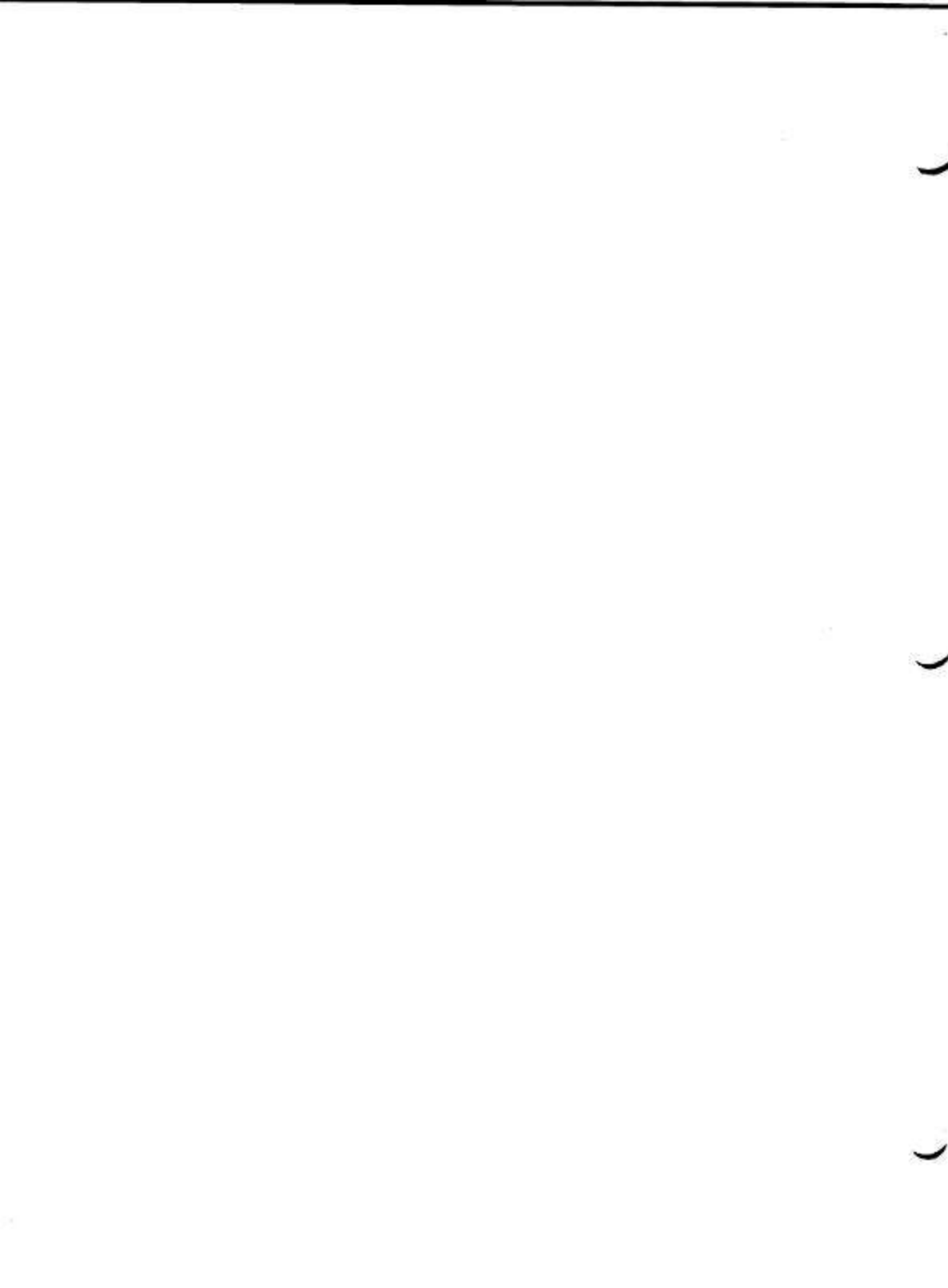


Twenty Dollars

Cromemco

SCREEN EDITOR

**Instruction
Manual**



Cromemco

SCREEN EDITOR

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This manual was produced on a Cromemco System Three computer using the SCREEN Editor described herein. The edited text was formatted using the Cromemco Word Processing System Formatter. Final camera-ready copy was printed on a Cromemco 3355A printer.

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Chapter 1

Introduction

1.1 Description and File Organization

The most common way to enter text or programs into a computer is by means of an editor. The SCREEN Editor described in this manual is one of the easiest to use and most powerful editors available for this function. SCREEN was designed specifically to be used with Cromemco computer systems.

The Cromemco SCREEN Editor displays an entire screen of information during the editing process. A cursor in the display can be readily moved around the screen to add, delete, or change information. Special features of Cromemco CRT terminals such as cursor positioning, blinking fields, and programmable function keys are used to simplify operation to the fullest.

Cromemco software packages are provided with both this SCREEN Editor as well as EDIT, a string oriented text editor. These editors may be used interchangeably in that a file created with one editor may be edited with the other editor. The string editor is necessary for using macro instructions or conditional editing functions. EDIT must also be used if the Cromemco computer is used with other than a Cromemco CRT terminal. For the great majority of applications the SCREEN Editor is the best choice. It is easy to use and has many features not normally found in other editors.

One important feature of the SCREEN editor is that it prompts the user automatically. This is done by using the top line of the screen display as a menu of command choices. By referring to this menu there is less need to refer back to this instruction manual during the routine operation of the editor. Another feature of the editor is that the user is politely notified by a beeping tone produced by the terminal if an illegal command has been entered. Still another feature of SCREEN is that the floppy disk drive motors of the computer are automatically turned off during user editing. The advantages of turning off the motors during editing are to prevent media and drive wear while providing a quieter atmosphere for the user. The motors are automatically turned on again when required.

1.2 Hardware Requirements

The SCREEN editor operates as a program under the control of the Cromemco Disk Operating System (CDOS). SCREEN requires approximately 10K of memory in the CDOS User Area. A Cromemco system with 32K of memory is the minimum acceptable for most editing.

SCREEN is supplied by Cromemco with versions 01.07 or higher of CDOS. It is not compatible with version 00.20 of CDOS.

SCREEN is licensed by Cromemco exclusively for use on Cromemco computer systems. Cursor positioning and other functions are designed specifically for use with the Cromemco CRT terminal. Cromemco cannot assure proper operation of this software package unless it is used with Cromemco computer products.

1.3 Getting Started

The SCREEN editor makes use of two files, an input file and an output file. The input file resides on a system disk and is the file to be edited. After editing, the resultant file is called the output file. When the output file is stored on disk, it takes the name of the original input file, while the original input file is renamed as a backup file. This means that even if you did make some error in the editing process, the original input file is still saved on the disk with the three letter extension BAK. Of course, when you are using SCREEN to create a new file, there is no input file and therefore no backup file.

The SCREEN editor is contained in a file named SCREEN.COM on the system disk. You can call SCREEN by typing the following in response to the CDOS prompt:

```
SCREEN [X:]filename.ext
```

where filename.ext, if an existing file, is the name of the input file. If filename.ext does not already exist, it is the name of the new file to be created. If filename.ext is not on the current drive, X is an identifier to specify the proper disk drive (e.g. A, B, C, etc.). If filename.ext is an input file residing on the current drive, then the drive identifier need not be used.

If after editing you wish the output file to be stored on a disk drive other than the current drive, this may be accomplished by calling SCREEN in the following way:

```
SCREEN [X:]file1.ext [Y:]file2.ext
```

Here the input file is read from drive X (A, B, C, etc.) and the output file is written to drive Y.

Now you are ready to begin. The best way to start using SCREEN is by following an example. The next chapter takes you step-by-step through an example that is specially designed to illustrate how to use SCREEN.

CHAPTER 2

Using the SCREEN Editor

2.1 Creating a File

Type the word **SCREEN** followed by the name of the file that you want to create and press the **RETURN** key. The **SCREEN** Editor will respond with its sign-on and then will display the command selection menu at the top of the screen. This is what it will look like (all information typed by the user is bold):

```
A. SCREEN BUS.TXT <CR>
```

```
CROMEMCO SCREEN Editor version xx.yy          new file
```

```
>Edit: @ Copy Delete Exit Find Insert ... XchnG Zap
```

The **SCREEN** Editor has signed-on and informed the user that it could not find an existing file called **BUS.TXT** so it created a new file with that name. **BUS.TXT** will be the name of the output file when you are finished using the **SCREEN** Editor.

Notice that the file name is written in two parts. The first part, which can be up to 8 characters long, is the name of the file. The three characters following the period are called the file extension. Its purpose is to designate the type of file. For word processing applications the extension **TXT** is used to indicate a text file. When writing software program source, the following conventions are recommended:

| | |
|----------------------|-------------|
| BASIC | .BAS |
| COBOL | .COB |
| FORTTRAN | .FOR |
| RATFOR | .RFR |
| Z80 assembler | .Z80 |

Next, enter some text using the **I** (Insert) command. We will intentionally include some mistakes in order to illustrate some features of the editor.

>Edit: @ Copy Delete Exit Find Insert ... Xchgng Zap

I

>Insert: <text...> <esc>

**THE S-100 MICROCOMPUTERBUS CONSISTS OF A <CR>
BANK OF 1000-CONTACT CONNECTORS WIRED IN <CR>
PARALLEL ONA COMMON MOTHER BOARD. <CR>
<esc>**

The Insert command is initiated by typing the letter I. All command characters may be entered in either upper or lower-case. Although text may be entered without carriage returns terminating each line, it is recommended that carriage returns be included for increased readability of the text and compatibility with the Cromemco Formatter. Any text (a program, a letter, a series of numbers, etc.) may then be entered. Insert is terminated by pressing the ESCape key. The SCREEN Editor then redisplay the menu.

After the completion of the Insert sequence, the cursor is positioned after the last character which was inserted. In this case the cursor is at the end of the text buffer or just after the <CR> of the last line.

If you find errors while still in the Insert mode, you may remove them by using the DELEte key, CNTRL-A, or CNTRL-H. The left arrow key of the Cromemco 3102 terminal may also be used for this purpose.

Suppose the user wanted to take a break now and turn off the computer. If the computer was turned off before writing the newly Inserted text to the output file, all would be lost, because the computer memory (which is where the text is stored) "forgets" when the power to it is turned off. To avoid this situation, the Exit command will cause the contents of the text buffer to be written to the output file and control to be returned to CDOS:

>Edit: @ Copy Delete Exit Find Insert ... XchnG Zap

E

>Exit: Quit Update <esc>
Quit - exit without updating BUS.TXT
Update - update BUS.TXT and exit
<exc> - return to editor

U

>Exit: Update

1K written to BUS.TXT

A.

The computer can safely be turned off after the disk has been removed from the drive because the text file has been stored on the disk.

2.2 Editing a File

Now to retrieve our newly created file and correct the mistakes. Call the SCREEN Editor with the name of the file, as was done when it was created. SCREEN will find the file we created last time and treat it as the input file. The SCREEN Editor signals its readiness to accept commands by displaying the command menu at the top of the screen. Commands can be entered in upper or lower-case; for example, the Substitute command can be called with S or s. Now we will correct the mistakes.

>Edit: @ Copy Delete Exit Find Insert ... XchnG Zap

The first error is an M instead of an N in MICROCOMPUTER. Position the cursor over the N in MICROCOMPUTERBUS by moving left with CNTRL-A (hold down the CNTRL key and press A) to the R in BOARD and up with CNTRL-W to N. Type X to call the XchnG command and overwrite the N with an M. Press the ESCape key to exit the XchnG command.

>Edit: @ Copy Delete Exit Find Insert ... Xchnng Zap

THE S-100 MICROCOMPUTERBUS CONSISTS OF A
BANK OF 1000-CONTACT CONNECTORS WIRED IN
PARALLEL ONA COMMON MOTHER BOARD.

>Xchnng: <text> <esc>

THE S-100 MICROCOMPUTERBUS CONSISTS OF A
BANK OF 1000-CONTACT CONNECTORS WIRED IN
PARALLEL ONA COMMON MOTHER BOARD.

The second error is that MICROCOMPUTER and BUS are two words and should be separated by a space. Move the cursor right with CNTRL-D to the B in MICROCOMPUTERBUS. Call the Insert command by typing I. Enter a space by pressing the space bar. Leave Insert by pressing the ESCape key and return to the command selection menu.

>Insert: <text...> <esc>

THE S-100 MICROCOMPUTER BUS CONSISTS OF A
BANK OF 1000-CONTACT CONNECTORS WIRED IN
PARALLEL ONA COMMON MOTHER BOARD.

The next error is that the 1000 should have been 100. To correct this, first position the cursor over the last 0 in 1000 by pressing the RETURN key to move to the beginning of the second line and move to the right with CNTRL-D. Call the Delete command by typing D. Eliminate the 0 by pressing the space bar once. Leave Delete by pressing the ESCape key.

THE S-100 MICROCOMPUTER BUS CONSISTS OF A
BANK OF 100-CONTACT CONNECTORS WIRED IN
PARALLEL ONA COMMON MOTHER BOARD.

>Delete: <esc>

THE S-100 MICROCOMPUTER BUS CONSISTS OF A
BANK OF 100-CONTACT CONNECTORS WIRED IN
PARALLEL ONA COMMON MOTHER BOARD.

Next ONA will be replaced by ON A using the Substitute command. Call Substitute by typing S. The computer then queries the user for the characters to be replaced (<old>) and for the new characters (<new>). In response to this query type "ONA" for <old>. After the computer inserts a comma, type "ON A" for <new>. The substitution will be made automatically.

> l Subs ... <old>,<new> "ONA", "ON A"

THE S-100 MICROCOMPUTER BUS CONSISTS OF A
BANK OF 100-CONTACT CONNECTORS WIRED IN
PARALLEL ON A COMMON MOTHER BOARD.

To add another sentence to this paragraph it is necessary to move the cursor to the end of the existing text so the new text will follow it. Type J to call the Jump command and enter E to designate the end of the file.

>Jump: Begin Cursor End <esc> E

Then Insert the new text and display it to check for errors.

I

>Insert: <text...> <esc>

THE S-100 MICROCOMPUTER BUS CONSISTS OF A
BANK OF 100-CONTACT CONNECTORS WIRED IN
PARALLEL ON A COMMON MOTHER BOARD.
THE 100 LINES OF THE BUS CARRY ADDRESS, <CR>
DATA, AND CONTROL SIGNAL INFORMATION. <CR>
<esc>

The edited text file would appear as follows:

THE S-100 MICROCOMPUTER BUS CONSISTS OF A
BANK OF 100-CONTACT CONNECTORS WIRED IN
PARALLEL ON A COMMON MOTHER BOARD.
THE 100 LINES OF THE BUS CARRY ADDRESS,
DATA, AND CONTROL SIGNAL INFORMATION.

Finally, we will Exit from the SCREEN Editor leaving a backup file, BUS.BAK, and an edited file, BUS.TXT, on the disk.

E

>Exit: Quit Update <esc>
Quit - exit without updating BUS.TXT
Update - update BUS.TXT and exit
<exc> - return to editor

U

>Exit: Update

1K written to BUS.TXT

A.

2.3 Conclusion

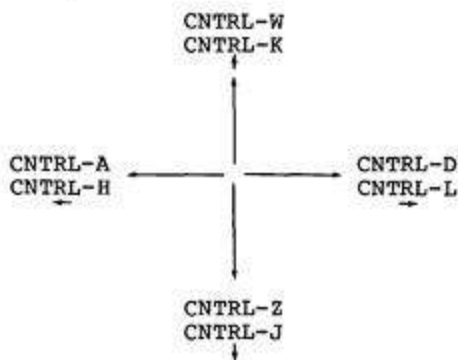
Having gone through this step-by-step example you should now be able to use SCREEN as a powerful editing tool with your computer. The following chapters describe SCREEN commands in more detail and describe additional features of the commands already discussed.

CHAPTER 3

Cursor Positioning Instructions

3.1 Cursor Movement with the CNTRL Characters and Arrow Keys

The cursor may be positioned with the arrow or control keys of a Cromemco 3102 terminal and with the control keys of other Cromemco terminals.



- [n] {CNTRL-**{H or A}**, or ← } moves left n spaces
- [n] {CNTRL-**{L or D}**, or → } moves right n spaces
- [n] {CNTRL-**{K or W}**, or ↑ } moves up n lines
- [n] {CNTRL-**{J or Z}**, or ↓ } moves down n lines

where:

- n is an optional repeat factor
- { } indicate a choice from the enclosed elements.
- CNTRL- is the CNTRL key
- ↑, ... are the arrow keys of the Cromemco 3102 terminal.

Control characters are entered by simultaneously pressing the CNTRL key and another character. CNTRL-A would be entered by pressing the CNTRL key and the A key at the same time.

Arrow keys and control keys will repeat their function if held down.

3.2 Deleting Characters

In the Insert, Find, Substitute, Read, and Write commands, text may be deleted using the DElete, underscore, left arrow, or any of the "move left" control keys.

3.3 Cursor Direction

Cursor direction is determined by the < or > flag in the upper left corner of the screen. The cursor direction is set to forward by typing

> or . or +

The cursor direction is set to reverse by typing

< or , or -

Example:

>Edit: Copy Delete Exit Find Insert Jump Move ...

To change the cursor direction to reverse, enter < or , or -.

<Edit: Copy Delete Exit Find Insert Jump Move ...

To change the direction to forward, enter > or . or +.

>Edit: Copy Delete Exit Find Insert Jump Move ...

3.4 Cursor Movement with the Space Bar, TAB, and RETURN Keys

The cursor may also be positioned by using the space bar, TAB key (or CNTRL-I), and the RETURN key. These modes of positioning the cursor may all be done at the command selection level.

Format: [n]{S,T,<CR>}

where:

n is an optional repeat factor.
S is an entry of a space with the space bar.
T is an entry of a tab with CNTRL-I or the TAB key.
<CR> is a carriage return.

In the forward mode, after a RETURN character is encountered, the cursor will move to the beginning of the next line. In the reverse mode, after the first character of a line is encountered the cursor will move to the unprinted carriage return character of the next line in that direction.

The cursor may be spaced forwards in the Delete, Insert, Tab, and Xchg commands. The cursor may be spaced backwards in the Delete and Insert commands.

The cursor may be moved forwards or backwards in the Delete and Insert commands with CNTRL-I or the TAB key.

The carriage return will move the cursor to the nearest beginning of a line in the selected direction.

The cursor may be moved forwards in the Delete and Xchg commands with the RETURN key. The cursor may be moved backwards in the Delete command with the RETURN key.

3.5 Scrolling

Scrolling through a file can be accomplished by pressing the # key and then the RETURN key. Pressing the # key enters, 65535, the largest acceptable repeat factor. Any Cromemco terminal can scroll in the forward direction, but scrolling backwards through a file can only be done on a Cromemco 3102 terminal.

CHAPTER 4

Command Instructions

instruction: **Beautify**

format: Bm1,m2

where:

B is the character used to call the Copy command.

m1 is the marker that designates the beginning of the text to be copied. Refer to the Set Marker command for further information.

m2 is the marker that designates the end of the text to be copied.

Beautify does simple formatting of text. It will reset the paragraph, left, and right margins. Beautify will also right-justify text.

Steps:

1. Set a marker at the beginning of the portion of the file to be formatted.
2. Set a marker at the character following the end of the portion of the file to be formatted.
3. Press B to call the Beautify command; the computer will respond:

```
Beautify: [Justify] [Margin] Begin Cursor End [markers] <esc>
```

where only the markers that the user has set will appear. If you wish to exit the Beautify command at this time, press the ESCape key.

4. Press M to call the Margin subcommand; the computer will respond:

```
Beautify: Paragraph( 15) Left( 10) Right( 70) <esc> <CR>
```

BEAUTIFY

The initial margin settings appear within the brackets. A margin setting may be reset by entering the first letter of the type of margin to be changed. The cursor will appear between the brackets following the name of that margin.

The desired value should be typed in followed by a space whereupon the value will be entered and the cursor will return to the right of the subcommand line. Admissible values are 1 through 131 for the paragraph and left margins and 2 through 132 for the right margin. The value for the left margin must less than that of the right margin. If you wish to exit the Beautify command at this time, press the ESCape key. Enter a RETURN to update the margin settings and exit the Margin subcommand.

5. The right margin may be justified, made smooth, by entering J. When this is done the word "Justify" within the brackets will blink and the brackets will disappear. No formatting will take place until the next step has been completed. If you do not wish to format the text at this time, press the ESCape key.
6. Enter the beginning and ending markers of the text to be formatted. After the second marker has been entered, the text will be formatted.

Example:

One of the most wide spread applications of computers is for storing, sorting, sifting, and retrieving information from a data base. In industry, the data base may take the form of mailing lists, personnel records, inventory and purchasing records, customer lists, accounts receivable entries, or a general ledger chart of accounts. In the professions, important data bases may included patient histories, client information, journal references, or student records. In personal use, the data base may consist of a Christmas card mailing list, birth dates of relatives, or stamp or coin collection information. In all these instances quick access to specific information in the data base can be very important.

BEAUTIFY

To format this text with a paragraph margin of 13, a left margin of 10, a right margin of 65, and be right-justified, first Set Marker 1 at the beginning of the paragraph. Then Set Marker 2 immediately after the end of the paragraph. Call the Beautify command and call the Margin subcommand by entering M. The command line will appear as:

```
Beautify: Paragraph( 15) Left( 10) Right( 70) <esc> <CR>
```

The left margin doesn't need to be changed. But, the paragraph and right margins do. Enter P and the cursor will move from the right of the command line to within the paragraph margin brackets. Enter 13 for the value of the paragraph margin. If the cursor doesn't move back to the right of the command line, press the space bar once. Type R and enter 65 for the right margin. Again, press the space bar if the cursor does not move to the right of the command line. The command line should now look like:

```
Beautify: Paragraph( 13) Left( 10) Right( 65) <esc> <CR>
```

Press the RETURN key to incorporate these margin changes and the original Beautify command line will return.

```
Beautify: [Justify] [Margin] Begin Cursor End 1 2 <esc>
```

Press J to enable right-justification of the text. The command line will appear as:

```
Beautify Justify: [Margin] Begin Cursor End 1 2 <esc>
```

with the word "Justify" blinking.

Finally, enter the beginning and ending markers to format the text.

```
Beautify Justify: [Margin] Begin Cursor End 1 2 <esc> 1,2
```

The text will now appear as:

One of the most wide spread applications of computers is for storing, sorting, sifting, and retrieving information from a data base. In industry, the data base may take the form of mailing lists, personnel records, inventory and purchasing records, customer lists, accounts receivable entries, or a general ledger chart of accounts. In the professions, important data bases may included patient histories, client information, journal references, or student records. In personal use, the data base may consist of a Christmas card mailing list, birth dates of relatives, or stamp or coin collection information. In all these instances quick access to specific information in the data base can be very important.

instruction: **Copy**

format: Cml,m2

where:

C is the character used to call the Copy command.

m1 is the marker that designates the beginning of the text to be copied. Refer to the Set Marker command for further information.

m2 is the marker that designates the end of the text to be copied.

Copy is used for duplicating part or all of a file into or onto itself.

Steps:

1. Set a marker at the beginning of the portion of the file to be duplicated.
2. Set a marker at the character following the end of the portion of the file to be duplicated.
3. Position the cursor at the character following the location to which the selected text is to be copied.
4. Press C to call the Copy command; the computer will respond:

Copy: Begin Cursor End [markers] <esc>

where only the numbered markers that the user has set will appear. If you wish to exit the Copy command at this time, press the ESCape key.

5. Enter the beginning marker and the ending marker. After the second marker has been entered, the text will be copied.

Notes:

1. If the first marker is in the middle of a line when copied, that line will be left justified.

COPY

2. To save time while copying a section of file to many places in the file, reset the markers to the bounds of one of the nearer copies. Resetting the markers usually takes less time than the computer's search time to find the more distant markers.

Example:

Numeric variables may be assigned numeric values. The range and accuracy of these depends on their type.

To copy the word "variables" to a position before the word "depends", first set a marker at the beginning of "variables" and at the beginning of the following word. Position the cursor at the beginning of the word "depends". Call the Copy command and enter the two markers used to delimit "variables".

Numeric variables may be assigned numeric values. The range and accuracy of these variables depends on their type.

DELETE

instruction: **Delete**

format: D

where:

D is the character used to call the Delete command.

Delete will eliminate text from a file.

Steps:

1. Position the cursor at one end of the text to be deleted.
2. Verify that the cursor direction is toward the other end of the text to be deleted. If it is not, change the cursor direction.
3. Press D to call the Delete command; the computer will respond:

Delete: <esc>

If you wish to exit the Delete command at this time, press the ESCape key.

4. Delete the unwanted text with the space bar, TAB key, RETURN key, CNTRL keys, or the arrow keys of the Cromemco 3102 terminal. If text was deleted that was desired, change the cursor direction and move the cursor back over the deleted text to retrieve it. This retrieval will not work if you leave Delete and get back in.
5. When the unwanted text has been deleted from the screen, press <esc> to implement these changes.

Notes:

The Delete command is confined to working on the currently displayed page.

Example:

Cromemco 16K Extended BASIC not only generates English-language error messages, but it also examines each statement as it is entered and prints error messages immediately.

DELETE

To delete the word "Extended" from the first line, set the cursor at the first letter of the word and call the Delete command by pressing D. With the space bar, space over to the first character of the next word and press <esc>.

Cromemco 16K BASIC not only generates English-language error messages, but it also examines each statement as it is entered and prints error messages immediately.

instruction: **Exit**
format: E{U,Q}

where:

| | |
|---|---|
| E | is the character used to call the Exit command. |
| U | updates the file and exits SCREEN. |
| Q | exits SCREEN without updating the file. |

Exit will cause control to return to CDOS with the option of either updating or not updating the file.

Steps:

1. Press E to call the Exit command; the computer will respond:

```
Exit: Quit Update <esc>  
      Quit - exit without updating "filename"  
      Update - update "filename" and exit  
      <esc> - return to editor
```

If you wish to leave the Exit command at this time and return to the editor, press the ESCape key.

2. Press Q to leave the editor without updating the file and return to CDOS. No BAK file is created if Q is entered. The following message will be displayed:

```
Exit: Quit  
Screen aborted
```

Press U to leave the editor, update the file, create a BAK file, and return to CDOS. After entering the command to update the file

```
Exit: Update
```

will be displayed. Upon the successful completion of creating the backup file and

EXIT

returning to CDOS the message

nK written to "filename"

will be displayed where n is the number of kilobytes written to the file.

If there is not enough room on your diskette for the updated file, you will receive the message:

disk overflow

insert blank diskette (not in unit N)

unit?

where unit N is the drive with the input or temp file. It is recommended to use a blank diskette to insure there will be enough space for the remainder of the file. The first part of the file on the original disk will have your filename with an extension of \$\$1. The second part of the file on the newly inserted diskette will have your filename and extension. The two parts of the file may be concatenated using the CDOS XFER utility. Refer to the CDOS User's Manual for more information about XFER/A/V.

FIND

instruction: **Find**

format: [n]F/string/

where:

n is an optional repeat factor.
F is the character used to call the Find command.
/ is a delimiter. Any non-alphanumeric character not used in the string may be used as a delimiter.
string is a sequence of characters.

Find will locate the beginning of a string.

Steps:

1. Position the cursor at one end of the section of text to be scanned.
2. Verify that the cursor direction is toward the other end of the text to be scanned. If it is not, change the cursor direction.
3. Enter a number to designate which occurrence of the string is to be found. If no number is entered, n will default to 1 and the first occurrence of the string will be found.
4. Press F to call the Find command; the computer will respond:

n Find: <string>

where n is the nth occurrence of the string to be found. If you wish to exit the Find command at this time, press the ESCape key.

5. Preface the string with a delimiter. The delimiter may be any non-alphanumeric character, not a letter or a number, which does not occur in the string.

FIND

Notes:

1. If the delimiter is a single or double quotation mark, the string as entered will be found. If the delimiter is some other non-alphanumeric character, the case, upper or lower, is disregarded.
2. Ambiguous strings may be found.

Certain characters have special functions when used in the string to be found. These characters are:

- ? will match any single character
- * will match any string up to 255 characters
- \ will ignore the special function of the next character. If the next character is not a * or a ?, it is treated as an ordinary character with no special function. In the commands that allow ambiguous character matching, the backslash must be entered twice to print a backslash. This is because the first backslash allows the following "non-printing" character to be displayed.

Example:

```
100 Print "This is a string literal"  
120 Rem The spacing within the string literal  
130 Rem and the Remark statements will not be  
140 Rem changed by BASIC.  
150 For I=1 TO 10  
160 Print I;  
170 Next I  
180 End
```

To find the second occurrence of the word "Print" enter 2F. When prompted for the string, enter a delimiter, the word, then the delimiter again. In this example, /print/, "Print", or *PRINT* will work. Be sure that the delimiter is not an element of the string.


```
2 Find: <string> /print/  
100 Print "This is a string literal"  
120 Rem The spacing within the string literal  
130 Rem and the Remark statements will not be  
140 Rem changed by BASIC.  
150 For I=1 TO 10  
160 Print I;  
170 Next I  
180 End
```

HOME

instruction: Home

format: H

where:

H is the character used to call the Home command.

The Home command moves the cursor to the upper left corner of the screen. This command appears on the Other command line.

INSERT

instruction: **Insert**

format: I<text>

where:

I is the character used to call the Insert command.

Insert will add text to a file. Text may be appended to the end of the file, entered before a given line, or before a given character.

Steps:

1. Position the cursor on the character that the inserted text should come before.
2. Press I to call the Insert command; the computer will respond:

Insert: <text...> <esc>

If you wish to exit the Insert command at this time without entering text, press the ESCape key.

3. Enter the text to be added.
4. Press <esc> to exit the Insert command.

Notes:

1. If a line was appended to the added text, a <CR> was not entered at the end of the added text.
2. If an error is made while in Insert, the user may backtrack and correct the error with the DElete key or CNTRL-A.
3. Non-printing characters can be entered by prefacing them with one stroke of the \ key.

Example:

To insert the word "Extended" before the word BASIC in the following paragraph, first position the cursor on the space before the first "BASIC".

INSERT

Real-time control applications often require integer, 16-bit arithmetic. Cromemco 16K BASIC provides this capability along with direct memory, input/output, and machine-code subroutine access through BASIC instructions.

Call the Insert command and enter "Extended". If the space before "Extended" were omitted, it would appear as "16KExtended". Press <esc> to leave the Insert command.

Real-time control applications often require integer, 16-bit arithmetic. Cromemco 16K Extended BASIC provides this capability along with direct memory, input/output, and machine-code subroutine access through BASIC instructions.

instruction: **Jump**

format: Jm

where:

J is the character used to call the Jump command.

m is the marker that the cursor will Jump to.

Jump will cause the cursor to move to any user-set marker, the beginning of the file, or the end of the file.

Steps:

1. Press J to call the jump command; the computer will respond:

Jump: Begin Cursor End [markers] <esc>

where only the numbered markers that the user has set will appear. If you wish to exit the Jump command at this time, press the ESCape key.

2. Enter a marker designator. If B was pressed, the first page of the file will be displayed on the screen with the cursor at the beginning of the file. If E was selected, the last half page of the file will be displayed with the cursor positioned at the end of the file. If a user-set marker was selected, a page will be displayed with the cursor centered on the screen at the marker.

Example:

A computer is a device which performs high-speed mathematical or logical calculations or which processes information derived from coded data in accordance with a predetermined program.

Assuming that the marker labeled "2" is set at the "c" in "coded", jumping to that marker is accomplished by calling the Jump command and pressing 2.

LIST

instruction: List

format: Lm1m2

where:

L is the character used to call the List command.

m1 is a marker.

m2 is a marker.

List will copy a section of a file to a line printer. The List command is displayed on the Other command selection menu at the top of the screen.

Steps:

1. Set markers at the beginning and the end of the section of the file to be listed to the line printer.
2. Press L to call the List command; the computer will respond:

List: Begin Cursor End [markers] <esc>

where only the numbered markers that the user has set will appear. If you wish to exit the List command at this time, press the ESCape key.

3. Enter the markers and the file section will be listed to the line printer.

Notes:

If the same marker is entered twice, a form feed will be sent to the printer.

WARNING:

The List command will pause indefinitely when used in a system without a line printer. If this happens, the system must be reset and the operating system reloaded.

MOVE

instruction: **Move**

format: Mm1,m2

where:

M is the character used to call the Move command.

m1 is the marker which designates the beginning of the text to be moved.

m2 is the marker which designates the end of the text to be moved.

Move will transfer text from one part of the file to another location in the file. Move deletes the text from the original position whereas Copy does not.

Steps:

1. Set a marker at the beginning of the portion of the file to be moved.
2. Set a marker at the character following the end of the section to be moved.
3. Position the cursor at the character following the location to which the selected text is to be transferred.
4. Enter M to call the Move command; the computer will respond:

Move: Begin Cursor End [markers] <esc>

where only the numbered markers that the user has set will appear. If you wish to exit the Move command at this time, press the ESCape key.

5. Enter the beginning and ending markers. After the second marker has been entered, the Move function will transfer the file section.

Notes:

The markers will **not** be transported along with the text.

MOVE

Example:

rapid, 14-digit arithmetic using the powerful, binary-coded decimal (BCD) arithmetic instructions. One major feature of Cromemco 16K Extended BASIC is which are unique to the Z-80 microprocessor.

The third line of the example will be moved to a location before the first line. Marker 1 is set at the beginning of the third line. Marker 2 is set at the beginning of the fourth line. The cursor is positioned at the beginning of the first line. The Move command is called and the two markers are entered.

```
Move: Begin End 1 2 <esc> 1 ,2
```

One major feature of Cromemco 16K Extended BASIC is rapid, 14-digit arithmetic using the powerful, binary-coded decimal (BCD) arithmetic instructions which are unique to the Z-80 microprocessor.

OTHER

instruction: **Other**

format: 0

where:

0 is the character used to display the Other command selection menu.

Other is a continuation of the command selection menu.

Steps:

1. Press 0 to call the Other command; the computer will respond:

>Edit: Beautify Home List Other Read Tabs Verify Write

Notes:

1. When either command selection menu is displayed, all commands may be called.
2. The original command selection menu will be restored when the next command is issued.

PAGE

instruction: Page

format: [n]P

where:

n is an optional repeat factor.

P is the character used to call the Page command.

Page moves the cursor n pages through the file in the selected direction.

Steps:

1. Verify that the cursor direction is set to the desired direction. If it is not, change the cursor direction.
2. Enter a number "n" and press P to display the nth page of text in the selected direction.

n Page

instruction: Read

format: Rfile-ref

where:

R is the character used to call the Read command.

file-ref is the name of the file to be read.

Read will copy another file into the current file. The Read command is displayed on the Other command selection menu at the top of the screen.

Steps:

1. Position the cursor to where the new file is to be inserted.
2. Press R to call the Read command; the computer will respond:

Read: <filename> <esc>

Enter the filename. Prefix the filename with a disk specifier if the file is on a disk other than the current disk. Include the filename extension if one exists. If you wish to exit the Read command at this time, press the ESCape key. Press the carriage return and the file will be copied into the current file beginning at the cursor position. After the file has been Read into the current file, the cursor will be positioned at the end of the added file.

SET MARKER

instruction: **Set Marker**

format: @n

where:

@ is the character used to call the Set Marker command.

n is a number from 1 to 7 designating the marker label.

Set Marker will place reference points in a file with markers.

Steps:

1. Position the cursor.
2. Press @ to call the Set Marker command; the computer will respond:

```
Set Marker: 1 2 3 4 5 6 7 <esc>
```

Enter one of the seven numbers and the marker will be set. The cursor will return to the previous position in the text. If you wish to exit the Set Marker command at this time and not set a marker, press the ESCape key.

Notes:

1. Markers that have been previously set by the user may be reset as often as desired.
2. A blinking marker number in the display above indicates the marker has been previously set by the user.
3. If a file section containing markers is moved or copied, all markers in the file section will be reset to the last marker in the file section.

Example:

One major feature of Cromemco 16K Extended BASIC is rapid, 14-digit arithmetic using the powerful, binary-coded decimal (BCD) arithmetic instructions which are unique to the Z-80 microprocessor.

SET MARKER

To set a marker at the beginning of the word "BASIC" first position the cursor over the "B". For additional information refer to the section on cursor positioning.

Call the Set Marker command by pressing @.

Enter the desired marker number.

Set Marker: 1 2 3 4 5 6 7 <esc> 2

A marker labeled "2" has now been set at the beginning of the word "BASIC". It is a reference point that may be referred to with the commands Beautify, Jump, Copy, Move, List, Read, Write, and Zap.

SET TABS

instruction: **Set Tabs**

format: T

where:

T is the character used to call the Set Tabs command.

Set Tabs will place reference points on a line with tabs. The Set Tabs command is displayed on the Other command selection menu at the top of the screen.

Steps:

1. To set tabs press T; the computer will display the default tab settings:

Set tabs: <esc> <CR>

```
          1           2           3           4   ...
1234567890123456789012345678901234567890 ...
T          T          T          T          T   ...
```

If you wish to exit the Set Tabs command at this time, press the ESCape key.

2. Position the cursor with the space bar and enter T at the desired locations. Press <CR> to implement the updated tab settings and exit from Set Tabs. Press <esc> to exit from Set Tabs without updating the tab settings.

Example:

Call the Set Tabs command and press T.

```
          1           2           3           4   ...
1234567890123456789012345678901234567890 ...
T          T          T          T          T   ...
```

SET TABS

To set a tab every third character from the beginning of the line, with the space bar, space to the positions where a tab is desired and press T.

```
          1          2          3          4  ...
1234567890123456789012345678901234567890 ...
T  T  T  T  T  T      T          T          ...
```

Press <CR> to save the updated tab settings.

SUBSTITUTE

instruction: **Substitute**

format: [n]S[Q] /string1//string2/

where:

n is an optional repeat factor.
S is the character used to call the Substitute command.
Q is the optional Query mode.
/ is a delimiter. Any non-alphanumeric character not used in the string may be used as a delimiter.
string1 is the original string.
string2 is the replacement string.

Substitute will replace one or several occurrences of a string with another string. Ambiguous string references may be used for string1.

Steps:

1. Position the cursor before or after the text that contains the string(s) to be replaced.
2. Verify that the cursor direction is toward the strings that are to be replaced. If it is not, change the cursor direction.
3. Enter the number of occurrences of the original string to be replaced.
4. Press S to call the Substitute command; the computer will respond:

n Substitute: [Query] <old>,<new>

where n is the number of replacements desired. If you wish to exit the Substitute command at this time, press the ESCape key.

5. Press Q to enable the Query option; the computer will respond:

n Substitute Query: <old>,<new>

SUBSTITUTE

where n is the number of replacements desired. The word "Query" will now be blinking. Query will allow the user to selectively Substitute strings.

6. Preface the old string with a delimiter. The delimiter should be a non-alphanumeric character that does not occur in the old string. End the old string with the same delimiter. Preface the new string with a delimiter that is not a character in the new string. When the delimiter is entered to end the new string, the replacement(s) will occur.
7. If Query **was not** selected, after the two strings have been entered with appropriate delimiters the replacements will be made.
8. If Query **was** selected, after the old string and the new string have been entered the cursor will jump to the first occurrence of the old string. The command display at the top of the screen will be:

Substitute Query: Yes No <esc>

Press Y to Substitute the string. Press N to **not** Substitute the string. The cursor will now jump to the next occurrence of the old string and the user will again be queried.

9. Press the ESCape key to exit at any time during the command.

Notes:

1. To insert the same string n times along the left or the right margin, Substitute using the RETURN key (^M) in the strings.

[n][S]/^M/,/@b^M/ will insert @b at the end of n lines of text.

[n][S]/^M/,/^M@b/ will insert @b at the beginning of n lines of text.

SUBSTITUTE

2. While replacing a multi-word string using Substitute, use question marks instead of spaces between the words of the initial string. This will cause the strings that are broken up with a carriage return to be found and replaced. Do not use the question mark in the replacement string. For additional information about ambiguous string references see note 2 of the Find command.
3. To delete n occurrences of a string, Substitute an empty string for the unwanted string.

```
[n][S]/string/,//
```

Example:

For many of today's demanding applications, more features are required than were provided in the original Dartmouth language. A language that provides advanced features and capabilities is frequently called an Extended language.

To replace the word "language" with "BASIC", first position the cursor at one end of the section containing the strings to be replaced. Be sure that the cursor direction is toward the strings that are to be replaced. Enter the number of replacements to be made. Call the Substitute command. Enter a non-alphanumeric delimiter that is not contained in the word to be replaced. Enter the original word. Terminate the original word by the same delimiter. Enter another delimiter followed by the new word terminated by the same delimiter.

```
3 Substitute: ... <esc> /language/,/BASIC/
```

For many of today's demanding applications, more features are required than were provided in the original Dartmouth BASIC. A BASIC that provides advanced features and capabilities is frequently called an Extended BASIC.

VERIFY

instruction: **Verify**

format: V

where:

V is the character used to call the Verify command.

Verify will redisplay the current screen contents. The Verify command is displayed on the Other command selection menu at the top of the screen.

Steps:

1. Enter V to call the Verify command; there is no response other than the redisplay of the current page.

WRITE

instruction: **Write**
format: Wmlm2file-ref

where:

W is the character used to call the Write command.

m1 is the marker designating the beginning of the section of the file.

m2 is the marker designating the end of the section of the file.

file-ref is the name of the file to be read.

Write will transfer a section of a file to an external file. The Write command is displayed on the Other command selection menu at the top of the screen.

Steps:

1. Set the markers that designate the beginning and end of the section of the file.
2. Press W to call the Write command; the computer will respond:

```
Write: Begin Cursor End [markers] <esc>
```

where only the numbered markers that the user has set will appear. If you wish to exit the Write command at this time, press the ESCape key.

3. Enter the markers. Begin, Cursor, and End may be used. A comma does not need to be entered. The computer will respond:

```
Write: Begin Cur... <esc > m1, m2 to <filename >
```

4. Enter the filename desired. Press carriage RETURN and the file will be created.

Notes:

Any existing file with the specified name will be deleted.

instruction: **Xchng** (Exchange)

Format: X <text> <esc>

where:

X is the character used to call the Xchng command.

Xchng overwrites text. Each character entered will replace the character at the cursor position.

Steps:

1. Position the cursor at the beginning of the text that is to be overwritten.
2. Press X to call the Xchng command; the computer will respond:

Xchng: <text> <esc>

If you wish to exit the Xchng command at this time, press the ESCape key.

3. Enter new text. DELETE, CNTRL-A, or CNTRL-H may be used for backtracking to correct errors in overwriting. The RETURN key in Xchng acts as a control character for cursor movement and will not exchange text.
4. Press <esc> to exit from Xchng and return to the command level.

Example:

Cromemco 16K Extended BASIC is designed to maximize computational precision, programming power, and speed of execution by fully utilizing the extensive 158 instruction set of the Z-80 microprocessor.

To correct the misspelling of "computasional", first position the cursor over the incorrect letter. Call the Xchng command and enter the correct letter. Press <esc> to leave the Xchng command.

Cromemco 16K Extended BASIC is designed to maximize computational precision, programming power, and speed of execution by fully utilizing the extensive 158 instruction set of the Z-80 microprocessor.

ZAP

instruction: **Zap**

format: Zm1,m2

where:

Z is the character used to call the Zap command.

m1 is a user-set marker or one of the preset Begin, Cursor, or End markers.

m2 is a user-set marker or one of the preset Begin, Cursor, or End markers.

Zap will delete sections of a file.

Steps:

1. Set a marker at the first character of the section of the file that is to be deleted.
2. Set a marker at the character just beyond the end of the section of the file that is to be deleted.
3. Press Z to call the Zap command; the computer will respond:

Zap: Begin Cursor End [markers] <esc>

where only the numbered markers that the user has set will appear. If you wish to exit the Zap command at this time, press the ESCape key.

4. Enter the beginning and ending markers. After the second marker has been entered, the file section will be deleted.

Notes:

To save a keystroke when deleting sections of a file, Zap from one marker to the cursor. This saves setting a second marker.

Example:

All computers are based on one fundamental concept
-- the binary digit. The binary number system uses
only the digits 0 and 1.

The second sentence of this example will be
deleted. Set marker 1 at the beginning of the
second sentence. Set marker 2 immediately after
the end of the second sentence. Call the Zap
command and enter the two markers. This will
delete the entire second sentence.

Zap: Begin End 1 2 <esc> 1 ,2

All computers are based on one fundamental concept
-- the binary digit.

Cursor Positioning Summary

| <u>Control</u> | <u>Used In Command</u> | <u>Direction Set</u> | <u>Description</u> |
|-------------------------------------|------------------------|----------------------|--|
| [n] CNTRL-A [n] CNTRL-H [n] - | D,X | < or > | Moves the cursor to the left. |
| [n] CNTRL-D [n] CNTRL-L [n] - | D,X | < or > | Moves the cursor to the right. |
| [n] CNTRL-W [n] CNTRL-K [n] ↑ | D,X | < or > | Moves the cursor up n lines. |
| [n] CNTRL-Z [n] CNTRL-J [n] ↓ | D,X | < or > | Moves the cursor down n lines. |
| [n] space | D | < | Moves the cursor to the left n spaces. |
| [n] space | D,T,X | > | Moves the cursor to the right n spaces. |
| [n] tab | D | < | Moves the cursor to the left n tabs. |
| [n] tab | D,X | > | Moves the cursor to the right n tabs. |
| [n] <CR> | D | < | Moves the cursor up n lines along the left margin. |
| [n] <CR> | D,X | > | Moves the cursor down n lines along the left margin. |

The command abbreviations used here are:

D = Delete
T = Set Tab
X = Xchng

Notes:

The repeat factor n may only be used at the command selection level and in the Delete command. The default of the repeat factor n for cursor positioning is 1. Press the # key to enter the maximum repeat factor which is 65535.

All cursor positioning methods will work at the command selection level.

Arrows refer to the arrow keys on the Cromemco 3102 terminal.

Command Summary

The following is an alphabetical list of the Screen Editor commands.

| Command /Subcommand | Markers Needed | Description |
|---------------------|----------------|---|
| @ | | Set Marker - Sets positional reference points in a file. |
| B | 2 | Beautify - Formats text on the screen. Paragraph, left, and right margins may be set for the formatting. Text may be right-justified. |
| C | 2 | Copy - Duplicates text to another location in the file. |
| D | | Delete - Eliminates text with the space bar, repeat factor n may only be used at the selection level. |
| E | | Exit - Leaves SCREEN and returns to CDOS. |
| /U | | Update - Implements the edit changes to the file. |
| /Q | | Quit - Does not update the file. |
| nF | | Find - Locates the nth occurrence of a string where n is a positive integer in the specified direction. |
| H | | Home - Moves the cursor to the upper left corner of the screen. |
| I | | Insert - Adds text to a file. |

- enter - Synonymous with "type in."
- <esc> - Represents the ESCape key.
- file - A file defines a group of related information. This information is addressed by means of a file name and usually resides on a disk.
- file name - A one to eight character label which is used to refer to a file. Several files may have the same file name. These files may be uniquely identified by the addition of a disk specifier and/or a file name extension.
- file ref - See the definition of file name above.
- flag - An indicator used for identification. In this manual, the flag indicates the cursor direction.
- instruction - A statement that specifies an operation.
- line - A horizontal row of characters.
- marker - Markers are positional reference points in a file.
- repeat factor - Incremental indicator for repeated commands. The Find command will locate the nth occurrence of a string. The Substitute command will substitute n occurrences of a string with another string. Pressing the # key will enter the maximum repeat factor of 65535.
- rubout - A rubout is a backspace and erasure of a character.
- string - A string is a sequence of characters.
- tabs - Tabs are positional reference points on a line. They may be accessed with the TAB key or CNTRL-I.

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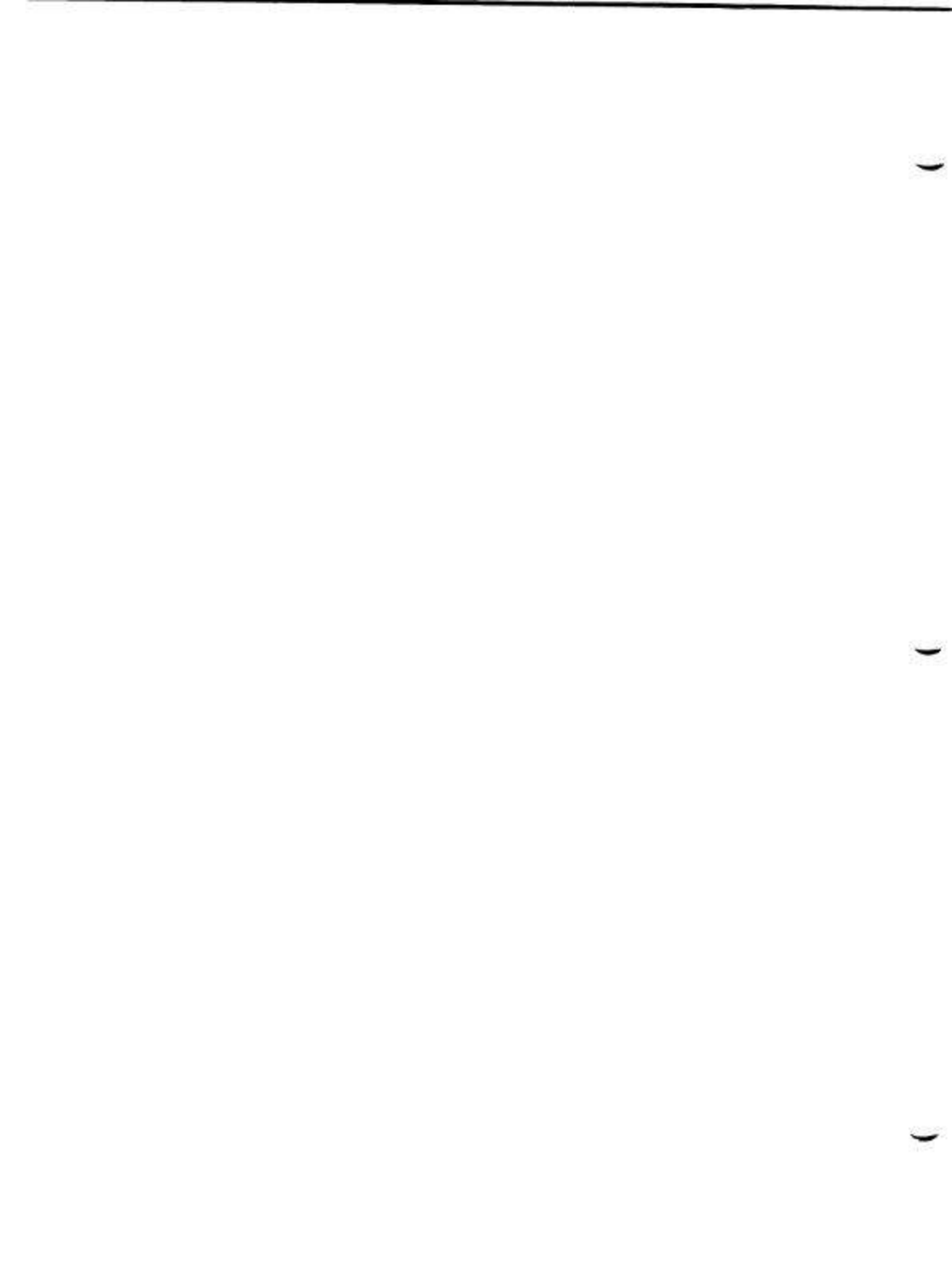
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