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TRS-80® Videotex Plus

User's Guide

TRS-80 Model I and Model III

Radio Shack®

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TRS-80® Model I/III
Videotex Plus User's Guide

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Introduction

The TRS-80® ***Model I/III Videotex Plus*** system is an easy to use, yet powerful and sophisticated communications package. With this package, you will be able to communicate with a variety of information services and host computer systems. Videotex Plus has many features that allow efficient and flexible information handling. The Videotex Plus system has three major modules:

VIDTEX An interactive terminal and data communications program.

VIDTEX S A specialized program for use with Store & Forward information services.

VIDEDT For preparing Auto Log-On/Auto Dial procedures.

VIDTEX and VIDTEX S are programs for communication with information services and systems. These programs let your TRS-80 Model I/III communicate with any computer information service (i.e., a host system) that has the same communications protocol as Videotex Plus. VIDEDT is used to create and edit log-on sequences and save them on a diskette for use by the VIDTEX and VIDTEX S automatic log-on procedure.

VIDTEX is the general purpose communication program for use with most information services and host computer systems. This module is used to set your system up for a particular host and then perform the communications function. A special set of function keys (the "Control" and "Meta" keys) allow you complete communications control and provide the flexibility necessary to utilize a variety of host systems.

A special feature of VIDTEX is that it lets you use the computer's memory (referred to as the RAM Buffer) for information retrieval. Received information can be saved, printed, or stored on diskette for later reference.

VIDTEX S is a special option designed for use with "Store and Forward" information systems. The information system user's guide will provide more information on the use of this option. The VIDTEX S command is used to start the program. You then enter the appropriate log-on sequence and data requests as directed by the host System. After establishing contact with the host, the information you requested will be transmitted and stored as "pages" in your computer's memory. VIDTEX S has an Advanced Storage mode that is used to enter requests and commands to the host system prior to starting the transmission.

VIDTEX and VIDTEX S feature an automatic log-on function that saves time and effort when logging on to an information service. The "automatic log-on" uses a log-on file you create that contains the information to automatically dial and sign-on to the system. These automatic log-on files are created using a special program called VIDEDT (or the Videotex Plus EDITOR).

In addition to the three modules that compose the basic structure of the package, Videotex Plus offers many features which will help you minimize connection time.

Other special features include:

- Disk file capabilities that let you save information for later viewing, editing, or transmission.
- Function keys that you can define for special applications.
- Printer control for "hard-copy" output of received information.
- Screen control for variable screen displays.
- An optional log-on procedure called VIDTEX I which is designed to give you the fastest method of log-on using Auto Log-On files created in VIDEDT.

This manual explains Model I/III Videotex Plus software only and should be used with an information service user's guide. Your information service user's guide will tell you how to contact and use a particular network and service. To use this Videotex Plus package, you will need:

- TRS-80 Model I/III Computer with at least 32K of RAM, RS-232C Interface capabilities, and one disk drive.
- An acoustic coupler or modem such as the TRS-80 Telephone Interface II, Acoustic Coupler, Modem I, Modem II, or DC-1200 High Speed Modem.
- Telephone.
- And, although it's not required, you can use any Radio Shack Printer that is compatible with a Model I/III.

Using this Manual

It is recommended that you start at the beginning and work through the manual log-on procedure if you are not already familiar with Videotex Plus. Practicing manual log-ons should make it easier to create your Auto Log-On files later.

There are two sample sessions given in this manual — one for a manual log-on so that you can immediately use your software by following simple instructions; and, another sample session that shows you how to create, save, edit, and use an Auto Log-On file using the VIDEDT module. The sample sessions will show you how to use the program and introduce some of the more advanced techniques that can enhance your communications.

The remainder of the manual will explain many of the operations that were introduced in the sample sessions.

The Technical Information section contains information on the internal operations of Videotex Plus and detailed explanations of certain special functions and characters that can occur during the interaction between the host and Videotex Plus.

Another section is devoted to processing retrieved information with SCRIPSIT™ or VisiCalc™. This procedure is particularly useful to edit extraneous characters that occur when RAM Buffer contents are saved onto diskette.

Note: The operating system READY prompt will depend on the operating system you are using (Model I, III, Hard Disk, etc.)

1 / System Start-Up

This section introduces the operation of Videotex Plus and will use a specific log-on sequence to illustrate the operation of this program. See your acoustic coupler or modem operation manual, if necessary, before proceeding.

Using the VIDTEX Program:

- If you have a printer and wish to use it with the program, turn it on now before starting VIDTEX.
- Model I Users. Before loading VIDTEX, be sure the TERM/COMM Switch on the RS-232 Interface Board is set to TERM. For specific instructions, see your TRS-80 RS-232C Interface instruction manual.
- Modem I and Acoustic Coupler Users. The ORIG/OFF switch should be set at OFF.
- Modem II Users. If you are using the TRS-80 Modem II, the DTR Switch at the rear of the modem must be in the OFF position. The POWER switch should be ON. The MODE switches should be set at AUTO/ORIG.

1. Power-up your Computer System (e.g., Computer, Modem, and Printer) as described in the Operation section of your TRS-80 owner's manual.

   IMPORTANT: Before using the Videotex Plus diskette, make a backup copy. You should never use your original master diskette except to make working backup copies. Consult your Model I/III owner's manual for instructions on using the BACKUP utility.

2. Insert a backup copy of the Videotex Plus diskette into Drive 0 and press the RESET button.
3. Type the date in MM/DD/YY format and press (ENTER).
4. When the computer's screen displays the message, `TRSDOS Ready`, type `VIDTEX` (ENTER).

   The screen shows:

Note: Depending on the type of equipment you have, the message, `** Data Carrier Lost! **`, may or may not appear on the screen. For example, if you are using a Modem II this message will not appear.

How to Log-On

Proceed with the following section if you have a Modem II or other auto dialing modem. If you have a non-dialing modem or acoustic coupler, proceed to the section entitled, For Non-Dialing Modem Users. Videotex Plus is preset for 300 BAUD operation. If you wish to operate at transmission speeds other than 300 BAUD, refer to the Meta-Q function in the Meta Key Functions section.

For Auto Dialing Modem Users . . .

This example uses the TRS-80 Modem II to contact the CompuServe Information Service.

1. Press (SHIFT)(*).

2. Then, depending on the type of telephone you have, type the CompuServe telephone number you received with the package in one of the following formats:

If you have a Touchtone telephone, type: DT*number*X
or
If you have a Rotary dial telephone, type: DR*number*X

Note: Consult your Modem owner's manual for other dialing instructions.

The phone number is then dialed. The first three lights on the Modem II (ON, OH, and TR) will illuminate. The screen may show:

```
** Data Carrier Lost! **
```

Then after approximately two seconds, the screen shows:

```
** Data Carrier Restored! **
```

At this point, the connection to CompuServe is complete.

3. Press (BREAK) and the ^C appears on the screen. The following prompt appears:

```
User ID:
```

4. In response to this prompt, type the User ID you received with the package and press (ENTER). The following prompt appears:

```
Password:
```

5. In response to this prompt, type the Password you received with the package and press (ENTER).

Note: To retain the secrecy of your Password, it will not appear on the screen when you type it.

At this point, you are logged on and may begin using the CompuServe Information Service.

For Non-Dialing Modem Users . . .

1. When the message, ** Data Carrier Lost! ** appears on the screen, pick up your phone and dial the CompuServe telephone number included in the package.

2. When the phone has been answered, you will hear a high-pitched tone.

- If you have a Modem I, set it to **ORIG**. When the tone changes to a lower tone, hang up the phone.
- If you have a DC-1200 High Speed Modem, press the **ORG** button. Release it when the **OH** indicator illuminates, then, gently hang up the telephone.
- If you have an Acoustic Coupler, set it to **ORIG**. When the phone is answered, wait for the tone, then firmly insert the telephone into the rubber couplers.

3. After a few seconds, the screen shows:

```
** Data Carrier Restored! **
```

4. This message indicates that you have established communications. Press (BREAK) and the ^C character appears on the screen. The following prompt appears:

```
User ID:
```

5. In response to this prompt, type the User ID you received with the package and press (ENTER). The following prompt appears:

```
Password:
```

6. In response to this prompt, type the Password you received with the package and press (ENTER).

Note: To retain the secrecy of your Password, it will not appear on the screen when you type it.

At this point, you are logged on and may begin using the CompuServe Information Service.

Note: To use other information services and host systems, simply substitute the appropriate dialog as provided in the information service user's guide after the `** Data Carrier Restored **` message appears.

Using a Printer with VIDTEX

Now CompuServe should be up and running. There are other features of Videotex Plus which need to be explored. One of these features is that of using a printer to print screen or RAM Buffer contents. Having a printer available gives you the option of printing articles or messages and keeping them for your future reference.

By now you have probably learned to select an article of interest from the vast choices offered from CompuServe. Use your ***CompuServe User's Guide*** included with the package if you have any problems.

1. If you have a printer connected to your Model I/III and currently have CompuServe running, make sure your printer is On Line and press (↑)(R) to turn the printer on. The message, `** Printer On **`, is displayed. From the point that you turn the printer on, every character appearing on the screen will be printed.

2. Press (↑)(T) to stop the printing.

3. You can also make a printout of one screen at a time. Press (↑)(·) and the current contents of the screen will be printed.

Using the RAM Buffer with VIDTEX

Videotex Plus lets you store information in memory for use or printing at a later time. While in VIDTEX Interactive Terminal Mode, you can "open" the RAM Buffer and selectively store information in the Buffer. The amount of information you can store depends on your system's capacity.

1. To open the RAM Buffer, press (↑)(O). From this point on, the information appearing on the screen will be saved in memory.

2. To close the RAM Buffer, press (↑)(C). The information received from this point will not be stored in the Buffer until you reopen it.

3. To display RAM Buffer contents, press (↑)(D). After the contents have displayed on your screen, the message, `** End of Buffer **`, will appear. Press (ENTER) to resume communications.

4. To print the contents of the RAM Buffer, press (↑)(P).

For more detailed information on using the RAM Buffer to retrieve data, see **Special Videotex Plus Key Functions (Meta Key)** later in this manual.

Configuring Your System

The VIDTEX Interactive Terminal mode also includes an option which will let you reconfigure your communication settings to be compatible with any host system. This means that you can change the baud rate, UART Configuration, the Log On Timer, Duplex, and XON/XOFF (flow control) Support. You can configure VIDTEX to meet the requirements of various host systems using the Query Status Meta Key function. For complete details on this feature, refer to **Meta Keys** later in this manual.

Exiting the Interactive Terminal Mode

1. To exit VIDTEX and return to `TRSDOS Ready`, always press (↑)(X). Never pull the diskette out until you are at `TRSDOS Ready`.

2. Turn your Modem OFF.

2 / Auto Log-On Files

One of the most useful features of Model I/III Videotex Plus is that it lets you save automatic log-on files on diskette. To clarify for later references, there are two types of auto log-on files.

- ***Auto Dial Log-On*** files which contain the host's telephone number and can only be used with a Modem II or modems designed for automatic dialing.
- ***Auto Log-On*** files which contain all log-on protocol without the host's telephone number. Using an Acoustic Coupler or Modem I requires that the telephone number be dialed manually.

The directions in this sample session will help you become comfortable with designing, saving, and loading Auto Log-On Files. There are certain syntax rules, like the rules of grammar, which have to be followed to successfully create Auto Log-On Files. These rules are primarily in the form of Key Commands which are translated by Videotex Plus to contact the host.

At first some of the key commands may seem tedious, but it should not take long for you to become familiar with them. The example given is an Auto Dial Log-On for the CompuServe Information Service. This service was chosen because you should already be familiar with it and it is similar to communication protocols used by other information services. So, making the transition from one information network's protocol to the next will not be that difficult.

Overview of Creating Auto Log-On Files (VIDEDT)

Creating and editing of auto log-on files is done with the VIDEDT module of this package. From the **VIDEDT Menu**, you can save new log-ons, load existing log-ons for editing, print log-ons, and end the program.

Creating auto log-on files consists primarily of your Auto Log-On anticipating the responses and transmissions that occur during a host-to-terminal communication. Your log-on should include the prompts, or what is requested from the host. Then, for each of these prompts, you transmit your response. This pattern continues until your final prompt response has been transmitted. At that time, your log-on will be complete.

These are the steps you will go through when creating an Auto Log-On file:

1. Power-Up the system and enter the **VIDEDT** module.
2. Select the **EDITOR** menu choice.
3. Enter the protocol using the commands prescribed in this program. Return to the **VIDEDT Menu**.
4. Save the Log-On file using a unique filename.
5. End the **VIDEDT** program.

Powering-Up the System

Insert the backup copy of Videotex Plus into Drive 0 of your Computer.

Press the RESET button.

Type the date in the format MM/DD/YY and press (ENTER). Type the time in the format HH:MM:SS and press (ENTER), or just press (ENTER).

Using the Auto Log-On Editor (VIDEDT)

At TRSDOS Ready, type VIDEDT (ENTER).

The screen shows:

LOAD FILE lets you load an existing file for editing.

SAVE FILE lets you save a new file for future use or revise an existing file.

PRINT BUFFER lets you make a printout of a Log-On file.

EDITOR is where you create new files or edit existing files.

END PROGRAM returns you to TRSDOS Ready.

Press (4) for the EDITOR function. The screen will clear except for the cursor in the upper-left corner of the screen.

At the EDITOR screen, you will be entering the necessary components to establish communications with a host system. Your settings must match those of the host.

In this Sample Session, all of the commands are given step-by-step. If, when following this lesson, you accidentally make a mistake, refer to the following **VIDEDT Editing Functions** table which shows all of the key editing functions of VIDEDT.

VIDEDT Editing Functions	
Function	**Result**
(↑)	Move up 1 line
(SHIFT)(0)	Upper/Lowercase toggle switch*
(←)	Backspace
(SHIFT)(↓)(<)	Open bracket command
(SHIFT)(↑)(>)	Close bracket command
(SHIFT)(←)	Deletes a character
(SHIFT)(→)	Inserts a character
(↓)	Advances Cursor to next line
(CLEAR)	Clears the screen from Cursor position to end
(BREAK)	Return to Menu
(SHIFT)(↑)	Home Cursor (extreme upper left)
(SHIFT)(@)	Help screen
(→)	Advance right 1 character

Table 1

*** Model I Users:** Use shifted characters for lowercase. Please refer to **Upper/Lowercase Characters** for specific instructions on sending both upper and lowercase characters when using a Model I.

VIDEDT is designed to detect errors in your Auto Log-On file when you save a file. If there is a mistake (commands only), VIDEDT will reject the save attempt, display an error message, return to the EDITOR, and place the cursor at the point of error.

After you create several log-on files, you will probably remember most of the functions. When you have a command that uses more than one key, be sure and hold down the first key and press the second key while holding the first key down. For example, to type the Open Bracket command, hold down (SHIFT), hold down (↓), and press (<).

Of particular interest is the "Help command" ((SHIFT)(@)) available at the EDITOR screen. The Help screen lists all of the commands and gives a brief summary for each. When you are in the EDITOR function, press (SHIFT)(@) to display the EDITOR commands. After you have refreshed your memory, press any key to return to the EDITOR screen.

The screen shows:

```
                    **COMMAND SYNTAX SUMMARY**

|EOF|        END OF AUTO LOG ON PROCEDURE
|TR|         START TRANSMIT BLOCK
|RC|         START RECEIVE BLOCK
|**|         HEX BYTE
|PO|         START PROMPT OPERATOR MESSAGE BLOCK
|WC|         WAIT FOR CARRIER DETECT
|WN|         WAIT FOR LOST CARRIER DETECT
|P2|         PAUSE 2 SECONDS
|S####|      SET BAUD/UART (SETCOM)
|CR|         CARRIAGE RETURN

                  PRESS ANY KEY TO CONTINUE
```

Creating an Auto Log-On File

If you have a non-dialing modem, use the following instructions to create an Auto Log-On file. The following example is a hypothetical CompuServe log-on. Use the CompuServe log-on information provided with the package to create an actual log-on. If you make a mistake while following the detailed instructions, refer to Table 1 for the editing functions.

This is what a CompuServe Information Service log-on would look like (the telephone number, user ID, and password are imaginary). Substitute the user ID and password included with the CompuServe packet.

```
|WN| |WC| |P2|
|TR| |Ø3|
|RC| User ID:
|TR| 73357,524 |CR|
|RC| Password:
|TR| SECRET |CR|
|EOF|
```

Follow the steps below to create a similar file.

1. At this point, you should be at the EDITOR function of the VIDEDT Menu. If you are not, press (4) at the VIDEDT Menu.

2. The cursor should be at the upper left of the screen. If it is not, press (SHIFT)(↑) to move the cursor to that position. Do not press (ENTER) until instructed.

3. To enter the first line of the example, type:

   (SHIFT)(↓)(<)WN(SHIFT)(↓)(>)
   (SHIFT)(↓)(<)WC(SHIFT)(↓)(>)
   (SHIFT)(↓)(<)P2(SHIFT)(↓)(>)

   and press (ENTER) to move to the next line.

4. To enter the second line which transmits a Hex Byte 03, type:

   (SHIFT)(↓)(<) TR (SHIFT)(↓)(>) (SHIFT)(↓)(<) Ø3 (SHIFT)(↓)(>) (ENTER)

5. The third line tells the modem to wait for the response from the host. In this case, the response is a request for User ID. To enter the third line, type:

(SHIFT)(↓)(<)RC (SHIFT)(↓)(>) User ID: (ENTER)

6. The fourth line transmits your response to the previous User ID: request. To enter the fourth line, type:

(SHIFT)(↓)(<) TR (SHIFT)(↓)(>) 73333,221
(SHIFT)(↓)(<) CR (SHIFT)(↓)(>)(ENTER)

7. The next anticipated request from the host will be your Password. The fifth line says to wait until the Password request is received. Type:

(SHIFT)(↓)(<) RC (SHIFT)(↓)(>) Password: (ENTER)

8. The next line of the log-on will be your response to the previous request for the Password. To transmit your Password, type:

(SHIFT)(↓)(<) TR (SHIFT)(↓)(>) SECRET
(SHIFT)(↓)(<) CR (SHIFT)(↓)(>)

9. It is mandatory that you indicate when the procedure is complete when creating any Auto Log-On file. This is done with the Auto Log-On **|EOF| command**. If you fail to enter the EOF command, you cannot save the Auto Log-On file. To enter the final End-of-File command for any Auto Log-On file, type:

(SHIFT)(↓)(<) EOF(SHIFT)(↓)(>)

10. Press (BREAK) to return to the VIDEDT Menu.

Now proceed to **Saving Log-On Files.**

Auto Dialing

If you have a Modem II, you can make an auto dial log-on file by adding the dialing sequence to auto log-on. The first line of an auto dial file for a touchtone phone line will be similar to the following:

|TR| *DT8702323X |WN| |WC| |P2|

To enter this information, at the VIDEDT Editor screen, type:

(SHIFT)(↓)(<) TR (SHIFT)(↓)(>)
*DT8702323X
(SHIFT)(↓)(<)WN(SHIFT)(↓)(>)
(SHIFT)(↓)(<)WC(SHIFT)(↓)(>)
(SHIFT)(↓)(<)P2(SHIFT)(↓)(>)

Press (ENTER) to move to the next line.

If you are using a different automatic dialing modem, refer to the dialing instructions for that modem and modify the first line to correspond to your modem's dialing instructions.

Saving Log-On Files

Your next step is to save the file you just created.

1. At the VIDEDT Menu, press (2) for Save File.

If you have made no errors in entering the file, the screen shows:

2. You are being asked to enter a unique filespec (filename) for the file you just created. (For detailed instructions, see **Naming Files** later in the manual.) For this example, type COMPUSRV and press (ENTER).
3. When the file has been saved successfully onto the diskette, the VIDEDT Menu appears.

Note: When saving a file, if there are any mistakes, an Error message appears. Press (ENTER) and the cursor will be at the point the error was detected.

Printing a Log-On File

If you have a printer, you can printout a copy of the Log-On file you just created. The brackets may appear on the printout as characters (arrow keys, for example) other than those appearing on the screen.

To make a printout of the Log-On file currently in memory:

1. Make sure the printer is properly connected to the Model I/III and is ready to print.
2. Press (3) for PRINT BUFFER and the Log-On file currently in memory will be printed.

Editing an Auto Log-On File

To edit an Auto Log-On File, you first need to load the file into memory using the LOAD FILE selection at the VIDEDT Menu.

1. To load an Auto Log-On File for editing, at the VIDEDT Menu, press (1) for Load File. The screen shows:

2. You now have two options. You can:

   - Press (ENTER) to load the last file you created which was entitled COMPUSRV.
   - Type another existing filename and press (ENTER).

   For now, press (ENTER) to load the last file you saved, which was COMPUSRV. After a brief pause, the VIDEDT Menu returns.

3. You have just loaded the file into your computer's memory. To edit this file, press (4) for the EDITOR function. The file will appear as you entered it earlier.

To change items in the file, use the key functions listed in Table 1.

Press (BREAK) when you are finished editing the file to return to the VIDEDT Menu. To retain these changes in the file, you must Save the file again. You may rename the file at this point. If so, the previous name and file for the unedited file will remain on the disk.

Using an Auto Log-On File

Videotex Plus is designed to let you enter many Auto Log-On files on diskette. If you have one disk drive, your only limitation is the amount of space on one disk. If you run out of space on your program diskette, make a backup of it and delete all Auto Log-On files from the backup. This lets you have several program diskettes that contain different log-on files. If you have more than one disk drive, you can make data diskettes and save files to the appropriate drive. Be sure and note which diskettes contain which Auto Log-On files.

After you have created and saved a number of Auto Log-On files, check your directory to see how much space is left on a diskette by typing DIR(ENTER) at TRSDOS Ready. At the bottom of the Directory List, the available number of Granules will be shown. Each Auto Log-On file requires 2 Granules.

As you create Auto Log-On files, the system develops a menu consisting of those files. If you have forty files in the Directory, when you are at the Auto Log-On menu, you will view the first 10. To view the next set of Auto Log-On files, press the (SPACEBAR). To view the fortieth file, press the (SPACEBAR) three times. Press the (SPACEBAR) again to return to the first ten Auto Log-On files.

We'll show you a sample menu, how to load a file from that menu, and how to load a file directly from TRSDOS Ready.

There are three methods of logging on with Auto Log-On files — each is fast and efficient:

A. Enter VIDTEX from TRSDOS Ready. Press (↑)(I) for the Auto Log-On menu where all of your current Auto Log-On files can be viewed.

B. You can go directly to the Auto Log-On Menu from TRSDOS Ready using VIDTEX I.

C. Log-on directly from TRSDOS Ready using the VIDTEX I(0-9) command. (The 0-9 refers to the first ten log-on files currently in the Auto Log-On Menu).

Each of these options is explained using the file you created in VIDEDT called COMPUSRV.

Method A

1. At TRSDOS Ready, type VIDTEX(ENTER). When the program loads, press (↑)(I). The screen shows:

2. At this point there is only one file on record (unless you've been experimenting on your own). There can be up to ten files on this screen. The :0 denotes that the file, COMPUSRV, is located in the directory of Drive 0.

3. To load COMPUSRV, press (0). The screen shows:

   SET MODEM/COUPLER UP, PRESS (ENTER)

   - If you have an acoustic coupler, set the coupler to **ORIG** and press (ENTER). Pick up the telephone and dial the number. Wait for the high-pitched tone, then firmly insert the receiver in the rubber couplers.

   - Press (ENTER) if you have a non-dialing modem, then dial the number. When you hear the high-pitched tone, switch the modem to **ORIG**. When the high-tone changes to a lower tone, gently hang up the phone.

   - If you are using an auto dial modem, make sure your modem is on and set for auto dial and originate. If you have a Modem II, the **DTR** switch should be **OFF**.

When ready, press (ENTER). Do not press (ENTER) before turning the modem on.

The log-on should then proceed. If it does not, re-enter VIDEDT and verify your file log-on information.

Method B (VIDTEX I)

You can go directly from TRSDOS Ready to the Auto Log-On Menu mentioned earlier.

1. To do this, at `TRSDOS Ready`, type `VIDTEX I`(ENTER). The Auto Log-On Menu appears. Starting at Step #2 in Method A, repeat the log-on instructions.

Method C VIDTEX I(0-9)

This method lets you skip the Auto Log-On Menu selection process and stops only when you are asked to make sure your equipment is ready. The 0-9 refers to the Auto Log-On file you prefer to load from the Auto Log-On Menu. Although there can be many Log-On files in the Menu, only the first 10 can be candidates for Method C. For our example, COMPUSRV is number 0.

To load COMPUSRV using this method:

1. At `TRSDOS Ready` type `VIDTEX I0`(ENTER). The next request you will have is to make sure the modem is ready. Refer to Step #3 of Method A and proceed from there to complete the log-on.

To return to the interactive terminal mode from the log on menu screen, press (BREAK). You must exit the auto log-on screen before exiting the program.

Automatic Log-on Commands

This section outlines the commands used when creating an auto log-on file. You have already used the majority of these commands in the Sample Session. The commands are entered using a special key sequence. Each command (TR, RC, etc.) is enclosed in left and right brackets. Each bracket is created using a triple key combination. For example, to make a left bracket, type (SHIFT)(↓)(<); and, to make a right bracket, type (SHIFT)(↓)(>). When the command is entered, it will appear on the screen as the command abbreviation. The explanation begins with the most commonly used commands and ends with those that are not always required.

|RC|
Receive and Verify

(SHIFT)(↓)(<)RC(SHIFT)(↓)(>)*text*

This command is used to look for a specific request or message from the host system. When the |RC| command is used, the log-on process will wait for the specified key words to be received before continuing. If they are not received within 10 seconds, the process will terminate. If you wish to change this timing, use the Meta-Q function (described later) to enter the number of seconds you wish to delay.

For example, if the host system requests you to enter an identification code using a specific prompt, you would enter the |RC| command followed by the text of the prompt.

Example

(SHIFT)(↓)(<)RC(SHIFT)(↓)(>)`User ID:`

The screen will show: `|RC| User ID:`

|TR|
Transmit

(SHIFT)(↓)(<)TR(SHIFT)(↓)(>)*text*

This command is used to transmit information to the host system.

Example:

(SHIFT)(↓)(<)TR(SHIFT)(↓)(>)10000,100

The screen will show: |TR|10000,100

|CR|
Carriage Return

(SHIFT)(↓)(<)CR(SHIFT)(↓)(>)

In the auto log-on function, |CR| is used to specify that a Carriage Return (ASCII code 13) is to be sent to the host (on a TRansmit line) or to verify the receipt of a carriage return (on a receive and verify line) or to display a CR on a Prompt Operator line. It is not used to terminate a command line. It represents the carriage return character.

Example:

(SHIFT)(↓)(<)TR(SHIFT)(↓)(>)HELLO
(SHIFT)(↓)(<)CR(SHIFT)(↓)(>)

The screen will show: |TR|HELLO|CR|

|##|
Insert a Hexadecimal Byte

(SHIFT)(↓)(<)##(SHIFT)(↓)(>)

This command is used to enter a two-character ASCII representation of a Hexadecimal value not available on the keyboard. This function can be used in the TRansmit, Receive, and Prompt Operator modes. After the left bracket, type the ASCII code for the appropriate Hexadecimal value and enter the right bracket.

For example, to send a Control-C (ASCII code 03) you would type the following as part of the text on a TRansmit line:

(SHIFT)(↓)(<)03(SHIFT)(↓)(>)

The screen will show: |03|

|WC|
Wait for Carrier

(SHIFT)(↓)(<)WC(SHIFT)(↓)(>)

This command delays the log-on process until a "carrier" (data transmission tone) is detected. After dialing is completed, there will be a brief wait before the carrier is established. (The line could also be busy or dead.) In your auto log-on, |WC| is used to specify that you want the process to wait until the host's carrier signal is established before continuing with the next command. In some sequences, this is required to prevent the automatic log-on from proceeding without communications being established.

|WN|
Wait for No Carrier

(SHIFT)(↓)(<)WN(SHIFT)(↓)(>)

This command is used to pause the log-on sequence until there is a "no carrier" condition (carrier lost). The |WN| command is used with certain automatic dialing modems such as the TRS-80 Modem II. The use of the |WN| command is demonstrated in the section describing the use of the Modem II later in this manual. *Be careful when using this command.* If you have already made a connection to the host before entering the log-on procedure, a |WN| will prevent the log-on from continuing.

|P2|
Pause Two Seconds

(SHIFT)(↓)(<)**P2**(SHIFT)(↓)(>)

This command stops the log-on process for 2 seconds. It is useful in giving the host system time to process a request before proceeding to the next step or waiting for hardware status to change.

|EOF|
End of File

(SHIFT)(↓)(<)**EOF**(SHIFT)(↓)(>)

This command must be entered at the end of each log-on file. If you fail to enter the EOF command, you will receive an error message.

|PO| Prompt Operator (Optional Prompt Message)

(SHIFT)(↓)(<)**PO**(SHIFT)(↓)(>)*optional prompt message*

This command is used to allow manual entry of information during an automatic log-on process. You might wish to use this feature if you do not want your secret password included in the sequence. |PO| is normally used after receiving a host request for information such as a Password.

The |PO| command will temporarily stop the automatic process and allow you to enter the desired information. When you have entered your response, either press the (ENTER) key to send a carriage return to terminate the |PO| command and resume the automatic process, or press (BREAK) to terminate the Prompt Operator command and resume the automatic process.

For example, to be prompted for the Password, you would enter:

(SHIFT)(↓)(<)RC(SHIFT)(↓)(>)Password:(ENTER)
(SHIFT)(↓)(<)PO(SHIFT)(↓)(>)

The screen will show:
|RC|Password:
|PO|

Note: You must press the (ENTER) or (BREAK) key immediately after typing the manual response. This is to allow the automatic process to resume before the host system responds.

|S####|
SETCOM — Set the Baud Rate and UART

(SHIFT)(↓)(<)S####(SHIFT)(↓)(>)

This command lets you set the Baud Rate and UART to match the host with which you are communicating. The first two numbers are reserved for the Baud Rate Hexadecimal Code (see **Baud Rate Code Table**). The second two numbers are reserved for the UART Hexadecimal Code (see **UART Configuration Table**). The codes must be preceded by the S.

For example, the setting |S556D| means to set the Baud to 300 (where 55 is the Hexadecimal Code for 300 Baud), and to set the UART at 8 bit words, no parity, and 1 stop bit (where 6D is the Hexadecimal Code for this configuration).

(BREAK)

After all elements of the log-on file have been entered, press (BREAK) to return to the VIDEDT Menu where you may name and save the file for future use. (BREAK) can also be used to exit from the VIDTEX auto log-on menu to the interactive terminal mode.

A Sample Log-On File

To illustrate the use of a variety of log-on commands, the following sample log-on session will be explained for the Imaginary Information Service.

The Imaginary Information Service (IIS) is a general purpose information service that operates at a transmission speed of 300 Baud and uses 7 Bit characters, Even Parity (for error checking) and 1 Stop Bit per character. The log-on protocol indicates that when a connection has been established, you are to send a Control-C to let the host know you are ready. IIS will respond with a welcome message to which you respond with an ***A**, followed by a carriage return. IIS then asks for an Account Code and then a Password. After entering the Password, the system then responds with some miscellaneous information, and then asks for your request with a COMMAND prompt. At the COMMAND prompt, IIS will accept a variety of requests for data and services.

Let's say you wish to create an auto dial log-on file for use with your Modem II. With this file, you want to dial the IIS system with a touchtone phone, log-on, and perform a request that you do frequently. The file would look something like this:

```
|S556C||TR|*DT18005551212X|WN||S55A4||WC||P2|
|TR||03|
|RC|Welcome to IIS -- Terminal Code?
|TR|*A|CR|
|RC|Account Code:
|TR|AC0003|CR|
|RC|Password:
|PO|TYPE PASSWORD<ENTER>
|RC|COMMAND:
|TR|FIND MYDATA|CR|
|EOF|
```

Let's examine this file line-by-line to see what occurs during the log-on:

Line 1 This line contains all of the commands required to dial and establish a connection with the IIS system. Some Modem II's require a configuration of 8 Bit characters, No Parity, and 1 Stop Bit for dialing. The |S556C| command is used to set it for 300 Baud, 8, None, 1. (See **UART Configuration Table**.) The |TR| command is used to tell the Modem II to dial the number. After the Modem II dials the number, it turns off the carrier (transmission signal) until a carrier is received from IIS. The |WN| function is used to detect this stage.

The Videotex Plus system normally operates at 300 Baud, so usually no change is needed to the transmission speed. However, Videotex Plus is preset to 8 Bit characters, No Parity and 1 Stop Bit per character. To communicate with IIS, we must change this to 7 Bit, Even Parity. This is done using the |S####| command. The value 55 specifies a transmission rate of 300 Baud and A4 specifies a configuration of 7 Bit, Even Parity characters with 1 Stop Bit. Since the Modem II may require the 8, None, 1 configuration, we waited until after dialing to change it.

The |WC| command is used to detect when the IIS carrier signal is received and the P2 command is used to pause for two seconds before we try to transmit anything.

The rest of the session simply duplicates the dialog that would normally be done from keyboard.

Line 2 The Hex Byte command is used to transmit a Control-C (Hexadecimal 03) to the IIS system.

Line 3 The RC command is specified here to look for the message and determine when to send the Terminal Code. As soon as the message is received, the log-on will proceed to the next step.

Line 4 The TR command is used to transmit the ***A** terminal code and a CR (carriage return). This duplicates the action of typing `*A` (ENTER) on the keyboard.

Line 5 The RC function is used to look for the Account Code prompt.

Line 6 The TR function is used to transmit the code followed by a Carriage Return.

Line 7 The RC command is used to look for the Password prompt.

Line 8 The PO (Prompt Operator) function is used so that the password is not automatically transmitted or stored in the auto log-on file. When this step is reached, the auto log-on prompt `TYPE PASSWORD` (ENTER) will be displayed. You will then type the password on the keyboard and press the (ENTER) key. (ENTER) is used to send a carriage return and exit the PO function. Refer to the section of this manual, **Automatic Log-On Commands** for other ways to terminate the PO function.

Line 9 The RC command is used to look for the COMMAND: prompt from IIS. All other information that is received will be displayed but will be ignored by the log-on process until the specified prompt is received.

Line 10 The TR command is used to send the FIND MYDATA request (followed by a carriage return) to the IIS service.

Line 11 The EOF command is used to mark the end of the automatic log-on session. When the EOF is reached, the process is turned over to manual control from the keyboard.

Naming Files

FILESPEC is simply the name of the file you are creating or editing. A FILESPEC can be up to 8 characters long, must begin with an alphabetic character and should not contain any punctuation or spaces. Since you may have many different log-on files for various systems on the diskette, you should choose a distinctive name. For example, if you subscribed to an information service known as Tom's News Service, you might create a log-on file called TOMNEWS or TNS.

If you have a multi-drive system, you can save your files onto a formatted data diskette in another drive. To specify a drive other than 0, simply follow the name with a colon and the number of the drive that contains the data diskette. For example, to save an auto log-on file named TNS to Drive 1, type `TNS:1` (ENTER). (Using auto log-on files saved on any drive other than 0 is explained later in this manual.)

Note: TNS:1 will appear on the diskette's directory as TNS/ALG:1. The /ALG is automatically added by the program. You do not have to enter /ALG when saving or loading a file. The system will not recognize a log-on without the /ALG suffix. Do not attempt to change the name.

Using the Directory

To list the files currently on a diskette, at TRSDOS Ready, type `DIR :d` (ENTER) (Where *d* is the drive number of the diskette you wish to examine.)

Deleting an Auto Log-on File

To delete a file from a diskette, at `TRSDOS Ready`, type `KILL` *filespec* (ENTER) (Where *filespec* is the name of the file you wish to delete.) Do not KILL VIDTEX or VIDEDT.

3 / Using the Model I/III Keyboard with VIDTEX

While running VIDTEX, whatever you type will be sent to the host system. Whatever information you receive from the host will usually (but not always) be displayed on your screen.

In general, you can use the keyboard as usual. However, under VIDTEX some keys perform special operations such as turning the printer on or off. Others send special characters not normally available on the keyboard. These are Meta-functions. They are used to control the Videotex Plus program and are not transmitted. This section will describe how VIDTEX uses the TRS-80 keyboard.

Upper/Lowercase Characters

If your TRS-80 Model I is not equipped for lowercase, all lowercase characters will be translated to uppercase on the screen.

After you load Videotex Plus, the program will determine if your System can display lowercase characters. For a Model I/III, use the (SHIFT)(0) toggle switch to enter lowercase mode if your TRS-80 has lowercase capability.

The TRS-80 Model I can transmit lowercase characters to the host (using the (SHIFT)(0) toggle switch) even if it has not been modified to display them.

Repeating Keys

During the operation of VIDTEX, key entries will repeat if a key or key combination is held for more than two seconds. For example, if you wish to enter a line of dashes, simply hold down the (−) key until the desired number of dashes have been entered.

Control Key Functions

The (↓) is used as the Control Key. To enter a "Control" function, simply press the appropriate key while holding down (↓). For example, to enter a CONTROL-C, use the key-combination (↓)(C).

The following table lists the most commonly used Control key functions. Note that VIDTEX both sends and receives the Control key functions listed in Table 2. That is, if VIDTEX sends a Control-S (XOFF) and if the host supports it, the host will pause; if the host sends a Control-S, VIDTEX will pause the transmission.

VIDTEX Control Key Functions	
Key Control	**Function**
(↓)(S)	Pause (XOFF).
(↓)(Q)	Restarts after a pause (XON).
(↓)(R)	Turns the print option ON.
(↓)(T)	Turns the print option OFF.
(↓)(C) or (BREAK)	Interrupt. Press (ENTER) to continue.
(↓)(CLEAR) or (CLEAR)	ESC (Escape)

Table 2

For additional information, refer to the Redefined Keys table in the **Technical Information** section of this manual.

Meta (↑) Key Functions

The (↑) key is called the "Meta Key." Meta functions are used to control VIDTEX advanced features. The operation of the Meta functions is similar to the Control functions. To execute a Meta function, simply hold down the (↑) key and press the key corresponding to the function you want. To display a list of the Meta key functions, use Meta-M by pressing the key-combination of (↑)(M). This will produce a display similiar to:

```
                    META Key functions

RAM Buffer          Local Control       Miscellaneous
C Close             B Break Words       A Abort
D Display           E Enable Clean      F Function Keys
G Get Screen        N Narrow            H Help
L Load              R Printer On        I Init Auto Dial
O Open              T Printer Off       M Menu
P Print             W Wide              Q Query Status
S Save              * Print Screen      X Exit
U Unedited Save     CLEAR Clear Screen
V Transmit
Y Transmit W/Prompt
Z Zero
  USED: 00016
  FREE: 24431

      Press your choice or <ENTER> for terminal mode.
```

Note: To use a Meta key function while displaying the menu, do not press (↑).

C
Close Buffer

Press (↑)(C) to close memory (i.e., the RAM Buffer). Using this key combination will display the message, `** Buffer Closed **`, meaning further data transmission will not be saved in memory. (See **Open**).

D
Display Buffer Contents

Memory contents ("captured data") can be displayed by pressing (↑)(D). To stop or pause the display, press (↓)(S). To resume the display, press (↓)(Q). To cancel the display, press (↑)(A). Press (ENTER) to return to the previous screen.

G
Get (Save) the Screen

A copy of the current screen display can be saved in memory, without opening the Buffer, by pressing (↑)(G). Each line is copied into memory up to the last non-blank character on the line. If the Buffer was closed, it will remain closed after saving the screen.

L
Load a Saved File from Disk

Press (↑)(L) to load a previously saved file from disk. VIDTEX will prompt you to enter the file name assigned to the file. All data in the file will be added to the current contents of the RAM Buffer. If the file is too large to load, an error message will be displayed.

O
Open Buffer

VIDTEX lets you channel information into the unused portion of your computer's memory. This memory area is called the RAM Buffer. This process is known as "data-capturing" because the received data is saved rather than discarded as soon as it is received. By using the available memory space, you can "capture" text from the host if you want to save it for future reference.

When VIDTEX is started, the computer's RAM Buffer will be empty and closed. To open the Buffer and save the information, press (↑)(O). The screen will display the message, `** Buffer Open **`. All subsequent received characters will be added to memory until it becomes full or until you press (↑)(C).

If RAM Buffer becomes almost full, a message `** Buffer Closed **`, will be displayed. If this message appears, you should save the information using (↑)(S) or (↑)(U), then clear the Buffer. You may then open the Buffer to continue. If the host does not stop transmission, or you try to open the Buffer without previously clearing it, the Buffer will automatically close.

Note: If you return to TRSDOS at any point, you will lose all captured data in the Buffer.

P
Print Buffer Contents

Press (↑)(P) to print the RAM Buffer contents. Press (↑)(A) to stop the printing. After you press (↑)(A), the printer may continue momentarily.

S
Save An Edited Version of Buffer Contents on Disk

An "edited" save converts the Buffer information to TRSDOS compatible ASCII format. This format should be used for saving data for processing with another program such as VisiCalc™ or SCRIPSIT™. In this format, Control codes and special graphic characters are removed or replaced with TRSDOS compatible codes.

Press (↑)(S) to save an edited version of the Buffer contents to diskette. You will be prompted to enter the file name you want to assign the information. If you wish to save the information on a disk drive other than Drive 0, you must specify a drive number.

If you have two drives, you would insert a formatted data diskette into Drive 1. Type the file name followed by a colon and the drive number and press (ENTER). For example, to save a file to Drive 1, you might type `JUNGLE:1` (ENTER).

Because of the substitutions made when a full Buffer is saved with editing, the file may become too large to reload. It is recommended that the edited save be used for saving data to a diskette when it is to be processed using another program. Press (↑)(A) to cancel the save at the point you are prompted to enter a file name.

U
Saving Unedited Buffer Contents

Press (↑)(U) to save unedited information exactly as it is received. You will be prompted to enter a file name for the Buffer contents. Type a file name and press (ENTER).

The unedited save is preferable when saving text that you want to view later (see (↑)(L)). Graphic pages, such as stock graphs, require that you use the unedited save for later viewing. Press (↑)(A) to cancel the save when prompted for a file name.

V
Transmit Information to Buffer

This function can save on connect time since it lets you load information into memory before you log-on, then transmit it to a host (e.g., transmitting a message through electronic mail) after you have signed on.

Press (↑)(V) to transmit the contents of RAM Buffer continuously.
`** Transmitting Buffer **` will be displayed on the screen. The transmission will stop after the entire contents of the Buffer are sent. You may stop the transmission by pressing (↑)(A).

Y
Transmit Data with Prompt

Press (↑)(Y) for a prompted transmission of Buffer contents. You will be asked for a prompt character (one keyboard character). Press the character of your choice and Buffer contents will be transmitted one line at a time.

After each line has been transmitted, VIDTEX will wait for the specified prompt character to be received. Press (↑)(A) to cancel data transmission.

Z
Emptying Buffer Contents

To clear the Buffer, press (↑)(Z). The screen displays ** Buffer Zeroed **.

B
Break Words

Press (↑)(B) to stop the "word cleaning" characteristic of VIDTEX. Pressing this key-combination causes the words to be "split" as the text reaches the end of a line. This function is useful for saving tables or graphs into memory.

E
Enable Clean

Press (↑)(E) and words will no longer be split at the end of lines (e.g., "wrap-around" is prevented). This resumes the "word cleaning" characteristic of VIDTEX if you have previously selected the "Break Words" function.

N
Normal Screen Display

Press (↑)(N) to display text in normal (64 characters per line) width.

R
Turn Printer Option ON

Press (↑)(R) to turn the printer option on. ** Printer On ** will be displayed on the screen. When the printer option is on, all characters displayed on the screen will also be printed on the printer.

T
Turn Printer Option OFF

Press (↑)(T) to turn the printer option off. ** Printer Off ** will be displayed on the screen.

W
Wide Screen Display

Press (↑)(W) to display text in wide (32 characters per line) width.

(CLEAR)
Clear Screen

Press (↑)(CLEAR) to clear the screen. Data transmission will continue.

A
Cancel (Abort) Functions

Press [↑][A] to cancel the current function.

F
Define Function Keys

VIDTEX has 10 function keys (0-9) which can be defined as any arbitrary phrase you choose to assign to frequently used commands. For example, you could store your CompuServe User ID by defining a function key.

The Load and Save key options let you keep several sets of definitions with different file names on disk. By loading different definitions for different needs, you can have virtually an unlimited number of function keys.

To define a function key, press [↑][F]. You will then have the choice to display the current key definitions, load the key definitions from disk, save the key definitions to disk, or define a key.

Press the key you wish to define (0-9). Do not press [ENTER]. If you select a key that already has a definition, the existing definition will be erased. You may then enter a new definition.

Type the definition. Most host computers do not recognize a command until [ENTER] is pressed. Therefore, most function key definitions should include [ENTER]. To enter the definition, press [↑][F] again. You must then return to the function key menu to save the definition to disk.

Function key definitions cannot exceed 255 characters. If you exceed this limitation, `Function key buffer full!` will be displayed.

To clear (e.g., erase a definition) a function key, select a key as if you were defining a key, then press [↑][F].

Note: It is not advisable to define a function key for your password.

Saving Function Key Definitions To Disk

Press [S] at the function key menu to Save the defined set of function keys to disk. For `Enter file name:`, type a file name (up to 8 characters) and press [ENTER]. (Be sure you use a different file name for each set of function key definitions.) If you want to save a file on a drive other than 0, type *filename: d* (where *d* is the drive number).

Loading Function Key Definitions From Disk

At the Function Key menu, press [L]. You will be asked to enter the file name for the set of key functions you defined. Type the file name, press [ENTER], and the program will resume. You can change function key definition files by returning to the function key menu and entering another file name.

Using Defined Function Keys

To use a defined key, press [↑] and function key desired. To end the transmission, press [↑][A].

H
Help

For a list of redefined keys, press (↑)(H). A table similar to the following will be displayed:

```
                    KEY DEFINITIONS

Key     SFT     CTL     Key             Normal    Shift     Control
1       !       ¦       BREAK           ^C        BRK       ^C
5       %       ~       Left Arrow      BS        ^U        BS
7       '       ^       Right Arrow     HT        HT        HT
8       (       [       CLEAR           ESC       RUB       ESC
9       )       ]       Up Arrow          --META KEY--
-       =       _       Down Arrow        --CONTROL KEY--
@               NUL
,       <       {           Shift-Zero Toggles SHIFT Lock
.       >       }
/       ?       /

                    Key ENTER for terminal mode
```

I
Displays Auto Log-On Menu

This function displays the Auto Log-On Menu. To select a Log-On file, press (↑)(I) to display the Log-On Menu. Enter a selection to start an Auto Log-On procedure.

Q
Query and Change UART and TIMER settings.

Press (↑)(Q) to examine or change the configuration of the communication hardware and set the delay timer for the |RC| auto log-on command.

When you request this function, the following will appear on the screen:

```
BAUD    UART    TIMER   RETRY   DRIVE   DUPLEX  XON/XOFF
 55      6C      ØA      N       Ø       F       Y

                1. BAUD RATE
                2. UART CONFIGURATION
                3. LOG ON TIMER
                4. LOG ON RETRY
                5. LOG ON DEFAULT DRIVE
                6. DUPLEX
                7. XON/XOFF SUPPORT

        Press your choice or ENTER for terminal mode.
```

The codes are special values that indicate the various combinations available. Refer to the BAUD Rate Codes and UART Configuration tables in the **Technical Information** section of this manual. The value shown for TIMER is the number of seconds of delay in hexadecimal form.

Note: Care should be taken when changing the pre-assigned values in VIDTEX. Make sure you are familiar with the capabilities of the communication equipment and the particular host system you wish to use before modifying these values.

Baud Rate Press (1) if you wish to change the BAUD rate. Enter the appropriate value from the BAUD Rate Code table and press (ENTER).

Uart Configuration To change the UART configuration, press (2) and type the appropriate value from the UART Configuration code table. Press (ENTER).

Log On Timer To change the delay for the |RC| auto log-on command, press (3). Type the number of seconds to delay (in Hexadecimal form) and press (ENTER).

Log On Retry Log On Retry lets you tell the program to repeat the auto log-on if connection is not established during a previous try. Press (4) at the Menu. Type N(ENTER) if you do not want the Continuous Retry option. Type Y(ENTER) to tell the program to "retry" the log-on until a successful connection is established. To discontinue the Retry mode, press (BREAK) and the message FUNCTION TERMINATED, PRESS <ENTER> TO RECOVER appears.

Log On Default Drive If you have additional disk drives or Hard Disks, you can specify from which drive you want to load the auto log-on files. Press (5) if you have a specification. Type a number from 0 to 7 (depending on your system) and press (ENTER). The auto log-on files will be loaded from the disk drive corresponding to that number.

Duplex Press (6) to change from Half to Full-Duplex. If the host communicates in Half-Duplex, type H(ENTER) to set the program for half-duplex (self-echo) communication. If the host is Full-Duplex, type F(ENTER) to set the program for full-duplex (host echo).

XON/XOFF Support Press (7) to change XON/XOFF Support. Consult your information service user's guide to determine if this needs to be specified. If the host supports XON/XOFF, type Y(ENTER). If the host does not support XON/XOFF, type N(ENTER).

Press (ENTER) for the VIDTEX terminal mode.

X
Exit VIDTEX

Press (↑)(X) to exit VIDTEX and return to TRSDOS Ready. You must always use the Meta-X command to exit. Do not remove your diskette before returning to TRSDOS.

Using a Printer with VIDTEX

If you have a printer connected to your TRS-80, you can use it to obtain hard-copy printouts while you are in the interactive terminal mode.

- Press (↑)(R) and a copy of all subsequent characters received will be sent to the printer. If the printer is not ready when you use this command (Off Line, out-of-paper, etc.), an error message will be displayed.
- Press (↑)(T) to stop printing.
- Press (↑)(*) to print a copy of the information on the screen.
- To stop the printout, press (↑)(A). The printer may continue printing briefly before stopping.

Hints and Tips

- You may be inadvertently disconnected from the network if you have a "call-waiting" service and there is an incoming call signal.

- If an extension phone is picked up, you may receive data errors (normally, you will not be disconnected).

4 / VIDTEX S (Store and Forward/Advanced Storage)

If you subscribe to a "Store and Forward" information service, you can save on connect time by utilizing the Advanced Storage Mode option of Videotex Plus. The Advanced Storage Mode lets you load the program, select your menu choice, log-on to the service, and receive and store up to 48 pages of text (48K system) or up to 28 pages of text (32K system).

This is a specialized option that utilitizes a protocol not supported by most host Computers. It is designed specifically for use with "Store and Forward" information services that use special software. The actual use of this the VIDTEX S option will be described by the particular service that requires this feature.

1. At `TRSDOS Ready`, type `VIDTEX S`(**ENTER**).

2. Press any key other than (**BREAK**). This will activate the advance entry mode of VIDTEX S. Anything you type will be stored beginning on "page" 6. When you have completed the entry of your request, press (**BREAK**).

3. When the `PLACE CALL` prompt appears, you can use an auto dial sequence by pressing (**A**), then make a selection from the Auto Log-On Menu.

   If your modem does not support auto dial, dial the number and establish the connection manually. The procedure used will depend on the equipment you are using.

   If you are using a Modem II, but are not using Auto Log-On, you must turn the DTR switch **ON**; then, when the connection is made, turn the DTR switch **OFF**.

4. Press any key, other than (**A**), to start the communication when the connection and carrier have been established.

After the information requested has been transmitted by the host service or the maximum number of pages is stored, an `OFF-LINE` message will appear. If you are using an acoustic coupler, hang up the phone.

Use (↑) and (↓) to scroll through the pages of text received.

When you are finished viewing the information, press (**BREAK**) to exit or (**CLEAR**) to enter another request and repeat the procedure.

5 / Technical Information

Redefined Keys

While operating VIDTEX, you can use the keyboard normally, however, remember that some key combinations perform special operations (such as turning the printer on or off). Other key functions transmit special characters not normally available on the keyboard.

The following table summarizes the keys that have been redefined.

Redefined Keys						
	— Normal —		— Shifted —		— Control —	
Key	ASCII	Hex	ASCII	Hex	ASCII	Hex
1	1	31	!	21	!	7C
5	5	35	%	25	~	7E
7	7	37	'	27	^	5E
8	8	38	(	28	[	5B
9	9	39	)	29	]	5D
–	–	2D	=	3D	–	5F
@	@	40		60	NUL	00
,	,	2C	<	3C	{	7B
.	.	2E	>	3E	}	7D
/	/	2F	?	3F	\	5C
BREAK	ETX	03	BREAK-	SEQ	ETX	03
←	BS	08	NAK	15	BS	08
→	HT	09	HT	09	HT	09
CLEAR	ESC	1B	RUB	7F	ESC	1B

Up Arrow (↑) -Meta Key
Down Arrow (↓) - Control Key

When communicating with a host system, you will find that the most commonly used keys are (ENTER) and (BREAK).

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

Cursor Positioning

VIDTEX also supports remote cursor positioning sequences that allow the host to position text anywhere on the screen. Remember that this is a remote function executed by the host and cannot be performed from the keyboard. The character sequence for remote cursor positioning is:

(ESC)(Y) *line code character column code character*

where "line code" and "column code" are from the following table:

Cursor Positioning Sequences

Line Code		Column Code					
Line	Char.	Col.	Char.	Col.	Char.	Col.	Char.
1	Space	1	Space	23	6	45	L
2	!	2	!	24	7	46	M
3	"	3	"	25	8	47	N
4	#	4	#	26	9	48	O
5	$	5	$	27	:	49	P
6	%	6	%	28	;	50	Q
7	&	7	&	29	<	51	R
8	'	8	'	30	=	52	S
9	(	9	(	31	>	53	T
10	)	10	)	32	?	54	U
11	*	11	*	33	@	55	V
12	+	12	+	34	A	56	W
13	,	13	,	35	B	57	X
14	–	14	–	36	C	58	Y
15	.	15	.	37	D	59	Z
16	/	16	/	38	E	60	[
17	0	17	0	39	F	61	/
18	1	18	1	40	G	62	]
19	2	19	2	41	H	63	^
20	3	20	3	42	I	64	_
21	4	21	4	43	J		
22	5	22	5	44	K		

VIDTEX Escape Sequences

VIDTEX lets the host computer perform screen control functions through escape sequences. Remember that these are remote functions executed by the host and cannot be performed from the keyboard. The following table summarizes the screen control sequences and the functions they perform. Note the difference between lower and uppercase.

Escape Control Sequence Summary	
Sequence	**Function**
(ESC)(ESC)O	Open RAM buffer
(ESC)(ESC)C	Close RAM buffer
(ESC)(ESC)Z	Zero RAM buffer
(ESC)A	Cursor up
(ESC)B	Cursor down
(ESC)C	Cursor right
(ESC)D	Cursor left
(ESC)G4	Semi-graphics 4 mode
(ESC)GN	Text mode
(ESC)H	Home cursor
(ESC)J	Clear to end of page
(ESC)K	Clear to end of line
(ESC)Y line col	Position cursor
(ESC)b	Lock keyboard
(ESC)c	Unlock keyboard
(ESC)e	Disable display
(ESC)f	Enable display
(ESC)g	Restart VIDTEX
(ESC)j	Clear Page
(ESC)l	Normal character width
(ESC)m	Wide character width
(DC1)	XON
(DC2)	Printer on
(DC3)	XOFF
(DC4)	Printer off

Graphics Mode

An (ESC)G4 is used by the host to specify semi-graphics 2 x 2 mode. These codes are used internally by the Videotex Software and cannot be generated from the keyboard. In this mode the parity bit is used to distinguish between graphic and ASCII characters. If the parity bit is zero, the character is a standard ASCII character. If the parity bit is one, the character is a graphics character. The format of a graphic character is:

7	6	5	4	3	2	1	0
1	a	b	c	d	e	f	g

Bits "abc" define the color as follows:

000 - Green
001 - Yellow
010 - Blue
011 - Red
100 - Buff or White
101 - Cyan
110 - Magenta
111 - Orange

Since the Model I/III does not support color, all colors are mapped to white.

Bits "defg" define the graphic character as a set of four picture elements. A one bit sets a picture element on. The bits map to the picture elements as follows:

d	e
x	y
f	g

The "x" bit is set only when bits "d" and "f" are set. Similarly, the "y" bit is set only when bits "e" and "g" are set.

Data Transmission Flow Control

VIDTEX recognizes the standard ASCII flow control characters, XOFF (Control-S) and XON (Control-Q). If VIDTEX receives an XOFF from the host, it will halt transmission. If an XON is not received in approximately five seconds, transmission will resume automatically.

VIDTEX expects the host to observe the same rules. There are several instances where an XOFF is sent to temporarily halt transmission from the host (RAM Buffer almost full, printer buffer full, menu selected). If the host does not respond to flow control, characters may be lost.

UART Settings

VIDTEX sets the communication hardware to the following settings:

Baud rate:	300
Data bits:	8
Stop bits:	1
Parity:	None

Changing the Transmission Speed (BAUD Rate)

If you need to communicate at a rate other than 300 baud, select the appropriate value from the table below and enter the value using the Meta-Q function.

BAUD Rate Codes	
Baud Rate	**Hexadecimal Value**
50	00
75	11
110	22
134.5	33
150	44
300	55
600	66
1200	77
1800	88
2000	99
2400	AA
3600	BB
4800	CC
7200	DD
9600	EE
19200	FF

Changing the UART Settings

If you need to communicate using a different UART configuration, select the appropriate value from the table below and change the configuration using the Meta-Q function.

UART Configuration Codes			
Data Bits	**Parity**	**Stop Bits**	**Hexadecimal Value**
7	Even	1	A4
7	Odd	1	24
7	None	1	2C
7	Even	2	B4
7	Odd	2	34
7	None	2	3C
8	Even	1	E4
8	Odd	1	64
8	None	1	6C
8	Even	2	F4
8	Odd	2	74
8	None	2	7C

For more information on system configurations:

If you have a Model I, consult your ***TRS-80 RS-232C Interface Technical Reference Manual.***

If you have a Model III, consult your ***TRS-80 Model III Technical Reference Manual.***

6 / Using SCRIPSIT™ or VisiCalc™ to Process a Stored Information File

If you have SCRIPSIT™ software, you can work with the Videotex plus RAM Buffer contents that you saved in a TRSDOS file. Insert SCRIPSIT™ in Drive 0, and insert the data diskette with the saved RAM Buffer into another disk drive. Using the SCRIPSIT™ file loading function, load the saved RAM Buffer using the name assigned when it was saved. You should then be able to work with the information using the features and functions of SCRIPSIT™. For detailed information concerning TRSDOS file manipulation, consult your SCRIPSIT™ Reference Manual.

If you have only one drive:

1. Place the source (Videotex Plus) diskette in Drive 0 and type `COPY` *filename*`:Ø :Ø`(ENTER).
2. When prompted to `Insert SOURCE Disk <ENTER>`, place your Videotex Plus diskette in Drive 0 and press (ENTER).
3. When prompted to `Insert DESTINATION Disk <ENTER>` place your SCRIPSIT™ disk in Drive 0 and press (ENTER). Repeat from Step 2 until the TRSDOS Ready prompt appears.

If you have VisiCalc™ software, you may receive VisiCalc data into your Buffer and save it to disk. You can edit this file using SCRIPSIT™ prior to loading into VisiCalc™. Insert your VisiCalc™ disk in Drive 0 and insert the data diskette with the saved RAM Buffer into another disk drive. Using the VisiCalc™ loading function, load the saved RAM Buffer using the name assigned when it was saved. You should then be able to work with the information using the features and functions of VisiCalc™. For detailed information, consult your ***VisiCalc™ User's Guide***.

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