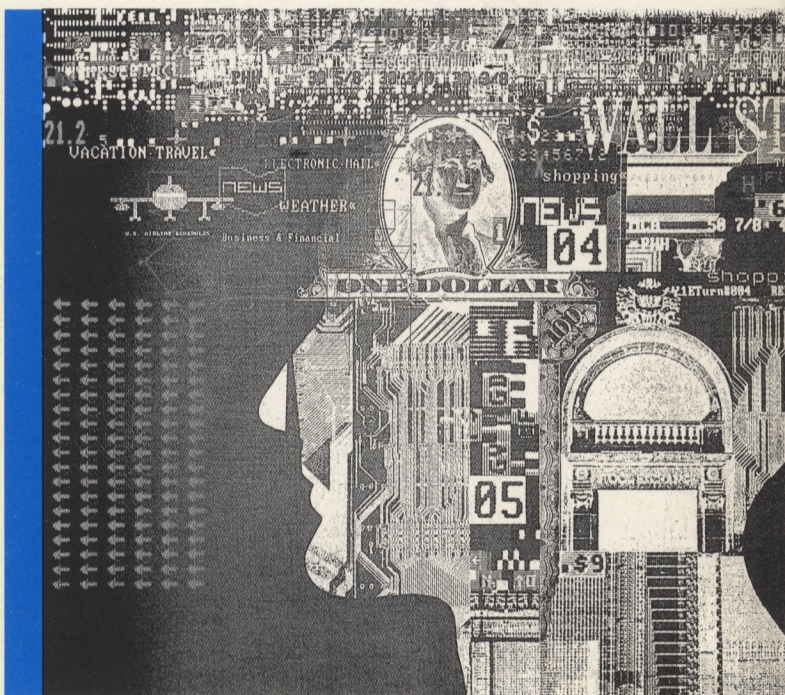


CompuServe

Atari
VIDTEX™

Users Guide



Atari VIDTEX™

Users Guide

Disclaimer

This document contains the latest information available at the time of publication. However, CompuServe reserves the right to modify the services described herein at any time, with or without published notification.

CompuServe offers no warrants, express or implied, regarding the accuracy, sufficiency, suitability or merchantability of the software or other materials delivered herewith. Customers have the sole responsibility for inspecting and testing all services to their satisfaction before using them with important data.

Copyright

This software product is copyrighted and all rights are reserved by CompuServe. The distribution and sale of this product are intended for the use of the original purchaser only and for use only on the computer system specified. Lawful users of this program are hereby licensed only to read the program from its medium into memory of a computer solely for the purpose of executing the program. Duplicating (except for backup purposes), selling or otherwise distributing this product is a violation of the law.

Trademarks

ATARI 65XE, ATARI 130XE, ATARI 800, ATARI 800XL, ATARI 810, ATARI 825, ATARI 835, ATARI 850, ATARI 1025, ATARI 1027, ATARI 1030, ATARI 1050 and ATARI XM301 are trademarks of ATARI INC.

The Source is a service mark of The Source Telecomputing Corp.

Dow Jones News Retrieval is a service mark of Dow Jones & Company, Inc.

VisiCalc is a registered trademark of VisiCorp.

VIDTEX, MicroQuote, Quick Quote, FILTRN, ACCESS, QTRAN, QUBIT, and MegaWars are trademarks of CompuServe Incorporated.

Smartmodem is a trademark of Hayes Microcomputer Products Inc.

Contents

i	Contents
iii	About This Manual

Chapter 1: Introduction

1-1	Equipment Requirements
1-2	VIDTEX Diskette
1-3	VIDTEX Backup
1-3	Program Overview
1-4	Operating Controls

Chapter 2: Running VIDTEX

2-1	VIDTEX Disk Preparation
2-4	System Startup and Program Loading
2-8	Communication Parameters
2-8	Logging On
2-9	Defining Your Terminal Type
2-10	Logging Off

Chapter 3: Meta Key Functions

3-1	Using the Capture Buffer
3-7	Controlling Your Printer
3-7	Function Keys
3-9	Automatic Logon
3-13	Specifying Communication Settings
3-16	Word Cleaning
3-17	Controlling Color
3-17	Managing Your Files
3-19	Specifying Modem Functions

Chapter 4: Transferring Files

4-1	What is B Protocol?
4-1	How To Perform A File Transfer

Chapter 5: Advanced Autolog Files

5-1	Online Navigation
5-3	Storing Meta And Control Commands
5-3	AUTOLOG Chaining
5-4	Executing an Advanced AUTOLOG
5-7	Summary Of AUTOLOG Commands

Chapter 6: Tips for Using VIDTEX

- 6-1 File Requirements for Running VIDTEX
- 6-1 Avoiding Garbled Display When You Log On
- 6-1 Avoiding Garbled Display of Uploaded Files
- 6-2 Avoiding Accidental Deletion of Disk Files
- 6-2 Dialling with a Hayes Smartmodem™
- 6-2 Logging in through Telenet
- 6-2 Saving the Capture Buffer to Disk
- 6-3 Updating VIDTEX
- 6-4 Starting VIDTEX without AUTORUN.SYS

Chapter 7: VIDTEX Error Messages

Chapter 8: Technical Information

- 8-1 Escape Sequences
- 8-6 ASCII Control Characters
- 8-6 Printer Control Character Conversion
- 8-6 Editing

Appendix A: Disk Error Codes

Appendix B: Glossary of Terms

About This Manual

To make this Users Guide more convenient for you to use, these conventions are followed throughout:

Special Typefaces




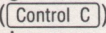
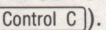
Different styles of type illustrate different VIDTEX features:

Information displayed on your terminal appears in this type. This includes program messages, menus and prompts.


In text and examples, commands and responses you enter appear in this blue type.

Bold typeface is used for commands, program names and to emphasize important information such as error messages.

Key Symbols

The key symbol () illustrates keys on your computer used with VIDTEX. When you see two adjacent keys ( ) , press them in the order shown, releasing the first before pressing the second. Two symbols within the same key () tell you to hold down the first key while pressing the second. In some cases, there may be three keys pressed at the same time () .

Note: When displayed on your screen, the control functions are displayed as the symbol ^ (circumflex) combined with the appropriate character. Thus, Control C is displayed as ^C.

 (carriage return) is used where needed for clarity only. Unless otherwise indicated, all information you enter is terminated with a carriage return.

Screen Symbols

A large, dark blue screen containing text indicates that the text displayed is a main menu of the VIDTEX program or of the CompuServe service.

A small, light blue screen adjacent to the text indicates information displayed on your screen such as your input, program messages, prompts and secondary menus.

Chapter 1

Introduction

Note: VIDTEX is designed specifically for operation in conjunction with either an ATARI direct-connect modem or the ATARI 850™ interface module, also known as the 850 handler. If none of these modules are present, VIDTEX may not load. Even if the load is successful, your ATARI microcomputer will not be able to communicate with the host system.

Welcome to the world of videotex and the extensive capabilities VIDTEX brings to your ATARI microcomputer system.

This guide contains easy-to-follow instructions and helpful examples to assist you in using VIDTEX. A technical section and appendices are included for reference.

If you have any questions that this guide does not answer, you can obtain additional information in any of the following ways:

- See the online VIDTEX Information Area (enter "GO VID" from any CompuServe menu). This service gives up-to-date information on all VIDTEX programs, as well as answers to some of the most common questions.
- For more complicated questions or problems, contact Customer Service through online Feedback. Since some questions may require research, please allow several weeks for a reply via EasyPlex.
- For questions needing immediate answers, contact Customer Service by telephone. The toll-free number is (800) 848-8990.

Equipment Requirements

The minimum system configuration for using VIDTEX is:

- Any of the following ATARI microcomputers:
 - ✓ ATARI 800 (with 48K RAM)
 - ATARI 800XL
 - ✓ ATARI 65XE
 - ✓ ATARI 130XE

- ✓ ● ATARI Disk Operating System (DOS) 2.0S or 2.5
- ATARI 810™ or ATARI 1050™ disk drive
- ✓ ● television set or video monitor
- one of the following communications configurations:
 - ATARI 850 interface module connected to a modem conforming to RS-232 specifications
 - ✓ — ATARI 835™ direct-connect modem
 - ATARI 1030™ direct-connect modem
 - ATARI XM301™ direct-connect modem

Caution

ATARI VIDTEX is designed specifically and solely for use in conjunction with an ATARI direct-connect modem or the ATARI 850 interface module. DO NOT attempt to substitute any other interface for the ATARI 850, even one that is normally compatible, unless you are sure that it operates EXACTLY the same.

You can fully utilize the features and capabilities of VIDTEX by including the following additional equipment:

- ✓ ● from one to three additional disk drives
- ✓ ● a compatible printer

VIDTEX Diskette

The VIDTEX software is provided on a diskette. You should take care not to expose the VIDTEX diskette to heat, dust, high humidity, or magnetic interference.

On your VIDTEX diskette are the following files:

VIDTEX.OBJ is CompuServe's VIDTEX program.

HANDLER.SYS is the program for automatic initialization of the ATARI 850 interface module and/or an ATARI direct-connect modem.

These files must be duplicated to a formatted disk which contains ATARI DOS 2.0 or 2.5. For procedures, see VIDTEX Disk Preparation in Chapter 2.

VIDTEX Backup

CompuServe recommends that you make a backup copy of the program for daily use. Follow these steps to back up VIDTEX:

1. From the ATARI DOS menu, select the disk duplication function.
2. Insert your VIDTEX master diskette into your disk drive.
3. Use a formatted diskette as the destination.
4. Place the VIDTEX master diskette in a safe place.

Program Overview

VIDTEX is a sophisticated terminal program that makes your computer fully compatible with the CompuServe Information Service and other host computer systems.

VIDTEX provides the following powerful features:

Capture Buffer

The Capture buffer is a segment of your computer's memory that can be controlled by special commands. Using the buffer you can capture information received from the host computer and save it to disk or printer. The ATARI's capture buffer can hold up to 8,191 characters of information.

Printer Control

You can use the VIDTEX printer control functions to produce a printed copy of all or part of any dialogue between your microcomputer and a host system, or to produce a printed copy of the complete contents of your display screen at any time.

Function Keys

You can define the ten number keys (0-9) with any frequently typed commands. Definitions can be saved to disk and new sets of definitions loaded into the function keys at will.

Video Special Effects

VIDTEX responds to commands from the host computer that employ color graphics and cursor positioning for creating special video effects. For a detailed discussion, refer to Escape Sequences in Chapter 8 of this guide. Moreover, you can select among 16 colors for regular screen displays.

Automatic Logon

With VIDTEX you can automate the procedure of accessing a host computer system and navigating menus.

Error Free File Transfer

You can use CompuServe's B Protocol to protect important files from telephone line noise and other types of interference during transfers between your computer and CompuServe.

Operating Controls

VIDTEX provides two types of special control functions:

Meta (meaning "change") functions transmit VIDTEX operation commands to your computer. To perform a Meta function, you hold down either the SELECT key or the OPTION key while you depress another character key. This changes the normal function of the character key, so that it transmits a Meta command instead of a character. For example, holding down the Meta key while you press the O key opens the capture buffer and begins data capture.

Meta functions help you operate such VIDTEX features as the capture buffer and printer output. In most cases, they do not transmit any data to CompuServe, but perform only local functions — that is, functions which affect the operation of your terminal. Meta functions are not available in the graphics mode, with the exception of Meta Control G which changes the transmission mode from graphics to text.

For a detailed discussion, see Meta Key Functions (Chapter 3 of this guide).

Control functions transmit special commands to your host computer. To perform a Control function, you hold down the key marked CONTROL or CTRL while you press the appropriate character key. For example, holding down the Control key while you press the S key temporarily halts transmissions from the host.

For a detailed discussion of Control key functions, see the Reference Card at the end of this guide.

Chapter 2

Running VIDTEX

To run VIDTEX, you should be familiar with the following procedures:

- VIDTEX disk preparation
- System startup and VIDTEX program loading
- Logging on to CompuServe
- Defining your terminal type
- Logging off of CompuServe
- Exiting the VIDTEX program
- Restarting VIDTEX after exiting

The following subsections explain each of these procedures.

VIDTEX Disk Preparation

As mentioned in Chapter 1 (See VIDTEX Diskette), the master VIDTEX program diskette you receive from CompuServe contains only two files: VIDTEX.OBJ and HANDLER.SYS. Before you can use the VIDTEX program, you must copy these files onto another disk containing the ATARI Disk Operating System (DOS 2.0 or DOS 2.5). Then you must create a special file called MEM.SAV, unless it is already present. Finally, you must create a new file called AUTORUN.SYS, so that your ATARI will automatically initialize the communications device(s) and, if desired, the VIDTEX program as well.

Copying VIDTEX Files to DOS

Remember to create a backup VIDTEX diskette before you copy the files. To make sure the backup disk has been copied correctly, you can use it in the copy operation. The disk you intend to copy to should contain only the ATARI DOS.

Copying with One Disk Drive

If you have a single-drive system, you can use the following procedure to copy the files from the VIDTEX master diskette to the disk with the ATARI DOS:

1. Proceed to the ATARI DOS menu.
2. Select Choice O (Duplicate File). The system now prompts you to specify which file is to be moved.
3. Enter:

VIDTEX.OBJ

The system now prompts you to insert the source disk.

4. Insert the VIDTEX program diskette. The system copies the VIDTEX.OBJ file to your ATARI's Random Access Memory (RAM). As soon as the copying operation is complete, it prompts you to insert the destination disk.
5. Insert the diskette containing the ATARI DOS. The system now copies the VIDTEX.OBJ from RAM to the destination disk, and then returns to the ATARI DOS menu.
6. Select Choice O from the menu again. The system repeats the file identification prompt.
7. Enter:

HANDLER.SYS

The system once again prompts you to insert the source disk.

8. Repeat Steps 4 and 5.

Copying with Multiple Disk Drives

If you have two or more disk drives, you can copy the VIDTEX master files with the following procedure:

1. Insert the disk with ATARI DOS into Drive 1 and the VIDTEX master diskette into Drive 2.
2. Proceed to the ATARI DOS menu.
3. Select Choice C (Copy File). The system prompts you to identify the source and destination files.
4. Enter:

D2:VIDTEX.OBJ,D1:VIDTEX.OBJ

After copying VIDTEX.OBJ, the system returns to the ATARI DOS menu.

5. Select Choice C again. When the system repeats the file identification prompt, enter:

D2:HANDLER.SYS,D1:HANDLER.SYS

After copying HANDLER.SYS, the system returns to the DOS menu.

Creating the MEM.SAV File

The VIDTEX program cannot run unless it has access to a special file named MEM.SAV. The program needs this file for the temporary retention of various types of information it generates while operating.

✓ You do not need to create the MEM.SAV file if you are using an ATARI 130XE, because this model automatically creates MEM.SAV and places it in the RAM disk area. With other ATARI computers, you can create MEM.SAV on your diskette by selecting Choice N (Create MEM.SAV) from the ATARI DOS menu, and then responding "Y" when the system prompts you to do so.

Creating the AUTORUN.SYS File

After adding the VIDTEX files to a disk with ATARI DOS, you can remove the source VIDTEX diskette. Now you can finish preparing the new (destination) disk by redefining one or both of your VIDTEX files.

✓ To force the ATARI DOS to process a disk file automatically, you must assign it the file name AUTORUN.SYS. As the name suggests, this file will be run automatically if it is available when you turn on your microcomputer.

You can set up the AUTORUN.SYS file so that your ATARI will initialize the appropriate communications device(s) — 850 interface module and/or direct-connect modem — and then begin to run the VIDTEX program. Or you can set it up so that the communications device(s) will be initialized automatically, but VIDTEX will not be run until you issue specific instructions to do so.

In either case, the first step is to copy HANDLER.SYS to AUTORUN.SYS. The procedure is as follows:

1. Select Choice C (Copy File) from the ATARI DOS menu. The system then prompts you to identify the source and destination files.
2. Enter:

HANDLER.SYS,AUTORUN.SYS

The system now copies the complete contents of HANDLER.SYS to AUTORUN.SYS. If there is already a file named AUTORUN.SYS on the disk, this operation replaces it with the new file.

Now the system will automatically initialize the 850 interface module and/or the direct-connect modem. The appropriate device(s) must be initialized before VIDTEX can be executed.

If you want to have VIDTEX executed automatically, you must now add the VIDTEX.OBJ file to the AUTORUN.SYS file as follows:

1. Select Choice C (Copy File) from the ATARI DOS menu. The system prompts you for the source and destination files.
2. Enter:

VIDTEX.OBJ,AUTORUN.SYS/A

The "/A" at the end instructs the system to append the source file to the destination file. Without this stipulation, AUTORUN.SYS would be replaced by the contents of VIDTEX.OBJ.

Once this copy operation has been completed, AUTORUN.SYS consists of HANDLER.SYS followed by VIDTEX.OBJ. Thus, whenever you turn on your computer with this disk present in Disk Drive 1, the system will automatically execute both programs, first initializing your communications interface device(s) and then starting the VIDTEX program.

System Startup and Program Loading

To power up your system and load the VIDTEX program:

1. Turn on either your direct-connect modem or your ATARI 850 interface module.

Note: If both devices are present, turn on only the modem. Leave the 850 handler off until the system has been powered up.

2. Turn on your disk drive.
3. Insert the prepared diskette into Disk Drive 1.
4. If your modem is not an ATARI direct-connect modem, set it to ORIGINATE and FULL DUPLEX (These are the default settings for direct-connect).
5. Turn on your computer, disabling BASIC (This saves an extra step):
 - With an ATARI 800, just make sure the BASIC cartridge is not inserted.
 - With any of the other modules, if AUTORUN.SYS does not include VIDTEX.OBJ, hold down the OPTION key while you turn the computer on. If AUTORUN.SYS includes VIDTEX.OBJ, the program will disable BASIC automatically.

This loads the AUTORUN.SYS file. If it includes VIDTEX.OBJ, VIDTEX will start automatically. Otherwise, proceed to Step 6 whenever you want to run VIDTEX.

Note: When you turn on your computer, a blinking cursor will appear if the AUTORUN.SYS file is unable to initialize communications. That is, the cursor will blink if neither the direct-connect modem nor the ATARI 850 interface module has been turned on.

6. To execute VIDTEX manually, select Choice L (Binary Load) from the ATARI DOS menu. When the system prompts you for the file to be loaded, enter:



VIDTEX.OBJ

As soon as the VIDTEX program is loaded, whether automatically (if it is part of AUTORUN.SYS) or manually, your screen displays a program banner and a prompt. A sample display looks like this:

```
CompuServe VIDTEX 4.0 10/85  
Copyright(c) 1985 CompuServe Inc.
```

```
Press (SELECT)  
and M for Function Menu  
and H for Key Definitions
```


Meta Key Functions Menu

The Meta Key Functions Menu is a list of the Meta function keys and the various operations they perform. You can display this menu by holding down the SELECT key (or the OPTION key) while you press the M key. Alternatively, you can display it by pressing the ATARI key  on the ATARI 800 keyboard, or  on any of the others.

The Meta Key Functions menu looks like this:

```

Meta Key Functions

RAM Buffer
O Open          C*Close
Z Zero          G Get Screen
D Display       P Print
K Load ASCII   L Load ATARI File
U Unedited Save S Save ATARI File
V Transmit     Y Transmit W/Prompt
               Used:      0      Free: 8191

Local Control
E*Enable Clean  B Break Words
R Printer On   T*Printer Off
: Print Screen CLR Clear Screen

Miscellaneous
A Abort        X Exit
H Help         F Function Keys
I New Autolog  W Modem
N Scratch File J Old Autolog
=1Disk Drive  * Catalog
               Q Query/Set Status

Press your choice
or (Return) for terminal mode
```

You should be aware that you cannot select Choice W (Modem) unless you are using an ATARI direct-connect modem.

While the menu is on your screen, you can perform any Meta function by simply pressing the appropriate letter — you do not need to hold down the SELECT or OPTION key.



You can terminate most Meta functions by holding down the SELECT or OPTION key and simultaneously pressing the A (for "Abort") key. This cancels any function key or capture buffer transmission. You can only abort the creation of a new automatic logon (AUTOLOG) file at the file name prompt; once the file is entered, it can only be exited in the normal fashion.

You should note that some of the functions are marked with an asterisk (*) between the key and the description. This indicates the current setting. The sample menu above shows the initial default settings. For instance, when you first access VIDTEX, the capture buffer is closed (C*Close). If you later display the menu when the buffer is open, the asterisk will appear after the O instead (O*Open).

The number following the equal sign (=) identifies the default drive. In the sample menu, it is 1, indicating that any save or load operation will use Disk Drive 1 unless another drive is specified. However, it could be any number from 1 through 4.

Used: represents the number of characters currently stored in your capture buffer; **Free:** indicates remaining buffer space (See Buffer Status in Chapter 3 of this guide).

Key Definitions List

VIDTEX also provides a handy reference list of predefined keys. To view this list, hold down the Meta key while you press the H key. Or you can hold down the SHIFT key while you press the ATARI key ( on the ATARI 800,  on the ATARI 800XL, 65XE and 130XE).

```

                                KEY DEFINITIONS

CTRL          Control Key
OPTION        Meta Key

CTRL ,        {
CTRL .        }
CTRL /        ~
CTRL ;        '
Meta and 0 to 9    Function Keys 0 to 9

Local Color Control
META .         Background
META /         Border
META ,         Luminance

Exit Graphics    Meta CTRL G

Key <Return> for terminal mode
  
```

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

Note: Holding down both the SELECT key (or the OPTION key) and the CONTROL or CTRL key while you press the C key will interrupt any operation. Some host computers use this as an attention signal instead of a Control-C (See Appendix A for a discussion of CONTROL characters).

Communication Parameters

VIDTEX is initialized to the following communication parameters:

full duplex
300 baud
flow Control receive and transmit ON
8 bit word
parity bit zero
1 stop bit

These are the correct parameters for accessing CompuServe. You can change these settings for other host systems (See Specifying Communications Settings in Chapter 3.)

Logging On

Logon procedures depend on the host computer and on the network you use to access it. If you are logging on to any host other than CompuServe, you must follow the procedures for that host. If you are using another network to access CompuServe, you can check the Logon Procedures sheet included in your startup kit. The procedure for logging on to CompuServe through the CompuServe Network is:

1. Dial the local access phone number. For dialling procedures with a direct-connect modem, see Specifying Modem Functions in Chapter 3. With the ATARI 850 interface module, you must wait until you hear the high-pitched tone after dialling, and then connect your telephone to your modem.
2. Hold the Control key while you press the C key.
3. You may be prompted for the host name, If so, enter:

CIS

4. When you see the prompt message:

User ID:


enter your CompuServe User ID (two numbers separated by a comma).

5. When you see the following prompt:

Password:

enter your secret CompuServe password.

Once you connect to the host computer, a host information banner and the host system's first service will be displayed on your screen. When you access the CompuServe Information Service, for example, you see:



```
CompuServe Information Service
```

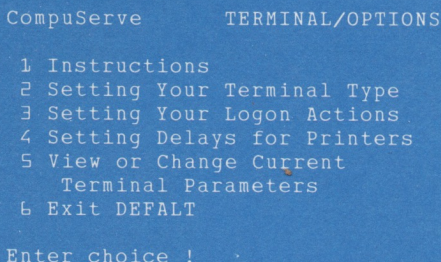
```
12:08 EDT Saturday 18-May-85
```

This banner will be followed by CompuServe's standard top menu or your personal menu (or occasionally by the WHAT'S NEW THIS WEEK headlines).

Defining Your Terminal Type

If this is the first time that you have accessed the host system using VIDTEX, you may need to modify your communication parameters. Otherwise the host may transmit data in a form incompatible with VIDTEX.

For example, to inform CompuServe that you are using VIDTEX, select Terminal Settings from the CHANGE YOUR USER PROFILE Menu. The following will be displayed on your screen:



```
CompuServe      TERMINAL/OPTIONS

1 Instructions
2 Setting Your Terminal Type
3 Setting Your Logon Actions
4 Setting Delays for Printers
5 View or Change Current
  Terminal Parameters
6 Exit DEFAULT

Enter choice !
```

Select option 2 (Terminal Type) and specify on the subsequent menu page that you are running VIDTEX compatible software. See the CompuServe Information Service User's Guide (CS-597) for more information on using DEFAULT.

Logging Off


When you have completed an online session, you must inform the host that you wish to log off. To log off of CompuServe, simply enter the following at any menu page:

 OFF OR BYE

Avoid terminating contact with the host by simply disconnecting the modem. Your job on the host computer may continue to incur connect time charges if not logged off properly.

Exiting VIDTEX

To exit the VIDTEX program, hold down the SELECT key (or the OPTION key) while you press the X key. This Returns you to the ATARI DOS menu. To prevent you from exiting the program by accident, VIDTEX displays:

 Exit (Y/N)?

Pressing N will Return VIDTEX to terminal mode with no loss of incoming data. Pressing Y, the Return key or the SPACE bar will cause VIDTEX to exit to the DOS Menu.


Note: Whenever VIDTEX prompts with (Y/N), only N is accepted for NO; Y, Return or SPACE can be entered for YES.

Returning to VIDTEX after You Exit


After exiting the VIDTEX program, you can restart it by simply turning your computer off and then back on, provided that VIDTEX is set up to run automatically. When the load is complete, the VIDTEX banner will appear.

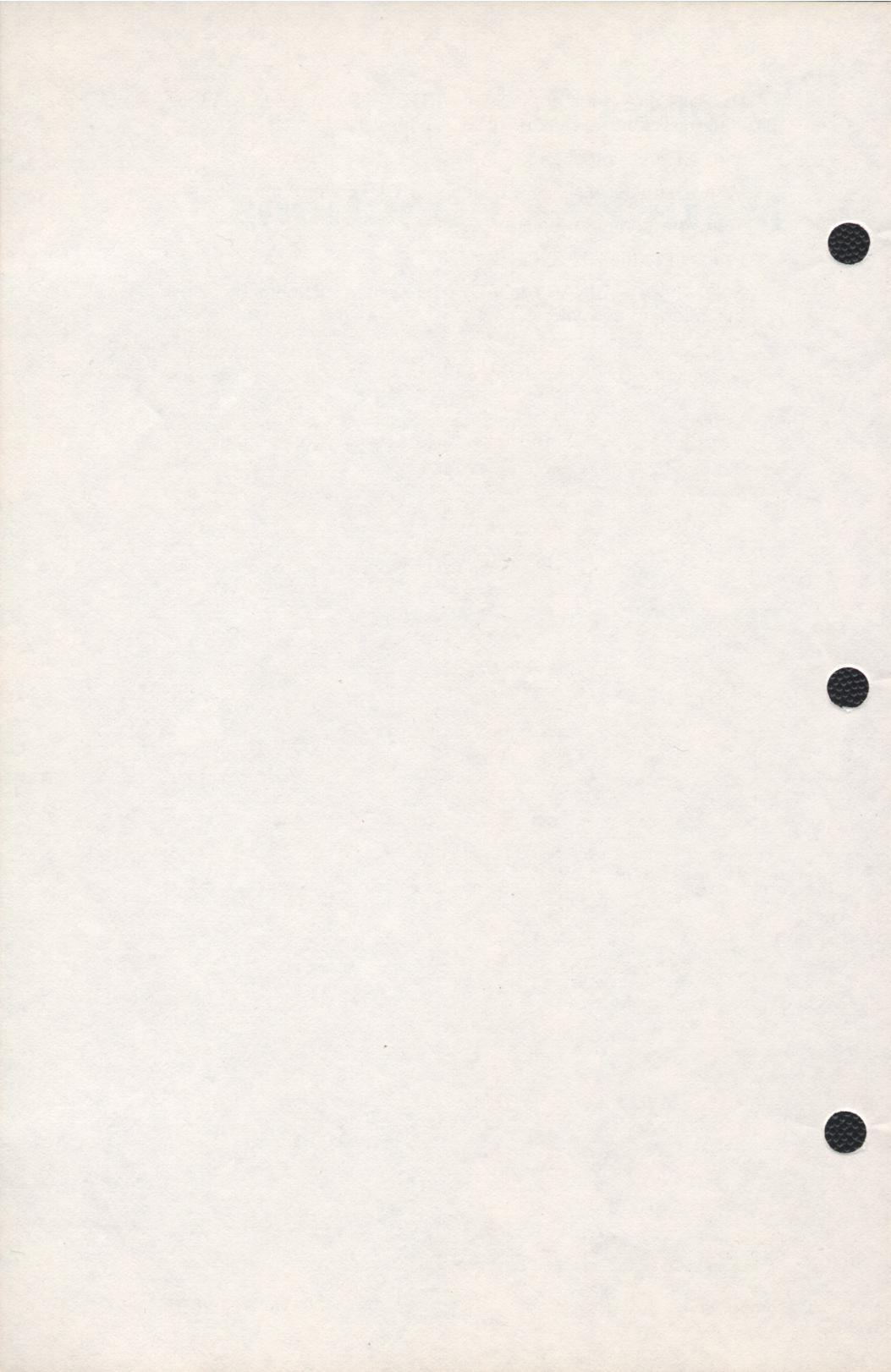
If AUTORUN.SYS does not include VIDTEX.OBJ, you can use the following procedure to restart VIDTEX after exiting.

1. Turn off your computer.
2. Verify that your disk drive contains a VIDTEX program diskette.
3. Turn your computer back on.
4. Proceed to the ATARI DOS menu.
5. Select Item L (BINARY LOAD). The system responds by displaying the following prompt:

 LOAD FROM WHAT FILE?

6. Enter:

 VIDTEX.OBJ



Chapter 3

Meta Key Functions

The Meta functions are the VIDTEX control functions for your terminal. You can perform any Meta function by holding down the SELECT key or the OPTION key while you press the appropriate character key.

The following sections describe the various Meta key functions that VIDTEX offers. In these discussions, any key combination will be represented by a rounded rectangle containing the word Meta followed by a space and the pertinent character. For example, Meta O means to depress the O key while you are holding down the SELECT key or the OPTION key.


Using the Capture Buffer

VIDTEX defines a portion of your computer's RAM memory as a capture buffer. Using the capture buffer, you can store anything that CompuServe or any other host computer system displays on your screen. Saving displayed information is often called "data capture". Besides capturing information from CompuServe, you also can prepare text files offline and use your capture buffer to transfer them to CompuServe disk storage.

As you can see, the capture buffer enables you to use information services effectively. The following subsections explain how to operate the capture buffer.

Open Buffer — Meta O

You can save a copy of all information received from the host computer in the capture buffer. The capture buffer is empty and closed when VIDTEX is first run. To open the buffer and start saving data, press Meta O. All subsequently received characters will be added to the buffer. VIDTEX confirms that the buffer is open by displaying:




```
[ Buffer Opened ]
```

This message is not sent to the host computer.


Close Buffer — Meta C

Close the capture buffer by pressing Meta C. VIDTEX displays the local message:

 [Buffer Closed]



Zero Buffer — Meta Z

You can zero (erase) the buffer by pressing Meta Z. VIDTEX displays:


 [Buffer Zeroed]

Buffer Status

By pressing Meta M, you can display the Meta Key Functions menu. The numbers listed for Used: and Free: show the status of the capture buffer.

Note: You can also display the Meta Key Functions Menu by pressing the HELP key or the ATARI key ( on the ATARI 800, or  on the ATARI 800XL, the ATARI 65XE or the ATARI 130XE).

If the capture buffer becomes full, VIDTEX displays the message:

 !! Buffer Full !!
Press CTRL-Q to continue!

and halts transmission from the host. This gives you an opportunity to save the buffer's current contents on disk (See Save/Load ATARI File, below). After saving the data, you can erase the buffer (See above) and then use a Control Q (hold down the CONTROL or CTRL key while you press the Q key) to continue. If you press Control Q without zeroing the buffer first, transmission resumes but the buffer will be full.

Save Screen — Meta G

A copy of the text screen can be added to the buffer by pressing Meta G (Get Screen). As each line from the screen is copied to the buffer, a carriage return and line feed are appended to the line. If a line is entirely blank, only a line feed is added. Thus, the format of the screen is retained. This feature does not open or close the buffer.

Display Buffer — Meta D

You can display the contents of the buffer by pressing Meta D. The following key combinations enable you to control the display:

Control S (hold down the CONTROL or CTRL key while you press the S key) stops the display immediately.

Control A stops the display at the end of the current line.

Control Q resumes the display.

Control O cancels the display.

When the display is done, press Return to continue.

Print Buffer — Meta P

Print the current contents of your capture buffer by pressing Meta P. Press Meta A to abort buffer print.

Converting Code Characters

CompuServe and your ATARI use different character sets. CompuServe uses standard ASCII and your computer uses the ATARI ASCII (ATASCII) character set. A file containing data in one character set cannot be displayed or processed on a system using another character set.

For example, if you try to upload an ATARI file to CompuServe, it will appear garbled when you later display it. Also, VIDTEX cannot display ATARI files because its video driver is based on ASCII.

VIDTEX solves the problem of incompatible character sets by providing different ways to save or load a file depending on how you plan to use it.

VIDTEX provides one pair of capture buffer commands for saving and loading ATARI files and another pair for saving and loading ASCII files. The first pair, Meta S (**Save ATARI File**) and Meta L (**Load ATARI File**), perform the necessary conversions to read and write ATARI files. The second pair, Meta U (Unedited Save) and Meta K (Load ASCII File), only perform the save or load operations; they do not change the contents of the file in any way.

Consequently, when you use VIDTEX to save or load files, keep in mind the purpose you have for the particular file in order to determine which pair of Meta commands to use. The following subsections explain how to use the various load and save commands.

Save/Load ATARI File — Meta S And Meta L

If you have information in your capture buffer which you wish to process with ATARI BASIC or with a word processing program, use Meta S to save the information to disk. During the save process, Meta S converts ASCII data in the buffer to conform to the ATASCII character set.

When you press Meta S, VIDTEX prompts you for a file name. You can enter any name you wish, provided it conforms to ATARI file identification rules. VIDTEX will copy the contents of the buffer to a diskette file, giving it the file name you specify.

If you name the file VIDTEX.TXT, you will not have to specify a file name if you later reload the file into the capture buffer.

You should be careful when you name files to be saved: if the name you assign is the same as the name for an existing file on the same diskette, the save operation will delete the old file and replace it with the new one.

Note: When you use Meta S to save a full buffer, the disk file that is created may end up too large to reload into VIDTEX because of the character set conversions.

You can cancel the save operation by pressing Meta A at the file name prompt.

Meta L — If you have created a file using BASIC or a word processor and you wish to upload it to CompuServe, you can use Meta L to load it into the capture buffer. Meta L converts the contents of the file to standard ASCII. If you do not use Meta L to load the ATARI file, it cannot be displayed on CompuServe or with VIDTEX.

When you press Meta L, VIDTEX prompts for a file name. You can identify any diskette file on the currently activated disk drive. If you press the RETURN key without identifying a file, VIDTEX will automatically load VIDTEX.TXT, if present (if not, VIDTEX will redisplay the file name prompt).

During the load process, data in the file is appended to the current contents of the capture buffer. Text is inserted into the buffer until the buffer is full, at which time VIDTEX displays an error message. If this happens, press Return to continue.

You can cancel the load operation by pressing Meta A at the file name prompt.

Save/Load ASCII File — Meta U And Meta K

Use Meta U to save to diskette any information which you wish to display again using VIDTEX. Also, use it to save executable programs. Meta U does not perform any conversions on the contents of the capture buffer, but saves it exactly as it is.

When you press Meta U, VIDTEX prompts you for a file name. The name you enter becomes the identification for the diskette file. If you intend to reload the file to the capture buffer, naming it VIDTEX.TXT will save you the trouble of specifying a file name during the load operation.

As with the Meta S function, you should be careful in your selection of the file names. If you assign the file a name which matches the name of an existing file on the same diskette, the old file will be erased.

To abort, press Meta A at the file name prompt.

Use Meta K to load a previously saved ASCII file from diskette to the capture buffer. VIDTEX prompts you for a file name. You can identify any file on the disk drive, or just press Return to load VIDTEX.TXT (if present). You can cancel the load when you see the file name prompt by pressing Meta A.

Transmit Buffer — Meta V And Meta Y

You can transmit the contents of the capture buffer continuously by pressing Meta V. You can cancel the transmission at any time with Meta A.


If you only want to send one line at a time, press Meta Y. VIDTEX asks for a prompt character such as a "I". After a line has been transmitted, VIDTEX waits for the host to send the prompt character before transmitting the next line.

Note: Be careful not to specify a prompt character which is part of the textual contents of the buffer.

Uploading A Message


Using your capture buffer you can prepare messages offline and then upload them to CompuServe. Besides electronic mail, one of the most popular CompuServe services for exchanging messages is a Forum or Special Interest Group (SIG). To upload a message to a Forum, follow this procedure:

1. Compose the message offline.
2. Since CompuServe uses standard ASCII, you may need to convert the message from the ATARI character set. This can be accomplished easily by loading your message file into the capture buffer using **[Meta L]**. If your message is already in ASCII, use **[Meta K]** instead.
3. Log on, access the Forum, and select the "Leave a Message" function. The Forum program then prompts you to identify the message recipient, its subject, and the contents. The prompt sequence differs from Forum to Forum. In the ATARI Users Forum, for example, the sequence might look like this:



```
TO: 78910,1234
SUBJECT: Two New Games
1:
```

4. At this point press **[Meta Y]** and VIDTEX responds:



```
Enter Prompt Character:
```

5. Enter a colon (:) since the Forum program prompts for each new line with a number followed by a colon. Your message then is transmitted one line at a time. After the transmission of each line, VIDTEX waits for CompuServe to send a colon before transmitting the next line.

You can abort the transmission process at any time by pressing **[Meta A]**.

Controlling Your Printer — Meta R And

Meta T

If you have a direct-connect printer, or a compatible printer connected to your ATARI 850 interface module, you can use it to obtain hardcopy of received information with VIDTEX.

VIDTEX controls printing as follows:

1. VIDTEX receives a line of information and instructs the host to temporarily halt transmission.
2. The line is sent to the printer.
3. VIDTEX instructs the host to resume transmission.
4. A new line is received and the process is repeated.

While this process may lengthen your terminal sessions, it assures reliable printed information.

Meta R turns your printer on.

Meta T turns your printer off.

Printing a Screen - Meta :

You can get a printed copy of the entire screen at any time by pressing Meta :. Remember to use the SHIFT key to produce a colon instead of a semicolon. If the screen print function appears not to work, verify that the printer is ready.

Press Meta A to cancel the screen print at any time.

Function Keys

You can avoid repetitious typing by using your function keys. Frequently typed commands can be programmed into function keys, thus saving you time and effort. The number keys (0-9) in conjunction with the Meta key are the VIDTEX function keys.

Your function key definitions can be saved to a file for future use. Any number of definition files can be created and used to load your keys. By loading different definition files for different needs, you can have a virtually unlimited number of function keys.

Defining Keys Meta F

Pressing Meta F displays the function key menu, which looks like this:

FUNCTION KEY MENU

D - Display function keys
L - Load from disk
S - Save to disk
(0-9) - Define

Press your choice
or (RETURN) for terminal mode

To define a key, press the desired number key (0-9) and type in the definition.

Every character you type is inserted into the definition; it is impossible actually to erase a character from the definition file. For example, if you press the backspace key, the backspace character Control H is entered into the key definition along with the character you wish to delete. When you execute the function key, the character that you backspaced over will not be sent, but both it and the Control H are part of the total number of characters in the function key definitions. The total number of characters for all the function key definitions cannot exceed 255.

Most host computers do not process a line until they receive a carriage return character. Thus command lines in function keys should be terminated with a carriage return.

To end the definition, press Meta F again. To clear a definition, select it and immediately press Meta F.

Executing a Function Key — Meta 0 through Meta 9

To execute a function key, hold down the SELECT or OPTION key and press the desired number key. This initiates transmission of the key definition. Press Meta A to abort transmission of a function key.

Displaying Key Definitions

To display the current definitions, press "D" at the function key menu. Each key number followed by a colon and the definition will be displayed.

While the key definitions are on display, you can execute any of the function by typing the corresponding number. That is, you do not have to hold down the Meta Key.

To switch to terminal mode, press .

Saving Key Definitions

To save a set of function key definitions, press "S" at the function key menu. You are prompted for a file name. You can enter any name you like. CompuServe recommends that you identify the file as VIDTEX.KEY because you will not have to specify a file name when you later load the key definitions.

Press at the file name prompt to abort.

Loading Key Definitions

To load a key definitions file, press the L key at the function key menu. VIDTEX prompts for the file name. If you do not enter one, it **will** automatically load VIDTEX.KEY, if present (if there is no file with the name VIDTEX.KEY, the program will prompt you again for a file name). You should note that whenever you run VIDTEX, it automatically loads the function key definitions from this same file (if present).

To abort a load, press at the file name prompt.

Automatic Logon

With VIDTEX you can automate the process of logging on to CompuServe. Automatic logon is accomplished by creating and executing special files, called AUTOLOGs. An AUTOLOG file contains all the information necessary for accessing the host computer.

Creating AUTOLOG Files — Meta I

Press **Meta I** to create an AUTOLOG file. VIDTEX prompts you as follows:

```
Creating New Autolog
Enter file name: C:\S
```

You must identify the file using ATARI DOS naming conventions. CompuServe recommends that you specify the file name VIDTEX.ATO, because this is the default name used at execution (See Executing AUTOLOG Files, below).

You can abort the process at this point by pressing **Meta A**.

Now VIDTEX asks you to specify a prompt sequence:

```
Prompt:
```

Enter the sequence of characters that the host computer uses as a prompt. The maximum length for a prompt from the host is 23 characters. It is recommended that you enter only the last few characters. You can use upper or lower case since VIDTEX translates both your entry and the received characters to upper case for matching.

If you are preparing an AUTOLOG to access through the CompuServe Network, press **ESC**. Since the CompuServe network requires that you initiate contact, there will be no prompt. Now VIDTEX prompts you as follows:

```
Response:
```

Enter the response to be transmitted and press **Return**. The carriage return will be transmitted with the response. If you do not want a carriage return transmitted, press **ESC** instead.

The maximum length of a response is 64 characters. A response of more than 64 characters can be transmitted by entering it in two or more parts, each less than 64 characters, and pressing **ESC** instead of specifying an intervening prompt.

If you are preparing an AUTOLOG for accessing through the CompuServe Network, store a **Control C** at this point by typing **^** (Circumflex) and then **C**. Terminate this response by pressing **ESC** to suppress the carriage return.

*Note: This method of generating a **[Control C]** can only be used in AUTOLOG files.*

You can specify as many prompt/response sequences as are necessary to complete the login. To exit the sequence, type **[ESC]** at both the prompt and the response.

Special AUTOLOG Commands

Control characters can be included in AUTOLOG responses by typing **[^]** (Circumflex) followed by the control character. Meta commands can be entered into AUTOLOG responses by typing **[_]** (Underscore) and then the letter or special character. For example, to enter the **[Meta O]** command for opening the capture buffer, type **[_]** followed by **[O]** (the letter O).

The following Meta commands can be used to synchronize the execution of an AUTOLOG file with your modem and/or the network carrier signal. These commands are available only within an AUTOLOG file:

[_&] provides a one half second delay.

[_%] provides a two second delay.

[_&] (ampersand) and **[_%]** (percent) are useful for creating dialling strings for modems that require a delay between dialling each digit in the phone number.

As an example of how these Meta commands can be used, you might store the following Meta command in the AUTOLOG:

Response: **[_&^CESC]**

Typing an underscore and then an ampersand specifies that the response will begin with **[Meta &]**. Typing a circumflex and then a letter C initiates contact with CompuServe by transmitting a **[Control C]**. Since you would not want to transmit a carriage return, you must terminate the response by pressing **[ESC]**.

Note: You can include a single circumflex (^) in a response by typing two circumflexes in succession. Similarly, you can specify an underscore (_) by typing two successive underscores.

Sample AUTOLOG Creation

The following shows how you might create an AUTOLOG file for logging on to CompuServe if your microcomputer communicates through the ATARI 850 interface module and an RS-232 modem. Your entries are shown in blue; you must terminate every entry by pressing **Return** or **ESC**, as indicated.

```
Creating New Autolog
Enter file name: VIDTEX.ATO Return
Prompt: ESC
Response: ^C ESC
Prompt: ID: Return
Response: 71234,567 Return
Prompt: WORD: Return
Response: SECRET Return
Prompt: ESC
Response: ESC
```

This sample logs you on to CompuServe and takes you to the top menu. In it, you begin by specifying no prompt, because your terminal must initiate the connection request. The response is a **Control C**, which you terminate with **ESC** because you do not want to transmit a carriage return. The AUTOLOG then waits for a User ID: prompt, and transmits your User ID, this time ending with **Return**, just as you would if you were typing the response. The next prompt is the Password: prompt, to which the AUTOLOG responds by transmitting your secret password. Note the use of ID: and WORD: instead of the complete prompts, and that it makes no difference whether you specify upper or lower case letters. To conclude your sign-on sequence, you press **ESC** for the next prompt and the next response.

The next example shows how you might create an AUTOLOG file for logging on to CompuServe through an ATARI direct-connect modem.

```
Creating New Autolog 835
Enter file name: VID1630.ATO Return
Prompt: Escape
Response: _WD4572105 Return —WD2651263
Prompt: Escape
Response: _%_%_%_%^C Escape
Prompt: ID: Return
Response: 71111,111 Return 73665,43
Prompt: WORD: Return
Response: SECRET Return
Prompt: Escape
Prompt: Escape
```


In this signon sequence, you begin by proceeding to the Modem Functions menu (See Specifying Modem Functions, this chapter) with a **[Meta W]**. Then you instruct the modem to dial a number by entering D followed by the number (457-2105 is the local access number for Columbus OH). Now you specify a ten-second delay with five **[Meta %]**s, to give the modem time to make the connection before VIDTEX transmits a **[Control C]**. From this point, you proceed as in the previous example.

Executing an AUTOLOG — **[Meta J]**

After you create an AUTOLOG file, you can execute it by pressing **[Meta J]**. VIDTEX prompts:

```
Old Autolog  
Enter filename:
```

If you press **[Return]** by itself, VIDTEX will execute VIDTEX.ATO if it exists.

If you are using a non-dialing modem, be sure to wait until you have established telephone contact with the host before executing the AUTOLOG.

You can type on the keyboard during execution of an AUTOLOG without affecting its performance. VIDTEX exits the AUTOLOG mode when all prompts are received and responses sent.

Press **[Meta A]** to abort execution of an AUTOLOG.

To fully automate VIDTEX, you can create an AUTOLOG file named VIDTEX.AST. This AUTOLOG will be executed automatically whenever the VIDTEX program is started. By placing your logon sequence in VIDTEX.AST, for example, you would be signed on to CompuServe as soon as you turned on your computer.

Specifying Communication Settings —

[Meta Q]

[Meta Q] presents a menu of VIDTEX communications characteristics. With this feature, you can adjust VIDTEX to be compatible with host systems using different conventions. For information on a particular host system's communication conventions, consult the user's guide for that system.

Pressing **[Meta Q]** displays the following menu:

1	DUPLEX	F
2	BAUD	8
3	FLOW RECV	Y
4	FLOW XMIT	Y
5	PARITY	O
6	STOP BITS	1

Key **<Return>** for terminal mode
!

Note: BAUD and STOP BITS cannot be changed with ATARI direct-connect modems.

Select the option you want to change by typing the number next to it; you do not have to press **[Return]**. VIDTEX will place the cursor over the current value for the selected parameter. Type in the new value for the parameter and press **[Return]**. The communications parameters you selected will be put into effect.

Note: Do not try to modify your communications settings while online. The results may be unpredictable.

You can change any combination of the following communication settings:

DUPLEX refers to the echoing of your keyboard entries to your video screen. The setting for DUPLEX can be either of the following:

- F (for full duplex) means that VIDTEX will not echo your keyboard entries to the screen. When you access CompuServe, keyboard echo is handled automatically by the network.
- H (for half duplex) means that VIDTEX will echo your keyboard entries. In half duplex, all ESCAPE characters are displayed as dollar signs (\$) to improve readability.

BAUD (not implemented with ATARI direct-connect modems) refers to the rate of data transfer through your modem. The baud rate is roughly equivalent to the number of characters transmitted times 10. Check your modem instructions to determine the appropriate rate(s) and then enter one of the codes from the following table.

Code	Baud rate
1	110
2	150
3	300
4	600
5	1200
6	1800
7	2400

FLOW RECV refers to whether VIDTEX responds to the standard ASCII flow control characters, XOFF (CONTROL-S) and XON (CONTROL-Q), when sent by a host computer system. The options are:

- Y (for Yes)
- N (for No)

FLOW XMIT refers to whether VIDTEX transmits the standard flow control characters XOFF (CONTROL-S) and XON (CONTROL-Q) when sending to a host system. There are two choices:

- Y (for Yes)
- N (for No)

For example, VIDTEX may send an XOFF when the capture buffer is almost full, or when a VIDTEX function menu is selected.

You should set FLOW XMIT to N if you are using an AUTOLOG file to access CompuServe through the TELENET network, then reset it to Y once you have logged on.

PARITY refers to the method for checking the transmission accuracy of characters sent by the host system. You can specify any of the following:

- 0 (zero) sets the parity bit to zero.
- 1 sets the parity bit to one.
- E means even parity.
- O (the letter O) means odd parity.
- D means to disable parity checking.

STOP BITS (not implemented with ATARI direct-connect modems) are bits used to delineate the transmitted characters and thus keep communications synchronized. You can set this parameter to either of the following:

- 1 means to use one stop bit per character.
- 2 means to use two stop bits per character.

Popular Communication Settings

Below are the communication conventions of some popular host systems:

	CompuServe	The SOURCE	Dow Jones
Parity	Zero	Even	Even
Duplex	Full	Full	Full
Flow Recv	Yes	Yes	No
Flow Xmit	Yes	No	No
Baud Rate	110-1200	110-1200	110-1200


Word Cleaning — Meta E And Meta B

VIDTEX contains a video driver that allows it to perform cursor control remotely and not break words across lines. VIDTEX will not start a word on the right hand edge of the screen and finish it on the beginning of the following line. Instead, the entire word will be moved to the start of the next line and any part of the word which was on the previous line will be erased. This makes it easier for you to read text which is wider than your screen width.

Meta E enables word cleaning. This is the default setting, so the only time you need to use Meta E is when you have previously disabled word cleaning with a Meta B.


Meta B disables word cleaning (breaks words at the ends of lines).

If word cleaning was disabled, text would be displayed as follows:



```
Now is the time for all very good progra  
mmers to come to the aid of their countr  
y.
```

With word cleaning enabled, the same text appears as:



```
Now is the time for all very good  
programmers to come to the aid of their  
country.
```


Controlling Color

You can control your screen colors for text display with the following Meta function commands:

Meta . changes the luminance (the brightness of the foreground color).

Meta , changes the background color.

Meta / changes the border color.

Meta CLR (the CLR key) clears the screen.

If **Meta CLR** fails to clear the screen, try pressing the **Shift** and then **CLR** without pressing **OPTION** or **SELECT**. This instructs the host computer to transmit a clear-screen command.

Managing Your Files — **Meta =**, **Meta N** And

Meta *

VIDTEX provides three Meta key functions which help you to maintain local disk files.


Meta =, followed by a number from 1 through 4, identifies the default disk drive. This drive will be used for all subsequent disk operations, unless you specifically select another drive, or specify a different default drive.

When you begin a VIDTEX session, the default drive is set to 1.

Meta N enables you to delete (scratch) any file on your disk drive. VIDTEX will prompt you for the file identification. Entering **Meta A** at the prompt will abort the function.

After deleting the specified file, VIDTEX will ask whether you wish to repeat (that is, delete another file). If you type Y, VIDTEX will prompt for another file name. When you are through, type N at the repeat prompt to return to terminal mode.

Meta * displays a list of the files on your disk drive. You will be prompted:

 Disk Catalog
(1-4) or (RETURN) for terminal mode:

You can catalog the files on any one of your disk drives by entering the drive number. VIDTEX displays the name of each file and its size in sectors. For example, suppose you identify Disk Drive 2. The catalogue display might look like this:

```
ARTICL  TXT  010
LETTER  TXT  004
GAME    TXT  008
164 FREE SECTORS
```

(1-4) or (RETURN) for terminal mode:

At the bottom of the list, the number of free sectors remaining on the diskette is displayed. Then VIDTEX will prompt for another drive number. When you are through cataloging, type .

Specifying Modem Functions — Meta W

If you are using the version of VIDTEX designed for ATARI direct-connect modems, Meta W enables you to control the modem's operation. Typing Meta W displays the following menu:

MODEM FUNCTION

D Dial
N*On Hook
F Off Hook
O*Originate
A Answer

Press your choice
or `<RETURN>` for terminal mode

To dial a telephone number, select Choice D from the Modem Functions menu. This displays the following prompt:

 Enter # :

Now you can enter the complete number for the telephone to which you wish to make connection. DO NOT include any dashes (-).

There are two special considerations in dialling:

- ATARI direct-connect modems are designed to use pulse dialling.
- If you are dialling from an extension (that is, if you must dial 9 to be connected to an outside line), then you should separate the 9 from the destination phone number with a comma (.). The comma instructs the modem to wait three seconds after the 9 is dialled before dialling the remaining digits.

You should also be aware that the ATARI modems will automatically disconnect from the telephone carrier system if unable to complete a call within 30 seconds.

You can also use the Modem Functions menu to specify whether your telephone receiver is on or off the hook. The purpose of this option is to enable you to disconnect your microcomputer from a host system in case a system problem prevents you from using normal signoff procedures.

You should note the modem automatically opens and closes the telephone line in normal situations. For instance, when you initialize VIDTEX, you are offline, so your modem is set to On Hook. Whenever you instruct the modem to dial a number, it automatically removes the phone from the hook, and keeps it off until you issue signoff instructions.

The current setting for the hook is always indicated by the position of the asterisk (*).

Finally, you can use the Modem Functions menu to indicate whether your microcomputer will be the originating station or the answering station when it communicates with another computer.

In any dialogue between computers, only one of them can control the flow of communications. When your microcomputer converses with a host system, for example, it always "conducts" the conversation, requesting connection and disconnection, specifying which programs the host system will perform, and so on. The controlling station is said to "originate" the dialogue. That is why your modem is set to Originate whenever you initialize VIDTEX.

If you decide to hold a dialogue with another microcomputer, however, one of the participants must act like the host system and assume the subordinate role. The communicating station which does not "originate" a dialogue is said to "answer." You can set your modem to answer by entering A from the Modem Functions menu.

You can always tell whether your modem is currently originating or answering by the position of the asterisk (*).

Chapter 4

Transferring Files

If you had to type everything you wish to send to CompuServe, you would expend a lot of time and effort. Fortunately, VIDTEX provides two major ways you can transmit and receive whole files of data without typing.

The first method, often called data capture or buffer transfer, is explained in Using the Capture Buffer (See Chapter 3). Data capture is an excellent way to save or transmit anything that is displayed on your screen.

A second way to transfer information files is to use CompuServe's B Protocol. With large files, B Protocol generally is faster and more accurate than data capture.

What Is B Protocol?

A protocol is a set of rules and conventions for handling communications between a sender and receiver. Protocols can range from simple to complex.

CompuServe has developed a sophisticated protocol, named B Protocol, to regulate the transfer of files between your computer and CompuServe. B Protocol ensures the accuracy of the transmitted file by comparing each line of transmitted data with the original. Any errors are detected and corrected. Thus, your important files are protected against possible damage from telephone line noise and other types of interference.

How To Perform A File Transfer

B Protocol transfer is used in a variety of CompuServe services that offer uploading and downloading. These services are described in the following sections.

You should be familiar with a few basic terms:

download means to transfer a file from CompuServe to your computer.

upload means to transfer a file from your computer to CompuServe.

host refers to CompuServe's computers.

remote refers to your computer.

There are three types of B Protocol file transfers:

Text transfer is used to transfer any type of text file, such as a letter or an untokenized BASIC program. When uploading a text file, VIDTEX translates from the remote computer's character representation to standard ASCII. This usually includes adding line feeds to carriage returns. When a text file is downloaded, VIDTEX translates the text from standard ASCII to the microcomputer's character representation.

Machine Specific transfer is used to transfer machine dependent files. You should use machine specific transfer for uploading and downloading ATARI programs, since it transfers files specific to the ATARI.

During a machine specific transfer, VIDTEX inserts all of the information it needs to recreate the file exactly as it originally existed. If you try to download a machine specific file to a microcomputer different from the type that uploaded it, VIDTEX will issue a warning message because the file will not be usable on your computer.

Binary transfer is used to transfer eight-bit files such as tokenized BASIC programs and machine language programs. This also can be used to transfer BASIC data files to and from most microcomputers. VIDTEX does not alter any data during a binary file transfer. Machine specific information is not included in a binary transfer.

The type of transfer is determined by the extension assigned to the file on CompuServe. The valid extensions are:

.TXT specifies a Text transfer.

.IMG specifies a Machine Specific transfer.

.BIN specifies a Binary transfer.

If you do not specify an extension, VIDTEX automatically performs a Text transfer.

To initiate a B Protocol transfer, follow these steps:

1. Load and run VIDTEX.
2. Log on to CompuServe.
3. Access the area where you wish to perform the file transfer (e.g., Forum Reference Library, Public Access File Area or Personal File Area).

The following subsections explain how to upload and download files from various areas on CompuServe.

Personal File Area

To upload and/or download files from your CompuServe disk storage, you must begin by accessing the Personal File Area. At any ! prompt, enter:


 PER

A menu similar to the following will be displayed:

```
FILE MANAGEMENT
1 Brief catalog of files
2 Detailed directory of files
3 Create & edit files via FILGE
4 Type a file's contents
5 Delete a file
6 Rename a file
7 Copy a file
8 Change a file's protection
9 Upload or download a file
10 Print a file ($)
11 Enter command mode
```

Enter choice !

Select choice 9 (Upload or download a file). If you have not set your terminal type to VIDTEX compatible (see Defining Your Terminal Type in Chapter 2), you will see the following prompt:

 Are you running a VIDTEX
executive?

You must respond:

 YES

CompuServe's file transfer program, FILTRN, then will be executed. It will prompt you as follows:

```
Select direction-
      D if to your computer
      U if to CompuServe
:
```

Type to upload or to download. Then FILTRN prompts you:

```
Enter the CompuServe file name:
```

Type an appropriate file name and extension. Remember that the file extension determines the type of B Protocol transfer. You then are prompted:

```
Enter a file name for your computer:
```

You can specify any file following the naming rules of your system. The file name might include a drive designation, a file extension, punctuation or password. Since the format for file names is different for every microcomputer, no syntax checking is performed on the remote file name. The remote file name does not affect the type of transfer performed.

VIDTEX will not overwrite an existing file on a download — you must first delete the file yourself.

As the transfer proceeds, a series of digits is displayed on your screen. Plus signs (+) appear between the digits. When the transfer is completed, the message:

```
*** File Transfer Completed! ***
```

appears and you are Returned to the FILE MANAGEMENT menu.

To abort a file transfer, hold until the next digit appears on the screen.

Forums

You can upload and download files in the Data Library of any CompuServe Forum (Special Interest Group) with B Protocol file transfer.

Once in the Forum, the first step is to proceed to the appropriate section of the Forum's Data Library. There you will see a menu similar to the following:

```
1 (DES) Description
2 (BRO) Browse thru files
3 (DIR) Directory of files
4 (UPL) Upload a new file
5 (DOW) Download a file
6 (DL) Change Data Library
7 (T) Return to Function Menu
8 (I) Instructions
```

Enter selection for H for help:

To upload, select Item 4 (Upload a new file). The program prompts you to identify the file you wish to upload:

File name:

Your file name should follow CompuServe naming conventions — that is, it should consist of a one- to six-character file name, followed by a period and a three-character file extension. The extension should be one of the following:

- .TXT to transfer text files or untokenized BASIC programs. VIDTEX translates the contents of the file to standard ASCII characters, and reverses the translation when the file is downloaded.
- .IMG to transfer executable programs. Anyone with an ATARI like yours will be able to download the file and run it.

Next you are prompted:

Keywords:

To help other subscribers identify your file, enter one or more topic keywords separated by spaces. For example:

ATARI BASIC PROGRAM CHESS GAME

Next you are prompted for a description of your file:

Description (500 chars max, blank line when finished):

The description you enter should explain the file. For instance:

A CHALLENGING CHESS PROGRAM TO BE RUN ON
DISK-BASED ATARI'S

Finally you are prompted to verify the accuracy of the information entered to this point:

Is this okay (Y or N)?

If your response is affirmative, the file will be uploaded from your computer. The UPLoad function transfers the file into a temporary area controlled by the Forum Administrator (or SYSOP). He or she will review your file and place it into the Library as soon as possible (usually within 24 hours).

To download, simply select Item 5 (Download a file) from the menu, and respond to the file name prompt. If you do not know the file name, you can review the available files by selecting Item 2 (Browse thru files). This displays a summary listing for each file in turn, showing the file name, keywords and description. As each file is listed, you can either display the contents to your screen or download it.

Both B Protocol and standard XON/XOFF protocol are supported. For more information on using a Forum, see the Forum User's Guide (CS-507).

Public File Access Area (ACCESS)

The Public File Access Area is a large library of files submitted by CompuServe subscribers. To reach the Public File Access Area, request the ACCESS program from your Personal File Area. You will see the following menu:

```
1 (DES) Description
2 (BRO) Browse thru files
3 (UPL) Upload a new file
4 (HEL) Help
5 (EXI) Exit from Access
```

Key digit:

Uploading is similar to a Forum. When you select Choice 3 (Upload a new file), you are prompted to enter the file name, topic keywords, and a description of the file. The only difference is that the prompt for a file identification reads:

Access file name:

Then you indicate whether or not the information you have entered is correct. If it is, the upload proceeds just as in a Forum.

Downloading, however, is a little different, because you cannot select a menu item. Instead, you must enter the Download command. Its general format is:

DOW[NLOAD] [file]

You do not have to identify the file when you enter the command — if you do not, the ACCESS program will prompt you for the file name.

As with Forum files, the ACCESS program supports both CompuServe B Protocol and standard XON/XOFF protocol.

Other Services Using B Protocol

The following services also support B Protocol file transfers. When you use these services you will find the file transfer function self-explanatory.

MicroQuote™ is a series of programs for retrieving and storing current and historical stock data. Over 40,000 issues are represented in the historical database which contains quotes back to January 1, 1974.

The MicroQuote program, MQDATA, automatically stores stock information into a file which you can download using FILTRN.

SOFTEX is an online software shopping service. You can purchase reasonably priced programs and download them directly to your computer for immediate use. B Protocol ensures the reliability of your purchase.

QTRAN™ is a program that will take a VisiCalc[®] file in DIF format and convert it into a batch input file for QUBIT™. QTRAN is available to commercial CompuServe customers only.

Chapter 5

Advanced Autolog Files

Because of their prompt/response structure, AUTOLOG files are ideally suited for handling online menu navigation. Moreover, Control and Meta commands can be coded into an AUTOLOG, enabling you to capture data and perform other functions automatically.

Creating an advanced AUTOLOG file is similar to creating the AUTOLOG file for logging on to CompuServe, as shown in Chapter 3. Since the only time you can execute an advanced AUTOLOG is when you are already at a ! or OK prompt, you must not specify a beginning prompt.

For example, the following AUTOLOG could be used to access MegaWars™, the interactive space war game. Your complete entries, including the Return or ESC key used to terminate them, are shown in blue. The menu choices are examples only, and may not be correct.

```
Prompt: ESC  
Response: GO GAM Return  
Prompt: ! Return  
Response: 7 Return  
Prompt: ! Return  
Response: 2 Return  
Prompt: ESC  
Response: ESC
```

Online Navigation



You need to know the menu prompts you will encounter on CompuServe in order to create an AUTOLOG file that navigates menus. The following are examples of common prompts on the CompuServe Information Service:

```
Enter choice !  
  
Press <CR> !  
  
Issue:
```


Make a list of the prompts encountered and use it as a guide in creating the AUTOLOG. This can be accomplished easily using your capture buffer.

Here are two tips that can make AUTOLOG construction easier:

- Match only the exclamation point portion of CompuServe menu prompts
For example:

 Prompt: ! 

- Use the GO command wherever possible. GO is a CompuServe menu navigation command that enables you to access any page on the service directly instead of going through menus. The format of the command is:

GO page

where page is any system page identification. You can use the online Subject Index (GO IND) to find page identification, or you can simply make note of it when you access the service manually. The GO command can be entered at any CompuServe menu prompt and within many services.

Note: Page identification may change occasionally. If you encounter a problem using the GO command, check the on-line Subject Index for the current page number.

The following CompuServe navigation commands also may be useful:

T (top) takes you to the CompuServe Main Menu.


M (menu) takes you back to the last previous menu.

B (back) takes you to the last previous page in a multi-page menu.

P (previous) takes you to the previous page in an article.

OFF logs you off CompuServe.

S (scroll) prints (displays) the following text continuously, without pausing for instructions at the end of each page.

^C  aborts the current program and returns to the CompuServe menu.

Storing Meta And Control Commands

Meta (including function keys) and Control key commands can be stored in an AUTOLOG file. However, they are generated within AUTOLOGs using different keys:

- To store a Meta command, type (Underscore) and then type the appropriate character. The Meta function will be performed at that point when the AUTOLOG file is executed.
- To store a Control command, type (Circumflex) and then type the appropriate letter.

Hint: Enter the Meta command to execute a function key for a response that might change. An AUTOLOG file can be created to load the function key from a file and then transmit the function key as a response. If the response changes, you only have to change the function key definition, not the entire AUTOLOG sequence. (See Example 2.)

The following Meta functions cannot be performed from an AUTOLOG:

— change background color

— change border color

— change luminance

AUTOLOG Chaining

You can initiate the execution of a new AUTOLOG from one that is already executing. To set up an AUTOLOG "chain", store a command at a Response: prompt. The format is:

Jfilename

The is the AUTOLOG equivalent of ; "filename" identifies the other AUTOLOG file that you want to execute. The closes the current AUTOLOG and executes the specified file. The contents of the first AUTOLOG after the are ignored.

Executing an Advanced AUTOLOG

You can execute an advanced AUTOLOG from any prompt where you could enter a menu navigation or GO command. To execute the AUTOLOG, press **[Meta J]**, and then type the name of the AUTOLOG file.

Advanced AUTOLOG Examples

Example 1

The following AUTOLOG retrieves the current-day stock quotes automatically from the CompuServe Information Service. It is programmed to go directly to the Quick Quote program, open the capture buffer, request information on H&R Block, exit the Quick Quote program and log off. Your entries are shown in blue, and include the Return or ESC key required to terminate each entry. The page number FIN-15 is an example only.

```
[Meta-I]
Creating New Autolog
Enter file name: HRBQUO.ATO
Prompt: [ESC]
Response: GO FIN-15 [Return]
Prompt: ! [Return]
Response: [Return]
Prompt: : [Return]
Response: _O [ESC]
Prompt: [ESC]
Response: HRB [Return]
Prompt: : [Return]
Response: _C [Return]
Prompt: ! [Return]
Response: OFF [Return]
Prompt: [ESC]
Response: [ESC]
```


When this AUTOLOG is executed, no initial prompt will be needed. The first response is to go to the Quick Quote program, which displays an introduction followed by a ! prompt. The response is a carriage return. Then Quick Quote prompts for an issue, at which point the AUTOLOG opens the capture buffer. Without waiting for another prompt, it responds "HRB," the ticker symbol for H&R Block. When Quick Quote produces the report for H&R Block, it prompts for another issue. Now the AUTOLOG closes the capture buffer, terminating the response with a carriage return to indicate that no further issues are to be examined. This returns you to the Investments and Quotations menu, from which the AUTOLOG logs off the service. After that, the AUTOLOG ends with no prompt and no response.

The following shows how the AUTOLOG might execute:

```
! Meta-J HRBQUO
GO FIN-15
```

CompuServe

Page FIN-15

Request Recorded,
One Moment, Please
Thank You for Waiting
These quotes are delayed a
minimum of 20 minutes and
cover several major U.S.
exchanges as well as selected
OTC. CompuServe does not edit
this and is not responsible
or liable for its content,
completeness, or timeliness.

Press the carriage return or
ENTER key to exit, type ?
for instructions, or /HELP
for a list of options.

Issue:
[Buffer Opened]
HRB

BLOCK H & R INC	HRB
Vol(00) Hi/askLow/Bid	Last
79 51.500 50.250	51.500
Updated: 11:15 Change: +1.000	

Issue:
[Buffer Closed]

QUOTATIONS

- 1 Current-Day Stock Prices (\$)
- 2 Price History, 1 Security (\$)
- 3 Price History, Mult. Issues (\$)
- 4 Dividend History (\$)
- 5 Ticker, CUSIP Lookup (\$)

(\$) Indicates surcharged service

!OFF

Off at 10:50 EDT 11-Apr-85
Connect time = 0:02

Example 2

The following AUTOLOG could be used to enter the CB simulator program from any other menu page on CompuServe. The function key file CBKEYS defines the 1 key to be 'GO CB-1' (the page ID for Band A of the CB simulator) and the 2 key as 'ZOCTOR DARKOV' (an arbitrary CB handle).

```
Meta-I
Creating New Autolog
Enter file name: CB.ATO Return
Prompt: ESC
Response: FLCBKEYS Return
Prompt: ESC
Response: 1 ESC
Prompt: ? Return
Response: 2 ESC
Prompt: ESC
Response: ESC
```

The following shows how this AUTOLOG might execute.











```
Meta-J CB.ATO
GO CB-1

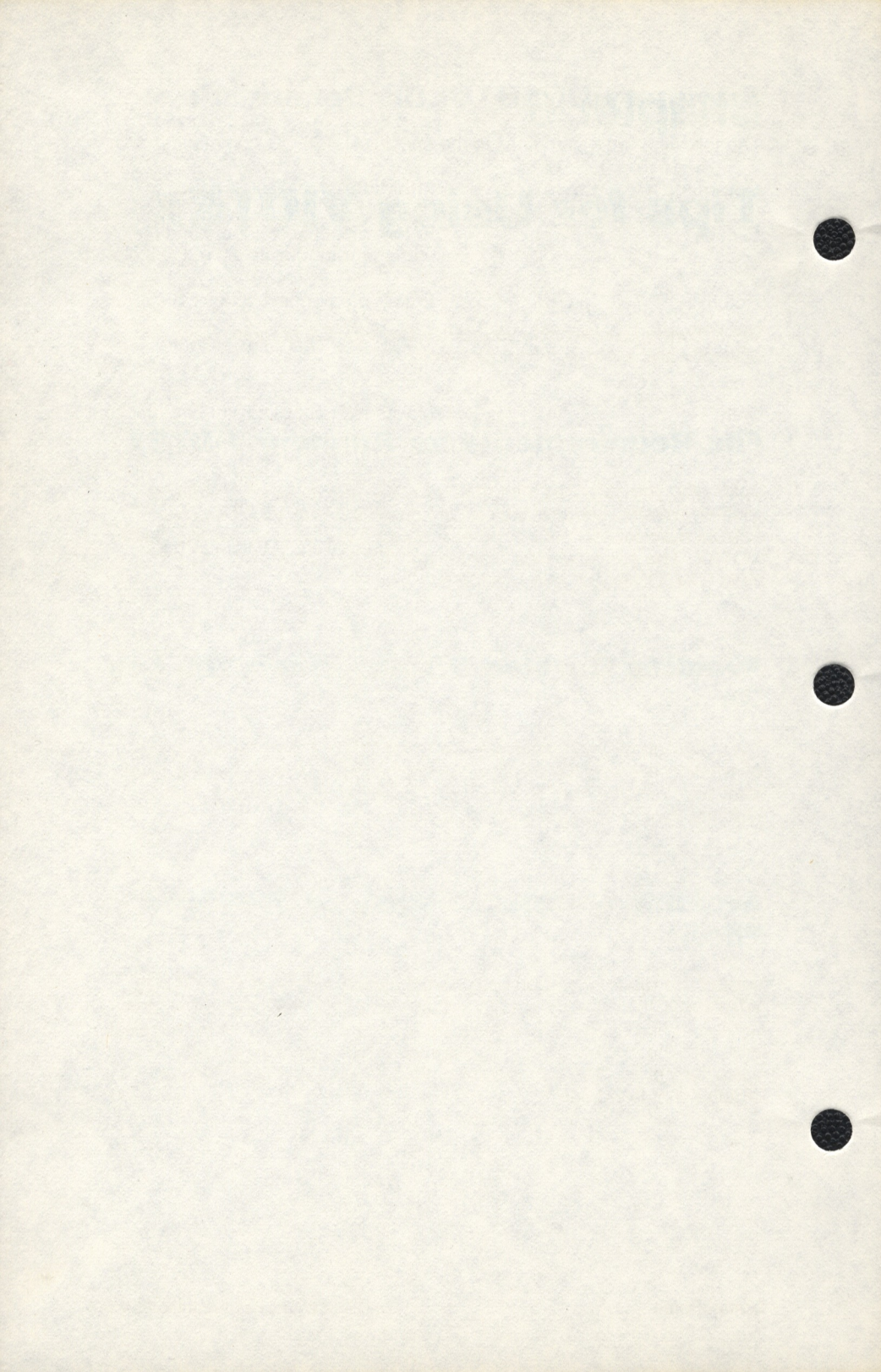
CompuServe                Page CB-1

Request Recorded,
One Moment, Please
Thank You for Waiting
CB Simulator Ver 3(64) Band A
What's your handle? ZOCTOR DARKOV
(Channel) users tuned in
(1)4 (4)? (22)20 (33)6
```


Summary Of AUTOLOG Commands

The following table summarizes the special AUTOLOG commands:

Command	Key(s)	Function
Escape		Enters response without sending a carriage return; exits AUTOLOG file.
Return		Enters prompt or response.
Control		Makes next character a Control function.
Meta		Makes next character a Meta function.
 Meta &		Sets half-second delay.
 Meta %		Sets two-second delay.
 Meta J		Executes AUTOLOG file to be specified.



Chapter 6

Tips for Using VIDTEX

The following tips can help you to use the VIDTEX program more efficiently and avoid potential problems.

File Requirements for Running VIDTEX

Optionally, you can copy files from your VIDTEX program diskette to another diskette, and use the second diskette to run VIDTEX. This diskette may contain data or other programs you wish to use along with VIDTEX. The essential files for running VIDTEX are AUTORUN.SYS, MEM.SAV, DOS.SYS and DUP.SYS.

Avoiding Garbled Display When You Log On

If you sign on to CompuServe while using VIDTEX and the displayed information appears to consist of random garbled characters, you must reset your terminal type to VIDTEX Compatible. See Defining Your Terminal Type in Chapter 2 of this guide.

Avoiding Garbled Display of Uploaded Files

Most of the diskette files on your ATARI system will be in the ATASCII (ATARI ASCII) character set. ~~To upload these files to CompuServe disk storage during a VIDTEX session, be sure to use~~ Meta L ~~when you load them into the capture buffer.~~ This converts the files into the ASCII character set used by CompuServe. See Save/Load ATARI Files in Chapter 3 of this guide.

Avoiding Accidental Deletion of Disk Files

Whenever you save the contents of the capture buffer to a file on diskette, be very careful in selecting the file name. If the name you specify is the same as the name of a file already on the diskette, the old file will be deleted before the new one is added.

Dialling with a Hayes Smartmodem™

If your ATARI communicates through a Hayes Smartmodem, you must modify the standard VIDTEX communication settings before attempting to dial the access number for a host computer. This is because the Smartmodem refuses to accept the signals sent by VIDTEX to begin and/or terminate disk input/output.

Before dialling, use **[Meta Q]** to access your communications settings. Then set FLOW XMIT to N (for No). This prevents VIDTEX from forwarding the signals and enables you to dial up the host system. After dialling, use **[Meta Q]** again and set FLOW XMIT back to Y (for Yes).

Logging in through Telenet

If you use the Telenet network to access CompuServe (or another host system), you must modify the standard VIDTEX communication setting for FLOW XMIT before dialling the Telenet access number. Use **[Meta Q]** to display the current communications settings, then set FLOW XMIT to N (for No). Once you have reached the host system, use **[Meta Q]** again to restore the FLOW XMIT setting to Y (for Yes).

Saving the Capture Buffer to Disk

When you wish to save the capture buffer to a file on diskette, it is extremely important to select the appropriate META key function for the type of data you are transferring.

[Meta U] always saves the data from the capture buffer exactly as it is. Use **[Meta U]** only to save data that you intend to reload with **[Meta K]** in VIDTEX. This data is not compatible with other programs, such as word processors.

[Meta S] converts the data to make it compatible with other ATARI programs, such as word processors. You can reload this data into the capture buffer for use with VIDTEX with **[Meta L]**.

Updating VIDTEX

As new versions of VIDTEX become available, you can update your diskette by replacing VIDTEX.OBJ with the new version. If VIDTEX.OBJ is not included in the AUTORUN.SYS file — that is, if you have to load VIDTEX.OBJ manually whenever you want to run the VIDTEX program — then all you have to do is download the new version. Be sure that you assign it a different name (for example, NEWVID.OBJ) from the name assigned to the existing VIDTEX object program. The name you specify must include the extension .OBJ, or ATARI DOS will not treat it as a program.

If you have set up VIDTEX so that it is started automatically — that is, if VIDTEX.OBJ is part of your AUTORUN.SYS file — you will also have to update AUTORUN.SYS to incorporate the new version of VIDTEX.OBJ.

After you have downloaded the new version of VIDTEX.OBJ, you can use the following procedure to update AUTORUN.SYS:

1. Catalogue your VIDTEX diskette (See Managing Your Files in Chapter 3) to determine how many sectors are still free.
2. If there are more than 125 free sectors, rename your current AUTORUN.SYS file. This enables you to download the new file and still keep the original, just in case the new version does not function properly. If you do not have at least 125 free sectors, you must delete AUTORUN.SYS before creating a new one.
3. Copy HANDLER.SYS to AUTORUN.SYS, and then append the new VIDTEX object program file. Remember to identify the destination file as AUTORUN.SYS/A when you append the object program. Without the "/A" the system will delete the existing contents of AUTORUN.SYS (that is, HANDLER.SYS) before copying the object program.

The update is now complete. At this point, it would be a good idea to create a backup copy of the new diskette.

Starting VIDTEX without AUTORUN.SYS

If the AUTORUN.SYS file on your VIDTEX diskette is not performing properly, you can use the following procedure to run a VIDTEX session without rebuilding this file:

1. Rename AUTORUN.SYS.
2. Copy the device initialization file HANDLER.SYS to AUTORUN.SYS.
3. Turn your computer off and then back on.
4. Proceed to your ATARI DOS menu.
5. Select Choice L (BINARY LOAD). The system will prompt you for the name of the file to be loaded.
6. Identify the file to be loaded as VIDTEX.OBJ.

When the load is complete, the VIDTEX banner will appear.

Note: If you suspect that AUTORUN.SYS is not working properly because of an error in the object program (VIDTEX.OBJ), you may want to load a previous version (which you have saved) instead. If so, the file must have the extension .OBJ, to indicate that it is a machine language program.

Chapter 7

VIDTEX Error Messages

The following list illustrates some commonly encountered error messages. The listing for each message is accompanied by an explanation of the problem and, where appropriate, suggestions for resolution.

[No carrier detected]

Your modem was unable to make connection with the number you dialed. This notice may indicate an invalid phone number, a busy signal, etc. Check the number and dial again.

[No Printer Present]

Your printer is not acknowledging instructions. Check to see whether it is turned on. If it is, then check the serial bus (strapping cable) to see that it is properly connected.

[Disk Error # <number>]

This message indicates the occurrence of the disk error and identifies the errors by number: Some examples are [Disk Error # 136] and [Disk Error # 168].

!! Capture Buffer Full !!

Press CTRL-Q to continue !

The capture buffer is full and cannot accept additional text, and the VIDTEX program has transmitted a Control-S to the host system to halt transmission. Save the buffer contents to your disk, zero (empty) the buffer, and then simultaneously press the Control (or CTRL) key and the Q key to restart host transmission.

[Function Key Buffer Full]

The memory allocation (255 characters) for function key definitions has been used up.

[% VTXCMP - Communications Problem, Please Stand By. . .]

There has been a delay of more than 30 seconds since you responded to the last prompt in the FILTRN prompt sequence. Because of its error-detection functions, B Protocol transmits a warning whenever there is extensive idle time. Since this is only a warning message, you can proceed to enter the information for which FILTRN is waiting.

**[? VTXCMF - Communications Failure
Returning to Terminal Mode]**

There has been a delay ^{or} more than two minutes in the FILTRN prompt sequence. VIDTEX has responded by terminating the file transfer and returning to terminal mode.

Chapter 8

Technical Information

This chapter contains VIDTEX technical information.

Escape Sequences

VIDTEX responds to certain Escape sequences when received from a host computer. These sequences cannot be performed locally; they must be received from a host.

In the following explanations, each Escape sequence is represented by *Escape* (for the Escape character), followed by the other character(s) in the order of transmission. You should note the distinction between upper case and lower case characters.

Keyboard Lock And Unlock

When an *Escape b* sequence is received, VIDTEX will lock the keyboard and not transmit any more characters entered. This condition is reset when VIDTEX receives an *Escape c* sequence. These sequences can be used by a host program that does not want to be interrupted during critical processing.

Video Enable And Disable

When an *Escape e* sequence is received, the video is disabled and subsequent characters are not displayed. The video is enabled again when an *Escape f* sequence is received.

Cursor Control Sequences

VIDTEX allows the host computer to perform screen control functions through Escape sequences. These are remote functions 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 upper case.

Escape A moves cursor up one line.

Escape B moves cursor down one line.

Escape C moves cursor right one space.

Escape D moves cursor left one space.

Escape H homes cursor to top left corner.

Escape K clears from cursor to end of line.

Escape J clears from cursor to end of screen.

Escape j clears page — same as an ASCII form feed.

Cursor Positioning

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

<Escape Y><line code><column code>

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

Cursor Positioning

Line Code		Column Code			
Line	Character	Column	Character	Column	Character
1	Space	1	Space	21	4
2	!	2	!	22	5
3	"	3	"	23	6
4	#	4	#	24	7
5	\$	5	\$	25	8
6	%	6	%	26	9
7	&	7	&	27	:
8	'	8	'	28	;
9	(9	(29	<
10)	10)	30	=
11	*	11	*	31	>
12	+	12	+	32	?
13	,	13	,	33	@
14	-	14	-	34	A
15	.	15	.	35	B
16	/	16	/	36	C
17	0	17	0	37	D
18	1	18	1	38	E
19	2	19	2	39	F
20	3	20	3	40	G
21	4				
22	5				
23	6				
24	7				
25	8				

Table 8-1
Cursor Positioning

If a line or column code falls outside the valid value range, the invalid code is replaced by the valid code of nearest magnitude.

Graphics Mode

Three types of graphics are used on CompuServe:

- semigraphics 2 X 2
- medium resolution
- high resolution

ATARI VIDTEX supports all three types.

An *Escape GN* is used to enter text mode. All received characters will be treated as ASCII.

An *Escape G4* is used to enter semigraphics 2 X 2 mode. 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 (byte) is:

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

Bits "abc" define colors as follows:

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

Bits "defg" define the graphic character as a set of four picture elements. A 1 bit sets a picture element on. The bits map to the picture elements as follows:

d	e
f	g

Medium and High Resolution Graphics

The following explains how medium and high resolution graphic information is transmitted:

The screen is cleared to black automatically upon entering either medium or high resolution mode. In these modes, data is sent as pairs of run length encoded characters. The first character of the pair indicates the number of background pixels, and the second character indicates the number of foreground pixels. Each character of the pair is the actual count plus 32; no count exceeds 128.

Thus the ASCII sequence <L><W> indicates 44 background and 55 foreground pixels. Line drawing will wrap from one line to the next and all cursor positioning ESCAPE sequences refer to pixel location rather than character position. When an ESCAPE sequence occurs, the next character is automatically assumed to be the start of a new set of run length characters and is taken as the count of background pixels.

Mapped Color

VIDTEX makes some color substitutions since only three colors and black are available on the ATARI. The incoming color information is remapped automatically according to the following table:

Color Sent	Mapped Color
Black	Black
Green	Blue
Yellow	White
Blue	Blue
Red	Orange
Buff	White
Cyan	Blue
Magenta	Orange
Orange	Orange

Escape Sequences Summary

The following list summarizes the functions of Escape sequences recognized by VIDTEX. These functions occur only when the Escape sequence is received from the host computer. These functions cannot be typed from the keyboard as local commands.

Escape A moves the cursor up one line.

Escape B moves the cursor down one line.

Escape C moves the cursor right one space.

Escape D moves the cursor left one space.

Escape G4 enters semigraphics 2 x 2 mode

Escape GH enters high resolution graphics mode.

Escape GM enters medium resolution graphics mode.

Escape GN enters text mode.

Escape H places the cursor in home position.

Escape J clears from the cursor to the end of the page.

Escape K clears from the cursor to the end of the line.

Escape Y line column positions the cursor.

Escape b locks the keyboard.

Escape c unlocks the keyboard.

Escape e disables video display.

Escape f enables video display.

Escape j clears the page.

Escape Escape O opens the capture buffer.

Escape Escape C closes the capture buffer.

Escape Escape Z zeroes the capture buffer.

Escape Escape V transmits the capture buffer.

Escape Escape Y pmt transmits the capture buffer with a prompt.

ASCII Control Characters

VIDTEX responds to the ASCII control characters BS (BackSpace), HT (Horizontal Tab), LF (Line Feed), FF (Form Feed) and CR (Carriage Return).

Printer Control Character Conversion

VIDTEX converts printer control characters as follows:

Character	Conversion
Tab	Equivalent number of spaces.
Line feed	Since most printers automatically line feed, no line feed is sent to the printer.
Form feed	Translated to top of form character.

Editing — Meta S


When the capture buffer is saved to disk with a Meta S, it is edited as follows:

- Carriage return/line feed (CR/LF) is converted to 9B (hexadecimal).
- All bell characters (Control G) are passed to disk.
- Backspaces are unchanged.
- Tabs are replaced by multiple spaces.
- Form feeds are replaced by the clear screen character.
- All other Control characters are discarded.

Appendix A

Disk Error Codes

Many of the problem situations you might encounter when using VIDTEX actually occur because of error conditions involving the disk drive(s) attached to your computer. VIDTEX notifies you of such problems by displaying a Disk Error message, which looks like this:

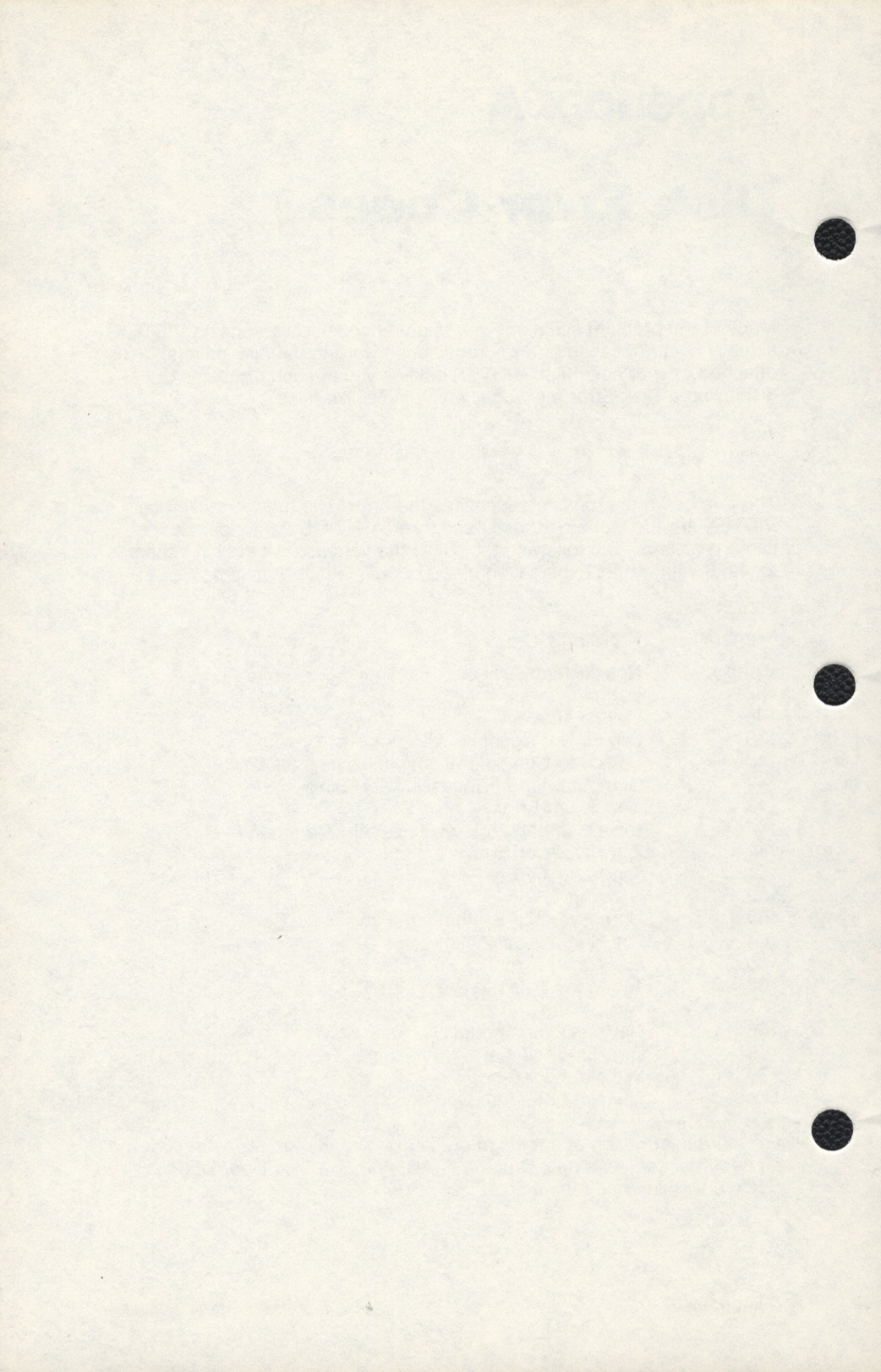


[Disk Error # 144]

The number in the message identifies the error. The numbers used by VIDTEX are the same as those used by ATARI DOS 2.0 to identify the same problems. The following table lists the various disk error numbers, together with a brief explanation of the corresponding problem.

Error Number	Problem
130	Nonexistent Device
136	End of File
138	Device Timeout
139	Device Not Responding
140	Device to Computer Communications Garbled
142	Computer Input Processing Too Slow
143	Checksum Error
144	Device Unable to Execute a Valid Command
160	Drive Number Error
161	Too Many OPEN Files
162	Disk Full
163	Unrecoverable System I/O Error
164	File Number Mismatch
165	File Name Error
166	Too Many Bytes in POINT Call
167	File Locked
168	Device Command Invalid
169	Directory Full
170	File Not Found
171	File Not OPEN for Update

For more information about these problems, and the appropriate recovery procedures, see Appendix C of the ATARI 400/800 Disk Operating System II Reference Manual.



Appendix B

Glossary of Terms

This Glossary defines some common terms associated with terminal communications.

ASCII is an acronym for American Standard Code for Information Interchange. Represented in the ASCII character set are 96 printable and 32 non-printable (Control) characters.

baud rate refers to the number of bits transmitted or received per second. For example, 300 baud = 300 bits per second. The actual number of characters sent depends on how many data, stop and start bits comprise each character. Generally, 300 baud = 30 characters per second.

binary file is a type of file that contains data which is not necessarily printable. Generally, binary files are used to hold executable programs.

bit is a contraction of BINARY DIGIT, the smallest unit of information in the binary numbering system. A choice between two possible states, ON and OFF or zero and one, is represented in a bit.

buffer is a storage area for information. VIDTEX reserves a portion of your computer's memory to be used as a capture buffer.

byte is eight bits which are interpreted as one unit of data. One character, such as the letter A, is represented internally in one byte during data communications.

carrier is the signal which is modulated to transmit data over the telephone line.

database is any collection of information stored on the computer.

defaults are settings telling your terminal specific ways to respond. For example, how many lines on a screen you want to have displayed while scrolling, the first page to see after logon, the number of characters to delay after issuing a command, etc. These default settings can be made permanent or can be in effect for the current session only.

disk storage refers to the storing or saving of data in the Personal File Area on a device called disk. The data can then be retrieved for use. Each Standard and Prime Service customer is allocated 128,000 characters of disk space at no extra charge. Additional storage can be requested through Feedback for an extra charge.

DISPLA is the program which accesses the Videotex Area from the Personal File Area.

download is the process of transferring a file of data from CompuServe to your computer.

EasyPlex is the CompuServe Electronic Mail program, previously called EMAIL.

EDIT is the text editor program used to create and modify files in EasyPlex, Forums, the Personal File Area, and the National Bulletin Board. Previously, EDIT was called FILGE.

EMAIL is the previous name for EasyPlex.

Executive is a type of program (See VIDTEX).

FEEDBK is the program which enables you to provide your comments, ask questions or get help with a problem from Customer Service.

file is a collection of data, uniquely identified by a name and, optionally, an extension.

FILGE™ is the previous name for EDIT, CompuServe's text editor program.

Forum is an electronic club offering message exchanges, conferencing, and a data library (also known as a Special Interest Group or SIG).

full duplex means that the echoing of keyboard entries is handled by the network and not by VIDTEX (as used in this guide).

hardcopy is a printout or a paper copy of computer data.

host is the CompuServe or other computer system to which you are connected.

initial page is the first page of information which is displayed after login.

job is a user's individual session while logged onto the CompuServe computer.

logoff is the sequence of events which disconnects you from the CompuServe computer.

logon is the sequence of events which connects you with the CompuServe computer.

menu refers to the item choices from which you may select a page to be displayed in the Videotex Area.

network is the communications link equipment that enables you to connect to CompuServe's computers in Columbus, Ohio. CompuServe operates its own network in most major cities in the 48 contiguous United States. Access from other cities in the U.S. and Canada is available through a supplemental network such as TYMNET, TELENET or DataPac at an additional communications surcharge.

node is a specialized communications computer which allows many terminals to communicate through the same line to CompuServe's large computer complex in Columbus, Ohio.

OK is the prompt which is used in the Personal File Area to indicate readiness to accept a command.

page is any one of the CompuServe displays which appears on your terminal.

password is a special sequence of characters that authorizes access to CompuServe services for a unique User ID. Your password is your key to safeguarding your data and usage charges. You are responsible for all usage by your User ID. The CompuServe Information Service strongly recommends that you keep your password in a secure place separate from your User ID and never give it to anyone, verbally or through the service. The most secure password consists of two non-related words connected with a symbol.

pixel is a contraction of picture element, and refers to the smallest unit of graphic display.

program is a set of machine instructions which the computer uses to perform a defined function. References to particular programs used on the CompuServe Information Service are made by program name, such as FEEDBK or DISPLA. When a program is requested, the host computer loads and executes (runs) the specified set of instructions (program).

prompt is any message displayed to alert you that the computer is waiting for input. For example, "Enter choice!" in the Videotex Area, or "OK" in the Personal File Area.

protocol is a computer communications convention for transferring data between a sender and receiver.

RS-232 is a commonly used interface between a computer terminal and a modem. Since the computer deals with bytes and the modem only with bits, the RS-232 interface provides a way to "serialize" data sent to the modem.

screen refers to one video page of information.

SIG is an acronym for Special Interest Group, another name for a Forum.

SOFTEx is the name for the CompuServe software exchange program, which allows a user who is equipped with the proper version of VIDTEX to purchase programs online that can be run on his/her personal computer. These programs can be downloaded to the personal computer system upon purchase.

SYSOP is an acronym for SYStem OPerator, who is the person responsible for maintaining a Forum on CompuServe.

terminal is a keyboard and printing or display mechanism used to enter data into a computer and to display output from a computer. A microcomputer which is running terminal emulation software is considered to be a terminal.

upload is the process of transferring a file from your personal computer system to CompuServe disk storage.

User ID is a unique number assigned to your account that, when used with the correct password, allows access to the CompuServe Information Service. For example, 77777,777.

Videotex is an easy-to-use interactive menu-formatted system for accessing remote databases or programs. On CompuServe, the Videotex format is in pages of text.

VIDTEX™ is a terminal emulator program which is designed specifically for use with the CompuServe Information Service and which is in the CompuServe Videotex format.

CompuServe

Tell Us What You Think

CompuServe continually strives to provide high quality users guides and manuals. Please take a moment and tell us what you think about this manual.

	Excellent	Good	Average	Fair	Poor
Organization of manual					
Appearance of manual					
Ease of use of manual					
Completeness of information					
Quantity of illustrations					
Quantity of examples					
Degree to which this manual meets your needs					
Level of detail compared to your own experience					
Overall manual					

Please indicate, by page, any errors you found in this manual.

Please feel free to offer any suggestions on how we may improve this manual.

Thank you for your suggestions. Please mail to:

CompuServe Incorporated
P.O. Box 20212
Columbus, Ohio 43220
Attn: Editorial Services Dept.

2013-2014



CompuServe

5000 Arlington Centre Blvd.
Post Office Box 20212
Columbus, Ohio 43220
800/848-8990 (contiguous U.S.)
614/457-8650 (Ohio)

CS-562(11/85)
An H&R Block Company
©1985 CompuServe Incorporated