QUIT	F7 LOCATE	F8 132COL

You can then correct the error (by replacing the * with ;) and execute the procedure again.

If you already have a split screen, the file on the lower half of the screen is replaced with the file containing the procedure error. To return to your previous edit file, either press:

EDIT

or enter the **EDIT** directive.

Redefining Programmable Function Keys

You can redefine the programmable function keys (the default functions are described in section 2) to execute any FSE directive. The redefined functions remain in effect for the duration of the current editing session (including a session that you resume by entering the FSE command without a file name).

To redefine a key, use the SET directive with the KEY parameter. For example, to redefine the F6 QUIT key as the QUIT REPLACE function, enter:

```
S K 6/ QR/
```

FSE then displays the new function key prompts.

```
F1 MRKCHR F2 ONECPY F3 DELB F4 LAST F5 UNMARK F6 QR F7 LOCNXT F8 BOCOL  
F1 MARK F2 MOVE F3 INSB F4 FIRST F5 UNDO F6 QR F7 LOCATE F8 132COL
```

NOTE

Function key definitions must be 244 or fewer characters (only the first six characters appear on the function key prompt).

To define or redefine the shifted function keys, include the SHIFT parameter. For example, to define the shifted F6 key as the LOCATE PREVIOUS function, enter:

```
SKS6/LP/
```

FSE then displays the new function key prompts.

```
F1 MRKCHR F2 ONECPY F3 DELB F4 LAST F5 UNMARK F6 LP F7 LOCNXT F8 BOCOL  
F1 MARK F2 MOVE F3 INSB F4 FIRST F5 UNDO F6 QR F7 LOCATE F8 132COL
```

If you want the redefined function keys to remain in effect from one editing session to the next, include a SET KEY directive in the STARTUP procedure on your FSEPROC file. (Refer to *Creating and Using FSE Procedures*, earlier in this section).

Redefining Keys to Call Procedures


Using FSE procedures, it is possible to redefine keys to call procedures. For example, you may want to redefine several keys on the first row of function key prompts to perform word processing functions. A simple way to do this is to create a procedure that redefines the keys you want to use. The following procedure illustrates this. (Spaces are included in the directive strings to make the function key prompts easier to read.)

```
WORD
S K 1/ .FILL/
S K 3/ I W/
S K S 3/ D W/
S K S 6/ -DEF/
S K 8/ .JOIN/
S K S 8/ .SPLIT/
QP
```

You then add to your STARTUP procedure the following line, defining the shifted F6 key as -WORD.

```
SKS6/-WORD/
```

From then on, every time you press:

```
 F6 -WORD
```

the function keys are redefined to the specified word processing functions.

Defining Layers of Function Keys

No limits are placed on the number of times you can branch from a default setting for a key: one key calls a procedure that redefines that key (or another key) to call another procedure, which in turn redefines the same key (or another key), and so forth. For example, procedure WORD (the example just created) redefines the shifted F6 key to call another procedure, procedure DEF. Procedure DEF can be written to again redefine the shifted F6 key, or any other function keys, and any of these redefined keys can call another key-defining procedure.

To return to the original settings for the keys, create a procedure on FSEPROC that sets the function keys to their original settings. In the example procedure WORD, this is the function of procedure DEF.

If the number of procedure branches you create is large, you might find it difficult to keep track of which procedure defines the keys in which way. A worksheet is provided on the next page to help you remember how your procedures redefine keys. The following example shows how you would use the worksheet if you created the sample procedure WORD.

Programmable Function Key Definition Worksheet

F1	F2	F3	F4	F5	F6	F7	F8
MRKCHR	ONECPY	DELB	LAST	UNMARK	-WORD	LOCNXT	80COL
MARK	MOVE	INSB	FIRST	UNDO	QUIT	LOCATE	132COL

ORIGINAL

F9	F10	F11	F12	F13	F14	F15	F16
MIDDLE	ENDLIN	SPLIT	JOIN	PARA	COPY	CENTER	

F1	F2	F3	F4	F5	F6	F7	F8
MRKCHR	ONECPY	DW	LAST	UNMARK	-DEF	LOCNXT	.SPLIT
.FILL	MOVE	IW	FIRST	UNDO	QUIT	LOCATE	.JOIN

WORD

F9	F10	F11	F12	F13	F14	F15	F16
MIDDLE	ENDLIN	SPLIT	JOIN	PARA	COPY	CENTER	

F1 F2 F3 F4 F5 F6 F7 F8

F9 F10 F11 F12 F13 F14 F15 F16

F1 F2 F3 F4 F5 F6 F7 F8

F9 F10 F11 F12 F13 F14 F15 F16

F1 F2 F3 F4 F5 F6 F7 F8

F9 F10 F11 F12 F13 F14 F15 F16

F1 F2 F3 F4 F5 F6 F7 F8

F9 F10 F11 F12 F13 F14 F15 F16

10

11

12

13

14

Labeling Programmable Function Key Prompts

If you do not indicate otherwise, the prompt FSE displays for a programmable function key is the same as the directive string you enter when redefining the key. If, for example, you define the shifted F6 key as:

```
SKS6/LP;V/
```

the F6 function key prompt is:

```
F6  LP;V
    QUIT
```

You can, however, label the key prompt differently by using the LABEL parameter with the SET KEY directive. You can, for example, redefine a key to execute two directives, as just described, but only include one function on the key prompt. In the preceding example, you could label the key prompt LOCPRE, without affecting the two directives it executes, by entering:

```
S K S 6/ LP;V/L/LOCPRE/
```

The F6 prompt is:

```
F6  LOCPRE
    QUIT
```

but both the LOCATE PREVIOUS and VIEW directives are executed when you press the shifted F6 key.

NOTE

Function key labels must be six or fewer characters to fit in the prompt area at the bottom of the screen.

Labeling keys with descriptive phrases rather than the actual directive strings helps you understand each key's function and presents a cleaner looking screen.

If you want to change the label of a key but leave the directive string associated with the key unchanged, include only the LABEL parameter and the new label. For example, to change the label of the shifted F6 key from LOCPRE to LCTPRV, enter:

```
S K S 6 L/LCTPRV
```

The shifted F6 key is now labeled LCTPRV while the directive string associated with it (LP;V) remains the same.

Changing Your Screen Format

The type of screen format you use depends on the operation you perform. To change the format of your screen, use the SET VIEW directive and various keyword parameters. With the SET VIEW directive you can:

- Specify the number of lines displayed each time the screen is rewritten.
- Specify the number of columns displayed each time the screen is rewritten.
- Specify the number of lines available for the lower half of a split-screen edit.
- Define the number of columns that can be edited.
- Change the line length limit.
- Change the first column displayed at the left edge of the screen.

Specifying the Number of Lines Displayed

If you do not want the complete screen (the default value) printed each time the screen is rewritten, use the SET VIEW LINE directive. For example, to have only 15 lines displayed (including the directive and message lines and the function key prompts), enter:

```
S V L 15
```

During subsequent file editing, only 15 lines are displayed each time the screen is rewritten. These 15 lines include the file header, the directive and message lines, and programmable function key prompts. The minimum value is 10.

Specifying the Number of Columns Displayed

To specify the number of columns you want displayed each time the screen is rewritten, use the `SET VIEW COLUMN` directive. For example, to print only columns 1 through 60 (the default is 80), enter:

```
S V C 60
```

Only characters in columns 1 through 60 are displayed when the screen is rewritten. The minimum value is 10. Only text lines are shortened. The FSE header lines and function key prompts are unaffected. A value exceeding 80 changes the screen display to 132-column format (if your terminal has this capability).

The `SET VIEW COLUMN` directive can also be used in line mode to prevent lines from wrapping on the terminal.

The terminal configuration is not changed. Each line of output is restricted to the number of characters specified on the `SET VIEW COLUMN` directive.

Specifying the Number of Lines for Split-Screen Editing

When split-screen editing, you can reduce or increase the number of lines reserved for the lower half of the screen. To do so, use the `SET VIEW SPLIT` directive as shown in the following example.

```
S V S 7
```

Subsequent split-screen editing uses only seven lines for the bottom half of the screen.

Specifying the Number of Columns for Editing

To limit the number of columns that can be edited, use the `SET VIEW EDIT` directive. For example, if you want to edit only the first seven columns of a file, enter:

```
S V E 7
```

Subsequent editing affects only columns 1 through 7. The left margin is always column 1.

Changing the Line Length Limit

To change the line length limit, enter the **SET VIEW WARN** directive. For example, to change the line length to 70 from a previous setting, enter:

```
S V W 70
```

When a line is encountered that exceeds 70 characters, FSE stops directive processing and issues a warning message.

Changing the First Column Displayed

To view lines that run off the edge of your screen, use the **SET VIEW OFFSET** directive to specify the leftmost column to be displayed. For example, to view a line beginning at column 30, enter:

```
S V O 30
```

Column 30 then becomes the leftmost column displayed on your screen. To return to the default setting (1), enter:

```
S V O 1
```

Column 1 is once more the leftmost column displayed.

Getting Started.....	7-1
Setting Line Mode	7-1
Starting FSE	7-2
Creating a File	7-2
Editing	7-3
Displaying Lines	7-3
Searching	7-5
Inserting Lines	7-6
Deleting Lines	7-7
Getting Online Help	7-7
Changing Lines	7-8
Copying Lines.....	7-9
Replacing Text	7-9
Undoing Changes	7-9
Stopping FSE and Returning to NOS	7-10
Restarting FSE.....	7-10
Stopping FSE and Making Changes Permanent.....	7-10
Editing Sequenced Files	7-10



6

6

6

6

6

FSE is not exclusively a screen editor. It also functions as a line editor, which can be used on any terminal. Almost all of the directives available for screen editing are applicable to line editing. When line editing, enter directives after the ?? prompt and then always press:

NEXT

For information on directives, refer to section 4, *FSE Directives*.

NOTE

For each task, examples show you how a hypothetical file looks before and after editing. The sample files are not released with the system. You must create your own files if you want to perform the tasks in the examples.

Getting Started

Setting Line Mode

To use FSE as a line editor, you must be logged in to NOS. For information on NOS login procedures, refer to the *NOS Version 2 Reference Set, Volume 2, Guide to System Usage*.

Once logged in to NOS, enter the NOS LINE command.

LINE

This sets your terminal in line mode or cancels a SCREEN command if you have been screen editing. If you have not been screen editing during your current terminal session, you do not need to enter the LINE command; FSE is a line editor by default.

Starting FSE

To start FSE, enter the following command, including the name of the file you want to edit (MYFILE is the sample file).

```
FSE,MYFILE
```

The following prompt appears.

```
NOS FULL SCREEN EDITOR
EDIT: MYFILE
??
```

Creating a File

To create a file, enter the directive:

```
?? INSERT
```

to access the insert function (INSERT can be abbreviated to I). Line numbers are automatically generated as you enter text and press **(NEXT)**.

```
?? I
1 ? PROGRAM INDEX
```

Each use of **(NEXT)** advances you one line. Pressing **(NEXT)** twice returns you to the ?? prompt so you can enter new directives.

```
1 ? PROGRAM INDEX
2 ? C
3 ? INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
4 ?
??
```

Typing INSERT once again returns you to the line you last called with a directive.

Editing

Displaying Lines

To display all the lines in a file, enter the PRINT ALL directive:

```
?? PA
```

To display lines 1 through 30 of the file, enter the following PRINT directive:

```
?? P1 30
```

The first 30 lines of the file are displayed.

```
1 PROGRAM INDEX
2 C
3 C INDEX ALPHABETIZES AND SORTS A FILE CONTAINING A CORRECTLY
4 C FORMATTED MANUAL INDEX. THE PROGRAM RECOGNIZES PRIMARY,
5 C SECONDARY, AND TERTIARY ENTRIES AS WELL AS THEIR RESPECTIVE
6 C CONTINUATION LINES.
7 C
8 IMPLICIT INTEGER (A-Z)
9 PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
10 PARAMETER (MSC=50)
11 PARAMETER (MAXILEN=160,MAXSLEN=310,MAXXEN=-60)).../
12 CHARACTER*40 COND
13 CHARACTER*1 CO,CN
14 CHARACTER*10 SLANTS
15 CHARACTER*12 FMTST
16 CHARACTER*(MAXILEN) INPLIN
17 CHARACTER*7 PVAL,PNAME
18 CHARACTER*7 INPFILE,OUTFILE
19 CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
20 LOGICAL PARMERR
21 DIMENSION TAB(3)
22 C
23 DATA PENTRY/' ',SENTRY/' ',TENTRY/' ',BLANK/' '/
24 DATA OUTFILE/'OUTPUT',INPFILE/'INPUT'/
25 DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/
26 DATA FMCNT/0/,SEPCNT/3/
27 DATA SLANTS/'/////////////////'
28 C
29 C
30 5 ERR=0
```

A directive that attempts to display more lines than exist in a file results in the message:

OUT OF BOUNDS

Refer to the **SET VIEW COLUMN** directive for information about how to specify the number of columns to be displayed.

NOTE

The line numbers are added by FSE so you can see where you are in the file. They are not part of the file text. Also, the file shown here contains a few intentional errors that will be corrected to illustrate various editing functions.

Searching

Suppose you want to move the first line in the file containing the string:

```
LOGICAL PARMERR
```

to the line between present lines 16 and 17.

To locate the line, you must position the cursor at the first line of the file by entering the following PRINT directive.

```
?? P1
```

The first line is printed.

```
1      PROGRAM INDEX
```

Then, enter:

```
?? L/LOGICAL PARMERR
```

The first line containing the string is displayed.

```
20     LOGICAL PARMERR
```

To see a few lines before and after line 20, enter the following VIEW directive.

```
?? V
```

The four preceding lines, line 20, and the four following lines are displayed.

```
16     CHARACTER*(MAXILEN) INPLIN
17     CHARACTER*7 PVAL,PNAME
18     CHARACTER*7 INPFILE,OUTFILE
19     CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
20     LOGICAL PARMERR
21     DIMENSION TAB(3)
22 C
23     DATA PENTRY/' ',SENTRY/' ',TENTRY/' ',BLANK/' '
24     DATA OUTFILE/'OUTPUT',INPFILE/'INPUT'/
```

Inserting Lines

To insert:

```
LOGICAL PARMERR
```

between lines 16 and 17, enter the following INSERT directive.

```
?? I16
```

FSE prompts you with:

```
17 ?
```

You then enter the line to be inserted.

```
17 ?\LOGICAL PARMERR
18 ?
```

NOTE

The \ is the default tab character. Because the default tabs are set at 7 and 72, the inserted text starts at column 7.

You can enter as many lines as you want, ending the insertion either by entering a tab character at the end of an inserted line or by pressing:

NEXT

on an empty line.

You then display the surrounding lines with the VIEW directive.

```
?? V
13 CHARACTER*1 CO,CN
14 CHARACTER*10 SLANTS
15 CHARACTER*12 FMTST
16 CHARACTER*(MAXILEN) INPLIN
17 LOGICAL PARMERR
18 CHARACTER*7 PVAL,PNAME
19 CHARACTER*7 INPFILE,OUTFILE
20 CHARACTER*50 PENTRY,SENTRY,TENTRY,BLANK
21 LOGICAL PARMERR
```

Notice that the line numbers following 17 have all increased by one to accommodate the new line.

NOTE

To insert characters while line editing, use the ALTER directive, described in section 4.

Deleting Lines

To delete LOGICAL PARMERR on line 21, enter:

```
?? D21
```

The deleted line is displayed at your terminal.

```
21      LOGICAL PARMERR
```

You can delete more than one line at a time. To delete lines 25 through 27, for example, enter the following DELETE directive.

```
?? D25 27
```

The deleted lines are displayed, and line numbers on the remaining text shift accordingly.

```
25      DATA TAB(1)/1/,TAB(2)/5/,TAB(3)/9/
26      DATA FMCNT/0/,SEPCNT/3/
27      DATA SLANTS/'/////////'
```

To avoid displaying these lines, include the QUIET parameter.

```
D 25 27 Q
```

(If you want these lines returned, use the UNDO directive.)

Getting Online Help

Suppose you need to change line 11, but cannot quite recall how the ALTER directive works. To get help, enter the following directive.

```
?? H ALTER
```

This directive accesses the FSEHELP file and positions the cursor at the area of text describing the ALTER directive. To continue reading the help file text, enter PRINT directives as needed. For example, to read the next 20 lines, enter PN20. When you have read the information, the following directive returns you to file MYFILE.

```
?? BACK
```

NOTE

To delete characters while line editing, use the ALTER directive, described in section 4.

Changing Lines

You then enter the following PRINT directive to position the cursor to line 11.

```
?? P11
```

The line is displayed.

```
11      PARAMETER (MAXILEN=160,MAXSLEN=310,MAX%ZEN=-60)).../
```

You enter the following ALTER directive.

```
?? A
```

FSE responds with the following prompt.

```
11      PARAMETER (MAXILEN=160,MAXSLEN=310,MAX%ZEN=-60)).../
A??
```

You then space over to where the change is to be made and enter the correction underneath the error.

```
11      PARAMETER (MAXILEN=160,MAXSLEN=310,MAX%ZEN=-60)).../
A??                                OL  1  !
```

The entries in this example perform the following functions.

Entry	Function
Space	No effect on the line.
0	Replaces first %.
L	Replaces second %.
1	Replaces -.
!	Truncates the line at the current character.

When you press **(NEXT)**, the corrected line is displayed.

```
11      PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
```

Copying Lines

To copy lines 8 through 12 immediately after line 15, enter the following COPY directive:

```
?? C 8 12 TO 15
```

The copied lines and their new line numbers are displayed.

```
16    IMPLICIT INTEGER (A-Z)
17    PARAMETER (PRM=1,PRMC=2,SEC=3,SECC=4,TER=5,TERC=6)
18    PARAMETER (MSC=50)
19    PARAMETER (MAXILEN=160,MAXSLEN=310,MAXOLEN=160)
20    CHARACTER*40 COND
```

Replacing Text

To replace all occurrences of INTEGER with INT, enter the following REPLACE directive.

```
?? RA/INTEGER/INT
```

The lines affected by the change are displayed.

```
8    IMPLICIT INT (A-Z)
71   INT(A1)
90   INT(B23)
```

When the replacement is complete, the cursor is positioned at the last line affected. In this example, the cursor would rest at line 90.

Undoing Changes

To undo a change to your file, enter the UNDO directive. For example, to undo the last REPLACE directive, enter:

```
?? UNDO
```

All the INTEGERS that were replaced with INT are now changed back to INTEGER. To undo other changes made to your file during your current editing session, enter an UNDO directive for each item you want restored. The changes are undone in the reverse order of their occurrence. UNDO does not display the reinstated line; however, you can enter the PRINT directive to verify that the changes are undone.

Stopping FSE and Returning to NOS

To stop FSE and return to NOS, enter:

```
?? QUIT
```

The following message appears.

```
FILE: MYFILE
```

This message tells you that you have made changes to file MYFILE but they are not permanent.

Restarting FSE

To return to FSE at the point you left, enter the FSE command without parameters.

```
FSE
```

In this example, you are positioned at line 90, the point at which you stopped FSE with the QUIT directive.

Stopping FSE and Making Changes Permanent

To stop FSE and make the changes to your file permanent, enter the QUIT REPLACE directive.

```
QR
```

The following message appears, confirming that the changes are permanent.

```
FILE: MYFILE (PERMANENT)
```

Editing Sequenced Files

When editing or creating files in the BASIC or FORTRAN subsystem, FSE assumes the file is a numbered sequenced file. In directives, you can then refer to the sequence numbers rather than to the internal line numbers FSE provides. Refer to the SET NUMBER directive for more information on manipulating sequence numbers.

6

6

6

6

6

This section consists of worksheets for recording the keys on your terminal that correspond to the Viking 721 terminal keys and the default settings of programmable function keys F1 through F16. For example, the **(NEXT)** key description appears on the worksheet as:

Viking 721 Key	Your Terminal Key	Function
(NEXT)		Terminates the input line.

If you are using the worksheet on a CDC 722 terminal, you fill it in as follows:

Viking 721 Key	Your Terminal Key	Function
(NEXT)	<u>NEW LINE OR CR</u>	Terminates the input line.

Refer to appendix D for information on corresponding keys for the CDC 722 and 722-30; DEC VT100; Zenith Z19/Z29; Heathkit H19; IBM 3270; Lear Siegler ADM3A and ADM5; Tektronix 4115; and TeleVideo TV924, TV950, and TV955 terminals.

10

11





12

13

14

Terminal

Viking

721 Key	Your Terminal Key	Function
 FWD	_____	Advances to the last screen of the file.
FWD	_____	Advances screen one page.
 BKW	_____	Moves backward to the first screen of the file.
BKW	_____	Moves screen backward one page.
UP	_____	Moves the line the cursor is on to the top of the screen.
DOWN	_____	Moves the line the cursor is on to the bottom of the screen.
HELP	_____	Displays the FSE help file in the lower half of a split screen.
EDIT	_____	Terminates split-screen mode, returning the top half of the screen to full screen.
BACK	_____	Returns you to the section of a file that you marked with the DATA directive or with your last BACK directive.
DATA	_____	Marks a section of the file to which you can return with the BACK directive.
 INSRT	_____	Inserts a blank line, allowing you to type in a new line of text.
INSRT	_____	Inserts a blank character into which you type a new character.
 DLETE	_____	Deletes the line the cursor is on.
DLETE	_____	Deletes the character the cursor is on.
CLEAR	_____	Rewrites the entire screen.
HOME	_____	Moves the cursor to the FSE directive line, allowing you to enter FSE directives.
NEXT	_____	Terminates an input line.

Default Programmable Function Key Settings

MARK _____

MRKCHR _____

MOVE _____

ONECPY _____

INSB _____

DELB _____

FIRST _____

LAST _____

UNDO _____

UNMARK _____

QUIT _____

LOCATE _____

LOCNXT _____

132COL _____

80COL _____

MIDDLE _____

ENDLIN _____

SPLIT _____

JOIN _____

PARA _____





COPY _____

CENTER _____

NOTES: _____

Terminal

Viking

721 Key	Your Terminal Key	Function
 FWD	_____	Advances to the last screen of the file.
FWD	_____	Advances screen one page.
 BKW	_____	Moves backward to the first screen of the file.
BKW	_____	Moves screen backward one page.
UP	_____	Moves the line the cursor is on to the top of the screen.
DOWN	_____	Moves the line the cursor is on to the bottom of the screen.
HELP	_____	Displays the FSE help file in the lower half of a split screen.
EDIT	_____	Terminates split-screen mode, returning the top half of the screen to full screen.
BACK	_____	Returns you to the section of a file that you marked with the DATA directive or with your last BACK directive.
DATA	_____	Marks a section of the file to which you can return with the BACK directive.
 INSRT	_____	Inserts a blank line, allowing you to type in a new line of text.
INSRT	_____	Inserts a blank character into which you type a new character.
 DLETÉ	_____	Deletes the line the cursor is on.
DLETÉ	_____	Deletes the character the cursor is on.
CLEAR	_____	Rewrites the entire screen.
HOME	_____	Moves the cursor to the FSE directive line, allowing you to enter FSE directives.
NEXT	_____	Terminates an input line.

Default Programmable Function Key Settings

MARK _____

MRKCHR _____

MOVE _____

ONECPY _____

INSB _____

DELB _____

FIRST _____

LAST _____

UNDO _____

UNMARK _____

QUIT _____

LOCATE _____

LOCNXT _____

132COL _____

BOCOL _____

MIDDLE _____

ENDLIN _____

SPLIT _____

JOIN _____

PARA _____

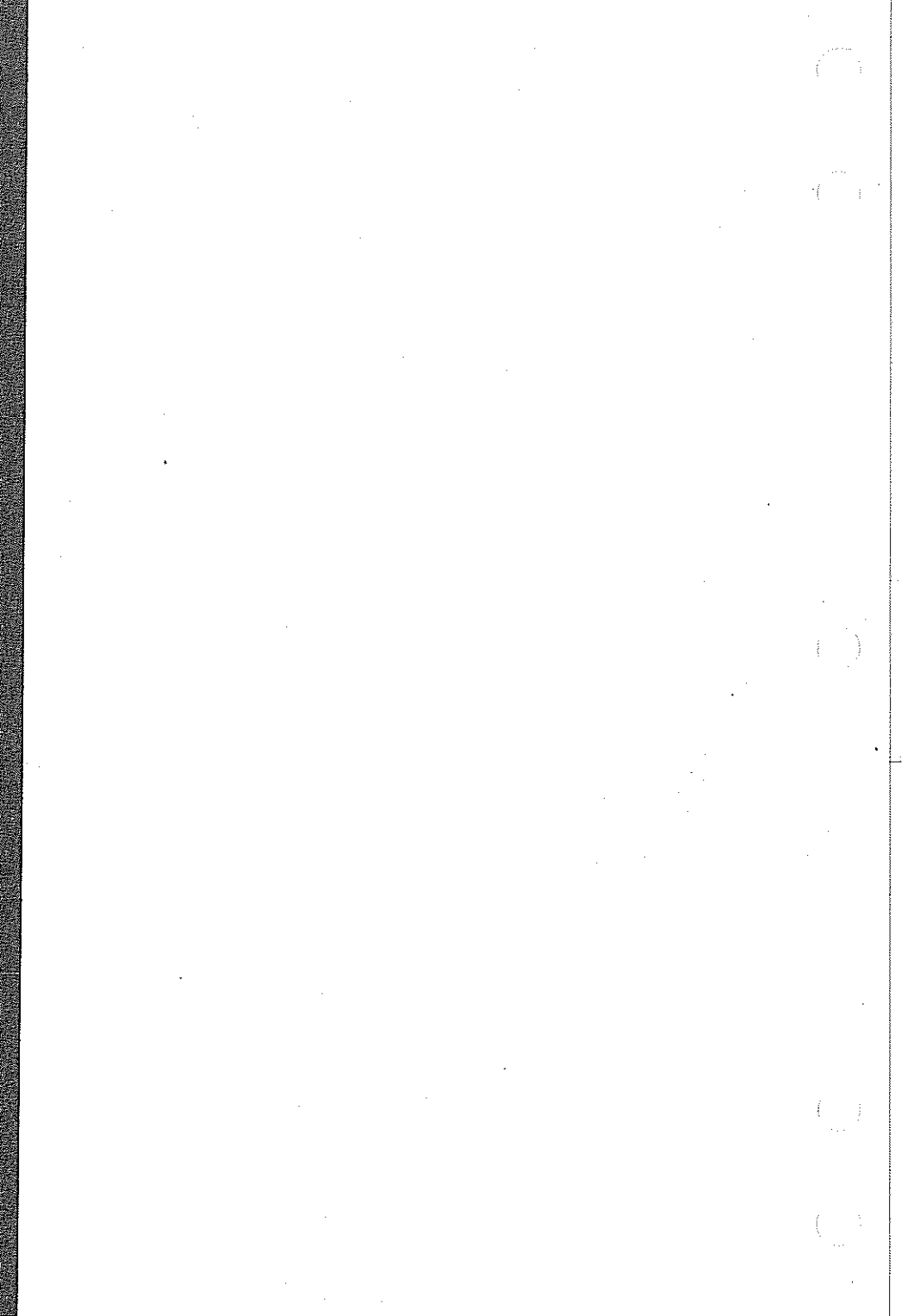
COPY _____

CENTER _____

NOTES: _____

Appendixes

Code Set Conversion	A-1
Error Recovery and Diagnostic Messages	B-1
Glossary	C-1
Terminal Support Information	D-1
Function Key Directive Strings	E-1
Viking 721 Terminal Settings	F-1



Code Set Conversion

A

The code conversion charts in this appendix interpret information coded in 6/12-bit display code or 7-bit ASCII code when it is displayed in 6-bit display code form. (7-bit ASCII characters occupy the rightmost 7 bits of a 12-bit field. The leftmost 5 bits are unused.)

The left side of table A-1 lists the 128-character ASCII character set with the corresponding 6-bit display code values. The right side of the table shows the 6/12-bit display code and 7-bit ASCII code characters as they appear when displayed in 6-bit display code format.

Table A-1. Code Conversion Chart

ASCII (128-Character)			6-Bit Display Code		6/12-Bit Display Code		7-Bit ASCII Code
Character	Octal	Hex.	Char.	Octal	Char.	Octal	Char.
NUL	000	00			~5	7640	5:
SOH	001	01			~6	7641	:A
STX	002	02			~7	7642	:B
ETX	003	03			~8	7643	:C
EOT	004	04			~9	7644	:D
ENQ	005	05			~+	7645	:E
ACK	006	06			~-	7646	:F
BEL	007	07			~*	7647	:G
BS	010	08			~/	7650	:H
HT	011	09			~(	7651	:I
LF	012	0A			~)	7652	:J
VT	013	0B			~\$	7653	:K
FF	014	0C			~=	7654	:L
CR	015	0D			~sp	7655	:M
SO	016	0E			~,	7656	:N
SI	017	0F			~.	7657	:O
DLE	020	10			~#	7660	:P
DC1	021	11			~[	7661	:Q
DC2	022	12			~]	7662	:R
DC3	023	13			~%	7663	:S
DC4	024	14			~"	7664	:T
NAK	025	15			~_	7665	:U
SYN	026	16			~!	7666	:V
ETB	027	17			~&	7667	:W

Continued on next page

Table A-1. Code Conversion Chart (Continued)

ASCII (128-Character)			6-Bit Display Code		6/12-Bit Display Code		7-Bit ASCII Code Char.
Character	Octal	Hex.	Char.	Octal	Char.	Octal	
CAN	030	18			..	7670	:X
EM	031	19			?.	7671	:Y
SUB	032	1A			<.	7672	:Z
ESC	033	1B			>.	7673	:0
FS	034	1C			@.	7674	:1
GS	035	1D			\.	7675	:2
RS	036	1E			..	7676	:3
US	037	1F			;	7677	:4
sp	040	20	sp	55	sp	55	:5
! Exclamation Point	041	21	!	66	!	66	:6
" Quotation Marks	042	22	"	64	"	64	:7
# Number Sign	043	23	#	60	#	60	:8
\$ Dollar Sign	044	24	\$	53	\$	53	:9
% Percent Sign	045	25	%	63	%	63	:+
& Ampersand	046	26	&	67	&	67	:-
' Apostrophe	047	27	'	70	'	70	:.*
(Opening Parenthesis	050	28	(	51	(	51	:/
) Closing Parenthesis	051	29	)	52	)	52	:(
* Asterisk	052	2A	*	47	*	47	:(.)
+ Plus	053	2B	+	45	+	45	:\$
, Comma	054	2C	,	56	,	56	:=
- Dash	055	2D	-	46	-	46	:-sp
. Period	056	2E	.	57	.	57	:.:
/ Slant	057	2F	/	50	/	50	:/
0	060	30	0	33	0	33	:#
1	061	31	1	34	1	34	:[
2	062	32	2	35	2	35	:]
3	063	33	3	36	3	36	:%
4	064	34	4	37	4	37	:.^
5	065	35	5	40	5	40	:_
6	066	36	6	41	6	41	:_.
7	067	37	7	42	7	42	:_&
8	070	38	8	43	8	43	:_.
9	071	39	9	44	9	44	:_?
: Colon	072	3A	:	00	@D	7404	:<
; Semicolon	073	3B	;	77	:	77	:>
< Less than	074	3C	<	72	<	72	:@
= Equals	075	3D	=	54	=	54	:_\
> Greater than	076	3E	>	73	>	73	:_.
? Question Mark	077	3F	?	71	?	71	:_.

Continued on next page

Table A-1. Code Conversion Chart (Continued)

ASCII (128-Character)			6-Bit Display Code		6/12-Bit Display Code		7-Bit ASCII Code Char.
Character	Octal	Hex.	Char.	Octal	Char.	Octal	
@ Commercial At	100	40	@	74	@A	7401	A:
A	101	41	A	01	A	01	AA
B	102	42	B	02	B	02	AB
C	103	43	C	03	C	03	AC
D	104	44	D	04	D	04	AD
E	105	45	E	05	E	05	AE
F	106	46	F	06	F	06	AF
G	107	47	G	07	G	07	AG
H	110	48	H	10	H	10	AH
I	111	49	I	11	I	11	AI
J	112	4A	J	12	J	12	AJ
K	113	4B	K	13	K	13	AK
L	114	4C	L	14	L	14	AL
M	115	4D	M	15	M	15	AM
N	116	4E	N	16	N	16	AN
O	117	4F	O	17	O	17	AO
P	120	50	P	20	P	20	AP
Q	121	51	Q	21	Q	21	AQ
R	122	52	R	22	R	22	AR
S	123	53	S	23	S	23	AS
T	124	54	T	24	T	24	AT
U	125	55	U	25	U	25	AU
V	126	56	V	26	V	26	AV
W	127	57	W	27	W	27	AW
X	130	58	X	30	X	30	AX
Y	131	59	Y	31	Y	31	AY
Z	132	5A	Z	32	Z	32	AZ
[Opening Bracket	133	5B	[	61	[	61	A0
\ Reverse Slant	134	5C	\	75	\	75	A1
] Closing Bracket	135	5D	]	62	]	62	A2
^ Circumflex	136	5E	^	76	@B	7402	A3
_ Underline	137	5F	_	65	_	65	A4
Grave Accent	140	60	@	74	@G	7407	A5
a	141	61			^A	7601	A6
b	142	62			^B	7602	A7
c	143	63			^C	7603	A8
d	144	64			^D	7604	A9
e	145	65			^E	7605	A+
f	146	66			^F	7606	A-
g	147	67			^G	7607	A*

Continued on next page

Table A-1. Code Conversion Chart (Continued)

ASCII (128-Character)			6-Bit Display Code		6/12-Bit Display Code		7-Bit ASCII Code Char.
Character	Octal	Hex.	Char.	Octal	Char.	Octal	
h	150	68			ˆH	7610	A/
i	151	69			ˆI	7611	A(
j	152	6A			ˆJ	7612	A)
k	153	6B			ˆK	7613	A\$
l	154	6C			ˆL	7614	A=
m	155	6D			ˆM	7615	Asp
n	156	6E			ˆN	7616	A,
o	157	6F			ˆO	7617	A.
p	160	70			ˆP	7620	A#
q	161	71			ˆQ	7621	A[
r	162	72			ˆR	7622	A]
s	163	73			ˆS	7623	A%
t	164	74			ˆT	7624	A"
u	165	75			ˆU	7625	A_
v	166	76			ˆV	7626	A!
w	167	77			ˆW	7627	A&
x	170	78			ˆX	7630	A'
y	171	79			ˆY	7631	A?
z	172	7A			ˆZ	7632	A<
| Opening Brace	173	7B	[	61	ˆ0	7633	A>
| Vertical Line	174	7C	\	75	ˆ1	7634	A@
| Closing Brace	175	7D	]	62	ˆ2	7635	A\
- Tilde	176	7E	-	76	ˆ3	7636	Aˆ
DEL	177	7F			ˆ4	7637	A;

NOTE: sp represents a space.

Error Recovery and Diagnostic Messages

B

This appendix describes procedures for recovering from errors that either cause you to lose the connection to NOS or, when screen editing, cause your screen to become garbled. This appendix also provides alphabetical lists of FSE diagnostic messages.

Error Recovery

This section describes how to recover your FSE session if one of the following errors occurs.

- 1 The screen is garbled due to communication errors.
- 1 The connection to NOS is lost.
- 1 You enter the wrong terminal model on the NOS SCREEN command.

Recovery from Communication Errors

If communication errors cause your screen to become garbled, you can rewrite the current screen as follows:

- 1 If you are on a Viking 721 terminal, press:

HOME **CLEAR** + **NEXT**

- 1 If you are on a CDC 722 terminal, press:

EOP + **NEW LINE**

- 1 On any terminal, press:

HOME

(or the equivalent key) to position the cursor on the FSE directive line.
Then enter:

S S

Recovery from Losing the NOS Connection

The following procedure restores your FSE session if you lose the NOS connection.

1. Log in to NOS.

```
WELCOME TO THE NOS SOFTWARE SYSTEM.  
COPYRIGHT CONTROL DATA 1978, 198x.
```

```
yy/mm/dd 13.20.42 L3FT1  
CDC NETWORK OPERATING SYSTEM NOS 2  
FAMILY: familyname,username,password  
JSN: ABVJ, NAMIAF
```

2. When the following appears, enter the job sequence name (JSN) of the job to recover. In this example, only job ABVJ can be recovered.

```
RECOVERABLE JOB(S)  
  
JSN    UJN    STATUS    TIMEOUT  
  
ABVJ   AKVA   SUSPENDED 29 MIN.
```

```
ENTER GO TO CONTINUE CURRENT JOB,  
RELIST TO LIST RECOVERABLE JOBS,  
OR DESIRED JSN: abvj
```

3. Do not enter GO when the following message appears.

```
JSN: ABVJ SYSTEM: BATCH SRU: 2.679  
STATUS: FSE,MYFILE,A,G.  
CHARACTER SET: ASCII MODES: PROMPT ON  
INPUT REQUESTED. ENTER GO TO CONTINUE.
```

Instead, press:

(NEXT)

The following FSE prompt appears.

??

4. Respond to the prompt with:

S S

This returns you to where you left off in your FSE session.

Refer to the *NOS Version 2 Reference Set, Volume 2, Guide to System Usage*, for detailed information on NOS login and job recovery procedures.

Recovery from Typing the Wrong Terminal Model

If you accidentally enter the NOS command:

SCREEN,721

and your terminal is, for instance, a 722, entering:

FSE,filename

results in a meaningless screen display. To exit this malfunctioning FSE session, press:

(STOP)

on the Viking 721, or enter:

(CTRL) (T)

on any terminal.

(You may have to press **(STOP)** or **(CTRL) (T)** several times in succession.)

This switches you to the FSE line editor, which displays the directive prompt:

??

To exit the line editor, enter:

QUIT (or Q)

and press:

(RETURN)

Re-enter the SCREEN command with the correct model name for your terminal. In this example, enter:

SCREEN,722

You can now edit your file in screen mode.

Diagnostic Messages

FSE diagnostic messages are grouped in two categories: user messages and internal messages. User messages appear when you make a mistake while using FSE. Internal messages appear when FSE makes a mistake. Internal messages are always preceded by FSE INTERNAL ERROR, and followed by CONTACT SOFTWARE SUPPORT.

This section lists user messages first followed by internal messages. If you receive a message not listed, either refer to the *NOS Version 2 Reference Set, Volume 3, System Commands*, or contact Central Software Support.

User Messages

BATCH JOBS MUST BE ERROR FREE.

A syntax error occurred on a noninteractive FSE session. Correct the job and try again.

CANNOT CHANGE READ-ONLY FILE.

You tried to change a file you are not allowed to change.

CHANGES OUTSIDE OF TEXT AREA DISCARDED.

You tried to input data or insert or delete lines outside of the text area of the screen. (For example, by typing over the function key labels.) Use the appropriate key or directive to position the cursor in the area where you want the file changed.

CHARACTER SEQUENCE NOT RECOGNIZED.

Your input is not recognized by FSE. Check the spelling and try again.

CURSOR RESET FROM BEYOND EDGE OF SCREEN.

A directive or string of directives resulted in positioning the cursor past the right edge of the screen. Use the appropriate key or directive to increase the number of columns (if possible) on the screen, or use the SET VIEW OFFSET key or directive to view the affected area of text.

DIRECTIVE CANCELLED BY FUNCTION KEY.

You pressed a function key before a directive had finished executing. The function key cancels the directive and executes the function. No action is required.

EMPTY FILE.

You have specified a file that contains no lines. Try again with the correct file name.

END OF LINE BEYOND EDGE OF SCREEN.

You tried to position the cursor to the end of a line that extends beyond the edge of the screen. Use the appropriate key or directive to view the wide line.

ERROR IN THIS PROCEDURE LINE.

The procedure line displayed contains an error. Correct the error and try again.

FILE MUST BE ON DISK.

The file you specified is not on a mass storage device, so could not be located. Try again with a valid file name.

FILE MUST NOT CONTAIN SEQUENCE NUMBERS.

The directive you specified can be performed only on files without sequence numbers. Try another directive or file.

FILE NAME IN USE.

The file name you specified is already in use in the work file. Select a different file name and try again.

FSEKEYS IN TDU DEFINITION TOO LONG.

One or more of the FSEKEYS strings in your Terminal Definition Utility (TADU) file is longer than 250 characters. Split the string into multiple FSEKEYS strings so none exceeds 250 characters.

INTERNAL ERROR.....

Refer to the *Internal Messages* section that follows this list.

INVALID FILE NAME.

You specified an invalid file name. Check the spelling of the file name and try again.

KEYWORD MUST FOLLOW SET.

You entered an invalid keyword parameter following the SET directive. Check the syntax of the SET directive and try again.

LINE INCREMENT VALUE TOO LARGE.

The value you specified on the SET INCREMENT directive is too large for the specified file. Try again with a smaller increment.

MARKS CANCELLED.

You cancelled the previously set marks by either pressing **UNMARK** or entering the UNMARK directive.

MISSING REPLACEMENT STRING.

You entered a REPLACE directive that did not contain a replacement string. Try again with a specified string.

MUST SPECIFY FILE NAME.

The FSE directive you entered did not contain a valid file name. Try again with a valid file name.

MUST SPECIFY YES OR NO.

You specified a keyword parameter other than YES or NO. Try again with YES or NO specified.

NO FILE DATA STORED WITH "DATA".

You entered the BACK directive (or pressed the **BACK** key) without first marking an area of the file with the DATA directive. Once you enter DATA to mark the area to which you wish to return, the BACK directive becomes operational.

NO FILE NAME ON FSE COMMAND

You entered an FSE command without specifying the file name. Reenter the FSE command with a valid file name.

NO MARK(S) ACTIVE.

You specified UNMARK (UM) to cancel marks on text, but no marks were currently set.

NOT ENOUGH ROOM FOR INSERTION.

There is not enough room for you to insert lines. Resequence the line numbers and try again.

NOT FOUND.

The string you specified on a **LOCATE** or **REPLACE** directive is not in the file. Check the spelling of the string and try again.

ONLY ONE RANGE ALLOWED.

You specified more than one range. Check the syntax of the desired directive and try again.

OUT OF BOUNDS.

The range you specified is out of bounds. Specify a smaller range and try again.

PARAMETER NOT VALID FOR THIS DIRECTIVE.

You specified a keyword parameter that **FSE** does not recognize. Check the command syntax and try again.

PFN BUSY OR NOT FOUND, USING LOCAL FILE.

FSE cannot access the permanent file specified on the **FSE** command because it is busy or the file does not exist. **FSE** uses the local copy of the file, if any. Check the file name and try again.

PLEASE RE-ENTER INPUT.

You must wait until one directive or function is complete before you can enter another. Try again.

PROCEDURE NOT FOUND.

FSE cannot not find the procedure specified. Check the file on which the procedure resides, check the spelling, and try again.

QUIT IS REQUIRED FOR BATCH JOBS.

You did not include a **QUIT** directive in a noninteractive **FSE** session. Add a **QUIT** directive and try again.

RANGE MUST BE IN SAME FILE.

The range you specified spanned more than one file. Try again with the range limited to one file.

RESERVED FILE.

You tried to edit a file that is protected from editing. Start FSE again with a valid file name.

RETURN MUST FOLLOW FUNCTION KEY.

You must enter a carriage return after pressing the specified function key. Try again, pressing **(RETURN)** after the function key.

SCREEN MODE REQUIRED.

You tried an editing function that works only in screen editing mode. Either try another function or set screen mode and try again.

SET UNDO YES - TO ENABLE UNDO.

You tried to enter the UNDO directive while it is not enabled. Enable UNDO (using the SET UNDO YES directive) and try again.

STRING GREATER THAN 80 CHARACTERS.

You entered a string containing a line longer than the allowable limit (80 characters).

STRING NOT ALLOWED.

You entered a string when none is required. Try again without the string.

SYSTEM INTERRUPT, PROCEED NOW.

A forced transaction from multi-user FSE to single-user FSE has occurred. This is not a result of anything you did. Resume editing. The effects of the previous directive may be cancelled.

TAB FIELD ORDINAL OUT OF BOUNDS.

You specified a tab field that is out of range. Try again with a valid tab field.

TAB STOP OUT OF BOUNDS.

You specified a tab field that is out of range. Try again with a valid tab field entry.

***TO* REQUIRED BEFORE DESTINATION FILE.**

You entered a COPY or MOVE directive with a source and destination file specified but did not include the required TO parameter.

TOO MANY FSE COMMAND PARAMETERS.

You entered too many parameters on your FSE command. Check for the correct parameters and try again.

TOO MANY PARAMETERS.

You specified too many parameters on one directive. Take off a few parameters and try again.

UNKNOWN CONTROL KEY, CHECK SCREEN.

You entered a sequence that FSE does not recognize. Determine whether the screen has been garbled by entering either:

 **CLEAR** + **NEXT**

or

SET SCREEN

to rewrite it, and try again.

UNKNOWN DIRECTIVE.

You entered a directive that FSE did not recognize. Check the spelling and syntax and try again.

UNKNOWN FSE OPTION: OP

You specified an option on the FSE command that FSE does not recognize. Check the FSE command format and try again.

UNRECOGNIZED FSE COMMAND SYNTAX.

The string you entered is not a valid FSE command. Check the FSE command format and try again.

UNSUPPORTED FUNCTION KEY.

FSE does not support the key you pressed. Check the key you want and try again.

USE "EDIT" TO UNSPLIT SCREEN

When FSE help is displayed in the lower half of the screen, this message tells you how to exit the help file, returning the upper half of the screen to full-screen length.

VALUE MUST BE NUMERIC.

You entered a nonnumeric value for a keyword parameter that must be numeric. Enter a numeric value and try again.

WARNING: ONE OR MORE OF YOUR ASCII FILES CONTAINED COLONS ENCODED IN THE DISPLAY CODE FORMAT OF OCTAL 00 (:) RATHER THAN THE ASCII FORMAT OF OCTAL 7404 (_D).

ENTER ...

YES COLONS LEFT IN DISPLAY CODE (:)

NO COLONS CHANGED TO ASCII (_D)

??

Decide whether to keep the colons in display code format (enter YES) or to change them to ASCII format (enter NO).

WARNING: ONE OR MORE OF YOUR FILES COULD NOT BE SAVED BECAUSE OF YOUR VALIDATION LIMITS (THE FILE IS NOW TOO LONG OR YOU HAVE EXCEEDED YOUR LIMITS FOR NUMBER OF FILES) AND HAS BEEN LEFT LOCAL BY FSE.

Check your validation limits by entering the LIMITS command from command mode. If the number of permanent files allowed in your catalog has not been exceeded, the file you are editing may be too long. Break the file down into two or more shorter files.

WIDE LINE.

You specified a range of lines containing a line longer than the limit. To complete the processing of the line range, increase the line width limit.

XYZ POINTER NOT SET IN FILEfile.

You specified an X, Y, or Z pointer as the range in the source file for a COPY or MOVE directive without previously setting the pointer in that file. Set the appropriate pointers before executing the COPY or MOVE directive.

Internal Messages

The following messages are always preceded by the line FSE INTERNAL ERROR.

NOTE

When an FSE internal error message occurs, you should repeat the procedure that produced the message. If the message reappears, contact Central Software Support.

ALL WORKFILE BUFFERS ARE FULL.

FSE encountered a full working buffer while trying to store data.

ALTERED PRU WAS NOT REWRITTEN.

FSE failed to rewrite an altered PRU before reusing the buffer. Contact Central Software Support.

BAK BEFORE START OF FILE.

FSE attempted to access a line located before the first line of the file. Contact Central Software Support.

DIRECTORY BLOCK POINTER TOO LARGE.

The directory block pointer is greater than the value allowed. Contact Central Software Support.

DIRECTORY BLOCK POINTER TOO SMALL.

The directory block pointer is less than the value allowed. Contact Central Software Support.

FILE MUST BE ON DISK.

The file specified on the FSE command is not on a mass storage device. Try again with a valid file name.

FILE POSITION STACK OVERFLOWED.

The stack that monitors the file position overflowed. Contact Central Software Support.

FILE POSITION STACK UNDERFLOWED.

The stack that monitors the file position underflowed. Contact Central Software Support.

FILE SIZE INCORRECT.

The file size (EOI sector) reported by CIO conflicts with FSE. Contact Central Software Support.

FILE TOO LARGE.

The file you are attempting to edit is too large for FSE to handle. Contact Central Software Support.

FWD BEYOND END OF FILE.

FSE attempted to access a line located after the last line of the file. Contact Central Software Support.

LENGTH TOO LONG.

The length of a line FSE tried to manipulate exceeded the maximum length of 250 characters. Contact Central Software Support.

LINE NOT FOUND IN FILE.

FSE attempted to access a line that does not exist in the file. Contact Central Software Support.

OLD SECTOR MUST BE WRITTEN.

FSE attempted to allocate a new sector without first flushing the old sector to disk. Contact Central Software Support.

OUT-OF-BOUNDS PRU ADDRESS ON READ.

FSE attempted to read a sector address that is out of bounds. Contact Central Software Support.

PREVIOUS VERSION OF WORKFILE.

FSE and the workfile versions do not match. Contact Central Software Support.

PRU CONTENT INCORRECT.

The content of the PRU does not match the expected value. Contact Central Software Support.

RANDOM ADDRESS INCORRECT.

The random address returned by CIO after a random rewrite conflicts with FSE. Contact Central Software Support.

RANDOM READ LIST INCORRECT.

The read list did not contain the sector FSE was trying to access. Contact Central Software Support.

REENTRANT DATA STACK OVERFLOWED.

The general purpose data stack for reentrant code overflowed. Contact Central Software Support.

REENTRANT DATA STACK UNDERFLOWED.

The general purpose data stack for reentrant code underflowed.

RPHRLS LIST BUFFER IS FULL.

The list buffer for the RPHRLS macro is full. Contact Central Software Support.

SECTOR CANNOT BE DEALLOCATED.

FSE attempted to deallocate a block that was still valid. Contact Central Software Support.

STATUS FLAGS SHOULD HAVE BEEN CLEARED.

The content of the PRU includes status flags that should have been cleared. Contact Central Software Support.

TRANSFER TO THE BUFFER IS INCOMPLETE.

The buffer transfer on a COPY or MOVE is incomplete. Contact Central Software Support.

UNABLE TO WRITE FROM BUFFER.

FSE was unable to write and empty the circular buffer. Contact Central Software Support.

UNKNOWN TERMINAL MODEL NUMBER.

The terminal model number specified is not defined.

WORKFILE BUFFER ALLOCATED TWICE.

FSE encountered a sector written in two areas of the work file. Contact Central Software Support.

WORKFILE BUFFER CONTAINS WRONG TEXT.

FSE encountered a working buffer with incorrect text. Inform Central Software Support.

WORKFILE BUFFER EMPTY ON READ.

FSE encountered an empty circular buffer while reading the workfile. Contact Central Software Support.

WORKFILE BUFFER FULL ON READ.

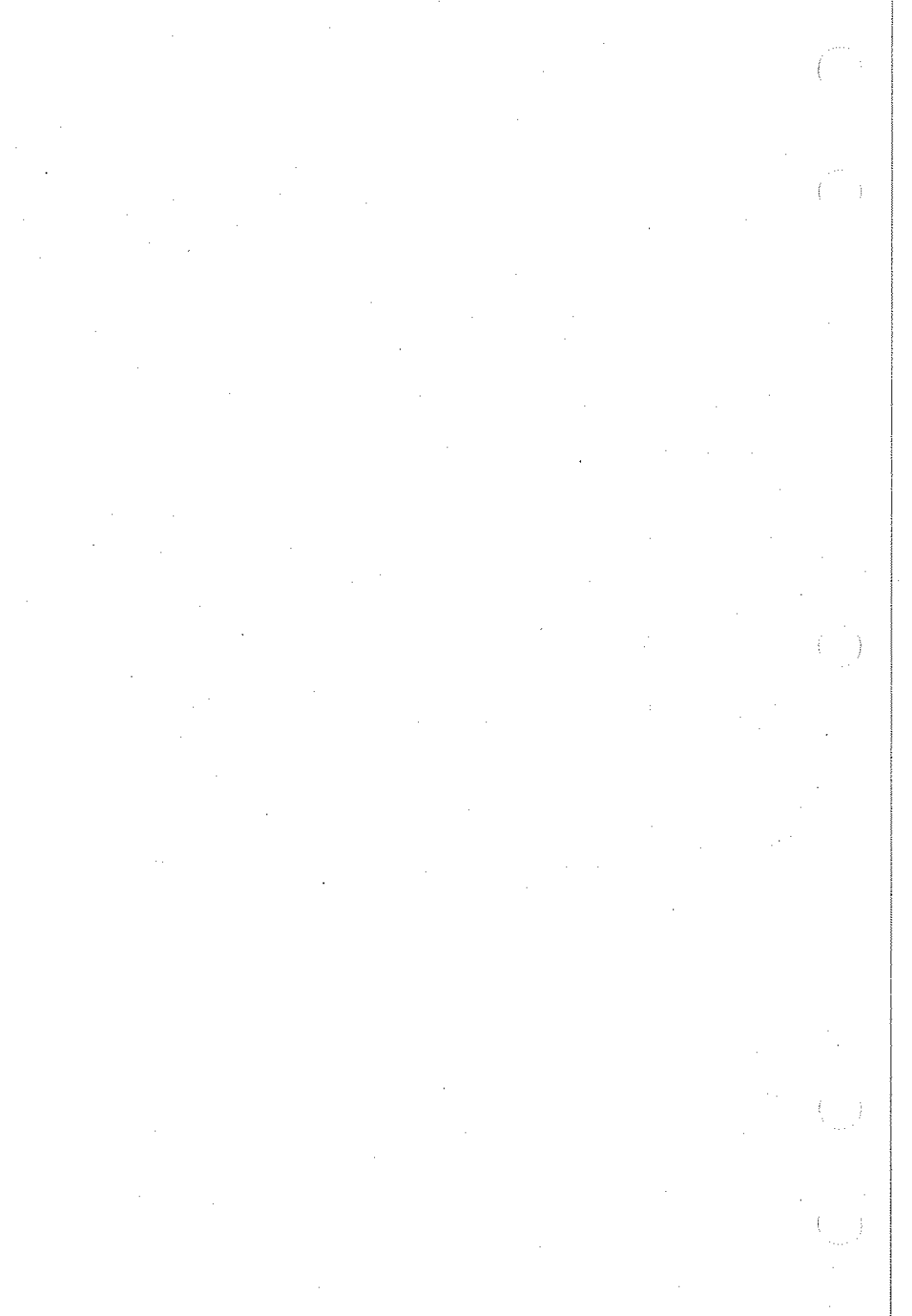
FSE encountered a full circular buffer while reading the workfile. Contact Central Software Support.

WORKFILE BUFFER FULL ON WRITE.

FSE encountered a full circular buffer while writing the workfile. Contact Central Software Support.

WORKFILE IS NOT IN A RESUMABLE STATE.

FSE could not recognize the contents of the workfile. Contact Central Software Support.



A

ASCII

American National Standard Code for Information Interchange. A 7-bit code representing a prescribed set of 128 characters including both uppercase and lowercase letters.

ASCII Mode

Use of the American National Standard Code for Information Interchange 128-character set. It includes both uppercase and lowercase letters.

Attach

The process of retrieving a direct access permanent file to use at your terminal by specifying the proper permanent file identification and, if required, passwords.

B

BACK

The FSE directive that returns you to the section of a file you marked with the DATA directive, or to the position at which you last entered BACK.

BASIC

1. Beginner's All-Purpose Symbolic Instruction Code, an elementary programming language.
2. The subsystem that uses the BASIC compiler.

Batch Job

Instructions and data submitted as a complete unit without further intervention on your part.

Batch Mode

Mode in which instructions and data are submitted as complete units without further intervention on your part.

Break

An interruption in the data stream. A user break (a break normally entered by you at your interactive terminal) stops delivery of a message or output from the host.

C

CDC Standard Keys

Keys that perform functions on nearly all applications and on all supported terminals.

Character

Any alphabetic, numeric, or special symbol that can be encoded. This term applies to the graphic characters for an input or output device, and to uniquely encoded control characters used by a terminal.

Character Set

A prescribed set of characters, specified at the time the operating system is installed. FSE supports the ASCII 128-character set, and subsets such as the ASCII 64-character set.

Command

An instruction you give to NOS that causes it to perform an operation.

Current Character

The character on which the cursor is positioned.

Current Editing Session

The editing session started with the latest entry of the FSE command that includes parameters.

Current Line

The line on which the cursor is positioned.

Current Screen

The text appearing on your screen.

Current Terminal Session

The terminal session started with the latest physical connection to the system.

D

DATA

The FSE directive that marks a section of your file to which you can return by entering the BACK directive.

Default

A system-supplied value used when you do not supply a value.

Direct Access File

A NOS permanent mass storage file that can be attached to your terminal session. All changes to this file are made on the file itself, rather than on a temporary copy of the file (compare with *Indirect Access File*).

Directive

An instruction to FSE.

Display Code

A 6-bit character code set used to represent alphanumeric and special characters. Display code includes only uppercase letters.

E

EDIT

The FSE directive that restores the top half of a split-screen display to full-screen length.

Editing Keys

Keys, such as **INSRT** , **DLETE** , **ERASE** and others, whose functions are predetermined and usually performed by software at your terminal. Contrast with *Programmable Function Keys*.

Editing Session

The time elapsing from when you start FSE (by entering the FSE command with parameters) to when you stop FSE (by either logging off NOS or entering another FSE command with parameters). You can restart your previous editing session by entering the FSE command without parameters.

Ellipsis String

A parameter delimited by strings enabling you to specify longer strings. The first string delimiter must be on the same line as the last string delimiter.

EOF (End-of-File)

A boundary within a sequential file. EOF is not necessarily the end of a file that can be referenced by name. The actual end of a named file is defined by EOI. In the product set manuals (FORTRAN, for example), end-of-file is also called end-of-partition (EOP).

EOI (End-of-Information)

The end of data on a file. Information appearing after this point is not considered file data. CDC CYBER Record Manager defines EOI in terms of file residency and organization.

EOR (End-of-Record)

An indicator that marks the end of a logical record. In product set manuals (FORTRAN, for example), end-of-record is also called end-of-section (EOS).

F

File

A collection of data referred to by a file name (seven or fewer alphanumeric characters). You can create a file at your terminal or retrieve a file from permanent file storage for use during a terminal session.

File Header

In FSE screen mode, the file header is the line containing the following information.

- File name and type.
- Range of lines currently displayed.
- Total number of lines in the file.

File Name

Name assigned to a file. It contains one through seven letters and digits, the first of which must be alphabetic.

FORTRAN

1. Formula Translation, a high-level language consisting of symbols and statements used to create a program closely resembling mathematical notation.
2. The subsystem that uses the FORTRAN Version 5 compiler.

FSE

The NOS command that starts the Full Screen Editor.

FSE Procedures

Groups of directives that perform the FSE functions and can be grouped under one name.

FSEPROC

The library file in which most FSE procedures reside.

Full Screen Editor

An editing utility that enables you to edit files either screen-by-screen or line-by-line.

H

Help File

An online reference aid that lists the FSE directives and their parameters.

I

Indirect Access File

A NOS permanent file that you access by making a temporary copy of it (GET or OLD command). You create or alter it by saving or substituting the contents of an existing temporary file (QUIT REPLACE directive).

Input

Information flowing from your terminal to the host mainframe.

K

Keyword

A type of parameter used in an FSE directive, usually followed by a value.

L

Line Mode

The FSE editing mode in which a line of the file is the basic unit of operation.

Local File

Any file assigned to your terminal session. This includes all temporary (indirect access permanent) files, all direct access permanent files, and all files that are not permanent.

Login

The procedure used at an interactive terminal to gain access to the system.

Logoff

The procedure used to end a terminal session.

M

Micros

Symbolic variables within procedures or directive strings that allow you to specify the current character, word, line, or file as a parameter.

Modification Character

A special character (#, &, !, or ~) used with the ALTER directive to change text.

N

NOS

Network Operating System.

O

Output

Information flowing from the host mainframe to your terminal.

P

Pad Shifted

Terminal characteristic that enables shifted keypad functions.

Paragraph

A group of lines not containing a blank line.

Parameter

A value following a command name or directive name that alters the behavior of the command or directive.

Permanent File

A file that does not disappear when you log off the system. There are two types of permanent files on NOS: indirect access and direct access.

You access indirect access permanent files indirectly (hence, the name). That is, NOS makes a copy of your permanent file, which you can then use without affecting the permanent copy.

Direct access files are accessed directly and any changes you make are made to the actual permanent file.

Usually, indirect access files are used for smaller files and direct access files are used for very large files.

Procedure

A user-defined set of instructions that is referenced by name. Within FSE you can use procedures that consist of FSE directives.

Programmable Function Keys

Keys defined either by FSE or by you to perform FSE functions.

Q

QUIT

The FSE directive used to exit the editor, exit the TEACH file, or end a procedure.

R

Record

Divisions within a file. Within FSE, the FSEPROC file contains procedures. Each of these procedures is a record terminated by an EOR marker or a QP directive.

Restart

Reentering FSE at the point you exited. To restart FSE, enter the FSE command without parameters.

S

Screen Mode

The FSE editing mode in which a file is edited with a page of text as the basic unit of operation.

Soft Tab Character

A software character that instructs FSE to move text to the next tab setting.

String

Any combination of alphanumeric characters bounded by delimiters.

T

TEACH File

A tutorial to help the user become familiar with the Viking 721 terminal and the basics of screen editing.

Temporary File

A file that is assigned to your terminal session and vanishes when you either release it or end your terminal session. Local copies of indirect access permanent files are temporary files. Direct access permanent files assigned to your terminal session are not temporary files.

Terminal Definition Utility (TDU)

The utility that allows you to define your terminal's characteristics to NOS.

Terminal Session

The period between the time you physically connect the terminal to the system and the time you log out.

Typematic

A terminal characteristic that causes keys to automatically repeat their functions when held down.

U

UNDO

The FSE directive that allows you to delete changes in the reverse order that they were made. UNDO should be turned off for batch processing (SET UNDO NO).

UNMARK

The FSE directive that cancels marks you have set on characters or lines of text.

W

Word

A string of text delimited by nonalphanumeric characters or spaces.

Terminal Support Information **D**

This appendix describes how to use the following terminals to run FSE.

- CDC 722.
- CDC 722-30.†
- DEC VT100.†
- Zenith Z19/Z29 or Heathkit H19.†
- IBM 3270.
- Lear Siegler ADM3A and ADM5.†
- Tektronix 4115.†
- TeleVideo 924/950/955

Information on these terminals includes:

- The keys equivalent to the Viking 721 editing and CDC standard keys.
- The default settings for the programmable function keys.

† The network control character (CT) for this terminal should be something other than ESC. The terminal uses ESC sequences for function key definitions. To change the network control character, enter:

```
TRMDEF,CT=value
```

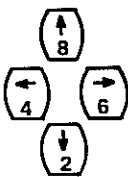
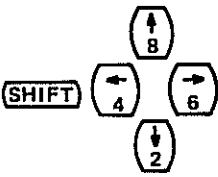
For details, refer to the *NOS Version 2 Reference Set, Volume 3, System Commands*.

CDC 722



Equivalent Keys

Viking 721 Key	Equivalent on CDC 722	Function
(FWD)	(F1) + (NEW LINE)	Advances screen one page.
(BKW)	(SHIFT) (F1) + (NEW LINE)	Moves screen backward one page.
(UP)	(F2) + (NEW LINE)	Moves current line to top of screen.
(DOWN)	(SHIFT) (F2) + (NEW LINE)	Moves current line to bottom of screen.
(HELP)	(F7) + (NEW LINE)	Displays the FSE help file.
(EDIT)	EDIT directive	Terminates split-screen mode, returning the file in the upper half of the screen to full-screen length.
(BACK)	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
(DATA)	DATA directive	Marks a section of the file to which you can return with the BACK directive.
(INSRT)	(F4) + (NEW LINE)	Inserts a blank line space in which you type in a new line of text.
(INSRT)	(F3) + (NEW LINE)	Inserts a blank character space in which you type a new character.
(DLETE)	(SHIFT) (F4) + (NEW LINE)	Deletes the current line.
(DLETE)	(SHIFT) (F3) + (NEW LINE)	Deletes the current character.

Viking 721 Key	Equivalent on CDC 722	Function
CLEAR	EOL	Deletes all characters from the cursor to the end of the line.
⏏ CLEAR	SHIFT EOL	Rewrites the entire screen.
HOME	SHIFT HOME	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
NEXT	NEW LINE or CR	Terminates an input line.
		Moves cursor around on screen.

Default Programmable Function Keys for the CDC 722

Key	Description
F1 BKW F1 FWD	F1 FWD moves forward one page in the file. Shifted, F1 BKW moves backward one page in the file.
F2 LINEDN F2 LINEUP	F2 LINEUP moves the current line to the top of the screen. Shifted, F2 LINEDN positions the current line to the bottom of the screen.
F3 DELC F3 INSC	F3 INSC inserts a blank at the current character (you can type a new character over the blank). Shifted, the (F3) DELC key deletes the current character. You can press the F3 key several times before pressing (NEW LINE) to delete or insert more than one character. It is not until you press (NEW LINE) that the results are shown.
F4 DELL F4 INSL	F4 INSL inserts a blank line over which you can type new text. Shifted, F4 DELL deletes the current line. You can press the (F4) key several times before pressing (NEW LINE) to insert or delete more than one line. It is not until you press (NEW LINE) that the results are shown.
F5 UNDO F5 MARK	F5 MARK marks a line or lines for later use with another directive. These marked lines are not in inverse video display as on the Viking 721. Shifted, F5 UNDO the previous change to your file.

Key	Description
F6 COPY F6 MOVE	F6 MOVE moves any marked lines or characters before the current line or character. Shifted, F6 COPY copies any marked lines or characters before the current line or character.
F7 LEFT F7 HELP	F7 HELP displays the FSE help file. Shifted, F7 LEFT moves your view of the file to the left.
F8 RIGHT F8 QUIT	F8 QUIT stops FSE without making any changes permanent. Shifted, F8 RIGHT moves your view of the file to the right.
F9 UNMARK F9 ENDLIN	F9 ENDLIN moves the cursor to the end of the current line. Shifted, F9 UNMARK cancels marks you have set on characters or lines.

NOTES

- You must press **(NEW LINE)** or **(CR)** after pressing a programmable function key.
 - Do not use the **(TAB)** key to insert tabs. Instead, use the soft tab character (the default character is \).
-

CDC 722-30

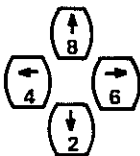
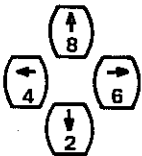


Equivalent Keys

Viking 721 Key	Equivalent on CDC 722-30	Function
(FWD)	(F1)	Advances screen one page.
(BKW)	(F2)	Moves screen backward one page.
(UP)	(SHIFT) (F1)	Moves current line to top of screen.
(DOWN)	(SHIFT) (F2)	Moves current line to bottom of screen.
(HELP)	HELP directive	Displays the FSE help file.
(EDIT)	EDIT directive	In split-screen mode, returns the file in the upper half of the screen to full-screen length.
(BACK)	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
(DATA)	DATA directive	Marks a section of the file to which you can return with the BACK directive.
() (INSRT)	(7) (Numeric keypad)	Inserts a blank line space in which you type in a new line of text. When you insert lines, the function key prompts move down according to the number of lines inserted. To align the prompts properly, press (RETURN) .

Viking 721 Key	Equivalent on CDC 722-30	Function
INSRT	1 (Numeric keypad)	When you press 1 , it puts the terminal into insert mode. While insert mode is on, pressing any character moves the existing text to the right and inserts the new character. Insert mode is cancelled when you either press 1 a second time or press RETURN .
⏏ DLETE	9 (Numeric keypad)	Deletes the current line. When you delete lines, the function key prompts move up according to the number of lines deleted. To align the prompts properly, press RETURN .
DLETE	3 (Numeric keypad)	Deletes the current character.
CLEAR	EOL	Deletes all characters from the cursor to the end of the line.
⏏ CLEAR	⏏ CLEAR	Clears the entire screen. Press RETURN to rewrite it.

Viking 721 Key	Equivalent on CDC 722-30	Function
(HOME)	(HOME)	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
(NEXT)	(RETURN)	Terminates an input line, rewrites the screen after (CLEAR) , realigns the function key prompts after (7) (insert blank line) and (9) (delete line), and cancels insert mode after (1) .
		Moves cursor around on screen.



Default Programmable Function Keys for the CDC 722-30

Key	Description
F1 UNMARK MARK	F1 MARK marks a line or lines to be used with another function or directive. Shifted, F1 UNMARK cancels any marks on lines or characters you have set.
F2 ONECPY MRKCHR	F2 MRKCHR marks a character or characters for use with another function or directive. Shifted, F2 ONECPY copies marked text before the current line or character and automatically cancels the marks.
F3 LINEUP FWD	F3 FWD moves forward one page in the file. Shifted, F3 LINEUP moves the current line to the top of the page.
F4 LINEDN BKW	F4 BKW moves backward one page in the file. Shifted, F4 LINEDN moves the current line to the bottom of the screen.
F5 UNDO	F5 UNDO cancels the previous change to your file.
F6 QUIT	F6 QUIT stops FSE without making any changes permanent.
F7 LOCNXT LOCATE	F7 LOCATE locates a character string that you specify. Shifted, F7 LOCNXT locates the next occurrence, following the present cursor position, of the string you specify.
F8 MOVE COPY	F8 COPY copies any marked lines or characters before the current line or character. Shifted, F8 MOVE moves any marked lines or characters before the current line or character.

Key	Description
F9 LAST FIRST	F9 FIRST moves the cursor to the first line of the file. Shifted, F9 LAST moves the cursor to the last line of the file.
F10 ENDLIN MIDDLE	F10 MIDDLE moves the current line to the middle of the screen. Shifted, F10 ENDLIN moves the cursor to the end of the current line.
F11 SPLIT	F11 SPLIT splits the current line into two lines. If the cursor is at the beginning of the line, it inserts a blank line above it. Otherwise, it splits the line at the cursor position.
F12 JOIN	F12 JOIN joins the current line with the next line.

NOTE

Do not use the **(TAB)** key to insert tabs. Instead, use the soft tab character (the default character is /).

DEC VT100





Equivalent Keys

Viking 721 Key	Equivalent on DEC VT100	Function
FWD	1 + RETURN	Advances screen one page.
BKW	PF1 + RETURN	Moves screen backward one page.
DOWN	PF2 + RETURN	Moves current line to bottom of screen.
UP	2 + RETURN	Moves current line to top of screen.
HELP	7 + RETURN	Displays the FSE help file.
EDIT	EDIT directive	Terminates split-screen mode, returning the file in the upper half of the screen to full-screen length.
BACK	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
DATA	DATA directive	Marks a section of the file to which you can return with the BACK directive.
INSRT	4 + RETURN	Inserts a blank line space in which you type a new character.
INSRT	3 + RETURN	Inserts a blank character space in which you type a new character.
DELETE	PF4 + RETURN	Deletes the current line.
DELETE	PF3 + RETURN	Deletes the current character.

NOTE

DEC VT100 function key (except **RETURN**) are on the numeric keypad.

Viking 721 Key	Equivalent on DEC VT100	Function
 CLEAR	 + RETURN	Rewrites the entire screen.
HOME	ENTER + RETURN	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
NEXT	RETURN	Terminates an input line.

NOTE

DEC VT100 function key (except **RETURN**) are on the numeric keypad.

Default Programmable Function Keys for the DEC VT100

Key	Description
F1 BKW F1 FWD	F1 FWD moves forward one page in the file. Shifted, F1 BKW moves backward one page in the file.
F2 LINEDN F2 LINEUP	F2 LINEUP moves the current line to the top of the screen. Shifted, F2 LINEDN positions the current line to the bottom of the screen.
F3 DELC F3 INSC	F3 INSC inserts a blank at the current character (you can type a new character over the blank). Shifted, F3 DELC deletes the current character. You can press the F3 key several times before pressing (RETURN) to perform delete or insert more than one character. It is not until you press (RETURN) that the results are shown.
F4 DELL F4 INSL	F4 INSL inserts a blank line over which you can type new text. Shifted, F4 DELL deletes the current line. You can press the F4 key several times before pressing (RETURN) to insert or delete more than one line. It is not until you press (RETURN) that the results are shown.
F5 UNDO F5 MARK	F5 MARK marks a line or lines for later use with another directive. These marked lines are in inverse video display as on the Viking 721. Shifted, F5 UNDO cancels the previous change to your file.

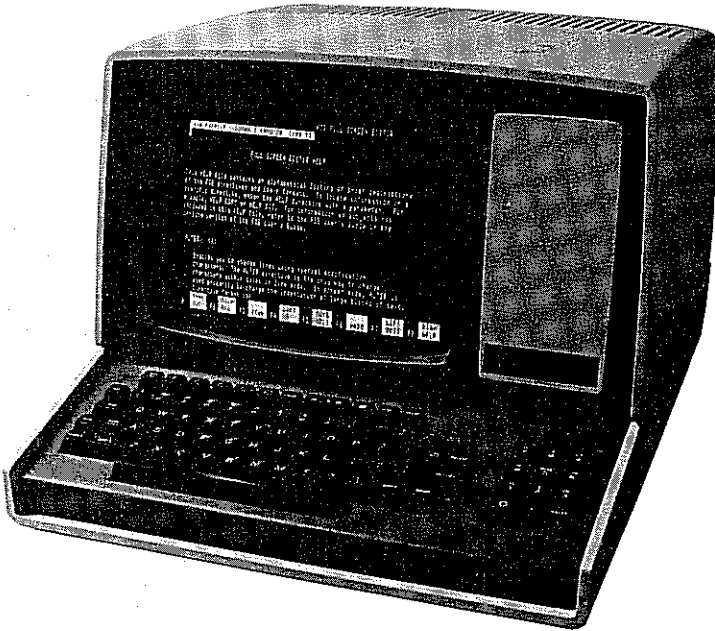
Key	Description
F6 COPY MOVE	F6 MOVE moves any marked lines or characters before the current line or character. Shifted, F6 COPY copies any marked lines or characters before the current line or character.
F7 HOME HELP	F7 HELP displays the FSE help file. Shifted, F7 HOME positions the cursor on the FSE directive line.
F8 CLEAR QUIT	F8 QUIT stops FSE without making any changes permanent. Shifted, F8 CLEAR clears your screen.
F9 UNMARK ENDLIN	F9 ENDLIN moves the cursor to the end of the current line. Shifted, F9 UNMARK cancels marks you have set on characters or lines.

NOTES

- You must press **(RETURN)** after pressing a programmable function key.
- The unshifted function keys F1 through F9 are the keypad keys **(1)** through **(9)**. (Within FSE, the keypad cannot be used for numeric values).
- The shifted function keys are the following keypad keys.

Function Key	Keypad Key
Shifted F1	(PF1)
Shifted F2	(PF2)
Shifted F3	(PF3)
Shifted F4	(PF4)
Shifted F5	(-)
Shifted F6	(.)
Shifted F7	(ENTER)
Shifted F8	(.)
Shifted F9	(0)

Zenith Z19/Z29 or Heathkit H19



Viking 721 Key	Equivalent on Zenith Z19/Z29, or Heathkit H19	Function
(FWD)	(f1) + (RETURN)	Advances screen one page.
(BKW)	(f2) + (RETURN)	Moves screen backward one page.
(UP)	(f3) + (RETURN)	Moves current line to top of screen.
(DOWN)	(f4) + (RETURN)	Moves current line to bottom of screen.
(HELP)	HELP directive	Displays the FSE help file.
(EDIT)	EDIT directive	In split-screen mode, returns the file in the upper half of the screen to full-screen length.
(BACK)	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
(DATA)	DATA directive	Marks a section of the file to which you can return with the BACK directive.
(INSRT)	(IL) (Numeric keypad)	Inserts a blank line space in which you type a new line of text. When you insert lines, the function key prompts move according to the number of lines inserted. To align the prompts properly, press (RETURN) .




Viking 721 Key	Equivalent on Zenith Z19/Z29, or Heathkit H19	Function
(INSRT)	(IC) (Numeric keypad)	When you press (IC) , it puts the terminal into insert mode. While insert mode is on, pressing any character moves the existing text to the right and inserts the new character. Insert mode is cancelled when you either press (IC) a second time or press (RETURN) .
(↑) (DELETE)	(DL) (Numeric keypad)	Deletes the current line. When you delete lines, the function key prompts move according to the number of lines deleted. To align the prompts properly, press (RETURN) .
(DELETE)	(DC) (Numeric keypad)	Deletes the current character.
(↑) (CLEAR)	(SHIFT) (ERASE) + (RETURN)	Rewrites the entire screen.
(HOME)	(HOME) (Numeric keypad)	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
(NEXT)	(RETURN)	Terminates an input line.

Default Programmable Function Keys for the Zenith Z19/Z29 or Heathkit H19

Key	Description
F1 MARK FWD	F1 FWD moves forward one page in the file. Shifted, F1 MARK marks a line or lines to be used with another function or directive.
F2 MRKCHR BKW	F2 BKW moves backward one page in the file. Shifted, F2 MRKCHR marks a character or characters for use with another function or directive.
F3 LINEUP	F3 LINEUP moves the current line to the top of the screen.
F4 COPY LINEDN	F4 LINEDN positions the current line to the bottom of the screen. Shifted, F4 COPY copies any marked lines or characters before the current line or character.
F5 MOVE ENDLIN	F5 ENDLIN moves the cursor to the end of the current line. Shifted, F5 MOVE moves any marked lines or characters to the current line or character.
F6 UNMARK UNDO	F6 UNDO cancels the previous change to your file. Shifted, F6 UNMARK cancels marks you have set on characters or lines.
F7 LEFT QUIT	F7 QUIT exits FSE without making changes to your file permanent. Shifted, F7 LEFT moves your view of the file to the left.
F8 RIGHT HELP	F8 HELP accesses the FSE help file. Shifted, F8 RIGHT moves your view of the file to the right.

NOTES

- You must enter **RETURN** after pressing a programmable function key.
- Unshifted function keys F1 through F5 are keyboard keys **f1** through **f5**.
Unshifted function keys F6 through F8 are the following keyboard keys.

Function Key	Keyboard Key
F6	 (blue square)
F7	 (red square)
F8	 (white square)

- Shifted function keys F1 through F8 are the shifted numbers on the keypad to the right of the main keyboard. For example, to enter a shifted F3, press:

SHIFT **3** + **RETURN**

When not shifted, keypad keys **1** through **9** allow you to move the cursor, insert, and delete. (The keypad cannot be used for numerals.)

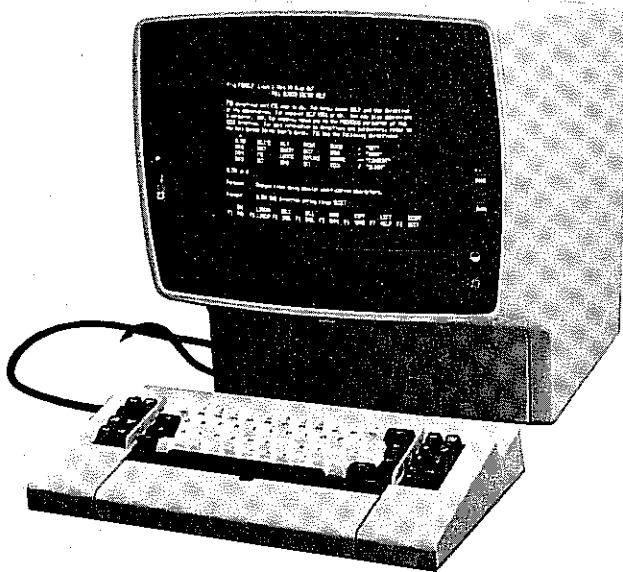
- The shifted keypad keys **0**, **.**, and **ENTER** are the shifted function keys F10, F11, and F12.
- The Z19 hardware has tabs set every eighth column beginning with 1. These tabs are set at columns:

1 9 17 25 33 41 49 57 65 73

To specify tabs other than these, use the tab character (default is \).

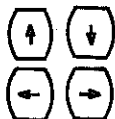
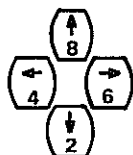
IBM 3270

photograph of 3270



Equivalent Keys

Viking 721 Key	Equivalent on IBM 3270	Function
FWD	PF1	Advances screen one page.
BKW	PF2	Moves screen backward one page.
UP	ALT + PF13	Moves current line to top of screen.
DOWN	ALT + PF14	Moves current line to bottom of screen.
HELP	ALT + PF18	Displays the FSE help file.
EDIT	EDIT directive	In split-screen mode, returns the file in the upper half of the screen to full screen length.
BACK	BACK directive	Returns you to the section of a file that you marked with the DATA directive or with your last BACK directive.
DATA	DATA directive	Marks a section of your file to which you can return with the BACK directive.
INSRT	PF4	Inserts a blank line space in which you type in a new line of text.
DLETE	ALT + PF15	Deletes the current line.
CLEAR	ALT + PF19	Rewrites the entire screen.
HOME	PF7	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
NEXT	NEW LINE or CR	Terminates an input line.



Moves cursor around on screen.

Default Programmable Function Keys for the IBM 3270

Key	Description
F1 LINEUP F1 FWD	F1 FWD moves forward one page in the file. Shifted, F1 LINEUP moves the current line to the top of the screen.
F2 LINEDN F2 BKW	F2 BKW moves backward one page in the file. Shifted, F2 LINEDN moves the current line to the bottom of the screen.
F3 UNMARK	F3 UNMARK cancels marks that you have set on lines or characters.
F4 DELL F4 INSL	F4 INSL inserts a blank line in which you can type new text. Shifted, F4 DELL deletes the current line. You can press the (F4) key several times before pressing (NEW LINE) to insert or delete more than one line. It is not until you press (NEW LINE) that the results are shown.
F5 UNDO F5 MARK	F5 MARK marks a line or lines for later use with another directive. These marked lines are not in inverse video display as on the Viking 721. Shifted, F5 UNDO cancels the previous change to your file.
F6 COPY F6 MOVE	F6 MOVE moves any marked lines or characters before the current line or character. Shifted, F6 COPY copies any marked lines or characters before the current line or character.
F7 HOME F7 HELP	F7 HOME moves the cursor to the FSE directive line, allowing you to enter FSE directives. F7 HELP displays the FSE help file.
F8 CLEAR F8 QUIT	F8 QUIT stops FSE without making any changes permanent. Shifted, F8 CLEAR clears your screen.
F9 ENDLIN	F9 ENDLIN moves the cursor to the end of the current line.

NOTES






- Function keys F1 through F12 are keys **(PF1)** through **(PF12)**. Shifted keys F1 through F12 are obtained by pressing **(ALT)** before function keys **(PF13)** through **(PF24)**. For example, to enter a shifted F1, press:
(ALT) (PF13)
 - Do not use the **(TAB)** key to insert tabs. Instead, use the soft tab character (the default character is \).
-

Lear Siegler ADM3A



Equivalent Keys

Viking 721 Key	Equivalent on Lear Siegler ADM3A	Function
FWD	ESC + 1 + RETURN	Advances screen one page.
BKW	ESC + SHIFT 1 + RETURN	Moves screen backward one page.
UP	ESC + 2 + RETURN	Moves current line to top of screen.
DOWN	ESC + SHIFT 2 + RETURN	Moves current line to bottom of the screen.
HELP	ESC + 7 + RETURN	Displays FSE help file.
EDIT	EDIT directive	In split-screen mode, returns the file in the upper half of the screen to full-screen length.
BACK	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
DATA	DATA directive	Marks a section of the file to which you can return with the BACK directive.
INSRT	ESC + 4 + RETURN	Inserts a blank line space in which you type a new line of text.
INSRT	ESC + 3 + RETURN	Inserts a blank character space in which you type a new character.
DELETE	ESC + SHIFT 4 + RETURN	Deletes the current line.
DELETE	ESC + SHIFT 3 + RETURN	Deletes the current character.

Viking 721 Key	Equivalent on Lear Siegler ADM3A	Function
 CLEAR	(ESC) + (O) + (RETURN)	Rewrites the entire screen.
HOME	(CTRL) (HOME)	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
NEXT	(RETURN)	Terminates an input line.
 4	(CTRL) (H)	Moves cursor left.
 2	(CTRL) (J)	Moves cursor down.
 8	(CTRL) (K)	Moves cursor up.
 6	(CTRL) (L)	Moves cursor right.

Default Programmable Function Keys for the Lear Siegler ADM3A

Key	Description
F1	BKW FWD F1 FWD moves forward one page in the file. Shifted, F1 BKW moves backward one page in the file.
F2	LINEDN LINEUP F2 LINEUP moves the current line to the top of the screen. Shifted, F2 LINEDN moves the current line to the bottom of the screen.
F3	DELC INSC F3 INSC inserts a blank at the current character (you can type a new character over the blank). Shifted, F3 DELC deletes the current character. You can press F3 several times before pressing (RETURN) to delete or insert more than one character. It is not until you press (RETURN) that the results are shown.
F4	DELL INSL F4 INSL inserts a blank line over which you can type new text. Shifted, F4 DELL deletes the current line. You can press the F4 key several times to insert or delete more than one line. It is not until you press (RETURN) that the results are shown.
F5	UNDO MARK F5 MARK marks a line or lines for later use with another function. Shifted, F5 UNDO cancels previous changes to your file.
F6	COPY MOVE F6 MOVE moves any marked lines or characters before the current line or character. Shifted, F6 COPY copies any marked lines or characters before the current line or character.
F7	LEFT HELP F7 HELP accesses the FSE help file. Shifted, F7 LEFT moves your view of the file to the left.
F8	RIGHT QUIT F8 QUIT exits FSE without making changes to your file permanent. Shifted, F8 RIGHT moves your view of the file to the right.
F9	MRKCHR ENDLIN F9 ENDLIN moves the cursor to the end of the current line. Shifted, F9 MRKCHR marks a character or characters to be used with another function key.
F10	UNMARK CLEAR F10 CLEAR clears your screen. Shifted, F10 UNMARK cancels marks you have set on characters or lines.
F11	LAST FIRST F11 FIRST moves the cursor to the first line of the file. Shifted, F11 LAST moves the cursor to the last line of the file.

Key	Description
F12 DELB INSB	F12 INSB inserts blank lines at the current cursor position. Shifted, F12 DELB deletes blank lines, starting with the line the cursor is at, until a nonblank line is encountered.
F13 LOCNXT LOCATE	F13 LOCATE locates a character string that you specify. Shifted, F13 LOCNXT locates the next occurrence, following the present cursor position, of the string you specify.
F14 JOIN SPLIT	F14 SPLIT splits the current line into two lines. If the cursor is at the beginning of the line, it inserts a blank line above it. Otherwise, it splits the line at the cursor position. Shifted, F14 JOIN joins the current line with the next line.
F15 PARA	F15 PARA reformats lines you marked to conform to margins set with the SET WORD FILL directive. If you have set no marks, F15 PARA reformats the current paragraph. Paragraphs are delimited by blank lines. Refer to the description of the SET WORD FILL directive in chapter 4 for more information.

NOTES

- You must press **(RETURN)** after pressing a programmable function key.
- Function keys F1 through F15 are the top row of keyboard keys **(1)** through **(^)**. Each must be preceded by **(ESC)**. For example, to enter an F3, press:

(ESC) + **(3)** + **(RETURN)**

To use the shifted functions of these keys, include the **(SHIFT)** key.

(ESC) + **(SHIFT)(3)** + **(RETURN)**

- (0)** and **(SHIFT)(0)** perform the same function, so in effect there is no shifted F10 function.
- To specify tabs, use the soft tab character (the default character is \).

Lear Siegler ADM5

Equivalent Keys

Viking 721 Key	Equivalent on Lear Siegler ADM5	Function
FWD	(ESC) + (1) + (RETURN)	Advances screen one page.
BKW	(ESC) + (SHIFT) (1) + (RETURN)	Moves screen backward one page.
UP	(ESC) + (2) + (RETURN)	Moves current line to top of screen.
DOWN	(ESC) + (SHIFT) (2) + (RETURN)	Moves current line to bottom of the screen.
HELP	(ESC) + (7) + (RETURN)	Displays FSE help file.
EDIT	EDIT directive	In split-screen mode, returns the file in the upper half of the screen to full-screen length.
BACK	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
DATA	DATA directive	Marks a section of the file to which you can return with the BACK directive.
(⌞) INSRT	(ESC) + (4) + (RETURN)	Inserts a blank line space in which you type a new line of text.

Viking 721 Key	Equivalent on Lear Siegler ADM5	Function
INSRT	ESC + 3 + RETURN	Inserts a blank character space in which you type a new character.
↵ DLETE	ESC + SHIFT 4 + RETURN	Deletes the current line.
DLETE	ESC + SHIFT 3 + RETURN	Deletes the current character.
↵ CLEAR	PAGE + RETURN	Rewrites the entire screen.
CLEAR	LINE	Clears a line from the current character to the end of the line.
HOME	HOME	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.
NEXT	RETURN	Terminates an input line.

Default Programmable Function Keys for the Lear Siegler ADM5

Key	Description
F1 BKW FWD	F1 FWD moves forward one page in the file. Shifted, F1 BKW moves backward one page in the file.
F2 LINEDN LINEUP	F2 LINEUP moves the current line to the top of the screen. Shifted, F2 LINEDN moves the current line to the bottom of the screen.
F3 DELC INSC	F3 INSC inserts a blank at the current character (you can type a new character over the blank). Shifted, F3 DELC deletes the current character. You can press F3 several times before pressing (RETURN) to delete or insert more than one character. It is not until you press (RETURN) that the results are shown.
F4 DELL INSL	F4 INSL inserts a blank line over which you can type new text. Shifted, F4 DELL deletes the current line. You can press the F4 key several times to insert or delete more than one line. It is not until you press (RETURN) that the results are shown.
F5 UNDO MARK	F5 MARK marks a line or lines for later use with another function. Shifted, F5 UNDO cancels previous changes to your file.
F6 COPY MOVE	F6 MOVE moves any marked lines or characters before the current line or character. Shifted, F6 COPY copies any marked lines or characters before the current line or character.
F7 LEFT HELP	F7 HELP accesses the FSE help file. Shifted, F7 LEFT moves your view of the file to the left.
F8 RIGHT QUIT	F8 QUIT exits FSE without making changes to your file permanent. Shifted, F8 RIGHT moves your view of the file to the right.
F9 MRKCHR ENDLIN	F9 ENDLIN moves the cursor to the end of the current line. Shifted, F9 MRKCHR marks a character or characters to be used with another function key.

Key	Description
F10 UNMARK CLEAR	F10 CLEAR clears your screen. Shifted, F10 UNMARK cancels marks you have set on characters or lines.
F11 LAST FIRST	F11 FIRST moves the cursor to the first line of the file. Shifted, F11 LAST moves the cursor to the last line of the file.
F12 DELB INSB	F12 INSB inserts blank lines at the current cursor position. F12 DELB deletes blank lines, starting with the line the cursor is at, until a nonblank line is encountered.
F13 LOCNXT LOCATE	F13 LOCATE locates a character string that you specify. Shifted, F13 LOCNXT locates the next occurrence, following the present cursor position, of the string you specify.
F14 JOIN SPLIT	F14 SPLIT splits the current line into two lines. If the cursor is at the beginning of the line, it inserts a blank line above it. Otherwise, it splits the line at the cursor position. Shifted, F14 JOIN joins the current line with the next line.

NOTES

- You must press **(RETURN)** after pressing a programmable function key.
- Function keys F1 through F14 are the top row of keyboard keys **(1)** through **(1)**. Each must be preceded by **(ESC)**. For example, to enter an F3, press:

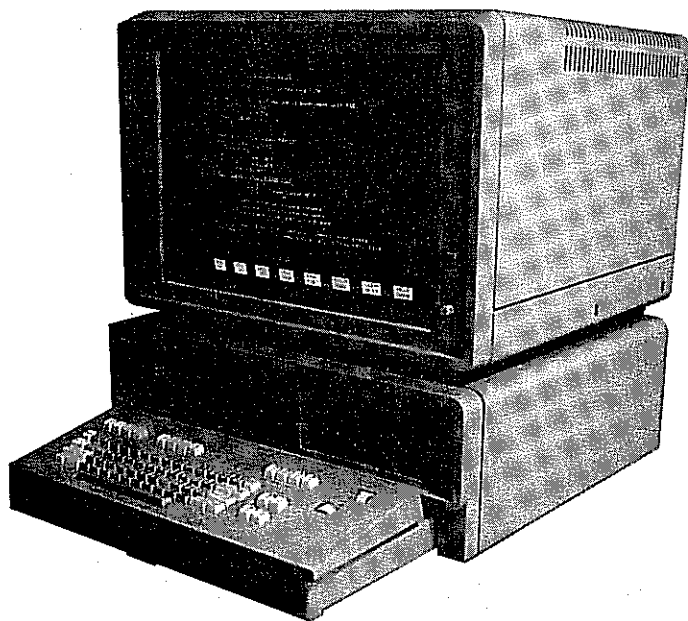
(ESC) + **(3)** + **(RETURN)**

To use the shifted functions of these keys, include the **(SHIFT)** key.

(ESC) + **(SHIFT)** **(3)** + **(RETURN)**











- (0)** and **(SHIFT)** **(0)** perform the same function, so in effect there is no shifted F10 function.
- To specify tabs, use the soft tab character (the default character is \). Do not use the **(TAB)** key.

Tektronix 4115



Equivalent Keys

Viking 721 Key	Equivalent on Tektronix 4115	Function
FWD	F1	Advances screen one page.
BKW	SHIFT F1	Moves screen backward one page.
UP	F2	Moves current line to top of screen.
DOWN	SHIFT F2	Moves current line to bottom of the screen.
HELP	SHIFT F8	Displays the FSE help file.
EDIT	EDIT directive	In split-screen mode, returns the file in the upper half of the screen to full-screen length.
BACK	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
DATA	DATA directive	Marks a section of the file to which you can return with the BACK directive.
INSRT	CTRL X	Places the terminal in a mode in which pressing any character key moves existing text to the right and inserts the new character. This mode is cancelled by pressing RTN .
INSRT	CTRL Z	Inserts a blank line space in which you type a new line of text.
DELETE	CTRL V	Deletes the current line.
DELETE	CTRL C	Deletes the current character.
CLEAR	SHIFT F7	Rewrites the entire screen.
HOME	F8	Positions the cursor at the FSE directive line, allowing you to enter FSE directives.

Viking 721 Key	Equivalent on Tektronix 4115	Function
		Terminates an input line.
		Moves cursor left.
		Moves cursor down.
		Moves cursor up.
		Moves cursor right.

Default Programmable Function Keys for the Tektronix 4115

Key	Description
F1 BKW F1 FWD	F1 FWD moves forward one page in the file. Shifted, F1 BKW moves backward one page in the file.
F2 LINEUP F2 LINEUP	F2 LINEUP moves the current line to the top of the screen. Shifted, F2 LINEUP moves the current line to the bottom of the screen.
F3 LAST F3 FIRST	F3 FIRST moves the cursor to the first line in the file. Shifted, F3 LAST moves the cursor to the last line in the file.
F4 UNMARK F4 UNDO	F4 UNDO cancels the most recent change to your file. Shifted, F4 UNMARK cancels marks you have set on characters or lines.
F5 MRKCHR F5 MARK	F5 MARK marks a line for later use with another function. Shifted, F5 MRKCHR marks a character or characters for use with another function.
F6 COPY F6 MOVE	F6 MOVE moves any marked lines or characters before the current line or character. Shifted, F6 COPY copies any marked lines or characters before the current line or character.
F7 CLEAR F7 QUIT	F7 QUIT exits FSE without making changes to your file permanent. Shifted, F7 CLEAR clears your screen.
F8 HELP F8 HOME	F8 HOME positions the cursor on the FSE directive line. Shifted, F8 HELP displays the FSE help file on the lower half of your screen.
F9 80COL F9 160COL	F9 160COL sets the terminal to 160-column mode. When shifted, F9 80COL sets the terminal to 80-column mode (default).

Key	Description
F10 LOCNXT LOCATE	F10 LOCATE locates a character string that you specify. Shifted, F10 LOCNXT locates the next occurrence, following the present cursor position, of the string you specify.
F11 PARA ENDLIN	F11 ENDLIN moves the cursor to the end of the current line. Shifted, F11 PARA reformats lines you marked to conform to margins set with the SET WORD FILL directive. If you set no marks, F11 PARA reformats the paragraph the cursor is at. Paragraphs are delimited by blank lines. Refer to the description of the SET WORD FILL directive in chapter 4 for more information.
F12 JOIN SPLIT	F12 SPLIT splits the current line into two lines. If the cursor is at the beginning of the line, it inserts a blank line above it. Otherwise, it splits the line at the cursor position. Shifted, F12 JOIN joins the current line with the next line.

NOTES

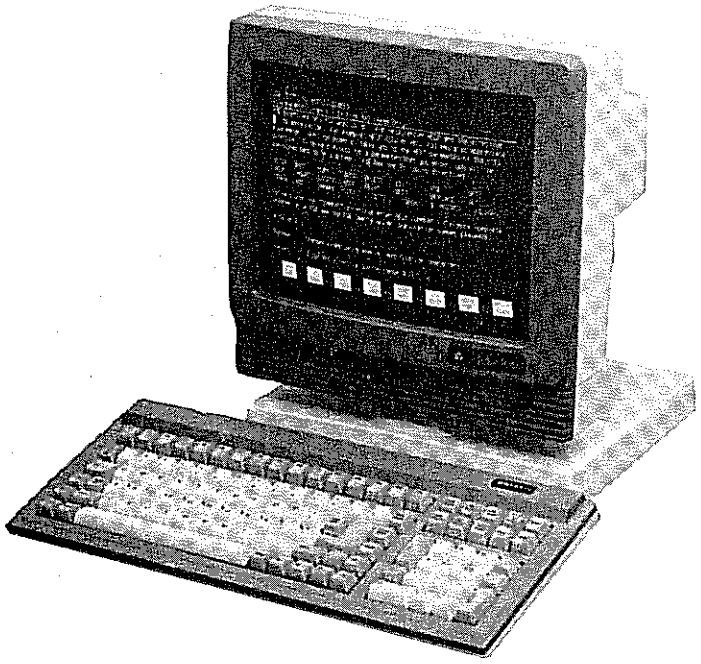
- Unshifted function keys F9 through F12 are the following keyboard keys.

Function Key	Keyboard Key
F9	CTRL A
F10	CTRL S
F11	CTRL D
F12	CTRL F

- The shifted function keys F9 through F12 are the following keyboard keys.

Function Key	Keyboard Key
Shifted F9	CTRL Q
Shifted F10	CTRL W
Shifted F11	CTRL E
Shifted F12	CTRL R

TeleVideo 924/950/955



Equivalent Keys

Viking 721 Key	Equivalent on TeleVideo 924/950/955	Function
(FWD)	(f1)	Advances screen one page.
(BKW)	(f2)	Moves screen backward one page.
(UP)	(F3)	Moves current line to top of screen.
(DOWN)	(F4)	Moves current line to bottom of screen.
(HELP)	(SHIFT) (f4)	Displays the FSE help file.
(EDIT)	(SHIFT) (F3)	In split-screen mode, returns the file in the upper half of the screen to full-screen length.
(BACK)	BACK directive	Returns you to the section of a file you marked with the DATA directive or with your last BACK directive.
(DATA)	DATA directive	Marks a section of the file to which you can return with the BACK directive.
(↑) (INSRT)	LINE INSERT	Inserts a blank line space in which you type a new line of text. When you insert lines, the function key prompts move down according to the number of lines inserted. To align the prompts properly, press RETURN
(INSRT)	(SHIFT) CHAR INSERT	Puts the terminal into insert mode. While insert is on, pressing any character moves the existing text to the right and inserts the new character. Insert mode is cancelled when you either press CHAR INSERT a second time or press RETURN

Viking
721 Key

Equivalent on
TeleVideo 924/950/955 Function

 **DELETE**

LINE
DELETE

Deletes the current line. When you delete lines, the function key prompts move up according to the number of lines deleted. To align the prompts properly, press RETURN

DELETE

CHAR
DELETE

Deletes the current character.

CLEAR

LINE
ERASE

Deletes all characters from the cursor to the end of the line.

 **CLEAR**

CLEAR

Clears the entire screen.

HOME

HOME

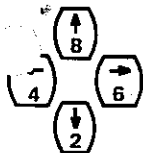
Positions the cursor at the FSE directive line, allowing you to enter FSE directives.

NEXT

RETURN

Terminates an input line.

Moves cursor around on screen.



Default Programmable Function Keys for the TeleVideo 924/950/955

Key	Description
F1 LAST FWD	F1 FWD moves forward one page in the file. Shifted, F1 LAST moves the cursor to the last line of the file.
F2 FIRST BKW	F2 BKW moves backward one page in the file. Shifted, F2 FIRST moves the cursor to the first line of the file.
F3 EDIT LINEUP	F3 LINEUP moves the current line to the top of the screen. Shifted, F3 EDIT , in split-screen mode, returns the file in the upper half of the screen to full-screen length.
F4 HELP LINEDN	F4 LINEDN moves the current line to the bottom of the screen. Shifted, F4 HELP splits the screen and displays the FSE help file.
F5 UNMARK UNDO	F5 UNDO cancels the previous change to your file. Shifted, F5 UNMARK cancels any marks you have set on lines or characters.
F6 QUIT	F6 QUIT stops FSE without making any changes to your file permanent.
F7 MOVE COPY	F7 COPY copies any marked lines or characters before the current line or character. Shifted, F7 MOVE moves any marked lines or characters before the current line or character.
F8 MRKCHR MARK	F8 MARK marks a line or lines for use with another function or directive. Shifted, F8 MRKCHR marks a character or characters for use with another function or directive.
F9 LOCALL LOCATE	F9 LOCATE locates, from your current position forward, the character string entered. Shifted, F9 LOCALL locates all line occurrences of the character string entered.

Key**Description**

- F10 **PARA CENTER** F10 **CENTER** centers the line the cursor is on according to the boundaries set by the SET WORD FILL directive. (Refer to section 4 for more information.) Shifted, F10 **PARA** reformates lines you marked to conform to margins set with the SET WORD FILL directive. If you have set no marks, shifted F10 **PARA** reformats the current paragraph. Paragraphs are delimited by blank lines. Refer to the SET directive in section 4 for more information.
- F11 **JOIN** F11 **BREAK** divides the current line into two lines. The line is split at the cursor position. Shifted, F11 **JOIN** joins the current line with the next line.
- SKPEOL F12 **MIDDLE** moves the current line to the middle of the screen. Shifted, F12 SKPEOL moves the cursor to the end of the current line.

Function Key Directive Strings E

This appendix lists the directive strings associated with the default settings of the programmable function keys.

Following are the directive strings used by FSE. Where n is used, it indicates any number from 1 through 16.

<u>String</u>	<u>Key Prompt</u>
SK _n /VNS/LABEL/FWD/	FWD
SK _n /VPS/LABEL/BKW/	BKW
SK _n /VN/LABEL/UP/	UP
SK _n /VP/LABEL/DOWN/	DOWN
SK _n ./I/LABEL/INSC/	INSC
SK _n ./D/LABEL/DELC/	DELC
SK _n /IBP1/LABEL/INSL/	INSL
SK _n /D;PN/LABEL/DELL/	DELL
SK _n ./END/LABEL/ENDLIN/	ENDLIN
SK _n /SM/LABEL/MARK/	MARK
SK _n /VH/LABEL/HOME/	HOME
SK _n /SS/LABEL/CLEAR/	CLEAR
SK _n /CMTP/LABEL/COPY/	COPY
SK _n /CMTP;UM;SA' /LABEL/ONECPY/	ONECPY
SK _n /MMTP/LABEL/MOVE/	MOVE
SK _n /UNDO/LABEL/UNDO/	UNDO
SK _n /UM/LABEL/UNMARK/	UNMARK
SK _n /QUIT/LABEL/QUIT/	QUIT
SK _n /HELP/LABEL/HELP/	HELP
SK _n /LABEL/ /	
SK _n /SVO0/LABEL/LEFT/	LEFT
SK _n /SVO&&C;P+20/LABEL/RIGHT	RIGHT
SK _n /PF/LABEL/FIRST/	FIRST
SK _n /VL/LABEL/LAST/	LAST
SK _n /IBP/LABEL/INSB/	INSB
SK _n /DB/LABEL/DELB/	DELB
SK _n /SVC80/LABEL/80COL/	80COL
SK _n /SVC132/LABEL/132COL/	132COL
SK _n "L/&&?/"LABEL"LOCATE"	LOCATE

String	Key Prompt
SKn/LN/LABEL/LOCNXT/	LOCNXT
SKn/V/LABEL/ MIDDLE/	MIDDLE
SKn/SMW/ LABEL/MRKCHR/	MRKCHR
SKn/.S/LABEL/SPLIT/	SPLIT
SKn/.J/LABEL/JOIN/	JOIN
SKn/.F/LABEL/PARA/	PARA
SKn/.C/LABEL/CENTER/	CENTER
SKn/SVC80;SVL34/LABEL/80COL/	80COL
SKn/SVC160;SVL64/LABEL/160COL/	160COL

Viking 721 Function Key Settings

The directive strings associated with the default settings for the Viking 721 terminal are:

String	Key Prompt
SK1/SM/LABEL/MARK/	MARK
SKS1/SMW/LABEL/MRKCHR	MRKCHR
SK2/MMTP/LABEL/MOVE/	MOVE
SKS2/CMTP;UM;SA' '/LABEL/ONECPY/	ONECPY
SK3/IBP/LABEL/INSB/	INSB
SKS3/DB/LABEL/DELB/	DELB
SK4/PF/LABEL/FIRST/	FIRST
SKS4/VL/LABEL/LAST/	LAST
SK5/UNDO/LABEL/UNDO/	UNDO
SKS5/UM/LABEL/UNMARK/	UNMARK
SK6/QUIT/LABEL/QUIT/	QUIT
SK7"L/ &&?/"LABEL"LOCATE"	LOCATE
SKS7/LN/LABEL/LOCNXT/	LOCNXT
SK8/SVC132/LABEL/132COL/	132COL
SKS8/SVC80/LABEL/80COL/	80COL
SK9/V/LABEL/ MIDDLE/	MIDDLE
SK10/.END/LABEL/ENDLIN/	ENDLIN
SK11/.S/LABEL/SPLIT/	SPLIT
SK12/.J/LABEL/JOIN/	JOIN
SK13/.F/LABEL/PARA/	PARA
SK14/CMTP/LABEL/COPY/	COPY
SK15/.C/LABEL/CENTER/	CENTER

CDC 722 Function Key Settings

The directive strings associated with the default settings for the CDC 722 terminal are:

String	Key Prompt
SK1/VNS/LABEL/FWD/	FWD
SK2/VN/LABEL/LINEUP/	LINEUP
SK3/.I/LABEL/INSC/	INSC
SK4/IBP1/LABEL/INSL/	INSL
SK5/SM/LABEL/MARK/	MARK
SK6/MMTP/LABEL/MOVE/	MOVE
SK7/HELP/LABEL/HELP/	HELP
SK8/QUIT/LABEL/QUIT/	QUIT
SK9/.E/LABEL/ENDLIN/	ENDLIN
SKS1/VPS/LABEL/BKW/	BKW
SKS2/VP/LABEL/LINEDN/	LINEDN
SKS3/.D/LABEL/DELC/	DELC
SKS4/D;PN/LABEL/DELL/	DELL
SKS5/UNDO/LABEL/UNDO/	UNDO
SKS6/CMTP/LABEL/COPY/	COPY
SKS7/SVO0/LABEL/LEFT/	LEFT
SKS8/SVO&&C;.P+20/LABEL/RIGHT/	RIGHT
SKS9/UM/LABEL/UNMARK/	UNMARK

CDC 722-30 Function Key Settings

The directive strings associated with the default settings for the CDC 722-30 terminal are:

String	Key Prompt
SK1/SM/LABEL/MARK/	MARK
SK2/SMW/LABEL/MRKCHR/	MRKCHR
SK3/VNS/LABEL/FWD/	FWD
SK4/VPS/LABEL/BKW/	BKW
SK5/UNDO/LABEL/UNDO/	UNDO
SK6/QUIT/LABEL/QUIT/	QUIT
SK7"L/&&?/"LABEL"LOCATE"	LOCATE
SK8/CMTP/LABEL/COPY/	COPY
SK9/PF/LABEL/FIRST/	FIRST
SK10/V/LABEL/MIDDLE/	MIDDLE
SK11/.S/LABEL/SPLIT/	SPLIT
SK12/.J/LABEL/JOIN/	JOIN
SKS1/UM/LABEL/UNMARK/	UNMARK
SKS2/CMTP;UM;SA' '/LABEL/ONECPY	ONECPY
SKS3/VN/LABEL/LINEUP/	LINEUP
SKS4/VP/LABEL/LINEDN/	LINEDN
SKS7/LN/LABEL/LOCNXT/	LOCNXT
SKS8/MMTP/LABEL/MOVE/	MOVE
SKS9/VL/LABEL/LAST/	LAST
SKS10/.E/LABEL/ENDLIN/	ENDLIN

DEC VT100 Function Key Settings

The directive strings associated with the default settings for the DEC VT100 terminal are:

String	Key Prompt
SK1/VNS/LABEL/FWD/	FWD
SK2/VN/LABEL/LINEUP/	LINEUP
SK3/I/LABEL/INSC/	INSC
SK4/IBP1/LABEL/INSL/	INSL
SK5/SM/LABEL/MARK/	MARK
SK6/MMTP/LABEL/MOVE/	MOVE
SK7/HELP/LABEL/HELP/	HELP
SK8/QUIT/LABEL/QUIT/	QUIT
SK9/.END/LABEL/ENDLIN/	ENDLIN
SKS1/VPS/LABEL/BKW/	BKW
SKS2/VP/LABEL/LINEDN/	LINEDN
SKS3/.D/LABEL/DELC/	DELC
SKS4/D;PN/LABEL/DELL/	DELL
SKS5/UNDO/LABEL/UNDO/	UNDO
SKS6/CMTP/LABEL/COPY/	COPY
SKS7/VH/LABEL/HOME/	HOME
SKS8/SS/LABEL/CLEAR/	CLEAR
SKS9/UM/LABEL/UNMARK/	UNMARK

Zenith Z19/Z29 and Heathkit H19 Function Key Settings

The directive strings associated with the default settings for the Zenith Z19/Z29 and Heathkit H19 terminals are:

<u>String</u>	<u>Key Prompt</u>
SK1/VNS/LABEL/FWD/	FWD
SK2/VPS/LABEL/BKW/	BKW
SK3/VN/LABEL/LINEUP/	LINEUP
SK4/VP/LABEL/LINEDN/	LINEDN
SK5/.END/LABEL/ENDLIN/	ENDLIN
SK6/UNDO/LABEL/UNDO/	UNDO
SK7/QUIT/LABEL/QUIT/	QUIT
SK8/HELP/LABEL/HELP/	HELP
SKS1/SM/LABEL/MARK/	MARK
SKS2/SMW/LABEL/MRKCHR/	MRKCHR
SKS4/CMTP/LABEL/COPY/	COPY
SKS5/MMTP/LABEL/MOVE/	MOVE
SKS6/UM/LABEL/UNMARK/	UNMARK
SKS7/SVO0/LABEL/LEFT/	LEFT
SKS8/SVO&&C;,P+20/LABEL/RIGHT/	RIGHT

IBM 3270 Function Key Settings

The directive strings associated with the default settings for the IBM 3270 terminal are:

String	Key Prompt
SK1/VNS/LABEL/FWD/	FWD
SK2/VPS/LABEL/BKW/	BKW
SK3/UM/LABEL/UNMARK/	UNMARK
SK4/IBP1/LABEL/INSL/	INSL
SK5/SM/LABEL/MARK/	MARK
SK6/MMTP/LABEL/MOVE/	MOVE
SK7/VH/LABEL/HOME/	HOME
SK8/QUIT/LABEL/QUIT/	QUIT
SK9/.E/LABEL/ENDLIN/	ENDLIN
SKS1/VN/LABEL/LINEUP/	LINEUP
SKS2/VP/LABEL/LINEDN/	LINEDN
SKS4/D;PN/LABEL/DELL/	DELL
SKS5/UNDO/LABEL/UNDO/	UNDO
SKS6/CMTP/LABEL/COPY/	COPY
SKS7/HELP/LABEL/HELP/	HELP
SKS8/SS/LABEL/CLEAR/	CLEAR

Lear Siegler ADM3A Function Key Settings

The directive strings associated with the default settings for the Lear Siegler ADM3A terminal are:

String	Key Prompt
SK1/VNS/LABEL/FWD/	FWD
SK2/VN/LABEL/LINEUP/	LINEUP
SK3/.I/LABEL/INSC/	INSC
SK4/IBP1/LABEL/INSL/	INSL
SK5/SM/LABEL/MARK/	MARK
SK6/MMTP/LABEL/MOVE/	MOVE
SK7/HELP/LABEL/HELP/	HELP
SK8/QUIT/LABEL/QUIT/	QUIT
SK9/.END/LABEL/ENDLIN/	ENDLIN
SK10/SS/LABEL/CLEAR/	CLEAR
SK11/PF/LABEL/FIRST/	FIRST
SK12/IBP/LABEL/INSB/	INSB
SK13"L&&?/"LABEL"LOCATE"	LOCATE
SK14/.S/LABEL/SPLIT/	SPLIT
SK15/.F/LABEL/PARA/	PARA
SKS1/VPS/LABEL/BKW/	BKW
SKS2/VP/LABEL/LINEDN/	LINEDN
SKS3/.D/LABEL/DELC/	DELC
SKS4/D;PN/LABEL/DELL/	DELL
SKS5/UNDO/LABEL/UNDO/	UNDO
SKS6/CMTP/LABEL/COPY/	COPY
SKS7/SVO0/LABEL/LEFT/	LEFT
SKS8/SVO&&C;,P+20/LABEL/RIGHT/	RIGHT
SKS9/SMW/LABEL/MRKCHR/	MRKCHR
SKS10/UM/LABEL/UNMARK/	UNMARK
SKS11/VL/LABEL/LAST/	LAST
SKS12/DB/LABEL/DELB/	DELB
SKS13/LN/LABEL/LOCNXT/	LOCNXT
SKS14/.J/LABEL/JOIN/	JOIN

Lear Siegler ADM5 Function Key Settings

The directive strings associated with the default settings for the Lear Siegler ADM5 terminal are:

String	Key Prompt
SK1/VNS/LABEL/FWD/	FWD
SK2/VN/LABEL/LINEUP/	LINEUP
SK3/.I/LABEL/INSC/	INSC
SK4/IBP1/LABEL/INSL/	INSL
SK5/SM/LABEL/MARK/	MARK
SK6/MMTP/LABEL/MOVE/	MOVE
SK7/HELP/LABEL/HELP/	HELP
SK8/QUIT/LABEL/QUIT/	QUIT
SK9/.END/LABEL/ENDLIN/	ENDLIN
SK10/SS/LABEL/CLEAR/	CLEAR
SK11/PF/LABEL/FIRST/	FIRST
SK12/IBP/LABEL/INSB/	INSB
SK13"L/???"LABEL"LOCATE"	LOCATE
SK14/.S/LABEL/SPLIT/	SPLIT
SKS1/VPS/LABEL/BKW/	BKW
SKS2/VP/LABEL/LINEDN/	LINEDN
SKS3/.D/LABEL/DELC/	DELC
SKS4/D;PN/LABEL/DELL/	DELL
SKS5/UNDO/LABEL/UNDO/	UNDO
SKS6/CMTP/LABEL/COPY/	COPY
SKS7/SVO0/LABEL/LEFT/	LEFT
SKS8/SVO&&C;P+20/LABEL/RIGHT/	RIGHT
SKS9/SMW/LABEL/MRKCHR/	MRKCHR
SKS10/UM/LABEL/UNMARK	UNMARK
SKS11/VL/LABEL/LAST/	LAST
SKS12/DB/LABEL/DELB/	DELB
SKS13/LN/LABEL/LOCNXT/	LOCNXT
SKS14/.J/LABEL/JOIN/	JOIN

Tektronix 4115 Function Key Settings

The directive strings associated with the default settings for the Tektronix 4115 terminal are:

String	Key Prompt
SK1/VNS/LABEL/FWD/	FWD
SK2/VN/LABEL/LINEUP/	LINEUP
SK3/PF/LABEL/FIRST/	FIRST
SK4/UNDO/LABEL/UNDO/	UNDO
SK5/SM/LABEL/MARK/	MARK
SK6/MMTP/LABEL/MOVE/	MOVE
SK7/QUIT/LABEL/QUIT/	QUIT
SK8/VH/LABEL/HOME/	HOME
SK9/SVC160;SVL64/LABEL/160COL/	160COL
SK10"L/∞&?/"LABEL"LOCATE"	LOCATE
SK11/_END/LABEL/ENDLIN/	ENDLIN
SK12/_S/LABEL/SPLIT/	SPLIT
SKS1/VPS/LABEL/BKW/	BKW
SKS2/VP/LABEL/LINEDN/	LINEDN
SKS3/VL/LABEL/LAST/	LAST
SKS4/UM/LABEL/UNMARK/	UNMARK
SKS5/SMW/LABEL/MRKCHR/	MRKCHR
SKS6/CMTP/LABEL/COPY/	COPY
SKS7/SS/LABEL/CLEAR/	CLEAR
SKS8/HELP/LABEL/HELP/	HELP
SKS9/SVC80;SVL34/LABEL/80COL/	80COL
SKS10/LN/LABEL/LOCNXT/	LOCNXT
SKS11/_F/LABEL/PARA/	PARA
SKS12/_J/LABEL/JOIN/	JOIN

TeleVideo 924/950/955 Function Key Settings

The directive strings associated with the default settings for the TeleVideo 924/950/955 terminals are:

String	Key Prompt
SK1/VNS/L/FWD/	FWD
SK2/VPS/L/BKW/	BKW
SK3/VN/L/LINEUP/	LINEUP
SK4/VP/L/LINEDN/	LINEDN
SK5/UNDO/L/UNDO/	UNDO
SK6/Q/L/QUIT/	QUIT
SK7/CMTP/L/COPY/	COPY
SK8/SM/L/MARK/	MARK
SK9"L/∞&?"L"LOCATE"	LOCATE
SK10/C/L/CENTER/	CENTER
SK11/S/L/BREAK/	BREAK
SK12/V/L/MIDDLE/	MIDDLE
SKS1/VL/L/LAST/	LAST
SKS2/PF/L/FIRST/	FIRST
SKS3/E/L/EDIT/	EDIT
SKS4/H/L/HELP/	HELP
SKS5/UM/L/UNMARK/	UNMARK
SKS7/MMTP/L/MOVE/	MOVE
SKS8/SMW/L/MRKCHR/	MRKCHR
SKS9/LA/L/LOCALL/	LOCALL
SKS10/F/L/PARA/	PARA
SKS11/J/L/JOIN/	JOIN
SKS12/.E/L/SKPEOL/	SKPEOL



Viking 721 Terminal Settings

F

The Viking 721 terminal contains software setup switches. These are to be set as shown here to ensure correct operation under FSE. The switches are software toggle switches, which have a limited number of options (usually two) from which to choose. To change a switch setting, press the corresponding programmable function key. The first set of switches appears when you turn on your terminal. Set them as follows:

F MODE 1	F MODE 2	F MODE 3	F MODE 4	F MODE 5	F MODE 6	F MODE 7	F TRMNL
1 CYBER	2 PLATO	3 CP/M	4 DISK	5 4014	6	7 PACK	8 TEST

Once you have set these as shown, press:

F MODE 1
1 CYBER

to select CYBER mode. At this point, the screen becomes blank except for the cursor.

Press:

SETUP

to display the next set of switches and change them, if necessary, to the following settings.

F Return	F LINE	F PRNTR	F MARGIN	F ALERT	F LOCK	F N PAD	F SCREEN	F CYBER	F MORE
1	2 ON	3 OFF	4 ON	5 SOFT	6 ALPHA	7 NORMAL	8 ROLL	9 LARGE	10 SELECT

Then, press:

F MORE
10 SELECT

to set the next set of switches to the following.

F return	F BACKGD	F CURSOR	F CURSOR	F BAUD	F DUPLEX	F CHR/LN	F LINES	F XPARNT	F mode
1	2 DARK	3 BLOCK	4 SOLID	5 1200	6 HALF	7 80	8 30	9 OFF	10 SELECT

When you have set all the switches, press:

F return
1

to remove the switch prompts from the screen. You are now ready to log in to NOS.

Refer to the *721-10/20/30 Hardware Reference Manual* for further information on these settings.

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Index



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Index

A

Advanced functions 6-1
ALTER directive 4-8; 7-7
Arrow keys 2-11
Attempting to display too many
lines 7-3

B

BACK directive 4-11
BACK key 2-33; 4-58; 5-7
BACKSPACE key 2-31
BACKTAB key 2-31
BASIC 2-28
BKW key 2-17,33

C

Calling a procedure from a file 6-5
CDC standard function keys 2-32
CDC 722 terminal 1-2; D-2
CDC 722-30 terminal 1-2; D-7
CENTER 2-37; 5-12
Centering lines 4-70; 5-12
Changing
Current file name 4-57
Lines 4-8; 7-7
Screen format 4-62; 6-24
Changing screen format 5-13
Character
Deletion 2-13; 4-71
Insertion 2-13; 4-72
Character sets 3-1
CLEAR key 2-31
Code Set Conversion Chart A-1
Column alignment 4-28
Combining directives 4-3
Command
FSE 2-2,10; 3-1; 5-2
SCREEN 2-1,9
COMMENT (-) directive 4-77

Common parameters 4-4

Direction 4-4
(File) 4-4
Line 4-5
Range 4-7
String 4-7

Communication errors B-1

Conditional procedures 6-13

Parameters 6-14
Using line addresses 6-14
Using QP 6-15

COPY 2-19,37

COPY directive 4-12; 7-8

COPY key 2-19,33

Copying

Lines 2-19; 4-13; 7-9
Lines between files 5-3
Text 4-13

Creating FSE procedures 6-4

Creating multifile files 2-29

Creating multirecord files 2-29

Cursor 2-7

Cursor positioning 2-11

D

DASH (-) directive 4-73

DATA directive 4-14

DEC VT100 terminal 1-2; D-13

Default function key settings 8-3

Defining keys to call
procedures 6-19

Defining layers of function
keys 6-20

DELB 2-35

DELETE directive 4-16

Deleting

Characters 2-13; 4-71
Lines 2-15; 4-17; 7-7
Words 4-17

Diagnostic messages B-1,4

Directive

Abbreviations 4-1
Description conventions 4-4
Format

ALTER 4-8
BACK 4-11
COMMENT 4-77
COPY 4-12
DASH 4-73
DATA 4-14
DELETE 4-16
DOT 4-71
EDIT 4-21
FSE 4-23
GET 4-25
HELP 4-29
INSERT 4-33
LOCATE 4-35
MOVE 4-41
PRINT 4-43
QUIT 4-45
REPLACE 4-49
SET 4-56
SLASH 4-78
TEACH 4-65
UNDO 4-67
UNMARK 4-68
VIEW 4-69

FSE 2-10; 5-2

Line 2-7

Parameters 4-5

Syntax 4-1

Directives, entering 2-38

Displaying

Function key prompts 5-9

Lines 7-3

DELETE key 2-13,15,31

DOT(.) directive 4-71

DOWN key 2-33

E

EDIT directive 4-21

Editing

Different parts of same file 6-3

Keys 2-31

Line mode 7-1

Screen 2-1

Screen editing 2-10

Sequenced files 2-28; 7-10

Session 2-10

Split-screen 5-3; 6-2

Text 2-11

Two files at same time 6-2

ENDLIN 2-37

Entering directives 2-38

Equivalent keys 1-5; 8-1; D-2

ERASE key 2-31

Error

Messages B-4

Recovery B-1

F

File

FSEPROC 6-4

Header 2-7

Text 2-7

File marks 2-29

FIRST 2-36

FORTRAN 2-28

FSE

Advanced functions 6-1

Capabilities 1-1

Command 2-7,10,22; 3-1; 5-2,14;
7-9

Command parameters 3-1

Directive 4-23; 5-3; 6-2

Directives 4-1

Help 2-22

Introduction 1-1

Procedures

Branching 6-20

Calling 4-73

Comments 4-76

Creating 6-4

Errors 6-16

Format 4-73; 6-4

Micros 4-75

Prompts 4-61; 6-6

STARTUP 6-4,19

Stopping 4-45

Restarting 2-24; 5-15; 7-9

Starting 2-10; 5-2; 7-2

Status 4-25
 Stopping 2-24; 4-45; 5-14; 7-9
 FSEPROC file 6-4
 Function key
 Directive strings E-1
 Prompts 2-7; 4-60
 Function key definition 6-19
 Function key prompts,
 displaying 5-9
 Function keys 2-32
 Functions, advanced 6-1
 FWD key 2-16,33
 F1 key 2-16,35; 5-4,5
 F2 key 2-18,35; 5-7
 F3 key 2-35; 5-10
 F4 key 2-36
 F5 key 2-19,36
 F6 key 2-24,36
 F7 key 2-36
 F8 key 2-37
 F9 key 2-37
 F10 key 2-37
 F11 key 2-37
 F12 key 2-37
 F13 key 2-37; 5-11
 F14 key 2-37
 F15 key 2-37; 5-12
 F16 key 2-37

G

GET directive 4-25
 Getting started 2-1
 Glossary C-1

H

Heathkit H19 terminal 1-2; D-18
 Help 7-6
 HELP directive 4-29; 7-6
 HELP file 4-29
 HELP key 2-22,33
 HOME key 2-24,38

I

IBM 3270 terminal D-23
 INSB 2-35; 5-10
 INSERT directive 4-32; 7-5
 Inserting
 Characters 2-13; 4-72
 Lines 2-14; 7-6
 Paragraphs 5-10
 Text 4-32
 INSRT key 2-13,14,31
 Interactive procedure input 6-10
 Internal messages B-10
 Introduction 1-1

J

Job recovery B-2
 JOIN 2-37
 Joining lines 4-72
 Justifying paragraphs 5-11

K

Keys 1-4
 CDC standard function 2-32
 Editing 2-31
 Programmable function 2-34;
 5-9

L

Labeling function keys 6-25
 LAST 2-36
 Lear Siegler ADM3A terminal 1-2;
 D-27
 Lear Siegler ADM5 terminal 1-2;
 D-32
 Leaving FSE 4-45
 Line
 Centering 4-71; 5-12
 Changing 7-7
 Copying 2-18; 7-8

- Deletion 2-15; 7-6
 - Insertion 2-14; 4-33; 7-5
 - Joining 4-72
 - Marking 2-18
 - Moving 2-18
 - Pointers 4-64
 - Printing 4-62
 - Replacing 7-8
 - Splitting 4-72
 - LINE command 7-1
 - Line editing 7-1
 - Line mode, setting 4-59
 - Line number increment 4-57
 - LOCATE 2-36
 - LOCATE directive 4-35; 7-4
 - Locating text 4-35
 - LOCNXT 2-36
- M**
- Making changes permanent 2-24; 7-9
 - Manual
 - Conventions 7
 - Organization 5
 - Related publications 9
 - Margins 4-64
 - MARK 2-18,35; 5-4,5
 - Marking lines 2-18
 - Message area 2-7
 - Messages diagnostic B-4
 - Internal B-10
 - User B-4
 - Micros 6-7
 - &? 6-11
 - &C 6-7
 - Expansion of micros during procedure execution 6-11
 - &F 6-8
 - &L 6-8
 - Micro values 6-12
 - &n 6-11
 - &T 6-9
 - &W 6-10
 - &Z 6-10
 - MIDDLE 2-37
 - Misspelled directives 4-3
 - Modification characters 4-9
 - MOVE 2-18,35
 - MOVE directive 4-41
 - Moving lines 2-18; 4-41
 - MRKCHR 2-35
- N**
- Network control character D-1
 - NEXT key 2-33
 - NOS
 - Commands 4-78
 - Recovery B-2
 - NOS line command 3-3
 - NOS screen command 3-3
- O**
- ONECPY 2-35; 5-7
 - Online help 2-22; 4-29; 7-6
 - Other terminals 1-5
- P**
- Paging
 - Backward 2-16
 - Forward 2-16
 - PARA 2-37; 5-11
 - Paragraph
 - Insertion 5-10
 - Justification 4-71; 5-11
 - Parameter order 4-2
 - Permanent changes 2-24; 5-16
 - Pointers 4-64
 - Positioning the cursor 2-11
 - Preface 3
 - PRINT directive 4-43; 7-3
 - Printing lines 4-62; 7-3
 - Printing text 4-43
 - Procedure
 - Branching 6-20
 - Calling 4-73
 - Comments 4-77
 - Creating 6-4
 - Error recovery 6-16
 - Format 6-4

Micros 4-75
Prompts 4-61; 6-6
STARTUP 6-4,19
Stopping 4-45
Procedures
 Procedure looping 6-13
 Recursive procedure calls 6-13
Programmable function key
 definition worksheet 6-22
Programmable function key
 prompts 4-61
Programmable function keys 2-34
 Default settings 8-3; D-3
 Labeling 6-25
 Prompts 2-7; 4-60; 6-25
 Redefining 6-20

Q

QR 2-24
QUIT 2-24,36
QUIT directive 4-45,78; 7-9
 QUIT PROC 4-46; 6-4
 QUIT REPLACE 2-24; 4-45;
 5-16

R

Recovering jobs B-2
Recovery
 From losing your
 connection B-2
 Procedures B-1,2
Redefining function keys 4-61; 6-18
Related publications 7
REPLACE directive 4-49; 7-8
Replacing
 Files 2-24
 Lines 4-49
 Text 4-49; 7-9
 Words 4-49
Restarting FSE 2-24; 5-15; 7-10

S

Sample display screen 2-6
Sample editing session 2-8
Sample screen editing session 5-1
Screen
 Editing 2-1
 Format 2-7
 Mode 2-9
SCREEN command 2-1,9
Screen editing sample session 5-1
Screen format 5-13; 6-26
Screen mode 2-1
Searching 4-35; 7-5
Selecting a character set 2-3
Sequence numbers 4-60
Sequenced files 2-28; 4-60; 7-9
SET ANNOUNCE directive 6-6
SET directive 4-56
 ANNOUNCE 4-56
 CHAR 4-56
 DCOLON 4-57
 FILENAME 4-57
 HEADER 4-57
 INCREMENT 4-57
 JUMP 4-57
 KEY 4-58; 6-18
 LINE 4-59
 MARK 4-59
 NUMBER 4-60
 BASIC 4-60
 FORTRAN 4-61
 PROMPT 4-61
 REWRITE 4-61
 SCREEN 4-61
 SPLIT 6-25
 TAB 4-61
 UNDO 4-62
 VIEW 4-62
 COLUMN 4-62; 6-24
 EDIT 4-62; 6-25
 LINE 4-62; 6-24
 OFFSET 4-62; 6-25

SPLIT 4-63
WARN 4-63; 6-25
WORD 4-63
X 4-64
Y 4-64
Z 4-64
Setting
Line mode 4-59; 7-1
Margins 4-64
Marks 4-59
Screen Mode 2-9
Tabs 4-61
SETUP key F-1
SLASH (/) directive 4-78
Soft tab character 4-56
Specifying
Another edit file 4-22
Columns to be edited 6-27
Current column 6-7
Current file 6-8
Current line 6-6
Current terminal type 6-9
Current word 6-9
Interactive input 6-10
Left screen margin 6-25
Line length 6-28
Nth parameter 6-11
Number of columns displayed 6-27
Number of lines displayed 6-26
Number of lines for split-screen editing 6-27
Screen format 4-60
SPLIT 2-37
Split screen, terminating 4-22
Split-screen editing 5-3; 6-2
Splitting lines 4-72
Standard function keys 2-32
Starting FSE 2-4,10; 5-2; 7-2
STARTUP procedure 6-4,19
STOP key 2-33
Stopping FSE 5-14; 7-10
String delimiters 4-2
Submitting comments 3
System-defined terminals
CDC 722 1-2
CDC 722-30 1-2

DEC VT100 1-2
Heathkit H19 1-2
IBM 3270 1-2
Lear Siegler ADM3A 1-2
Lear Siegler ADM5 1-2
Tektronix 4115 1-2
TeleVideo 924/950/955 1-2
Viking 721 1-2
Zenith Z19/Z29 1-2

T

Tab character 4-56
TAB key 2-31
TEACH directive 4-65
Tektronix 4115 terminal 1-2; D-36
TeleVideo 924/950/955 terminal 1-2; D-41
Terminal
CDC 722 D-2
Default function key settings D-5
Directive string settings E-3
CDC 722-30 D-1
Default function key settings D-11
Directive string settings E-4
Configuration F-1
DEC VT100 D-13
Default function key settings D-16
Directive string settings E-5
Equivalent Viking 721 and CDC 722 keys D-3
Equivalent Viking 721 and CDC 722-30 keys D-8
Equivalent Viking 721 and DEC VT100 keys D-14
Equivalent Viking 721 and Heathkit H19 keys D-19
Equivalent Viking 721 and IBM 3270 keys D-24
Equivalent Viking 721 and Lear Siegler ADM3A keys D-28
Equivalent Viking 721 and Lear Siegler ADM5 keys D-32

Equivalent Viking 721 and
Zenith Z19/Z29 keys D-19

Function keys 2-32

Heathkit H19 D-1

- Default function key
settings D-21
- Directive string settings E-6

IBM 3270 D-1

- Default function key
settings D-25
- Directive string settings E-7

Lear Siegler ADM3A D-1

- Default function key
settings D-30
- Directive string settings E-8

Lear Siegler ADM5 D-1

- Default function key
settings D-34
- Directive string settings E-9

Support information D-1

Tektronix 4115 D-1

- Default function key
settings D-39
- Directive string
settings E-10

TeleVideo 924/950/955 D-1

- Default function key
settings D-44
- Directive string
settings E-11

Viking 721 D-1

- CYBER mode F-1
- Directive string settings E-2
- Hardware configuration F-1
- Keys 1-4
- Setup settings F-1

Zenith Z19/Z29 D-1

- Default function key
settings D-21
- Directive string settings E-6

Terminal Definition Utility 2-2

Text editing 2-12

Tutorial file 4-65

Typing over text 2-12

U

UNDO 2-20,36

UNDO directive 4-67; 7-8

Undoing changes 2-20; 4-67; 7-9

Undoing marks 2-21

UNMARK 2-19

UNMARK directive 4-68

UP key 2-33

User messages B-4

Using other terminals 8-1

V

VIEW directive 4-69; 7-4

Viking 721 terminal 1-3

Viking 721 terminal keys 1-4

W

What you need to know about this
manual 3

Word processing 4-71; 5-8

Worksheet

- Procedure branching 6-21
- Using other terminals 8-2

Z

Zenith Z19/Z29 terminal 1-2; D-18

C

C

C

C

C



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- Other _____

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- To Learn the Product/System
- For Comprehensive Reference
- For Quick Look-up

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- NOS 2 Reference Set, Vol 1
- NOS 2 Reference Set, Vol 2
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Directive Index

Directive	Parameters	Page
ALTER	<i>END</i> direction string range QUIET	4-8
BACK	None	4-11
COPY	range (file 1) TO line (file 2) QUIET	4-12
DATA	None	4-14
DELETE	range BLANK WORD IN tab QUIET	4-16
EDIT	None	4-21
FSE	file charset GET READ SPLIT	4-23
GET	STATUS ALIGN	4-25
HELP	directive	4-29
INSERT	line PREVIOUS string BLANK WORD	4-32
LOCATE	WORD direction string range IN tab UPPER QUIET	4-35
MOVE	range (file1) TO line (file2) QUIET	4-41
PRINT	range QUIET	4-43
QUIT	REPLACE QUIET UNDO PROC range/command	4-45
REPLACE	WORD direction string1 string2 range IN tab UPPER QUIET	4-49
SET	Too many parameters to list	4-56
TEACH	Too many parameters to list	4-65
UNDO	None	4-67
UNMARK	None	4-68
VIEW	line direction SCREEN HOME	4-69
.	Too many parameters to list	4-71
-	procname (file)	4-73
--	comment	4-77
/	command	4-78

Common Parameter Index

The following parameters are common to more than one of the FSE directives. Detailed descriptions of these parameters begin on page 4-4.

Parameter	Values
direction	NEXT num, PREVIOUS num, REPEAT num
(file)	NOS file name of seven or fewer characters.
line	line number, CURRENT, FIRST, LAST, ALL, PREVIOUS num, REPEAT num, NEXT num, line + num, line - num, X, Y, Z, line (file).
range	line number, CURRENT, FIRST, LAST, ALL, PREVIOUS num, REPEAT num, NEXT num, MARK, SCREEN, line + num, line - num, X, Y, Z, line (file), or any two of the preceding parameters.
string	/text/, "text", 'text', \te/xt/, /text1/./text2/

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