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TRS-80™ VIDEOTEX
for
TRS-80 Model I and Model III

User's Guide

CUSTOM MANUFACTURED IN THE USA BY RADIO SHACK A DIVISION OF TANDY CORPORATION

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Introduction

TRS-80 VIDEOTEX™ includes a machine-language program, VIDTEX, supplied on a cassette tape. It requires a TRS-80 Model I computer with at least 16K RAM and Level II Basic or a TRS-80 Model III with at least 16K RAM and Model III BASIC along with communications capabilities on either computer.

VIDTEX is a smart terminal program which allows your Computer to communicate with the CompuServe information service as well as any other computer system which has telephone answering capabilities and utilizes the same communications protocol.

The *CompuServe Information Service User's Guide* provides information on accessing and using the CompuServe network.

This manual, however, explains the VIDTEX software only and should be used in conjunction with the *User's Guide.*

To run VIDTEX on your TRS-80 Model I or III, you will need these communication capabilities:

Model I A Radio Shack Expansion Interface (Radio Shack Catalog Number 26-1140/1141/1142); RS-232-C Interface (26-1145); Telephone Interface II (26-1171) or other acoustic coupler or modem; and a telephone.

Model III The Radio Shack RS-232-C Interface (26-1148); Telephone Interface (26-1171) or other acoustic coupler or modem; and a telephone.

Loading Procedure: Cassette System

Note: If you are using a Model III, first set cassette speed to Low (500 baud).

1. When BASIC prompts with READY, type:

   SYSTEM (ENTER)

   Insert the tape into the cassette recorder and prepare the recorder for playing.

2. The prompt *? will be displayed. Then type:

   VIDTEX (ENTER)

   Two asterisks should appear in the upper right-hand corner of the display. If the tape is loading correctly one should be flashing. If one does not flash, try again using a different volume.

3. When VIDTEX has been properly loaded into memory the ? prompt will be displayed again. To execute VIDTEX, type:

   / (ENTER)

Making a Disk Copy (Disk Systems Only)

If you have a disk-based system, you will want to make a disk copy of VIDTEX. Here's how:

Model I

1. When TRSDOS displays the message DOS READY, type:

   TAPEDISK(ENTER)

   This will load and execute TAPEDISK. When TAPEDISK is ready, it will prompt with a ?.

2. Insert the tape copy of VIDTEX in the cassette recorder and prepare the recorder for playing. When it is ready, type:

   C(ENTER)

   This will load VIDTEX from the tape into memory. When it is loaded, the ? will appear again.

3. VIDTEX is now loaded in memory. To save it to disk, type:

   F VIDTEX/CMD:Ø 7ØØØ 779A 7ØØØ (ENTER)

   VIDTEX will be written to the disk as the file, VIDTEX/CMD. When the dump is complete, the ? will appear again.

4. To return to TRSDOS, type:

   E (ENTER)

Refer to your TRSDOS reference manual for further details on running TAPEDISK/CMD.

Model III

The screen will show:	You type:
TRSDOS Ready	TAPE (S = T, D = D)
CASS?	L
Set Cassette to Play and Press Enter	(ENTER)
VIDTEX	

The system will read the tape and automatically create a file named VIDTEX/CMD. To run this program, simply type VIDTEX and press (ENTER). The following will appear on the screen:

CompuServe Information Services Executive

At this point follow the procedures specified in the *CompuServe Information Services User's Guide* to access the CompuServe network.

Loading Procedure: Disk System

1. Load TRSDOS on your Model I or III.
2. When TRSDOS displays the message DOS READY, type:

   VIDTEX (ENTER)

   VIDTEX will then load and execute.

Using VIDTEX

Versions of VIDTEX will be available for all configurations of TRS-80 computers and other popular makes. In some cases, VIDTEX must determine the configuration of the machine on which it is running and then make modifications to itself which allow the available features to be used.

The TRS-80 Model I version, for example, determines if a lowercase modification has been installed. If one has, VIDTEX will permit lowercase characters and the keyboard is set in lowercase mode. If not, VIDTEX will convert all lowercase characters to uppercase (capitals) and the keyboard is set to uppercase cap mode.

VIDTEX then checks to see if a printer is connected. If you wish to use a printer, be sure it is turned on and ready before VIDTEX is run.

Redefined Keys

VIDTEX has its own keyboard decoder. This permits it to redefine the keys. The keys which have been redefined are described below.

The down-arrow key (↓) functions as a "control" key. For example, to enter a control-C, you would press (C) while holding down (↓). The up-arrow key (↑) gives a " ↑ " character; the left-arrow key (←) is a backspace; and the right-arrow (→) is a horizontal tab. The (BREAK) key is a "control-C" and the (CLEAR) key is an "escape" key.

Some characters are simulated on the keyboard by combinations of other keys. A left-square bracket "[" is produced by a control-(8) ((↓) (8)), a right-square bracket "]" by a control-(9) ((↓) (9)), an underscore "_" is entered using a control-(−) ((↓) (−)), and a backslash "\" by a control-(/) ((↓) (/)).

Some keys perform functions internally to the TRS-80 and do not send any character. A control-(R) ((↓) (R)) will start copying all output to the printer providing one is attached and ready. A control-(T) ((↓) (T)) will stop the copying to the printer. A (SHIFT) (0) (zero) is an on/off switch for the caps lock function of the keyboard. When caps lock is in effect, you can only type in uppercase (capital) letters. When caps lock is not in effect, you can type in upper- or lowercase.

Note: You do not need the lowercase modification in order to send lowercase characters. Any lowercase letters being displayed will be translated to uppercase but, without the modification kit, the letters will appear on the video display as uppercase.

The following table summarizes the keys which have been redefined:

Labeled Key	Hex Code	Function or Character
↓	None	Control Key
↑	5E	" ↑ " Character
←	08	Backspace
→	09	Horizontal Tab
BREAK	03	Control-"C" Character
CLEAR	1B	"Escape" Character
↓ 8	5B	"["
↓ 9	5D	"]"
↓ −	5F	Simulates a RUBOUT (deletes previous character)
↓ /	5C	"\"
↓ X		Exit and Return to normal TRS-80 operation
↓ R		Turn the printer option on
↓ T		Turn the printer option off
SHIFT Ø (zero)		Caps lock on/off switch

If any key is held down for two seconds, it will automatically repeat.

Video Support

VIDTEX has the capability to interpret video control codes which are sent to the TRS-80 by CompuServe or other systems. This allows these host systems to perform functions such as clearing the screen, moving the cursor and printing messages at various screen positions.

Additional Technical Information

VIDTEX also responds to certain "escape sequences" for cursor control. These sequences must be generated by programs running on the computer with which the TRS-80 is communicating. This information is provided for determining compatibility with hosts other than the CompuServe network.

The following is a list of the cursor controls codes and the functions they perform. Note the difference between lower- and uppercase; **this is very important!**

ESCAPE Sequence Received	Effect on TRS-80 VIDTEX
(ESC)(m)	Enter Wide Character Mode
(ESC)(I)	Enter Normal Mode
(ESC)(A)	Move Up One Line
(ESC)(B)	Move Down One Line
(ESC)(C)	Move Right One Space
(ESC)(D)	Move Left One Space
(ESC)(H)	Home
(ESC)(K)	Clear to End of Line
(ESC)(J)	Clear to End of Page
(ESC)(j) (or X'FF')	Clear Page
(ESC)(Y) *line column*	Absolute Positioning*

*The cursor can be moved directly to any position on the screen by absolute positioning. The sequence to do this is:

(ESC)(Y) *line column*

Where *line* is the ASCII character whose code is the line number + 31 and *column* is the ASCII character whose code is the column number + 31. If *line* is too large, the cursor will be positioned at the bottom line. Similarly, if *column* is too large, the cursor will be positioned at the last column. For example, the following sequence would position the cursor at the fourth line and the tenth column:

(ESC)(Y)(#)())

since the character # has the ASCII code of 35 (31 + 4) and the character) has the ASCII code of 41 (31 + 10).

Future Versions

VIDTEX contains a machine-language object file loader which will allow future versions of VIDTEX to be downloaded from CompuServe. The CompuServe system will examine your version of VIDTEX. If you do not have the most recent version, a new version will be transmitted through the CompuServe system and automatically saved to your disk or tape.

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NOTE: Good data processing procedure dictates that the user test the program, run and test sample sets of data, and run the system in parallel with the system previously in use for a period of time adequate to insure that results of operation of the computer or program are satisfactory.

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