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# Introduction

## **Welcome to Telix for Windows**

Welcome! We know you are eager to begin using Telix for Windows; if you are like most people, you want to jump right in and start using your new program, but we encourage you to at least skim through this help file or you manual first.

One more thing before you start... If you bought your package from a dealer, *send in your registration card*. Without it, we cannot tell you about the next new widget we add to the program. If you bought your copy directly from *deltaComm Development, Inc.*, you are already registered.

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## Telix for Windows and Microsoft Windows

*Telix for Windows* operates in a graphics environment called Microsoft Windows, created by Microsoft Corporation. An extension of the MS-DOS operating system, Microsoft Windows gives a standard look and feel to *Telix for Windows* and all other Windows applications.

To run *Telix for Windows*, you must license and install Microsoft Windows.

This document was created using Microsoft Word for Windows 6.0 and HelpBreeze 1.6.

# Customer Services

If you have a question about Telix for Windows, first look in the printed documentation, or use the online Help system. We have tried to anticipate all of your questions, and have included the answers to many of them within this help file and the manual. If you cannot find the answer in the manual or the online help, contact Telix Customer Services. Click [HERE](#) to read the [Answers to Common Questions](#) section.

## ***Product Support Within the United States***

### **Electronic Services:**

Assistance is available through a variety of electronic means, 24 hours a day, 7 days a week, including holidays.

**CompuServe:** Assistance is available via CompuServe in the Telix for Windows Forum. In addition, the file libraries within this forum contain a wealth of third party add-ons for Telix, as well as the latest patches and fixes for Telix for Windows. At any CompuServe ! prompt, type **go telix** to access the Telix for Windows Forum. An introductory CompuServe membership kit is included with Telix for Windows to get you started.

**Internet:** Assistance is available by addressing Email to **support@delta.com**. You can obtain the latest Shareware version and patches from our World Wide Web page at **<http://www.cybernetics.net/users/bstowers/deltcomm.htm>**. If you prefer FTP, connect to **ftp.cybernetics.net** and change to the **/pub/Windows/telix/** directory.

**deltaComm Online:** *deltaComm* Development, Inc. maintains a 24 hour customer service bulletin board that you can access via modem at (919) 481-9399. This system supports speeds of up to 28,800 bps with settings of 8 data bits, no parity, and one stop bit. The first entry in Telix for Windows' default PhoneBook is for this service. Once connected, you will find a large library of third party add-ons, and will be able to address questions directly to the Telix developers. In addition, *deltaComm* Online offers our customers many extra information services not related to Telix, such as:

- Δ Internet Email accounts
- Δ Usenet Newsgroups
- Δ USA Today
- Δ Boardwatch Magazine
- Δ National Weather Service maps

All of these additional services are complimentary to Telix registered users for one year. Additional years of these extra services can be purchased for a nominal charge.

### **Voice Telephone Support:**

Unlimited no-service-charge support is available from our customer service engineers is available via a toll call between 9:00 a.m. and 9:00 p.m. Eastern time, Monday through Thursday, and between 9:00 a.m. and 6:00 p.m. on Fridays, excluding holidays.

For Technical Support, call **(919) 460-4556** to speak to a software engineer. Before calling, please make sure you have the following information available:

- Δ The Telix for Windows version number from Help | About on the program menu.
- Δ The brand and model of your modem, and whether it is internal or external.

- △ The brand and model of your video card, and the version number of its drivers.
- △ The exact wording of any error messages that have appeared on your screen.

## ***Product Support Worldwide***

If you have purchased your copy of Telix for Windows outside of the United States, you may be able to obtain support at one of several worldwide support centers, either electronically or via voice. Support availability and cost may vary from site to site outside of North America, and may require you to have purchased your copy from the specific support site in order to qualify for support from that site.

<u>Area</u>	<u>Contact</u>
Australia & New Zealand	My Computer Company (02) 565-1044 BBS (02) 550-4459 fax (02) 565-1991 voice
Germany	Connect GmbH (0241) 9177981 BBS (040) 511 7074 fax (040) 511 7073 voice
Great Britain	S.C.S. (0493) 748891 BBS (0493) 748876 fax (0493) 748904 voice
Benelux	The Owl's Nest (31)-(0)2155-23219 BBS (31)-(0)2155-26527 fax (31)-(0)2155-28631 voice

# Program Requirements

The minimum requirements in order to be able to run Telix for Windows include:

- Δ **System:** Telix for Windows requires an 80386 compatible computer running Microsoft's Windows Operating System version 3.10 or later. Please note that Telix for Windows cannot be run on an 80286 or lower, or in conjunction with Microsoft Windows version 3.00 or earlier.
- Δ **RAM:** Telix for Windows will operate comfortably on a system with 4 megs of RAM installed. For heavy multitasking, 8 or 16 megs is suggested.
- Δ **Disk Space:** Telix for Windows requires a hard drive with at least three megabytes of space available. Some operations, such as downloading files, and optional components, such as this help file, may require additional space to be available. A complete installation will require nearly five megabytes of space.
- Δ **Video:** Microsoft Windows version 3.1 requires a monitor and compatible graphics card with at least EGA resolution. Super VGA (800x600 pixels of resolution or better) is strongly recommended in order to fit all information on one screen. Accelerated video cards or local bus video can greatly enhance system performance during high speed communications. RIPscrip works best with 256 color support, though it will work, although more slowly, in 16 color mode.
- Δ **Mouse:** A mouse is not required, though the use of one is highly recommended for ease of use; the program was designed with the mouse user in mind. Any mouse supported by Microsoft Windows will work with Telix for Windows.
- Δ **Modem:** Any serial device that connects via a standard RS-232 port will work with Telix for Windows. Some supported connections such as direct connections (from one serial port directly to another) may require special cabling or adapters called null modems.
- Δ **Serial Port:** If Telix for Windows is to be used with a modem, a compatible serial port is required. We **highly** recommend the use of a serial card or internal modem that includes a buffering chip known as a NS16550AFN UART (commonly referred to as a 16550). Without a 16550, your serial port may lose characters and/or experience file transfer errors under a multitasking operating system such as Microsoft Windows.

A basic working knowledge of Microsoft Windows is assumed. If you are not familiar or comfortable with the concept of dialog boxes, checkboxes, and DOS subdirectories, please consult your Windows User's Guide for further assistance.

# Answers to Common Questions

Below are the questions that are asked the most of *deltaComm*'s technical support department. Simply click on the question mark next to the problem that you are experiencing to read a detailed discussion of the problem and possible solutions.

## **Modems:**

- [?](#) Why can't I get my modem to dial?
- [?](#) Telix told me that my COMxFIFO setting is incorrect, but it is set to "ON".
- [?](#) Why isn't there a 14,400 speed setting in Telix for Windows?
- [?](#) Telix seems to be missing characters, right in the middle of words!
- [?](#) My modem is on IRQ 5, but I can't change it in Telix. Why not?
- [?](#) Why does Telix always say that it is already online when I first run it?
- [?](#) My modem is not in the list of available Connect Devices. What now?
- [?](#) What is a 16550 and why should I have one?

## **Connecting to other systems:**

- [?](#) Telix ignores a connect and the text from the BBS is just displayed in the dialing window.
- [?](#) Why doesn't Telix recognize a busy signal when I'm dialing?
- [?](#) How do I stop Call Waiting from interrupting my calls?
- [?](#) How can I use a credit card number to place a long distance call with Telix?
- [?](#) Why doesn't Telix allow me to choose 115,200 as a baud rate?
- [?](#) I don't have Touch Tone Service -- how can I dial?
- [?](#) Why do I sometimes I get disconnected right in the middle of a call?

## **Transferring Files:**

- [?](#) Why do I get CRC or Timeout errors when transferring files?
- [?](#) Why is Telix so far off when estimating file transfer times?

## **Scripts:**

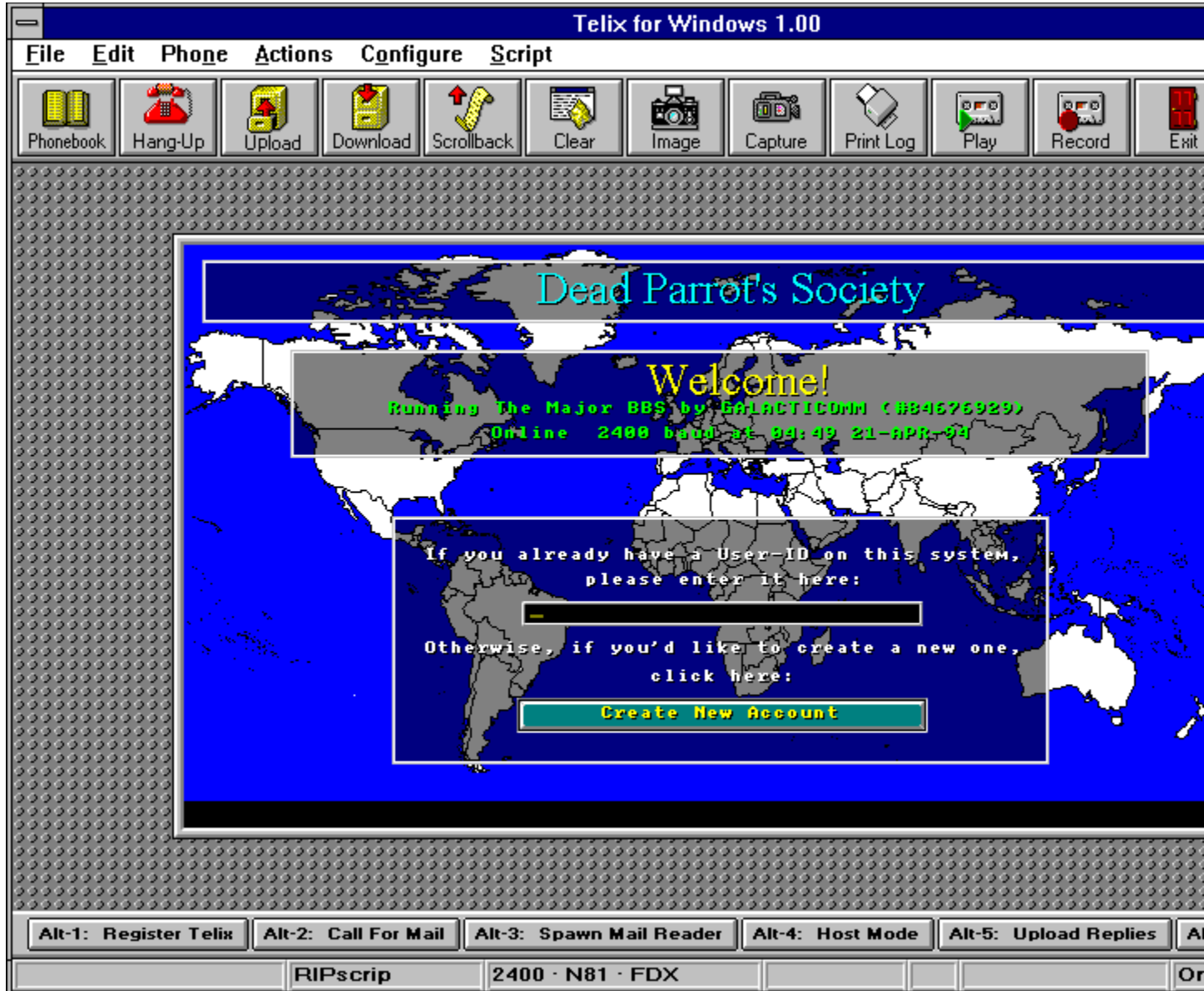
- [?](#) My script compiles just fine but when I run it, I get a "Stack Underflow" or "Stack Overflow" message.
- [?](#) My script compiles without errors but when I run it, I receive a "Function not supported" message. This works fine in Telix for DOS.
- [?](#) Telix is reporting an error in my script when I run it, but I'm having trouble finding exactly where the error is located. How can I find the problem?

## **Errors:**

- [?](#) Why do some RIP screens fill up the screen with one color, or paint wrong?
- [?](#) What is a GPF Error, and how do I stop it?
- [?](#) Why can't I get Telix to work with my video card?
- [?](#) What is a Run-Time Error, and how do I stop it?
- [?](#) Why can't I get my "Hayes Compatible" modem to work with Telix?

# The Application Window

Below is a representation of the Telix Application Window. Simply click on any part of it to view specific help.





## The Terminal Window

The Terminal Window is the focal point of all of your communications. What you type on your keyboard is sent to your connect device (usually a modem) and is displayed in the Terminal Window. The data your modem receives is sent to the Terminal Window for display. The Terminal Window features advanced [editing and marking](#) capabilities. If you wish to experiment with these features, hold down the right mouse button for the Terminal Window [popup menu](#).

# Menus



The **Menu Commands** are where you will find most of the features of Telix, in a form familiar to all users of Microsoft Windows. There are seven main menu items available, grouped by the categories of [File](#), [Edit](#), [Phone](#), [Actions](#), [Configure](#), [Script](#), and [Help](#). Select the item from the previous list or the menu above that you would like further help with.

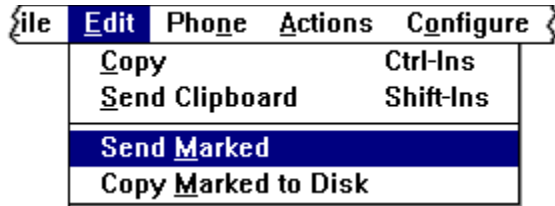
There is one other menu that is not as obvious as the others. Referred to commonly as the [Popup Menu](#), it allows you quick and easy access to the most often used menu items. To access this menu, simply press the right mouse button when the cursor is located anywhere inside the [terminal window](#).

## File Menu

<u>F</u> ile	<u>E</u> dit	<u>P</u> hone	<u>A</u> ctions
<u>D</u> ownload			Alt-PgDn
<u>U</u> pload			Alt-PgUp
<u>C</u> apture Log			Alt-L
<u>P</u> rinter <u>L</u> og			Ctrl-@
<u>S</u> creen <u>I</u> mage			Alt-I
<u>P</u> rint <u>A</u> ll			
<u>P</u> rint <u>S</u> electe			
<u>P</u> rinter <u>S</u> etup...			
<u>E</u> xit			Alt-X

The **File Menu** is where you will find all actions related to files and the printer. To use the menus to transfer a file to or from another computer to yours, or to capture what has been sent to your system by another system to a file or to your printer, you would use an action in the File Menu. Select the item from the menu above that you would like further help with.

## Edit Menu



The **Edit Menu** is capable of marking text on the screen, saving it to the Windows Clipboard for sharing with other applications, or sending the marked text back out to the remote system. Popular uses of the Edit Menu include marking filenames that have recently been displayed so that they can easily be transferred to your computer. Select the item from the menu above that you would like further help with.

## Phone Menu



The **Phone Menu** contains commands for all of your dialing needs. From here you can access your PhoneBook, redial entries in your dialing queue, or manually enter a number to dial. Select the item from the menu above that you would like further help with.

## Actions Menu

<b>one</b>	<b>Actions</b>	<b>Configure</b>	<b>Script</b>
	<u>H</u> angup		Alt-H
	<u>C</u> lear Screen		Alt-C
	Send <u>B</u> reak		Ctrl-End
	<u>S</u> croll Back		Alt-Up Arrow
	<u>D</u> oorway Mode		Alt=-
	<u>I</u> nitialize Modem		
	Answer <u>M</u> odem		

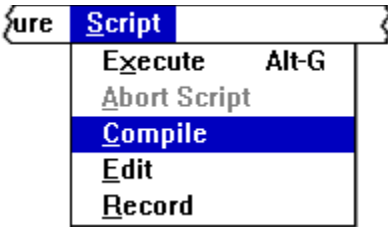
From the **Actions Menu** menu, you can hang up the phone, initialize your modem, use your modem to answer the phone, and much more. Select the item from the menu above that you would like further help with.

## Configure Menu

ns	<b>Configure</b>	<u>S</u> cript
	<u>G</u> eneral Options	
	<u>T</u> erminal Devices	Alt-T
	<u>C</u> onnect Devices	Alt-M
	<u>E</u> xpense Devices	
	<u>F</u> lashKey <u>M</u> acros	
	<u>F</u> ilenames & Paths	
	<u>A</u> SCII Transfers	
	<u>P</u> rotocol Options	
	<u>K</u> eyboard <u>M</u> acros	Alt-K
	<u>T</u> ranslation Tables	Alt-W
	<u>S</u> ounds	
	<u>R</u> esize Current Terminal	Alt-Z
	<b>Open...</b>	
	<u>S</u> ave	TELIX.CFG
	<u>S</u> ave <u>A</u> s...	

Configuring a detailed program like Telix for Windows, with its hundreds of options, might be a daunting task if it was not for the **Configure Menu** and its many sub-options. This menu breaks down each detail of how Telix functions into highly organized screens of easy to understand options. Most times, the values we've preset for you will be fine, but sometimes you will want to change the mix, and this is where you can do it. Select the item from the menu above that you would like further help with.

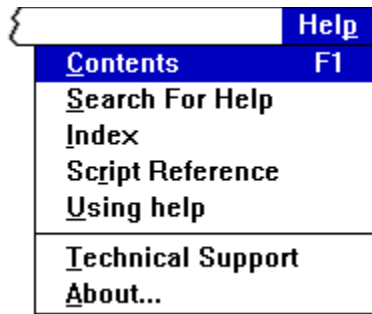
## Script Menu



For truly advanced communications automation, Telix's scripting languages, accessed through this **Script Menu**, are unparalleled. A built-in script editor and recorder allow the creation of scripts, from simple scripts that send your passwords for you, to scripts as advanced as a complete mail reader or the Telix for Windows Host Mode. With these features, scripts can be created, edited, compiled, or even recorded for you without your intervention. Select the item from the menu above that you would like further help with.



## Help Menu



The **Help Menu** provides quick access to sections of this help file, and also to the [Script Language Reference](#). Select the item from the menu above that you would like further help with.

## Help Contents



This command will open the help file and place you at the beginning.

**Searching for Help**

This command will display a dialog that allows you to search for topics in the help file based on a key word. This method is very similar to using the index of a traditional book or manual.

**Help Index**

This command will open the help file and place it at the Index.

**Using Help**

The online help is displayed in a program called WinHelp which is provided with Microsoft Windows. Selecting this command will display a tutorial on how to use the WinHelp application to navigate any help file.

**Technical Support**

Selecting this option will display information on how to contact *delta*Comm Development in the event that you experience any trouble.

**About Telix for Windows**

This command will display a dialog that contains information about the version of Telix for Windows that you are using, as well as your serial number.

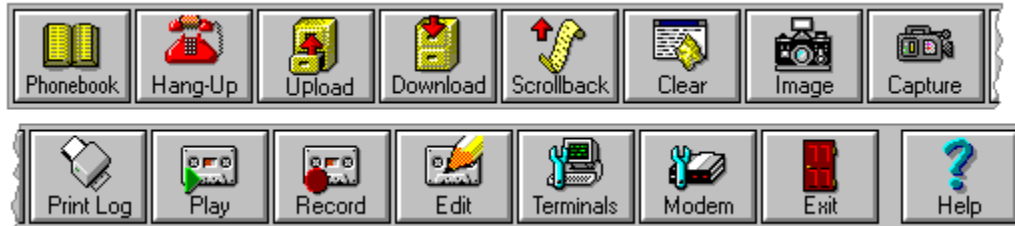
## Popup Menu

<b>S</b> creen <b>I</b> mage <b>V</b> iew local file
<b>C</b> opy <b>S</b> end <b>M</b> arked <b>S</b> end Clipboard
<b>H</b> angup
<b>C</b> lear Screen <b>S</b> croll Back
<b>D</b> ownload <b>U</b> pload

The **Popup Menu** is available in the [terminal window](#) by pressing the right mouse button. It provides quick and easy access to the most commonly used functions of Telix. Select the item from the menu above that you would like further help with.



## QuickTools



The QuickTools™ bar contains several buttons that give you instant access to the most often used features of the program, such as transferring files, scrolling back, or capturing the incoming data to a file. These buttons are configurable to display with or without text labels, and are self arranging. The **Help** QuickTool is always onscreen at the far right hand side of the QuickTool bar, with the **Exit** QuickTool immediately to its left. Also, if you place the mouse pointer over a tool and do not move it for a brief period of time, a small window containing a brief description of the button will be displayed. Using the QuickTool bar above, click on the tool you need further help with.

# FlashKeys



FlashKeys™ add a great degree of power to Telix, allowing you to define your own buttons. These FlashKeys can send associated text or can run other programs or Telix scripts to perform very detailed actions, such as dialing a system for mail automatically, or entering Host Mode at the touch of a button. FlashKeys are defined under the [Configuration Menu](#); extensive documentation on how to attach scripts or programs to FlashKeys is available in the Telix for Windows manual or in the [FlashKey Configuration](#) section of this help file. A few default FlashKeys, such as Send Password and Run Host Mode have been defined for you, but you may change these to suit your own taste. The FlashKey bar can be configured to appear just above the status bar near the bottom of the window, or just below the menu near the top of the window, or they may be turned off entirely.

Clicking on a FlashKeys will send the macro or text that you have defined in the [Flashkey Configuration](#).  
A FlashKey may also be executed by pressing it's corresponding Alt key combination (Alt-0 through Alt-9).

## Status Bar



The **Status Bar** displays information about your current session, emulation, and actions that are occurring. Also, when a menu is displayed, the status bar will show you more detailed information on the command that is highlighted. Using the Status Bar above, click on the section you would like more information on.

**System Name**

When you have established a connection with an entry in your PhoneBook, the name of the system will be displayed here. If you are not currently connected, this area will be blank.

**Terminal Emulation**

Displays the type of terminal emulation that you are currently using.

### **Communications Parameters**

There are several pieces of information described here. First, the baud rate that you are connected at is displayed if you are connected to another system. If you are not connected, the maximum rate your connect device is configured to support is displayed. Next, a combination of three letters and numbers appears. These describe your current settings for parity, data bits, and stop bits. Following this, the letters **FDX** or **HDX** will appear. **FDX**, an abbreviation for full duplex, means that you have local echo on. **HDX**, an abbreviation for half duplex, means that you have local echo off.

**Capture Log**

If you have turned on a capture log, the word **Capture** will appear here to remind you that you are recording a session. If there is no capture log occurring, this area will be blank.



**Printer Log**

If you have turned on a printer log, the letter **P** will appear here to remind you that the session is being echoed to the printer. If there is no printer log occurring, this area will be blank.

**Executing Script**

If there is a script currently executing, the name of the script will be displayed here. If not, this section will be blank.

**Online Time**

Once you have established a connection with another system, Telix for Windows will display the total amount of time since the connection was established here.

## Editing And Marking Capabilities

When text has been marked or is contained on the Clipboard, the [Edit Menu's](#) commands will become available for your use. These commands allow you to move text onto the Windows Clipboard, or from it to a connect device. you may also save marked text to a file on you disk drive.

To mark text in the terminal window, or text in the [scrollback buffer](#), use the mouse pointer. Placing the mouse pointer over the first character to mark, click and hold the left mouse button. Drag the mouse pointer to the last character to mark and release the mouse button. The marked text will be highlighted in an "inverse color." If you are marking text in a terminal window, you will be unable to exceed the boundaries of the window; when marking text in a scrollback buffer, exceeding the boundaries of the window will cause the buffer to "move" with you, thus allowing you to mark more than a single "page" of data at a time. Once text has been marked, it can be manipulated, exchanged with other applications via the Windows Clipboard, or even sent back to the connect device with the commands on the the [Edit Menu](#).

# The PhoneBook

This is where things are set in motion. To communicate with another system, you will in most cases have to dial that system or otherwise connect to it (by network connection for example). The PhoneBook is just like your local telephone directory, except that in Telix, you have complete editorial control over who is listed and who is not listed. You may attach comments to entries, list several alternate phone numbers, and even redefine the order in which your entries appear. The PhoneBook is where you tell Telix for Windows how to connect to other systems. There are so many in-depth features of the PhoneBook that we have dedicated an entire chapter of the manual to it (See Chapter 2, Inside The Phonebook).

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**See also**

[Elements of a PhoneBook](#), [Manipulating a PhoneBook](#), [Opening a PhoneBook](#), [Connecting to Other Systems](#)

## About Shareware

**Shareware** (n): A method of marketing software directly to end users by allowing them to try out a software package before it is purchased. Shareware authors place their trust in the end users to abide by the terms of shareware license and purchase a license (i.e. pay the author) within the given evaluation period.

Shareware is not free software, nor a different "type" of software. Just as Microsoft or Word Perfect Corp. expects to be paid for their efforts, so too do the authors of shareware. The only difference lies in the method of distribution to the end user.

Producers of the software you find in retail outlets often spend millions of dollars advertising and marketing their software, and this is frequently reflected in the prices you find in these stores.

Software developers who use the shareware marketing method realize that your using the software is the best advertising there is -- word of mouth! When you license (purchase) one of our shareware products, you will be entitled to a higher standard of customer service than you would expect from any other developer, and you receive the same shrink-wrap box and printed manual; yet you pay far less than you would for comparable products in your retailer's store, plus you get to try the package first to ensure that it meets your needs.

Shareware developers **trust** the user to pay the license fee if the software is used on an ongoing basis. Sadly, industry estimates place the level of registration at between two and five percent of all regular users.

Please remember that shareware is not a type of software. It is a way to market software to customers like yourself, and it is based on trust. Shareware authors work hard on their products, have technical support costs to cover, and ongoing development to finance. Just as you wouldn't work for an employer who wouldn't pay your salary, you shouldn't expect software to work for you indefinitely if you aren't willing to pay for it.

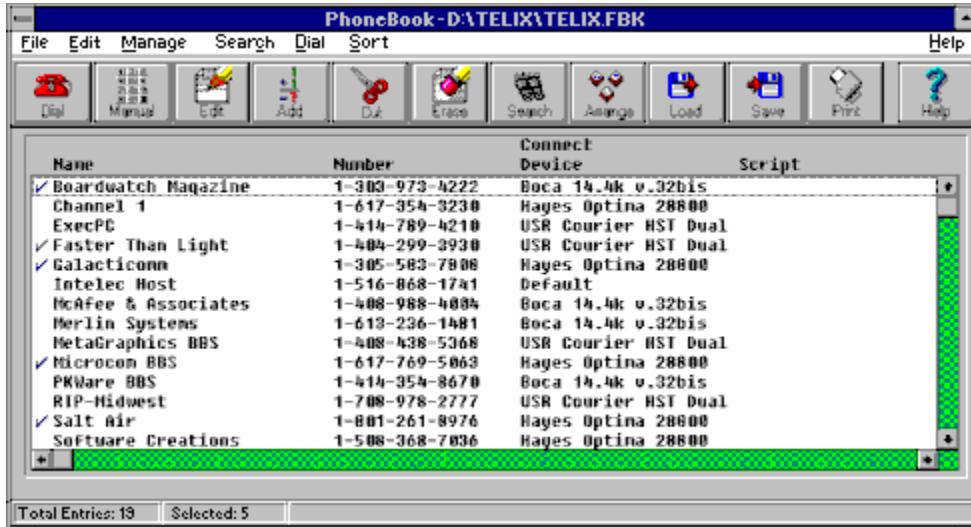
Shareware only works as a marketing method when everyone pays for the software that they use -- everyone wins! The software developers can then afford to continually improve their products, and the user receives a better value and a better program than they could have bought in their local retail software store.

**Please register (pay for) shareware that you use.**

## Elements of a PhoneBook



Telix for Windows PhoneBooks support up to 1,000 entries each, and you may have as many different PhoneBooks as you like. Each PhoneBook is displayed in a PhoneBook Manager as shown below. To display the PhoneBook Manager, you may: click the **PhoneBook** QuickTool, press ALT-D, or select **Manage PhoneBook** from the [Phone Menu](#). You can choose an item from the picture below that you would like further help with.



Telix for Windows will load either the defined [Default PhoneBook](#), or the PhoneBook you had in memory when you last exited Telix if you've configured Telix to ignore the default PhoneBook definition. There will always be a PhoneBook loaded even if the PhoneBook Manager is not on the screen.

The entries contained within the currently open PhoneBook are always in memory for speed and versatility considerations, so it is recommended that you keep your individual PhoneBooks organized and limited to numbers that you call regularly.

**Horizontal Scroll Bar**

Using this scroll bar, you can change what information about each PhoneBook entry is displayed.



**Vertical Scroll Bar**

Using this scroll bar, you can quickly move through a large list of PhoneBook entries.

**PhoneBook Name**

Displayed in the PhoneBook Manager's title bar is the complete path and file name of the PhoneBook being used. If the PhoneBook has not yet been named, it will display "[Untitled]".

**PhoneBook Status Bar**

The status bar displays the total number of entries in the current PhoneBook and the number of these entries that are marked (tagged) for batch operations.

**PhoneBook Entries**

Entries appear in the Manager one per line. The information on each entry is too great to fit on a single screen, so you may "scroll" further information into view by using the [Horizontal Scroll Bar](#). An entry with a checkmark next to it is said to be "selected" or "marked" for actions such as dialing and editing.

**Titles**

These are the titles of the PhoneBook entry information being displayed directly under them.

## Manipulating a PhoneBook

- △ Opening, appending and importing PhoneBooks is discussed in the [Opening PhoneBooks](#) section.
- △ Saving and renaming PhoneBooks is covered in the the [Saving PhoneBooks](#) section.
- △ [Adding PhoneBook Entries](#) and [Editing PhoneBook Entries](#) are two of the most common functions, and therefore are described in detail in their respective sections.
- △ Another set of related functions, [Clearing PhoneBook Entries](#) and [Deleting PhoneBook Entries](#), explain their differences and how to recover from accidental data loss.
- △ The Windows Clipboard is one of the most commonly used items for moving and rearranging data. The section entitled [Cutting, Copying and Pasting PhoneBook Entries](#) explains how Telix for Windows makes use of this handy feature.
- △ Changing the order of entries listed in a PhoneBook is a snap, and it is explained in detail in the [Sorting PhoneBooks](#) section.
- △ If your PhoneBook contains a large number of entries, it can seem impossible to find the one you are looking for sometimes. But with the help of the [Find](#) command, you can locate entries based on their name, number, comment, and more. The related [Replace](#) command can take this a step further and allow you to make updating passwords or area code changes a snap.
- △ The printing capabilities of the PhoneBook are very flexible, allowing you to specify what items to print, as well as how they are arranged. The [Page Setup](#) section discusses this in detail.

## PhoneBook Keyboard Interface

<u>Keypress</u>	<u>Function</u>
ESC, ALT-F4	<a href="#">Exit the PhoneBook Manager</a>
ALT-BKSPC	<a href="#">Undo</a>
CTRL-INS	<a href="#">Copy</a> Entry or Entries to Clipboard
SHIFT-INS	<a href="#">Paste</a> Entry or Entries from Clipboard
E, CTRL-E	<a href="#">Edit</a> Current or Marked Entries
L	<a href="#">Edit Long Distance Codes</a>
DEL, CTRL-DEL	<a href="#">Delete</a> Current or Marked Entries
C, CTRL-C	<a href="#">Clear</a> Current or Marked Entries
A	<a href="#">Add</a> Blank Entry
I, INS	<a href="#">Insert</a> Blank Entry
F3	<a href="#">Search</a> Entries
F4	<a href="#">Replace</a> Entries
D, ENTER	<a href="#">Dial</a> Entries
M	<a href="#">Manual Dial</a>
SPACE	<a href="#">Mark</a> Entry and Advance Selection
SHIFT-SPACE	<a href="#">Mark</a> Entry and Decrease Selection

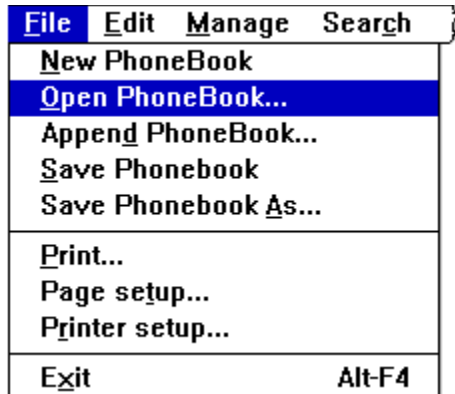
## PhoneBook Menu



The seven top-level menu items provide access to the functions of the PhoneBook Manager. Most of the functions are duplicated in the [PhoneBook QuickTools](#) for your convenience; those that are will be noted with a snapshot of the QuickTool button to the left of the description. The menu items are: [File](#), [Edit](#), [Manage](#), [Search](#), [Dial](#), [Sort](#), and [Help](#). To view further help, select any of the items in the previous list or from the menu above. Also available is a [popup menu](#) accessible by clicking the right mouse button in the PhoneBook Manager Window.



## PhoneBook File Menu



The PhoneBook **File Menu** contains functions to create new (empty) PhoneBooks, open existing ones, or append from different PhoneBooks (even PhoneBooks of other communications software!). Options to print the contents of the current PhoneBook or to format the output for such a printout are included; this is also where you will find the menu command to exit a PhoneBook and return to viewing the Terminal Window. Select the item from the menu above that you would like further help with.

## PhoneBook Edit Menu

<b>E</b> dit	<b>M</b> anage	<b>S</b> earch	<b>D</b> ial	<b>S</b> ort
<b>U</b> ndo Edit Entry			<b>A</b> lt-BkSp	
<b>C</b> ut			<b>S</b> hift-Del	
<b>C</b> opy			<b>C</b> trl-Ins	
<b>P</b> aste			<b>S</b> hift-Ins	
<b>E</b> dit Current Entry...			<b>'E'</b>	
<b>E</b> dit Marked Entries...			<b>C</b> trl-E	
<b>E</b> dit LD Codes...				
<b>D</b> elete Current Entry			<b>D</b> el	
<b>D</b> elete Marked Entries			<b>C</b> trl-Del	
<b>C</b> lear Current Entry			<b>'C'</b>	
<b>C</b> lear Marked Entries			<b>C</b> trl-C	

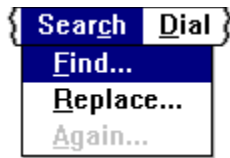
The PhoneBook **Edit Menu** contains functions to manipulate or change your PhoneBook entries. When you wish to revise the data contained in an entry, delete entries, or undo changes you have previously made to the entries in the current PhoneBook, this is where you'll find the function you need. Select the item from the menu above that you would like further help with.

## PhoneBook Manage Menu

<b>Manage</b>	<b>S</b> earch	<b>D</b> ial	<b>S</b>
<b>A</b> dd Blank Entry			'A'
<b>I</b> nsert Blank Entry			'I'
<b>M</b> ark All			
<b>U</b> nmark All			
<input checked="" type="checkbox"/> <b>S</b> how Numbers			
<input checked="" type="checkbox"/> <b>U</b> nmark on Connect			

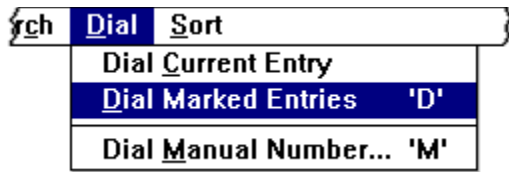
The items on the **Manage Menu** are catch-all functions for adding new entries to the PhoneBook, and for marking or unmarking the entire contents of the PhoneBook. Also on this menu are functions that affect the way the PhoneBook Manager presents the entries to you, and how it treats the markers as it dials. Select the item from the menu above that you would like further help with.

## PhoneBook Search Menu



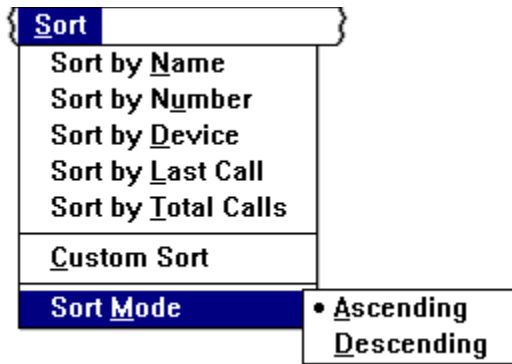
The **Search Menu** allows for the searching and replacement of data in the PhoneBook's entries. The search will be performed only on the following fields: System Name, Primary Number, User Logon Name, Password, Linked Script and User Comment. Select the item from the menu above that you would like further help with.

## PhoneBook Dial Menu



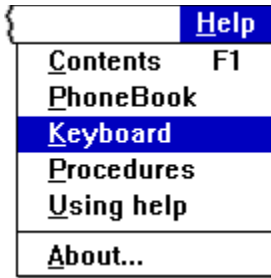
At the heart of the PhoneBook manager are the dialing functions. Using these functions, you will make your connections to other systems. Select the item from the menu above that you would like further help with.

## PhoneBook Sort Menu



From time to time it may be desirable to sort the entries in a PhoneBook, or to even arbitrarily rearrange their order to suit your calling patterns. The **Sort Menu** contains just the features you need to do so. Select the item from the menu above that you would like further help with.

## PhoneBook Help Menu



The **Help Menu** provides quick access to sections of this help file. Select the item from the menu above that you would like further help with.

**PhoneBook Help** will display this help file, starting with the section entitled [The PhoneBook](#).



**PhoneBook Keyboard Help** will display this help file, starting with the [Keyboard Interface](#) section.

**PhoneBook Procedures Help** will display this help file, starting with the [Manipulating a PhoneBook](#) section.

## PhoneBook Popup Menu



The **Popup Menu** above will appear when you click the right mouse button while pointing at an entry. You can perform any of the above actions on the entry you clicked on, regardless of what entries are selected or what entry is the current entry. Each of these actions can be undone by the [Undo](#) command. Select the item from the menu above that you would like further help with.

## PhoneBook QuickTools



The **QuickTools**™ bar contains several buttons that give you instant access to the most often used features of the PhoneBook Manager, such as dialing and editing entries, undo, and opening PhoneBooks. These buttons are configurable to display with or without text labels, and are self arranging. The Help QuickTool is always on-screen at the far right hand side of the QuickTool bar, as is the Exit QuickTool which is immediately to its left. Using the QuickTools bar above, click on the tool you need further help with.

## Dialing PhoneBook Entries



**Dial Current Entry** dials the single entry that is highlighted. The highlight is the thin black dotted line that surrounds only one entry in the PhoneBook Manager. This highlighted entry may or may not be in view; it is possible to scroll the current entry out of your view in the PhoneBook Manager. There is always an entry considered to be the current entry.



**Dial Marked Entries** dials each of the [marked entries](#) in sequence, stopping only when told to abort or when a connection is made. If an entry contains alternate phone numbers in its data, then those will also be dialed in sequence. You may note that we have placed the same QuickTool button before this section as the **Dial Current Entry** section. This is because the Dial QuickTool will determine if you have marked entries, and, if so, dial those. If not, it will dial the current entry.



**Dial Manual Entry** allows you to enter a phone number that is not contained in your PhoneBook, on the spur of the moment. A dialog will prompt you for the number to dial, and then this number will be dialed as a single entry, using dialing prefix number 1. **Long distance codes** are also valid in the manually entered number.

Once you have issued a command to dial using any of these commands, the PhoneBook Manager will close and be replaced by the [dialing dialog](#).

## Cutting, Copying and Pasting PhoneBook Entries

Using the Windows Clipboard, you can easily arrange entries in a PhoneBook, or even move entries between PhoneBooks.

**Cutting an Entry** will place the current entry, or, if entries are [marked](#), the marked entries on the Clipboard and remove them from the PhoneBook.

**Copying an Entry**, similar to cutting, will place the current entry or marked entries on the Clipboard, but does not remove them from the PhoneBook.

**Pasting an Entry** will insert the entry or entries contained on the Clipboard at the current position. If the Clipboard does not contain any PhoneBook entries, this command will be unavailable.

## Clearing PhoneBook Entries



**Clearing an Entry** is very similar to [deleting](#) it, in that both are data-destructive. The difference is that while deleting an entry removes it from the PhoneBook, clearing it erases the data without deleting the entry itself. After clearing an entry, its contents are all blank spaces or default values. You can select this function for either the current entry or for the group of [marked entries](#). You will be prompted for confirmation before Telix actually clears the entries only if you have configured Telix to do so by turning on the "Confirmation Dialogs" in the [General Options Configuration](#). If you accidentally clear entries, the [Undo](#) function will restore them.

## Deleting PhoneBook Entries



**Deleting an Entry**, either the current entry or the marked ones, removes the entries from the PhoneBook and moves all other entries up to fill in the blanks left by this command. You will be prompted for confirmation before Telix deletes the entries only if you have configured Telix to do so by turning on the "Confirmation Dialogs" in the [General Options Configuration](#). If you accidentally delete entries, the [Undo](#) function will restore them.



## Editing PhoneBook Entries



**Editing an Entry** is the process of revising, or making changes to, the data stored in the PhoneBook entries. You may either edit the currently selected entry (the one that displays in the PhoneBook Manager with a dotted line around it), or you may edit the a group of entries by [marking](#) them. Changes made with the Edit commands can usually be restored with the [Undo](#) command.

When you select the **Edit an Entry**, you will be presented with a dialog (shown below) in which you can change any of the information about an entry. When in this dialog box, you may either use the mouse to click on a field in which you wish to type, or you may use the TAB and SHIFT-TAB key sequences to move about between fields. Clicking on any item below will display further help on that item.

A screenshot of the 'Edit Directory Entry' dialog box. The dialog has a blue title bar and a grey background. It contains several fields and sections: 'System Name' (Telegrafix Vector Sector), 'Connect Device' (AT&T DataPort 14.4/Fax), 'Primary Number' (1-714-840-3520), 'Alternate Numbers' (1: 1-714-379-2133, 2: empty, 3: empty), 'Prefix' (ATDT), 'Expert Settings' (checked), 'User Logon Name' (Jeff Woods), 'Password' (Sorry!), 'Linked Script' (VECTOR), 'Comment' (Home of RIPscrip), 'Terminal' (RIPscrip 1.54), 'Protocol' (ZModem), 'BBS Type' (The Major BBS), and a list of BBS types (TAG, TBBS, Telegard, The Major BBS, TriBBS, Wildcat!, WWIV). The 'The Major BBS' item is highlighted. On the right side, there are three buttons: OK (green checkmark), Cancel (red X), and Help (blue question mark). At the bottom, there are 'Prev.' and 'Next' buttons with red arrows, and 'Expert' and 'Stats...' icons.

**System Name** is the name of the host system. This can be any text you care to enter, but it is wise to try to keep each entry's system name unique. Some advanced scripting options can use this field to dial a system from the PhoneBook even if you only know the name.

**Primary Number** is the main telephone number of the host system. If a system has more than one number you can call to access, put the one you call most frequently, or the one that is easiest to connect to, here. This field should contain only the telephone number as you would dial it, plus any long distance codes you might want to use when dialing it.

**Alternate Numbers** are additional telephone numbers to call if the Primary Number is busy or does not answer. If these fields are left blank, then they will simply be ignored.

**Prefix** is the string which is sent to the modem just before the phone number. It is most often ATDT but may include other modem commands to affect compression and connect speed. You cannot type in your own prefix here; you must select one of the prefixes that your configured Connect Device makes available. To change the available prefixes, see the [Connect Device Configuration](#) section. Remember that any change made to the connect device's prefixes will affect all other entries that use that connect device.

**User Logon Name** is a text field that can contain any text you care to enter. It can later be accessed from the Telix scripting languages as a variable. This field does not have to contain your user logon name, though that is its most common use. You may enter any string you wish to be able to access via the scripting language at a later time, such as your date of birth or mother's maiden name. This field is **required** for IEMSI logons (See [Expert Settings](#) for more information about IEMSI).

**Password** is a text field that can contain any text you care to enter. It can later be accessed from the Telix scripting languages as a variable. This field does not have to contain your logon password, though that is its most common use. You may enter any string you wish to be able to access via the scripting language at a later time, such as your date of birth or mother's maiden name. (See [Expert Settings](#) for more information about IEMSI).

**Comment** is a text field that can contain any text you care to enter. It can later be accessed from the Telix scripting languages as a variable. You may enter any string you wish to be able to access via the scripting language at a later time, such as your date of birth or mother's maiden name, or perhaps the name of the operator of the system (SysOp).



**Linked Script** is the name of the compiled Telix script file, without the extension, that is to be executed as soon as a connection is made to this system. If the script is not compiled, or the last modification date of the script source code is more recent than the compiled version of the script, then the script will automatically be recompiled for you upon connect, and prior to execution **only** if you have selected the **Recompile Scripts** option in the [General Options](#) configuration. Do not try to enter an extension in this field. If your script file is named **GO.SLC**, enter **GO**, not **GO.SLC**. Entering a filename that does not exist will invoke the script recorder the next time you connect to the system. Note the small disk button to right of this field. Clicking this button will present you with a dialog that allows you to choose a file from your default [Script Directory](#)+

**Connect Device** is the name of the connect device you will use to dial this system. A connect device holds data about your modem, such as its communications port, speed, initialization string, dialing prefixes, and other data about the modem or other hardware device. Many entries will share the use of a single connect device, so use caution in changing their contents. See the section on [Connect Device Configuration](#) for more details about connect devices.

**Terminal** is the name of the Terminal Emulation Device that you will use to communicate with this system. A terminal device holds information about the emulation (such as ANSI, VT-102, or RIPScrip) used to interpret special color or positioning commands while online. In addition, Terminal devices hold information about line feed translation, scrollbar buffer size, and terminal font used. Many entries will share the use of a single terminal device, so use caution in changing their contents. See the section on [Terminal Configuration](#) for more details about terminal devices.

**Protocol** is the default file transfer protocol for this online system. In most cases, ZModem will be the preferred transfer protocol. This setting affects how the upload manager presents your options to you, and makes the use of the upload manager easier.

**BBS Type** holds information about the type of system you are calling. Telix uses this to assist you in the processing of recorded scripts, and in the writing of new scripts in the script editor. It has no effect while you are online, though its contents can be accessed from a script variable.

**Expert Settings** are those settings which you may not want to apply to each and every entry in the PhoneBook. Since the entire PhoneBook is kept in memory at all times, you will want to leave the checkbox for Expert Settings turned off for most entries, to reduce the size of the entry in memory and on disk. If the Expert Settings box has been left unchecked, then the EXPERT BUTTON will be grayed out, and you will not be able to select it. If the Expert Settings box has been checked, then the EXPERT BUTTON will be active, and clicking on it will bring up the [Expert Entry Edit](#) dialog containing additional information about this online system.

Selecting the PREVIOUS BUTTON will display the last marked entry for editing. Note that this button is only available if you are editing a group of marked entries.

Selecting the NEXT BUTTON will display the next marked entry for editing. Note that this button is only available if you are editing a group of marked entries.



Selecting the OK BUTTON will save the entry you are currently editing, exit the dialog, and return you to the PhoneBook Manager.

Selecting the CANCEL BUTTON will discard any changes you have made to the entry you are currently editing, exit the dialog, and return you to the PhoneBook Manager. If you are editing a group of [marked](#) entries, the Cancel button does **not** discard changes made to other entries, only the one being edited. You can restore the marked entries by using the [Undo](#) command.

Selecting the HELP BUTTON displays this help page.

# Expert Settings



**Expert Settings** are those settings which you may not want to apply to each and every entry in the PhoneBook. Since the entire PhoneBook is kept in memory at all times, you will want to leave the check box for Expert Settings turned off for most entries, to reduce the size of the entry in memory and on disk. If the Expert Settings box has been left unchecked, then the EXPERT BUTTON will be grayed out, and you will not be able to select it. If the Expert Settings box has been checked, then the EXPERT BUTTON will be active, and clicking on it will bring up the following additional dialog containing information about this online system. Clicking on any item below will display further help on that item.

**Expert Entry Edit**

**Expense Device**  
Default

**Baud** Default **Parity** Default

**Data Bits:** Default 7 8  
**Stop Bits:** Default 1 2

**Keyboard File** Default  
**Translate Table** Default  
**RIP Icons Dir** RIP  
**Capture File** c:\telix\caps\range.cap  
 Auto Capture  Auto Usage

IEMSI Logons  Skip Mailers  
 Bulletins  'More' Prompts  
 Mail  Fullscreen Edit  
 Files  Fullscreen Chat  
 Hotkeys  Allow Tabs  
 Clear Screen  Do-Not-Disturb

**Location** Cary, NC

**Voice Number** (919)467-1167  
**Data Number** (919)481-9399  
**Birthdate** 10/08/1967

OK Cancel Help

**Expense Device** is the name of the cost-tracking calculator in use for this entry. Telix can create reports to tell you how much you've spent on a given system, or on a given PhoneBook. Expense devices contain data about the cost per first minute and additional minute to call this system at various times of the day. You may only choose from the list of Expense Devices that are currently defined. For more details about configuring an expense device, see the [Expense Device Configuration](#) section.

**Translate Tables** contain tables that change characters into other characters. Sometimes it is necessary for certain incoming or outgoing characters to be changed to another value or stripped altogether. Translation tables are kept in memory and as characters are sent or received, they are compared to the translate table to see if they need to be changed. Normally, no translation is done, but you can use this field to select any translate table that you have created. For more information on creating and maintaining translate tables, see the [Translate Table Configuration](#) section.

**Keyboard File** is the name of the default keyboard macro file that the remote system requires. Normally, the keyboard macros are defined by the terminal device in use, but you may specify an alternative file here. Note that using a keyboard macro file that is based on a different terminal device than the terminal device used by the entry can cause unpredictable results.

**Baud, Parity, Data and Stop Bits** are fields that you can use to override the settings of the Connect Device for a particular entry. A good use of these fields is to allow connection to 7-bit systems such as CompuServe, which require 7 data bits, even parity, and 1 stop bit, while the rest of the data for the connect device remains unchanged. This is a good way to avoid creating a new connect device with only minor changes, that would only be needed by a single system.



**RIP Icon Directories** can be configured on a system by system basis to keep track of the large numbers of RIP icon files at their disposal. You may either keep these all together in the main Telix RIP Icon Directory as defined in the [Filenames and Paths Configuration](#), or you may select a path for this system only in this field. Note that this field is not for an entire directory name; the subdirectory must exist as a child directory of the Telix for Windows directory. Later implementations of *RIPscrip* are expected to use *resource files* rather than icons and this field will later be used for that purpose.

**Capture File** is the default name of the file to which capture logs will be written. This filename overrides the main Telix setting in the [Filenames and Paths Configuration](#).

**Auto Capture** overrides a feature in the Telix [General Configuration](#), and allows for all calls to this particular system to have the entire session logged to disk. If Auto Capture is checked here, the session will be captured to one of the default capture file names as follows: If the entry's Expert Settings defines a valid [Capture File](#), it will be used. If Expert Settings does not define a valid Capture File, the default Telix capture file as defined in [Filenames and Paths Configuration](#) will be used.

**Auto Usage** overrides a feature in the Telix [General Configuration](#), and allows for all calls to this particular system to make corresponding entries to the Telix usage log. If Auto Usage is checked on here, the session will make entries to the default Telix [Usage Log](#) as defined in [Filenames and Paths Configuration](#).

**IEMSI Logons** (Interactive Electronic Mail Standard Identification) are automated logon packets exchanged between Telix for Windows and certain BBS packages. If IEMSI Logons are enabled, you will also be able to configure the fields that can be included in an IEMSI packet, such as your telephone number, location, and online preferences. Ask your system operator (SysOp) if his or her BBS package supports and allows IEMSI Logons. BBS packages known to support IEMSI Logons are RACC, Renegade, QuickBBS and RemoteAccess. You must enter the name and password that you use on the host system in the [User Logon Name](#) and [Password](#) fields in the [Edit Entry](#) dialog or Telix will not be able to log you on to the system. Also, some systems require that include your [Voice](#) and [Data](#) phone numbers for IEMSI logons. If this box is not checked, Telix for Windows will **not** attempt to log you on, **even** if the host requests it.

**Skip Mailers:** Some BBS systems have a *Mailer*, or *Front Door*, program that is ran before the BBS itself. This program is responsible for exchanging network messages with other BBS Mailers. This type of program is easily identified by the prompt it sends, "Press ESC twice to enter the BBS." Enabling this option will allow Telix for Windows to respond to this prompt, eliminating the need for you to take any action.

**Bulletins**, if selected, tells the host system that you want to see the list of new bulletins.

**Mail**, if selected, tells the host system that you want to check for new mail.



**Files**, if selected, tells the host system to display a list of new files.

**Hotkeys**, if selected, this setting tells the host system that you want to use Hotkeys.

**Clear Screen**, if selected, tells the host system that you want Screen Clearing codes to be sent. Make sure that you are using a terminal that supports screen clearing if you select this option.

**'More' Prompts**, if selected, tells the host system to prompt you when the screen has been filled with data before continuing with more data.

**Fullscreen Edit**, if selected, tells the host system that you want to use a full screen editor for entering messages. Make sure that you have selected a terminal (usually ANSI or ANSI-BBS) that supports this type of editing.

**Fullscreen Chat**, if selected, tells the host system that you are capable of full screen chat mode. Make sure that you have selected a terminal (usually ANSI or ANSI-BBS) that supports full screen movement.

**Allow Tabs**, if selected, tells the host system that it may send TAB characters.

**Do-Not-Disturb**, if selected, tells the host system to place you in Do-Not-Disturb mode. This setting is generally used by hosts systems that support multiple nodes and allow chatting between those nodes. If set, the host system will not allow other nodes to page you for chatting.



**Voice Number** is used to tell the host system your voice phone number. Some systems will not allow IEMSI logons unless this field is included.

**Data Number** is used to tell the host system your data phone number. We have had experiences with some BBS software that uses this field as your voice number. For this reason, we recommend that if you do not have a data number, you enter your voice number here.

**Birthdate** is used to tell the host system your date of birth. This is used by some software to further verify your identity.

**Location** tells the host system the location you are calling from. Many multi-node systems use this data when displaying a list of who is currently logged on.

Selecting the OK BUTTON will save the settings and return to the [Edit Entry](#) dialog.

Selecting the CANCEL BUTTON will discard any changes and return to the [Edit Entry](#) dialog.

Selecting the HELP BUTTON displays this help topic.

## Adding PhoneBook Entries



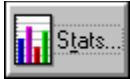
**Add Blank Entry** places a new entry after the last entry in the current PhoneBook. You may then edit the contents at your convenience, or move this new entry to any other location using the [custom sort](#) function.

**Insert Blank Entry** performs much the same function as **Add Blank Entry** above, with two key differences: Inserting allows for the insertion of more than one entry at a time, and the placement of the new entries is before the currently highlighted entry, rather than at the end of the PhoneBook. When inserting you will be presented with the following dialog box:





## PhoneBook Entry Statistics



**Entry Statistics** are kept about the number of calls made to a system, the date of the last connection to a system, the total amount of time spent on a system, and the costs associated with the calls to the system as calculated by the entry's expense device. Clicking on the **STATS** BUTTON brings up the following dialog:

A screenshot of the 'Entry Statistics' dialog box. The title bar is blue with the text 'Entry Statistics'. The dialog is divided into two sections: 'Connection Info' and 'Connection Costs'. Each section contains two text boxes with spin buttons on the right. The 'Connection Info' section shows 'Last Connected: 6/ 1/94', 'Total Calls: 123', and 'Total Time: 0012:31:19'. The 'Connection Costs' section shows 'Monthly Total: \$ 1.20' and 'Total Cost: \$ 81.03'. At the bottom, there are three buttons: 'OK' with a green checkmark, 'Cancel' with a red X, and 'Help' with a blue question mark.

Connection Info	
Last Connected:	6/ 1/94
Total Calls:	123
Total Time:	0012:31:19

Connection Costs	
Monthly Total:	\$ 1.20
Total Cost:	\$ 81.03

Buttons: OK Cancel Help

You may edit any of the statistics fields by using Tab and Shift-Tab to move through the fields, typing in new data wherever you wish. Clicking on a field allows you to begin typing in data for that field at once. You can also use the spin buttons to increase or decrease any field. Holding the left mouse button down on a spin button for several seconds quickly increases the speed at which the data changes. For further information on any item in the dialog, simple click on it.

The date that Telix last successfully made a connection to the entry.

The total number of successful connections that have been made to the entry.

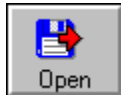
The total amount of time that has been spent on the entry.

The cost of all connections made for the current month as determined by the [Expense Device](#) selected for the entry.

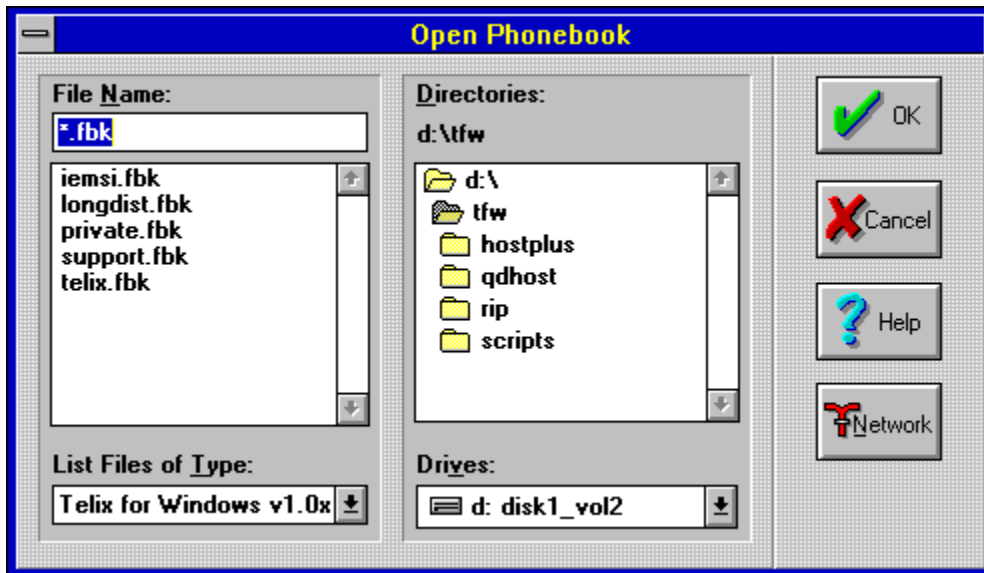
The cost of all connections made as determined by the Expense Device selected for the entry.

## Opening PhoneBooks

**New PhoneBook** will first save the current PhoneBook to its default file name and will then create an entirely new PhoneBook without any entries in it. This new PhoneBook will not be titled (i.e. it will not have a file name), and any attempt to open a new or different PhoneBook while an untitled PhoneBook is in memory will result in a prompt for a file name.



**Open PhoneBook** will first save the current PhoneBook to its default file name and will then prompt you for a new PhoneBook to load into the Manager. This prompt should be familiar to Windows users as a common file dialog:



From the **List Files of Type** selection box, you can select the format of the PhoneBook you wish to open. If the format is not Telix for Windows, the selected PhoneBook will be converted to Telix for Windows format and then saved. This will **not** overwrite your original PhoneBook. The types of PhoneBooks that can be converted is dependant on which PhoneBook converters you selected when you installed Telix for Windows. The Network button will only appear when you are running on a Local Area Network, and enables you to attach additional drives on the network "on the fly" if you have sufficient network privileges to do so.

**Append PhoneBook** brings up a dialog identical in form and function to the Open PhoneBook dialog. The one difference is that appending to a PhoneBook does not close the current PhoneBook. This action adds the contents of the specified PhoneBook to the one currently open. When appending to a PhoneBook, you can choose a format in the same manner as described above for **Open PhoneBook**.

## Saving PhoneBooks



**Save PhoneBook** saves the current PhoneBook to disk. This action isn't usually needed as Telix saves PhoneBooks automatically, though explicitly saving may be desirable if you know you are about to run an ill-behaved program that may crash Windows.

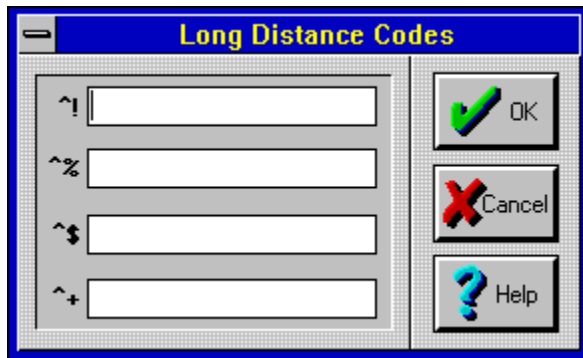
**Save PhoneBook As** brings up a common file dialog similar to the [Open PhoneBook](#) dialog, that allows you to select a path and new file name for the current PhoneBook. This command is equivalent to Save PhoneBook except that you can specify a new file name, effectively making a copy of the PhoneBook.



## Editing Long Distance Codes

The **Long Distance Codes** are advanced dialing options that add greater flexibility to your PhoneBook. There are four long distance code character pairs as shown in the dialog below; when encountered while dialing, they will be expanded to their defined strings. This function allows you to specify those strings. Long distance codes are most often used for long distance service PIN numbers and access codes.

For example, if you are a Sprint customer, you may need to enter a thirteen digit PIN number in order to place a call. Rather than include that PIN number in each entry, you should define one of the long distance codes to be your PIN, and only use that code in the entry. You can include any information in the long distance codes, and they will be translated to their defined strings when they are encountered. If you need to pause during the string, use the modem-defined pause string, often a comma.



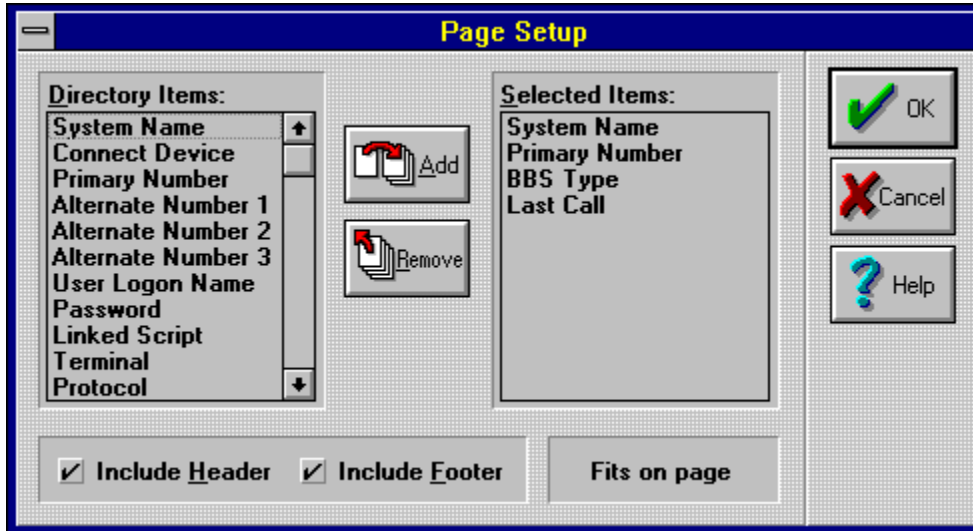
## Printing PhoneBooks



**Print PhoneBook** sends the contents of the PhoneBook to the default Windows printer (defined in Windows' Control Panel, or **Print Setup** below). The output is formatted as specified with the [Page Setup](#) command.

# Page Setup

**Page Setup** displays a dialog that allows you to select how your dialing directory printouts will appear. This includes which fields of the dialing directory are included in the output, how the columns are arranged, and whether or not to include headers and footers. If you need further help with any items in the dialog below, simply click on them.



This is a list of all items of information that can be printed about each PhoneBook entry. These items can be selected one at a time, or in a group. To select multiple items, select one and drag the mouse to the last item, select the first item and then select the last while pressing the Shift key, or choose them individually by pressing the Control key and selecting each item. Once chosen, the items can be added by selecting the [Add button](#).

This is a list of all items you have chosen to be printed for each PhoneBook entry. You can select any of these items if you want to remove them in the same manner as described for [Directory Items](#).

Selecting the ADD BUTTON will add all [Directory Items](#) that you have chosen to the [Selected Items](#).

Selecting the REMOVE BUTTON will remove all [Selected Items](#) that you have chosen.

If this box is checked, each page printed will be prefaced with a header that specifies the PhoneBook's file name, and column headings will be printed above the entry data.



If this box is checked, each page printed will end with the page number.

Telix will attempt to determine how much data can be placed across each page to be printed. Comparing this to the amount of data you have selected to be printed, Telix can determine if all data chosen will fit on the page. If it will, the message "Fits on page" will be displayed, otherwise "Too big for page" is shown. Most printers will reliably report their width, but it is dependent on your printer driver. For this reason, you may wish to experiment to determine exactly how much data will fit on your printer.

Selecting the OK BUTTON will store you preferences in the PhoneBook and return you to the PhoneBook Manager. These preferences will be stored with the PhoneBook file, enabling you to store different preferences with different PhoneBooks.

Selecting the CANCEL BUTTON will discard all changes you have made, restoring the previous settings, and returning you to the PhoneBook Manager.

Selecting the HELP BUTTON displays this help topic.

## Printer Setup

**Printer Setup** displays a dialog that will allow you to quickly choose the printer to use for output. It also offers a Setup option that allows you to configure the current printer and its behavior exactly as you would in Windows' Control Panel. Please refer to your Microsoft Windows documentation on how to use the Control Panel Printer Setup program.

# Undo



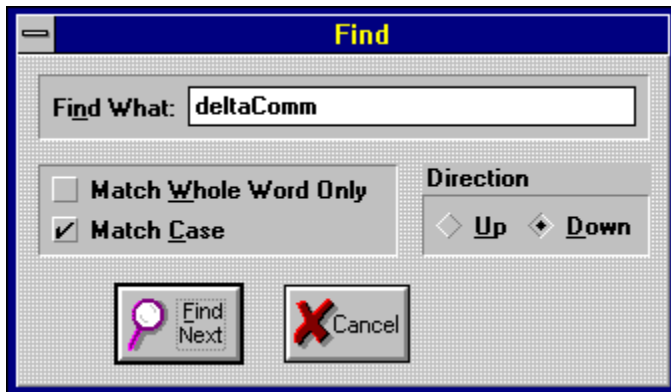
The **Undo** feature is your safety net; with the use of this tool, almost any change can be reversed, restoring the PhoneBook step by step until it is restored to its state as it was when you started Telix last. If there have been no changes that can be undone, then this button and menu item will grayed out.

A few changes cannot be undone, such as [Search](#) and [Replace](#). Changes made after another PhoneBook has been opened or after Telix has been exited also cannot be "undone."

## Searching PhoneBook Entries



The **Find** menu item prompts for a string to search for in the text fields of a PhoneBook's entries. You can optionally search for only specific cases, or only complete words. The following dialog appears when you select the Find function:



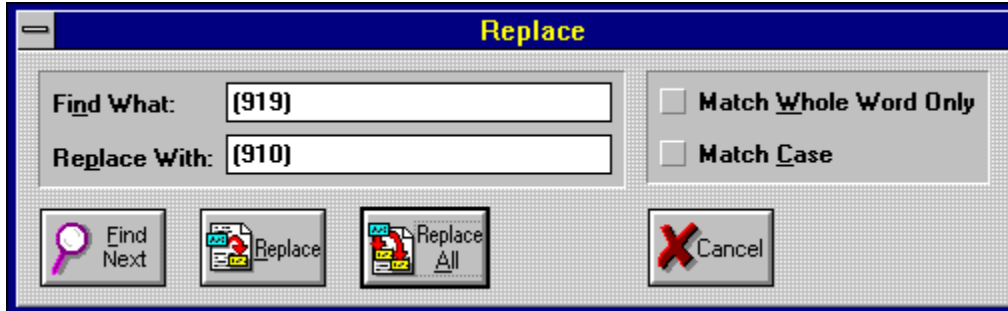
This dialog remains on the screen until you select Cancel; you will see the results of your search in the PhoneBook Manager in the background. Once you have found the entry you were searching for, or are ready to stop searching, click on Cancel or press Esc. The **Again** menu selection repeats the last search without popping up the dialog box.

The fields that are examined during a search are: System Name, Primary Number, User Logon Name, Password, Linked Script and Comment.



## Replacing PhoneBook Entries

**Replace** is very much like [Find](#) in that it searches for text within the text fields of a PhoneBook's entries. Replace will find and replace text in the following text fields: System Name, Primary Number, User Logon Name, Password, Linked Script and Comment.



One note of caution, this operation can **not** be [undone](#).

## Marking PhoneBook Entries

Many commands, such as dialing, editing, deleting and others, can be performed on either a single entry or all marked entries. Marking entries is very simple. Using the keyboard, simply press the spacebar key when the desired entry is highlighted. This will place a checkmark next to the entry and advance the highlight box to the next entry. Alternatively, you can hold down the Shift key while pressing the spacebar and the highlight box will be moved to the previous entry, rather than the next. Using the mouse, simply click on the entry to mark it. If you want to mark several consecutive entries with the mouse, click on the first entry and hold the mouse button down while move the pointer in the direction you wish to mark.

**Mark All** and **Unmark All** on the [Manage Menu](#) are quick ways to tag or untag all entries in the PhoneBook for action. Common uses of these features would be to mark all entries so that you could begin dialing them, or to unmark all of your entries to start over with a fresh group of numbers to dial.

**Unmark on Connect** tells Telix to remove the mark in the PhoneBook manager once we have made a connection to an entry. This action is on by default, but it may sometimes be desirable to leave an entry marked after you have connected to it. This option is a menu toggle option, meaning that each selection of it toggles it on or off, depending on the current state. If the option is currently on, a checkmark will appear to the left of the menu while viewing the menu.

**Show Numbers** enables or disables the display of sequential entry numbers for each entry in a PhoneBook. If this option is enabled, sequential numbers will appear in the PhoneBook to the left of the system name. This option is a menu toggle option, meaning that each selection of it toggles it on or off, depending on the current state. If the option is currently on, a checkmark will appear to the left of the menu while viewing the menu.

## Sorting PhoneBooks

**Sort By...** commands sort the current PhoneBook based on the command given. The built-in sort keys that can be selected from the menus include:

- Sort by Name
- Sort by Number
- Sort by Device
- Sort by Last Call Date
- Sort by Total Calls

These sorts will take place in the order (ascending or descending) specified by the [Sort Mode](#). If you find that you've made an error in sorting, the [Undo](#) command will restore the PhoneBook to its original order.



**Custom Sorting** is the most flexible and versatile of your ordering options. A custom sort allows you to drag and drop individual entries or groups of consecutively marked entries to new locations within the PhoneBook -- even to new locations not visible in the PhoneBook at the time!

The Custom Sort function is a menu toggle function. When you select the menu item or click on the arrange button as shown above, you enter custom sort mode and many of your menu options and QuickTool buttons are instantly grayed out and unavailable. Clicking the ARRANGE button again or selecting Custom Sort from the menu will exit custom sort mode and restore the menu items and QuickTools to their normal state.

When you are in custom sort mode, clicking on an entry does not mark it as selected as you normally expect. To manually order your PhoneBook, you click and hold down the left mouse button on an entry or group of entries you wish to move to a new location. While you are holding down the mouse button, your mouse cursor will change to a cupped hand to show that you are manually moving the entry or group of entries around.

If the entry was not marked (i.e. does not have a checkmark to its left) before you entered custom sort mode, then clicking and holding on such an entry will not move or affect any adjacent entries. If the entry was selected (i.e. does have a checkmark to its left), then all immediately adjacent entries also marked with checkmarks will also be picked up and dragged along with the one you are explicitly dragging.

Attempting to drag vertically above the top listing within the view or below the bottom listing in the view will scroll the view to show parts that were not on-screen before, while still keeping your dragged selection on screen. In this manner, you can drag entries to locations in the PhoneBook that were not on screen at the time you started to drag.

Releasing the mouse button while dragging places the dragged entries at their new location in the PhoneBook.

All of the changes you make within one custom sort session are considered to be one action by the Undo command. Entering custom sort and moving three entries is one action, and clicking on Undo will undo all three moves at once. However, entering custom sort, moving an entry, and exiting, three times in a row, is considered to be three separate actions.

**Sort Mode** tells Telix whether to sort in ascending or descending order when you sort based on a built-in sorting order such as name or telephone number.

## Default PhoneBook

A default PhoneBook may be defined in the [General Options Configuration](#), and if there is, that PhoneBook will be loaded, but not necessarily displayed, every time Telix is started. If no default PhoneBook is defined, the PhoneBook last used will be loaded when Telix is started.

## PhoneBook Help



Selecting the Help QuickTool will display this help file, starting with section entitled [The PhoneBook](#).

## Exiting the PhoneBook



Exit PhoneBook is somewhat of a misnomer in that it doesn't really exit the PhoneBook by unloading it from memory -- it just "hides" the PhoneBook for a while, so that you can see the Terminal Window instead. All selections and positions are saved.



# Telix Configuration

If everyone wanted to use the very same program, owned the very same modem, and called one single on-line service, "cyberspace" would not be a very interesting place. Telix for Windows allows a vast number of different configurations and appearance changes to satisfy the needs of even the pickiest person.

Almost every configuration command lies under the umbrella of the [Configure menu](#). With it, you may change [where Telix looks for its files](#), how each [terminal emulation behaves and appears](#), how [modems react to commands](#) (and at what speeds they do so), and even the [size of the font](#) used in the [terminal window](#).

Most of what you can change here has been pre-configured to the most useful and efficient setting, but don't let us tell you what to do! It's very difficult to break Telix for Windows, so feel free to experiment with each of the options described in the help file. You can always change things back, often simply by hitting a CANCEL BUTTON.

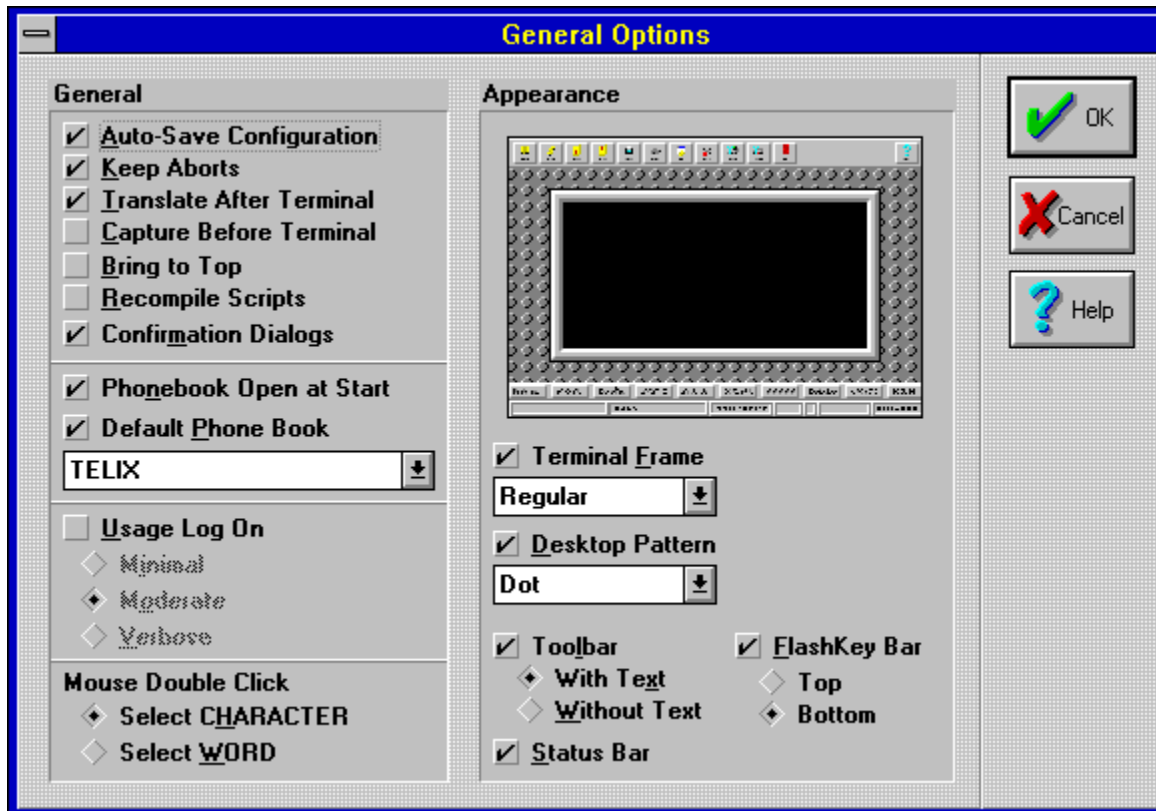
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## See also

[General Options](#), [Terminal Devices](#), [Connect Devices](#), [Expense Devices](#), [FlashKey Macros](#), [Filenames & Paths](#), [ASCII Transfers](#), [Protocol Options](#), [Keyboard Macros](#), [Translation Tables](#), [Sounds](#), [Resize Terminal](#), [Opening & Saving Configurations](#)

# General Options Configuration

Selecting **General Options** from the [Configure menu](#) allows you to configure the general appearance and function of Telix for Windows. With this function you can change the frame and desktop patterns, determine how Telix behaves at startup and shutdown, and whether some of the more general features of Telix are in effect (such as whether you are asked to confirm hanging up or exiting Telix). Below is a representation of the General Options configuration dialog. Simply click on any part of it to view specific help.



**Auto-Save Configuration**

This checkbox determines whether the changes you make under any of the Configure menu items will automatically be saved to the master configuration file when you exit Telix for Windows. It is a good idea to leave this option on unless there is a compelling reason for your changes to be discarded between sessions, such as demonstrations or testing of each feature to see how it works.

**Keep Aborts**

When transferring a file, it is possible, although not likely, that the file transfer could be interrupted before it is complete. Usually this is a result of human intervention rather than program failure (the electricity blinked for a moment, someone picked up the phone, etc.), but it can be particularly annoying near the end of a large file transmission. Telix for Windows' ZModem protocol can resume file transfers at the point where the interruption occurred, provided that the partial file was kept. This checkbox determines whether Telix for Windows will delete files that are not completely received. If the option is on, incomplete files will be saved; if not, they will be erased, and the transfer will have to be started over from the beginning.

### **Translate After Terminal**

Terminal emulations, such as VT-220 or ANSI, use special sequences of characters to make your screen display different colors or different sizes of text. Normally, Telix will process all characters through the [translation table](#) before passing the characters along to the terminal emulator. Sometimes it is desirable to have the opposite occur. For example, some characters do not appear on North American keyboards; characters such as é, ö or ß do commonly appear on French or German keyboards, among others. These characters are above 127 in the ASCII table, and cannot be transmitted over seven-bit systems. To solve this problem, some European systems have developed a standard substitution for these characters for transmission on 7-bit systems. The characters that were chosen sometimes conflict with the characters used by terminal emulators to send color, size, or positioning commands, so on these systems, it is desirable for the terminal emulator to receive all of the characters first. The remaining characters can then be passed to the translation table for proper handling. Most users will leave this option off, though it will not affect system performance if it is on.

### **Capture Before Terminal**

When *capturing* data that comes over the modem to a file, usually you will not want to capture any of the special terminal emulation sequences that show color, positioning, or character size. Editing such a file later will display a file that seems full of garbage mixed in with your captured data; that gibberish is the terminal emulation data. On occasion, though, it is desirable to capture everything that comes in, including the emulation commands. For example, you might see an interesting ANSI screen on a system, and want to save it to show to friends. If you don't capture such a screen before the terminal emulation, then none of the color codes will come through, and you'll see a black and white image only. This option is usually left off unless you specifically want the emulation codes to be captured into the file as well.

**Bring To Top**

During a lengthy redial process or file transfer, you will want to take advantage of Windows' built-in multitasking capabilities. This option determines if Telix will force itself to become the current application when a connection is made or a file transfer is completed. If you were, for example, playing a game in Windows, and the file transfer you started earlier completes, this option being on would force the game to become a background activity, with Telix for Windows becoming the foreground activity. Telix will always return to the top in the state you left it. If Telix was minimized before you switched over to the other task, it will pop back to the top in a minimized state as well. If this option is off, you must explicitly switch tasks when your transfer is complete or your connection is made.

**Recompile Scripts**

Scripts exist in two states; the uncompiled source code which Telix cannot execute directly, and the compiled script which Telix uses for execution. When a script is run with this option turned on, Telix will compare the file dates of the compiled and uncompiled versions of the script. If a source file (.SLT or .SIM extension) is found to be newer than the compiled script (.SLC extension), the script will be recompiled before running it. If during this recompile a compilation error occurs, it will be displayed and the script will not be executed.



**Confirmation Dialogs**

Telix for Windows can safeguard you against doing some things that you might not have wanted to do, such as hanging up the phone or deleting a file. If Confirmation Dialogs are turned on, you will be prompted with a dialog that asks Are you Sure before performing such actions. If this option is turned off, then these critical actions will be performed without asking, as soon as you select the action.

**PhoneBook Open at Start**

Many users prefer that the PhoneBook be the focal point of Telix rather than the terminal window, especially at startup. With this option checked, the PhoneBook will automatically be opened when you run Telix for Windows. Which PhoneBook is loaded depends on the [Default PhoneBook](#) Option; if the default PhoneBook option is selected, the specified PhoneBook will be loaded. If the Default PhoneBook Option is not selected, then Telix for Windows will load the last PhoneBook you had open as the default PhoneBook.

**Default PhoneBook**

When opening the first PhoneBook of a given session, Telix for Windows normally opens the last PhoneBook you had open when you exited the program. If you wish a specific PhoneBook to always be the first one opened at startup or when the PhoneBook manager is executed, this option will override this feature. If selected, the specified PhoneBook in the drop-down list will be opened instead of the *memorized* PhoneBook. You cannot type your own PhoneBook name into this list -- you may only select from the existing PhoneBooks in the default Telix for Windows directory. If the specified PhoneBook does not exist, then TELIX.FBK will be opened instead.

**Usage Log On**

If this option is checked, whenever Telix starts it will automatically open the usage log as defined in the [Filenames and Paths configuration](#), and will make entries to the Usage Log until you exit the program or turn off the Usage Log manually.

**Usage Log Type**

The detail of information stored in the usage log varies depending on the setting of the Usage Log Type. You may select any of three usage log levels of detail:

- Δ Minimal Detail
- Δ Moderate Detail
- Δ Verbose Detail

See the [Usage Log](#) section for a complete discussion of these levels of detail.

**Mouse Double Click**

When you double-click your primary mouse button within the terminal window, it will send the data you clicked on to the connect device. You can choose to have the double-click send either the single character you clicked on or the entire word you clicked on with this option. For this option, a word is defined to be a series of characters bordered by either spaces or the terminal window boundary.

**Appearance**

Within General Options, you may set certain features that determine how Telix for Windows will appear to you. Included in this are whether a QuickTool toolbar and FlashKey Bar are on screen, and, if so, how or where they appear; you can also choose the frame that surrounds the terminal window, and the pattern that goes on the Telix for Windows desktop. Changes you make to the Appearance section are reflected in this small sample window as you select them, to let you preview the new appearance.

## Terminal Frame

The frame surrounding the terminal window is completely configurable. If the Terminal Frame option is checked, then a frame will appear around the terminal window; if a frame is desired, you may select which frame to display. There are several built-in frames to choose from, some of which (such as Rainbow) look best only in 256 color (or higher) mode.

You may also create your own frames as bitmaps. All files with a **.FRA** filename extension that are located in the Telix for Windows default directory will be assumed to be user defined frames in Windows **.BMP** format, and will appear in all caps in the terminal frame selection list. User-created frame bitmaps must be no more than 64k in size, and should have heights and widths that are each evenly divisible by three. Multi-color frames are allowed. For a complete discussion on how to create your own frame, see the [Creating a Frame](#) section.

## **Desktop Pattern**

When the terminal window is sized such that it does not fill the entire application's window, a desktop pattern is displayed in the unused space in much the same way as Windows uses wallpaper bitmaps for its backgrounds. If the Desktop Pattern option is checked, then the pattern named in the accompanying selection list will be used for the Telix desktop. There are several built-in patterns to choose from.

You may also create your own desktop patterns as bitmaps. All files with a **.BKG** filename extension that are located in the Telix for Windows default directory will be assumed to be user defined desktop backgrounds in Windows .BMP format, and will appear in all caps in the desktop pattern selection list. User-created pattern bitmaps must be no more than 64k in size. Bitmaps whose size is evenly divisible by eight will draw much faster than other sizes. Multi-color patterns are allowed. For a complete discussion on how to create your own desktop pattern, see the [Creating a Desktop Pattern](#) section.



**ToolBar**

If the ToolBar option is checked, then the QuickTool bar will appear in the application, just under the regular menu bar. The QuickTools can be displayed either as images only, or as images with descriptive text. The images with text are somewhat larger than the images without text, and do reduce the maximum size of the terminal window. It is recommended to leave the text turned on until you are comfortable with the functions of QuickTools. If the ToolBar option remains unchecked, then no QuickTools will appear in the application.

**FlashKey Bar**

If the FlashKey Bar option is checked, then the [FlashKey bar](#) will appear in the application. You may position the FlashKeys, if enabled, either at the top of the application below the QuickTools (or the menu if no QuickTools are present), or at the bottom of the application above the Status Bar (if present). If the FlashKey Bar option is unchecked, then no FlashKeys will appear in the application, though their keyboard functions will still work as defined in the [FlashKey Configuration](#).

**Status Bar**

If the Status Bar option is checked, then the [Status Bar](#) will appear in the application at the bottom of the window. If the Status Bar option remains unchecked, then no Status Bar will appear in the application.

**OK Button**

Selecting the OK BUTTON will close the General Options dialog and put your selections into effect.

**Cancel Button**

Selecting the CANCEL BUTTON will close the General Options dialog and restore your previous settings, discarding any changes you have made.

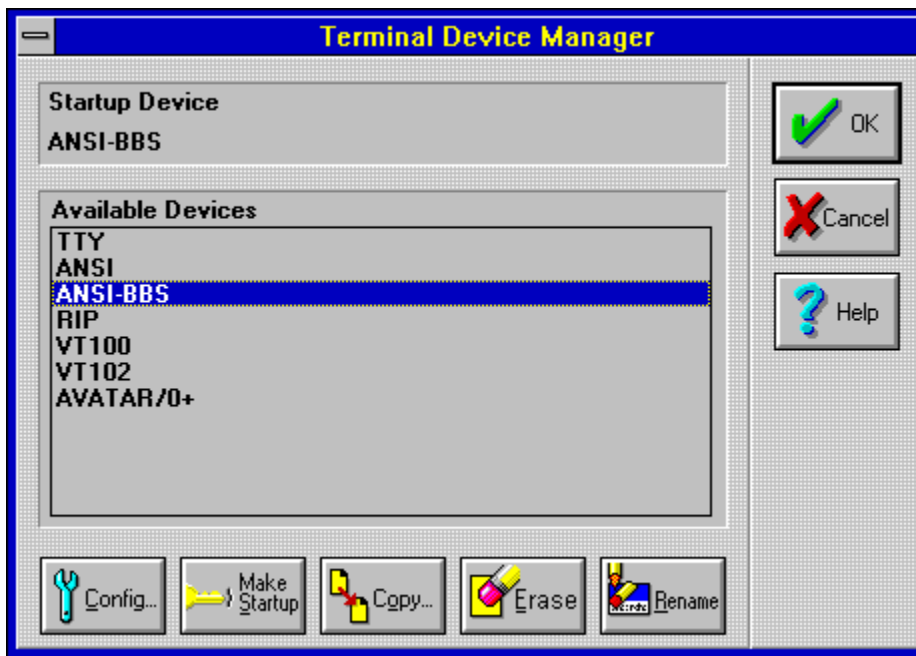
**Help Button**

Selecting the HELP BUTTON will display this help page.

# Terminal Device Manager



Terminal devices are the core of how the terminal window presents information to you, and how it interprets the terminal emulation sequences sent to it by the host computer. Each terminal device is based on a specific terminal emulation (DEC VT-102, ANSI, etc.), and stores all the information needed to determine its configurable behavior, including its size, font, and reaction to keystrokes. You can tell each [PhoneBook](#) entry which terminal device to use for communications. In this manner you may have many PhoneBook entries associated with just one terminal device, and any changes made to the device will apply to all of the entries that use it. A wise grouping of entries and terminal devices saves you many headaches when changing hardware or preferences. The following is an example of the terminal device manager. Simply click on any part of it to view specific help.



**Startup Terminal Device**

Telx for Windows will always place a terminal window on screen at startup. The device you specify as the startup device with the [Make Startup button](#) will be the terminal device that you first see when you run Telix. Connecting to a PhoneBook entry that specifies a different terminal will result in a change of terminal devices and disconnecting from that entry will not revert to the original device. The startup device is only used when the program is first run, and can later be changed on demand.



**Available Terminal Devices**

While in the Terminal Device Manager, clicking on any of the available terminals highlights the terminal and makes it the current or active device. Any actions taken within the Terminal Device Manager will affect only the current device. The Terminal Device Manager is your portal to making new Terminal devices, modifying existing devices, or choosing which terminal device to use at a given moment.

**Make Startup Button**

Selecting this button will cause the currently selected terminal to become the [startup terminal](#).

**Copy Terminal Device**

To create a new terminal device, highlight the device most similar to the one you wish to create, and select the COPY BUTTON. You will be prompted for a unique name for the new terminal device, which will have all of the attributes of the original device. You may then make modifications to the options of the new terminal device as needed.

**Erase Terminal Device**

To remove a terminal device from the list of available devices in the device manager, highlight the device you wish to remove and select the ERASE BUTTON. If Confirmation Dialogs are active, you will be asked to confirm the deletion. The terminal device will then be removed from the list of available devices. Any PhoneBook entries that were associated with the deleted device will no longer be able to access the device, and will thus use the Current Device, a selection that may not be appropriate for that entry. Delete terminal devices with caution. Telix for Windows will not allow you to delete a terminal device if it is the only device available, or if it is defined as the Startup Device.

**Rename Terminal Device**

Terminal Devices are always identified by their names, both in the configuration of devices and in the selection of devices in PhoneBook. The rename function allows you to change the name of a device. It is usually not a good idea to rename existing devices; any PhoneBook entries that are associated with the device will no longer be able to access the newly renamed device, and will thus use the Current Device, a selection that may not be appropriate for that entry. Rename terminal devices with caution.

**OK Button**

Selecting the OK BUTTON will close the Terminal Device Manager. If you have selected a new terminal device, the [terminal window](#) will be updated to reflect this change.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Terminal Device Manager and restore your previous settings, discarding any changes you have made. This extends to all changes you may have made to individual terminal configurations.

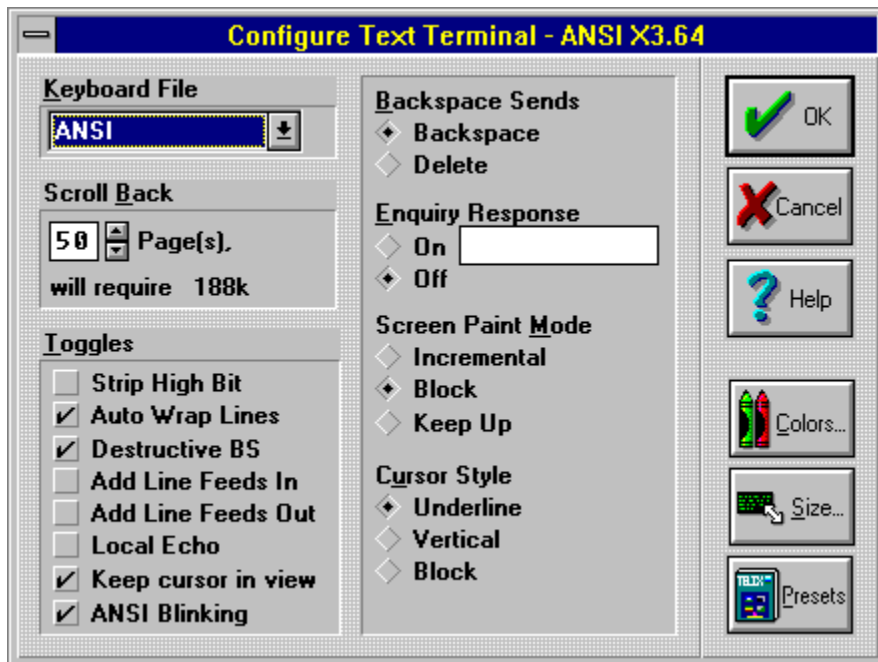
**Help Button**

Selecting the HELP BUTTON will display this help page.



## Configuring Terminal Devices

To change the characteristics of a terminal device, highlight it to make it the currently selected device in the list of available devices, and select the CONFIG BUTTON. The dialog that results allows you to change many of the default behaviors and functions of the selected terminal device. Many of these options are matters of personal preference, but you will not often find cause to change most of them. A sample of the configuration dialog, with detailed descriptions of each option available to you, follows. Simply click on any part of it to view specific help.



**Keyboard File**

Each terminal device performs two major functions; it intercepts incoming sequences of characters that denote attribute and positioning commands from the remote terminal, and it handles outgoing keystrokes, translating your keystrokes into commands recognizable by the remote terminal. The keyboard file contains data about the latter of these two functions. In this drop-down list, you may choose from any of the keyboard files contained in your [Keyboard Macro Manager](#).

**ScrollBack Pages**

This setting determines how much memory is set aside to hold data that has already "scrolled off" of the terminal window. The [Scroll Back function](#) can later be used to turn back the pages to review data that has already moved off the screen. Memory is set aside for scrollback data as pages. One page is the amount of memory needed to store all of the rows and columns of the current terminal device. For example, if you selected 5 pages of scrollback for a terminal with 80 columns and 24 rows, you would be dedicating 19k of RAM to hold older data, and you could always look back into that RAM to see this older data, up to the last five full screens of data that have passed by. You may select up to 99 pages of buffering for the Scroll Back function. Graphics-based terminal devices (such as *RIPscrip*) do not allow scrollback; this is caused by the graphical nature of the data as opposed to the line-by-line nature of a text-based terminal. If the terminal device does not have scrollback capabilities, then this option will be disabled and cannot be changed.

**Strip High Bit**

Telix for Windows can strip the high, or most significant, bit from incoming data bytes while in terminal mode. This is sometimes useful because it allows the parity bit of seven bit systems to be ignored. A common use of this is using a modem set for 8 data bits to call a system that tells you to call with 7 data bits. If your remote system instructs you to set your software for 7-E-1, or 7 data bits, Even Parity, and One Stop Bit, then you should instead set Telix for Windows' connect device for 8-N-1 (Eight data bits, No Parity, and One Stop Bit), and activate this toggle in the terminal device instead.

**AutoWrap Lines**

This option specifies the default state of the automatic word-wrapping functions of terminal emulations. For example, if a terminal screen is specified to be 80 columns wide, and a steady stream of 100 characters comes in, the last twenty characters will either *wrap around* to appear on the next line of the terminal, scrolling the terminal to create a new line if necessary, or will, if this option is off, simply pile up in the 80th column, causing some of the characters to appear to be lost. This option is generally left on so as to allow automatic wrapping.

**Destructive Backspace**

This setting controls how Telix treats incoming backspace characters. If this option is checked, then Telix for Windows will back up over the previous character and erase it; otherwise, the existing character is not erased and only the cursor will be moved.

**Add LineFeeds In**

If you are connected to a remote system and the incoming data keeps writing over and over the same line in the terminal window, you will want to add line feeds to the incoming carriage returns to force the terminal to move the data down to the next line. Otherwise, this option is generally left off.

**Add LineFeeds Out**

Telx normally passes along only those keystrokes you type, as processed by the keyboard file in use at the time. In some cases it may be desirable to send a line feed after each carriage return sent by Telix for Windows. Checking this option on forces these extra line feeds to be sent, though this option is usually left off.



## Local Echo

Sometimes referred to as *duplex*, local echo determines whether or not the keys you type appear on screen as you type them. If local echo is on, often called *Half Duplex*, this means that the keys that you type are immediately placed onto the terminal window by Telix. If local echo is off, a state often called *Full Duplex*, then the characters you type are not placed on the terminal screen by Telix. The most common setting for this state is Full Duplex, or local echo off, where characters you type are sent to the remote site, which sends the character back to Telix for confirmation (thus **full duplex** mode). It is the character that is sent back that is displayed on the terminal screen, not the typed character. If you begin to see a doubling of all characters you type (i.e. TTeelliixx ffoorr WWiinnddoowwss), then this option needs to be turned off. If you cannot see any of the characters you type at all, then this option may need to be turned on. To quickly toggle the current terminal's local echo state, press ALT-/.

**Keep Cursor In View**

In a windowed environment such as Microsoft Windows, it is possible to have a terminal device whose display area is larger than your screen will allow. If this occurs, scrollbars will appear at the edge of the terminal view to allow you to move around to see the entire contents. When the Keep Cursor in View option is on, the scrollbar thumbs will automatically move about as new data is received, to insure that the cursor is always within the visible portion of the terminal window. The disadvantage to this option is that frequent cursor repositioning can slow down the updates to the terminal dramatically without a fast machine and accelerated video card. This option is largely a matter of personal taste that you should experiment with to determine the best setting for you. This option has no effect when scroll bars are not present in the terminal window.

**ANSI Blinking**

DOS telecommunication software can readily display a character that blinks on and off in a regular pattern. Such characters are known as blinking ANSI characters. Microsoft Windows' use of color palettes and device independence makes the issue of blinking ANSI somewhat more difficult. While Microsoft has provided Windows functions to simulate ANSI blinking, these functions are only available in sufficient form when using a 256 color driver. 16 color drivers do not support sufficient palette entries and 32k color drivers or better do not support palette manipulation at all. Telix for Windows will automatically detect if you are using a 256 color driver and will activate ANSI blinking. Some video drivers do not properly support this function, though, which results in strange color mutations or other applications not displaying the proper colors. this option overrides all ANSI blinking and disallows it when checked, even if Telix for Windows detects a 256 color driver. This option has no effect if you are not using exactly 256 colors in your video driver.

**Backspace Sends**

Normally, Telix for Windows sends the backspace character (ASCII 08h) when the Backspace key is pressed, and the DEL character (ASCII 7Fh) when Control-Backspace is pressed. If this option is checked, then this swaps the actions of Backspace and Control-Backspace.

**Enquiry Response**

Some systems require that the terminal program send an identification string when an ENQ (Ctrl-E, or ASCII 05h) character is received. You may define your own "answerback" response to this enquiry here, and specify if the defined string should be sent. If CompuServe Quick-B or B+ transfers are enabled, then the answerback string will not be sent, as the ENQ character is used as part of the startup for these protocols. It is advised that you keep a separate terminal device defined solely for calling CompuServe due to this and other differences.

## Screen Paint Mode

Telx for Windows can place received characters on the screen in one of three ways. Your choice of methods combined with the speed of your system will determine the smoothness of the scrolling, and whether or not Telix for Windows can *keep up* with a steady stream of incoming characters at high speed.

It is wise to remember that the more memory there is to be moved with each scroll, the less efficient (and less speedy) the scroll will be. Telix for Windows will perform best when you account for these factors in your configuration and system setup:

- △ Higher color resolutions always increase the amount of memory needed to scroll a line. A line of text in 65,536 color mode uses four times the RAM as the same line in 16 color mode, and will therefore take four times longer to scroll.
- △ Larger terminal windows always increase the amount of memory needed to scroll a line. Since the terminal window size is usually dependent on the selected font size, smaller fonts mean faster scrolling. Characters in a 10x12 font will contain 120 pixels per character, while a smaller 5x8 font will contain only 40 pixels per character, or a third less memory to move around.
- △ A "large" terminal window in 800x600 mode can often scroll faster than a smaller terminal in 1024x768 mode. The higher you pixel resolution, the slower scrolling will be on a similarly sized window.

The combination of a high screen and color resolution like 1024x768x65k and a large terminal window (10x18 font) can drastically slow down your system. A fast local-bus video accelerator such as those reviewed in various computer magazines can speed up scrolling and the rest of the Microsoft Windows environment by a tremendous amount. **We cannot recommend highly enough that you invest in a graphics accelerator board, especially if you plan to communicate at 14,400 bps or faster.**

Knowing the above, the three scrolling modes of Telix for Windows are as follows:

- △ **Incremental mode** is the mode in which each character is placed on the screen as it is received. This is the slowest of all modes, but will result in the smoothest scrolling. A video accelerator card is usually required for incremental mode.
- △ **Block mode** is the recommended mode because it accumulates groups of characters with similar attributes and positions and writes them to the screen in blocks. Scrolling is still done one line at a time in block mode, but block mode is much faster than incremental mode.
- △ **Keep-up mode** is the fastest mode, though it will produce what appears to be very jerky screens with streaming data. Keep-up mode saves up line scrolls and performs several at once. Since scrolling is the slowest part of updating the screen, by scrolling two or more lines at a time when needed, Telix for Windows can keep up with most any data stream coming in; scrolling more than one line at a time does tend to make the screen appear to jump in larger blocks, resulting in a jerky appearance, but this is normal in Keep-up mode.

**Cursor Style**

Not to be confused with Windows' mouse cursor, the terminal window cursor is the blinking indicator of where the next character received will go. You may select the shape of your cursor to be one of three styles: a vertical bar, an underscore character, or a solid block the size of a single character.

**Colors Button**

Selecting the COLOR BUTTON will allow you to select the foreground and background colors for the terminal device.



**Presets Button**

Selecting the PRESETS BUTTON will restore all of the options within the terminal device configuration to the defaults associated with the parent terminal. The parent terminal is the emulation specification, such as VT-102 or ANSI, on which this terminal device is based. This parent terminal is usually a part of the device name. If you mistakenly press this button, and wish to undo the changes that it made, simply click the CANCEL BUTTON.

**OK Button**

Selecting the OK BUTTON will close the Terminal Configuration dialog and update the terminal with your new selections.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Terminal Configuration dialog and restore your previous settings, discarding any changes you have made.

**Help Button**

Selecting the HELP BUTTON will display this help page.

# Connect Device Manager



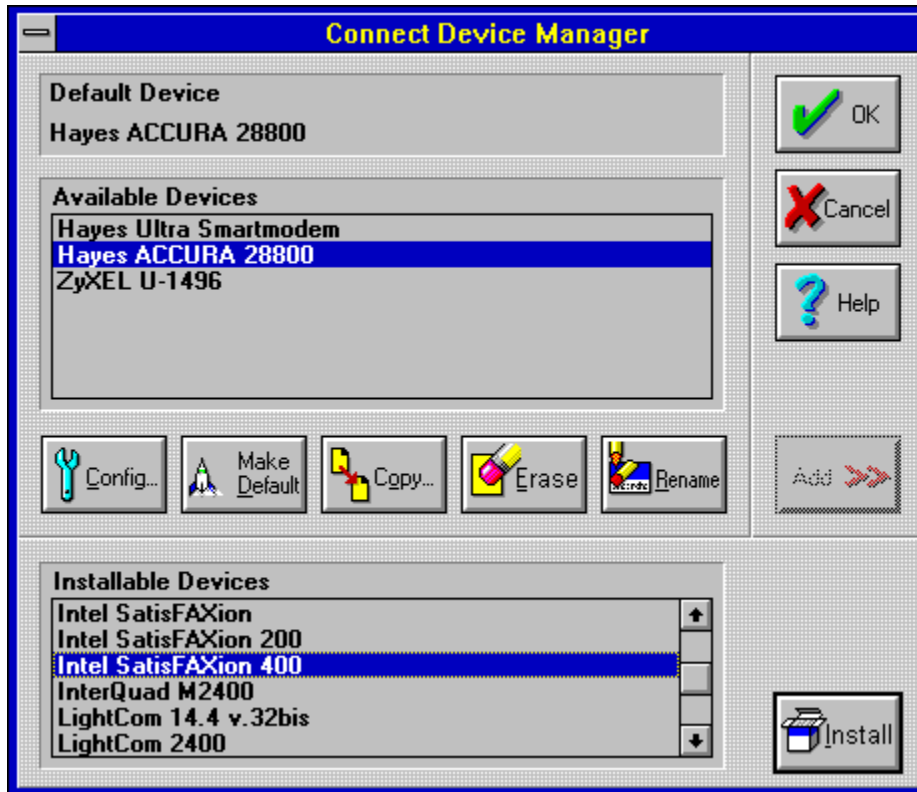
Connect devices contain the vital information about your modem that Telix for Windows will use to make connections. In most communications software, you are presented with a confusing morass of cryptic "init strings" and "port settings". You don't want to mess with parity settings and bits per second, though, do you? Telix for Windows already knows about the settings for over 500 brands and models of modems; all you have to do is tell Telix which one you're using, and which communications port it is connected to (and we'll even help you out with the communications port!). For the brave and fearless, though, the internal workings of the connect device can be fine-tuned, from the modem init string to the number of data bits in a byte. Configuring a connect device is how this is done. Once configured, each PhoneBook entry then references only the connect device, rather than containing details about the modem or port settings on an entry by entry basis. Later, if you upgrade your modem you can simply make the changes to the connect device and all of the PhoneBook entries change along with the device! It can't get much simpler. The following is an example of the terminal device manager. Simply click on any part of it to view specific help.



# Connect Device Manager



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**Default Connect Device**

Telix for Windows always needs a device to communicate with. The device you specify as the startup device with the [Make Default button](#) will be the connect device that is used when you first run Telix. Connecting to a PhoneBook entry that specifies a different connect device will result in a change of devices and disconnecting from that entry will not revert to the original device. The startup device is only used when the program is first run, and can later be changed on demand.

**Available Connect Devices**

While in the Connect Device Manager, clicking on any of the available connect devices highlights the device, making it the current or active device. Any actions taken within the Connect Device Manager will affect only the current device. The Connect Device Manager is your portal to making Telix for Windows aware of new modems, for modifying data about previously installed devices, or choosing which connect device to use at a given moment.



### **Make Default**

The Default Connect Device is a special device. A device named **Default** is always available to PhoneBook entries. If an entry is not told to use a specific connect device by name, but is instead configured to use the built-in device named **Default**, the entry will use the device that the Connect Device Manager has specified as the default connect device. It is wise to leave most entries in a PhoneBook configured to use the built-in connect device named **Default**, because later changes in modems will not require you to change the connect devices of many entries -- you will only need to install a new device and make it the default connect device. To make a device the default connect device, highlight it in the list of available devices and click on the MAKE DEFAULT BUTTON.

**Copy Connect Device**

To create a new connect device, highlight the device most similar to the one you wish to create, and select the Copy function. You will be prompted for a unique name for the new connect device, which will have all of the attributes of the original device. You may then make modifications to the options of the new connect device as needed. Copying is only necessary when Telix is not aware of the specific connect device you need, or when you want slight configuration changes to a single connect device.

Always check the list under the ADD BUTTON to see if your connect device needs have already been anticipated.

**Erase Connect Device**

To remove a connect device from the list of available devices in the device manager, highlight the device you wish to remove and select the ERASE BUTTON. If Confirmation Dialogs are active, you will be asked to confirm the deletion. The connect device will then be removed from the list of available devices. Any PhoneBook entries that were associated with the deleted device will no longer be able to access the device, and will thus use the Current Device, a selection that may not be appropriate for that entry. Delete connect devices with caution. Telix for Windows will not allow you to delete a connect device if it is the only device available, or if it is defined as the Default Device.

**Rename Connect Device**

Connect Devices are always identified by their names, both in the configuration of devices and in the selection of devices in PhoneBook. The rename function allows you to change the name of a device. It is usually not a good idea to rename existing devices; any PhoneBook entries that are associated with the device will no longer be able to access the newly renamed device, and will thus use the Current Device, a selection that may not be appropriate for that entry. Rename connect devices with caution.

**Installable Devices**

Telix for Windows is aware of over 500 modem brands and models, but few will use more than one or two different modems on their computer. The list of available devices is taken from a much larger list stored on disk. To insert a new device into Telix, highlight the one desired in this list and click the **INSTALL** **BUTTON** in the lower right corner of the dialog. The new device will be added to your list of available devices where you can modify it as needed and select it for use.

**Install Button**

To insert a new device into Telix, highlight the one desired in the list of Installable Devices and click this button. The new device will be added to your list of available devices where you can modify it as needed and select it for use.

**OK Button**

Selecting the OK BUTTON will close the Connect Device Manager. If you have selected a new connect device, Telix will begin using it immediately.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Connect Device Manager and restore your previous settings, discarding any changes you have made. This extends to all changes you may have made to individual connect devices.



**Help Button**

Selecting the HELP BUTTON will display this help page.

## Configuring Connect Devices

To change the characteristics of a connect device, highlight it to make it the currently selected device in the list of available devices, and select the CONFIG BUTTON. The dialog that results allows you to change many of the default behaviors and functions of the selected connect device. Many of these options are matters of personal preference, but you will not often find cause to change most of them. A sample of the configuration dialog, with detailed descriptions of each option available to you, follows. Simply click on any part of it to view specific help.

**Connect Device - Hayes ACCURA 28800**

**Direct Connect**

**Connect Port**  
COM Port 3

**Baud Rate** 115200 **Parity** None

**Data Bits** 7 **Stop Bits** 2

**Buffer Sizes**  
Receive 24 Send 8

**Flow Control**  
 XON/XOFF  
 CTS/RTS  
 DSR/DTR

**Modem Init String**  
ATZ^M

**Dialing Prefixes**  
1 ATDT  
2 ATDT  
3 ATDT  
4 ATDT

**Dial Suffix** ^M **Dial Cancel** ^M

**Dial Time** 60 **Dial Pause** 1

**Connect String**  
CONNECT

Auto Baud Detect

**No Connect Strings**  
1 NO CARRIER  
2 BUSY  
3 VOICE  
4 NO DIAL TONE  
5

**Auto Answer String**  
ATS0=1^M

**Hangup String**  
~+++~ATH0^M

Drop DTR to Hangup

OK  
Cancel  
Help

**Direct Connect**

A direct connection is one that is made directly between two serial ports, without the use of modems. A direct connection requires the use of a special modem cable known as a null modem cable. If you are connecting two adjacent computers together via their serial ports, make sure you are using a null modem cable, and make sure that the direct connect box is selected.

**Connect Port**

The connect port is the hardware device that is actually used for communications. Currently, Telix for Windows allows communications via the serial port connections of COM1: through COM4: and via FOSSIL drivers installed in your computer for network communications. Windows itself controls the details of the ports from within the Control Panel's Ports icon. Please refer to your Microsoft Windows User's Guide for instructions on manipulating the hardware details such as the base address and IRQ. It is usually not necessary to change the Control Panel settings.

**Baud Rate**

The speed at which your connect device talks to your computer is known as the *bps rate*, or *bits per second* rate. This is also commonly referred to as the baud rate. Baud is not the proper term for this setting, but because it is so commonly referred to as baud by the computer store clerks who sell modems, we have labeled it with the misnomer to avoid further confusion. Select the maximum communications speed of your connect device here.

A frequently asked question is one about 14,400 bps or 28,800 bps modems, and why there are no settings for these speeds. The answer to this can become somewhat involved, but the solution is to set your speed at a higher bps rate than the modem is rated for. A 14,400 bps modem will transfer files about 20% faster when you set your port for 38,400 bps than it will when set for 14,400 bps. Likewise, a 28,800 bps modem will also perform 20% faster when set for 57,600 as opposed to 28,800 bps. A good rule of thumb here is that if your modem is capable of MNP or v.42 error correction, then you will want to set this value as high as your modem or device allows in order to get the most from your modem. For 14,400 bps modems, this is usually 38,400. For modems rated for more than 14,400 bps, then 57,600 bps is the recommended speed setting.

Microsoft Windows comes preloaded with drivers that allow communications up to 57,600 bps out of the box. Some third party communications drivers that can be added to Windows allow for higher speeds of 115,200 bps. Telix for Windows will attempt to detect the built-in drivers, and remove the setting for 115,200 bps if you have not installed third party communications drivers. If 115,200 bps is present, this does not guarantee that your communications drivers support this speed. Please refer to the documentation for the third party communications drivers before selecting a bps rate of 115,200.

Telix for Windows has already selected the best bps rate for its preinstalled modems. Users should not alter this setting without a good working knowledge of serial communications and of their modem.

**Parity, Data Bits & Stop Bits**

Parity bits, data bits, and stop bits are all related; often, the selection of a certain number of data bits will force your choice of parity and stop bits. The most common settings for this trio of settings are 8 data bits, no parity, and one stop bit (referred to as 8-N-1), and 7 data bits, even parity, and one stop bit (referred to as 7-E-1).

Telex for Windows has already selected the combination of bit settings for its preinstalled modems. Users should not alter these settings without a good working knowledge of serial communications and of their modem.

**Buffer Sizes**

The data that comes in from and is sent to the connect device is stored in memory until Telix is given an opportunity by Windows to process it. These memory locations are known as buffers; there are separate buffers for incoming and outgoing data, and their sizes can be altered here. Unless you have very minimal RAM in your computer (under 4 megabytes), it is recommended that these buffers be left as large as possible. The receive buffer can range in size from 1k to 24k and the send buffer may range in size from 1k to 8k. The larger the buffer size, the better Telix will perform.

## Flow Control

As is usually the case with high speed modems, a connect device will be configured to communicate at speeds far above its true capabilities, in order to insure that the communications device always has enough data to send. A traffic cop of sorts is needed in these cases to keep the flow of data from overwhelming and clogging the connect device. Flow control acts in this capacity, in the form of signals to the modem. There are three different kinds of flow control that can be used, and Telex has already selected the proper one for the connect device you've chosen. Change these only with great care.

- △ **XON/XOFF flow control** is often referred to as software flow control, because the method of signaling is via special control characters sent by the software, intermixed with the data being sent. XON/XOFF flow control is usually only used with 2400 bps modems without any sort of error correction. Faster modems will want to leave this option off and rely on CTS/RTS hardware flow control.
- △ **CTS/RTS flow control** is often referred to as hardware flow control, because the method of signaling is via electrical pulses sent along the modem cable for external modems or directly between the computer and the modem for internal modems. CTS/RTS flow control is commonly used with all modems capable of speeds greater than 2400 bps, and with those 2400 bps modems capable of MNP or v.42 error correction.
- △ **DSR/DTR flow control** is often referred to as hardware flow control for direct connections, because the method of signaling is via electrical pulses sent along a modem cable that is part of a direct connection. DSR/DTR is not the same as CTS/RTS flow control and will not work when a modem is in use. DSR/DTR flow control frequently requires the use of a special direct connect modem cable referred to as a null modem cable.



## Modem Init String

The init string, short for initialization string, is the string sent to a connect device to prepare it for communication. This string is sent whenever the connect device is loaded, such as when the device is the default connect device at program startup, or when Telix is told to dial a PhoneBook entry that uses a connect device other than the current connect device. A modem init string will contain commands from the modem's own documentation that will configure it for best possible performance when combined with the other settings in the connect device configuration. Each available connect device has been preconfigured with the best init string known to us, and should be changed only by experienced modem users or upon advice from a representative from *deltaComm* or from the modem manufacturer.

The modem init string may contain certain control codes to alter its behavior. These codes are:

**^M** A carat followed by an M signifies pressing the ENTER key. This sequence is often referred to as Carat-M or as Control-M.

**~** A tilde character in the init string is an instruction to Telix to pause for 1/2 second before sending the characters following it. This should not be confused with a command to the modem to pause between generating tones (such as those pauses used to wait for a signal to enter a long distance credit card number). The tilde will not generate such pauses as required for credit card usage. See the [Editing Long Distance Codes](#) section for details about pauses required for credit card dialing.

**^~** Because the tilde always denotes a pause to Telix itself, there would appear to be no way to send the tilde character to the modem. However, a carat followed by a tilde will send only the tilde character to the modem. This sequence will not generate the pause within Telix that a tilde normally does.

**^^** Because the carat always denotes a control character to Telix itself, there would also appear to be no way to send the carat character to the modem. However, a pair of consecutive carats will send only a single carat to the modem. This sequence will not be interpreted as a control character sequence.

## **Dialing Prefixes**

During dialing, Telix for Windows will send the selected dialing prefix, the telephone number, and the dialing suffix, in that order, to the connect device. The dialing prefix is usually the command to the modem to dial a number, such as the Hayes Compatible command of ATDT. There are four dialing prefixes that you can assign to a connect device, and in the PhoneBook listings, you may select which prefix to use for each entry. One use of the multiple prefixes is to have different dialing commands for dialing systems with different error correcting capabilities; one prefix might tell the connect device to connect with MNP error correction turned on, while another could tell the device to ignore any attempts to connect in MNP mode, which can be useful when you are calling a system that does not support MNP. Telix for Windows has already pre-configured the connect device prefixes that it knows about. You may add your own commands to the prefixes from the modem's documentation as you wish, making sure that you only insert the new commands between the AT and the DT in the existing prefixes.

**Dialing Suffix**

During dialing, Telix for Windows will send the selected dialing prefix, the telephone number, and the dialing suffix, in that order, to the connect device. The dialing suffix is the string that Telix should send after the number during a dialing command, usually a carriage return in the form of the special control character sequence of **^M**.

**Dial Cancel**

The dial cancel string is the string that should be sent to the connect device to abort the current dialing attempt. For virtually all modems this should not be changed from the default of a single carriage return in the form of the special control character sequence of **^M**.

**Dial Time**

The dial time is the amount of time in seconds that Telex should wait for a connection when dialing a number via the PhoneBook. This should not be confused with the amount of time that the modem will wait for a connection. The dial time should be set to a number less than the amount of time the modem waits for a connection (usually set for 60 seconds). Usually, 45 seconds is sufficient for most long distance numbers. The amount of time a modem is configured to wait for a connection will always take precedence over this setting. On most Hayes compatible modems, the amount of time is specified in the S7 register. See your modem documentation for further details.

**Dial Pause**

The dial pause is the amount of time in seconds that Telix should wait between failed attempts to connect to numbers. If a connection was not made on a dialing attempt via the PhoneBook, Telix will pause for this number of seconds before dialing the next number in the queue.

### **Connect String & Auto Baud Detect**

When Telix for Windows is told to dial a number, it cannot do so directly. It passes the dialing command on to the connect device via the dialing prefix, number, and dialing suffix. Telix also cannot detect whether or not a connection has been made -- it must rely on the connect device to report the progress of the dialing command. Telix then takes the appropriate action based on the reports the connect device sends. Most modems are able to send result codes such as CONNECT, BUSY, NO CARRIER or VOICE back to the terminal program for action.

The Connect String is the string that Telix for Windows will watch for to indicate that a connection has been made. This string is case sensitive, meaning that connect and CONNECT are two different strings. Most modems report a connection in upper case, with the word **CONNECT**. Some newer modems have also started to use the word **CARRIER** as their connect string. Telix for Windows knows the connect strings for over 500 modems and has been preconfigured with these. It is usually not a good idea to alter the connect string of a built-in device unless under the advice of a customer service representative of your modem manufacturer or of *deltaComm*.

**Auto Baud Detect** is included for compatibility with older modems only, and should be left off in most cases. Its only use would be in using a 2400 bps modem to connect to a 1200 bps or slower modem. To autobaud detect, Telix will examine the connect string to see how fast the actual connection is, and if this is different from the Baud Rate of the connect device, Telix will switch to the new speed. Modems that are faster than 2400 bps use a different method of making sure speeds match, called flow control; this option should be left off for all but these very slow modems.

**No Connect Strings**

When the dialing attempt is not successful for whatever reason, it is up to the modem to tell Telex about this condition. Telex will act in the same manner no matter which of the no connect strings it receives; the dial cancel string will be sent to abort the attempt, Telex will wait for the dial pause time, and will then cycle to the next number in the dialing queue. Telex can watch for up to five messages to tell it that there has been a failure to connect. Four of these come preconfigured with common strings for the connect device. Any may be altered as you need.



**Auto Answer String**

This is the string that TeliX for Windows will send to the modem upon entering Host Mode. This string should allow the modem to automatically answer the phone when it rings, and can initialize it in any other ways needed by a host mode. A default string has been provided, and can be altered by the experienced modem user.

**Drop DTR to Hangup & Hangup String**

The fastest way to break a telephone connection is by dropping, or turning off, a signal present in your modem known as DTR, which is short for Data Terminal Ready. Turning off the Data Terminal Ready signal, will cause most modems to hang up very quickly. When this option is on, Telex will attempt first to break the connection when told by dropping DTR. If dropping DTR fails to result in an immediate loss of connection, the hangup string will then be sent. This option is rarely turned off.

If dropping DTR to hang up is either not configured or does not work, Telex will send the hangup string to the connect device to tell it to terminate the connection. The default string supplied should cause most Hayes compatible modems to drop their connections (usually because they are surrounded).

**Ok Button**

Selecting the OK BUTTON will close the Connect Device Configuration dialog and update the device with your new selections.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Connect Device Configuration dialog and restore your previous settings, discarding any changes you have made.

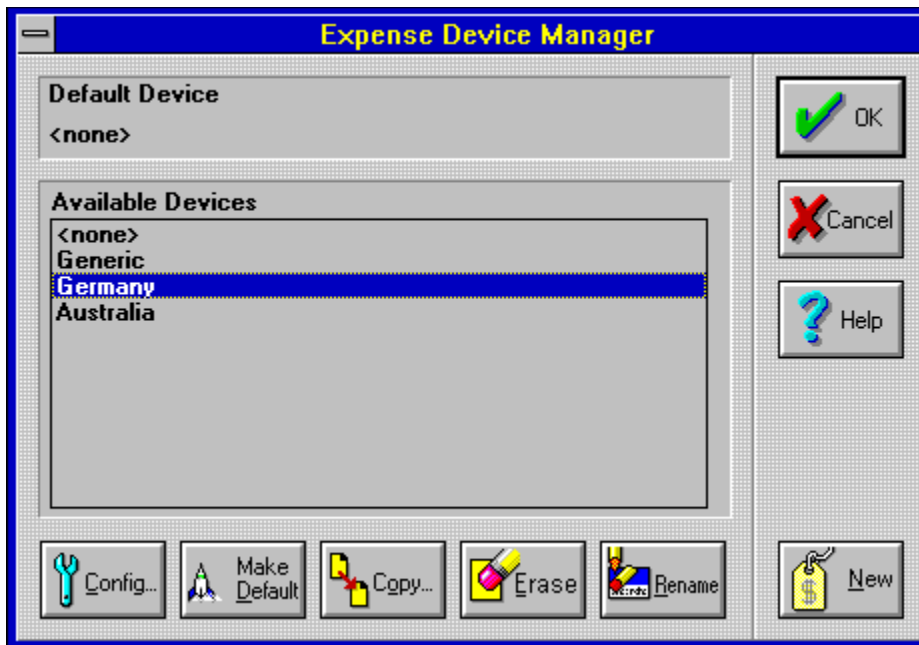
**Help Button**

Selecting the HELP BUTTON will display this help page.

# Expense Device Manager

Expense devices contain information about how much telephone calls cost to other places, and when the rates go up and down. With this information in hand, Telix for Windows can calculate how much you've spent on long distance modem calls in a given time period. Using this valuable data, you can begin to make up better excuses to explain to your spouse why the phone bill is so large.

You will want to create expense devices for each different rate zone you call. For instance, if you know that calls to California are at one rate, but calls within your own state are at a different rate, you would create a unique expense device for each of these calling zones, and attach the appropriate expense device to PhoneBook entries that are in those calling zones. To create and manipulate the expense devices, you will use the expense device manager, shown below. Simply click on any part of it to view specific help.



**Default Expense Device**

The Default Expense Device is a special device. A device named **Default** is always available to PhoneBook entries. If an entry is not told to use not a specific expense device by name, but is instead configured to use the built-in device named **Default**, the entry will use the device that the Expense Device Manager has specified as the default expense device.

**Available Expense Devices**

While in the Expense Device Manager, clicking on any of the available expense devices highlights the device, making it the current or active device. Any actions taken within the Expense Device Manager will affect only the current device.



**Make Default**

A device named **Default** is always available to PhoneBook entries. If an entry is not told to use not a specific expense device by name, but is instead configured to use the built-in device named **Default**, the entry will use the connect device that the Expense Device Manager has specified as the default expense device. To make a device the default connect device, highlight it in the list of available devices and click on the MAKE DEFAULT BUTTON.

**Copy Expense Device**

To create a new expense device that is similar to an existing device, highlight the device most similar to the one you wish to create, and select the COPY BUTTON. You will be prompted for a unique name for the new expense device, which will have all of the attributes of the original device. You may then make modifications to the settings of the new expense device as needed.

**Erase Expense Device**

To remove an expense device from the list of available devices in the device manager, highlight the device you wish to remove and select the ERASE BUTTON. If Confirmation Dialogs are active, you will be asked to confirm the deletion. The expense device will then be removed from the list of available devices. Any PhoneBook entries that were associated with the deleted device will no longer be able to access the device, and will thus use the Default Device, a selection that may not be appropriate for that entry. Delete expense devices with caution. Telix for Windows will not allow you to delete an expense device if it is the only device available, or if it is defined as the Default Device.

**Rename Expense Device**

Expense Devices are always identified by their names, both in the configuration of devices and in the selection of devices in PhoneBook. The rename function allows you to change the name of a device. It is usually not a good idea to rename existing devices; any PhoneBook entries that are associated with the device will no longer be able to access the newly renamed device, and will thus use the Current Device, a selection that may not be appropriate for that entry. Rename expense devices with caution.

**New Expense Device**

Telix for Windows comes pre-configured with some common time periods and call types. You may either use these as a basis for creating new expense devices as copies, or you may work from scratch by creating new devices. To create a totally new expense device, with no time periods pre-configured, click the NEW BUTTON. You will be prompted for a unique name for the new device. After naming the new device, it will be available for editing in the list of devices.

**OK Button**

Selecting the OK BUTTON will close the Expense Device Manager.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Expense Device Manager and restore your previous settings, discarding any changes you have made. This extends to all changes you may have made to individual expense devices.

**Help Button**

Selecting the HELP BUTTON will display this help page.



## Configuring Expense Devices

To change the characteristics of an expense device, such as the rate periods or the cost per minute for a given period, highlight it to make it the currently selected device in the list of available devices, and select the CONFIG BUTTON. The dialog that results allows you to change many of the default behaviors and functions of the selected expense device. A sample of the configuration dialog follows, with detailed descriptions of each option available to you. Simply click on any part of it to view specific help.

Ranges	Days	Hours
Day Range 1	Start Day Sunday	Start time 06:00 AM
Hour Range 2	End Day Sunday	End time 05:00 PM
		Connect Cost 125 ¢
		Minute cost 65 ¢

Because phone calls made at different times of the week and different times of the day cost different amounts of money, expense devices allow you to break the week into different ranges of days. You can then break each range of days into separate ranges of hours and associate different costs for each range of hours. These costs are applied to your calls and a cost for each call is calculated.

When you first create an expense device, it covers the entire week in one range of days from Sunday to Saturday and one range of hours from midnight to 11:59 pm. The cost for making any call during this time is zero. The Expense Device Editor displays the same information in two ways; graphically and textually. You may use either display to alter your periods and their rates.

**Days**

A graphical representation of the ranges of days that the expense device covers. Using the mouse within the graphical display you can manipulate the existing ranges or create new ones. Simply click on the section of the bar that represents the day range you wish to work with, and the range will be highlighted with a red bordered box. You can also modify the day range by moving the mouse cursor to the edge of the current range, pressing the mouse button when the cursor changes to the double-headed arrow, and then dragging to the desired range.

Each day range has its own unique group of hour ranges. Selecting a different day range allows you to select and edit the hour ranges associated with that day range. Selecting a different hour range allows you to alter the cost of calls during that hour range. In the example displayed here, changes made to the cost boxes would affect the rates of Sunday, 6 am to 5 pm.

**Hours**

A graphical representation of the ranges of hours that the expense device covers. Using the mouse within the graphical display you can manipulate the existing ranges or create new ones. Simply click on the section of the bar that represents the hour range you wish to work with, and the range will be highlighted with a red bordered box. You can also modify the hour range by moving the mouse cursor to the edge of the current range, pressing the mouse button when the cursor changes to the double-headed arrow, and then dragging to the desired range.

Each day range has its own unique group of hour ranges. Selecting a different day range allows you to select and edit the hour ranges associated with that day range. Selecting a different hour range allows you to alter the cost of calls during that hour range. In the example displayed here, changes made to the cost boxes would affect the rates of Sunday, 6 am to 5 pm.

**Insert Button**

The red bordered box around a day or hour range will indicate that it is the active range. Clicking on the INSERT BUTTON will split the active range into two ranges which may then be independently modified. The new range will have the same cost or hour range settings as the range it was split from.

**Erase Button**

The red bordered box around a day or hour range will indicate that it is the active range. Clicking on the ERASE BUTTON will merge the active range with the range immediately to its right; the cost or hour settings of the new range will be the costs that were associated with the range to the right of the erased range.

**Report**

If the Report box is checked, whenever a call associated with this expense device is completed, Telix for Windows will write out a report of the call to a file. The file is named using the first 8 letters of the expense device's name with the extension .EXR'. In our example, this file would be called GERMANY .EXR. Spaces in the file name will be replaced by underscores to insure that a valid filename is used. If the report check box is not marked, the report is not generated, but the expense statistics are still added to the PhoneBook entry's statistics.

**Day Range**

A textual representation of the current range of days being edited. To change the range of days being edited, simply type the number of the desired range or use the arrow buttons at the right. The graphical representation of the newly selected day range will be displayed on the [Days](#) bar above.

**Hour Range**

A textual representation of the current range of hours being edited. To change the range of hours being edited, simply type the number of the desired range or use the arrow buttons at the right. The graphical representation of the newly selected hour range will be displayed on the [Hours](#) bar above.



**Start Day**

The starting day of the current day range. Using the arrow keys or the arrow buttons to the right, you can change the starting day of the current range. The graphical representation of the modified day range will be displayed on the [Days](#) bar above.

**End Day**

The ending day of the current day range. Using the arrow keys or the arrow buttons to the right, you can change the ending day of the current range. The graphical representation of the modified day range will be displayed on the [Days](#) bar above.

**Start Time**

The starting time of the current hour range. Using the arrow keys or the arrow buttons to the right, you can change the starting time of the current range. If the text cursor is in the hour section of the time, the time will be incremented or decremented by an hour; if the cursor is in the minutes section of the time, the time will be incremented or decremented by one minute. The graphical representation of the modified hour range will be displayed on the [Hours](#) bar above.

**End Time**

The ending time of the current hour range. Using the arrow keys or the arrow buttons to the right, you can change the ending time of the current range. If the text cursor is in the hour section of the time, the time will be incremented or decremented by an hour; if the cursor is in the minutes section of the time, the time will be incremented or decremented by one minute. The graphical representation of the modified hour range will be displayed on the [Hours](#) bar above.

**Connect Cost**

This is the cost associated with the current hour range for making a connection to another system. If a call is made during the selected range, the connect cost is applied to the cost of the call.

For example, if a call lasts only 20 seconds, the cost is calculated as the connect cost plus the cost of one minute. In our example, this call would cost \$1.90.

Another way of looking at the connect cost is as the cost of the first  $n$  minutes as a fixed rate, less the cost of those first  $n$  minutes at the minute cost. An international call that costs \$3.90 for the first three minutes and \$.75 per additional minute would then have a Connect Cost of \$1.65 and a per minute cost of \$0.75. This is because the per minute cost is applied to all minutes of the call, even the first three minutes. Using this method, it is possible to account for various billing methods used by phone companies throughout the world. In this international example, though, the results might not be accurate if the call was only one minute long. It was developed this way in favor of simplicity over fine tuned accuracy.

**Minute Cost**

This is the cost associated with the current hour range for each minute, or portion thereof, of a connection to another system. The minute cost is multiplied by the number of minutes that a call lasted and added to the connect cost to calculate the total cost of a call. The last portion of a minute is always rounded up to the nearest minute.

For example, if a call lasts only 20 seconds, the cost is calculated as the connect cost plus the cost of one minute. In our example, this call would cost \$1.90.

Another way of looking at the connect cost is as the cost of the first  $n$  minutes as a fixed rate, less the cost of those first  $n$  minutes at the minute cost. An international call that costs \$3.90 for the first three minutes and \$.75 per additional minute would then have a Connect Cost of \$1.65 and a per minute cost of \$0.75. This is because the per minute cost is applied to all minutes of the call, even the first three minutes. Using this method, it is possible to account for various billing methods used by phone companies throughout the world. In this international example, though, the results might not be accurate if the call was only one minute long. It was developed this way in favor of simplicity over fine tuned accuracy.

**OK Button**

Selecting the OK BUTTON will close the Expense Device Configuration dialog and update the device with your new selections.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Expense Device Configuration dialog and restore your previous settings, discarding any changes you have made.

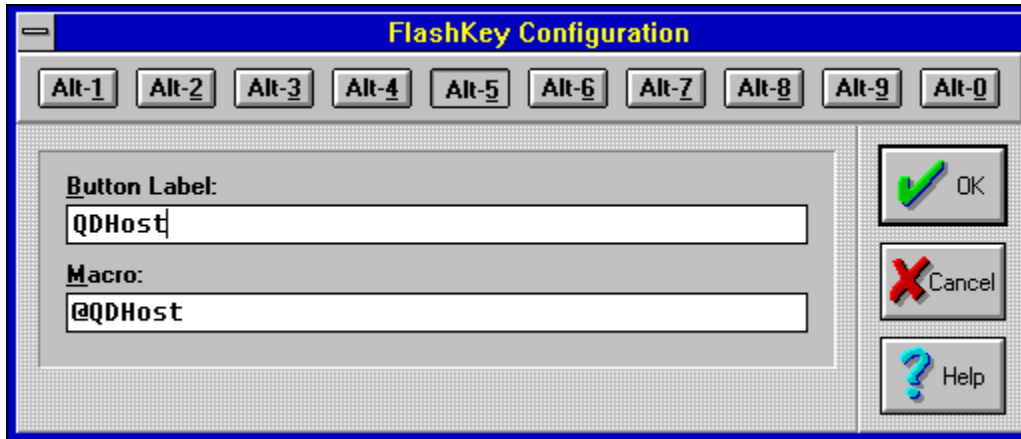


**Help Button**

Selecting the HELP BUTTON will display this help page.

## FlashKey Macro Configuration

FlashKeys™ are on-screen buttons that you can program to perform various actions; text can be sent directly, or scripts can be linked to a FlashKey for playback. By using FlashKeys, you can automate many of your most frequently performed actions, and can even use your mouse cursor to activate the playback of the FlashKey contents by name. To create and manipulate FlashKeys, use the FlashKey Editor. An example of the FlashKey Editor is shown below. Simply click on any part of it to view specific help.



## **FlashKey Buttons**

The ten available FlashKeys are linked to the keyboard as Alt-0 through Alt-9. FlashKey contents are played back whenever the keyboard counterpart is pressed. A [FlashKey bar](#) containing buttons with text labels you define can also be used to activate FlashKey playback. The FlashKey bar availability and location is specified in the [General Options](#) configuration. To select the button you wish to edit, you can select it by one of three methods: Clicking on the desired button with the mouse cursor; Pressing the key combination corresponding to the FlashKey; Pressing the `TAB` key until the selection rectangle (a box made of a dotted line) appears around the currently selected FlashKey, and then use the arrow keys to select the desired key.

**FlashKey Label**

The button label is the text that appears on the FlashKey button if the FlashKey toolbar is configured to appear on-screen. In our example, we have defined "QDHost" as the text label to appear on the FlashKey toolbar.

**FlashKey Macro**

Type the text to be sent or the script to be executed when the FlashKey is activated. If text is to be sent, it may contain control sequences such as **^M** for a carriage return. If a script is to be used, simply type in the filename of the script prefaced with the **@** character. The filename may include a complete path if desired. If it does not, the script will be searched for first in the Script Directory defined in the [Filenames & Paths](#) configuration, and if not found there, in the directory Telix occupies. In our example, we have specified that the script "QDHOST" is to be executed.

## OK Button

Selecting the OK BUTTON will close the FlashKey Editor dialog and update your FlashKeys. If the [FlashKey bar](#) is displayed, it will be updated to reflect your changes.

**Cancel Button**

Selecting the CANCEL BUTTON will close the FlashKey Editor dialog and restore your previous settings, discarding any changes you have made.

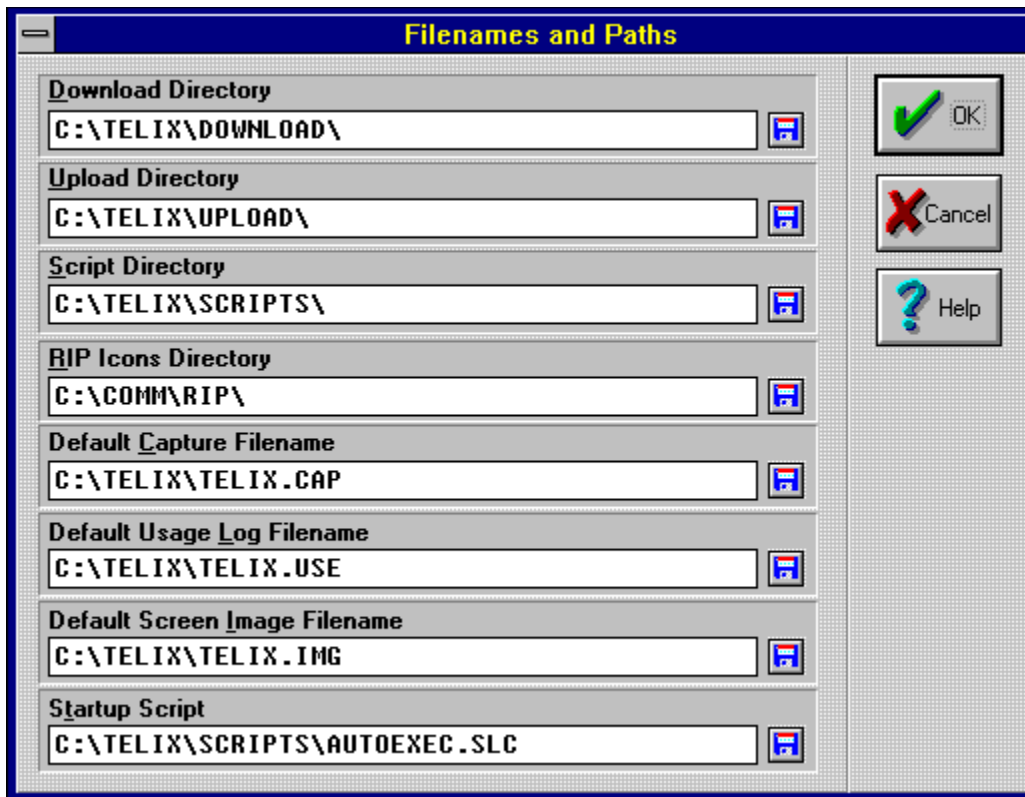
**Help Button**

Selecting the HELP BUTTON will display this help page.



## Filename & Paths Configuration

Telnet for Windows keeps several types of files at its disposal, and may create or receive others as necessary throughout its operation. Rather than place all files in a single subdirectory, it is often more convenient to keep different kinds of files in separate directories. For example, you will likely wish to have a separate subdirectory defined to hold received files and nothing but received files. Configuring the file locations of Telnet for Windows allows you to define just this sort of file segregation for scripts, transferred files, and graphics icons. You may also define the default names and locations of some of Telnet's built-in files, such as the capture file name, the usage log name, and the name to which screen snapshots should be stored. As you enter your desired directory and file names, do not worry about the existence of the path. If it does not exist, Telnet will inform you and ask if you wish to have it created. An example of the Filename & Paths configuration screen is shown below. Simply click on any part of it to view specific help.



**Download Directory**

This directory is the location on your hard drive where incoming file transfers, or [downloads](#), will be placed. Defining a directory that does not exist can cause file transfer problems or failures. If no directory is defined here, then Telix for Windows will use the directory that it resides in as the download directory.

**Upload Directory**

This directory is the location on your hard drive where outgoing file transfers, or [uploads](#), will be searched for first. If no directory is defined here, then Telix for Windows will use the directory that it resides in as the default upload directory.

**Script Directory**

This directory is the directory that the script editor will use as a default when opening or saving files; all compilations of scripts will go into this directory as well. Defining a directory that does not exist can cause problems and may cause scripts to execute erratically or not at all. If no directory is defined here, then Telix for Windows will use the directory that it resides in as the script directory.

### **Rip Directory**

This directory is the directory that Telix will search to find various RIP icons and screens unless a [PhoneBook entry](#) specifies its own private directory. This **is** the directory in which the icons and RIP screens themselves should be placed. If, for example, you installed RIPterm into D:\COMM\RIP, you will have a subdirectory titled D:\COMM\RIP\ICONS that contains your RIP screens and icons. In this case, you want to define your RIP directory in Telix to be D:\COMM\RIP\ICONS.

### **Default Capture Filename**

When Telix is told to capture all incoming data to a file (open a [capture log](#)), it will suggest this filename as the default. You may name a full path and file, a file only, or you may leave this blank.

If you specify a full path and filename, the path must exist, though the file does not have to exist. If the path portion of the file you name in this field does not exist, you will be prompted to create it. You may either allow Telix for Windows to create the directory at this time, or skip creation of the directory. Defining a directory that does not exist can cause problems and may cause capture files to be lost or to perform erratically.

If you name only a file without a path, then the file will be created and maintained in the same directory in which Telix resides.

If you leave this field blank, then the file will automatically be named TELIX.CAP and will be created and maintained in the same directory in which Telix resides.

### **Default Usage Log Filename**

When Telix is told to keep a [usage log](#) of the actions performed while it is running, such as a log of file transfers and connections, it will make its log entries in the file and path you name here. You may name a full path and file, a file only, or you may leave this blank.

If you name a full path and file, the path must exist, though the file does not have to exist. If the path portion of the file you name in this field does not exist, you will be prompted to create it. You may either allow Telix for Windows to create the directory at this time, or skip creation of the directory. Defining a directory that does not exist can cause problems and may cause usage log entries to be lost.

If you name only a file without a path, then the file will be created and maintained in the same directory in which Telix resides.

If you leave this field blank, then the file will automatically be named TELIX.USE and will be created and maintained in the same directory in which Telix resides.

**Default Screen Image Filename**

When Telix is told to capture all data currently in the terminal window to a file (create a [screen image](#)), it will place the data in the file and path you name here. You may name a full path and file, a file only, or you may leave this blank.

If you name a full path and file, the path must exist, though the file does not have to exist. If the path portion of the file you name in this field does not exist, you will be prompted to create it. You may either allow Telix for Windows to create the directory at this time, or skip creation of the directory. Defining a directory that does not exist can cause problems and may cause screen image files to be lost or to perform erratically.

If you name only a file without a path, then the file will be created and maintained in the same directory in which Telix resides.

If you leave this field blank, then the file will automatically be named TELIX.IMG and will be created and maintained in the same directory in which Telix resides.



**Startup Script**

Whenever Telix is run, the [script](#) file specified here will be loaded and played back automatically. You may name a full path and file, a file only, or you may leave this blank, in which case no script file will be executed on startup.

**OK Button**

Selecting the OK BUTTON will close the Filenames & Paths dialog and update the appropriate settings.

**Cancel Button**

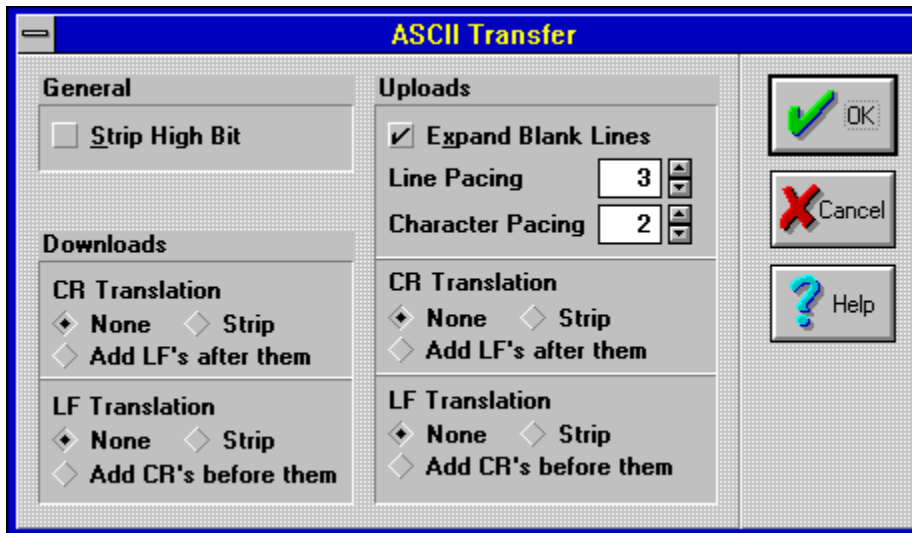
Selecting the CANCEL BUTTON will close the Filenames & Paths dialog and restore your previous path and filenames, discarding any changes you have made.

**Help Button**

Selecting the HELP BUTTON will display this help page.

# ASCII Transfer Configuration

When transferring a file from one computer to another, Telix normally does some sort of error checking on the file being transferred. Sometimes, however, it is desirable to simply send or receive the file without error checking, exactly as it is on the disk. This is a common method used to upload prepared text into a message editor, for example, and such a transfer is called an ASCII transfer. You have control of many aspects of an ASCII transfer that you do not have control over when you use other protocols. Other protocols send the data as a steady stream or broken into blocks; ASCII transfers can be configured to pause between each character or between each line of text, plus many other options. These options are changed in the ASCII protocol options dialog. An example of this dialog and a description of its options appears below. Simply click on any part of it to view specific help.



**Strip High Bit**

All characters have 8 bits in them. The order of the bits determines what the character is via the ASCII code table. If this parameter is on, then the high bit, or the one that is commonly referred to as the parity bit, is stripped, or turned off, in characters that have just been received, and in characters that are about to be sent. This high bit contains the parity information when parity is not set to None; it also can be used to signify a character with an ASCII code between 128 and 255 when parity is set to None. Setting this option on can be used in two ways: It can be used to ignore the parity bit when Parity is not set to None, or it can be used to emulate a 7-bit system when you are dialing with 8 bits. Setting this option will disable the use of the ASCII line-drawing characters, among others.

### Download CR Translation

When a carriage return (also known as the ENTER key, ASCII code 13) is received during an ASCII download, Telix can be configured to do one of three things by selecting the appropriate radio button here.

- △ **None:** Telix for Windows will do nothing special with this character. It will be included in the downloaded file exactly as it was received.
- △ **Strip:** Telix for Windows will discard this character. It will not appear in the downloaded file.
- △ **Add LF:** Telix for Windows will include the character in the downloaded file, and it will also insert a line feed character (ASCII 10) in the file immediately following the carriage return.

### **Download LF Translation**

When a line feed character (ASCII code 10) is received during an ASCII download, Telix can be configured to do one of three things by selecting the appropriate radio button here.

- Δ **None:** Telix for Windows will do nothing special with this character. It will be included in the downloaded file exactly as it was received.
- Δ **Strip:** Telix for Windows will discard this character. It will not appear in the downloaded file.
- Δ **Add CR:** Telix for Windows will include the character in the downloaded file, but before it does so, it will insert a carriage return (the `ENTER` key) in the file immediately preceding the line feed.



## **ASCII Upload Options**

### **Expand Blank Lines**

When Telix is sending a file and it encounters a blank line (a line with nothing in it except for a carriage return and/or a line feed), and this option is turned on, it will send a space prior to sending the carriage return and/or line feed. This is very useful for uploading prepared text into a message editor on a remote system that assumes that a blank line with no text on it means that you are done entering your message. In those cases, without this option turned on the remote editor would stop accepting your message after the first paragraph. This option is normally left on, as very rarely will the extra space added to blank lines cause difficulty on any system.

### **Line Pacing**

This is the amount of time, in tenths of a second, that Telix for Windows should wait before sending each line. This delay is not usually necessary, but some BBS systems may not be able to keep up with lower values here. Set this value as low as you can without corrupting the data.

### **Character Pacing**

This is the amount of time, in milliseconds (thousandths of a second), that Telix for Windows should wait between each character sent. Because Microsoft Windows does not always offer precise timer resolutions, this number can only be approximate. The delay is never less than the number specified here, but could often be somewhat greater depending on the number of applications running and the type of timer used. Systems that have installed Microsoft's multimedia extensions (MMSYSTEM.DLL) will have much greater timer accuracy. For systems without MMSYSTEM.DLL installed, this value is only approximate to the nearest 1/18 second, always rounded up.

### **Upload CR Translation**

When a carriage return (also known as the ENTER key, ASCII code 13) is about to be sent during an ASCII upload, Telix can be configured to do one of three things by selecting the appropriate radio button here.

- Δ **None:** Telix for Windows will do nothing special with this character. It will be sent as part of the uploaded file exactly as it was encountered.
- Δ **Strip:** Telix for Windows will discard this character. It will not be sent to the remote computer, and thus it will not appear in the file on that system.
- Δ **Add LF:** Telix for Windows will send the character and will immediately send a line-feed character as well.

### **Upload LF Translation**

When a line feed character (ASCII code 10) is about to be sent during an ASCII upload, Telix can be configured to do one of three things by selecting the appropriate radio button here.

- Δ **None:** Telix for Windows will do nothing special with this character. It will be sent as part of the uploaded file exactly as it was encountered.
- Δ **Strip:** Telix for Windows will discard this character. It will not be sent to the remote computer, and thus it will not appear in the file on that system.
- Δ **Add CR:** Telix for Windows will first send a carriage return (the `ENTER` key) and will then send the character.

**OK Button**

Selecting the OK BUTTON will close the ASCII Transfer dialog and update the appropriate settings.

**Cancel Button**

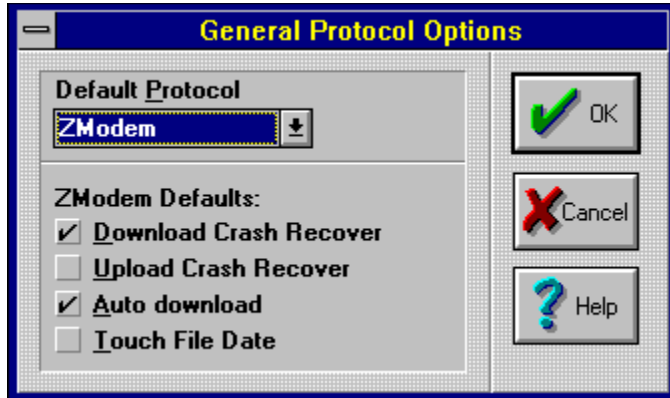
Selecting the CANCEL BUTTON will close the ASCII Transfer dialog and restore your previous settings, discarding any changes you have made.

**Help Button**

Selecting the HELP BUTTON will display this help page.

## Protocol Options Configuration

Most of the time file transfers are hands-off, with the sender and receiver negotiating the best protocol settings automatically based on current telephone line conditions and other factors. Sometimes, however, it is necessary to directly alter some of the basic behavior of the various file transfers protocols, particularly the robust ZModem protocol. Below is an example of the dialog in which you can specify your preference during file transfers. Simply click on any part of it to view specific help.



**Default Protocol**

Whenever a file transfer is requested via the menus or the QuickTools, you will have the ability to change the protocol in use. The default protocol is the protocol that will be used if you do not select a different protocol. You may choose from any available protocol in the drop-down combo box. This default selection can be overridden in PhoneBook entries, and therefore applies mainly to numbers that are dialed manually.



**View GIF on Download**

Telix for Windows has the capability to display .GIF files as they are being received. The portion of the .GIF that has been received so far will appear in a separate pop-up window if this box is selected and a .GIF file is being transferred.

**Drop RTS During Disk Writes**

Frequently, multitasking operating environments such as Microsoft Windows use memory management techniques that can conflict with the serial port. This is often the root cause of file transfer errors such as data subpacket too long or CRC error. If you are encountering these errors, you may be able to avoid many of them by selecting this option. Drop RTS tells the modem to do its own buffering while Telix for Windows writes received data to the disk. It is important to remember that Telix cannot take this precaution during the disk writes of other programs active in memory, or of Windows itself, which can write to its swap file. It is regrettable but unavoidable that some CRC or data subpacket errors can occur during task switching or disk writes; such errors do not mean that data has been lost or corrupted, though, only that the packet must be resent.

**ZModem Download Crash Recovery**

If an incoming file transfer has been interrupted before completion, ZModem has the capability of crash recovery, trying to pick up where it left off, rather than starting over at the beginning. Crash recovery is not 100% effective, but it is frequently a good method of saving time that can be lost due to aborted transfers. To attempt a crash recovery, check this option on and download the file again with ZModem. This option should normally be left unchecked except when you are explicitly trying to recover from an aborted download. Crash recovery should not be attempted on data that is generated right before transfers, such as .QWK mail packets; data corruption is certain to occur if the file sent during a recovery is not identical to the file that was being sent when the file transfer was aborted.

**ZModem Upload Crash Recovery**

If an outgoing file transfer has been interrupted before completion, ZModem has the capability of crash recovery, trying to pick up where it left off, rather than starting over at the beginning. Crash recovery is not 100% effective but it is frequently a good method of saving time that can be lost due to aborted transfers. To attempt a crash recovery, check this option on and upload the file again with ZModem. This option should normally be left unchecked except when you are explicitly trying to recover from an aborted upload. Crash recovery should not be attempted on data that is generated right before transfers, such as .QWK mail packets; data corruption is certain to occur if the file sent during a recovery is not identical to the file that was being sent when the file transfer was aborted.

**ZModem Auto-Download**

ZModem is one of a new generation of protocols that can automatically detect the beginning of a file transfer and start the reception of a file automatically. With ZModem auto-downloading, you can request a remote site send a file, and Telix will automatically transfer without the usual keystrokes necessary to begin a transfer with other protocols. You will not have to select the [Download QuickTool](#) or choose Download from the [File menu](#) when the transfer is via ZModem auto-download. This option should be left on in most cases.

**Touch File Date**

The ZModem file transfer protocol sends along a great deal of information about the file it is sending, including the original date and time attached to the file on the remote computer. Because other file transfer protocols do not send this information with the file, they will set the date and time of the received file to the date and time it was received. Should you wish ZModem to also set file dates and times to match the time of reception rather than the time received along with the file, turn this option on.

**OK Button**

Selecting the OK BUTTON will close the Protocol Options dialog and update the appropriate settings.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Protocol Options dialog and restore your previous settings, discarding any changes you have made.

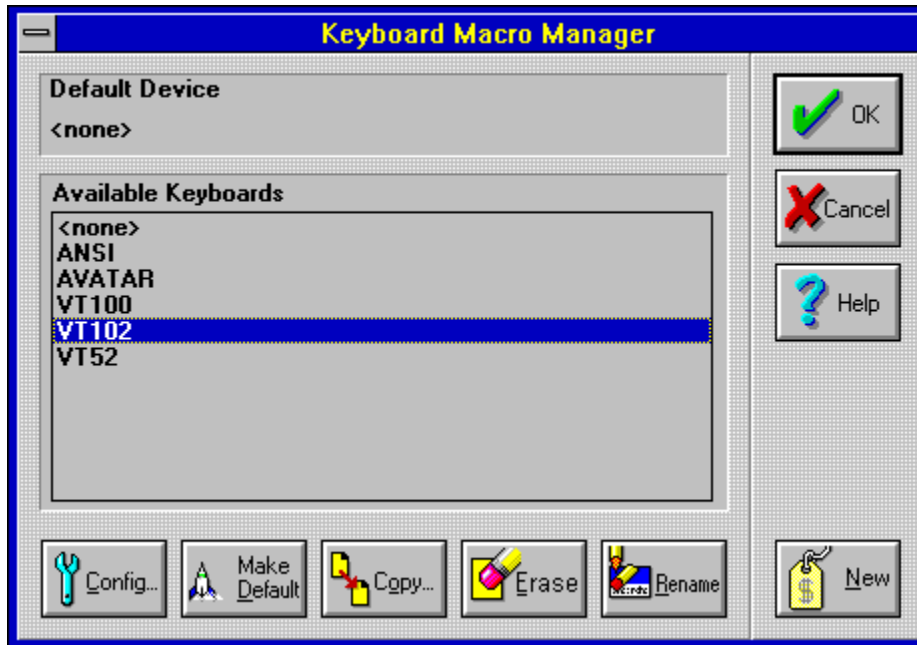


**Help Button**

Selecting the HELP BUTTON will display this help page.

# Keyboard Macro Manager

Keyboard Macros are a very powerful feature of Telix for Windows that allow you to change the characters that your keyboard sends out the communications port when keys are pressed. Keyboard macros are mainly used for mapping the keyboard keys to send the required sequences for terminal emulations, though they can be used as extra [FlashKey](#) user macros or for any purpose desired. Users have been known to program a set of macros to play on-line games requiring repetitive commands to give them a competitive advantage. Following is an example of the keyboard macro manager. Simply click on any part of it to view specific help.



### **Default Keyboard**

The Default Macro Table is a special device. A macro table named ***Default*** is always available to PhoneBook entries. If an entry is not told to use not a specific macro table by name, but is instead configured to use the built-in table named ***Default***, the entry will use the macro table that the Keyboard Macro Manager has specified as the default keyboard macro table.

**Available Keyboard Devices**

While in the Keyboard Macro Manager, clicking on any of the available macro tables highlights the table and makes it the current or active table. Any actions taken within the Keyboard Macro Manager will affect only the current table. The Keyboard Macro Manager is your portal to defining new macros, modifying existing macros, or choosing which macro table to use at a given moment.

### **Make Default Keyboard**

The Default Macro Table is a special device. A macro table named ***Default*** is always available to PhoneBook entries. If an entry is not told to use not a specific macro table by name, but is instead configured to use the built-in table named ***Default***, the entry will use the macro table that the Keyboard Macro Manager has specified as the default keyboard macro table. To make a macro table the default keyboard macro table, highlight it in the list of available tables and click on Make Default.

**Copy Keyboard Device**

To create a new keyboard macro table for terminal emulations slightly different than the defaults, highlight the macro table most similar to the one you wish to create, and select the COPY BUTTON. You will be prompted for a unique name for the new macro table, which will have all of the attributes of the original macro table. You may then make modifications to the options of the new macro table device as needed.

**Erase Keyboard Device**

To remove a macro table from the list of available devices in the keyboard macro manager, highlight the table you wish to remove and select the ERASE BUTTON. If [Confirmation Dialogs](#) are active, you will be asked to confirm the deletion. The macro table will then be removed from the list of available tables. Any PhoneBook entries that were associated with the deleted table will no longer be able to access the table, and will thus use the Default Macro Table, a selection that may not be appropriate for that entry. Delete macro tables with caution. Telix for Windows will not allow you to delete a macro table if it is the only table available, or if it is defined as the Default Macro Table.

### **Rename Keyboard Device**

Keyboard Macro Tables reside on disk, and are identified by their names on disk, without the default .KBD file extension. It is also this name that is used both in the configuration of macro tables and in the selection of tables in PhoneBook. The rename function allows you to change the name of a macro table. It is usually not a good idea to rename existing macro tables; any PhoneBook entries that are associated with the table will no longer be able to access the newly renamed macro table, and will thus use the Default Macro Table, a selection that may not be appropriate for that entry. Rename macro tables with caution.



**New Keyboard Device**

Telx for Windows comes pre-configured with keyboards for common terminals. You may either use these as a basis for creating new keyboard devices as copies, or you may work from scratch by creating new devices. To create a totally new keyboard device, with no macros pre-configured, click the NEW BUTTON. You will be prompted for a unique name for the new device. After naming the new device, it will be available for editing in the list of devices.

**OK Button**

Selecting the OK BUTTON will close the Keyboard Device Manager.

**Cancel Button**

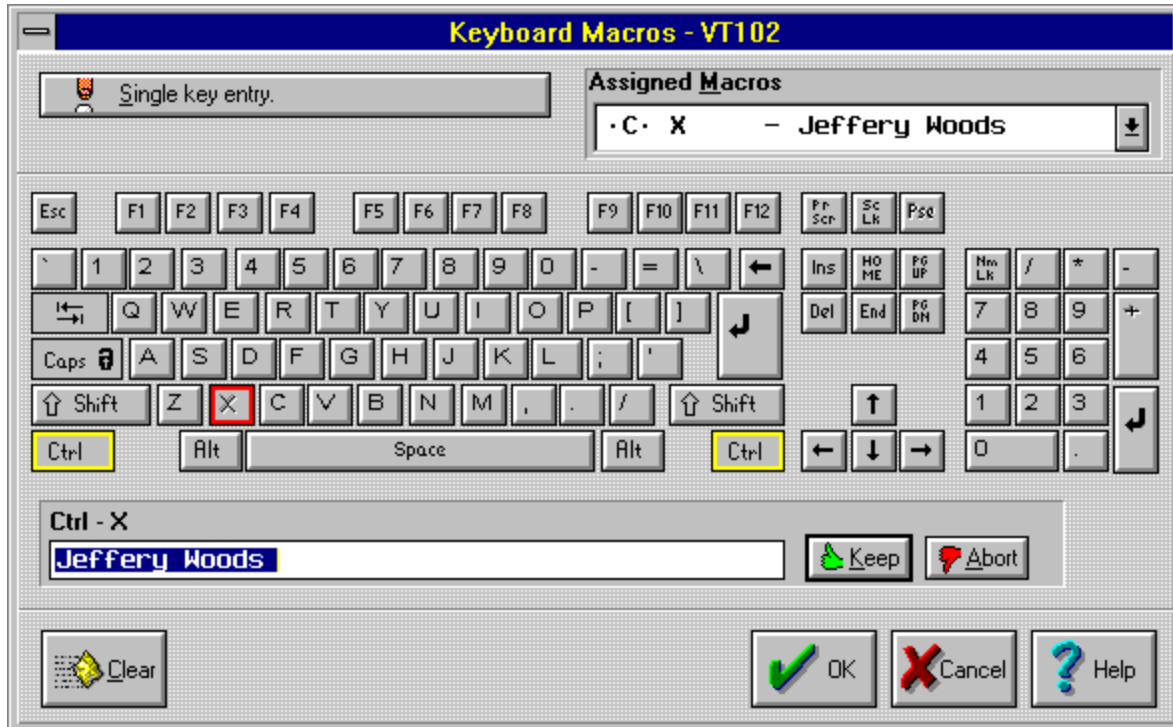
Selecting the CANCEL BUTTON will close the Keyboard Device Manager and restore your previous settings, discarding any changes you have made. This extends to all changes you may have made to individual keyboard devices.

**Help Button**

Selecting the HELP BUTTON will display this help page.

## Configuring Keyboards

To change the characteristics of a macro table, highlight it in the list of available tables, and select the CONFIG BUTTON. The dialog that results allows you to change most any keystroke combination on your keyboard, with the exception of certain keys reserved by Windows and DOS, such as CTRL-ALT-DEL, and ALT-F4 among others. A sample of the keyboard macro editor follows. Simply click on any part of it to view specific help.



### **Single Key Entry Button**

For those without a mouse, or who simply prefer to use the keyboard, this button will allow you to choose the key combination to edit. When selecting a macro to edit via keyboard, bear in mind that while you are in the process of entering the characters of a macro, you cannot select a new macro to edit via this method. You must first select the KEEP or ABORT BUTTON, or use the tab key to move to the large box in the upper left of the window. When the box in the upper left reads **Single Key Entry**, you cannot choose a new macro to edit. The box must read **Press a Key** when you are selecting a new macro to edit via the keyboard. Tabbing over to this box will change it to **Press a Key**.

When selecting the macro to edit via keyboard, you must always select your toggle-keys such as SHIFT, CONTROL, and ALT, first; press and release all toggle keys one at a time, and verify that the toggle name shows up above the edit window in the lower left corner of the macro editor. When all toggles are correct, press and release the regular key. For example, to select the macro CTRL-SHIFT-F2, press and release the CONTROL key, press and release the SHIFT key, and then press and release the F2 key.

**Assigned Macros List**

The Assigned Macros list allows you to view the entire macro table in a single list, without having to select each key sequence to view it. Drag your mouse pointer through the list and release on a macro to edit that macro at once.

**Keyboard**

The easiest way to select a macro to edit is to click on the key sequence. For example, to select ALT-X as the macro to edit, click on ALT and then click on X. A few keys, such as SHIFT, ALT, and CTRL, are toggles, and will alternately turn on and off with each press. You will be able to identify a toggle key by the yellow border around it.



# Keyboard Macro Editing

Once you have selected a macro to edit, you are in edit mode. All keystrokes will be entered in as part of the macro. Only characters may be entered as part of the macro -- combination keys requiring the use of the CONTROL or ALT keys cannot be inserted into macros, nor can the function keys. You will remain in edit mode until you explicitly exit edit mode to select another macro to edit or you exit the editor completely via OK or CANCEL. Almost any mouse action outside of the edit space, and almost any button selection via the TAB key, will take you out of edit mode and either back to the manager, or back into the macro-to-edit selection mode.

## Running Scripts from Macros

Telix for Windows allows you to run a script file in lieu of sending characters when a key is pressed. If a macro has an @ character as its first character, Telix will assume the rest of the definition is the name of a script file, and will try to execute the named file. For example, if ALT-X was being edited to contain the macro @EXIT, Telix would look for the file EXIT.SLC in the defined script directory, and will execute it if it is found. If you really want to send out an @ character as the first character of a macro definition, use two of them instead. For example, if the macro had been @@EXIT instead, then the sequence @EXIT would have been sent to the connect device, and no script would have been run. If @@ appears anywhere in a macro other than as the first character, then both characters will be sent.

## Special Sequences in Macros

The **tilde** symbol is a special symbol that denotes a 1/2 second pause the Telix. For example, to send the word Hello, pause one second, and then send the word World, put a pair of tildes between the words, i.e. Hello~~World. To send a literal tilde character, use a carat followed by a tilde, i.e. This string does not pause, but does send a single tilde here ^~"

The **caret** symbol is a special symbol that denotes a control character in macros. For example, to send a carriage return, which is CONTROL-M, put a carat and an M in the macro, i.e. This macro sends this string and a carriage return.^M. To send a literal carat character, use two consecutive characters, i.e. This string sends no carriage return, but sends a single carat here ^^. The Esc key is denoted by the special sequence of carat-left bracket, i.e. Send an escape key here ^[.

In order to facilitate true VT220 and other emulations, several special caret sequences are available to give the expert user greater control over their macros. These sequences are processed by the current terminal device which replaces them with valid escape codes based upon the terminal mode selected by the host. The table of special sequences is shown in the table below:

<u>SEQ</u>	<u>ANSI/VT100</u>	<u>8-bit VT52</u>	<u>7-bit VT220</u>	<u>VT220</u>	<u>USED FOR</u>
^_	^[O	^[?	SS3	^[O	Numeric keypad
^+	^[O	^[	SS3	^[O	PF keys
^=	^[[		CSI	^[[	Function keys
^#	^[[	^[	CSI	^[[	, cursor mode
^#	^[O	^[	SS3	^[O	,application mode
^"					Comment

The comment sequence signals the end of a keyboard macro. It is useful for documenting the names of function keys. Everything after ^" (including ^" itself) is ignored.

For those who wish to use the older Telix for DOS methodology using ^| sequence blocks, they are still supported, as follows:

^|1 start of block processed if in cursor mode {reset}  
^|2 start of block processed if in cursor application mode {set}  
  
^|3 start of block processed if in keypad numeric mode  
^|4 start of block processed if in keypad application mode

Only one of the above will be processed in any given macro, depending on the internal settings of the terminal as sent to Telix by the remote. None of the above sequences actually get sent out with a macro --They are just placeholders or markers that either get replaced with terminal escape codes or just define sections of the macro to be sent out.

For example, assume the 6 key was a macro whose contents reads:

^|1Cursor mode^|2Cursor Application Mode^|3Keypad numeric^|4Keypad application

If the **6** key is pressed on the ten-key pad, and NUM-LOCK is on, the string **Keypad numeric** will be sent. If the **6** key is pressed on the ten-key pad and NUM-LOCK is off, then the string **Keypad application** will be sent. If the six key on the top row is pressed, similar sequences from the macro as above will be sent, depending on the mode of the terminal, cursor mode or cursor application mode.

**Keep Button**

The KEEP BUTTON is a signal to the editor to replace the previous macro with the contents of the macro edit window. Once Keep has been selected, any previous macro assigned to this key sequence is gone.

**Abort Button**

The ABORT BUTTON is a signal to the editor to restore the macro that existed before you began editing it in the macro edit window. This command is only valid before the KEEP or OK BUTTON is selected. Once KEEP or OK has been selected, abort cannot restore the previous macro. This button is most useful in recovering from a typing or selection error.

**Clear Button**

The CLEAR BUTTON will erase **every** macro assigned in the current keyboard. Should you mistakenly clear a macro table, clicking ABORT will restore the old values.

**OK Button**

Selecting the OK BUTTON will close the Keyboard Device Configuration dialog and update the device with your new macros.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Keyboard Device Configuration dialog and restore your previous macros, discarding any changes you have made.

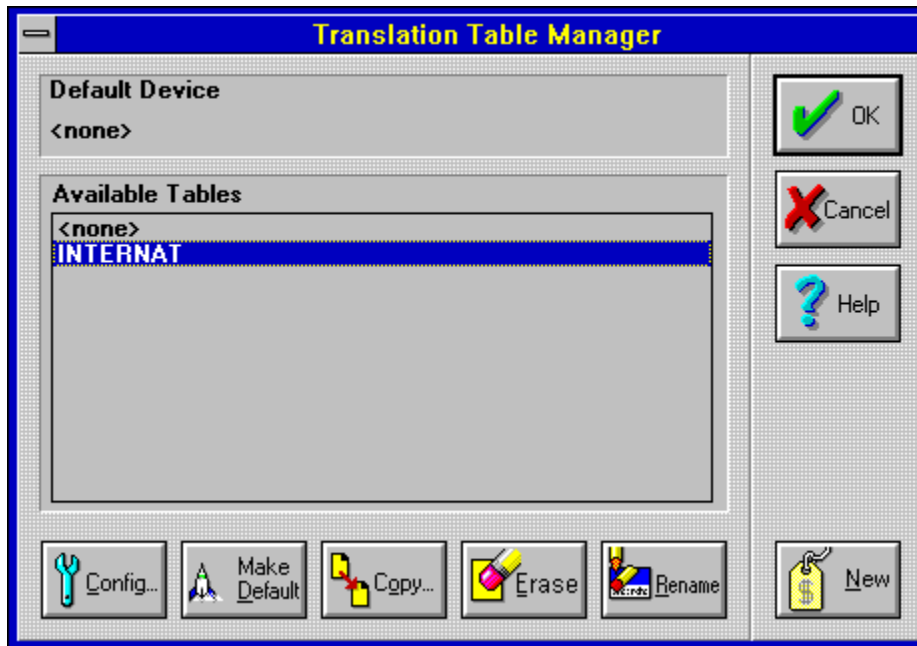
**Help Button**

Selecting the HELP BUTTON will display this help page.



# Translation Table Manager

Sometimes it is necessary for certain incoming and outgoing characters to be changed to other values, or to have certain characters stripped altogether. For this purpose, Telix for Windows keeps a pair of translation tables in memory. For each character in the ASCII set of characters, the translate table defines what the new value, if any, is to be. Using the Translate Table Manager, you may alter the translation values for incoming and outgoing characters. A sample of the translate table manager appears below. Simply click on any part of it to view specific help.



### **Default Translate Table**

The Default Translation Table is a special table. A translation table named **Default** is always available to PhoneBook entries. If an entry is not told to use not a specific translation table by name, but is instead configured to use the built-in table named **Default**, the entry will use the translation table that the Translation Table Manager has specified as the default table. To make a translation table the default table, highlight it in the list of available tables and click on Make Default.

**Available Translate Table Devices**

While in the Translation Table Manager, clicking on any of the available translation tables highlights the table and makes it the current or active table. Any actions taken within the Translation Table Manager will affect only the current table. The Translation Table Manager is your portal to defining new translation tables, modifying existing tables, or choosing which translation table to use at a given moment.

**Make Default**

The Default Translation Table is a special table. A translation table named ***Default*** is always available to PhoneBook entries. If an entry is not told to use not a specific translation table by name, but is instead configured to use the built-in table named ***Default***, the entry will use the translation table that the Translation Table Manager has specified as the default table.

**Copy Translate Table**

To create a new translation table that closely resembles an existing table, highlight the translation table most similar to the one you wish to create, and select the COPY BUTTON. You will be prompted for a unique name for the new translation table, which will have all of the attributes of the original translation table. You may then make modifications to the options of the new translation table as needed.

**Erase Translate Table**

To remove a translation table from the list of available tables in the translation table manager, highlight the table you wish to remove and select the erase function. If Confirmation Dialogs are active, you will be asked to confirm the deletion. The table will then be removed from the list of available translation tables. Any PhoneBook entries that were associated with the deleted table will no longer be able to access the table, and will thus use the Default Translation Macro Table, a selection that may not be appropriate for that entry. Delete translation tables with caution. Telix for Windows will not allow you to delete a table if it is the only table available, or if it is defined as the Default Translation Table.

**Rename Translate Table**

Translation Tables reside on disk, and are identified by their names on disk, without the default .XLT file extension. It is also this name that is used both in the configuration of translation tables and in the selection of tables in PhoneBook. The rename function allows you to change the name of a translation table. It is usually not a good idea to rename existing translation tables; any PhoneBook entries that are associated with the table will no longer be able to access the newly renamed translation table, and will thus use the Default Translation Table, a selection that may not be appropriate for that entry. Rename translation tables with caution.

**New Translate Table**

To create a totally new translate table, click the NEW BUTTON. You will be prompted for a unique name for the new device. After naming the new device, it will be available for editing in the list of devices.



**OK Button**

Selecting the OK BUTTON will close the Translate Table Manager.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Translate Table Manager and restore your previous settings, discarding any changes you have made. This extends to all changes you may have made to individual translate tables.

**Help Button**

Selecting the HELP BUTTON will display this help page.

## Configuring Translation Tables

To change the character mappings of a translation table, highlight it to make it the currently selected table in the list of available tables, and select the CONFIG BUTTON. The dialog that results allows you to change the character translations of all of the characters of the ASCII character set. A sample of the translation table editor follows. Simply click on any part of it to view specific help.

**Translate Tables - INTERNAT**

Incoming				Outgoing			
0 → 0	12 → 12	24 → 24	36 → 36	0 → 0	12 → 12	24 → 24	36 → 36
1 → 1	13 → 13	25 → 25	37 → 37	1 → 1	13 → 13	25 → 25	37 → 37
2 → 2	14 → 14	26 → 26	38 → 38	2 → 2	14 → 14	26 → 26	38 → 38
3 → 3	15 → 15	27 → 27	39 → 39	3 → 3	15 → 15	27 → 27	39 → 39
4 → 4	16 → 0	28 → 28	40 → 40	4 → 4	16 → 6	28 → 28	40 → 40
5 → 5	17 → 17	29 → 29	41 → 41	5 → 5	17 → 17	29 → 29	41 → 41
6 → 6	18 → 18	30 → 30	42 → 42	6 → 6	18 → 18	30 → 30	42 → 42
7 → 7	19 → 19	31 → 31	43 → 43	7 → 7	19 → 19	31 → 31	43 → 43
8 → 8	20 → 20	32 → 32	44 → 44	8 → 8	20 → 20	32 → 32	44 → 44
9 → 9	21 → 21	33 → 33	45 → 30	9 → 9	21 → 21	33 → 42	45 → 45
10 → 10	22 → 22	34 → 34	46 → 46	10 → 10	22 → 22	34 → 34	46 → 46
11 → 11	23 → 23	35 → 35	47 → 47	11 → 11	23 → 23	35 → 35	47 → 47

Display as...  
 Character  
 Decimal  
 Hex

Link by...  
 None  
 Movement  
 Values

Clear OK Cancel Help

### **Incoming and Outgoing Translations**

Character translations may be changed via the keyboard or via the mouse. To change a translation via keyboard, use the TAB key to move to the appropriate table, and then use the arrow keys to move to the character to be altered. Typing in the new value in the box in the right hand column, as shown in the example for outgoing character 17, will alter the character translation.

### **Changing a Character via Mouse**

You may manipulate the translation table via Windows drag and drop capabilities. To change a character translation via mouse, click and hold down the left mouse button while over the character that is to be the new character, and drag the mouse pointer (which will change to an arrow) over the right hand column of the character to be translated. Release the mouse button for the new mapping to take effect. For example, to force incoming ASCII 21 characters to be translated to ASCII 32 characters, click and hold the mouse pointer over the ASCII 32 character, and drag the mouse pointer so that it rests over the ASCII 21 character in the right hand column of the table. Release the mouse button for the new mapping to take effect.

### **Stripping a Character**

When it is desirable to strip a character entirely, so that it appears that the character was never received or so that the character is impossible to send, set the character's translation to NULL, or to an ASCII 0. This may be useful for at least filtering out some line noise on modems that do not have error correction. The most common character sent as line noise is the ASCII 251, or square root symbol. If you were to translate ASCII 251 in the incoming table to NULL or ASCII 0, then even if you did receive line noise in the form of this character, you would not see it.

**Display As...**

The translation table editor can refer to characters in any of three ways. You may choose here which reference you wish to be used in the tables. You may select from:

- △ **Character:** Shows the displayable ASCII character or equivalent.
- △ **Decimal:** Shows the ASCII character value from 0-255 in decimal.
- △ **Hex:** Shows the ASCII character value from 00h-FFh in base 16.

### **Link By...**

The translation table editor displays both the incoming and outgoing tables at the same time, and based on this setting, changes to one side may or may not affect the other side. You may choose the link method from the following:

- Δ **None:** The two tables are totally unrelated. Changes and movements in one table will not affect the other table at all.
- Δ **Movement:** The movements of the two tables are linked (moving one scrollbar causes the other table to follow along), but changes to one table will not affect the translations of the other.
- Δ **Value:** The two tables are completely intertwined. Changes to one table are mirrored in the other. For example, if ASCII 64 characters are to be changed to ASCII 96 in the incoming table, then ASCII 96 characters will be changed to ASCII 64 in the outgoing table.

**Clear Button**

Clearing a translation table will restore all of its translations to a default of no translation. All characters will be passed through unchanged in both the incoming and outgoing tables. Should you mistakenly clear a table, clicking Abort will restore the old values.



**OK Button**

Selecting the OK BUTTON will close the Translate Table Configuration dialog and update the device with your new translations.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Translate Table Configuration dialog and restore your previous translations, discarding any changes you have made.

**Help Button**

Selecting the HELP BUTTON will display this help page.

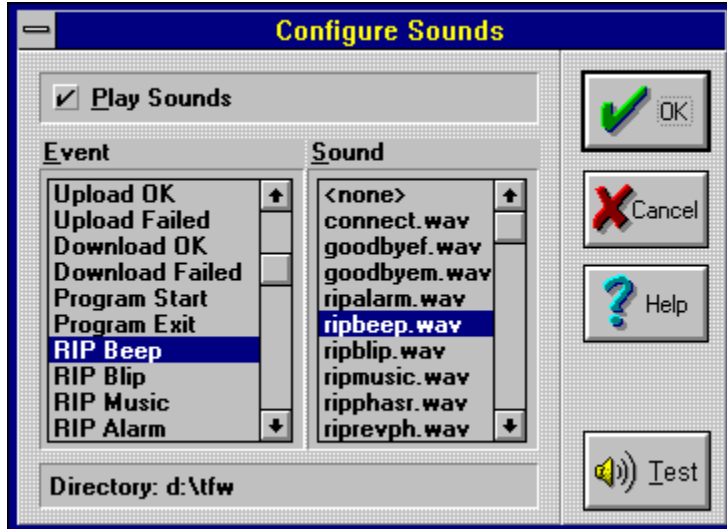
## Sound Configuration

Telix has the capability of linking Windows' .WAV sounds files to certain events and playing these sounds through your installed sound card or through your PC speaker with the appropriate drivers available from Microsoft and other third party vendors. The Configure Sounds dialog allows you to choose which sounds get played at what times.

### What To Do If You Don't Have a Sound Card

.WAV files are normally played through a sound card and its drivers, installed into your machine and into Windows' configuration separate from Telix. If your system does not have a sound card installed, you may still get a rough approximation of the .WAV file to play through your PC speaker by installing Microsoft's PC Speaker Drivers for Windows, available separately from Microsoft or your local bulletin board service. Many Windows users have installed this driver to allow basic sound capabilities on their machines, however, due to the nature of the PC speaker driver, it is **NOT** recommended for use with Telix for Windows. If you wish to use it, you should experiment with file transfers and other Telix functions which cause sounds to be played to determine if it will cause problems.

An example of the Sounds Manager follows. Simply click on any part of it to view specific help.



**Play Sounds**

This option determines whether sound files will be played at all. If this option is checked, then sounds will be heard. If this option is not checked, then all sounds will be ignored.

**ANSI Music**

While the ANSI committee has not issued a standard on sounds generated via escape codes in the ANSI-based terminals, there is a fairly common standard among communications software developers. If this option is enabled, then the sounds commonly called ANSI Music will be played through the PC Speaker.

**Assigning Sound Events**

To assign a sound file to an event, select the desired event in the Sound Events list then select the desired system sound from the list of .WAV files installed. Telix for Windows comes with several .WAV files, though you are not restricted to using only those; any .WAV file will do. If the desired .WAV file is in a different directory, you may change directories and disks by selecting the desired directory from the bottom of the list of available sounds.

**Current Path**

To help you navigate through directory structures, the directory you are currently in will be displayed here.



**Test Sound**

You may listen to a .WAV file to determine if it is truly the sound you want to link to an event by clicking on the TEST BUTTON. Clicking on the TEST button will play the .WAV file currently highlighted in the list of available sounds.

**OK Button**

Selecting the OK BUTTON will close the Configure Sounds dialog and update the appropriate settings.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Configure Sounds dialog and restore your previous settings, discarding any changes you have made.

**Help Button**

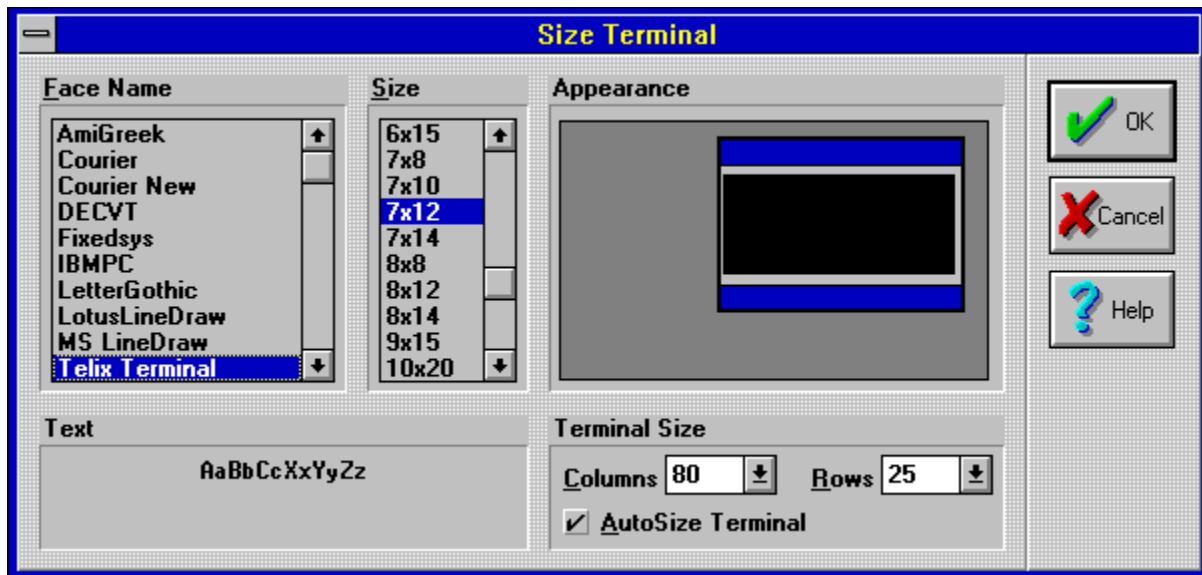
Selecting the HELP BUTTON will display this help page.

## Resize Current Terminal

The one facet of the terminal window that is changed most frequently is the size of the terminal window itself. Telix sets the terminal size as being the combination of the number of rows and columns and the size of the characters that make up these rows and columns. Therefore, to change the size of the terminal window, one only needs change the size of the font, or the number of rows and columns.

When you select the terminal size function, you will be presented with a dialog containing all of the features of the terminal device that affect its size. The one exception to this is the *RIPscrip* terminal device, whose terminal window is fixed at 640x350 pixels, and cannot be changed.

A sample of the configuration dialog follows, with detailed descriptions of each option available to you. Simply click on any part of it to view specific help.



**Font Face Name**

The font face and [font size](#) you choose directly affect the size of the terminal window. The larger the chosen font, the larger the window will be. The font face will affect the size only to a small degree, but it is a matter of preference and also capabilities. Most Windows fonts can't display special ANSI characters (such as line drawing characters) that many BBSes use. Telix for Windows provides two special fonts, Telix Terminal and Telix VT Terminal, which include the characters needed for ANSI BBS systems and DEC VT Terminal emulation, respectively.

**Font Size**

The [font face](#) and font size you choose directly affect the size of the terminal window. The larger the chosen font, the larger the window will be. When autosizing is on for this terminal device, you may select the font face, but the size will be chosen automatically to best fit the main window. You may select a fixed font size when autosizing is not active; Telix for Windows will then center the terminal window, adding scroll bars if the selected size causes the terminal window to be larger than the available desktop space.

**Appearance**

The changes you make to the font face and size, along with the number of columns and rows you select determine the dimensions of the terminal window. Changes you make are reflected in this small sample window as you select them, to let you preview the new appearance.



**Text Sample**

When you select a new font face or size, a sample of the resulting font as it will appear in the terminal window is displayed so that you may preview it.

**Terminal Size**

The number of rows and columns in the terminal device directly affect the size of the terminal window. The more rows and columns you choose, the larger the window will be. In autosizing mode, you must still select the number of rows and columns, and Telix will work to best fit the chosen number of rows and columns on screen by automatically choosing a smaller or larger font as is warranted.

**Autosize Terminal**

When autosizing is active, you may select the font that the terminal will use, and the number of rows and columns that the terminal will contain, but you may not select the size of the font. The size of the font will be chosen automatically to give you the largest possible terminal window that will fit without scroll bars in the application window. To resize the window, use the standard Windows border dragging to resize the main Telix for Windows application window. Telix for Windows comes with all terminal defaults set to autosize mode except for RIP*scrip* devices, which cannot be resized at all.

**OK Button**

Selecting the OK BUTTON will close the Size Terminal dialog and put your selections into effect.

**Cancel Button**

Selecting the CANCEL BUTTON will close the Size Terminal dialog and restore your previous settings, discarding any changes you have made.

**Help Button**

Selecting the HELP BUTTON will display this help page.

# Opening and Saving Configurations

Telx for Windows is capable of maintaining multiple configuration files, all accessible independently either at startup or after the program is running. Each configuration file contains all of the detail about your setup, including all information about terminal devices, connect devices, files and paths, sounds, and many other items you have configured. The two exceptions are translation tables and keyboard macros, which are stored in separate files.

## Opening a Different Configuration File

You may change configurations quickly and easily by selecting **Open** from the [Configure menu](#). You will then be presented a dialog that allows you to choose a different .CFG file. When the new file is opened, its settings and defaults will immediately become active. The old configuration file may or may not be saved with its changes (if any) depending on whether the option for [Autosave Configuration](#) is turned on. When in doubt, always save the current configuration file before opening a new one.

## Saving a Configuration File

Even if the [Autosave Configuration](#) option is turned on, it is sometimes desirable to save the current configuration explicitly, perhaps under a different name. Selecting **Save** from the [Configuration menu](#) saves the configuration file under its current name, which will appear on the menu next to the Save command. Selecting **Save As** from the Configuration menu will prompt you for a new filename and directory before saving the config file to the new name. While you may choose any file and extension here, we highly recommend you retain the .CFG extension and that you keep all Telix for Windows configuration files in the Telix for Windows directory to avoid confusion.

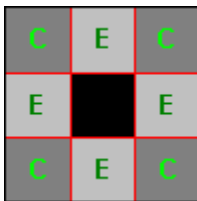
## Creating a Terminal Frame

It is possible to create your own terminal frames for use in Telix. A terminal frame is simply a Windows bitmap file with the extension **.FRA**. Telix looks in its startup directory for **.FRA** files and adds them to the list of available terminal frames. These frames are easily distinguished from the frames included with Telix as their names will be in all capital letters.

You can create frames with any paint program, such as Paintbrush which is included with Windows, or other image creation program you wish. Some programs will not allow you to save a bitmap file with the extension **.FRA** so you may have to save it with the extension **.BMP** and use File Manager to rename the file. Some paint programs offer the option of saving bitmap files in one of two subformats: *RLE encoded* or *RGB encoded*. When given a choice, always choose *RGB encoded* because *RLE encoded* files are not compatible with Telix.

You can use a bitmap with any number of colors, even 16.7 million. The bitmap file can be any size up to 64k. This allows for a bitmap of 320x200 pixels with 256 colors or 147x147 pixels with 16.7 million colors. Attempting to use a bitmap larger than 64k will result in a medium sized black frame.

There are a few rules to follow when drawing your frame bitmap. Telix divides a terminal frame bitmap into 9 equal squares, as illustrated below.

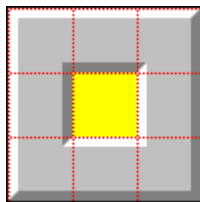


If your bitmap's width and height are not evenly divisible by three, Telix will throw away the right-most and bottom-most pixels and then divide what remains.

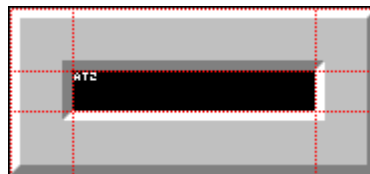
The corners (shown above by a 'C') are used exactly as you drew them for the corners of the terminal frame. The edges (shown above by an 'E') are stretched or squashed until they are the right length or width to fit the sides of the terminal. The center area is not used at all and is ignored by Telix.

Here are two examples that show what happens with a cleverly designed frame bitmap and a not so cleverly designed frame bitmap. The dotted red lines will help illustrate the different sections.

### Clever:

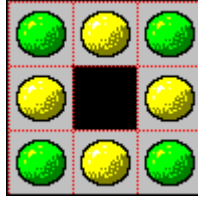


Original Bitmap



Result in Telix for Windows as a terminal frame

### Not So Clever:



Original Bitmap



Result in Telix for Windows as a terminal frame

Notice on the clever bitmap that the yellow center has no effect on the final terminal frame.

Notice on the not so clever bitmap that the green balls in the corner are perfect in the final terminal frame, but that the yellow balls on the edges become distorted on the final bitmap.

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**See also**

[Creating a Desktop Pattern](#)



## Creating a Desktop Pattern

It is possible to create your own desktop patterns for use in Telix. A desktop pattern is simply a Windows bitmap file with the extension **.BKG**. Telix looks in its startup directory for **.BKG** files and adds them to the list of available desktop patterns. These patterns are easily distinguished from the patterns included with Telix as their names will be in all capital letters.

You can create desktop patterns with any paint program, such as Paintbrush which is included with Windows, or other image creation program you wish. Some programs will not allow you to save a bitmap file with the extension **.BKG** so you may have to save it with the extension **.BMP** and use File Manager to rename the file. Some paint programs offer the option of saving bitmap files in one of two subformats: *RLE encoded* or *RGB encoded*. When given a choice, always choose *RGB encoded* because *RLE encoded* files are not compatible with Telix.

You can use a bitmap with any number of colors, even 16.7 million. The bitmap file can be any size up to 64k. This allows for a bitmap of 320x200 pixels with 256 colors or 147x147 pixels with 16.7 million colors. Attempting to use a bitmap larger than 64k will result in a black desktop pattern.

There are no specific rules for drawing your desktop pattern bitmap. Telix repeatedly displays the bitmap until it fills the entire desktop area of the [Telix application window](#). If your bitmap is 8x8 pixels, Telix can take advantage of a special Windows subroutine to draw the desktop pattern that is much faster than what Telix must do otherwise. If you have a local bus video card or a video card with bitmap caching, the difference in drawing speeds will probably not be noticeable.

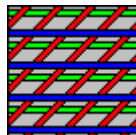
Since Telix does a simple repeat of the bitmap to fill the desktop, you may get seams if the edges of your bitmap do not wrap perfectly. Think of the bitmap being bent around so that the left and right edges meet. If the picture does not flow smoothly across this seam the bitmap will not tile smoothly. The same is true for the top and bottom edges of the bitmap.

Here are two examples that show what happens with a cleverly designed desktop pattern bitmap and a not so cleverly designed desktop pattern bitmap.

### Clever:



Original Bitmap

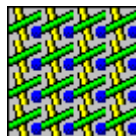


Result in Telix for Windows as a desktop pattern

### Not So Clever:



Original Bitmap



Result in Telix for Windows as a desktop pattern

Notice that just because a desktop pattern is designed to be continuous, it is not necessarily pretty. Also notice that just because a desktop pattern is designed with seams and discontinuities, it is not necessarily ugly. These illustrations are simply suggested guidelines, and your personal taste will be the final factor in determine what looks good as a desktop pattern and what does not.

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**See also**

[Creating a Terminal Frame](#)

## Downloading Files



To download a file, you must normally inform the remote system that it should send the file. When you are downloading (receiving), by definition, the remote system must be sending to you. If you are calling into an automated bulletin board system, this is usually done by way of a menu command of the online system. If you are calling a friend or colleague to transfer files directly, then the colleague will have to start the transfer manually. We will review the manual sending of files in a moment. For now, let's look at how to download a file from a BBS.

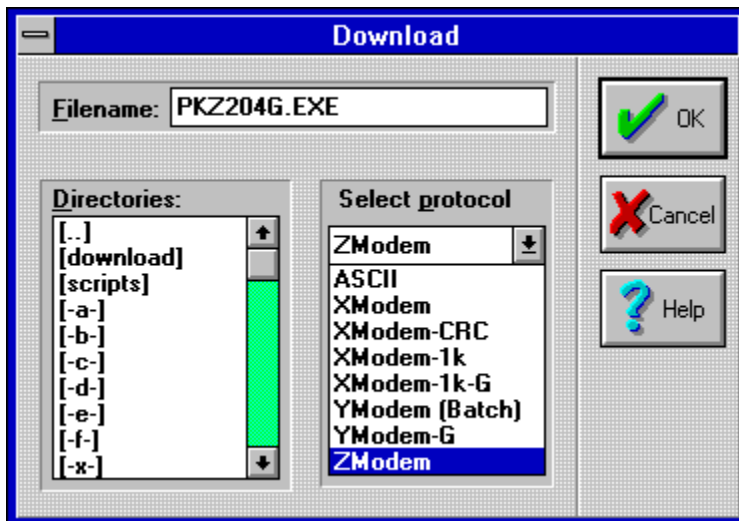
For example, when calling our online system, *deltaComm Online*, you might find that you need a compression utility known as PKUNZIP to decompress the other compressed files that you can download from us. To download this utility from *deltaComm Online*, then, you first need to tell our BBS that you wish it to send the file.

The command on *deltaComm Online* to initiate a download to you is `download`. Most systems include some form or variant of this command, but it will differ from system to system, and may be hidden under other menu options, such as a file menu. Once the online system has been told that you wish to download a file, it will begin asking other questions about the transfer, such as which file or files you wish to transfer, and possibly which file transfer protocol you wish to use. In our example, you are asked for the name of the file you wish to download.

Only when the remote computer has all the information it needs to send you the file(s) will the transfer be ready to start. The remote computer will then send something to the effect of "Sending Files ... Start Your Download." At this point, you are ready to tell Telix for Windows to begin receiving the files.

Once the remote computer is ready to send the file or files, Telix for Windows must be placed into receive mode using the matching file transfer protocol. If the remote computer was told to send the files with the ZModem transfer protocol, then Telix for Windows must be told to receive the files with ZModem as well.

ZModem downloads will begin automatically if configured to do so in the [Protocol Options Configuration](#). All other protocols must be started by you. To start the download in Telix for Windows when the time comes, select the **Download File** option from the [File Menu](#), or press ALT-PAGE DOWN. A file transfer protocol selection box will prompt you for the protocol and filename as illustrated below:



Select the same protocol you selected on the remote computer -- this protocol must match the protocol that the BBS is using to send the file or files. A description of each protocol and the merits of each can be found in the section on [Selecting a Transfer Protocol](#). Some file transfer protocols will not need you to provide a name for the file to receive, as modern protocols pass the name of the file along as part of the protocol startup. It will not hurt to enter a filename here when it is not needed -- at worst, the filename you enter will simply be ignored. Once the protocol and filename (if needed) have been selected, click the OK button to begin the file transfer.

When you click OK, the dialog will go away. The file transfer will then begin, with the files you are downloading being placed in the directory defined as the download directory in the [Filenames and Paths Configuration](#); during the transfer you will be shown a [File Transfer Status Dialog](#), showing you the progress of the file transfer.

When the file or batch of files has been completely received, the dialog will go away and you will be returned to terminal mode. If you are having difficulty in transferring a file, please refer to the [Answers to Common Questions](#) section.

There is usually no reason to sit and watch a long file transfer progress. Telix for Windows is quite capable of downloading a file in the background while you work on something else in the foreground. You may minimize Telix for Windows to an icon during a file transfer, and the icon will show you the progress of the current file.

## Uploading Files

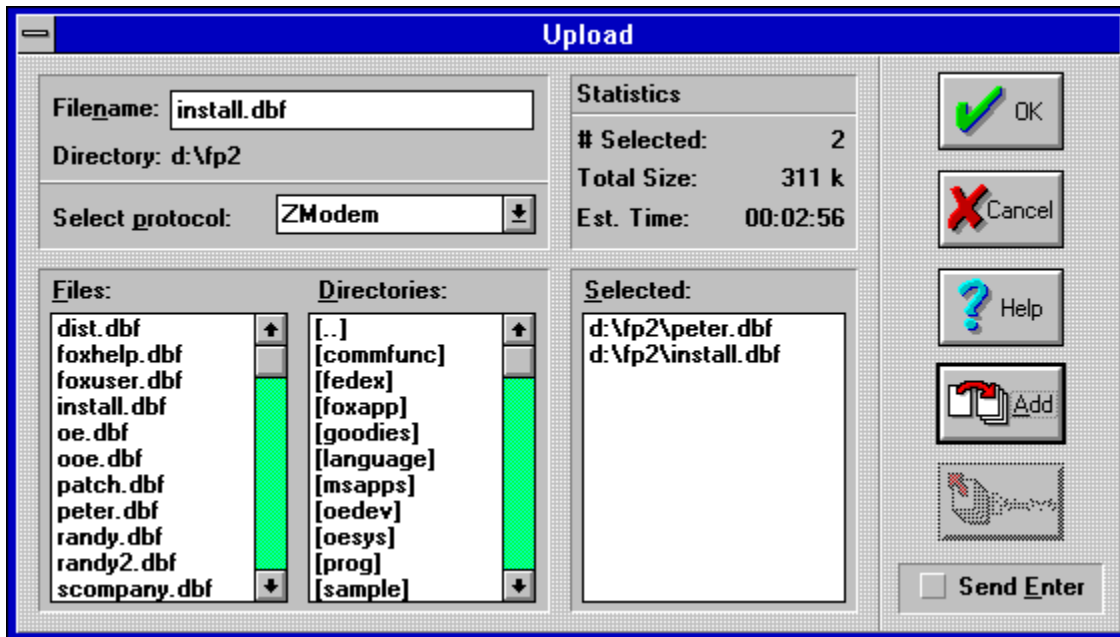


To upload a file, you must normally inform the system that it should prepare to receive the file. When you are uploading (sending), by definition, the remote system needs to be receiving from you. If you are calling into an automated bulletin board system, then this is usually done by way of a menu command of the online system. If you are calling a friend or colleague to transfer files directly, then the colleague will have to start the transfer manually. Lets look at how to manually upload a file to a colleague.

For example, if your colleague in another city needs your customer database, you might find it convenient to send the file to him by modem. You would arrange for your co-worker to answer a telephone call with his modem. Once the modems are connected, you will be ready to continue.

Unlike calling a BBS, connecting directly to another computer like this will not present the caller with a menu or command structure -- there will be no interactive bulletin board software to guide you with help or commands. When directly transferring files, it is best to have a second phone line handy so that you can speak to the recipient while starting the transfer, though this is not mandatory.

Because you are the one who wants to send the file, you should start your side first. To initiate a file upload from your computer, press ALT-PAGE UP or select **Send File** from the main windows [File Menu](#). When selected, this command will present you with a dialog in which you must choose the file transfer protocol to use, and the file or files that you wish to send. A sample of this dialog appears below.



Select the file transfer protocol you wish to use in the dialog above. Make sure that your colleague knows which protocol you will be selecting. Then choose the files you wish to send in the boxes labeled Files and Directories. If the chosen file transfer protocol supports the sending of multiple files, you may be allowed to select more than one file to send. See the section on [Selecting a Transfer Protocol](#) for details on batch file transfers.

To select the file or files to send, use the arrow keys or the mouse cursor to highlight the file to send in the **Files** list and press the ADD button. The file will then be listed in the **Selected** list as well. All files listed

in the **Selected** list will be sent. You may place files from multiple directories in the **Selected** list. You may highlight multiple files to add from the files list by holding down the control key while you click on several files. If you mistakenly include a file in the **Selected** list, you may remove it by highlighting it and clicking the REMOVE button.

Once the Selected list contains the file or list of files to be sent, click OK to begin sending the files. Once you click OK, your colleague should begin a download using his communications software and the same protocol that you arranged to use. When you click OK, the [File Transfer Status Dialog](#) will appear, showing you the progress of the file transfer.

Until your colleague starts his download, the field labeled **Message** will contain the message *Waiting to Send*. Once your colleague starts his download, the transfer will begin. When the file or batch of files has been completely sent, the dialog will go away and you will be returned to terminal mode. If you are having difficulty in transferring a file, please refer to the [Answers to Common Questions](#) section.

There is usually no reason to sit and watch a long file transfer progress. Telix for Windows is quite capable of uploading a file in the background while you work on something else in the foreground. You may minimize Telix for Windows to an icon during a file transfer, and the icon will show you the progress of the current file.

### **Uploading Files to an Online Service**

Uploading files to an online service is very much like uploading them to a colleague. The online service must be aware that the files are to be received before you send them. To upload to an online service, you will select a menu command from the service instead of having a colleague manually begin the remote send.

For example, when calling our own online system, *deltaComm* Online, you might find that we may ask you to upload an example of a script for which you need assistance. To upload your script to us, you first need to tell our BBS that you wish to send it the file.

The command on *deltaComm* Online to initiate an upload to us is upload. Most systems include some form or variant of this command, but it will differ from system to system, and may be hidden under other menu options, such as a file menu. Once the online system has been told that you wish to upload a file, it will begin asking other questions about the transfer, such as which file or files you wish to transfer; it may also ask for a description of the file. Some systems will ask for the description before the file transfer begins, while others may wait until after the transfer is complete.

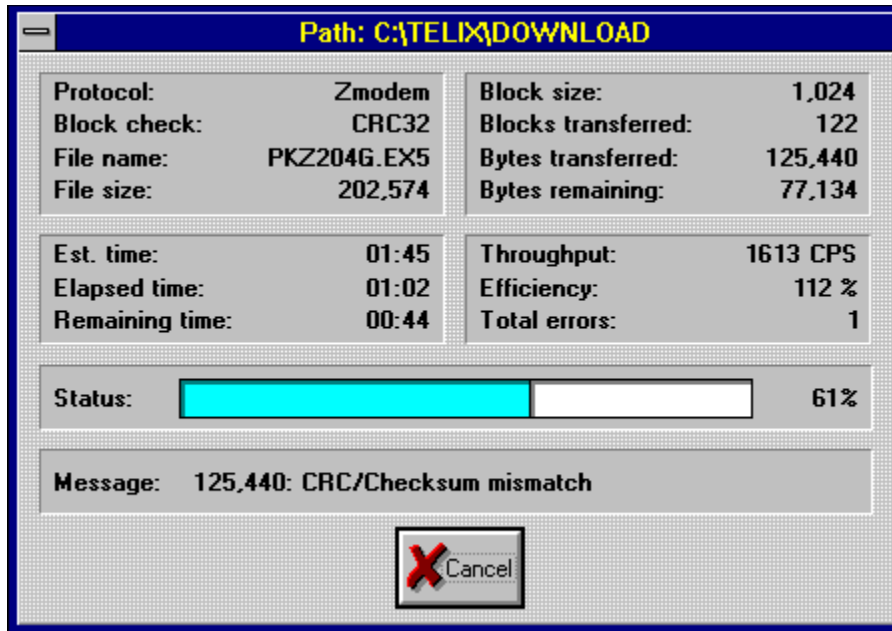
Only when the remote computer has all the information it needs to receive your file or files will it be time to start the transfer. The remote computer will then send something to the effect of Ready to Receive ... CTRL-X Aborts Transfer." At this point, you are ready to tell Telix for Windows to begin sending the files. From this point on, the use of the file selection dialog is the same as described in the section on **Sending a File to a Colleague** above. Remember to select the same protocol that the BBS lists as the receiving protocol.

## Selecting a Transfer Protocol

Telnet for Windows supports a number of built-in file transfer protocols. It can be confusing to decide which one to use. When both sides of the connection support only one common protocol, then obviously that is the one to use, no matter what its deficiencies. When you have the option, some protocols are better choices than others. The protocols included in Telnet for Windows are described below, along with their recommended uses. ZModem is the preferred protocol, followed by YModem-G and YModem (Batch). XModem is included for completeness but is not recommended unless no other protocols are available. XModem works, but it is very slow compared to other protocols available.

- △ **ZModem** For most purposes, ZModem is the best all-around protocol. It is very fast and very reliable. It can arguably be called the most popular protocol in use today. ZModem can transfer a group of files in a single batch, and does not add any extra bytes to the file. You do not have to give the file name(s) when downloading with ZModem -- the sending system will send the file name as part of the header that is sent before the file. ZModem can detect and recover from errors quickly, and can resume an interrupted transfer at a later time (this feature, called **ZModem Resume** or **ZModem Crash Recovery**, can be activated when needed in the [Protocol Options Configuration](#)). ZModem is also very well suited for satellite links and X.25 packet switched networks.
- △ **XModem** XModem is often called the lowest common denominator of protocols. It is the original protocol, and the father of the remaining protocols described here. XModem sends files in blocks of 128 characters at a time. After each block, XModem waits for the receiving computer to check the block for errors. Only when the receiving computer sends a signal that the block was received intact will the next block be sent. The receiving computer can request that a block be resent if errors are detected. XModem supports two kinds of error checking: checksum and CRC checking. CRC is the more sophisticated of the two. If the file being transmitted with XModem is not a multiple of 128 bytes in size, then XModem pads the end of the file with extra characters (ASCII 26, End of File Markers) to bring it to a full 128 byte block. This protocol does not support batch transfers.
- △ **XModem-1k** This protocol is a variant of XModem. The only difference is that it uses 1024 byte blocks instead of 128 byte blocks, thus reducing the number of delays while blocks are acknowledged. Some communications programs mistakenly refer to this protocol as Ymodem. This protocol pads blocks and does not support batch transfers.
- △ **XModem-1kG** This protocol is an XModem variant that achieves great speed by sending blocks one after the other without waiting for any acknowledgment from the receiver. Because of this, however, it cannot re-send blocks in the case of an error; this protocol should therefore only be used on a high performance error-correcting modem. If an error *is* detected by the receiver, the transfer is immediately aborted. This protocol is mistakenly called YModem-G by some communications programs. YModem-G is entirely different. This protocol pads blocks and does not support batch transfers.
- △ **YModem Batch** This protocol is a variation of XModem, which allows for multiple files to be sent in a single transfer. While transferring files, it keeps the correct name, size, and date, and may use 128 or 1204 byte blocks.
- △ **YModem-G** This protocol receives very high transfer rates by sending blocks one after another without waiting for any acknowledgment from the receiver. Because of this, it cannot re-send blocks in the case of an error; this protocol should therefore only be used on a high performance error-correcting modem. If an error *is* detected by the receiver, the transfer is immediately aborted. This protocol supports batch transfers.

## File Transfer Status Dialog



The File Transfer Status Dialog (shown above) displays information about the current file being transferred, including estimates of how long it will take to download this particular file at the current connection rate. Estimates are for the individual files being transferred, and are not estimates of the size of a batch of many files sent together.



**File Information**

- △ **Protocol:** The [Transfer Protocol](#) being used to send or receive the file.
- △ **Block Check:** The type of error checking that the protocol is using.
- △ **File Name:** The name of the file being transferred.
- △ **File Size:** The size in bytes of the file being transferred.

**Block Information**

- △ **Block Size:** The number of bytes that are being transferred in one block.
- △ **Blocks Transferred:** The number of blocks that have been transferred.
- △ **Bytes Transferred:** The number of bytes that have been transferred.
- △ **Bytes Remaining:** The number of bytes remaining to be transferred.

**Time Information**

- △ **Est. Time:** The estimated amount of time that will be required for the complete file transfer.
- △ **Elapsed Time:** The amount of time that has elapsed since the transfer of this file began.
- △ **Remaining Time:** The estimated amount of time remaining for this file to be completed.

**Efficiency**

- △ **Throughput:** The number of characters that are being sent or received per second.
- △ **Efficiency:** The ratio of the current throughput as compared to the connected baud rate connected.
- △ **Total Errors:** The number of protocol errors that have occurred during the file transfer. If you experience a large number of these errors, please see the [Answers to Common Questions](#) section.

**Status:** A bar graph, and the percentage that it represents, of the amount of the file that has been transferred, and remains to be transferred.

**Message:** When a transfer protocol detects an error, a description of the error will be displayed here, preceded by the byte count at the time of the error.

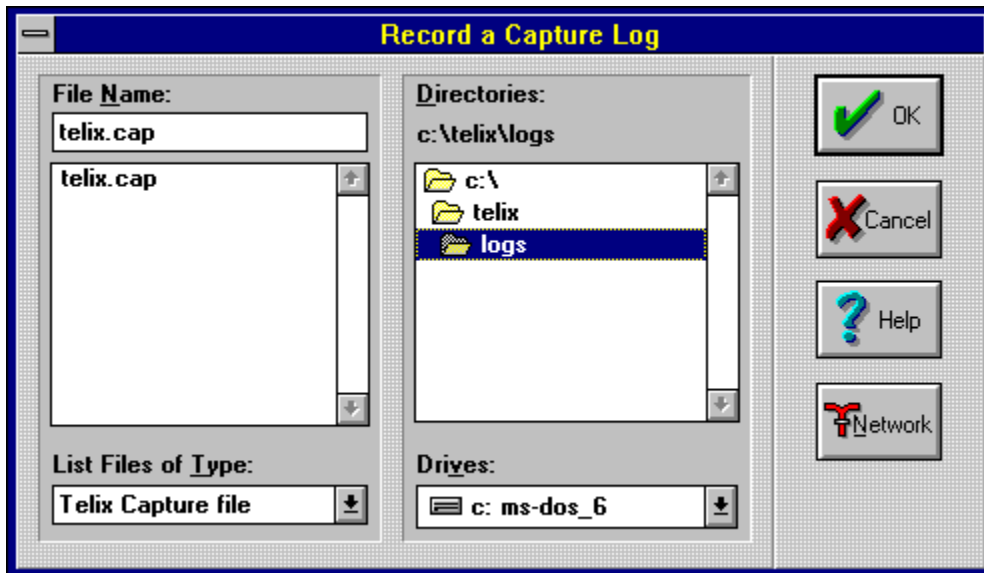
Pressing the CANCEL BUTTON at any time during a file transfer will abort the transfer and return you to terminal mode. It may be necessary to alert the system you are connected to that you have aborted the transfer. This is commonly accomplished by pressing CTRL-X several times.

# Capture Log



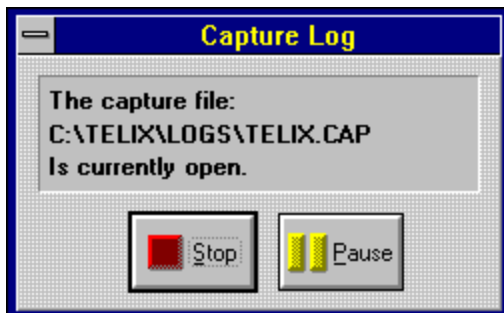
It is sometimes desirable to log all or part of a session to disk. A log file of everything that happened while you were on-line can be quite useful after you log off. Telix allows all incoming data to be captured to a file, with or without escape sequences. It can be done automatically (see *Editing PhoneBook Entries*) or on demand from the [File Menu](#).

To turn on a capture log, select the **Capture Log** function from the [File Menu](#). You can also select the **Capture Log** function from the [QuickTools](#) or from the keyboard by pressing ALT-L. You will be presented with a dialog like this:



If you select the name of an existing file, incoming data will be appended to the file. If you enter in a file that does not exist, it will be created and the log opened. Clicking on OK begins the capture process.

Selecting the **Capture Log** function again while the log is active will produce a different dialog, allowing you to suspend or close the capture log:



You may either stop the capture, thus closing the file, or you may simply pause the capture. The capture file will remain paused and no further data will be written to the capture log until the log is unpaused. To unpause a capture file, simply select the **Capture Log** function again to see the RESUME button, which will have replaced the PAUSE button as shown in the dialog above.



Capture files may or may not contain the color and positioning sequences that terminal emulations like ANSI use. You may configure whether the capture log should save the emulation sequences in the [General Options Configuration](#).

# Printer Log



It is frequently desirable to make a paper copy of an entire online session. Rather than capturing it and printing it out later, it is possible to log everything directly to printer. When the **Printer Log** is on, everything that is received by the connect device will be printed on your printer as well.

To turn on the printer log, select the **Printer Log** function from the [File Menu](#). You can also select the **Printer Log** function from the [QuickTools](#) or from the keyboard by pressing CTRL-@. When you start the printer log, the Print QuickTool will animate, making the image appear to be in motion. The QuickTool button will also appear to be depressed. While the **Printer Log** is turned on, all data is sent to the printer as well as to the screen. To turn off the **Printer Log**, select the menu option or QuickTool again; the animated icon will return to its normal off state as the log closes.

Some terminal emulations, such as VT220, may send codes to start a printer log automatically. Telix for Windows fully supports these codes, provided you are in the proper terminal emulation.

## Screen Image



Turning on a [Capture Log](#) will not capture characters that are already on the screen. When you want to save what is on the screen at a given moment and the capture file is not already turned on, a **Screen Image** can be made.

To record the image of what is on the screen to a file, select **Screen Image** from the [File Menu](#). You may also select the Image [QuickTool](#), or press ALT-I on your keyboard.

Telix will then place the text from the terminal into the image file defined in the [Filenames and Paths Configuration](#). If the file exists, Telix will append the current screen to the existing file; if not, it will create the file as it writes the image.

The *RIPscrip* terminal emulation currently cannot be imaged due to its graphical nature; nor will colors in text terminals be saved to the image file. To capture a *RIPscrip* scene or to save color codes, open a capture log with the [General Configuration](#) option **Capture Before Emulation** turned on and view the screen again.

## Print All

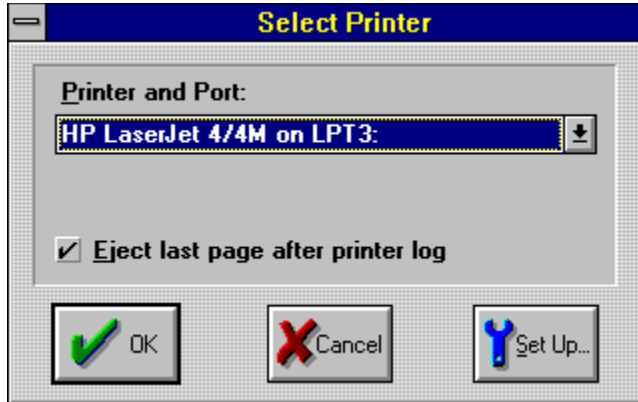
Telx for Windows can print an image of the screen to the currently selected Windows printer. To print the entire [Terminal Window](#), select **Print All** from the [File Menu](#). Telx for Windows cannot print the contents of the *RIPscrip* terminal window at this time.

## Print Selected

You may use your mouse cursor to select a portion of text from the [terminal window](#) or the [scrollback buffer](#) to be printed. To select a block of text for printing, click and hold the left mouse button on one boundary of the block and drag the mouse pointer to the other boundary. When you are satisfied that the block is what you want to print, release the mouse button. You may then use the **Print Selected** command from the [File Menu](#) to print only the selected text.

## Printer Setup

You may select the printer you wish to use from the printer drivers installed into Windows in the following dialog. To open this dialog, select **Printer Setup** from the main window [File Menu](#).



If your printer is not available in this dialog, please refer to your Microsoft Windows documentation for details on how to install new printers from the Control Panel.

Clicking on the SETUP BUTTON in this dialog will bring up Microsoft Windows standard printer setup dialog, as found under your **Printer Control Panels**. Please refer to your Microsoft Windows User Guide for details on configuring installed printers using **Control Panels**.

## Exit Telix



Selecting **Exit** from the [File Menu](#) begins an ordered shutdown of Telix, based on the settings contained in the [General Configuration](#). If **Confirmation Dialogs** are turned on, you will first be asked to confirm that you really wish to exit Telix, and if you wish to hang up the phone if you are connected. If **AutoSave** is turned on, then any changes made to the configuration file will be saved automatically, otherwise they will be discarded. The open [PhoneBook](#) will be closed with all changes saved, and Telix will then be shut down.

You may also exit Telix from the keyboard by pressing either ALT-X or ALT-F4, or from the [QuickTools](#) bar by clicking on the EXIT tool.

## Copying Text

To copy the marked text to the Windows Clipboard where other applications can access it, select **Copy** from the [Edit Menu](#). The marked text will be placed onto the Windows Clipboard, where it can be accessed by the paste commands of most Windows applications. The previous contents of the Windows Clipboard will be overwritten.



## Send Clipboard Text

Sometimes it is useful to send the contents of the Windows Clipboard to the connect device. For example, in uploading a file with a lengthy description to a BBS, it may be easier to place the description onto the Clipboard and then to send the clipboard to the connect device to enter the description than it would be to key in the description yourself. To send the contents of the clipboard to the connect device, select **Send Clipboard** from the [Edit Menu](#) or press SHIFT-INS on your keyboard.

## Send Marked Text

Sometimes it is useful to send the marked text to the connect device. For example, in reviewing a list of files available for download from an online system, marking and sending the name of a file you wish to download can be much easier than re-typing the file name. To send the marked text to the connect device, select **Send Marked** from the [Edit Menu](#).

## Copy Marked Text to Disk

When you forget to open a capture log, and more data has scrolled by than can be saved with a screen image, you may want to mark a large section of the scrollback buffer and save it to disk. To save the marked text to a disk file, select **Copy Marked to Disk** from the [Edit Menu](#). The marked text will be saved to the disk file you specify in the accompanying prompt.

## Dialing Directory



Selecting this command will display the [PhoneBook Manger](#). There, you will have all of the commands you need to easily manage your PhoneBooks. Please refer to that section for a complete discussion of its capabilities.

## Redialing PhoneBook Entries

**Redialing Entries** allows you to quickly continue with your most recent dialing queue. An entries remains in the queue until a connection is established with it, or it is deleted manually with the **Remove** button from the [dialing dialog](#).

## Manually Dialing Numbers

**Dial Manual Entry** allows you to enter a phone number that is not contained in your PhoneBook, on the spur of the moment. A dialog will prompt you for the number to dial, and then this number will be dialed as a single entry, using dialing prefix number 1. **Long distance codes** are also valid in the manually entered number. Once you have issued a command to dial, the [dialing dialog](#) will be displayed.

# Hangup



Selecting this option from the [Actions Menu](#), from the [QuickTool](#) bar, or from the keyboard by pressing ALT-H will make Telix attempt to hang up the phone. Telix will first attempt to hang up the phone by turning off a special signal to the modem known as the DTR signal. Most modems will immediately hang up when the DTR signal is turned off. If turning off DTR does not cause the modem to hang up, Telix will then send the hang-up string defined for the current connect device. If this still does not work, and Telix detects that you are still online, Telix will warn you with a **Hangup Failed** message.

If you are having difficulty hanging up and are receiving the **Hangup Failed** message, your modem is almost certainly configured to report a connection at all times, even when there is no connection. Please refer to the [Answers to Common Questions](#) section for assistance in reconfiguring the connect device to report a connection properly.

It is a time-honored courtesy to properly log off of an online service with the appropriate commands rather than unceremoniously hanging up on it. You should use the Hangup function only when attempts to properly disconnect or log out have failed.

# Clear Screen



This command erases Telix for Windows [terminal screen](#) back to its default state of no characters and a black background. This command works for all terminal modes, including *RIPscrip*. In text-mode terminals, the terminal is simply blanked out and repainted. In *RIPscrip* terminal mode, the entire terminal is reset internally so that mouse regions and buttons are cleared as well.



## Send Break

Some hosts require the use of a special modem signal called a **Break Signal** to do certain tasks, such as ending a transmission. To make Telix send a Break Signal to the remote host, select this from the [Actions Menu](#), or press CTRL-END. The Break Signal is not to be confused with the keyboard Break or CTRL-BREAK key command -- a Break Signal is not the same thing.

# Scroll Back



The [terminal window](#) can only hold so many lines of information. As new data is received, the older data is pushed upwards toward the top of the terminal window to make room for the new data. This upward movement is called **scrolling**. As the data reaches the top line, it scrolls off of the terminal window. Sometimes it is convenient to be able to see the data that has recently scrolled off, or even to save or manipulate it. In many communications programs, the amount of data that is saved is greatly limited or is saved without color codes, but Telix for Windows allows you to review one hundred full screens of recently scrolled off data in full color, by using Telix's **Scrollback Mode**.

You may define how much data Telix for Windows saves in its scrollback buffer in the [Terminal Device Configuration](#). Each terminal device has its own setting for how much data to save, in terms of how many full screens (pages) of data to keep.

To review the scrollback buffer, select the **Scroll Back** command from the [Actions Menu](#), the [Scrollback QuickTool](#), or press ALT-UP ARROW or ALT-B on your keyboard. Your terminal window will be replaced by a scrollback window with a familiar Windows scrollbar attached to it. The Scrollback QuickTool will automatically depress and animate, showing a rolling scroll to remind you that you are in Scrollback mode.

While in Scrollback mode, you may use the Windows scrollbar to move about within the buffer to locate the data you want to review. Rather than just allowing the viewing of the data, Telix for Windows allows many actions to be taken on the text within the scrollback window (as well as the data within the terminal window). For those actions to be undertaken, you must mark the text that you wish to manipulate and choose a command from the [Edit Menu](#).

## Doorway Mode

While in **Doorway Mode**, Telix will not perform any keyboard macro translation on keystrokes. All keystrokes not used by Windows to switch tasks will be sent as raw keyboard scan codes. In essence, it will be as if the key was pressed on the remote systems keyboard instead of yours. Doorway mode is used by the DOORWAY.EXE shareware utility and by several other applications. Windows reserves the use of ALT-TAB and CTRL-ESC for task switching, so they are not included in Telix for Windows Doorway mode. You may toggle in and out of Doorway mode by selecting this option from the menu or by pressing ALT-= (ALT-EQUAL) on your keyboard.

Use this option whenever a remote system requests you enter Doorway mode. Telix will attempt to detect when DOORWAY.EXE is being used as the remote host and will automatically switch you in and out of Doorway Mode if it detects DOORWAY.EXE.

## Initialize Modem

To send the modem initialization string of the current connect device as defined in the [Connect Device Configuration](#), select this option from the [Action Menu](#).

## Answer Modem

To force your modem to answer an incoming call, you want to send the Auto-Answer string (as defined in the [Connect Device Configuration](#)) to the connect device. Selecting this option places the modem in answer mode, where it will remain until the [modem initialization](#) string is re-sent.

# Creating and Using Scripts

Telix for Windows is a very powerful and robust solution to your communications needs. Much of Telix's power comes from its two powerful scripting languages, allowing you to automate many of the repetitive tasks that you perform when communicating. From rudimentary login scripts to complex online bulletin board systems and mail readers, it can be done using a Telix script.

## How Scripts Save Time

Scripts are in essence commands to Telix for Windows to run parts of itself without human intervention. If it can be done from the menus of Telix, then there is probably a way to do it automatically within a script. Scripts save time and money for you. A well-written group of scripts will:

- Δ Log you on faster, saving time and effort
- Δ Remember your passwords for you
- Δ Upload and download mail packets
- Δ Do just about anything else you want to automate!

## Scripts are Compiled

The source code to Telix for Windows is a set of text-based files in a programming language that is converted to a form your PC can understand in a process called compiling. The compiler takes the text we wrote and converts it into a TELIX.EXE file that your PC and Microsoft Windows can understand. Similarly, Telix's scripting languages are written in text form and later compiled into a machine-readable form that Telix can run much faster than the text form. In addition to speeding up the execution of a script, the compiler is very good at catching many common mistakes in your script that could cause it to do something you did not really want it to do.

## Linking Scripts to Your Work

Once you have a completed and compiled script file, there are several ways to start it and let it do its work. The methods of running a script include:

- Δ [Executing from the Script Menu or QuickTools bar.](#)
- Δ [Linked to a PhoneBook entry.](#)
- Δ [Attached to a FlashKey.](#)
- Δ [Attached to a Keyboard Macro.](#)
- Δ [Defined as a Startup Script.](#)

## Execute Script



The **Execute** command from the [Script Menu](#), the equivalent [QuickTool](#), or the keyboard command ALT-G will pop up a dialog allowing you to select a script file to run immediately. If a script selected in this manner is not compiled, it will first be compiled before it is run; the script will not run if compilation errors are detected.

## Abort Script

Sometimes, even the most carefully written script can go astray. In case such a problem should arise, the **Abort Script** command on the [Script Menu](#) is provided. Selecting this command will cause the currently executing script to stop immediately and return control to script that called it, or if none, the terminal. If other unrelated scripts are executing, they will continue without interruption.



## Compile Script

**Compiling** a script causes Telix to examine a file you specify, checking it for errors in syntax or structure and create a compiled script file that can be ran via the [Execute Script](#) command. If errors are detected, the compiled script will not be created, and you will be informed of the type of error and its location in the file.

## Edit Script



The **Edit** command from the [Script Menu](#) or the equivalent [QuickTool](#) will open the [Script Editor](#) window. From the Script Editor you can create new scripts, edit existing scripts, compile scripts, and even run scripts. The editor has many features, including context-sensitive help for all [SALT](#) functions. While you can use any text editor to create and edit your scripts, we recommend that you try this editor, as it has been tailored for script programming.

## Recording a Script



Telx for Windows can record a session, and write an appropriate script to repeat the same series of actions when presented with the same series of questions. This act is called recording a script.

Selecting the **Record** command from the [Script Menu](#) or the equivalent QuickTool will prompt you for the name of the script that will be generated. If you specify the name of a script that already exists, it will be overwritten after confirming that this is truly what you wish to do. Telix will then record your keystrokes and will determine what question you were answering when you typed them, and will do its best to write a script to do these acts again the next time you run the script. Script learning is complete when you select the QuickTool or menu command again, at which time the learned script will be written to disk. At this time you may check the script for correctness or begin using it at once.

Script recording is not perfect. Some prompts that you might be answering change based on the time of day or how long you have been online. Some editing of the source file may be required to ensure that the script will work every time you log on. It is a good practice to bring the learned script into the editor to look for such prompts.

# Usage Log

If this [General Configuration](#) option **Usage Log On** is enabled, when Telix starts it will automatically open the usage log as defined in the [Filenames and Paths configuration](#), and will make entries to the Usage Log until you exit the program or turn off the Usage Log manually.

## Usage Log Type

The detail of information stored in the usage log varies depending on the setting of the Usage Log Type. You may select any of three usage log levels of detail:

**Minimal Detail** notes only the most basic information about connections and file transfers. Click here to view items. These entries will include:

- △ Entries for Starting and Exiting Telix for Windows.
- △ Entries made by the user with the UStamp() [SALT](#) function.
- △ File Transfers made, including which transfer protocols were used.
- △ Connections to online systems, including the System Name.
- △ Connections that are lost unexpectedly.
- △ Runtime Errors.

**Moderate Detail** notes everything that Minimal Detail includes, plus the following:

- △ Connections that are lost because the modem was [hung up](#).
- △ File Transfer times.
- △ User-executed scripts, including drag 'n drop scripts.
- △ Connections to online systems: System Name, DCE Rate, Terminal Device.
- △ Disconnections from online systems: Connection Costs as per the expense device.

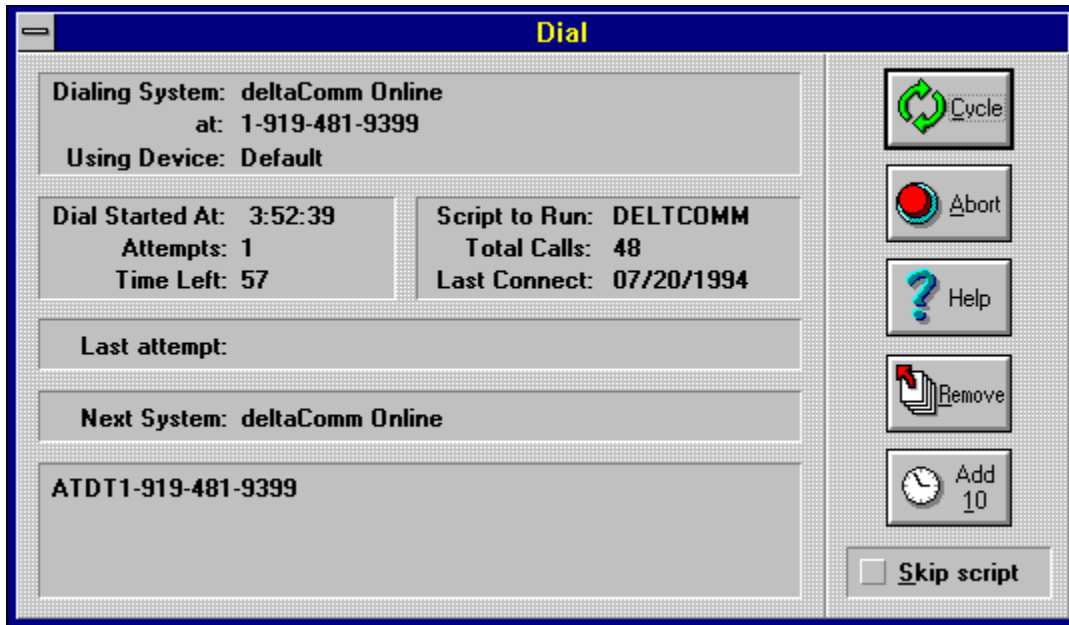
**Verbose Detail** notes everything that Moderate Detail includes, plus the following:

- △ File Transfers made: speed ratings, file sizes and errors during the transfer.
- △ Scripts executed with the Call() [SALT](#) function.
- △ IEMSI packet logons made.
- △ Connections to online systems: Entry's Device, Linked Script, Last Call and Total Calls.

## View Local File

This command will send the contents of a file through the current terminal emulation device and display it in the terminal window. The data will not be sent to the connect device. This command is most useful for examining RIP*scrip* scenes and previewing ANSI screens (especially "animated"). It is also a very quick and easy way to take a look at a text file; the scrollback buffer is very useful for long files.

## The Dialing Dialog



The Dialing Dialog is displayed when you instruct Telix for Windows to attempt to make a connection with another system. It is displayed until either a connection is established or you abort the attempt. Using the dialog above, click on the section you would like more information about.

Displayed here will be information about the system that Telix for Windows is currently trying to connect to, and also the connect device that is being used for the connection.

This section lists the time at which the first attempt was made, the total number of attempts at connecting, and the time left before the current attempt expires and is cycled.



The name of the script linked to the entry being dialed will be displayed here, along with the total number of connections that have been established, and the date of the last successful connection.

If a connection cannot be made, it is usually because the line was busy or there was no carrier present. The result of the last unsuccessful attempt is displayed here.

When multiple entries are marked for dialing, this section will display the name of the system that will be dialed if the current attempt fails.

This area is actually a small terminal window. All commands sent to the modem and all data received from the modem is shown here until a connection is established.

Use the Cycle button to stop the current dialing attempt, reset the modem, and continue with the next dialing attempt. This is useful if your modem cannot detect a busy signal, or if the system is not answering. The system that is being dialed is left in the dialing queue, and therefore it will be attempted again after all other systems in the queue have been tried.

The Abort button will stop the current dialing attempt, reset the modem, and return you to the terminal window.

The Help button will display this help topic.

Use the Remove button to stop the current dialing attempt, remove it from the dialing queue, reset the modem, and continue dialing with the next system.



The Add 10 button will increase the time remaining for the current dialing attempt by ten seconds. It may be used repeatedly, but note that most modems have a timeout built in and controlled through the S7 register. If the modem times out, Telix for Windows has no choice but to abort the dialing attempt.

If you check the Skip Script box, the script linked to an entry will not be executed upon successful connection.

# Development Notes

This section is for ongoing discussion, points of interest, things to look for, notes on what is done, what is being worked on, what I'm stuck on, etc, etc, etc.

When discussing the help file with me, please reference the version number below. This will make sure we are on the same wave length.

## TFW Help Version      **INT:B13-1**

- Δ Thanks for allowing yourself to be volunteered for this thankless task!!!!
- Δ Used Medium compression on the help file this time. Let me know if it seems any faster when jumping to topics and displaying the screen shots. Still no feedback on this... Does it seem to take a LONG time when loading big bitmaps like the [application window](#)?
- Δ Added a "Navigator" window. Go click the Navigator button on the Help window toolbar and check it out. Let me know what you think. Still no feedback on this either! Added all the menus. All done except for script stuff. Not sure if I want to add script to navigator or have an index instead.
- Δ The PhoneBook help is about all done. Need to re-do screen shots in a few places. All I need now is the help menu popup text for those items and a couple on the expert entry dialog. Ooops, also need a keyboard hotkey section. Drat, also need docs on new Cut, Copy and Paste commands. Other than that and some rewording of sections that are still being proofed, it should be done. Please point out anything else I may have missed.
- Δ Configuration is getting close. Sections for creating backgrounds and frames are in there now (Cornered Peter and forced it him type it up for me <g>), so all the entries should now be covered. All the text in there is a first-stab and still needs some editing/finishing/POLISHING. It is currently being proofed and \*hopefully\* will be redone by the time beta 11 goes out.
- Δ Menu commands are about 20% done. The topic linked from the table of contents for menus is done. It can get you to all the other menus, which only have hotspot links finished.
- Δ The Answers to commonly asked questions (FAQs) is started; if you have some good ones, let me know so I can put them in there. The program requirements topic should be considered finished, but is open to dispute. <g>
- Δ If there is one thing I cannot stand in a help file, it is the lack of keywords in the search dialog. I am putting all I can think of in there. If you come across any glaring omissions in this category, send 'em in. That is, if you ever pull up the search dialog and begin typing something and it doesn't come up, let me know. It should be intuitive. The danger is getting too many in there and becoming lost keywords trying to find the one you are looking for....
- Δ Any suggestions you have, send 'em my way.

**Thanks again!**

## Connect String Problems

**Q:** Telix ignores a connect and the text from the BBS is just displayed in the dialing window.

**A:** This problem is usually the result of an incorrectly entered [connect string](#). This string must match the string that your modem returns when a connection is made so that Telix can recognize it and proceed with the connection. Use your modem's documentation to determine the string that is returned upon connection and compare it to the string that is specified in the [Connect Device Configuration](#). Telix for Windows' Connect Device Manager includes pre-configured connect strings for several hundred brands of modems. If your modem is not listed, then the "Generic" brand of modem should work fine for most unlisted modems.

## COMxFIFO Setting

**Q:** Telix told me that my COMxFIFO setting is incorrect, but it is set to "ON".

**A:** In Microsoft Windows' initialization (.INI) files, many entries are assigned a boolean (True or False) value. These boolean entries allow you to specify whether an option is or is not to be used. Enabling an entry is usually accomplished by entering a value of *True*, *1*, or *On*. However, there is a known problem with COMxFIFO (where x is a number from 1 to 4 representing a communications port) entry that only recognizes a value of *1* to enable it. This entry enables the use of a chip, called a 16550 UART, on your serial port or modem that allows for much faster and more reliable communications. Many systems, especially older ones using external modems, do not have a 16550 chip, but if your system does, it is imperative that it be properly enabled. If your system is not equipped with this chip, we **strongly** urge that you invest in a serial card that does have one. The benefits, especially at 9600 baud and above, are worth far more than the cost of the card.

## The Communications Driver

**Q:** Why doesn't Telix allow me to choose 115,200 as a baud rate?

**A:** Microsoft Windows is internally capable of supporting baud rates of up to 115,200 bps, however the communications driver (COMM.DRV) supplied by Microsoft Windows only supports speeds of up to 57,600 bps. If Telix determines that you are using this communications driver, it will not offer 115,200 as a baud rate. Our tests using this baud rate determined that not only did it not work, it caused connections to be substantially less reliable than those made at a rate of 57,600. There are several replacements for the communications driver available as commercial, shareware and freeware products. If you are using a high speed modem, we **highly** recommend that you invest in a replacement communications driver.

## Stack Errors

**Q:** My script compiles just fine but when I run it, I get a "Stack Underflow" or "Stack Overflow" message.

**A:** There are several things that can cause this message. Check your script to ensure that ALL function calls are being passed the correct number of parameters, as well as the correct type of parameters. Overflow messages are often caused by passing too many parameters to a function, and Underflow messages by passing too few. Also, passing an integer type parameter to a function that is expecting a string type (and vice versa) can cause unpredictable results.

## Function Not Supported

**Q:** My script compiles without errors but when I run it, I receive a "Function not supported" message. This works fine in Telix for DOS.

**A:** In porting the SALT scripting language from DOS to Windows, several functions were not implemented. The reasons for this are many, but most often it was because a function "just doesn't make sense in Windows" or it has become obsolete. For example, the Set\_Port function is no longer supported because in Telix for Windows you do not work with connect ports, but with connect devices. The devices contain all the information, including the port. Because of this change in Telix, the Set\_Port function was no longer adequate, and it was replaced by the Set\_ConnectDevice function. You will need to edit or update this script to be compatible with Telix for Windows.



## IRQs and Base Ports

**Q:** My modem is on IRQ 5, but I can't change it in Telix. Why not?

**A:** Telix for Windows is not "allowed" to modify two basic pieces of information about a serial port: the Interrupt Request Line (IRQ) and the Base I/O Port Address. Under Microsoft Windows, both of these items are set from the Windows Control Panel under the **Ports** Icon. If you need to specify a non-standard IRQ or Base Port, do so from Control Panels.

## Carrier Detect Signal

**Q:** Why does Telix always say that it is already online when I first run it?

**A:** Your modem is either factory-set or programmed to leave the Carrier Detect signal on even when there isn't a carrier present. Adding "&C1" to your connect devices initialization string should resolve this problem. The pre-configured modem "drivers" in the Connect Device Manager should set this option if needed.

## No Connect Strings

**Q:** Why doesn't Telix recognize a busy signal when I'm dialing?

**A:** When your modem detects a busy signal, it reports this to Telix as a string. This string is known as one of the No Connect Strings which is defined in your [Connect Device Configuration](#). The problem is that the string specified in the configuration does not match the string your modem is reporting. Compare the string that is specified in the configuration to the string listed in your modem's documentation, paying careful attention to spaces.

## Call Waiting and Disconnections

**Q:** How do I stop Call Waiting from interrupting my calls?

**Q:** Why do I sometimes get disconnected right in the middle of a call?

**A:** If you have Call Waiting service from your telephone company, the tone that you receive when another call is coming in will almost always cause your modem to hang up the phone. This is because the tone interrupts the modem signal, and makes it think that you are no longer connected. The best solution is to have a dedicated telephone line for your modem usage, though you can disable Call Waiting with special strings in your Connect Device, if your modem supports the generation of the tone that you get when you press the star key on your telephone. Look in the front of your telephone book or contact your telephone company and ask them what sequence you would dial to disable Call Waiting for a single call. This sequence is very frequently \*70 (star 70). Insert the sequence into the dialing prefixes of your connect device, just after the "DT" or "DP" command. If your modem is incapable of generating a tone when you use the "star" in a dialing command, the telephone company may give you an alternative sequence to dial, often 1170 followed by two commas: 1170,,

To determine if your modem supports the use of the star character, from terminal mode while offline, issue the **ATM1L1DT\*** command. If you hear a dial tone and nothing else, you will need to use the 1170,, command in the prefix, but if the dial tone goes away within 5-10 seconds, and you hear a touch-tone, you may use \*70.

Thus, you may end up with a dialing prefix that looks like one of these:

Before	After
ATDT	ATDT*70
ATDP	ATDP1170,,
AT&B1DT	AT&B1DT1170,,

## Using a Calling Card

**Q:** How can I use a credit card number to place a long distance call with Telex?

**A:** The modem is likely to be a bottleneck here. Most modems cannot accept as many characters at once on a command string as a comm program can send out. The vast majority of modems have a 40 character command string limit, which must include the <ENTER> at the end, and the ATDT (or ATDP) at the beginning. Spaces, dashes, and any directives for MNP and such in the dialing prefixes also count.

Telex can, with the use of long distance codes, send much more than this, but the modem will not likely respond to this, since anything past 40 characters is simply ignored (and this includes your <ENTER> at the end).

Companies such as Sprint have gone to 13 character card codes to protect you against fraud, and this is a good idea. However, it does limit you via your modem (again, Telex is not the limitation here).

Let's examine this with a little math....

Assume the access number to Sprint is 1-800-4SP-RINT. Without the dashes (they count, so let's not waste characters), that is 11 digits. Now, before you even started, you had to dial ATDT. 4 more, and you're up to 15. Then you must use a few commas to pause and wait for the "boing" asking for the number or digit. Let's cheat, and use the modem to define **one** comma as a six second pause (see the S2 register in your modem documentation). Now we have 16 characters. Now, you want to call deltaComm Online, the Telex Support BBS, and charge it. Our BBS number is 919-481-9399, ten more digits for a total of 26. We need to pause again, for 27. 13 characters for your card number puts you at 40 characters, with no room to put in the <ENTER> now, and the above is the most tightly packed way you can do this.

How do you get around this? Unfortunately, you can't without some major trickery, which many modems do not support. If the modem supports the use of the ; character as a pause and then return for more, you will get a fresh 40 characters - but the intervening enter will hang up on you before you get that chance.

It has thus been our policy to recommend that you simply have a separate number in the dialing directory for the access number, and dial it. Then take the phone hooked up to the modem off the hook, and abort the dial.

While you have the phone off the hook, listen for the "boing". When you hear it, dial your number from your directory, and hang up the handset.

Now, you can use the long distance codes to have Telex send your card number automatically (remember, you've shaved off ten characters above).

For instance, assume your card number is 416-289-4641-1234. If you define one of the long distance codes (for example, ^\$) to contain that card number, rather than making the number in the directory read: "1-919-481-9399", you may save space in the number by removing dashes and spaces, adding the long distance code to the end of the number, making the number read: "09194819399^\$"

The ^\$ tells Telex to append the contents of that code, and the code includes the six second pause needed! You're ready to go!

## Protocol Errors and Character Loss

**Q:** Why do I get CRC or Timeout errors when transferring files?

**Q:** Telix seems to be missing characters, right in the middle of words!

**A:** Your problem likely comes from your extended memory cache, such as SMARTDRV.SYS.

If you do not have the 16550 UART you're going to have problems. Most internal modems have these high-performance chips, but many external modems are plugged into serial ports that do not have them. See "[What is a 16550 and why do I need one?](#)" for a discussion of what the 16550 UART is and does.

Following is an explanation of why this happens with extended memory, kept to a minimum of technospeak to make it easier for everyone to understand.

Extended memory access requires the computer to shut off comm port for extended lengths of time (in computer time, anyway, for several milliseconds). When you have an extended memory cache, instead of writing to the disk, a disk write writes to extended memory. While the interrupts are disabled, no characters may be picked up from the comm port's UART buffer. A 16450 UART has a one byte buffer. At 14,400 bps, a character comes in roughly every .0006 seconds. If the comm ports are disabled longer than that by extended memory, the character waiting to be picked up will be overwritten by the next character to come in (.0006 seconds later), and the CRC error checking will notice the error, and report that an error has occurred.

A 16550 UART has a 16 byte buffer. 16 characters does not sound like a great deal, but it is 16 times greater than 1 character. You are then allowed up to .01 seconds before you will lose characters, and that is more than sufficient time for extended memory access to occur without losing characters.

The use of a 16550 UART is highly recommended under Microsoft Windows. A DOS utility is available from deltaComm Online at 919-481-9399 to help you determine if you need a 16550. Download the file IS16550.ZIP and run the enclosed utility from DOS without Windows running to check for 16550's on your system.

## File Transfer Time Estimation

**Q:** Why is Telix so far off when estimating file transfer times?

**A:** This is not an easy question to answer without some understanding of the way modems work. The speed at which your modem connects to the other modem will often not be the same as the speed at which Telix talks to your modem. For the reasoning behind this, see the answer to the question "[Why isn't there a 14,400 speed setting in Telix?](#)"

Telix makes its best attempt to read this actual modem to modem connect speed, but it needs a little cooperation from the modem. Telix cannot determine the actual connect rate on its own -- it must rely on the modem to report it. Telix must accept the rate that the modem offers -- it has no way to "validate" it.

The best way to demonstrate this is as follows:

If you were to dial a number without the dialing directory by typing ATDT and the number, and pressing enter, you will receive a string somewhat like the following:

```
CONNECT 14400/ARQ/V42BIS/LAP-M
```

If you have a vanilla 2400:

```
CONNECT 2400
```

Telix reads the connect speed by watching for this string, and for a keyword, like CONNECT or CARRIER. So, in each case when done by the dialing directory, Telix now has the connect rate as 14400 in the first case and 2400 in the second. Telix takes the connect rate as the first number to follow the connect string on the same line as the connect string. Some modems, however, can be configured to return quite detailed information like this:

```
CARRIER 14400
```

```
PROTOCOL: LAP-M
```

```
CONNECT 57600/V32BIS/V42BIS
```

Now, if your connect string was "CONNECT", the value Telix detects is not the 14400 you wanted, but the 57600 you didn't want. In this case, you need to find the command in the modem manual that disables extended result codes like that, and goes back to the simple CONNECT 14400/ARQ/V42BIS string as above -- then Telix will get the connect string you wanted. Another option above (but not for all such modems) is to change the connect string to match the word right before the number. Above, you'd change the connect string to CARRIER. This one won't always work, and it is best to disable extended result codes if you want correct estimates.

Many Rockwell chipsets use the S44 register to control the result codes. Refer to your modem manual's section on result codes and connect strings to make sure your modem returns the actual connect speed immediately following the connect string.

Please note that some modems do not return a correct response string at all, such as the older US Robotics HST Dual Standard 1441 (v.32 9600) modems. They return 9600 even if the connect was at 14400, and your estimates in such cases will still be off by that amount.

## Debugging Information

**Q:** Telix is reporting an error in my script when I run it, but I'm having trouble finding exactly where the error is located. How can I find the problem?

**A:** SALT now includes a [preprocessor](#) which allows you to specify information about how a script should be compiled. One of the preprocessor commands, #DEBUGON, instructs the compiler to include debugging information such as source code line numbers in the compiled script. If debugging information is available in a script, and an error is encountered, Telix for Windows will report the error and the name of the source code file, as well as the line number. This information is invaluable when testing and debugging scripts.



## COM Ports

**Q:** Why can't I get my modem to dial?

**A:** Your modem may be dialing, and you do not know it because you cannot hear it. To first determine if your modem is talking to Telex, type "ATM1L1DT" from the terminal Window. You should hear a dial tone emanate from your system. If it does, then your modem probably is dialing, but you cannot hear it. If you wish to hear your modem, add the M1L1 commands to the initialization string of your connect device.

If you do not hear the dial tone when issuing the above command, then the problem almost always stems from an incorrect communications port setting. When [configuring a connect device](#) for use, the most important item of information is the port it should use. If it is not correctly specified, Telex for Windows will not know where to look for the modem. If you check your configuration and the port is correct, you should check all other serial ports in your system to ensure that they do not conflict with your modem's port. This is often the case with internal modems, as they are usually pre-configured for COM2, and most systems already have 2 serial ports. Refer to your system's documentation for instructions on how to disable or reconfigure a serial port's assignment.

## 14,400 bps

**Q:** Why isn't there a 14,400 speed setting in Telix for Windows?

**A:** This is a difficult question to answer without some understanding of the way your modem works with Telix and the serial ports. The link to get from your computer to the other computer looks much like this:

Your Computer <--> Your modem <-----> Their modem <--> Their computer

DTE rate	DCE rate	DTE rate
38,400	14,400	57,600

As you can see, it is really a series of three links; one between your computer and your modem, one between the two modems, and one between their modem and their computer. What might surprise you is that each of these three rates can be, and often are, completely different, as above. Above, DCE stands for Data Communications Equipment (i.e. a modem to modem link) and DTE is Data Terminal Equipment (i.e. terminal to modem link). You are not concerned with the final link, the remote DTE rate. That is up to the remote site, and does not matter at all to you. Once the data leaves your modem, and is received by theirs, it is out of your hands.

Why, though, do the DTE and DCE rates differ? Thank the original designers of modems and serial ports for that. When they were first designed, every byte to be sent was padded out. A byte is one character, made up of eight bits, or ones and zeros. If you have eight different bits, each of which can be only a one or a zero, you have  $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 256$  different characters available, which is exactly how many different characters the PC can handle. But that wasn't good enough for the original modemers. They added each byte with a "start bit" and a "stop bit" for security checks, which brought each character up to ten bits total, just to transfer 8 bits of data.

Modems with built in EC (error correction, MNP, v.42, etc) rightly found this to be a great waste of resources. If the modems are going to check themselves for errors already, why send these extra bits that amount to 20% of the data being sent? It is extra baggage, not needed. So Error Correcting modems strip this dead weight off, taking us back to 8 bits.

Then someone brilliantly realised that if PKZip (back then, PKArc) could compress files for storage, why couldn't modems do some quick on-the-fly compression of the data before it was sent, and have the receiving modem uncompress the data before passing it back on to the receiving terminal? MNP Class 5 and v.42bis were thus born, and for non-.ZIP files, these modems can be extremely efficient in compressing the data before sending it -- sometimes as much as 4 times compression (25% of the original size). Most 9,600 and 14,400 modems have these EC's and compression techniques built in.

What does all that technical mumbo-jumbo mean? Why do you need to be aware of all this behind-the-scenes information? If the modems can take 1000 characters from the comm program, and then turn it into 800 characters with simple error correction, or perhaps as little as 250 characters with compression, won't something strange happen? Yes!

Even though the data is compressed, the DCE (modem to modem) speed is the same. It still transmits at 14,400 in that case, and in the best of circumstances it needs 1000 characters from the comm program to transmit a mere 250 characters. Thus, it would stand to reason that in order to keep the DCE link flowing with data non-stop, your comm program would have to send data to your modem at 4 times the speed the modem is talking to the other modem (in the best case, which almost never happens). Thus, the DTE (comm program to modem rate) must be higher than the DCE (modem to modem rate) by a good margin, or the modems will sit idle frequently, waiting for the comm program to supply it with enough data. Since you have no way of knowing how much the data will be compressed, or at what speeds the two modems will actually connect up at, you should always leave the DTE rate on your end (the link between your comm program and your modem) locked in, or fixed, at that high rate that can accommodate the most

efficient case, since that most efficient case can occur at any time.

That's why you're always advised by comm program setup modules to set the comm program's speed, as well as all dialing directory entries (no matter how fast the board actually is), to a speed higher than the 9,600 or 14,400 you really have. Typically, you'll be told to use 19,200 or 38,400 (nowdays, typically 38,400, and even some will say 57,600). But the important thing is, that speed is constant. Your DTE (program to modem rate) always stays the same, so that when that most efficient case comes along, you're ready. All links use what's called "flow control" to insure that if its not the most efficient case, the links will stop momentarily until told there is room for the data they have to send.

The short answer is that if you set your connect device for 14,400 bps, then you're actually losing 20% of your modem's capabilities!

## 16550 UART Buffering Chip

**Q:** What is a 16550 and why should I have one?

**A:** A 16550 is a Universal Asynchronous Receiver/Transmitter, and every serial card or internal modem has a UART. It is a special chip designed to send and receive characters bit-by-bit, and is the central chip to serial ports and internal modems. Most serial cards and internal modems have a chip called an 8250 UART or equivalent, an older model of UART not designed for high speeds (9600 bps or better) or for multitasking operating platforms like Microsoft Windows.

The 16550 UART is a better chip in that it has a 16 character "buffer" that the 8250 and 16450 (an 8250 without bugs) do not. 16 bytes may not sound like a great amount, but it is 16 times more than the 8250 or 16450 can supply. This buffer can save lost data that can happen during long disk writes that occur every 4K or so, or caused simply by the data coming in too fast (the system losing interrupts -- not being able to get back in time to get a character before the next one comes in).

The 16550 is about \$15, and is easily replaced on many serial cards. Most internal modems already have a 16550 UART. The use of a 16550 UART is highly recommended under Microsoft Windows. A DOS utility is available from deltaComm Online at 919-481-9399 to help you determine if you need a 16550. Download the file IS16550.ZIP and run the enclosed utility from DOS without Windows running to check for 16550's on your system.

If you need to replace the UART on a serial card for your external modem, look on the serial card for a chip with 40 pins that says (in older models) 82C50 on the chip (or NS16450). Hopefully when you locate this chip, it is socketed in (simply plugged in) like your memory chips, and not soldered down like some of the support chips. If it is soldered then its a nasty job, and it's usually better just to buy a new serial card (almost all internal high speed modems are socketed for this reason). If it's socketed, it's a simple matter of pulling the old chip (carefully) and putting the new one in, making sure it goes in the right way. This will solve most problems with transfer errors under multitaskers or with fast modems on slower PC's.

## Unlisted Modem Types

**Q:** My modem is not in the list of available Connect Devices. What now?

**A:** Choose the "Generic" brand of the appropriate speed from the list to get up and running. We can add your specific modem to the list if you send us a photocopy of the modem's manual to:

*delta*Comm Development, Inc.  
PO Box 1185  
Cary, NC 27512

## Dialing Without Touch Tone

**Q:** I don't have Touch Tone Service -- how can I dial?

**A:** Telix uses "dialing prefixes" to tell the modem how and what to dial.

For any modem that bills itself as Hayes compatible, "AT" is the general "attention" command. This tells the modem that the next command is a directive to it.

The "D" directive is a directive to dial, and the letter following a "D" tells the modem HOW to dial. T is for tone, and P is for pulse.

Under Telix's Config (ALT-O), there is a subsection "M"odem and Dialing, and options B/C/D are the prefixes which designate to Telix what commands to "prefix" to each dialing command. Note that they are now set to "ATDT" or something similar.

Changing the occurrences of "DT" to "DP" in each of the strings will force the modem to use Pulse Dialing rather than touch tone.

## The Evil of FloodFills

**Q:** Why do some RIP screens fill up the screen with one color, or paint wrong?

**A:** RIPscrip was designed based on a DOS specification known as BGI, or Borland's Graphics Interface, which is not fully compatible with Windows' built-in graphics functions. The combination of two graphics types in the RIPscrip specification (bezier curves and border-type flood fills) can cause flood fills to "leak" beyond their intended boundaries, and fill far more of the screen than they should. This is often due to the artist's assumptions made while creating the picture. We've found that if Telix for Windows experiences problems in drawing a screen, then other programs supporting RIP under Windows also exhibit the same problems, indicating a problem in the image itself. If you find a picture that this happens with, it may be that it can be repaired by changing the picture slightly. Please upload copies of such images to deltaComm Online at 919-481-9399 so that we may review them.

## General Protection Faults

**Q:** What is a GPF Error, and how do I stop it?

**A:** A GPF or General Protection Fault is an error that happens when Telix or some other application attempts to write to memory that does not "belong" to it. It is usually a sign of a bug in either Telix or another program. If you encounter a GPF error, please make a note of the address of the error, the module it happened in, and the situation it happened in, and report these things to deltaComm Online at 919-481-9399 or deltaComm Customer services at 919-460-4556. You may also report such errors to us via Email at the Email addresses listed in the section on Telix Technical Support. The best reports of such errors are much like this:

I can reliably get a GPF in module TELIX.EXE at 12:10CD by performing the following steps in this order....



## Video Drivers

**Q:** Why can't I get Telix to work with my video card?

**A:** Much of the graphics support of Microsoft Windows is not in Windows itself, but in your **video drivers**. Our experience has shown that some drivers are horrendously buggy. Often the drivers that were shipped with your video card have been replaced by the time you bought the card. You should first make sure that you are using the latest driver release. Check the manufacturer's BBS or CompuServe for more recent drivers. If the problem persists with the most recent drivers, change your video driver to the generic SVGA drivers that come with Windows. If the problem does not recur, then the video card's drivers are buggy, and there is little that we can do for this. If the problem persists with Microsoft's drivers, contact deltaComm Customer Services at 919-460-4556.

## Run-Time Errors

**Q:** What is a Run-Time Error, and how do I stop it?

**A:** A run-time error is a recoverable mistake in Telix, less drastic than a General Protection Fault or GPF. If you encounter a run-time error, please make a note of the runtime error address and type, and report it to deltaComm Online at 919-481-9399 or deltaComm Customer services at 919-460-4556. You may also report such errors to us via Email at the Email addresses listed in the section on [Telix Technical Support](#).

The best reports of such errors are much like this:

I can reliably get a run-time error 201, Range Check Error, in TELIX.EXE at 12:10CD by performing the following steps in this order....

## Modem Compatibility

**Q:** Why can't I get my "Hayes Compatible" modem to work with Telex?

**A:** You may have tried to select the Hayes brand modem from the list of possible connect devices. Because a modem is touted as Hayes Compatible does not mean that it has the same extended command set as a Hayes modem. If your particular brand of modem is not listed in the device list, select the Generic Brand modem of the appropriate speed.

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[? Unmark All](#)

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# The Script Editor

When writing or compiling your own scripts, you may create the source form in any text editor you choose, in Windows Notepad editor, or any word processor that can write out standard ASCII text files. A better alternative is to use Telix for Windows built in editor, which has script compiling and command language reference capabilities built right into it.

Clicking on the Editor [QuickTool](#) or selecting [Edit](#) from the [Script Menu](#) brings up the powerful internal editor, which will resemble the following window. You may click on any part of the window to view specific help.



The script editor is a multi-document or MDI editor, capable of working with many different files in separate windows at one time. The editor has its own QuickTools in addition to its menus. A feature that is not readily apparent is the [Popup Menu](#). To access this menu, press the right mouse button in an editor window.

An Editor Window is where you actually do all of the editing of your script files. You may have as many editor windows open as you can keep up with.

## Script Editor QuickTools



The **QuickTools™** bar contains several buttons that give you instant access to the most often used features of the Script Editor, such as compiling, searching, undo, and opening files. These buttons are configurable to display with or without text labels, and are self arranging. The Help QuickTool is always on-screen at the far right hand side of the QuickTool bar, as is the Exit QuickTool which is immediately to its left. Using the QuickTools bar above, click on the tool you need further help with.

## Script Editor Status Bar

Line: 8	Col: 3	Overtyp	Modified	Lines: 13	Bytes: 430
---------	--------	---------	----------	-----------	------------

Above is a representation of the Status Bar that is displayed in the Script Editor. Items of interest, in the order they appear, are:

- Δ Line number of the current cursor position.
- Δ Column number of the current cursor position.
- Δ Insert or Overtyp mode.
- Δ Status of file contents.
- Δ Total number of lines in the file.
- Δ Total number of bytes in the file.



## Script Editor File Menu

<u>F</u> ile	<u>E</u> dit	<u>S</u> earch	<u>C</u> ompile	<u>O</u> ptions
<u>N</u> ew				
<u>O</u> pen...				
<u>S</u> ave				
Sa <u>v</u> e a <u>s</u> ...				
<u>P</u> rint...				
<u>P</u> rinter setup...				
<u>1</u> c:\telix\scripts\deltcomm.slt				
<u>E</u> xit				<b>Alt-F4</b>

The Script Editor **File Menu** contains functions to create new script source files and to open, save, or print existing files. Select the item from the menu above that you would like further help with.

**New** is a command to create a brand new, empty source file without a filename, ready for editing. Selecting this command will create a new empty editor window, and place it on the script editor desktop. The new window joins any other files already open on the editor desktop, and the new file becomes the active file.

**Open** brings up a file dialog allowing you to choose a script file to edit. You are not limited to Telix script source files in the editor. You may edit any text file. The open file dialog is a common file dialog resembling those throughout Microsoft Windows. A file that is opened is placed on the editor desktop along with other open files, and the newly opened file is made the active window, or the window that editing is occurring in.

**Save** saves the current file under its current filename, located on the title bar. Files opened with the [New](#) command will not have an associated file name; you will be prompted to supply a new filename in this case. Saving a file does not close it.

**Save As** brings up a common file dialog similar to the Open File dialog, allowing you to save a file under a new path and/or file name.

**Print** sends the file in the active or currently edited window to the default printer. The default printer may be changed by selecting [Printer Setup](#) from the Script Editor File Menu.

**Printer Setup** allows you to use the Microsoft Windows Control Panel to modify the behavior of the installed printers or to select a new default printer. For more details on configuring printers, please refer to your Microsoft Windows Users Guide.

The last five files that you have used in the script editor will be listed here, allowing you to quickly re-open files that you have used recently.



**Exit** closes down the editor. If any files are open and have been changed, you will be asked if you want to save the changed files, on a file by file basis.

## Script Editor Edit Menu

<u>E</u> dit	<u>S</u> earch	<u>C</u> ompile	<u>O</u> ptions
<u>U</u> ndo			Alt-BkSp
<u>R</u> edo			Shift-Alt-BkSp
<u>C</u> ut			Shift-Del
<u>C</u> opy			Ctrl-Ins
<u>P</u> aste			Shift-Ins
<u>D</u> elete			Del
<u>S</u> et Bookmark			▶
<u>G</u> o to Bookmark			▶

While editing a file, all standard Windows text marking capabilities are active. You may use the mouse to drag and select text, or the keyboard shift arrow keys to select text. The **Edit Menu** allows the manipulation of the selected text and the Windows Clipboard, and allows multiple levels of undo and redo. Bookmarks can also be set on a file-by-file basis to allow you to immediately jump to a given file location. Select the item from the menu above that you would like further help with.

The **Undo** feature is your safety net; with the use of the Undo command, almost any changes made to the file can be reversed. The Undo command stack is limited only by your systems memory -- repetitive use of the Undo command will continue to undo changes until the file is as it was before you started. If there are no changes that can be Undone, then this button and menu item will be grayed out. [Replace](#) is the only command that cannot be reversed with the Undo command.

The **Redo** command allows you to re-do a command that you mistakenly undid." Redo in essence is the Undo for the [Undo](#) command.

**Cut** removes the selected text from the file, and places it on the Windows Clipboard.

**Copy** makes a copy of the selected text and places it on the Windows Clipboard.

**Paste** places the text on the Windows Clipboard into the edited file just before the current cursor location. The Windows Clipboard is left intact, and the inserted text becomes the selected text.

**Delete** removes the selected text from the edited file. The Windows Clipboard is not affected. What was on the Clipboard prior to the command will still be on the clipboard after the command is complete.



**Set Bookmark** is a very powerful command. It allows you to mark a place in the file based on the surrounding text (not on the line number). Until you close the file, you may then jump back to that bookmark with a quick command from the Edit Menu or the [keyboard](#). To set a bookmark, place the cursor at the desired location of the bookmark and choose the desired bookmark -- bookmarks are identified by the digits 0-9. Bookmarks are not saved when files are closed.

**Go To Bookmark** allows you to jump to a previously set bookmark. To jump to a bookmark, choose this option from the menu, and select the desired bookmark number.

## Script Editor Search Menu

<b>S</b> earch	<b>C</b> ompile
<u>F</u> ind... F3	
<u>R</u> eplace... F4	
F <u>i</u> nd <u>n</u> ext	
<u>G</u> o to line...	

Large scripts or files can get unwieldy and difficult to manage. Often a very large file will have many hundreds of lines, and finding the text you want to edit can be somewhat difficult. The **Search Menu** commands can make this task much easier by homing in on uniquely identifying text within the file. Select the item from the menu above that you would like further help with.

To **Find** a specific string within the currently edited file, select this menu option, or click the Search [QuickTool](#). You will be presented with a dialog that will allow you to look throughout the file based on several options, for text you specify.

**Replace** allows you to search for specific text with the understanding that when it is found, it will be replaced with substitute text. There are several criteria you can specify in a replacement search to allow for very specific types of searches.

**Find Next** locates the next occurrence forward from the cursor of the most recently performed **Find** command. This command will not repeat a [Replace](#) command.

**Go To Line** moves the cursor location to an absolute line number that you provide.

## Script Editor Compile Menu

<b>C</b> ompile	<b>O</b> ptions
<b>C</b> ompile	Alt-F9
<b>R</b> un	Ctrl-F9

The meat of script writing is in getting the script to compile into an executable form without any errors that the compiler can notice. This does not mean, of course, that a programming error or logic error is not present in the script! It just means that Telix recognizes that there are no typographical errors or structural errors in your script. Most script developers will use this editor to do numerous test-compiles as they write their scripts. Scripts may either be compiled or run from this menu. Select the item from the menu above that you would like further help with.



**Compiling** the script means for the Script Editor to examine the file as a Telix script file, and to look for errors of syntax or structure. Selecting this option forces a compile to begin. If there are any errors, you will be informed of them, and the cursor will be placed on the line that contains the error. A description of the error and its location will be displayed.

**Run** is exactly the same as [Compile](#), except that it will execute the script upon a successful compilation. If the script does not compile successfully, then the script will not be executed.

## Script Editor Options Menu

<b>Options</b>	<b>Window</b>
✓ <b>A</b> uto-indentation	
✓ <b>C</b> reate <b>b</b> ackup file	
<b>F</b> ont...	
<b>T</b> abs	<b>F</b> ixed tabs
✓ <b>W</b> ord <b>S</b> t <b>a</b> r commands	<b>R</b> ead tabs
	✓ <b>S</b> mart tabs
	<b>T</b> ab size... 2

The editor allows many of its features to be configured to allow you to work in a environment you are comfortable with. This options you select here will be saved to the Telix for Windows config file whenever it is saved, either explicitly with the **Save** command from the [Configure Menu](#), or with AutoSave turned on in the [General Options](#) configuration. Select the item from the menu above that you would like further help with.

**Auto-indentation** can make it much easier to read and find errors in your scripts. Scripts, like many programming languages, are groups of commands ordered together, and if you indent the groups properly, you will be able to see these groups more clearly. Auto-indentation will automatically move you column position at the start of a new line to the same starting position as the previous line. If your primary use of the editor is to create Telix scripts, then it is highly recommended that you leave this option on.

**Creating Backup Files** is essential to any secure workplace. If anything goes wrong with your system, or if you make changes and save them, only later you find that you did not want to make them, you will be happy to have a backup file. When the Create Backup File option is turned on, any file you open will first be copied to a new file with a .BAK extension.

**Font** selection is mainly a matter of personal preference, or perhaps of eyeglass strength. You may select the size and the typeface of the font that the script editor uses. This font will be used for all editor windows in the Script Editor.

There are several ways to treat **Tabs**, and it is mainly a matter of personal preference as to how you wish to treat them. You may expand tabs into a selected number of spaces, or leave them embedded in the document as actual TAB characters.

- △ **Fixed Tabs** are tabs that are always expanded to a specified number of spaces. If tabs are configured to be fixed, then whenever the TAB key is pressed, the editor will insert the number of spaces specified by the [Tab Size](#) field.
- △ **Real Tabs** are tabs that are inserted into the file as a real ASCII tab character. When this option is on, the editor will jump the cursor the number of columns specified in the [Tab Size](#) field every time a tab character is encountered.
- △ **Smart Tabs** are Telix for Windows attempt to outguess the programmer. Smart Tabs will look at the previous line and jump the cursor to where it thinks the stop should be. Like Real Tabs, spaces are inserted rather than ASCII tab characters.

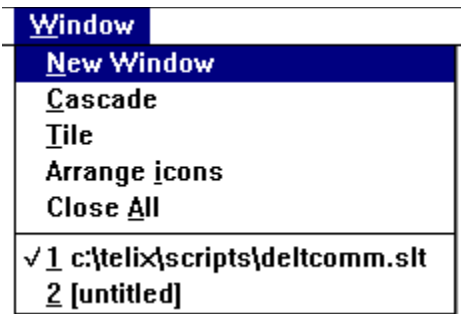
**WordStar Commands** are familiar to most programmers, since most editors include the original WordStar command set. Following is a list of the commands that the Script Editor supports if this option is enabled.

CTRL-A	Moves the cursor left one word
CTRL-C	Moves the cursor down one page
CTRL-D	Moves the cursor right one column
CTRL-E	Moves the cursor up one line
CTRL-F	Moves the cursor right one word
CTRL-G	Deletes the marked block, or the character after the cursor if no block is marked
CTRL-H	Deletes the character before the cursor. Same as backspace
CTRL-L	Repeat last find / replace command
CTRL-N	Break the line at the cursor by inserting a carriage return
CTRL-R	Moves the cursor up one page
CTRL-S	Moves the cursor left one column
CTRL-T	Deletes the marked block, or the word after the cursor if no block is marked
CTRL-V	Toggle insert mode on or off
CTRL-W	Scroll the display up one row
CTRL-X	Moves the cursor down one line
CTRL-Y	Deletes the current line
CTRL-Z	Scroll the display down one row
SHIFT-	
CTRL-Y	Delete from the cursor to the end of the file



**Tab Size** will allow you to specify the number of spaces that a single tab is to represent.

## Script Editor Window Menu



Select the item from the menu above that you would like further help with.

**Cascade** arranges windows so they overlap, starting in the upper-left corner of the Script Editor window. The title bar of each window remains visible, making it easy to select any window.

**Tile** arranges the windows side by side, so each window is visible and no windows overlap.

**Arrange Icons** arranges all windows that are minimized to icons along the bottom edge of the Script Editor, from left to right.

**Close All** closes every editor window that is open, prompting you to save if a file's contents have been modified.

The remaining items on the Window Menu are the titles of every file currently open.

## Script Editor Help Menu

Help	
<u>I</u> ndex	F1
<u>T</u> opic Search	Ctrl-F1
<u>U</u> sing help	
SALT <u>P</u> reprocessor	
SALT <u>F</u> unctions	
SALT <u>V</u> ariables	
SIMPLE Reference	
<u>A</u> bout...	

Many of the most commonly used script editor commands may be accessed through the editor popup menu. To make the popup menu active, click the right mouse button in an editor window. Select the item from the menu above that you would like further help with.



**Topic Search** is one of the most useful features of the Script Editor. Selecting this command, when the cursor is positioned over a SALT built-in function or keyword will open the [SALT help file](#) and place you in the appropriate topic.

## Script Editor Popup Menu

<b><u>N</u>ew</b>
<b><u>S</u>ave</b>
<b><u>U</u>ndo</b>
<b><u>C</u>ut</b>
<b><u>C</u>opy</b>
<b><u>P</u>aste</b>
<b><u>D</u>elete</b>
<b><u>F</u>ind...</b>
<b><u>R</u>eplace...</b>
<b><u>C</u>ompile</b>
<b><u>R</u>un</b>
<b><u>S</u>et Bookmark ▶</b>
<b><u>G</u>o to Bookmark ▶</b>

Many of the most commonly used script editor commands may be accessed through the editor popup menu. To make the popup menu active, click the right mouse button in an editor window. Select the item from the menu above that you would like further help with.

