

# My-Term

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Distributed by 9640 News  
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MDOS Terminal Emulator  
For Hard Drive Systems  
Compatible with MDOS V1.20 or Higher

## **Introduction**

My-Term is a MDOS Terminal Emulator designed to be used with an RS232 interface to transfer data to or from the Geneve 9640 to another computer. Typical interfaces either use a modem with a phone line or a null modem cable to directly connect two computers in close proximity. My-Term requires a Myarc Geneve 9640 running MDOS V1.20(F/H) or higher and will make use of additional memory if it has been added.

## **History**

Several years ago, the author Mike Riccio wrote My-Term while a student in college. Mike had been contracted by Lou Phillips, president of Myarc, Inc. to write various code for the development of MDOS and other utilities. While worrking on the other projects, My-Term was developed but could not be released until various bugs were fixed in MDOS. With V1.20 (F/H) of MDOS, the bugs were fixed and My-Term could then successfully undergo full beta testing. Sixteen months after the release of MDOS V1.20 (F/H), My-Term is now ready for distribution. During that time, Beery Miller of 9640 News has made minor modifications to further enhance the speed of My-Term. Many hours of programming have went into design and implementation to achieve high speed data transfers.

## **Requirements**

Minimum system requirements are a Geneve 9640 with 512K of ram using MDOS V1.20 (F/H) or higher. The use of additional memory will increase system performance in various functions of file and text buffering. Minimally, 32K of memory is required to run. As the need to use file transfers and text capture buffers, additional memory resources are required using up to 64K more memory.

## **Features**

- o Runs directly from MDOS supporting full HFDC access..
- o Configurable text capture buffer size from 8K to 32K.
- o Configurable file transfer buffer size from 8K to 32K.
- o Supports 9600 baud screen displays without losing characters.
- o Features an approximately 8K RS232 circular input buffer.
- o Supports XModem CRC and XModem-1K with fallback to Checksum.
- o Supports the MDOS CLI functions for all disk maintenance.
- o Supports VT-52 and Heath-19 terminal displays.
- o Supports uploading and downloading to hard drive

## **How to Load and Run My-Term**

My-Term is distributed on a 5.25" single sided single density diskette along with personalized copies of the software. To run, simply boot MDOS V1.20 (F/H) or higher and then type MYTERM at the appropriate drive letter prompt. The program will load and run.

To boot My-Term from hard drive, copy all the files on the My-Term distribution disk to your selected drive path. To run, type MYTERM and the program will load and run.

## **Description of Features**

### **Section 1.0.0**

After loading My-Term and pressing return followed by pressing F9, you will be presented with a screen with the following options:

My-Term Main Menu

- Terminal
- Download
- Upload
- ASCII Upload
- Log Open/Close
- MDOS Window
- Set Options
- Version
- Reset Terminal
- Quit My-Term

This menu may be accessed by pressing F9 at any time while in terminal mode. You may either use the arrow keys to move up and down to highlight an item before selecting it with pressing the Enter key, or you may press the first letter of the option and you will enter the sub menu.

### **Section 1.1.0**

Terminal Screen

Selecting the terminal option will take you to a screen that will configure the RS232 port to the settings you have established with your respective video terminal emulation mode. Upon initial entry, this screen will be blank except for the status line located at the bottom of the screen. If you wish to dial a phone number, enter your appropriate ATDT commands as indicated from your modem's user manual. If you are using a null modem cable, any text you type on

this screen should appear on the remote terminal if your settings are properly configured.

### **Section 1.1.1**

#### Hot Keys

Several keys are active and perform specific functions while in the terminal settings. The first key press is CTRL-BREAK. Pressing this combination of keys sends a break signal to the RS232 chip to reinitialize hardware. Under most conditions, you will never need to use this keypress.

The second key, is the Pg-Up key. When this key is pressed, the scroll back buffer is activated allowing you to review up to the last 4 display pages in the scroll back buffer. When Pg-Up has been activated, Pg-Dn will also function to scroll you forward a page. Press F9 to exit the Scroll-Back buffer.

The third key, is the F9 key. This keypress will return you to the My-Term Main Menu. You will use this key often if you wish to change configuration settings or wish to upload or download files.

The fourth key, is the F10 key. This keypress performs the same feature as the F9 key as described above.

### **Section 2.0.0**

#### Downloading

Downloading refers to capability of transferring a computer file from a remote system via your RS232 connection to a specified file path on your system. Many file transfer protocols exist for the transfer of data such as XModem, XModem-1K, YModem Batch, ZModem, JModem, BiModem and other proprietary protocols. My-Term supports XModem and XModem-1K for the transfer of files.

### **Section 2.1.0**

#### Download

Selecting the Download option will bring up the File Transfer Protocol selections. Presently, two protocols are available; XModem CRC, and XModem-1K. You may press F9 at any time to return to the previous menu.

### **Section 2.1.1**

#### XModem CRC

XModem CRC is a protocol with 16 bit error detection in the

software. During the transfer, data blocks consisting of 128 bytes are transferred from one system to another. In the event a CRC connection is not established, XModem CRC will default to XModem Checksum that is an 8 bit error detection method. Always request XModem CRC instead of XModem Checksum to minimize the possibility of undetected transmission errors.

### **Section 2.1.2**

#### XModem-1K

XModem-1K is a protocol with 16 bit error detection in the software. During the transfer, data blocks consisting of 1024 bytes are transferred from one system to another. XModem-1K typically achieves a 5 to 10% efficiency increase over XModem CRC due to reduced number of pause periods that are caused by the block sizes. In the event there is significant levels of phone line noise, use XModem CRC to minimize block retransmissions.

### **Section 3.0.0**

#### Uploading

Uploading refers to the capability of transferring a computer file from a local system via your RS232 connection to a specified file path on your remote system. Many file transfer protocols exist for the transfer of data such as XModem, XModem-1K, YModem Batch, ZModem, JModem, BiModem and other proprietary protocols. My-Term supports XModem and XModem-1K for the transfer of files.

### **Section 3.1.0**

#### Upload

Selecting the Upload option will bring up the File Transfer Protocol selections. Presently, two protocols are available; XModem CRC, and XModem-1K. You may press F9 at any time to return to the previous menu.

### **Section 3.1.1**

#### XModem CRC

XModem CRC is a protocol with 16 bit error detection in the software. During the transfer, data blocks consisting of 128 bytes are transferred from one system to another. In the event a CRC connection is not established, XModem CRC will default to XModem Checksum that is an 8 bit error detection method. Always request XModem CRC instead of XModem Checksum to minimize the possibility of undetected transmission errors.

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#### XModem-1K

XModem-1K is a protocol with 16 bit error detection in the software. During the transfer, data blocks consisting of 1024 bytes are transferred from one system to another. XModem-1K typically achieves a 5 to 10% efficiency increase over XModem CRC due to reduced number of pause periods that are caused by the block sizes. In the event there is significant levels of phone line noise, use XModem CRC to minimize block retransmissions.



## **Section 4.0.0**

### ASCII Uploading

ASCII upload refers to the feature of transferring a TI Display/Variable 80 file to a remote system in ASCII format. The purpose of transferring files in ASCII format are to provide a universal format for files to be used by other operating systems besides a TI-99/4A or Geneve 9640.

## **Section 4.1.0**

### ASCII Uploads

Selecting ASCII Uploads, you will be prompted for a filename to upload. Enter the name of a TI Display/Variable 80 file you wish to upload.

## **Section 4.1.1**

Send CR after each line ? (Y/N)

Various computer systems, networks, word processors, etc. handle the use of the Carriage Return differently. Dependent upon your personal use and the destination purposes for the file, the default option of Yes may need modification.

## **Section 4.1.2**

Send LF after each line ? (Y/N)

Various computer systems, networks, word processors, etc. handle the use of the Line Feed differently. Dependent upon your personal use and the destination purposes for the file, the default option of No may need modification. If the file on the receiving system does not scroll and appears to have all the lines on top of one another, change the LF option to Yes. Improper use of LF will result in double spacing between each line of text.

## **Section 4.1.3**

Seconds to pause between lines?

This is the time required after sending each line of text that My-Term will pause to allow the receiving system to properly transfer the data. On BBS connections or to a local remote computer, usually zero seconds will not cause a problem. On packet networks such as commercial systems such as GENIE, CIS, American Online, or Prodigy, then setting a 1 second wait after each line may be required.

## **Section 5.0.0**

### Log Open/Close

Logging refers to the capability of capturing all data that is transferred through the RS232 interface to a TI Display/Variable 80 file on the local system. This is a useful feature when reading various computer messages, ASCII text files, or other notes and recording that text into a TI Display/Variable 80 file suitable for My-Word or TI-Writer.

## **Section 5.1.0**

### Log Open/Close

Selecting this option the first time prompts for the Log Filename that you wish to save all incoming text. If a TI Display/Variable 80 file exists with the same name as chosen, then all text will be appended to the file. Selecting this option a second time will close the file.

## **Section 6.0.0**

### MDOS Window

The MDOS Window is an interface the MDOS Command Line Interpreter (CLI) or as some users may describe as the MDOS Prompt. The MDOS Window allows you to execute an internal MDOS command such as Format, Copy, Type, Dir, Remap, or any of the other commands to be used. To exit the MDOS window, press F9 and you will be returned to the Main Menu.

## **Section 7.0.0**

### Set Options

Set Options allows you to perform a custom configuration of My-Term to match your hardware and personal needs. Options for setting default baud rates, parity, modem ports, duplex mode, terminal type, screen colors, file transfer features, default file names and other functions can all be set and these options saved for the use of My-Term on subsequent uses of the program.

## **Section 7.1.0**

### Terminal Options

The Terminal Options allow you to configure those features required for initial connection with a remote or host system. You are allowed to set baud rate, parity, modem port, duplex mode, terminal

type, and screen colors to suit your personal taste and needs.

### **Section 7.1.1**

#### Baud Rate

Baud rate determines the speed at which data can be transferred through the RS232 port. Set the baud rate to match the modem carrier speed you will be communicating with, unless you are using a high speed modem or one with data compression. See section on High Speed Modems if you are using a high speed modem. For most users, setting the baud rate to 2400 baud will allow connections with 99% of all computer systems. Check with your modem and RS232 user manuals to identify the maximum baud rates you can use. Never set a higher baud rate than the hardware can support.

- A: 110
- B: 300
- C: 600
- D: 1200
- E: 2400
- F: 4800
- G: 9600
- H: 19200

### **Section 7.1.2**

#### Parity

Parity settings refer to the number of data bits, even/odd/no parity, and the number of stop bits a system is using for communication. The majority of all systems use 8,N,1 or sometimes called 8 data bits, No parity, 1 stop bit. Some older systems and other proprietary networks may use other settings. XModem CRC and XModem-1K both require 8,N,1. Some older systems use 7,E,1 and will switch automatically to 8,N,1 during a XModem file transfer. Depending upon the system and the version of the protocols being used, My-Term may or may not switch parity settings to match the new configuration. Most systems will support 8,N,1 even if they are using alternate parity settings.

- A: 8,N,1
- B: 7,E,1
- C: 7,O,1
- D: 7,N,1
- E: 8,N,2
- F: 7,E,2
- G: 7,O,2
- H: 7,N,2

### **Section 7.1.3**

#### Modem Port

Modem port refers to the RS232 port you are using to handle all communications. My-Term supports the stand RS232 cards plus the use of modified RS232 cards adding serial ports #3 and #4. Set the port you to the one you have a modem or nul modem cable connected.

A: RS232/1  
B: RS232/2  
C: RS232/3  
D: RS232/4

### **Section 7.1.4**

#### Duplex

Duplex refers to whether characters are echoed back to the sending system as the user types. In Full duplex mode, any key the user types in on his system will be received by the host and will be resent back to the user. Most systems use Full Duplex. In half duplex mode, any character that is typed will be echoed on the users screen as it is sent to the remote system. In the event the user is using half duplex and the remote system is using full duplex, typing "Hello" would yield "HHeelllloo" on the screen. Set the proper setting to match your host. GENie uses Half duplex, CIS uses full duplex, and many other BBS systems use full duplex.

Full  
Half

### **Section 7.1.5**

#### Terminal Type

Terminal type refers to the video terminal emulation mode that will be handled on the screen. There are a wide variety of video modes in existence such as ADM3A, VT-100, VT-52, Heath-19, ANSI, Avatar, etc. My-Term presently supports VT-52 and Heath-19. Set your settings to VT-52 for use with most systems.

Heath-19  
VT-52

### **Section 7.1.6**

#### Foreground Color

Selecting the Foreground Color option will rotate the foreground

colors on the screen through the 16 possible combinations. The default is white.

## **Section 7.1.7**

### Screen Color

Selecting the Screen Color option will rotate the screen colors on the screen through the 16 possible combinations. The default is blue.

## **Section 7.2.0**

### Auto-Dialer Options

Release V1.0 of My-Term does not contain any Auto-Dialer capabilities. Future updates to My-Term will support this feature.

## **Section 7.3.0**

### File Transfer Options

The File Transfer Options allows you to custom configure default paths or filenames, buffer sizes, how incomplete transfers are handled, and how Display/Fixed 128 files are handled.

## **Section 7.3.1**

### Default Filename

An entry is provided for Default filename. This entry allows you to enter a device path such as E:\DOWNLOADS. or a filename such as E:\DOWNLOADS\FILE1. The purpose of the Default Filename is to minimize data entry when initiating a file transfer.

## **Section 7.3.2**

### Buffer Size

My-Term supports buffer sizes from 8K to 32K before the file or a portion of it is saved to disk. The larger the file buffer, the more memory My-Term will require. If insufficient memory is available, an error message will be returned aborting a file download. The larger the file transfer buffer, the more will be saved during a file upload or download.

A: 8K  
B: 16K  
C: 24K  
D: 32K

### **Section 7.3.3**

#### Incomplete Transfers

If for some reason the user or the host aborts a file transfer, the option of saving the portion of the file received is available to the user. Under most conditions, you would not want to save the incomplete file.

Yes

No

### **Section 7.3.4**

#### TI File Header

The TI Files header (TIFILES) is added automatically by My-Term and other TI-99/4A and Geneve 9640 terminal emulators to properly recognize and handle all TI file formats. In the case of TI Display/Fixed 128 files, this is a unique file type to the TI system promoting cross-platform compatibility. When transferring cross-platform compatible files (GIF's, VOC's, etc), do NOT send a file header. If a TIFILES file header is sent attached to a GIF, VOC, etc., that file can not be used by the other platform. It is recommended for the majority of all file transfers, that the option of NO be selected. This will provide the largest margin of compatibility with all computer types. In a few unique cases, users may wish to include the TIFILES header.

No, Do Not Send Header for Dis/Fix 128

Yes, Always Send TI File Header

### **Section 7.4.0**

#### Log Options

The Log options allow you to custom configure your buffers for receiving and storing text that is received from a host. My-Term uses Ctrl-S and Ctrl-Q to control the host computer as data is written to a device.

### **Section 7.4.1**

#### Default Filename

Enter the default path or filename you would like to use when you select Log Open/Close from the main menu. This option provides a quick way to open your Log buffer with minimal keystrokes.



## **Section 7.4.2**

### Buffer Size

My-Term supports buffer sizes from 8K to 32K before the file or a portion of it is saved to disk. The larger the file buffer, the more memory My-Term will require. If insufficient memory is available, an error message will be returned aborting the log buffer. The larger the log buffer, the less frequent log saves will be made.

- A: 8K
- B: 16K
- C: 24K
- D: 32K

## **Section 7.5.0**

### Remote Term Options

The Remote Terminal option allows the Geneve 9640 to act as a host between two computer systems. Two serial ports are required to interface communications between a total of three computer systems.

## **Section 7.5.1**

### Remote Term On/Off

Selecting this option activate the Terminal Mode status of My-Term. Selecting this option a second time deactivates Terminal Mode status.

Activates Remote terminal mode

## **Section 7.5.2**

### Baud Rate

Baud rate determines the speed at which data can be transferred through the RS232 port. Set the baud rate to match the modem carrier speed you will be communicating with, unless you are using a high speed modem or one with data compression. See section on High Speed Modems if you are using a high speed modem. For most users, setting the baud rate to 2400 baud will allow connections with 99% of all computer systems. Check with your modem and RS232 user manuals to identify the maximum baud rates you can use. Never set a higher baud rate than the hardware can support.

- A: 110

B: 300  
C: 600  
D: 1200  
E: 2400  
F: 4800  
G: 9600  
H: 19200

### **Section 7.5.3**

#### Parity

Parity settings refer to the number of data bits, even/odd/no parity, and the number of stop bits a system is using for communication. The majority of all systems use 8,N,1 or sometimes called 8 data bits, No parity, 1 stop bit. Some older systems and other proprietary networks may use other settings. XModem CRC and XModem-1K both require 8,N,1. Some older systems use 7,E,1 and will switch automatically to 8,N,1 during a XModem file transfer. Depending upon the system and the version of the protocols being used, My-Term may or may not switch parity settings to match the new configuration. Most systems will support 8,N,1 even if they are using alternate parity settings.

A: 8,N,1  
B: 7,E,1  
C: 7,O,1  
D: 7,N,1  
E: 8,N,2  
F: 7,E,2  
G: 7,O,2  
H: 7,N,2

### **Section 7.5.4**

#### Terminal Port

Modem port refers to the RS232 port you are using to handle all communications. My-Term supports the stand RS232 cards plus the use of modified RS232 cards adding serial ports #3 and #4. Set the port you to the one you have a modem or nul modem cable connected.

A: RS232/1  
B: RS232/2  
C: RS232/3  
D: RS232/4

### **Section 7.6.0**

#### Save Changes

This option saves your configuration settings to a special file called MT092OPTS at the current My-Term boot path. When booting My-Term, make sure the directory prompt reflects the current location of My-Term so that My-Term can locate your personal configuration settings. These settings will be reloaded each time My-Term is executed.

### **Section 8.0.0**

Version

Selecting this option will display the introductory title screen displaying the current version and license number of the software you are using.

### **Section 9.0.0**

Reset Terminal

Selecting this option will restore the default configuration settings without reloading My-Term.

### **Section 10.0.0**

Quit My-Term

Selecting Quit My-Term will return you to the MDOS prompt closing all open files.

Yes: Exit My-Term

No: Return to Main Menu

## **Using My-Term with High Speed Modems**

My-Term has been successfully tested on a Geneve 9640 with Memex/Genmod at 9600 baud at 0 wait state and has not dropped a character on screen displays. Transferring files at 9600 baud will require some planning and knowledge of your system. At transfer rates of 9600 baud, the Geneve at 0 wait states is just marginally fast enough to transfer 32K blocks to a hard drive or ram disk. Attempting to transfer files to floppy at 9600 baud will usually result in aborted file transfers because the TI floppy system is too slow resulting in the sending system becoming out of SYNC with the receiving system. With the use of fast double density or high density floppy drives, 9600 baud file transfers may work on a case by case basis. This is a limitation based on the RS232 card and certain slow parts of the Geneve operating system. Only with hardware modifications to the RS232 can this limitation be overcome.

In order to properly use 9600 baud (or higher baud rate modems), it is necessary to fully understand how to configure the modem. Most high speed modems rely on flow control from two points; modem to modem, and from modem to computer. Neither the TI-99/4A or the Geneve 9640 support flow control from the RS232 port to the modem without hardware modifications to the RS232 card. My-Term has not been written to make use of these hardware modifications and has instead relied on the user to properly configure their system.

To properly use a Terminal Emulator and a High Speed Modem (9600 baud or higher), you must do the following:

1. Disable modem error correction and data compression. This includes disabling V.32, V.32B, V.42, and V.42B modes.
2. Set Computer to Modem speed to the transfer speed you expect to connect the system to. If you are connecting to a 9600 baud system, set your baud rate to 9600 baud.
3. Send any needed modem initialization strings to disable baud rate negotiation by the modem. This may include modifying the S37 register or one of the other many settings.

## **Hints**

My-Term has been tested with a SupraFaxModem 14.4K at 9600 baud. Two initialization strings were sent. ATZ, and then AT&F0. The first string resets the modem to default values, the second string disables all modem error correction modes and data compression modes and establishes the modem to computer speed to the baud rate that the modem sent the two initialization strings to it.

Other modems will probably have different strings. Before you purchase a modem, if at all possible make sure you can disable all settings. Hayes Compatible modems at baud rates above 2400 baud may not use the same strings and will be different from one manufacturer to another.

### **Limited Warranty**

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