

-----> **THE FAST TERMINAL PROGRAM** <-----
-----> (C) 1985, PAUL CHARLTON <-----
-----> 1110 PINEHURST CT. <-----
-----> CHARLOTTESVILLE, VIRGINIA <-----
-----> 22901 <-----

PROGRAM CAN BE PURCHASED BY SENDING \$15 CHECK OR MONEY ORDER TO ADDRESS ABOVE..
PERSONS WANTING SOURCE CODE MUST HAVE AT LEAST 720 SECTORS PER DISK (TELL ME
WHAT FORMAT) OR SEND AN EXTRA DISK TO ME..
CHARGES: \$15.00 FOR PROGRAM..
\$ 5.00 FOR ME TO PROVIDE DISK AND MAILER.
\$ 5.00 FOR UPDATES WITHIN 1 MONTH OF ORIGINAL PURCHASE OF PROGRAM
FROM ME (JUST SEND ME A LETTER SAYING THAT YOU WANT UPDATE).
->AFTER 1 MONTH, PLEASE REMIT \$10 AS PAYMENT..

Instructions for use:

- 1) You must have: EDITOR/ASSEMBLER, MINI-MEMORY, TI-WRITER, or EXTENDED BASIC.
- 2) You must have a Disk-Controller card..
- 3) You must have 32K of expansion memory..
- 4) To use the printer spooler feature you currently must have a PIO interface manufactured by TI, AXIOM (PARALLAX), CORCOMP, or MYARC. The spooler has been tested with these devices and might not work with others..

To load from EXTENDED BASIC..

- 1) Turn computer off. .
- 2) Place EXTENDED BASIC cartridge into the cartridge slot..
- 3) Turn computer on and go to EXTENDED BASIC..
- 4) Type: CALL INIT, then press <enter>..
- 5) Type: CALL LOAD("DSK1.FAST-LOAD").
- 6) Then: CALL LINK("TERM"). You may even do this from a program you have written (PHONE-DIALER, etc.) .

To load with EDITOR/ASSEMBLER or TI-WRITER menu..

- 1) Turn computer off..
- 2) Place EDITOR/ASSEMBLER or TI-WRITER cartridge in the cartridge slot..
- 3) Turn computer on and go to the cartridge main menu..
- 4) Select "RUN PROGRAM FILE" (5) from E/A or "UTILITY" (3) from TI-WRITER..
- 5) Press <enter> (NO FURTHER TYPING IS NECESSARY.).

To load from MINI-MEMORY..

- 1) Turn computer off..
- 2) Place MINI-MEMORY cartridge into cartridge slot..
- 3) Turn computer on and go to MINI-MEMORY menu..
- 4) Press 3, re-initialize. .
- 5) Press FUNCTION "6", proceed..
- 6) Press 1, "LOAD AND RUN"..
- 7) Type: DSK1.FAST-LOAD. <enter>..

FAST-TERM now attempts to find the file DSK1.CHARA1, the TI-WRITER replacement character set..

You are now in the program..

The program has auto-repeat on all keys..

Enter the name of a parameter file you have created with the program DEFAULT or hit <enter> to choose the following defaults:.

1200 =baud rate for the modem..

EVEN =parity for the modem..

PIO/1 =printer spooler (PIO/1 ON TI RS232 CARD! (not CORCOMP)..

RS232/1 =serial port to be used by modem..

FULL =duplex (auto-echo of keys you type is OFF)..

OFF =log file is not on when you enter FAST-TERM..

OFF =printer spooler is off when you enter FAST-TERM.

OFF =there is no linefeed sent after an <ENTER> in file send.

WHITE =text color..

DK. BLUE =screen color..

40 =screen width..

DSK1.SESSION =file to LOG to..

-----COMMUNICATIONS-----

There are several parameters that need to be configured to work with the system you are calling: baud rate, parity, and duplex..

The baud rate must be set to be the same as what the other system expects, it must also be set to a rate which your modem can handle. The default baud rate is 1200. This is not compatible with a large number of modems. You must set your baud rate by pressing CONTROL <1>. You will go through a series of baud rates that FAST-TERM handles:

1200--> 2400--> 4800--> 9600--> 19200--> 110--> 300--> 600--> 1200.

The baud rates faster than 1200 baud are not yet useful in tele-communications, they are most useful to someone who wishes to use the TI as a hard-wired terminal for another computer. (There are some CP/M cards for the TI that connect to the TI through the serial port, FAST-TERM is very useful for those.).

The parity must be set also. Consult the service you will be using to determine what parity they expect. The service will also have a suggested number of data-bits to use. In FAST-TERM, data with EVEN or ODD parity is automatically SEVEN bits; data with NONE for parity is automatically EIGHT bits. Use CONTROL <3> to change the parity. Here is the sequence:

EVEN--> ODD--> NONE--> EVEN..

There is also DUPLEX. This controls how characters you type will appear on your screen. FULL duplex means that any character you type must be sent back to you by the other system before you actually see it. HALF duplex means that the other system expects the terminal you are using (TI, with FAST-TERM) to automatically display the characters as you type them. There are very, very few systems around which expect you to use HALF duplex, FAST-TERM's default is FULL duplex. You may change the duplex by pressing FUNCTION SHIFT <D>, all at the same time..

-----HARDCOPY-----

SPOOLER : FAST-TERM provides a printer spooler feature. This means that if you have a printer you may instruct FAST-TERM to send everything you will see on your screen to the printer as it is displayed on your screen. The spooler allows data to be displayed on your screen faster than the printer can print it, the printer is allowed to be as much as FOUR-THOUSAND characters behind what you see on your screen. If the printer does manage to get Four-Thousand behind, the incoming data will no longer be sent to the printer and FAST-TERM will give you a warning message and a bell to tell you that the printer is very far behind. The spooler enables you to have a complete print-out of your whole session with the other system. Spooler is enabled by pressing CONTROL <2>. You may disable the spooler by pressing CONTROL <2> again. When you disable the spooler no more incoming data will be sent to the printer; data that the printer had gotten behind on will still continue to print..

SCREEN-DUMP : FAST-TERM also provides a screen-dump feature. If you have a printer you may print a copy of the data which is on the screen. Press FUNCTION <0> to freeze the screen (explained later) then press FUNCTION SHIFT <P>, all at the same time. All of the characters on the screen will be placed into the spooler, to be printed when the printer catches up. You must leave this freeze mode before you will see the rest of what the other system was sending you. (press FUNCTION <0> again).

-----HARDWARE-----

You must tell FAST-TERM how you have your hardware attached..

MODEM: Tell FAST-TERM which serial port your modem is attached to by pressing CONTROL <4>. Pressing this key takes you through a list of ports available for the modem. Stop when you get to the port to which your modem is attached..

PRINTER: Tell FAST-TERM which port your printer is attached to by pressing CONTROL <6>, this takes you through a list of ports available for your printer. Stop when you get to the right one. The default is the PIO port on the TI RS232 interface. If you have a CORCOMP serial interface and you have a printer for which you send data to PIO, you must select CORCOMP PIO from the list. NOT PIO!. If you have an AXIOM PARALLAX interface, you must choose AXIOM PIO for the printer to work. People with serial interfaces built by yet another manufacturer should try all of the available choices to find one which works. It is possible that your interface IS NOT compatible with FAST-TERM. For such people, I suggest that you LOG to your printer (LOGging is explained later).. Set your printer baud rate (serial printers only) by pressing CONTROL <7>. This works in the same way as setting the modem baud rate.. Set your printer parity (serial printers only) by pressing CONTROL <5>. This works in the same way as setting the modem parity..

-----SENDING AND RECEIVING FILES-----

RECEIVING ASCII files (text that you can read). You can receive an ASCII file by LOGging to a file. Press FUNCTION , this closes any previous file you were logging to and asks you for a new filename to log to. To log data you must give a filename. Then, at the point at which you want data to start going into the file, you must press FUNCTION <.> (period). All data will now go into the log file. Press FUNCTION <.> again when you get to the end of the data you want to save. All of the data is now in memory, to write it to disk you must press FUNCTION again. This writes the file to disk, closes it, then asks you for a new filename, enter a blank line if you don't want another log. If at some point in the transfer the memory gets full FAST-TERM will empty the buffer to disk then continue where it left off, still logging to the file. With a proper setup, through the DEFAULT program written in TI BASIC, no data will be lost as FAST-TERM writes the log to the file. For people whose serial interfaces don't allow them to use a printer with FAST-TERM, you should log to "PIO" to get a hardcopy of your session.
The log file is in a DISPLAY, VARIABLE 80 format..
You may clear the LOG's memory buffer at any time by pressing FUNCTION <Y>

SENDING ASCII files. To send an ASCII file you must first press FUNCTION <N> and give the name of the file which you wish to send. Press FUNCTION <,> (comma) to start sending the file. You will be asked of you want to send the file line-by-line. If you decide to send the file line-by-line you must press the spacebar everytime you want to send another line from the file. Press FUNCTION <4> to stop sending from the file. If you choose not to send the file line-by-line the file will be sent as quickly as the other system can handle it. The other system may send FAST-TERM a CONTROL <S> when FAST-TERM gets ahead of what the other system can handle, and send a CONTROL <Q> to FAST-TERM when it has caught up. (XOFF/XON handshaking) when you have sent enough of the file you may hit FUNCTION <4> to stop. Files you send may be in either DISPLAY, FIXED 80 or DISPLAY, VARIABLE 80 format on your disk..
Another option you may use when sending the file is to add a line-feed after every carriage return you send to the other system. This is useful when you sending a file to someone else's terminal for them to read. This feature is enabled by pressing FUNCTION <J>. It is disabled by pressing FUNCTION <J> again. .

----- TE2 protocol -----

Sending files using the TE2 protocol. Press FUNCTION SHIFT <T>, all at the same time. This enables transmission of files with the TE2 protocol. Pressing those keys again enables ASCII send. Press FUNCTION <N> and give the name of the file which you wish to send. Press FUNCTION <,> (comma) to send the file. You will be kept informed of the progress of the file transfer by an on-screen report of current block number, record number, and number of retries. A bell will ring when the transfer is complete. You may abort the transfer at any time by pressing FUNCTION <4>..

Receiving files using the TE2 protocol. First press FUNCTION <N> and give the name of the file which you want data to go into. THEN tell the other system to start sending you the file. You are given a report of the transfer's progress. Press FUNCTION <4> at any time to abort the transfer..

----- XMODEM protocol -----

Sending files using the XMODEM protocol. Press FUNCTION <N> and give the name of the file you wish to send. Tell the other system to prepare to receive a file. Once the other system is ready, press FUNCTION SHIFT <X>, all at the same time. Press <S> or <ENTER> to <S>end file. The rest of the transfer is automatic. The transfer will be aborted if at any time the number of retries for one record exceeds ten. You may abort the transfer at any time by pressing FUNCTION <4>, note that the other system will become confused by your abort, and will take about 90 seconds or so to give you a prompt back. (Most other systems.).

Receiving files using the XMODEM protocol. First press FUNCTION <N> and give the name of the file you want data to go into. THEN tell the other system to start sending you the file. NOW press FUNCTION SHIFT <X>, all at the same time. Press <R> for <R>eceive. You now need to choose which type of error checking you wish to use, CRC or CHECKSUM. CRC is more accurate than CHECKSUM, but not all systems support it (ask the sysop of that system about availability of CRC error checking). Note that if you choose CRC and the other system doesn't support it that you will be delayed for about 60 seconds. This is the time it takes XMODEM to automatically switch to CHECKSUM mode. Press. FUNCTION <4> to abort. Note that the other systems aborts immediately as well..

XMODEM sends TI disk directory information along with the file. It expects to see this information on any file it receives so that it may place the data into a file easily usable on the TI. Reception of a file which does not include directory information results in data being placed into a DIS/FIX 128 file format. Also, any file with the characteristics of DIS/FIX 128 is sent WITHOUT the directory information. This results in all-around compatibility with files from other systems..

-----OTHER FEATURES-----

SCREEN CONTROL: you may set the width of the screen to either 40 or 80 characters. Press CONTROL <0> to toggle between 40 and 80 columns. Note that this operation does not clear the screen like other terminal programs.. If you choose 80 column mode you will have to window from side-to-side to see all of the screen. Pressing FUNCTION <5> jumps you to the right, FUNCTION <L> jumps you to the left. You can set how far you jump by using the DEFAULT program which is written in TI BASIC.

COLORS : You may change the screen color by pressing FUNCTION <8>, you may change the text color by pressing FUNCTION <7>..

SCREEN FREEZE: you may pause display of incoming data by pressing FUNCTION <0>. This allows you to read what's on the screen without worrying about it scrolling of the top before you can read it. You unpause by pressing FUNCTION <0> again. All of the data that came in while you were paused is now printed on the screen..

WINDOW BACK: this feature allows you to look at data which has already scrolled off of your screen. First enter FREEZE mode by pressing FUNCTION <0>. Press the spacebar to quickly scan through the data, press <S> to go slowly through the data. You will see a SOLID BAR on the screen when you have caught up to where you were when you began. During window back print spooling and LOGging are suspended. You may re-enable them during window back mode in order to save "lost" data, data which had already scrolled off of the screen. You may also change things like screen width and color while you're in window back mode. when you leave window back mode by pressing FUNCTION <0> everything that you did like change screen parameters and LOGging is returned to the state it was in when you entered window back mode..

TIMER: FAST-TERM has a timer you can use to display your connect time. It is constantly display in the upper-left corner of the screen when you enable it by pressing FUNCTION <K>. You may turn the timer off by pressing FUNCTION <K> again. Enabling the timer always resets it to zero. The timer is disabled if you have FAST-TERM running at greater than 1200 baud. NOTE THAT THIS IS NOT A TIME-OF-DAY CLOCK, IT IS ONLY AN ELAPSED TIME COUNTER..

DISK DIRECTORY: the directory of a floppy disk drive may be shown by pressing FUNCTION <9>, only the names of the files are shown..

FAST-TERM (modified for ANSI) knows the following subset of the ANSI command sequences:.

ANSI: control code | function.

>07 | bell.

>08 | backspace (non-destructive).

>1B [# A | move up specified number of positions.

>1B [# B | move down specified number of positions.

>1B [# C | move forward specified number of positions.

>1B [# D | move back specified number of positions.

>1B [2 J | clear screen and home cursor.

>1B [H | home cursor.

>1B [#l ; #c H | moves cursor to row #l and column #c.

>1B [#l ; #c f | " " " " " " " " " " .

>1B [K | clear to end of line.

>1B [# {;#...} m | sets specified video mode:.

| 0 - normal display.

| 7 - inverse video on.

| 27 - inverse video off.

(all others ignored).

To set up a parameter file for use with FAST-TERM, go to BASIC and run the program DEFAULT. The program is self-explanatory and menu-driven. Use it to set up everything that you can set up with function keys within FAST-TERM, as well as some features that can only be changed by the parameter file..

HAVE FUN!

NOTES:

***** CONTROL KEYS FOR TERMINAL PROGRAM *****

FCTN- 1 Transmits >7F (DELETE).
- 2 Transmits >14 (control-T)
- 3 Transmits >0E (control-N)
- 4 Transmits BREAK TONE
--> also "break" hung-up I/O funtions
- 5 WINDOW RIGHT (LIKE EDITOR AND TI-WRITER)
*
- J TOGGLE TRANSMISSION OF LINEFEED AFTER "CR" IN ASCII FILE SEND MODE
- K SET THE TIMER TO ZERO.
- L WINDOW LEFT (LIKE WINDOW RIGHT BUT OTHER DIRECTION)
*
- 6 Transmits >05 (control-E)
- 7 CHANGE FOREGROUND TEXT COLOR
- 8 " BACKGROUND " "
- 9 DISK DIRECTORY
- 0 TOGGLE WINDOW BACK MODE (ON/OFF)
--> SPACEBAR FOR FAST DISPLAY, "S" FOR SLOW DISPLAY
*
CTRL- 0 TOGGLE SCREEN WIDTH BETWEEN 80 AND 40 CHARS --!!!DOES NOT CLEAR SCREEN!!
- 1 CHANGE COMMUNICATION SPEED (BAUD RATE)
- 2 TOGGLE PRINT SPOOLER ON/OFF
- 3 CHANGE PARITY (modem)
- 4 CHANGE MODEM PORT
- 5 CHANGE PRINTER PARITY. { ONLY USEFUL FOR SERIAL PRINTER }
- 6 CHANGE PRINTER PORT.
- 7 CHANGE PRINTER BAUD RATE { ONLY USEFUL FOR SERIAL PRINTER }
*
FCTN- . TOGGLE LOG ON/OFF.
- N NAME THE DISK FILE TO USE FOR FILE SEND AND TE2 TRANSFERS.
- Y CLEAR THE LOG
- B WRITES LOG TO DISK, GETS NAME FOR NEW LOG
- , SEND DISK FILE TO OTHER SYSTEM.
*
FCTN-SHIFT-D - TOGGLE DUPLEX BETWEEN FULL AND HALF
FCTN-SHIFT-P - PRINT SCREEN IN FREEZE OR WINDOW-BACK MODE.
FCTN-SHIFT-T - ENABLES TRANSMISSION OF FILE BY TE2 PROTOCOL.
FCTN-SHIFT-X - ENTERS XMODEM FILE TRANSFER MODE.
*
CURSOR CONTROL
- USE ARROW KEYS OR CONTROL (K,S,I,J)
*
UN-DOCUMENTED CONTROL KEYS ARE SAME AS TI-99/4(A) IN PASCAL SCAN MODE.
*
FCTN- = QUIT-LEAVE PROGRAM
CTRL- = "
*
PROGRAM KNOWS COMMON ANSI CONTROL CODES AND ESCAPE SEQUENCES..
PRINTER BUFFER TURNS OFF AND RINGS THE BELL WHEN IT GET FULL..
LOG AUTOMATICALLY WRITES TO DISK WHEN IT GETS FULL..

Program modified 2/28/97 for ANSI support.

A member of my User Group was having a lot of trouble using Telco with the Arizona Freenet. Telco's VT100 and ANSI emulations leave a lot to be desired; they lock up frequently, apparently when confronted with characters they don't know what to do with..

So I got hold of Paul Charlton's Fast Term program, whose most redeeming feature (other than speed!) is publicly-available source code! Too bad Telco isn't more open. From comments in the source code, it is evident that Paul left the door open for people who would upgrade his excellent program in the future. which I have..

Some things that I did not do, and remain for another enterprising hacker:.
1. The arrow keys still emit the old (ADM3A?) codes: > = 12 (FS), ^ = 11 (VT), < = 8 (BS), v = 10 (LF). These ought to be changed to the "VT100" codes, which are >1B 0 A (or B, or C, or D, same as the cursor movement codes, resp.), at least, per my Atari ST emulator. Plus, some means of feeding these back to EMIT when in Half Duplex mode, and fixing EMIT to recognize these code sequences also. The routines in ANSIS, which control cursor movement, namely DOBS, DOFS, DOLF, and DOVT really don't seem to do the right things, and probably ought to be scrapped (thus saving room)..

[Note: I left all the old control codes in, since I didn't know for sure that a host would NOT send, say, >08 for backspace.]

2. My standard for a VT100 emulation is being able to use the "vi" text editor on a Unix host. This includes line insertion and deletion, character insertion and deletion, etc. There are a lot of codes for doing this. The common ANSI sequences, such as published in the MSDOS "help", et al., do NOT include these; therefore, I assume that an ANSI-compliant terminal is not capable of supporting true, VT100 operation (such as "vi"). Refer to the "C Programmer's Guide to Serial Communications", the July '95 issue of "Embedded Systems Programming", or a VT100 terminal technical manual, if you can find one (I couldn't)..

Note: I am NOT the author. Paul Charlton is. If you use this program, you ought to make some effort to contact him and send him a Shareware fee. DON'T SEND IT TO ME!.

I hope this program is useful for other people who manage to log onto networks where the VT100 terminal protocol is standard!.

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