SCRIPSIT™

CAT. NO.
26-1590

Radio Shack TRS-80 SOFTWARE™

CUSTOM MANUFACTURED IN USA BY RADIO SHACK, A DIVISION OF TANDY CORP.

INSTRUCTION SHEET
for applying
SCRIPSIT PRESS-ON KEY LABELS

This sheet contains the 17 Press-on Labels that must be applied to the face of the keys. These labels do not fasten to the top of the key (the key cap). See the illustration for exact placement. Follow these steps:

1. Cut a wedge about 1/2" wide by 3" long from the bottom edge of the label card. This will be used as a holding tool for aligning and centering the labels. The wedge should look like this:

2. Carefully remove the first label from the sheet (the "START" label). Lightly fasten the label to the edge (as shown below). The wedge should jut out from the label at a 45° upward angle to the right. If you are left-handed, use the upper left corner. Ease the label into position just below the rim of the [↑] key cap. When the label is positioned properly, press it lightly into place and remove the wedge. If the label is slightly tilted or too high, you can gently peel it off and try again.

3. The character above each of the labels on the sheet indicates the proper key for the label. Thus, the "START" label is fastened to the [↑] arrow key, the "BLOCK" label is fastened to the [Q] key, etc.

   Note: The last label on the sheet (the "@" label) is fastened to the face of the "[Ø]"key (the number Ø, NOT the letter O). Since the [@] key is used exclusively as a control key, it was necessary to move the @ symbol to a new location, a [SHIFT][Ø]. Just as the "&" sign is a [SHIFT][6], the "@" sign is now a [SHIFT][Ø].

4. Once all the labels are in place, rub them down firmly with your finger. Your key-

Contents

Introduction

System Components 1
Word Processing 2
Your Training Package 2
Hardware Differences 3
Logging the Training Tape 3

Lesson One

Required Materials 5
Power Up 6
Inserting a Cassette Tape 6
Loading SCRIPSIT 6
Basic Error Correction Methods 8
Cursor Movement 8

Lesson Two

Required Materials 9
Current Screen Status 10
Video Parameters 13
Print Format Instructions 13

Lesson Three

Required Materials 15
Print Format Instructions 16
Clear 18
Saving a Document 19
Loading a Document 19
Printing a Document 20

Lesson Four

Required Materials 21
Header Blocks 22
Print with Invisible Lines 22
Footer Blocks and Page Numbering Blocks 24
Hyphenation 26
Removing Hyphens 27

Lesson Five

Required Materials 29
Tab-setting Instructions 30
Tab Documents 31
Inserting Blocks 33
Deleting Blocks 34
Exchanging Blocks 34
Page Numbering and Header and Footer Format Instructions 35

Lesson Six

Required Materials 37
Repeat. 37
Global Replace 38
Global Delete 38
Global Find. 39
Additional Print Instructions. 41
Save Instructions. 42
Load Instructions 42
Print Instructions 43

Instruction Summary 45

Notes For Advanced Users

A. How SCRIPSIT Uses Blanks 51
B. How SCRIPSIT Uses TRS-80 Memory Space 52
C. SCRIPSIT Command Syntax. 53
D. Data Storage Formats 55

Explanations of SCRIPSIT Error Messages 57

How to Modify SCRIPSIT For Use with Special Printers 61

Welcome!

You're about to begin learning about Radio Shack's SCRIPSIT.™ It converts your TRS-80™ into a word processing system.

But before you begin listening to the tapes and working with the figures in this Manual, there are a few preliminaries that you should double-check.

System Components

In order to use SCRIPSIT, your TRS-80 should have at least 16K of memory, a cassette player, the standard keyboard (or the new lowercase keyboard modification), and a printer. Check the system and then set everything up to resemble this:

You have also received some small labels. These labels identify special functions available while using some of the keys. Before you begin working with the lessons, peel off the backing on the labels and stick the labels on the appropriate keys. The labeled keys are:

Word Processing

Word processing. Sounds a little like data processing, doesn't it? Well, the two are very similar.

Word processing systems allow you to type documents — letters or any text material — and edit or change them as desired before actually printing anything. You can store the document on a cassette tape or bring a copy of it to the screen at any time for further changes or for printing. Only the changed information has to be retyped.

Another advantage of word processing systems is that you can change your mind about the design or format of a document. Make the margins wider or smaller, add a running title, or change the spacing between lines — each of these decisions takes one instruction. You can change your mind and the computer will change your document to match the new format.

Word processing systems take the drudgery out of typing. So now, in addition to data processing capabilities, your TRS-80 can process text documents.

Your Training Package

This training package has three cassettes with narrated information that will help you learn all about SCRIPSIT. Also included is this Manual, which has notes, illustrations, exercises, and reviews. As you listen to the tapes, the narrator will tell you when to turn to a particular figure and either read the information or begin a short typing exercise. There is also a program tape that has the SCRIPSIT program on both sides. Sometimes, you will be asked to work with exercises that are already recorded on a separate exercise tape. That way you can concentrate on a feature or instruction without spending a lot of time typing.

This kind of programmed learning lets you decide how fast or slow your training should be. If you have used your TRS-80 for a while, you will probably zip along through the lessons very quickly.

If you're a little timid about the system, don't worry. The narrator will lead you through the lessons, but you can stop and review part of a lesson or the entire lesson until you understand it completely.

Two suggestions will help make the lessons go faster:

- Try to take the lessons one at a time when you aren't likely to be interrupted. The more you concentrate on each lesson, the faster you will learn.

- Plan to spend about an hour for each lesson. This will allow you to read, type the exercises, and review.

When you have completed listening to the lessons, you can look up any instructions in the Instruction Summary or on the Instruction Summary Card included with your SCRIPSIT package.

Hardware Differences – Lowercase Keyboard or Serial Printer

If your TRS-80 has the Radio Shack lowercase modification, your text will appear on the screen in lowercase letters — unless you use the shift key to create capitals. If you want to lock the system into uppercase, press the [SHIFT] and [CONTROL] keys together. When you press [SHIFT] and [CONTROL] together again, the keyboard "unlocks".

If you're using a "serial" printer that requires an RS-232 Interface, be sure you read the RS-232 Manual. The print instruction for serial printers is slightly different from the standard line printer. At this point, note that when the narrator tells you the print instruction is "Break", "P", "Enter", your print instruction should actually be [BREAK] [P] [,] [S] [,] [P] and press [ENTER] (this includes the commas). The "S" tells the computer that you're using a "serial" printer. Printing will stop after each page. When you insert a new sheet of paper, press [ENTER] to resume printing. SCRIPSIT includes a general-purpose serial printer driver which on most printers will work at the top speed of 300 baud. Consult the user's manuals for your RS-232C Interface and serial printer for proper switch settings and use.

Logging the Training Tape

The Training Tape has three exercises recorded on it. The tape label has space on it to write the index number for the beginning of each exercise. To find the starting positions for each exercise, insert the cassette in the tape player and set the index counter to ØØØ. Disconnect the ear plug, press the "PLAY" button and listen for pauses or blank areas on the tape. Note the index number when you hear a pause and then write the index number on the tape label in order to use it as a reference. The index counter varies from recorder to recorder, but as a guide, the first exercise should begin about 12 seconds into the tape, the second exercise about 45 seconds from the beginning of the tape, and the third exercise about 93 seconds from the beginning of the tape.

During the lessons you'll be told to load one of the exercises from the training tape. When you insert the training tape, position the tape at the appropriate index number.

OK. You're ready to begin. Take out the cassette with Lesson One on it, insert the cassette in a tape recorder, and listen along as you learn about SCRIPSIT.

> Note: A number of lowercase modifications have been offered for the TRS-80 by other companies. SCRIPSIT is designed to work with Radio Shack's lowercase units only. We cannot say whether other modifications will work properly or will work at all.

Figure 1-1

In Lesson One, you will learn:

- Which TRS-80 peripherals are necessary to use SCRIPSIT
- How to set up the peripherals
- A little about word processing
- How to use the training package
- How to load SCRIPSIT
- How to make simple changes while you type
- What the cursor is and how to position it on the screen
- How to print what you type

The materials you will need to complete the Training Program are:

- The TRS-80
  - Keyboard/computer with at least 16K RAM
  - Video screen
  - Expansion Interface or Printer Interface Cable
  - Printer and paper
  - The Cassette Player that came with the system
- The Program Tape that came with this package
- One or more blank cassettes
- The LEVEL II BASIC Reference Manual (You should read pages i-iv.)
- Pencil and a notepad to take notes

BE SURE YOU HAVE THESE MATERIALS. THEN TURN THE TAPE BACK ON.

Figure 1-2

Read this information first. Then follow the steps.

Power Up

1. Turn on the Expansion Interface (if you're using one).

2. Hold down the [BREAK] key and turn on the keyboard/computer. In a few seconds, this information will appear on the screen:

   MEMORY SIZE?
   MEMORY SIZE?
   _

Inserting a Cassette Tape

1. Be sure the cassette recorder is properly connected to the keyboard/computer. Refer to the LEVEL II BASIC Reference Manual, page i, if you're not sure.

2. Insert the Program Tape into the cassette recorder.

Loading SCRIPSIT

1. Adjust the volume setting on the cassette recorder.

2. Press the "PLAY" key.

3. Press [ENTER]. This message appears:

   RADIO SHACK LEVEL II BASIC
   READY
   _

4. Type [S][Y][S][T][E][M] and the press [ENTER]. *? appears.

5. Type [S][C][R][I][P][S] and then press [ENTER]. The program begins to load. In a few seconds, an * will appear on the top line of the screen. A second * will appear and blink while the program is loading. The program loads in approximately four minutes and when loading is complete, the system automatically turns the tape player off and this message appears: *?

   If a "C" appears on the screen in place of the asterisks, then the program is not loading correctly. Rewind the tape and adjust the volume level slightly. Turn the computer off and then try again.

6. Press [/] and then press [ENTER]. The screen clears and a solid white line appears across the bottom of the screen with the message SCRIPSIT and the version number of the program under it.

Figure 1-2 (continued)

7. If you're using the lowercase modification, press [SHIFT] and [CONTROL] together. (If you don't have the lowercase modification and you press [SHIFT] and [CONTROL], the characters that appear on the screen will be quite different from what you type.)

8. Rewind the program tape; remove the cassette and put it away.

9. Disconnect the "earphone" and "remote" plugs from the tape player.

10. Carefully reinsert the narrated cassette and then TURN THE TAPE BACK ON.

Figure 1-3

SOME PEOPLE LIKE TO TIPE. ↖ Stop here

Figure 1-4

MY BROTHER TYYPES VERYY FAST. ↖ Stop here

Figure 1-5

WORD PROCCESSING IS ALSO A GOOD IDEA. ↖ Stop here

Figure 1-6

WITH WORD PROCESSING YOU CAN CHANGE YOUR MIND.
↖ Stop here

Figure 1-7

THIS EXERCISE IS FINISHED.
↖ Stop here

Review

What is the cursor?

How do you overtype?

How do you delete a character?
a word?
a sentence?

How do you use the arrow keys to move the cursor?

Figure 1-8

Basic Error Correction Methods

Overtype	hte first	Position the cursor over the character and type the new character.
Delete Character	dowxnhill	Position the cursor over the character and press [CONTROL] and the letter [D] together.
Delete Word	Is is this	Position the cursor over the first character of the word and press [CONTROL] and the letter [D] together. Then press [CONTROL] and the letter [Z] together.
Delete Sentence	~~This is bt~~	Position the cursor over the first character of the sentence and press [CONTROL] and the letter [D] together. Then press [CONTROL] and the letter [X] together.
Delete Trailing Blanks		Position the cursor immediately after the last character of the document. Press [CONTROL] and the letter [D] together and then [CONTROL] and the letter [F] together. This deletes any remaining or "trailing" blanks at the end of the document. You will learn more about this in Lesson Three.

Cursor Movement

To move the cursor left	Left arrow key—[←]
To move the cursor right	Right arrow key—[→]
To move the cursor up	Up arrow key—[↑]
To move the cursor down	Down arrow key—[↓]

(Press the keys firmly to move the cursor continuously.)

To move the cursor to the left-hand margin	Shift and left arrow together—[SHIFT] and [←]
To move the cursor to the end of the line	Shift and right arrow together—[SHIFT] and [→]
To move the cursor to the beginning of the document	Shift and up arrow together—[SHIFT] and [↑]
To move the cursor to the end of the document	Shift and down arrow together—[SHIFT] and [↓]

Figure 2-1

Things you will do in this lesson:

- Boot up the system
- Load SCRIPSIT
- Question the system about the screen status
- Change the screen parameters
- Type a short document
  - — Learn about word wraparound
  - — Delete and overwrite
  - — Insert characters
  - — Insert a line
- Print
  - — Review the difference between the screen and printing parameters
- Enter a top, bottom, left-hand, and right-hand margin
- Change line spacing
- Print again and compare

Before you go any further:

1. Boot up the system and load SCRIPSIT. Follow the steps in Figure 1-2.

When SCRIPSIT is loaded, TURN THE TAPE BACK ON.

Figure 2-2

Current Screen Status Questions

Screen Width

Press [BREAK], type [?][W], and press [ENTER]. VIDEO LINE WIDTH: 60

(60 characters is the default width.)

Document Length

Press [BREAK], type [?][L], and press [ENTER]. DOCUMENT LENGTH: 60

(60 characters is the normal initial length, but the number will change depending on what's on the screen.)

Memory

Press [BREAK], type [?][M], and press [ENTER]. CHARACTERS FREE: 20,525

(The initial number of available characters depends on the size of your system. The number could range from 4,141 to 36,909.)

Last Cursor Position

Press [BREAK], type [?][C], and press [ENTER]. CURSOR LINE NUMBER: 1

(If you haven't typed anything, or moved the cursor, line 1 is where the cursor last was.)

Paragraph Indent

Press [BREAK], type [?][I], and press [ENTER]. PARAGRAPH INDENT: 5

(A 5-character indent for paragraphs is the default.)

Figure 2-2 (continued)

You can also spell out the questions:

Press [BREAK] and type [?] [W] [I] [D] [T] [H] and press [ENTER]
Press [BREAK] and type [?] [L] [E] [N] [G] [T] [H] and press [ENTER]
Press [BREAK] and type [?] [M] [E] [M] [O] [R] [Y] and press [ENTER]
Press [BREAK] and type [?] [C] [U] [R] [S] [O] [R] and press [ENTER]
Press [BREAK] and type [?] [I] [N] [D] [E] [N] [T] and press [ENTER]

Type the last three instructions, and then TURN THE TAPE BACK ON.

Figure 2-3

Type this text:

TYPING ON THE RADIO SHACK TRS-80 WITH SCRIPSIT
IS REALLY EASY. NO MATTER WHAT THE TEXT IS,
YOU CAN TYPE IT QUICKLY AND EASILY. IF YOU
MAKE A TYPING MISTAKE, YOU CAN CORRECT IT BEFORE
PRINTING THE DOCUMENT. Press [ENTER] here

Figure 2-4

¶ TYPING ON THE RADIO SHACK TRS-80 WITH
SCRIPSIT IS REALLY EASY. NO MATTER quite
WHAT THE TEXT IS, YOU CAN TYPE IT
QUICKLY AND EASILY. IF YOU MAKE ae
S TYPING MISTAKE, YOU CAN CORRECT it them
BEFORE PRINTING THE DOCUMENT.

Review

Can you ask what is the current document length?

How do you change the video width?

How do you insert a line? A character?

How do you print?

Figure 2-5

To print this exercise:

1. Turn on the printer.
2. Check to be sure paper is inserted correctly.
3. Press [BREAK] .
4. Type a [P] . (If you are using a "serial" printer, type [P] [,] [S] [,] [P] .)
5. Press [ENTER] .

Figure 2-6

Figure 2-7

Video Parameters

Width — Press [BREAK], type [W][=][_] (1-132), and press [ENTER]. (The video width should be set for your convenience, but you might want to set it for the same number of characters that you want the printed format to have.)

Paragraph Indent — Press [BREAK] and type [I][=][_] (1-132, but less than width).

Tabs — Press [BREAK] and type [T][=][_][,][_][,][_][,][.][.][.] (1-132, but less than width).

Print Format Instructions

Format instructions are typed on a separate, "invisible" line (it's invisible when you print the document) that begins with the "greater than" symbol, >. The format line either must be the first line of the document or must follow a text boundary marker (the line symbol or the paragraph symbol are only two boundary markers you know about now, but there are other boundary markers). The instructions can be grouped together on a line or used individually when you want to make a change. If your keyboard has the lowercase modification, make sure your format instructions are typed in uppercase.

Left-hand Margin	[L][M][=][_]	(12 is the default)	60 character line.
Right-hand Margin	[R][M][=][_]	(72 is the default)	
Top Margin	[T][M][=][_]	(6 is the default)	
Bottom Margin	[B][M][=][_]	(60 is the default)	
Line Spacing	[L][S][=][_]	(1, or single spacing is the default)	
Page Length	[P][L][=][_]	(66 is the default, and you don't have to enter this unless you change to smaller or larger paper.)	

Your format line should look like this:

```
>LM=20 RM=50 TM=15 BM=50 LS=2 ■
```

Figure 3-1

Things you will do in this lesson:

- Exchange words and paragraphs
- Learn about new printing formats
  - — Changing the paragraph format
  - — Changing the horizontal format: justify, center, flush left, flush right
- Review the clear key
- Save text on a tape
- Load a recorded document onto the screen
- Learn about comment lines
- Learn about header blocks

Before you go any further:

If it's necessary, boot up the system and load SCRIPSIT.

When you finish, TURN THE TAPE BACK ON.

Figure 3-2

Type this text:

```
> LM=10 RM=60 TM=15 BM=60 ▪
TYPICAL DOCUMENTS ▪
   OFTEN PEOPLE TALK ABOUT "TYPICAL" WORD PROCESSING
DOCUMENTS.↵
   SOME SAY A FORM LETTER IS THE STANDARD WP
DOCUMENT.↵
   SOME THINK THAT LONG DOCUMENTS, LIKE MANUALS, ARE
"TYPICAL."↵
   MAYBE THE "TYPICAL" WORD PROCESSING DOCUMENT IS A
COMBINATION OF THESE DOCUMENTS. ▪
```

Figure 3-3

Make these text changes:

```
TYPICAL DOCUMENTS

   OFTEN PEOPLE TALK ABOUT "TYPICAL" WORD PROCESSING
DOCUMENTS.
   SOME SAY A FORM LETTER IS THE STANDARD WP
DOCUMENT.
   SOME THINK THAT LONG DOCUMENTS, LIKE MANUALS, ARE
"TYPICAL."
   MAYBE THE "TYPICAL" WORD PROCESSING DOCUMENT IS A
COMBINATION OF THESE DOCUMENTS.
```

Figure 3-4

Print Format Instructions

Paragraph Format	[>][P][F][=][–]	The number of lines to space between paragraphs. >PF=1 is the default, which means that new paragraphs begin on the first line after the paragraph symbol.
Center	[>][C][=][Y]	Print the following text centered. >C=N is the default.
Flush Right	[>][F][R][=][Y]	Print the following text flush right. >FR=N is the default
Justify	[>][J][=][Y]	Print the following text justified. >J=Y is the default.
Flush Left	[>][J][=][N] or [>][C][=][N] [F][R][=][N] [J][=][N]	Print the following text flush left.

Priority Sequence for Center, Flush Right, Justify, and Flush Left:

Sequence	Which Means
1. Center	C overrides all other instructions.
2. Flush Right	FR overrides J, flush left text, but not C.
3. Justify	J overrides flush left text.
4. Flush left	If all other format instructions are set to "N", text will print flush left.

Figure 3-5

Insert these format instructions:

>C=Y → TYPICAL DOCUMENTS

>C=N FR=Y → PEOPLE OFTEN TALK ABOUT "TYPICAL" WORD PROCESSING DOCUMENTS.

>C=N FR=N J=N → SOME THINK THAT LONG DOCUMENTS, LIKE MANUALS, ARE "TYPICAL."

>C=N FR=N J=Y → SOME SAY A FORM LETTER IS THE STANDARD WP DOCUMENT.

MAYBE THE "TYPICAL" WORD PROCESSING DOCUMENT IS A COMBINATION OF THESE DOCUMENTS.

Review

How do you exchange words? Paragraphs?

What is the priority sequence for centering, justifying, flush right, and flush left text?

How do you insert information at the beginning of a paragraph without deleting the indent?

Figure 3-6

Clear

1. Pressing [CLEAR] cancels an insert line. It deletes spaces and closes up the text.

2. Pressing [CLEAR] cancels an instruction "in progress". For example, to cancel a print operation, press [CLEAR] and the printer will stop.

3. Pressing [CLEAR] sometimes begins a new instruction. For example:

If you want to change this line symbol to a paragraph symbol,

1. Position the cursor over the line symbol.
2. Press [CONTROL] and the letter [D] together. DELETE COMMAND MODE appears on the message line.
3. Press [CLEAR] to cancel the message.
4. Press [CONTROL] and the letter [C] together to insert the paragraph symbol.

4. Pressing [CLEAR] reformats text. For example,

THEEND IS APPROACHING . . . ^ insert a space	THE END IS APPROACHING. . .

When you change long words at the beginning of a line into short words and then press [CLEAR] , and if there's room for the first short word at the end of the previous line, the short word will move up and the rest of the paragraph will wraparound.

Figure 3-7

Saving a Document

1. Position the cursor immediately after the last character of the document and delete any trailing blanks (press [CONTROL] and the letter [D] together, then [CONTROL] and the letter [F] together).

2. Connect the cassette recorder, insert a cassette (wind past leader), then press "RECORD" and "PLAY".

3. Press [BREAK].

4. Type an [S].

5. Press [ENTER]. The document begins to be recorded on the tape. A copy remains on the screen. When the recording is completed, the cassette recorder is automatically turned off.

6. If you want to verify that the save was accurate,

   a. Rewind the tape and press "PLAY".

   b. Press [BREAK].

   c. Type a [V].

   d. Press [ENTER]. The system will compare the recording with the information in the computer.

Loading a Document

1. Connect the cassette recorder, insert the cassette you want to load, position the tape at the start of the document, and press "PLAY".

2. Press [BREAK].

3. Type an [L].

4. Press [ENTER]. When the document is loaded, the cassette recorder is automatically turned off; any text that was on the screen disappears and is replaced by the document you selected. The first ten characters of the document appear below the message line. You can change your mind and stop the load at any time by pressing [CLEAR].

Figure 3-8

Printing a Document

If you're using continuous form paper:

1. Press [BREAK].
2. Type [P] (or [P] [,] [S]).
3. Press [ENTER] .

If you're using individual sheets of paper:

1. Press [BREAK] .
2. Type [P] [,] [P] (or [P] [,] [S] [,] [P]).
3. Press [ENTER]. When the first page is finished, printing stops and the message PRESS ENTER TO PRINT NEXT PAGE appears. Insert another sheet of paper and press [ENTER].

Figure 4-1

Things you will do in this lesson:

- Load documents from tape
- Print invisible lines
- Type a header block
- Save documents
- Type a footer block
- Type a page number block
- Change the screen width to match the print formats
- Hyphenate the text

Before you go any further,

1. If it's necessary, boot up the system and load SCRIPSIT.

2. Load the first exercise from the Training Tape.

   - Without rewinding, carefully remove the lesson tape.

   - Insert Training Tape.

   - If necessary, rewind tape.

   - Connect earphone and remote plug to tape player.

   - Press "PLAY" on tape player.

   - Press [BREAK] , type [L] , and press [ENTER] . When the document appears, rewind the tape and remove it. Disconnect earphone and remote plug from tape player, reinsert lesson tape, and press "PLAY" to continue listening to the lesson.

When you finish, TURN THE TAPE BACK ON.

Figure 4-2

The header for this document should be:

- Flush right with the same left- and right-hand margins as the document.
- The text should be REPORT ONE.
- REPORT ONE should be followed by two blank lines.

Header Blocks

Header blocks have two parts, the format instructions for printing and the text. You can prepare three kinds of header blocks: Even headers are printed on alternate pages beginning with the second page. Odd headers are printed on alternate pages beginning with the first page. Standard headers are printed on every page.

To enter a header block:

1. Press [CONTROL] and the letter [Q] (BLOCK) together. BLOCK COMMAND MODE appears in the message line.
2. Type an [H]. The block start marker and the letter H appear in the text line, and the message line changes to ODD, EVEN, OR STANDARD (O, E, OR S)?
3. Select the kind of block you want by typing an [O], [E], or [S]. The O, E, or S, followed by a "greater than" symbol, appear after the H.
4. Type the format instructions for the header. Press [ENTER] after the last one.
5. Type the text for the header. This can be as many as sixteen lines. Press [ENTER] after the last line of the header.
6. At the end of the header, press [CONTROL] and the letter [Q] together; then press [CONTROL] and the Down Arrow key ([↓]) together. The block end marker appears. (Remember that the block end marker must follow a text boundary marker.)

Figure 4-3

Print with Invisible Lines

To print the document with invisible lines:

1. Press [BREAK].
2. Type [P] [,] [I], [P] [,] [S] [,] [I], or [P] [,] [S] [,] [P] [,] [I]. The S, P, or I may be typed in any order.
3. Press [ENTER]. The document will be "listed" line for line as you typed it, including all comment and format lines. Format instructions will not be observed. Boundary marker symbols may differ depending on which printer you use. Experiment to see what your printer's symbols are.

Figure 4-4

Your printout should look like this:

```
>*SAMPLE EXERCISE FOR BLOCKS-WIDTH=50 CHARACTERS_
>PL=33 TM=3 BM=27 LM=20 RM=70 PF=2_
[HS>J=N C=N FR=Y_
REPORT ONE_
_
_
]_
DP VS WP_
$
     WHEN DATA PROCESSING FIRST BEGAN TO MAKE AN IMPACT ON
HOW BUSINESSES OPERATED, PEOPLE THOUGHT OF COMPUTERS AS
MYSTERIOUS, MAGICAL MACHINES.  THE COMPUTER ROOM BECAME AN
ISOLATED ENTITY WITH SPECIALISTS AND TECHNICIANS LOOMING
OVER REELS OF MAGNETIC TAPE AND WITH LINE PRINTERS CHURNING
OUT ENDLESS RIBBONS OF CONTINUOUS FORM PAPER. $
     THE MYSTERY CONTINUED AND TODAY COMPUTER ROOMS ARE
USUALLY LOCATED IN THE CENTER OF AN OFFICE, SURROUNDED BY
GLASS, WITH SPECIAL FLOORS TO SUPPORT THE HEAVY MACHINES
AND SEPARATE COOLING SYSTEMS TO INSURE THAT THE MACHINES
DON'T OVERHEAT. $
     WORD PROCESSING, ON THE OTHER HAND, HAS ALWAYS HAD A
FRONT OFFICE APPEAL.  MANAGERS, SECRETARIES, PROFESSIONALS,
AND ALL "WHITE COLLAR" WORKERS HAVE BEEN AFFECTED BY THE
INCREASED NUMBER OF WORD PROCESSING TYPING SYSTEMS. $
     THE TREMENDOUS STRENGTH THAT WORD PROCESSING HAS IS
BASED ON THE FACT THAT IT BECOMES A JOINING FORCE IN
COMPANIES.  WORD PROCESSING DRAWS PEOPLE TOGETHER. $
     DATA PROCESSING OPERATIONS TEND TO BE SEPARATE FROM
THE MAIN FLOW OF OFFICE WORK.  AND ALTHOUGH WE ALL RELY ON
THE OUTPUT FROM DATA PROCESSING COMPUTERS, WE ALL TEND TO
LOOK DOWN ON DATA PROCESSING OPERATIONS BECAUSE THEY ARE SO
ISOLATED. $
     IN THE NEXT FEW YEARS, HOWEVER, THIS SEPARATION WILL
COME TO AN END.  SINCE WORD PROCESSORS CAN NOW COMMUNICATE
WITH COMPUTERS OVER TELEPHONE LINES, THE TWO OPERATIONS ARE
BEGINNING TO GROW CLOSER TOGETHER.  IT'S HARD TO SAY WHETHER
DP AND WP WILL REMAIN THE SAME BECAUSE MORE AND MORE
COMPANIES ARE USING THEIR WP SYSTEMS AS MULTI-FUNCTION
SYSTEMS.  ONE TREND SUGGESTS THAT DP WILL BE ABSORBED UNDER
WP.  ANOTHER TREND SUGGESTS THAT BOTH DP AND WP WILL MERGE
WITH TELECOMMUNICATION SYSTEMS AND COME UNDER AN UMBRELLA
TITLE SUCH AS "INFORMATION SYSTEMS," OR "COMMUNICATIONS
DEPARTMENT."$
     NO MATTER WHAT HAPPENS, YOU ARE ALREADY IN THE
FOREFRONT OF AN EXCITING ELECTRONIC AGE.  YOUR TRS-80 WAS
DESIGNED TO PERFORM DATA PROCESSING FUNCTIONS EFFICIENTLY.
IT ALSO IS A VERY EFFECTIVE WORD PROCESSING SYSTEM.  WE
COMBINED THE OPERATIONS BECAUSE WE KNOW HOW QUICKLY THE
AUTOMATED OFFICE IS BECOMING A REALITY. _
```

Figure 4-5

The footer for this document should be:

- Centered with the same left- and right-hand margins as the document.
- Begun with two blank lines.
- The only text should be a page number.

Footer Blocks and Page Numbering Blocks

Footer blocks have the same two parts as header blocks — format instructions for printing and the text. Footer blocks can be typed to appear on even pages or odd pages. A standard footer appears on all pages.

Page numbering blocks instruct the computer to automatically print consecutive page numbers. The page numbering block is typed as part of a header or footer block.

When using a footer in a document that has a header, be sure there are no other characters between the close of the header and the opening of the footer. Otherwise a PAGE FORMATTING ERROR will result.

To enter a footer block that includes a page numbering block:

1. Press [CONTROL] and the letter [Q] (BLOCK) together. BLOCK COMMAND MODE appears in the message line.

2. Press [F]. The block start marker and the letter F appear in the text line, and the message line changes to ODD, EVEN, OR STANDARD (O, E, OR S)?

3. Select the kind of block you want by typing an [O], [E], or [S]. The O, E, or S, followed by a "greater than" symbol, appears after the F.

4. Type the instructions to format the footer, and then press [ENTER].

5. Type the text for the footer. At the place in the footer where you want a page number to appear, type a page number block.

   To type a page number block:

   a. Press [CONTROL] and the letter [Q] together, followed by the letter [P]. This opens the page numbering block. The page numbering block must appear within the header or footer block; otherwise, only one page number will be printed.

Figure 4-5 (continued)

b. Type up to five "pound" symbols ([#]). Each symbol represents one digit, and only "pound" symbols should be typed in the page numbering block. (If you type other information in the page number block and then try to print the document, the message PAGE NUMBER FORMAT ERROR will appear.)

c. Press [CONTROL] and the letter [Q] together, followed by [CONTROL] and the down arrow key ([↓]) together, to end the page numbering block.

6. Continue typing the rest of the footer. Then press [ENTER], followed by [CONTROL] and the letter [Q] together, and then [CONTROL] and the down arrow key ([↓]) together. The block end marker appears.

Figure 4-6

Hyphenation

Hyphenation enables you to adjust the number of characters that will appear on each printed line. This reduces the number of wide spaces that appear between words when the document is printed with justified margins.

Hyphenation is based on the number of characters that appear in each line, so before you begin to hyphenate a document (or a portion of the document), change the screen width to match the width of your printed line. (Press [BREAK] and type [W] [=] [–] [the number of characters between the left- and right-hand margin settings] and then press [ENTER]. Any text currently on the screen will be adjusted to the new screen width.)

If You Don't Change The Screen Width To Match Your Printed Width, The Document Will Not Be Hyphenated Or Printed Correctly.

To type the hyphenation block:

1. Position the cursor at the left edge of the line that you want to begin hyphenating. Then press [CONTROL] and type the letter [Q] simultaneously. BLOCK COMMAND MODE appears as a message.

   Hyphenation blocks must always start at the beginning of the document or immediately following a text boundary marker. If you start a hyphenation block somewhere else and then try to hyphenate, the message BLOCK NOT FOUND will appear.

2. Type a hyphen. (It's in the top row of the keyboard next to the [BREAK] key.) The block start marker, a hyphen, and the "greater than" symbol are inserted in the text.

3. Move the cursor to the end of the last line that you want to hyphenate and press [CONTROL] and the letter [Q] together, followed by [CONTROL] and the down arrow ([↓]) together. The block end marker appears.

4. Press [BREAK], type an [H], and press [ENTER]. HOT ZONE (2-10)? appears in the message line.

5. Type a number to indicate the number of characters in the hyphenation range (the smaller the number, the tighter the hyphenation range). Then press [ENTER].

6. The cursor moves back to the text. It appears within the first word that can be hyphenated and after the last character at which hyphenation can occur.

Figure 4-6 (continued)

To hyphenate:

1. If you want to hyphenate the word at this character, type a hyphen. The computer will insert a hyphen in front of the letter that the cursor is on and adjust the text. Then the cursor will move on to the next hyphenation point.

2. If the cursor is not at a correct hyphenation point in the word, move the cursor left ← until it is at an acceptable hyphenation point. Then type a hyphen.

3. If you don't want to hyphenate the word, press [ENTER] and the cursor will move to the next hyphenation point.

4. At the end of the block, the message HYPHENATION COMPLETE appears, and the cursor moves back to the beginning of the hyphenation block.

Removing Hyphens

If you want to go back and make changes to text that has already been hyphenated, delete the hyphens first. To do this:

1. If necessary, define the hyphenation block.

2. Press [BREAK].

3. Type [H] and press [ENTER].

4. Answer the HOT ZONE message by typing a [2]. The cursor moves to the first hyphenation decision, and the message PRESS ENTER TO CONTINUE appears.

5. Press [CLEAR].

Figure 5-1

Things you will do in this lesson:

- Type a title page
- Type a table of contents page using tabs
- Load a document and chain it to text on the screen
- Exchange, insert, and delete blocks
- Delete paragraphs and delete to the end of the text
- Type an odd and even header block
- Type a footer block with page numbering

Before you go any further:

If it's necessary, boot up the system and load SCRIPSIT.

When you finish, TURN THE TAPE BACK ON.

Figure 5-2

Type this text:

ANIMAL ANALYSIS
RESEARCH ON THE DEMISE
OF THE HIPPOPOTAMUS

Figure 5-3

Type this text using tabs that are set at 15 and 45:

CONTENTS		
SECTION 1	INTRODUCTION	23
SECTION 2	FINDINGS	24
SECTION 3	CONCLUSIONS	28

Tab-setting Instructions

Set All Tabs

Press [BREAK], type [T] [=] [–] [,] [–] [,] [–] [,] [–] [,] etc., and press [ENTER].
Or type [T] [A] [B] [=] [–] [,] [–] [,] [–] [,] [–] [,] etc., and press [ENTER].
Each number indicates a tab position. Tabs can be set at any character position from 1 to 132. Enter as many as needed. Dots appear in the white line at the specified settings.

Set One Tab

Position the cursor at the character position where you want a tab.

Press [BREAK], type [T] [S], and press [ENTER]. A dot appears in the white line at the cursor position.

Clear All Tabs

Press [BREAK], type [T] [A] [B], and press [ENTER]. All tab settings are deleted from the white line.

Clear One Tab

Position the cursor at the tab setting you want to clear.

Press [BREAK], type [T] [C], and press [ENTER]. The tab setting that the cursor was positioned on is deleted from the white line.

Figure 5-4

Tab Documents

Figuring Tab Positions

AAAAAAAAAAAAA BBBBBBBBBBBBB CCCCCCCCCCCCC

If you want the tabbed information to be evenly spaced between the columns, add up the longest entry in each column and subtract that from the total number of characters on the line. Then distribute those blank spaces evenly between each column.

Tabbing Across a Line

When you want to move the cursor to a tab position, press [CONTROL] and the right arrow key ([→]).

You cannot tab past a text boundary marker.

If no more tabs are set on the line, blank spaces will be added to the end of the line to fill it out to its maximum width. You can delete these blanks by placing the cursor over the second blank and using this command sequence: [CONTROL] [D] then [CONTROL] [F].

Figure 5-5

```
>C=Y VC=Y_
ANIMAL ANALYSIS_
RESEARCH ON THE DEMISE_
OF THE HIPPOPOTAMUS_
\
>C=N J=Y VC=N_
CONTENTS_
SECTION 1       INTRODUCTION                    23_
SECTION 2       FINDINGS                        24_
SECTION 3       CONCLUSIONS                     28_
\
>*HIPPO REPORT_
INTRODUCTION_
$
     AFTER CAREFULLY READING THE ARTICLE ENTITLED, "WHITHER
THE HIPPO?" I FEEL I MUST TAKE ISSUE WITH SOME OF THE
CONCLUSIONS AND ASSERTIONS REGARDING THIS CREATURE. $
     MY COMMENTS ARE ONLY SLIGHTLY BIASED BECAUSE I TRULY
BELIEVE THAT THE HIPPOPOTAMUS IS THE BEST EXAMPLE OF
NATURAL SELECTION AND SURVIVAL OF THE "FATTEST."_
\
FINDINGS_
$
     I MUST DISAGREE WITH THE CONTENTION THAT THE HIPPO IS
"A GREAT, HUGE, SLIMEY, DISGUSTING REPTILE WITH BIG TEETH."
THIS IS UTTER NONSENSE! IN POINT OF FACT, THE HIPPO IS A
GREAT, HUGE, SLIMEY, DISGUSTING MAMMAL WITH BIG TEETH. $
     AS REGARDS THE STATEMENT THAT THE HIPPOPOTAMUS IS
BECOMING EXTINCT: "BECAUSE IT LOST THE KEY TO ITS
APARTMENT, THE HIPPO WAS FORCED TO SPEND THE NIGHT
OUT-OF-DOORS. THIS UNFORTUNATE CIRCUMSTANCE LED TO ITS
DEVELOPING A COLD, WHICH TURNED INTO PNEUMONIA AND,
ULTIMATELY, LED TO THE ANIMAL'S DEATH." FOLLY AND ROT, I
SAY! $
     NOT HAVING ANY POCKETS, THE HIPPO UNDOUBTEDLY KEPT ITS
KEY ON A CHAIN AROUND ITS NECK; IT COULDN'T POSSIBLY HAVE
LOST IT. IT IS, I BELIEVE, MUCH MORE REALISTIC TO ASSUME
THAT THE CHAIN CAUGHT ON A TREE LIMB WHILE THE HIPPO WAS
JOGGING AND THAT THE CREATURE DIED OF STRANGULATION. THIS
CONCLUSION CAN, I'M SURE, BE UPHELD._
>*END THIS PAGE HERE AND LEAVE ROOM FOR A BLANK PAGE TO
ALLOW ROOM FOR ILUSTRATIONS._
\
CONCLUSIONS_
$
     THE ARTICLE "WHITHER THE HIPPO?" WAS PROBABLY WRITTEN
BY A PERSON WHO IS "ANTI" BIG CREATURES. THE SEVERAL
EXAMPLES THAT WERE CITED INCLUDED DEROGATORY COMMENTS ABOUT
ELEPHANTS, CAMELS, WHALES, AND GRIZZLY BEARS. $
     IT SEEMS THAT THE AUTHOR HAS NO POSITIVE FEELINGS FOR
ANIMALS BUT HE IS PARTICULARLY NEGATIVE ABOUT HIPPOS._
```

Figure 5-6

Inserting Blocks

To Insert (or Copy) a Block:

1. Surround the text that you want to insert with block markers.

   a. Position the cursor at the beginning of the text and press [CONTROL] and [Q] together. Then type a letter (any letter except H, F, or P — they are reserved for headers, footers, and page numbers). The block start marker, the letter, and the "greater than" sign are inserted in the text.

   b. Position the cursor at the end of the text you want in the block and press [CONTROL] and [Q] together. Then press [CONTROL] and the down arrow key ([↓]) together. The block end marker is inserted in the text.

2. Position the cursor at the place in the text that the block should be inserted.

3. Press [CONTROL] and [S] together, then [CONTROL] and [Q] together. Answer the message by typing the letter you assigned to the block. The text is inserted at the cursor position without any block markers.

4. If you want to insert the block somewhere else, repeat steps 2 and 3.

5. Unmark the block or delete it from its original position. To do this:

   a. Position the cursor on the block start marker.

   b. Press [CONTROL] and [D] together. DELETE OR UNMARK (D or U)? appears as a message.

   c. If you want to delete the information inside the block markers, press [D] . The text and the markers are deleted.

   d. If you want to remove just the block markers and not the text, press [U] . The block markers are removed but the text remains.

Figure 5-7

Deleting Blocks

To Delete a Block:

1. Surround the text that you want to delete with block markers.

   a. Position the cursor at the beginning of the text and press [CONTROL] and [Q] together. Then type a letter (any letter except H, F, or P). The block start marker, the letter, and the "greater than" sign are inserted in the text.

   b. Position the cursor at the end of the text you want in the block and press [CONTROL] and [Q] together. Then press [CONTROL] and the down arrow ([↓]) key together. The block end marker is inserted in the text.

2. Position the cursor on the block start marker.

3. Press [CONTROL] and [D] together. DELETE OR UNMARK (D or U)? appears as a message.

   a. If you want to delete the information inside the block markers, press [D] . The text and the markers are deleted.

   b. If you want to delete just the block markers and not the text, press [U] . The block markers are deleted but the text remains.

Exchanging Blocks

To Exchange Blocks:

1. Surround each set of text you want to exchange with block markers.

2. Position the cursor on the block start marker of the second block.

3. Press [CONTROL] and [E] at the same time. EXCHANGE COMMAND MODE appears as a message.

4. Press [CONTROL] and [Q] at the same time. Answer the message by typing the letter of the block you want to exchange this block with. The blocks are exchanged.

5. Unmark the blocks as explained above.

Figure 5-8

Page Numbering and Header and Footer Format Instructions

Start with a Specific Number	[P] [N] [=] [–]	This instruction usually appears with the overall document format and defines the number that the computer will begin numbering with.
Begin Header or Footer on a Specific Page	[H] [=] [–] or [F] [=] [–]	These instructions are usually included with the overall document format and instruct the computer to begin printing the header or footer on a specific page of the printout.
Cancel the Header or Footer for One (or More) Pages	[H] [=] [N] or [F] [=] [N]	These instructions are entered as a separate format line before the text of the page on which you want to cancel the header or footer. The header or footer will be canceled until you instruct the computer to begin the header or footer again.
Begin the Header or Footer Again with Odd or Even Text (Disregarding the Page Number)	[H] [=] [E] (or [O]) or [F] [=] [E] (or [O])	These instructions are entered as a separate format line before the text of the page on which you want to resume printing the header or footer.
Begin the Header or Footer with Odd or Even Text Depending on Page Number	[H] [=] [Y] or [F] [=] [Y]	

Note: Any format instructions you issue remain in effect until you cancel or change them.

Figure 5-9

Begin with the overall format information:

```
>*HIPPO REPORT – BEGIN WITH PAGE 21 ▪
>LM= – RM= – TM= – BM= – LS= – PF= – C=N FR=N J=Y PN=21 H=23 F=23 ▪
```

Add the header blocks next:

```
[HE> J=N C=N FR=Y ▪
ANIMAL ANALYSIS – HIPPO ▪
▪
]HO> J=N C=N FR=N ▪
ANIMAL ANALYSIS – HIPPO ▪
▪
]
```

Then add the footer block with the page number block:

```
[FS> J=N FR=N C=Y ▪
▪
PAGE [P> ##] ▪
]
```

Notes:

1. Be sure to type the space after the word "PAGE." Otherwise the page number will be printed as "PAGE24".

2. Don't press [ENTER] after typing the header or the footer block. Delete any trailing spaces ([CONTROL] [D] [CONTROL] [F]). When you load and chain the text after this information, be sure the C=Y VC=Y format line immediately follows the block end marker.

3. The vertical center instruction must appear first on the "printed" page; otherwise a PAGE FORMATTING ERROR message will appear when you type the print instruction. The line symbol isn't necessary after the block end marker, so if you press [ENTER] at the end of the footer block, the computer will think that the line symbol is the first line of the page and then alert you that this is an error.

4. For a description of rules to follow when entering headers and footers, see the "Notes For Advanced Users".

Figure 6-1

Things you will do in this lesson:

- Use the window command mode to look through the text
- Repeat instructions
- Make global changes
  - — Replace
  - — Delete
  - — Find
- Learn about copy markers
- Review the save, load, and print instructions

Before you go any further:

1. If it's necessary, boot up the system and load SCRIPSIT.

2. Load a copy of the original HIPPO document from the training cassette.

When you finish, TURN THE TAPE BACK ON.

Figure 6-2

Repeat

Repeat allows you to perform an instruction several times.

To Repeat an Instruction:

1. Press [CONTROL] and type the letter [R] at the same time. REPEAT HOW MANY TIMES? appears as a message.

2. Type a number between 2 and 255; then press [ENTER]. The message changes to ENTER REPEAT COMMAND. (If you want to repeat the instruction the maximum number of times, just press [ENTER].)

3. Type the instruction you want to repeat. (Any instruction can be repeated.) The computer will perform the instruction as many times as you specify.

Figure 6-3

Global Replace

The global replace instruction enables you to search for a string of characters (letters, symbols, numbers, or instructions) and then change that string to something else.

To Replace:

1. Position the cursor either at the beginning of the document or at the place in the text you want to begin the replace.

2. If you want to repeat the replace several times, type the repeat instruction.

   a. Press [CONTROL] and the letter [R] together; then type the number of times you want to repeat the instruction and press [ENTER]. By just pressing [ENTER], you can repeat up to the maximum of 255 times.

3. Press [BREAK].

4. Type an [R], a "greater than" symbol ([>]), and the string of characters you want to search for. Include spaces before or after words, punctuation, or any instructions that make the string unique.

5. Type another "greater than" symbol and then type the replace string. If you included spaces before or after words in the search string, be sure to include them as a part of the replace string.

6. Press [ENTER]. The cursor moves back to the text area, and the system looks for the first characters that match the search string. When a match is found, the characters are replaced.

   a. If the repeat instruction was typed first, the system continues to search and replace according to the repeat number.

7. The search and replace strings remain in memory until you enter a new global instruction. So if you want to continue the same replace instruction, just press [BREAK], type an [R], and press [ENTER].

Global Delete

The global delete instruction allows you to search for a string of characters (letters, symbols, numbers, or instructions) and delete them from the text.

To Delete:

1. Position the cursor either at the beginning of the document or at the place in the text you want to begin the deletion.

2. If you want to repeat the delete several times, type the repeat instruction.

Figure 6-3 (continued)

a. Press [CONTROL] and the letter [R] together; then type the number of times you want to repeat the instruction and press [ENTER]. By just pressing [ENTER], you can repeat up to the maximum of 255 times.

3. Press [BREAK].

4. Type a [D], a "greater than" symbol ([>]), and the string of characters you want to delete. Make the string as specific as possible.

5. Press [ENTER]. The cursor moves back to the text area, and the system looks for the first characters that match the search string. When a match is found, the information is deleted.

   a. If the repeat instruction was typed first, the system continues to search and delete according to the repeat number.

6. The delete string remains in memory until you enter a new global instruction. So if you want to continue the same delete instruction, just press [BREAK], type a [D], and press [ENTER].

Global Find

The global find instruction allows you to look for a string of characters. Find is used either to identify where a particular instruction was typed or to verify a unique spelling.

To Find a String of Characters:

1. Position the cursor at the beginning of the document, or at the place in the text you want to begin the find.

2. Press [BREAK].

3. Type an [F], a "greater than" symbol ([>]), and the string of characters you want to find. You should make the string as specific as possible. However, if you want to check for possible variations of the string, type a question mark for the character that might change. This wild card option expands the search possibilities.

4. Press [ENTER]. The cursor moves back to the text area, and the system looks for the first characters that match the find string (with all variations of the wild card option). When a match is found, the cursor appears at the beginning of the string.

5. The find string remains in memory until you enter a new global instruction. So if you want to continue the same find instruction, just press [BREAK], type an [F], and press [ENTER].

Note: If you precede the find instruction with a repeat instruction, the TRS-80 will tell you how many times the word occurs in the text, rather than stopping on the first occurrence.

Figure 6-4

Make these changes in the HIPPO/UC or HIPPO/LC document. Then print a copy of the revised document:

1. Delete all page markers.

2. Replace the five-space paragraph indent with seven spaces.

Figure 6-5

Additional Print Instructions

Copy markers allow you to define a specific amount of a document that is to be printed.

To Use Copy Markers:

1. Position the cursor at the place in the document where you want to begin printing. (This usually occurs at the beginning of a line.)

2. Press [BREAK], type the letter [C], and press [ENTER]. An up-pointing arrow appears in the text. Printing will begin at this character.

3. Position the cursor at the end of the information you want to be printed. Then press [BREAK], type the letter [C], and press [ENTER]. Another up-pointing arrow appears. The second copy marker must follow a text boundary marker.

4. When the document is printed, only the information that appears between the copy markers will be printed.

   a. If you only type one copy marker, the printout will begin at the first copy marker and continue to the end of the document.

Note: If you want to delete a copy marker, position the cursor on the up arrow and then press [CONTROL] and type the letter [D] at the same time.

[P][=][Y] (or [N])
Y is the default.

Suppress Printing Temporarily allows you to bypass a specific amount of text when the document is printed. The instruction can either be included with other format instructions or inserted in the text before the text that is affected. Remember to enter the instruction twice — once to suppress printing ([P][=][N]) and again at the place where you want to resume printing ([P][=][Y]). The instruction must follow a text boundary marker and a greater than (">") sign.

Widow Suppress [W][S][=][Y] (or [N]) Y is the default.

Widow suppress instructs the computer to override the bottom margin while printing a page — if the last line of the page begins a new paragraph. The instruction can either be included with the other format instructions or inserted in the text before the pages that are affected.

Figure 6-6

Save Instructions

Save

1. Prepare the tape and set it to "RECORD".
2. Press [BREAK].
3. Type [S].
4. Press [ENTER].
5. To verify the save:
   a. Rewind the tape and set to "PLAY".
   b. Press [BREAK].
   c. Type a [V].
   d. Press [ENTER].

Load Instructions

Load

1. Prepare the tape and set to "PLAY".
2. Press [BREAK].
3. Type an [L].
4. Press [ENTER]. The document loads from the tape, and the first ten characters of the document appear as a message.

Load and Chain to the End of the Text on the Screen

1. Press [BREAK].
2. Type an [L], a [.], and a [C].
3. Press [ENTER].

Figure 6-7

Print Instructions

Print

1. Press [BREAK].
2. Type a [P].
3. Press [ENTER].

Print Serially Through an RS-232 Interface

1. Press [BREAK].
2. Type [P] [.] [S].
3. Press [ENTER].

Print Invisible Lines

1. Press [BREAK].
2. Type [P] [.] [I].
3. Press [ENTER].

Print with a Pause After Each Page

1. Press [BREAK].
2. Type [P] [.] [P] (or [P] [.] [S] [.] [P]).
3. Press [ENTER]. At the end of each page, printing is interrupted and the message PRESS ENTER TO PRINT NEXT PAGE appears. Insert another sheet of paper and press [ENTER].

Instruction Summary

Blocks	
Start/Name a Block	Press [CONTROL] and [Q] together. Then type a letter to name the block (any letter except H, F, or P).
Headers	Press [CONTROL] and [Q] together. Then type the letter [H] and either [O], [E], or [S].
Footers	Press [CONTROL] and [Q] together. Then type the letter [F] and either [O], [E], or [S].
Page Numbers	Press [CONTROL] and [Q] together. Then type the letter [P]. Type up to five "pound" symbols ([#]) for the page number.
Hyphenation	Press [CONTROL] and [Q] together. Then type a hyphen.
End the Block	Press [CONTROL] and [Q] together. Then press [CONTROL] and the down arrow key ([↓]) together.
Comment Lines	If the characters [>] [*] follow a text boundary marker, all text up to the next boundary marker will be treated as a comment and ignored on the printout.
Copy Markers	Press [BREAK] . Type [C] and press [ENTER] . An up-pointing arrow appears in the text at the current cursor position. The first marker indicates the first character to be printed; the second marker indicates the last character to be printed.
Cursor Movement	
Left	Press the left arrow key ([←]). Alternate instruction: Press [CONTROL] and [A] together.
Right	Press the right arrow key ([→]). Alternate instruction: Press [CONTROL] and [F] together.
Up	Press the up arrow key ([↑]).
Down	Press the down arrow key ([↓]).
Beginning of a Line	Press [SHIFT] and left arrow key ([←]) together.
End of a Line	Press [SHIFT] and right arrow key ([→]) together.
Beginning of Document	Press [SHIFT] and up arrow key ([↑]) together. Alternate instruction: Press [CONTROL] and up arrow key ([↑]) together.
End of Document	Press [SHIFT] and down arrow key ([↓]) together. Alternate instruction: Press [CONTROL] and down arrow key ([↓]) together.

Beginning of Display	Press [CONTROL] and [W], then [CONTROL] and up arrow ([↑]).
Delete	
Character	Position cursor on character and press [CONTROL] and [D] together.
Word	Position cursor on any character in the word and press [CONTROL] and [D] together. Then press [CONTROL] and [Z] together.
Sentence	Position cursor on any character in the sentence and press [CONTROL] and [D] together. Then press [CONTROL] and [X] together.
Trailing Blanks or Contiguous Blanks	Position cursor on blank character and press [CONTROL] and [D] together. Then press [CONTROL] and [F] together.
Paragraph	Position the cursor on any character in the paragraph and press [CONTROL] and [D] together. Then press [CONTROL] and [C] together. Answer the message by pressing [Y] to delete or [N] to cancel the instruction.
Block	Position the cursor on the block start marker and press [CONTROL] and [D] together. Answer the message by pressing [D] to delete the block, [U] to unmark the block, or [CLEAR] to cancel the instruction.
To End of Text	Press [CONTROL] and [D] together, and then [CONTROL] and the down arrow key ([↓]) together. Answer the message by pressing [Y] to delete from the cursor position to the end of the document or [N] to cancel the instruction.
Exchange	
Word	Position the cursor on the second word of the two you want to exchange and press [CONTROL] and [E] together. Then press [CONTROL] and [Z] together.
Paragraph	Position the cursor on the second paragraph of the two you want to exchange and press [CONTROL] and [E] together. Then press [CONTROL] and [C] together.
Block	Position the cursor on the block start marker of one of the blocks you want to exchange and press [CONTROL] and [E] together, then [CONTROL] and [Q] together, and finally the letter of the block you want to exchange this block with.
Insert	
Character	Position the cursor at the insert point, press [CONTROL] and [S] together, and then type the missing character.
Line	Position the cursor at the insert point and press [CONTROL] and [S] together. Then press [CONTROL] and [X] together. Type the new information and press [CLEAR] to close up the line.

Block	Position the cursor at the insert point and press [CONTROL] and [S] together, then [CONTROL] and [Q] together, and finally the letter of the block you want to insert. The text is inserted without any block markers.

Print Format Instructions

[P][L][=][–]	Page length–66 is the default.
[L][M][=][–]	Left-hand margin–12 is the default.
[R][M][=][–]	Right-hand margin–72 is the default.
[T][M][=][–]	Top margin–6 is the default.
[B][M][=][–]	Bottom margin–60 is the default.
[P][F][=][–]	Paragraph format — (line spacing between paragraphs). 1 is the default.
[L][S][=][–]	Line spacing–1 is the default.
[J][=][Y] (or [N])	Justify–Y is the default.
[C][=][Y] (or [N])	Center–N is the default.
[F][R][=][Y] (or [N])	Flush Right–N is the default.
[V][C][=][Y] (or [N])	Vertical Center–N is the default.
[P][=][Y] (or [N])	P=N suppresses printing temporarily –Y is the default.
[W][S][=][Y] (or [N])	Widow Suppress–Y is the default.
[H] or [F][=][–]	Page number on which first header or footer should appear.
[H] or [F][=][Y] (or [N])	Turn header or footer off or on.
[H] or [F][=][E] (or [O])	Print odd or even header or footer on the next page (disregarding page number).
[P][N][=][–]	Begin page numbering with a specific number.

Notes: Any format commands that change the page boundaries — [T][M], [B][M], [V][C], [P][L], [P][N], [H], [F] — must precede the text for a new page. They must be placed at the start of text or after a page boundary marker (↓). Otherwise a PAGE FORMATTING ERROR will appear when you print the document.

Repeat	Press [CONTROL] and [R] together. Answer the message by typing the number of times you want to repeat an instruction (2-255) and then press [ENTER]. Pressing [ENTER] alone repeats the instruction 255 times. Answer the next message by typing the instruction you want to repeat.
Special Command Mode System Status Questions — Width	Press [BREAK], type [?][W] or [?][W][I][D][T][H], and press [ENTER].

— Length	Press [BREAK] . Type [?][L] or [?][L][E][N][G][T][H] and press [ENTER] .
— Memory	Press [BREAK] . Type [?][M] or [?][M][E][M][O][R][Y] and press [ENTER] .
— Cursor Position	Press [BREAK] . Type [?][C] or [?][C][U][R][S][O][R] and press [ENTER] .
— Indent	Press [BREAK] . Type [?][I] or [?][I][N][D][E][N][T] and press [ENTER] .

Set Video Parameters

— Width	Press [BREAK] . Type [W][=][–] (1-132) and press [ENTER] .
— Indent	Press [BREAK] . Type [I][=][–] (1-132, but less than width) and press [ENTER] .
— Set Tabs	Press [BREAK] . Type [T][A][B][=][–][,][–][,][–][,] etc. (1-132, but less than width) and press [ENTER] .
— Set One Tab	Position cursor on a character at the desired tab position. Press [BREAK] . Type [T][S] and press [ENTER] .
— Clear Tabs	Press [BREAK] . Type [T][A][B] and press [ENTER] .
— Clear One Tab	Position cursor on a character at that tab position and press [BREAK] . Type [T][C] and press [ENTER] .

Hyphenation

Set screen width equal to the printing width. Surround text to be hyphenated with block markers. The block must be named by [–] . Press [BREAK] . Type [H] and press [ENTER] . Answer HOT ZONE message by typing a number between 2 and 10. All previously inserted hyphens are removed, and cursor stops at first hyphenation point. Type a hyphen to hyphenate at that point, or move the cursor left and then type a hyphen. Press [ENTER] to leave the word as is, and go on to the next decision.

Global Changes

— Replace	Press [BREAK] . Type [R] and [>]. Type the search string. Type [>]; then type the replace string and press [ENTER] . At the first match, the replacement is made.
— Delete	Press [BREAK] . Type [D] and [>]. Type the string and then press [ENTER] . At the first match, the string is deleted.
— Find	Press [BREAK] . Type [F] and [>]. Then type the string and press [ENTER] . The cursor appears at the beginning of the first match.

Note: After typing the replace, delete, or find strings, the strings remain in memory until you change them. You can enter the instruction again without typing the strings by pressing [BREAK] , typing [R] , [D] , or [F] , and then pressing [ENTER] .

Save/Load/Print	
— Save	Press [BREAK]. Type [S] and then press [ENTER].
— Load	Press [BREAK]. Type [L] followed by a space. Type document name and then press [ENTER].
— Chain	Press [BREAK]. Type [L] [,] [C] and press [ENTER]. Text appears at the end of the text on the screen.
— Print	Press [BREAK]. Type [P] and press [ENTER].
— Print to Serial Port	Press [BREAK]. Type [P] [,] [S] and press [ENTER].
— Print with Invisible Lines	Press [BREAK]. Type [P] [,] [I] (or [P] [,] [S] [,] [I]) and press [ENTER].
— Print/ Pause for Paper	Press [BREAK]. Type [P] [,] [P] (or [P] [,] [S] [,] [P]) and then press [ENTER]. After each page is printed, insert new paper and press [ENTER] to print the next page.
Shift Lock	(Used with lowercase keyboard.) Press [SHIFT] and [CONTROL] together. Press [SHIFT] and [CONTROL] together again to resume lowercase typing.
Text Boundary Markers	
— Line	Press [ENTER]. (Alternate instruction: [CONTROL] and press [X].)
— Paragraph	Press [CONTROL] and [C] together. The current paragraph is ended, and the system inserts the blank spaces for the paragraph indent at the beginning of the next line. When the document is printed, the paragraph symbol instructs the printer to add the number of lines in the paragraph format.

— Page	Press [CONTROL] and [V] together. The page will end at this point when the document is printed.
Window Motion	Press [CONTROL] and [W] together. Press cursor up, down, left, or right and the text on the screen moves while the cursor holds its place in the text. [CONTROL] [↑] moves the cursor to the beginning of the display; shift left arrow or shift right arrow scrolls the text to the left-hand or right-hand margin. Cancel by typing another instruction or pressing [CLEAR] .

Notes For Advanced Users

A. How SCRIPSIT Uses Blanks

Starting New Lines

The first time SCRIPSIT is working for you and you ask it for the length of the "document" in memory, you may be surprised to find that even though you haven't typed a single character, SCRIPSIT insists you have a document length of 6Ø.

In fact, you actually have 6Ø characters of document in the text buffer, but they are all blanks. Because overwriting is so much faster than inserting every new character, SCRIPSIT avoids inserting whenever possible. It does this by anticipating each new line and filling it with blanks before you start writing on it.

At first, the concept of blanks is confusing because of the simple fact that when you try to look at one, you see nothing. If what you are seeing, then, is really a blank, how do you distinguish a legitimate character — which can be inserted, deleted, or printed — from the background of the video display — which may as well not exist as far as SCRIPSIT is concerned?

The answer to this question is simple. When you first get SCRIPSIT running, go ahead and try to move the cursor from that first blank line. No, it is not stuck. SCRIPSIT was designed so that the cursor could be placed over legitimate characters only. Blanks count, but the rest of the screen may as well not exist — until you write something on it.

When you try to move the cursor past the end of a line, you will notice that the cursor doesn't go as far as the right-hand margin. This is because if it sees no characters or blanks, it sees nothing at all. For the same reason, when you move the cursor up or down, it jumps to the end of a line if that line is shorter than the last line it was on. It can't move straight up or down if it has nowhere to go.

Occasionally, you will find yourself ready to type in some new text but unable to move the cursor past the end of the last line. This will happen if a new line has not been opened up. The remedy is easy — either do it yourself by executing an "insert line" instruction, or just start typing and let SCRIPSIT do it for you.

Trailing Blanks

Blanks are harmless — and as long as you take a few precautions, they will serve you well. First, beware of blanks trailing at the ends of lines. From the end of the last word on each line, you should be able to move the cursor right twice before it drops down to the beginning of the next line. (This does not apply to lines that end with text boundary markers.) The first position is the blank that naturally follows every word; the second is a "no man's land" position that SCRIPSIT maintains as it keeps track of the cursor. Incidentally, when the cursor is in this position, it is treated as though it were on the first character of the next line when executing instructions such as insert and delete.

If you have too many blanks at the end of a line, you will encounter problems later if you try to edit or re-format that section and suddenly find the unwanted blanks filling

the middle of a line. Since executing a Tab instruction ([CONTROL] [→]) inserts blanks when it passes the last character of any line, do not use this instruction to move the cursor to the end of the line. Always use the shift right arrow command.

You should also be aware of the way in which blanks can accumulate at the end of your document. You will usually end up with one blank line after you finish typing all your text (you may have more or less, depending on how much inserting and deleting you do). It is a good practice to end every document with a text boundary marker and execute a "delete blanks" instruction ([CONTROL] [D], [CONTROL] [F]) after the marker to close up the unwanted space. This is especially important when "chaining" documents (loading a second document so that it immediately follows the first). If the first document has those trailing blanks, they cease to be trailing blanks but instead become ugly space once the second document has been loaded.

How Clearing Deletes Blanks

Whenever the system opens up a new line — and whether it does so in response to your "insert line" command or on its own (as it does every time you type past the end of a line) — the system remembers that a line has been opened. The next time you press the [CLEAR] key, it checks to see if a line has been opened, and if it has, it tries to close it. This is why you can insert some text so easily into the middle of the line via the insert line command and then close up the line again with the [CLEAR] key. As long as the cursor is on a blank, that blank and all contiguous blanks are deleted. If the cursor is over another character, nothing happens. Therefore, if you move the cursor off the line you are typing, be careful when using the [CLEAR] key. If the cursor happens to be over a blank, chances are good that the blank will be deleted.

B. How SCRIPSIT Uses TRS-80 Memory Space

Memory Allocation

You are probably aware that your system contains a fixed amount of memory — either 16K, 32K, or 48K. These measurements are made in "bytes" — the "K" stands for kilo, which is the metric equivalent of one thousand. In SCRIPSIT terms, one byte of memory equals one character of text that will fit in the text buffer. The size of your TRS-80's memory will determine how large a document you can work with at one time. This doesn't prevent you from working with a document larger than will fit into the text buffer, but in order to do this, you will have to divide it into sections and treat each section as a separate document.

When you ask SCRIPSIT to tell you how much memory you have left (by pressing [BREAK] and typing [?] [M]), it is identifying the total number of characters available to you in the text buffer. This will never be the full 16K, 32K, or 48K that your system contains, because SCRIPSIT itself requires a certain amount of memory. Internally, SCRIPSIT uses one extra character of memory for each line of text you have. When you re-format your text to a narrower width, you will find its length ([BREAK], [?], [L]) to be the same, yet less memory will be available to you. Conversely, wider formatted text uses less space. That is why SCRIPSIT may occasionally tell you it is "out of room" when you attempt to re-format the screen to a narrower width.

Filling Up the Text Buffer

Because SCRIPSIT inserts blank lines as it goes, you may find yourself running out of room even though SCRIPSIT says you have a few dozen characters left. When you are this close to filling up the text buffer, it is time to save what you have and start a new section.

"Work Space" Requirements

The exchange instructions require some free memory for use as "work space". Generally, the greater the difference in size between the two blocks or paragraphs being exchanged, the greater the requirement for extra memory. If there is not enough memory to make the switch, SCRIPSIT will display a NO MORE ROOM message and refuse to execute the instruction.

Formatting Large Amounts of Text

If you have enough text to fill a 32K system (or one even larger), you may find that it takes a few seconds to format the entire text. "Formatting" text in this sense is simply the process of counting each line to determine where it should end and where the next line should begin. SCRIPSIT always assumes that text behind the cursor has been formatted but text in front of the cursor has not. So each time you bring a new line of text onto the video display, it must be formatted. When you execute the cursor to end-of-text instruction ([SHIFT] and [↓]) SCRIPSIT formats everything from the cursor on. If you are working with a large amount of text, either be patient or use this instruction sparingly.

C. SCRIPSIT Command Syntax

Command syntax is the set of rules that any program observes in executing written commands. SCRIPSIT deals with four types of written commands: format lines, comment lines, headers and footers, and "special" commands.

Format Lines

In order for SCRIPSIT to recognize a format line at all, it must start with a "greater than" sign and be placed in one of the following three locations: immediately following a text boundary marker, as the first character of text, or following the closing marker of a header or footer block. A text boundary marker is a line symbol, a paragraph symbol, or a page symbol. A format line can be any length — it may occupy more than one line on the screen — and is terminated by another boundary marker. All format commands must be in uppercase. For a list of valid format commands, refer to the Instruction Summary earlier in this Manual. The individual commands may be separated by commas, blanks, or any combination of the two. A violation of these rules will result in a FORMAT LINE ERROR message when printout is attempted. Format commands that affect page parameters are illegal if placed in a format line that does not precede a new page. These commands are [T][M], [B][M], [V][C], [P][L], [P][N], [H], and [F].

Comment Lines

Comment lines must begin with a "greater than" sign followed by an asterisk ([>][*]). The "greater than" sign must immediately follow a text boundary marker or a header or footer block, or it must be the first character of text. As with format lines, comment lines may be of any length. They are terminated by the next text boundary marker.

Headers and Footers

The rules of syntax are the same for headers as they are for footers. Both must precede the text of the page on which they take effect — thus they must be placed at the start of text or immediately following a page marker (down arrow). They are labeled as blocks with the designation H or F, followed by O, E, or S. The first line of the header or footer block is read as a format line and terminates with a text boundary marker. This line need not include format commands but must include the boundary marker. (Thus, if you do not wish to give your header or footer a special format, just insert a boundary marker after the "greater than" sign.) The actual text of the header or footer follows this marker and must not exceed sixteen lines. The last line of text must be terminated by another boundary marker, followed by a block close marker to designate the end of the header or footer. If this last boundary marker is missing, SCRIPSIT will miss the block close marker and return a HEADER OR FOOTER TOO LONG message when printout is attempted. The commands just listed that affect page parameters may not be used within headers or footers.

Page Numbers

A page number consists of a block designated P that contains between one and five "pound" symbols, depending on the maximum number of digits in the page number. Any character inside the block that is not a "pound" symbol will cause a PAGE NUMBER FORMAT ERROR message upon printout.

Special Commands

All "special" commands (accessible through the [BREAK] key) may be spelled out or abbreviated by their first character. In the [T][A][B][=][–][–][–][–] command, individual tab settings may be separated by commas, blanks, or any combination of both.

The print command consists of the word (or abbreviation) [P][R][I][N][T] , which may be followed by one or more "switches". These switches tell SCRIPSIT to do something special, such as print "invisible" characters, use a serial printer, or pause between pages. Switches may be entered in any order, with each preceded by a comma.

D. Data Storage Formats

This section is intended to provide technical assistance to programmers who wish to use SCRIPSIT text files in other programs or who wish to make their own data files readable by SCRIPSIT.

Data Storage in Memory and Tape

SCRIPSIT data is stored as a continuous ASCII string. Normally, bit 7 of all "invisible" characters is set. Invisible characters consist of the three text boundary markers, block open and close markers, block titles (the alphanumeric descriptor and "greater than" sign), copy markers, and hyphens inserted by the hyphenation instruction. Although format and comment lines do not print out, they are not stored as "invisible" characters. The SCRIPSIT load command examines text as it is being loaded and sets bit 7 of every control byte.

Following is a table of control codes as they appear in text files created by the [S] [A] [V] [E] command.

Character	Hex Value
New Line	8DH
New Paragraph	8EH
New Page	8CH
Block Open	97H
Block Close	9BH
Copy	8BH

Characters found in a text file that are not recognized by SCRIPSIT are displayed on the screen as back arrows and printed out as blanks.

Tape files are stored in modules, each preceded by a count byte and terminated by a checksum.

Explanations of SCRIPSIT Error Messages

Message: NO MORE ROOM
Possible causes:

A. The text buffer was written to within a few characters of being full. No new text will be accepted.

B. The opening of a new line would have caused the text buffer to overflow. Even though the [?] [M] command shows some free memory left, the new line will not be opened (see "How SCRIPSIT Uses Blanks").

C. An exchange instruction required more memory for "work space" than was available (see "How SCRIPSIT Uses TRS-80 Memory Space").

D. A load was attempted from tape and the entire document would not fit in the text buffer. If a "chain" switch was appended to the load command, any text previously in the buffer will be kept. Otherwise the buffer will be cleared.

E. An attempt was made to reformat text to a narrower line width, but the reformatted text would not fit in the buffer (see "How SCRIPSIT Uses TRS-80 Memory Space").

Message: INVALID COMMAND
Possible causes:

A. The [CONTROL] key was pressed with a non-labeled key.

B. A command sequence not recognized by SCRIPSIT was attempted (e.g., [CONTROL] [Q], [CONTROL] [↑]).

C. A syntax error was found in a "special" command (e.g., [P] [R] [I] [N] [T] [.] [I] [S] [.] [P]).

D. An invalid parameter was used in a special command (e.g., [T] [A] [B] [=] [1] [4] [5]).

Message: BLOCK NOT FOUND
Possible causes:

A. An attempt was made to insert or exchange a non-existent block.

B. Hyphenation was attempted without properly designating the block of text to be hyphenated. The block must be labeled with a hyphen, and the opening marker must immediately follow a text boundary marker.

Message: MARKER ERROR
Possible causes:

A. An attempt was made to insert, exchange, delete, or unmark a block that was opened but not closed. There must be one end marker for each labeled block in text.

B. Printout was attempted without closing a header, footer, or page number block.

C. Hyphenation was attempted on a block that was opened but not closed.

Message: CURSOR WITHIN BLOCK
Possible cause: An attempt was made to insert a block within itself or exchange two blocks wherein one contained the other.

Message: TAPE LOADING ERROR
Possible cause: A tape was misloaded. When this error is detected, loading immediately stops and current text buffer is displayed on the screen. If the "chain" switch was used, the buffer will be intact; otherwise it will be cleared.

Message: NO SEARCH KEY
Possible cause: The search string was omitted in a global find/replace/delete instruction ([BREAK], then [F], [R], or [D]) without having specified one previously.

Message: NO REPLACEMENT TEXT
Possible cause: The replacement string was omitted in a global replace instruction ([BREAK], then [R]) without having specified one previously.

Message: LINE TOO LONG
Possible cause: Because "invisible" characters (such as block markers) are not counted in the 132-character maximum line width, it is possible for the actual length of a line to exceed 255 characters. In the unlikely event that this should happen, the line will be formatted to 255 and the excess characters placed on the next line.

The Following Messages Can Occur on Printout Only

Message: FORMAT LINE ERROR
Possible causes:

A. A non-existent format instruction was included in a format line (e.g., [P][S][=][6][6] or [W][=][Y]).

B. A syntax error was committed in a format line (e.g., [P][L][=][6][6][W][S][=][Y] or [P][L][=][ ][6][6]).

C. An invalid parameter was used in a format instruction (e.g., [T][M][=][Ø] or [P][L][=][1][3][2]).

Message: MARGIN FORMAT ERROR
Possible causes:

A. The left-hand margin was specified to be greater than or equal to the right-hand margin, or the top greater than the bottom.

B. The bottom margin setting is greater than the page length setting.

C. The top and bottom margins were set too narrow for the header and footer to fit on the page.

Note: Be wary of default settings when changing a single margin parameter without changing others. For instance, setting the page length to 45 to accommodate smaller paper will result in this error if the bottom margin remains at its default setting of 6Ø.

Message: PAGE NUMBER OVERFLOW
Possible cause: The incrementing of a page number forced it over 65,535. If a page number is initialized too large in a format instruction (via [P][N][=][6][5][5][3][6] or greater), this message will not occur — rather, the page number will be initialized incorrectly.

Message: PAGE NUMBER FORMAT ERROR
Possible causes:

A. A page number block contains characters other than "pound" (#) symbols.

B. Not enough "pound" symbols were allotted in a page number block; this created a line wider than what had been specified.

Message: HEADER OR FOOTER TOO LONG
Possible causes:

A. The formatted length of a header or footer was greater than sixteen lines. This includes line spaces.

B. The block end marker for a header or footer was not preceded by a text boundary marker.

Message: PAGE FORMATTING ERROR
Possible causes:

A. A page format instruction ([T][M], [B][M], [V][C], [P][L], [P][N], [H], or [F]) was used in a format line that was *not* located at the start of text, immediately following a header or footer block, or immediately following a page boundary marker (down arrow).

B. One of the page format instructions just listed was used to format a header or footer.

Message: LINE PRINTER NOT READY
Possible cause: The printer is turned off, deselected (off line), out of paper, improperly connected to Expansion Interface, or in some other condition that prevents it from printing. When using a printer connected to the parallel port (the rear left-hand opening of the Expansion Interface), this message remains on the message line until the problem is corrected or the [CLEAR] key is pressed. If [CLEAR] is not pressed, printing begins as soon as the problem is corrected. If the comma-S switch was appended to the Print command, SCRIPSIT returns to overwrite mode when this error occurs. The Print command must be re-entered after the problem has been corrected.

Message: RS-232 INTERFACE NOT READY
Possible cause: The comma–S switch was appended to the Print command, and the Expansion Interface either is not equipped with an RS-232 interface or the RS-232 is improperly connected.

The following assembly language routines allow you to customize your copy of SCRIPSIT to drive a printer which is otherwise incompatible with SCRIPSIT. There are two routines listed below. Use the first if you have a printer connected to a parallel port, and the second with a serial port. When executed from DOS, each routine first loads SCRIPSIT from Disk, makes the necessary modifications to SCRIPSIT in memory, then jumps to SCRIPSIT's entry point.

Each routine leaves two openings for you to fill in: initialize the printer and send a character to the printer. The initialization routine is executed the first time you request a printout from SCRIPSIT or if you request a printout after halting the previous one via the [CLEAR] key. SCRIPSIT will still initialize the RS-232 interface according to the switch settings. You need not insert any code between the second set of asterisks if you have no special initializing to do.

When writing your driver routine for insertion between the first set of asterisks, keep the following in mind: when SCRIPSIT executes your code, the character to be sent to the printer will be in register A. Your routine should send the character to the printer and return to SCRIPSIT with the character still in A and all other registers intact. Enter the routines into RAM using DEBUG with the DUMP command from DOS or use the Editor/Assembler and store the object code to disk as a command file using TAPEDISK from DOS.

Once you have stored the routine on disk, always type its name instead of "SCRIPSIT/LC" or "SCRIPSIT/UC". For example, suppose you store the routine to disk under the file name "DRIVER/CMD". From now on, when you wish to use SCRIPSIT, boot up the system and when you see DOS READY type the command [D][R][I][V][E][R] . As long as SCRIPSIT is on the same diskette, your program will load SCRIPSIT, make the necessary modifications, and enter SCRIPSIT.

Following are the routines to modify SCRIPSIT to work with your printer (first for parallel ports, then serial):

```
                00100 ;THIS ROUTINE LOADS AND MODIFIES SCRIPSIT TO PERMIT
                00110 ;USE OF YOUR OWN PARALLEL PRINTER DRIVER
                00120 ;
                00130 ;IT SHOULD BE LOCATED IN HIGH RAM.  THIS EXAMPLE IS
                00140 ;LOCATED AT X'BF00' FOR A 32K MACHINE.
                00150 ;
BF00            00160          ORG     0BF00H
BF00            00170 PARLEL   EQU     $                ;ENTRY ADDRESS
BF00 E5         00180          PUSH    HL
BF01 2149BF     00190          LD      HL,SWITCH        ;TEST SWITCH FOR 1ST CALL
BF04 34         00200          INC     (HL)
BF05 35         00210          DEC     (HL)
BF06 E1         00220          POP     HL
BF07 203E       00230          JR      NZ,DRIVER        ;GO IF NOT 1ST CALL
BF09 114ABF     00240          LD      DE,DCBADR        ;DE=> FILE SPEC
BF0C CD3044     00250          CALL    LOAD             ;OPEN AND LOAD SCRIPSIT
BF0F CD2844     00260          CALL    CLOSE            ;CLOSE COMMAND FILE
BF12 3E01       00270          LD      A,1              ;SET SWITCH TO SKIP THIS
BF14 3249BF     00280          LD      (SWITCH),A       ;  CODE ON FUTURE CALLS
```

```
BF17 3E21      00290          LD      A,21H           ;PATCH SCRIPSIT
BF19 326752    00300          LD      (5267H),A       ;  TO PROTECT
BF1C 21FFBE    00310          LD      HL,PARLEL-1     ;  THIS DRIVER
BF1F 226852    00320          LD      (5268H),HL
BF22 3EC3      00330          LD      A,0C3H          ;PATCH SCRIPSIT TO EXECUTE
BF24 323F66    00340          LD      (663FH),A       ;  YOUR INIT. ROUTINE
BF27 3ECD      00350          LD      A,0CDH          ;PATCH SCRIPSIT TO EXECUTE
BF29 329E7A    00360          LD      (7A9EH),A       ;  YOUR DRIVER ROUTINES
BF2C 32977A    00370          LD      (7A97H),A
BF2F 2148BF    00380          LD      HL,INIT         ;ADDRESS OF YOUR INITIAL-
BF32 224066    00390          LD      (6640H),HL      ;  IZATION ROUTINE
BF35 2100BF    00400          LD      HL,PARLEL       ;ADDRESS OF YOUR DRIVER
BF38 229F7A    00410          LD      (7A9FH),HL      ;  ROUTINE
BF3B 22987A    00420          LD      (7A98H),HL
BF3E 211805    00430          LD      HL,0518H        ;PATCH SCRIPSIT TO SKIP
BF41 22635F    00440          LD      (5F63H),HL      ;  'PRINTER READY' TEST
BF44 C30052    00450          JP      5200H           ;ENTER SCRIPSIT
               00460 ;
BF47           00470 DRIVER   EQU     $
               00480 ;
               00490 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
               00500 ;                                                     *
               00510 ;        YOUR PARALLEL PRINTER DRIVER GOES HERE.      *
               00520 ;        ENTER AND EXIT WITH CHARACTER IN REGISTER A. *
               00530 ;                                                     *
               00540 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
               00550 ;
BF47 C9        00560          RET
               00570 ;
BF48           00580 INIT     EQU     $
               00590 ;
               00600 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
               00610 ;                                                     *
               00620 ;        IF YOU HAVE A SPECIAL INITIALIZATION         *
               00630 ;        ROUTINE, PUT IT HERE.                        *
               00640 ;                                                     *
               00650 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
               00660 ;
BF48 C9        00670          RET
               00680 ;
BF49 00        00690 SWITCH   DEFB    0
BF4A 53        00700 DCBADR   DEFM    'SCRIPSIT/LC'   ;OR USE 'SCRIPSIT/UC'
BF55 03        00710          DEFB    3               ;MARK END OF FILESPEC
               00720 ;
4430           00730 LOAD     EQU     4430H           ;CALL DOS TO LOAD FILE
4428           00740 CLOSE    EQU     4428H           ;CALL DOS TO CLOSE FILE
               00750 ;
5200           00760          END     PARLEL


               00100 ;THIS ROUTINE LOADS AND MODIFIES SCRIPSIT TO PERMIT
               00110 ;USE OF YOUR OWN SERIAL PRINTER DRIVER
               00120 ;
               00130 ;IT SHOULD BE LOCATED IN HIGH RAM.  THIS EXAMPLE IS
               00140 ;LOCATED AT X'BF00' FOR A 32K MACHINE.
               00150 ;
BF00           00160          ORG     0BF00H
BF00           00170 SERIAL   EQU     $               ;ENTRY ADDRESS
BF00 E5        00180          PUSH    HL
BF01 2143BF    00190          LD      HL,SWITCH       ;TEST SWITCH FOR 1ST CALL
BF04 34        00200          INC     (HL)
BF05 35        00210          DEC     (HL)
BF06 E1        00220          POP     HL
BF07 2030      00230          JR      NZ,DRIVER       ;GO IF NOT 1ST CALL
BF09 1144BF    00240          LD      DE,DCBADR       ;DE=> FILE SPEC
BF0C CD3044    00250          CALL    LOAD            ;OPEN AND LOAD SCRIPSIT
BF0F CD2844    00260          CALL    CLOSE           ;CLOSE COMMAND FILE
BF12 3E01      00270          LD      A,1             ;SET SWITCH TO SKIP THIS
BF14 3243BF    00280          LD      (SWITCH),A      ;  CODE ON FUTURE CALLS
BF17 3E21      00290          LD      A,21H           ;PATCH SCRIPSIT
BF19 326752    00300          LD      (5267H),A       ;  TO PROTECT
```

```
BF1C 21FFBE   00310          LD      HL,SERIAL-1      ;  THIS DRIVER
BF1F 226852   00320          LD      (5268H),HL
BF22 3EC3     00330          LD      A,0C3H           ;PATCH SCRIPSIT TO EXECUTE
BF24 323966   00340          LD      (6639H),A        ;  YOUR INIT. ROUTINE
BF27 32565F   00350          LD      (5F56H),A        ;  AND DRIVER ROUTINE
BF2A 213DBF   00360          LD      HL,INIT          ;ADDRESS OF YOUR INITIAL-
BF2D 223A66   00370          LD      (663AH),HL       ;  IZATION ROUTINE
BF30 2100BF   00380          LD      HL,SERIAL        ;ADDRESS OF YOUR DRIVER
BF33 22575F   00390          LD      (5F57H),HL       ;  ROUTINE
BF36 C30052   00400          JP      5200H            ;ENTER SCRIPSIT
              00410 ;
BF39          00420 DRIVER   EQU     $
BF39 08       00430          EX      AF,AF'           ;GET CHARACTER INTO A
              00440 ;
              00450 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
              00460 ;                                                     *
              00470 ;        YOUR PARALLEL PRINTER DRIVER GOES HERE.      *
              00480 ;        ENTER AND EXIT WITH CHARACTER IN REGISTER A. *
              00490 ;                                                     *
              00500 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
              00510 ;
BF3A C3745F   00520          JP      5F74H            ;GO BACK TO SCRIPSIT
              00530 ;
BF3D          00540 INIT     EQU     $
BF3D 3E01     00550          LD      A,1              ;SET SCRIPSIT SWITCH FOR
BF3F 32627C   00560          LD      (7C62H),A        ;  PRINTER INITIALIZATION
              00570 ;
              00580 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
              00590 ;                                                     *
              00600 ;        IF YOU HAVE A SPECIAL INITIALIZATION         *
              00610 ;        ROUTINE, PUT IT HERE.                        *
              00620 ;                                                     *
              00630 ; * * * * * * * * * * * * * * * * * * * * * * * * * * *
              00640 ;
BF42 C9       00650          RET
              00660 ;
BF43 00       00670 SWITCH   DEFB    0
BF44 53       00680 DCBADR   DEFM    'SCRIPSIT/LC'    ;OR USE 'SCRIPSIT/UC'
BF4F 03       00690          DEFB    3                ;MARK END OF FILESPEC
              00700 ;
4430          00710 LOAD     EQU     4430H            ;CALL DOS TO LOAD FILE
4428          00720 CLOSE    EQU     4428H            ;CALL DOS TO CLOSE FILE
              00730 ;
5200          00740          END     SERIAL
```