BOB TERM v1.2 Documentation
A ShareWare Terminal Program

by

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INTRODUCTION

BobTerm is a fully featured multi-tasking terminal program for ANY Atari 8 bit machine with at least 48K of memory. BobTerm has been fully tested under MYDOS, SpartaDOS, SpartaDOS X, TopDos, and Atari DOS 2, along with many others.

BobTerm supports XModem, XModem-CRC, 1K-XModem, CIS Fast XModem, YModem (batch) and FModem (batch) protocols. Also supported are floating buffer size (depending on your machine and DOS), a chat window with recall, online/real-time clock, RTime8 support, a dialing system, full DOS support, the ability to load modules for additional features (such as XEP80 and SpartaDOS command line support), both RS232 ports on the 850 and P:R:, and much more!

SETTING UP BOBTERM

BobTerm is compatible with all known RS-232 interfaces, and most direct-connect modems. If your modem is connected to a Black Box or MIO, no set-up is necessary. If you are using an 850 interface or P:R: Connection, BobTerm will automatically load the handler from the interface; no disk handler should be used. When using any other type of interface or direct-connect modem, a disk-based handler is necessary. Handlers have been provided for the Atari 835/1030/XM301 modems, and the Supra/MPP 1000x modems. Also included is a generic R:Verter handler. This is to be used with the Atari SX-212 modem connected with the SIO port, with the Supra 1200 baud modem (using the SupraVerter), and any modem connected through a R:Verter or similar interface. To use a disk-based handler, rename it to "RS232.COM," and place it in your "default directory," which is drive 1 for most DOSes.

To create a BobTerm boot disk, boot up your DOS and format a blank disk. Write DOS files to that disk. Now copy the BOBTERM.COM file to this disk, and rename it to AUTORUN.SYS. If you need a modem handler, copy the appropriate file (XM.COM for 835/1030/XM301 modems, MPP.COM for the Supra/MPP 1000x, etc.) to this disk, and rename it to RS232.COM. Users of the Black Box, MIO, 850, or P:R: connections do not need and should not have a RS232.COM file, since the handlers for those interfaces are built-in. Your BobTerm boot disk has now been created. If you want to use any of the module programs for BobTerm, they should be placed on this disk as well. See the section entitled MODULES for more information. BobTerm loads a default dialing list when it first boots (D:BOBTERM.PH1), so after adding all the entries to your dialing list, save it to this disk.

BobTerm looks to the "default" drive for all support files, so MYDOS and SpartaDOS X users can place all files for the term in a separate subdirectory <on a hard disk> for convenience. All other DOSes will look to drive 1 for these files, which is why it is a good idea to make up a boot disk as described above.

BobTerm loads right from DOS as a binary file. Use the [L]oad

Binary File option of your DOS menu, or consult your DOS manual for the correct command. Internal BASIC will be automatically disabled, but no language cartridges should be present. Use the 'X' command to load the term from the SpartaDOS X command line.

HELP MENU FUNCTIONS

Modem Parameters

Note: Unless otherwise stated, the command within the [] brackets is the character typed to toggle the command parameters.

[A] TRANSLATION AND PARITY

Changes your translation between ASCII, ATARI, VT-52E and VT-52O. ASCII is the universal text standard, and should be used on most national telecommunications networks, and non-Atari 8 bit Bulletin Boards (When in doubt, use ASCII). ATARI is the Atari-specific ATASCII text mode only usable on boards which support it (typically, only Atari 8 Bit Bulletin Boards). The two VT-52 modes provide the basic ASCII translation plus many of the extended cursor control commands provided in the DEC VT-52 terminal. BobTerm's VT-52 mode is designed to also emulate CompuServe's VIDTEX mode. VIDTEX is used in some of the online games available on CIS. It does not support graphics; only cursor positioning. When using VIDTEX on CIS, do a "GO TERMINAL" and set your page length to 23 and columns to 40.

The VT-52 mode also supports some of the Atari ST-specific subset of commands, for further compatibility.

Parity is determined by the translation mode. BobTerm does not check incoming parity; it is only generated. The Parity of ASCII mode is None; in VT-52E it is Even, and in VT-52O it is Odd. Parity is non-existent in ATARI translation.

The translation and parity may also be changed while in terminal mode by pressing Shift Control F.

[B] BAUD RATE

Baud rate is the speed at which your modem and the other system's modem can receive information. Rates supported are from 300 baud to 19.2K BAUD, but of course you cannot go any higher than your modem is capable. Note that some modem interfaces (namely the 850 and P:R: Connection) will not support 19.2K BAUD. Baud rates like 9600 and 19.2K are used mostly for "null-modem" transfers, where you hook up the output of your RS-232 interface to another computer's RS-232 port, through a special cable or adaptor.

[D] DUPLEX

Duplex controls how characters appear on your screen, that is, whether they are put on your screen by the terminal program, or echoed back

from the host computer. Full Duplex means that the characters are echoed from the host. Half Duplex means the characters are sent from your keyboard to the screen. Full Duplex is used on most all BBSes and online services (except GEnie), so unless otherwise stated, try Full Duplex first. If you can not see what you are typing, go into Half Duplex. The duplex improperly set to Half will be characterized by seeing double of each character you type. BobTerm also supports "Echoplex". This is enabled by holding [START] while pressing [D]. This will cause everything to be reflected, just as a BBS does. Echoplex is handy for answering a call, when the other person is in full duplex. Remember to switch into echo mode ONLY after connecting, and out of it after disconnecting.

You may change the duplex while in term mode by pressing Shift Control D.

Dialing Commands

[E] DIALING MENU

Provides you with various lists from which you pick the phone number(s) you wish to call. See "The Autodialer and Entries" below.

[F] ORIGINATE

Allows your terminal program and modem to connect to another modem sending a carrier. An example of this is if you originally connected using a voice line, then wished to use your modem. Use this command to connect to a BBS if you are dialing manually (with a telephone).

[G] SEND CARRIER

Known on other terminal programs as "ANSWER MODE," this will send an answering carrier to the other computer. If connecting to another person also using a term, one should Originate, and the other should "Answer," or send carrier.

[H] HANG UP

This will disconnect your modem from the telephone line. BobTerm first drops the DTR line; if it sees that a carrier is still present, it will send a +++, wait, then ATH. This should take care most all modem configurations. The online timer will stop. The timer will restart when dialing manually, or if Shift Control T is pressed.

System Commands

[C] CAPTURE BUFFER

The "Capture Buffer" is a feature that lets you record whatever you are receiving. If there is a special message or something you want to save, simply enable your capture ahead of time. When you type [C], it will ask you for the destination filename. Capture will then be turned on;

characterized by the screen's border color turning red. You may toggle the capturing by pressing [OPTION]. To close the capture (ending it), use this same option. It will ask you "[C]lose Capture, [V]iew, or [ESC]?" Press [C], and it will save the buffer to disk.

Note that you can also view the contents of the buffer by pressing [V] at this prompt. Use [CONTROL] [1] or the SPACE BAR to pause the listing. You may only view what is currently in the buffer; any data that was previously saved cannot directly be viewed. You would have to close the capture, then use the DOS Function of View a File, and look that way.

BobTerm's capturing capability is not limited to just the buffer size. While you are capturing data, you will see the buffer count on the top status line slowly decrease. When it gets to around 256 bytes left, it will pause the other end, save the buffer to disk, and resume operation. This will continue until you temporarily stop capturing (by hitting SELECT), or close the buffer. You cannot change the disk in the drive to which you are capturing until the capture is closed.

You may also start capturing by simply pressing [OPTION] (without first setting it up). When the buffer fills, it will prompt you for the destination filename. If you want to cancel the save, simply press [ESC]. Note that the destination capture name usually is a disk filename, but you could use "P:", sending it to your printer directly.

If you want to erase the buffer (say you turned on capture, but you really don't want to save it), you can clear the buffer by selecting [C]. Hit [C] again to select Close, and press [ESC] at the filename prompt. Now hit [ESC] again to return to terminal mode.

[Q] QUIT TO DOS

This will exit to DOS WITHOUT dropping carrier, allowing you to copy files, run other programs, such as ARC or UNARC, all without hanging up! To return to online, just reload BOBTERM (you may need to change translation, baud rate and duplex). If capturing was enabled, it will be saved before exiting. BobTerm will NOT perform the BOOTUP.BTM modem initialization function if it sees that you are re-entering BobTerm, so no junk data will be sent if you reload the term while the modem is online.

BobTerm now will 'unlink' any modem handler that it loaded, resetting LOMEM to whatever it was prior to entering the term. For this reason it is best to let BobTerm load any disk-based modem handler itself. This un-linking should 'clean up' memory usage, thus increasing compatibility.

[R] RECEIVE FILE

Use this when Downloading, or receiving a file or files from the host computer using a transfer protocol of XModem, XModem-CRC, 1K-Xmodem, YModem, CIS Fast XModem, and FModem. See below for "Send and Receive files explained".

[S] SEND FILE

This is the entry point for Uploading, or sending files TO the host computer. In addition to the protocols listed above, you may also do a simple text upload (the exact opposite of capturing). See below for "Send and Receive files explained."

[J] SYSTEM CONFIGURATION

This sets your bootup terminal and system defaults, as well as macro editing. See "[J] System Configuration" below.

[K] DOS FUNCTIONS

This takes you to a menu which supports the most common DOS functions. Use them just as you would from your DOS menu. Note that the subdirectory commands may not be supported in your DOS (they work under MYDOS and SpartaDOS). The letters chosen for the DOS function commands are those of DOS 2.X / MYDOS menu options, so they should be easy to memorize. These are the options:

[A] View a File: Allows you to view text files. Use [CONTROL] [1] or the SPACE BAR to pause, and [ESC] to quit.
[B] Set Directory: Used to set a working directory under a DOS that supports subdirectories.
[C] Copy a single File: This option is handy when copying a file from your RAMdisk to a floppy, or vice versa. Remember it can only copy one file at a time. The first filename entered should be the source. It may contain wildcards; the first file found will be the one copied. The second filename entered will be the destination name. Do NOT use wildcards on the destination.
[D] Delete a File: Asks for a filename.
[E] Rename File: Format is: OLDNAME.EXT,NEWNAME.EXT Remember to type both names on the same line.
[F] Lock a File: Asks for a filename.
[G] Unlock a File: Asks for a filename.
[H] Load a File: Use this to load the Sparta XINIT file to format disks. This may also be used in the future to load utility programs for BobTerm. Do NOT use this function with TOPDOS.
[I] Format Disk: Prompts for device number to format. It will format under the current DOS. SpartaDos X users are taken to the SDX format menu. This will format a disk in DOS 2 format if using disk-based SpartaDOS.
[J] Create Directory: Creates a new subdirectory under a DOS that supports them.

[1-9] DISK DIRECTORIES

Pressing the appropriate disk device number will prompt you for a "PATH NAME or RETURN". Simply pressing [RETURN] will display the main directory of the drive. If your DOS supports subdirectories, you may enter the subdirectory name, followed by a [>]. If you wanted to look at all

files ending with .BAS, you could enter "*.BAS". This function pauses at each page: pressing [RETURN] will continue, [ESC] will abort.

[J] System Configuration

This area allows to set such things as macros, screen colors, modem port, etc., and optionally save them so that they will be loaded each time you use BobTerm. There are two sub-menus that you encounter when you select this option. The first sub-menu allows you to select from:

[1] EDIT MACROS, ETC.: Takes you to the second menu area.
[2] RELOAD DEFAULT PARAMETERS: Lets you reload the way
BobTerm was set up by your BOBTERM.CNF file.
[3] SAVE DEFAULT PARAMETERS: Saves your settings to a
file called BOBTERM.CNF on the DEFAULT drive.

The second sub-menu is entered by pressing the [1] key above. This menu is the one that actually allows you to edit your macros, screen colors, and modem port.

To modify your screen colors, use the arrow keys (without holding CONTROL) until the screen color and intensity is pleasing to you.

BobTerm supports a total of 16 macros. A macro is a series of keys which, when pressed, will send out a pre-defined message. The macros in BobTerm are grouped by size and type of access. The macros may be chained together, allowing a very large string to be sent.

[A]-[H] Allows you to set the "Large Macros" of BobTerm. These macros may be up to 31 characters long. Large Macros are accessed by pressing the SHIFT, CONTROL, and a number key (from 1 to 8) all at the same time. (In these docs, holding SHIFT and CONTROL while typing another character will be referred to as 'SHIFT CONTROL x', where x is the character.) To define a large macro, just press the letter from A-H and type in the macro that you wish to store. Note that you can use the standard Atari editing keys; use [SHIFT] [DELETE] to clear out whatever is on the line. Press [RETURN] when you are finished entering the macro text. One special note about Large Macros A, B, and C: These macros are updated by the dialing list. Any macros set by your BOBTERM.CNF file will be over-written by the dialing list, if used. You may, however, reload the defaults AFTER dialing, and restore these three macros.

[I]-[P] Allows you to define the "Small Macros" of BobTerm. These macros are limited to 15 characters and are accessed by pressing the CONTROL and a number key (from 3 to 0) at the same time. Entering these macros is the same as the Large Macros.

[Q]-[U] Allows you to define five special one character macros that are controlled by the joystick in port #1 of the computer. Typical uses for this would be the CONTROL-S or CONTROL-Q character to stop and start text flow on most BBSes. To execute these macros, simply move the joystick or press the fire button.

SPECIAL MACRO CHARACTERS

There are five "special" characters that may be included in the Large and Small Macros. These are:

CONTROL-P will cause a 3 second delay in the sending of the macro, then resume. You may stack as many of these characters as you need.

CONTROL-D will cause a 1/2 second delay. This is useful when sending the "HHH" string necessary for GEnie.

CONTROL-, (little heart) will cause the macro to execute as normal, but it will NOT send a RETURN at the end of it. (Normally a RETURN is sent at the end.)

CONTROL-M will send a RETURN, but still continue with the rest of the macro.

CONTROL-N will cause the macro to link to chain to the next macro in line. The Shift Control 8 macro will chain to the Control 3 macro. The Control N should be the last character in the string. Note that a RETURN is not sent when chaining, so a Control M may be needed.

An example of using the special macro characters might be to call a BBS, send a RETURN, wait, send your name, wait, then send your password. This would be coded in a macro as:

```
^M^P^Pmy name^M^P^Ppassword
```

(note that the ^P means CONTROL-P, and ^M means CONTROL-M.)

One of the features of the Dialer is the ability to send a macro upon connection. Here's an example of a macro for automatic logon onto GEnie:

```
^Ph^Dh^Dh^Puserid,password
```

For CompuServe, try something like this:

```
^P^C^P70000,1000\password  (replacing 70000,1000 with your PPN)
```

If you are using an Atari 850 or P:R: Connection, BobTerm will let you use serial port #2. This is useful when null-modeming between the Atari and other machines, because you can leave your null-modem cable connected to port #2, and your modem to port #1. No cable swapping is need now! Pressing [V] in this config menu will alternate between ports 1 and 2. This has no effect if you are not using an 850 or P:R:.

Many other parameters of the term are saved in the configuration file. It is best to run through all functions of the term before saving the config, since for many functions, it 'learns' as you are using it.

If you want to restore your saved defaults, use the Reload Default Parameters option of the System Configuration sub-menu. Note that config files from previous versions of BobTerm are NOT compatible with this new version, and should be erased.

Items Saved in BOBTERM.CNF

Upload pathname (drive number)
Upload protocol
Download pathname
Download protocol
Capture pathname
Phone list filename
Last number dialed
Long Distance code
Tone/Pulse dialing mode
Terminal translation/parity
Terminal duplex
Term Baud rate
Delay Rate used in ASCII Send protocol
Status of keyboard CAPS lock (in upper case or lower)
Type of time being displayed (On=Online, or Rt=Real Time)
Screen colors
Key Click flag
Chat Buffer status (on or off)
Word Wrap status
Fine Scroll status
Left Margin status
RS232 Modem port number
Joystick characters
All 16 Macros

[S] Send Files and [R] Receive Files Explained

The first thing you will be asked is the protocol that you wish to use to transfer a file. This choice is based on what the other computer or system supports, and your Baud rate. XMODEM is recommended for 300 baud, 1K XMODEM or YMODEM for higher rates. When in doubt, try standard XMODEM, since almost all hosts support this.

The choices you have and a brief description of each are:

[1] STANDARD XMODEM

This is a 128 byte block size with a mathematical checksum for error detection and correction. It is supported by almost all BBSes and telecommunications networks.

[2] XMODEM-CRC

A 128 byte block size with a Cyclic Redundancy Checksum (CRC) for error detection and correction. This protocol is supported by the vast

majority of BBSes and telecommunications networks. Whenever possible, you should use XModem-CRC over Standard XModem because the CRC option will catch almost all errors.

[3] CIS FAST XMODEM

This is a BobTerm exclusive: when uploading or downloading from CompuServe, use this protocol; yet tell CIS that you are using XModem. This modification to the XModem protocol dramatically increases the transfer speed for the CIS host, but should only be used on a noise-free line. In some instances, it is actually faster than CIS Quick B! This protocol should be used ONLY on CIS, as it will not work correctly on any other system.

[4] 1K-XMODEM

This protocol is basically XModem-CRC with a 1K (1024 bytes) block size. The advantage to 1K XModem is that there are fewer "header" bytes sent per file, therefore, making 1K-XModem about 15% faster than XModem-CRC. Note that some systems incorrectly call this "YModem"; the difference being YModem is 1k XModem with batch capabilities.

[5] YMODEM (batch)

YModem is a modified 1K-XModem that allows the transfer of multiple files at one time. The file name and size are sent in a header block that BobTerm decodes for you. This way, you can set up a transfer of as many files as you like, and the filenames will be automatically taken from the sender. You only set up the transfer once, and there are no limits (except your disk space) to the number of files you can receive!

[6] FMODEM

This protocol is used on some ST BBS programs and in the Puff BBS. It is basically YModem with a 4K block size. Note that this protocol is also capable of batch file transfers, as is YMODEM. This is best used for null-modem transfers, because it gives the highest throughput of all protocols.

[7] SEND ASCII (XON/XOFF)

This is a send ONLY protocol (use "Capture Buffer" to receive) that simply dumps ASCII text to the other computer. Since this is not an actual protocol, there is no error checking that can be done. Use this to upload messages while in the BBSes message editor, etc... You can specify a delay rate of 0 through 9; 0 is no delay, and 9 is the largest. A value of 3 should be sufficient for most purposes. XON/XOFF control is supported (^S to pause, ^Q to resume).

The Send Ascii function 'expands blank lines'. Some message editors reformat the text you enter, and can remove the formatting you entered. By inserting a SPACE character between successive RETURN characters, your original formatting is preserved, yet without affecting the rest of the text.

HOW TO SEND/RECEIVE FILES

For transfers using XMODEM, XMODEM-CRC, CIS FAST XMODEM, and 1K-XMODEM, the following applies:

RECEIVE or DOWNLOAD

1. Instruct the host to send (download) a file with the appropriate protocol.
2. Press [R] from the BobTerm main menu.
3. Select the appropriate protocol on BobTerm.
4. Type the entire filename for the file, as you want it to appear on your disk, and press [RETURN]. You will be returned then to terminal mode.
5. Press [SELECT] to begin the transfer.

SEND or UPLOAD

1. Instruct the host to receive (upload) a file with the appropriate protocol.
2. Press [S] from the BobTerm main menu.
3. Select the appropriate protocol on BobTerm.
4. Enter the source filemask and filename, if you know what it is. If not, you can enter "*.*". Bobterm will prompt you for each file it finds. Type [Y] to send that file, [N] to keep looking, or [ESC] to re-enter the source filemask. Once you have selected a file, you will be returned to terminal mode.
5. Press [SELECT] to begin the transfer.

For transfers using YMODEM and FMODEM protocols, the following applies:

RECEIVE or DOWNLOAD

1. Instruct the host to send a file in the appropriate protocol. For batch transfers, see the host documentation for how to specify more than one file. Most often it is done by "marking" the files you want to download, then issuing the command to download.
2. Press [R] from the BobTerm main menu.
3. Select the appropriate protocol on BobTerm.
4. Provide the device name, and path name ONLY. BobTerm will take care of the filenames. (An example of a pathname is "D1:" or "D2:DLS>".) You will be returned then to terminal mode.
5. Press [SELECT] to begin the transfer.

SEND or UPLOAD

1. Instruct the host to receive a file in the appropriate protocol. For batch transfers, see the host documentation for how to

specify more than one file. Batch sending is rarely used on a BBS; it is meant more for term-to-term communications.
2. Press [S] from the BobTerm main menu.
3. Select the appropriate protocol on BobTerm.
4. Provide the pathname (and filename, if known) for the files that you wish to send, one at a time. If you used wildcards, BobTerm will display each file found and query you if you wish to send it. Press [Y] to add it to the list, [N] to skip it, or [ESC] to enter a new pathname. Pressing [A] will mark all the remaining files in the subdirectory and mask entered. Depending on the size of your path and filenames, you may be able to mark up to 100 or more files to be sent all at once! Note that the memory used to hold the dialing list is used for this list of files, so you will have to reload the dialing list to dial a new number. To end entering filenames, simply press [RETURN] at the "Enter filemask" prompt. You will be returned to terminal mode.
5. Press [SELECT] to begin the transfer.

The following applies to ASCII sends:

1. Instruct the host to receive ASCII text.
2. Press [S] from the BobTerm menu.
3. Select item 7 for SEND ASCII.
4. Provide path and filename to send.
5. Provide a delay rate. The delay rate determines the time between each character sent. You will need to experiment with different BBSes and telecommunications services to determine what the delay rate should be. A delay of 0 is none, 9 is the greatest. A value of 3 usually words ok for most BBS message editors. You will then be returned to terminal mode.
6. Press [SELECT] to begin the transfer.

FEATURES COMMON TO ALL TRANSFERS

BobTerm is the ONLY 8 bit terminal to remove the excess double-padding added to files by the online services. The timing used in the protocols should be loose enough for any system, yet tight enough to maintain fast transfers.

To abort any transfer, hold down the [START] key. To retry an aborted transfer, press [SELECT]. This will try the exact same transfer again. Note: if the transfer aborted because of an error on your end (like a wrong protocol, disk error, etc...) that has not been corrected, the transfer will simply abort again.

Once you begin a transfer, the top three lines of the screen will display the transfer status. Any bad bytes rejected by the protocol will be displayed below the status lines on the main term screen. The top line of the file transfer window displays the file name including path, followed by the file size in bytes (for batch receives only). The line under that

shows the status of the transfer, the block number being transferred, and the number of tries for the current block. The only time you will not see this display is when you are doing an ASCII send (you will stay in term mode for ASCII sends).

If the transfer is aborted because of a disk error on your end, the transfer will first abort, then the disk error message will be displayed. Press [RETURN] twice to return to terminal mode. If the transfer was aborted from the other side or timed out, you will be returned to term mode, and the top status line will display "Xfer Aborted!".

Holding [SHIFT] when entering the protocol number will select the ASCII <-> ATASCII translation mode. This is used for text files only! When sending files, ATASCII files will be converted to ASCII format (CR/LF). When receiving, ASCII will be converted back to ATASCII (CR, CR/LF, or just LF). This allows you to let BobTerm handle the translations so you do not have run separate translation programs! Just be sure you don't accidentally enable the translation on a file that is NOT a text file, else your file will be corrupted.

When receiving files, BobTerm will automatically adapt to the sender's protocol, so selection is not critical.

The CIS Fast XModem protocol is designed to cause CompuServe to 'send ahead' of itself. Error checking is still performed, but on downloads any error will cause the transfer to abort. Thus if you have a noisy line, it would be better to use one of the other protocols.

CompuServe now supports the XModem 1k protocol, although it is not listed on the menu choices. If you are connected at 1200 baud or higher, I suggest using this protocol WHEN DOWNLOADING. (For uploads, tell CIS you're using standard XModem.) Use "DOW PRO:X1K" at the disposition prompt. Now select the Fast CIS XModem protocol on BobTerm, and start the transfer. This is extremely fast, giving the highest throughput possible.

Setting up BOOTUP.BTM

Some Hayes-compatible modems default to some parameters that are not what you want for standard terminal use. For this reason, BobTerm will send whatever is in a file called BOOTUP.BTM on the default drive (drive 1 for most users) to the modem at the default baud rate, when the term first loads. (Note: the term will send this only once - if you quit to DOS and reload the program again without rebooting, it will NOT send it again.) It will input a line, send it to the modem, wait 1 second, then input again, etc., until it reaches the end of file. A control M is not needed at the end of each line. My suggestion might be to have something like this in your BOOTUP.BTM file:

```
ATX3 V1 L2 M1 E1 S7=30 &C1 &D2
```

You could change S registers to perhaps increase dialing speed, etc. Remember it is not necessary to have this file present; it's just there in case you have need of it.

CONTROL 3-0: 15 byte macros.

SHIFT CONTROL:

1-8: 31 byte macros (1-3 are the ones the Dialer updates)
Q: Recalls last two chat buffers (alternates between the 3).
W: Toggle word wrap,
E: Toggle the chat window in and out.
R: Reset the online time counter.
T: Start/stop the online time counter.
Y: Swap the online counter/real time on the top status line.
O: Takes a snapshot of the term screen, and saves it in the buffer.
P: Does a screen dump of the term mode screen to your printer, replacing any non-printable characters with a period.
M: Toggle left margin between 0 and 2.
S: Toggles fine scrolling. Note that a slower scroll is used for 300 baud than at higher baud rates..
9: Toggles the key click sound.

When Word wrap is enabled, words will not be split if the text you are reading is formatted for something over 40 columns. This has no effect on captures; it simply makes reading text a little easier, especially if the text is formatted for 80 columns. BobTerm also accounts for backspacing in word wrap; so if it is enabled and you are typing a message, you can backspace to the previous line without fear of deleting too many characters, as is the case with other term programs. Word Wrap is toggled by pressing Shift Control W, and its status is seen by the first character in the top status line.

You may change the left margin to 2 (incase your TV has overscan) by pressing Shift Control M. Note that this does NOT affect the edit window; the edit window remains in 40 columns.

Fine scrolling, when enabled, causes the screen to smoothly scroll vertically when the cursor is at the bottom of the screen. The disadvantage is quite a bit of time is taken to perform the scroll. At 1200 baud and higher, a faster scroll is used, but data may still be lost if it contains many RETURN characters in a row. It is best used for conferencing, or any situation where data is not sent at 'full speed'.

[E] The Autodialer and Entries

Pressing [E] from the BobTerm main menu will take you to the Dialing Menu. The dialing menu has a number of choices as follows:

[A] ADD AN ENTRY

This option allows you to add a telephone number to your dialing menu. You will be prompted for the name of the entry, the telephone

number, 3 macros (See section on System Configuration), the Baud Rate, the Translation, the Duplex, and the wait (amount of time to wait for the other computer to answer - should be 25-30 for average local calls). You may also cause the dialer to send the first macro upon connection by setting the last parameter to Yes. If you use this feature, it is recommended that the first character of the macro be a Control P for a pause.

[D] DIAL TAGGED

This option will continuously scan the "tagged" entries looking for a terminal connection. To tag an entry, use the arrow keys to move to the entry, and press the SPACE BAR to tag it. You will see a ">" in front of each tagged entry. To clear the tag, press the SPACE BAR again.

[K] KILL AN ENTRY

To delete an entry from your phone list, use the arrow keys to move to the entry, and press [K].

[M] MANUAL DIAL

By pressing [M], you may enter a phone number to dial from the keyboard. Note, the current system configuration will be used for this number (ie: baud rate, translation), and a wait time of 45 seconds will be used.

[S] SAVE LIST

This option will save your phone list to disk. You will be prompted for a device and filename, or you may use the last name used (by simply pressing [RETURN]).

[V] VIEW ENTRY

This option will allow you to just look at the entry.

[X] LONG DISTANCE CODE

This is the code that is used by long distance dialing services such as MCI, Sprint, etc... Although it is not needed much anymore because of "equal access," some long distance telcos still have special numbers to call and require a special code. Use this feature for those cases. To execute the long distance code, simply insert an exclamation point (!) in the phone number at the appropriate place (normally in the very beginning). When you enter your long distance code from the dialing menu, it is saved as part of your configuration file. For example:

```
LD code: 950-1111,,,,123456781
Dial: !716-247-8355
```

would do the following:

Dial 950-1111, wait 4 seconds, dial 123456781 (your LD code would be here), followed by 716-247-8355.

If you are using a Long Distance service that requires you to enter your special code after the number being dialed, insert a $ symbol in the LDX code where the number to be dialed should be positioned. This will cause the remainder of the phone number to be inserted in place of the $ symbol. For example:

```
LD Code: 950-0111,,,,1$12345678
Dial: !716-247-8355
```

would do the following:

Dial 950-0111, wait, dial 1, then 716-247-8355, then 12345678 (your LD code).

Another use for the LD code is for those who have call waiting. Insert an [!] before every number in your list, and make the LD code be the numbers you have to dial to disable the call waiting feature. If you ever want to dial the number without disabling the call waiting, simply erase the LD code.

[C] CLEAR LIST

This will erase the current list from memory.

[E] EDIT ENTRY

This option allows you to make changes to any of the entries in the dialing menu. First, select the entry to edit (by using the arrow keys), then hit [E]. Each item will be available for editing; press [RETURN] when done, or [ESC] to exit.

[L] LOAD LIST

Use this to load a new phone list from your disk. This may be used to load something other than the default (if you have more than 1 list), or if you have batch sent some files (since the batch send function will wipe out the list in memory).

[P] TONE/PULSE

Pressing this key toggles the dialing mode between Pulse and Touch-Tone. Pulse dialing may be used on most any telephone line, but tone dialing is usually an extra feature. Wheen using Pulse mode, you may need to increase the Wait time, since the timer starts the minute dialing is initiated, and pulse dialing can be slow.

[ESC]

Exits back to the main BobTerm menu.

[RETURN]

Dials the entry highlighted. (Use the arrow keys to move the bar to

the desired entry.)

To interrupt the dialing process at any time, press the SPACE BAR. Any messages from the modem will be displayed on the status line in the middle of the screen (BUSY, NO DIALTONE, etc...). If NO CARRIER is returned, then "Operation Aborted" will be displayed. The term will keep re-dialing until it either connects, or is interrupted by a SPACE BAR. Pressing RETURN will enter terminal mode immediately.

The Terminal Mode Status Line

While in terminal mode, the upper line of your screen is being used as follows:

WRAP:DUPLEX:TRANSLATION:BAUD RATE:BUFFER TOTAL:ONLINE/REAL-TIME CLOCK

The second line in the header is the changing status, which tells you if there are transfers pending, errors have occurred, etc...

Miscellaneous Notes

One of the unique features of BobTerm is its multi-tasking. You are ALWAYS in term mode; that is, any modem input is being printed to the term screen, even if you are not viewing that screen. The only exceptions to this are disk I/O and file transfer. You can be capturing, go do a disk directory, edit macros, and come back to term mode all without losing any data (assuming the other end supports XON/XOFF)!

Another feature is the extremely fast text screen handler. Term mode can keep up with text at 19.2K baud, even while capturing!

When BobTerm expects input from the user, [RETURN] will accept whatever is on the screen, and [ESC] will abort. On any filename or other line-input needed, you can use the standard Atari cursor control to edit. To delete the entire line, press [SHIFT] [DELETE/BACK SPACE].

The edit window is another unique feature. Used mostly for the "conference" section on the online services, this buffer is actually 3 buffers in one. When you press SHIFT CONTROL E, you will see three lines at the bottom. You may now type away in the buffer. Nothing will be sent out until you hit [RETURN]; then the whole buffer will be dumped. The only exception to this is control characters: they will be sent immediately, so that you can send a ^S to pause the sender, etc. By pressing SHIFT CONTROL Q, BobTerm will cycle through the last two "buffers" you typed and the current one. Once you press [RETURN], the current buffer gets copied into buffer 2, buffer 2 into 3, and buffer 1 is cleared. If you type [ESC] then press [RETURN], the data in the window up to the ESC will be sent, with no RETURN after it.

Another feature that might come in handy is the buffer screen command. Let's say you are on a BBS, and you're viewing a file that you

just decided you want to capture, yet you don't have the capture turned on. Simply press [OPTION], then press SHIFT CONTROL O. That last keypress will take a "snapshot" of the screen, placing it in the buffer. Pressing [OPTION] turned the buffer on, so now you will have saved everything that was on your screen, plus everything that will be coming, till you disable the capture (by hitting [OPTION] again). When you [C]lose the capture or if the buffer fills, you will be prompted for the filename to save the buffer.

In the ASCII and VT-52 translation modes, there are some characters displayed a little differently on the term screen. The Atari 8-bit does not have the curly brace characters, or the tilde. The curly braces are translated to Control A and Control D characters. To send the braces, simply type Control A for open brace, and Control D for close brace. The Tilde is translated to a carat symbol (^). The $7F Ascii character is absorbed, since GEnie uses this in various places for no apparent reason.

Modules

BobTerm allows the loading of modules to allow for new features to be added to the program without having to come out with special versions. Two modules have been included with this versions: a XEP-80 driver, and a SpartaDOS command processor interface.

When the term first loads, it looks on the default drive for MODULE1.BTM. If it finds this module, it will continue and look for MODULE2.BTM, etc., up to MODULE9.BTM. This is the only reliable way modules should be loaded into BobTerm, although you may have limited success with the LOAD A FILE option of the DOS functions. It is not necessary to have modules present, but if you do have any, they should be consecutively named (module1, 2, etc.).

Place the modules you wish to use in the same directory/drive as BOBTERM is located, and RENAME them to MODULEx.BTM, where x is a number between 1 and 9. There is no special number that needs to be assigned to a given module, only that the modules be sequentially numbered, and start with 1.

The following is a description of the two modules included with BobTerm 1.21:

XEP80.BTM

This is a driver for the XEP-80 80 column box from Atari. The driver directs ONLY the term mode screen to both the XEP and the standard term screen. It takes up 256 bytes of buffer space, so you will see your buffer size decrease when it initializes. The driver does not display any menus or the exit window. The XEP is just too slow to keep re-drawing the term mode screen and help screens, and does not have the capability of scrolling in one window and not in another. This is unfortunate.

In any event, you will need two monitors <or a switch for your monitor> to see the term mode screen on the XEP, and the help/editing

screens on your computer's output. The XEP driver will update both screen simultaneously, without blanking the computer's screen. Have your XEP-80 plugged into joystick port #2!

The driver makes a valiant attempt at supporting the VT-52 translation. Other terminal types (such as VT-100, etc. may be partially supported - experimentation is the best advice). All VT-52 commands are supported, but a couple of them take a bit of time for the XEP to perform, and result in lost bytes if the data rate is high. A few of the special function VIDTEX/VT-52 commands will only affect the XEP's screen, and will not affect the computer's screen.

The XEP can handle 2400 baud and perhaps 4800, but no higher. The VT-52 translation functions perfectly at 300 and 1200 baud, but two of the special commands will cause lost characters at 2400 or higher.

CP.BTM

This module is for SpartaDOS users only. It replaces the DOS functions with a command processor interface, so that you have access to DOS while online. Since it replaces the old DOS functions, it takes up no additional memory. You can quit to DOS, do whatever is necessary, then reload the term to do the same thing, but this is quicker, especially if you are using floppy drives.

SpartaDOS 3.2 and SpartaDOS X are the only two versions supported.

When you type [K] to get to the DOS functions, you will see the familiar Dx: prompt. Operation is basically the same as if you were really in the DOS's command processor, except that you may not move the cursor to the previous line and edit it. Pressing ESC at the command line prompt will return you to BobTerm.

Most all functions should work here, including COPY, AINIT, CWD, etc.. You may load XINIT, but do NOT select any DOSes to be written to the disk. BobTerm allows the use of memory from around $51FF down to LOMEM, so as long as programs don't use anything higher than $51FF, everything is safe.

It is best to LOAD COMMAND.COM prior to running BobTerm when using SDX. This eliminates certain memory conflicts with handlers, although you can get away without loading COMMAND.COM if you are using a Black Box or MIO. Note that in order to keep the screen on in SDX, I had to modify part of DOS in lower memory. There is no reason SDX should have turned the screen off, but after wasting over a solid week on the problem, I ended up modifying two bytes in the DOS itself. This should work find for version 4.20; if you have an earlier version, you're on your own - it may or may not work.

Support Shareware

BobTerm has taken a fair chunk of my time, but has been very

rewarding. It started out to be just a transfer utility for null-modeming files between an 8 bit and ST, but it kept growing!

This updated version fixes all known bugs with the earlier versions, as well as adds a few more features, view capture buffer and copy files being the two most requested. The ZMODEM protocol is something I plan on doing someday, as well as an editor that will allow the capture buffer to be edited.

As it stands, BobTerm 1.21 is coded in very tight machine code. Compare it to other term programs of even larger byte counts that contain not even half of the features. This will probably be the last version of BobTerm for all 8-bits, due to memory constraints. Any future major modifications will probably be on a version that will only run on expanded memory machines. There is enough of a userbase of upgraded 800, XL, and XE owners that I feel this will not be severely limiting the userbase.

I sincerely hope SpartaDOS X users appreciate the literal weeks worth of time spent making the term work so well with this incompatible DOS. Making the CP interface work with the disk version 3.2 of Sparta took time, but making it work with SDX took more than ten times the work. SDX in itself can be flaky, so if you experience random problems and glitches, use another DOS.

There have been a few requests of vector tables in BobTerm, and of writing modules for the term, yet no one has yet come forth with the source code. Due to the multi-tasking environment, writing code for the term can be very tricky. However, my offer still stands. If anyone has a small utility that they would like to add into the term, provide me with the ML source code (it must be 100% machine language), and I will see what can be done. Providing complete technical documentation would require extensive writing, something I unfortunately have no time for at the present.

I am releasing this program as "shareware," which means this: BobTerm is my copyrighted property. I grant you the license to use it and pass it around to your friends, on two conditions: the complete package (term, docs, and modules) are included UNALTERED!, and that the disk may not be sold for more than four US dollars. If you use the program regularly, consider the time that went into writing such a program, and send a donation ($15 suggested) to the address listed at the top. If you have any questions/comments, please feel free to drop me a note on my BBS, CompuServe, or GEnie. Paper mail usually gets a very slow reply.

Thank you! Enjoy the term.

Bob Puff

Support BBSes for BobTerm

Computer World (716) 247-8355 (my BBS)

The Moose BBS (716) 381-5139
The Breakfast Club BBS (916) 331-4722

Many thanks to all those who helped in getting all those nasty bugs out! Special thanks to Marty & Gayle Albert and Glenn Garman for the documentation & testing; the CompuServe 8 bit sysops Keith Joins, Don Lebow and Bill Aycock for their many hours of testing, suggestions, and downloading MANY versions of the term; Jeff "Alfred" Williams for the dialer code, and Frank Walters for his many calls and helping to get things totally bug-free.

I have also received many letters and messages from helpful people, too numerous to list. A big THANK YOU goes out to them!

The following is a list of changes from version 1.10 of BobTerm to the current 1.21 version:

Bug Fixes:
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1. Connects at 19200 Baud within the dialer will no longer switch down to 1200.
2. The delay between redials has been increased to work with a wider range of modems and settings.
3. The line editor now allows full ATASCII cursor editing (editing filenames, macros, etc...).
4. The first character of a macro may be any character, including a pause.
5. ATASCII<->ASCII protocol translation with MIO problem fixed.
6. FModem upload to FoReM boards finally fixed.
7. A couple bugs that caused the header and first blocks of each file in a batch transfer to be repeated were tracked down and fixed.
8. Obscure XModem padding problem fixed.
9. Fixed various lockup points when using the MIO.
10. When saving the capture buffer, a disk error now causes an error message to be displayed (none was shown before).
11. RAM-based OSes may now be used. An example of this is the HAPPYXL program that gives high speed data transfer with modified 1050 drives.
12. A lockup problem occurring when capturing and using the XEP driver was fixed.
13. The filename entry prompt for a full capture buffer makes sure the name you enter is good before saving (it used to just erase the buffer).
14. Doing a COPY <file> E: in the command processor interface for SpartaDOS 3.2 now works.
15. The 835/1030/XM-301 modem handler has been re-written to properly tone dial, as well as respond with the proper messages in the proper timing.
16. Dialing manually drom the dialer no longer unmarks the highlighted entry, and will not perform any automatic logon.

Enhancements/Modifications:
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1. The non-batch receive protocols are self-adapting, in that they will automatically adjust to the sender's protocol (If you select a CRC protocol).
2. Protocol sends are slightly faster.
3. The FAST CIS XMODEM receive protocol now supports 1k block sizes. I suggest you use the 1k block sizes (by specifying the protocol to CompuServe with PRO:X1K), as it causes the data stream to be continuous.
4. In the batch file selection area, pressing "A" at a file query will mark ALL the rest of the files in the directory mask you have entered. This saves having to hold "Y" for all the entries.
5. Separate pathnames are stored in the config for upload, download, and capture. This saves having to type the path all the time.
6. Separate upload and download default protocols.
7. Spaces are inserted between successive RETURN characters in ASCII

Sends, so your formatting will be preserved in message editors that normally 'eat' the blank lines.
8. Fine Scrolling is now available. Use Shift Control S to toggle. Its status is saved in the system config.
9. The Word Wrap flag is now saved in the system config.
10. Parity is now supported. Use the VT-52E for Even, VT-52O for Odd, and ASCII for No parity. Vidtex has not been eliminated, use the VT-52O for CIS Vidtex emulation.
11. The VT-52 emulation is more compatible with VT-100, ANSI, and a few other emulation modes. It does not support the entire VT-100 command set, but its better than it was before.
12. The timer/clock will keep the proper time on 50Hz PAL systems.
13. Internal BASIC is automatically disabled for all DOSes. This took some serious probing into SpartaDOS to make work. Also, OSS carts are also disabled under all DOSes except Sparta.
14. The Dialer's Print List option has been removed, and the buffer size has been decreased by 256 bytes. This had to be done to make room for the new features. If you wish to make a hardcopy of your dialing list, you may use an older version of the term for this. The dialing list format is the same.
15. The Capture buffer may now be viewed before it is saved. The view function is accessed by the [C] command from the main term menu.
16. The TONE/PULSE selection was moved from the main menu to the dialer, where it was actually used.
17. The modem's result messages returned when using the dialer are now displayed. (BUSY, NO DIALTONE, etc...)
18. The dialer now depends upon the modem's result codes rather than the carrier detect signal, and so should work with just about any hayes-compatible modem, regardless of configuration (the messages have to be returned in verbal as opposed to numeric).
19. The dialer now has an option of sending the first macro upon connection. This can be used for automatic logons. I suggest adding one or two Control Ps in the beginning of the first macro to account for the time needed for the other modem to properly connect.
20. The Long Distance code feature now supports the ability to embed the BBS number within the LDX code. See the main documentation for information.
21. When a DOS function is completed, you are returned back to the DOS Functions menu.
22. The DOS Functions have been assigned letters instead of numbers, the letters corresponding to the same ones used by DOS 2.x. This should make operation friendlier and easier.
23. The Command Processor interface for SpartaDOS now has a feel much more like the real DOS.
24. The ability to copy a single file is now available in the DOS functions!
25. The Atari 850 Interface handler is loaded every time; you don't have to power it down prior to coldstarting.
26. Any handler BobTerm loads will be unlinked when the term is exited. This should prevent random lockups that happened with various DOS and handler combinations. Note: it is recommended you use the [Q]uit command to exit the term, rather than pressing RESET.
27. The Control 1 function to start/stop printing may now be used in the View a file, View capture buffer, and command processor interface

functions.
28. The macro processor has been enhanced with two new functions: a Control D will cause a 1/2 second delay. This is useful for generating the HHH sequence for logging on to GEnie.
29. A Control N in a macro will cause it to link to the next macro. Thus, you are no longer limited to 31 characters in a macro! Note that neither the Control N nor the RETURN that follows it will be sent.
30. The curly brace characters in the Ascii character set are translated to Control A and Control D characters (for open and close). The braces may be sent by pressing the same keys.
31. The chat buffer may now be sent without a RETURN at the end. Type an ESC prior to hitting RETURN. (Note: version 1.21 fixes a bug in 1.20 that would not let a space be the last character before the ESC.)
32. The $7F character in the Ascii character set is now ignored. This serves no useful function, and caused problems on GEnie.
33. Attract mode is disabled while the dialer is busy dialing numbers.
34. The messages on the top status line have been enhanced.
35. The term screen is displayed while using a transfer protocol. It was found that BobTerm could keep up with 19200 Baud transfers with the screen fully on; so the top three lines indicate the transfer status, and the rest of the screen displays the term screen. Note that any bad bytes received while in the transfer are sent to the term screen, so if you start a transfer while the other side is still sending, you will be able to see the incoming data.
36. The BOBTERM.CNF file is now larger, and is not compatible with config files created by older versions. Delete any old config files you may have.
37. The ST-specific VT-52 color setting commands are now ignored instead of being displayed.

That's all I have documented that was changed. Its possible that there may be a couple minor things that have slipped past me. Please be sure to read the main documentation for more detail on the enhancements.

When uploading BobTerm to a BBS or giving it to a user, upload the whole ARC file, or make sure the disk contains ALL the data files unaltered. Thank you.

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