

MicroLink for Windows Users Guide

Welcome

MicroLink for Windows is a communications application for Microsoft Windows version 3.0 or later. You can use MicroLink to connect your computer to other computers and to information services such as CompuServe and Genie.

At the nucleus of MicroLink is the dialing directory, an easy to use database where you can store names, phone numbers, logon scripts, terminal settings, and port settings. Select an entry, press the *Dial* button, and MicroLink instructs the modem to dial for you, and to redial if the line is busy. Once connected your computer acts as a terminal, giving you access to the remote computer's resources. Eight built-in transfer protocols provide compatibility with nearly any other system for sending and receiving files.

You can have MicroLink capture incoming information to file with the simple press of a button. With MicroLink's *scroll-back* feature, you can review or print up to 2000 lines of text.

With its simple but powerful *script* language, you can prepare responses to a remote computer's prompts before a call. In this way, routine information requests and file transfers can be done automatically and completely unattended. Best of all, you do not need to be a programmer to prepare these scripts. MicroLink can write these scripts for you by *watching* your last call.

With MicroLink's configurable button bar, you can send or receive files, print captured text, open your dialing directory, and perform many other functions by simply selecting the appropriate button. You can even define your own "custom" buttons to invoke a script file.

About This Manual

This manual is designed to help you explore and use MicroLink for Windows. The table that follows lists the chapters in this guide.

- Chapter 1, "Getting Started", tells you how to install MicroLink on your computer and how to run MicroLink for Windows. This chapter also explains the various parts of the MicroLink window and provides some basic knowledge of the Windows environment.
- Chapter 2, "The Basics", introduces you to MicroLink. Detailed instructions enable you to configure MicroLink for your computer and provide for the creation of your

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directory file. Instructions for exiting MicroLink are also provided.

- Chapter 3, "Communicating with MicroLink", explains how to dial into a remote computer. It includes instructions about sending and receiving files and how to copy, paste and enter text while in an active session. You also learn how to disconnect to end an active session.
- Chapter 4, "Scripting", provides a complete list of the script commands supported by MicroLink. Numerous examples are given to aid you through the process.
- Chapter 5, "Command Summary", gives a detailed description of every command in MicroLink the order in which they appear on the menu bar.
- Chapter 6, "Errors and Troubleshooting", describes possible problems you may encounter when using communication software and their solutions .

What You Need to Get Started

Setting up MicroLink on your computer is easy and takes only a few minutes. This application requires that Microsoft Windows 3.0 or later is installed on your computer. If Windows is not yet installed on your computer, install it now. Before you get started you should know how to do the following:

- Set up, start and use you computer.
- Use Microsoft Windows 3.0.
- Use the File Manager to create a directory and copy files.

If you do not know how to perform these tasks, use your computer owner's manual and the Windows User's Guide to familiarize yourself with them..

Notational Conventions

A few notes on the typographical conventions used throughout this manual follow below:

The names of the keys are spelled out throughout the manual and appear in bold face. Key combinations are expressed with the use of the addition symbol (+). For example, "Press **Alt+D**" means that you should press the Alt key and hold it down while you press the D key. Once you have both keys pressed, release them at the same time.

The directional keys are expressed as the Left, Right, Up, Down, Page Up, Page Down, Home and End keys and not as they are graphically represented on your keyboard.

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Text that is to be entered is enclosed within quotes (" "). Whenever possible the exact syntax is presented.

Notes appear throughout the manual to provide additional information. They appear separately from the body text with one horizontal line above the note text and one horizontal line below it. The font used for notes is Helvetica. (This text is Helvetica.) To further aid you, one of two graphic symbols appears on the left side of the margin. A *i* icon indicates that the note is informational and an exclamation icon presents an important note which should be read carefully.

* This feature is present only in the Word for Windows format.

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Windows must be installed on your computer before you can start using MicroLink. You should also be familiar with using Microsoft Windows to launch and terminate an application.

Setting Up MicroLink

To set up MicroLink, follow these steps:

- 1 Place your MicroLink diskette in a drive and close its latch.

Normally, you will use Drive A. Some systems have more than one floppy drive. The second drive is usually called Drive B. If you choose to use a drive other than A, simply substitute the drive letter for A in the instructions that follow.

- 2 Before creating a directory for MicroLink, Windows must be running. If Windows is not running, type WIN at the DOS prompt to begin. From the Program Manager, start the File Manager by double clicking on the File Manager icon. Once the File Manager is visible on the screen and has displayed your fixed disk directory tree, select File, then Create Directory. Type "MLINK", then select OK. Your MicroLink directory will now appear in the Directory Tree.

It is best to put MicroLink in a subdirectory of its own. We suggest the name "MLINK" for the subdirectory.

- 3 To copy the MicroLink program and help files to your fixed disk, select File from the File Manager. Then choose Copy. When the Copy dialog box appears, type "A:*.*" at the From line. At the To line, type "C:\MLINK". Select Copy and MicroLink's files will be copied to your fixed disk in the MLINK directory.
- 4 To add the MicroLink icon to your Program Manager, select File from the File Manager. Then choose New. When the New Program Object dialog box appears, select Program Item and OK. The Program Item Properties dialog box will then appear. At the Description line, type "MicroLink for Windows". At the Command line, type "C:\MLINK\MLINK.EXE", then choose OK. The MicroLink icon will now appear in your Program Manager selections.

Anatomy of the MicroLink Window

The top bar of the MicroLink Window is the Title bar. This bar contains the system menu on the far left side and the minimize and maximize buttons on the far right. In the center of the Title bar is the application name. If you have selected a directory entry, its title will appear enclosed in brackets beside the application name. (ex. **MicroLink - [Atlanta Windows]**).

Below the title bar is the Menu bar. You can access the menu options by moving the mouse over the menu item and pressing the left mouse button. Alternately, you may press the "Alt" key, and once the File menu item has become inverted, press the underlined letter of the menu item you want to select.

The **Tools Bar** contains a set of push buttons designed to provide mouse accelerators for various commands. The push buttons that appear are definable via the Tools command.

The **Function Key Bar** contains a set of push buttons that represent the function keys on your keyboard. These keys may be programmed via the Function Keys command.

The **Lights Bar** is a set of indicators about the active port. **IM** indicates modem initialization; **HS** indicates high speed; **AA** indicates auto answer mode; **CD** indicates carrier detected; **OH** indicates off hook; **RD** indicates receiving data; **SD** indicates sending data; **TR** indicates terminal ready; and **MR** indicates modem ready.

The **Session Window** displays all incoming characters and, optionally, all outgoing characters. This window is scrollable, retrieving up to 2,000 lines of previously displayed text. The choice of typeface, font size and fore- and background colors may be customized via the Terminal command.

The **Status Bar** is the horizontal bar that appears along the bottom of MicroLink's window. It contains the current time or connected time; the current port settings; an indicator as to whether a log file is opened, closed, or temporarily on hold; and an indicator as to whether a script file is currently recording, paused or stopped.

The Tools, Function Key, Lights and Status bars may all be optionally disabled via the Window command thereby increasing the size of the Session Window.

The Basics

It is easy to get around the MicroLink program and to know just what MicroLink expects of you at any time. This chapter introduces you to the basics of using MicroLink.

Starting MicroLink

There are several ways to start MicroLink (some are easier than others). The four basic techniques follow below:

- From the DOS command line, type "WIN MLINK". You must be within the directory that the MicroLink executable file (MLINK.EXE) resides in and Windows must be located on your path environment variable.
- Double click on the program icon within Program Manager. As an alternate method, you can highlight the icon with either the mouse or arrow keys and press enter.
- Choose the Run command from the File menu of either the Program Manager or the File Manager. Enter the name of the program, then select OK. Remember to enter the complete pathname of MicroLink if it is not located within your path environment variable.
- Double click on the program file from a directory window within File Manager. As an alternate method, you can highlight the icon with either the mouse or arrow keys and press enter.

If Windows cannot find MicroLink, a message box will appear telling you that Windows could not find the file within the current search path. If MicroLink is not located on your current search path try placing it before the program name. For example, enter "C:\MLINK\MLINK.EXE" at the Command Line.

Configuring MicroLink

Because every computer is equipped with different hardware, you need to configure MicroLink before connecting to a remote computer. In particular, you need to tell MicroLink the brand of modem you are using and the COM port your modem is attached to. You also need to enter the phone number of the remote computer, as well as its port and terminal settings. Finally, you will want to set the user preferences.

The first time you start MicroLink, a small dialog box will appear prompting you to select

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the port your modem is attached to. After selecting the port and pressing OK, MicroLink will attempt to open the port and connect locally to the modem. If it is unable to open the port, the dialog box will reappear, prompting you to select another port as the default port. If no ports are available or if you have selected the cancel option, MicroLink will complete initialization but will not open any ports. When you attempt to connect to a remote computer, MicroLink will again retry this process.

Modem Settings

To configure the Modem settings including Modem Type, Line Type, Modem Volume, Initialization String, and Dialing Prefix, perform the following steps:

1. Choose Settings, then choose Modem.
2. Select the Modem Type, Line Type and Modem Volume.
3. Enter the Initialization String and Dialing Prefix.
4. Choose OK to accept these changes.

The **Initialization String** allows you to add additional initialization strings to be sent to the modem. Enter initialization strings without the **AT** prefix, as this prefix is already included. **DP, DT, E, E0, L, M, Q, S1, S7** and **Z** commands cannot be included in the initialization string as these codes are used internally.

The **Dialing Prefix** allows you to insert additional characters in front on the phone number. Codes such as **"*70"** for call waiting and **"9,"** for business PBX's should be placed here.

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Port Settings

To set the Port settings including serial (COM) port, baud rate, data bits, stop bits, flow control, parity, lock baud rate, parity check, and carrier detect, perform the following steps:

1. Choose Settings, then choose Port.
2. Select the serial (COM) port that your modem is attached to and its appropriate communications parameters.
3. Choose OK to accept these changes.

The **Baud Rate** group specifies how fast information is transferred through the port; **Data Bits** specifies the number of data bits in each packet of information; **Parity** specifies the error-checking method used; **Stop Bits** specifies the number of stop bits in each packet of information; and **Flow Control** specifies the method used to control the transmission, or flow, of data.

The **Lock Baud Rate** option indicates whether MicroLink should modify the connection speed between the computer and the modem. This option should be enabled when using modems that can connect at baud rates that are not supported by Windows. For example, several US Robotics modems can connect at baud rates of 14,400. To support a modem at this speed, set the baud rate to 19,200 and enable the Lock Baud Rate option.

The **Parity Check** option indicates whether MicroLink should translate the high order bit on the characters it receives.

The **Carrier Detect** option indicates whether MicroLink should automatically delete the loss of carrier to automatically perform a hang up.

It is important that these port options are set correctly. It is recommended that you refer to the manual from your modem to find its maximum baud rate and that you verify the settings of the remote computer. If these settings are incorrect a Receiving Framing error may occur.

Session Settings

To set the Session settings including the Session Title, Phone Number, default File Transfer Protocol, and Logon Script, perform the following steps:

1. Choose Settings, then choose Session.
2. Enter the Session Title and Phone Number.
3. Select the default File Transfer Protocol. If the chosen protocol requires additional settings the Configure button will be enabled. The Configure button allows you to choose additional settings for the selected protocol. For example, ZModem allows you

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- to configure send and receive options and enable its auto download feature.
4. Enter the Logon Script filename or select the Logon Script button to display a listing of available scripts.
 5. Choose OK to accept these changes.

The maximum number of characters for the **Title** is 25.

The maximum number of characters for the **Phone Number** is also 25. Special dialing codes such as "*70" for call waiting or "9," for business PBXs, should be entered in the dialing prefix option located in the Modem dialog box.

The default **File Transfer Protocol** is the method of file transfer you use most often when transferring files to this remote computer.

The **Logon Script** is the script that is automatically invoked once a connection has been made. This script file must reside in the default scripts directory.

Terminal Settings

To set the Terminal settings including Terminal Type, the default Font Name and Size, the Caret Type, scrollbar buffer size and dimensions, outbound Carriage Return expands to Carriage Return plus Line Feeds options, Local Echo, and ANSI Color Attributes, perform the following steps:

1. Choose Settings, then choose Terminal.
2. Select the Terminal Type, Font Name, Font Size and Caret Type.
3. Enter the scrollbar Buffer size in lines, the number of Rows per page, and the Column width.
4. Select CR->CR+LF options, Local Echo and ANSI Color Attributes.
5. Choose OK to accept these changes.

The minimum number of lines in the scrollbar **Buffer** is 50 and the maximum is 2000. The minimum number of **Rows** per page is 25, the maximum is 50 and the default setting is 25. The minimum number of **Columns** per page is 40, the maximum is 240 and the default setting is 80.

If **ANSI Color Attributes** is set on, MicroLink will translate the colors the remote computer sends thru escape sequences. Disabling ANSI Color Attributes allows you to set the colors for the session window, thereby overriding the remote color sequences. You can change the default colors by selecting the Colors button, which will display the colors dialog box. For more information on setting colors, see the related topic Colors below.

MicroLink will display every fixed space typeface that resides in your system. However, the list of

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available font sizes is a standard one and may not represent the actual font sizes you have in your system. It is designed to accommodate Adobe Type Manager, Bitstreams FaceLift and True Type, which create fonts on the fly. As a result, typefaces such as terminal may display the same font for various sizes.

Terminal - Colors Command

The Terminal - Colors Command sets the screen colors of the session window .

To select the foreground and background colors used in the session window, perform the following steps:

- 1 Choose Settings, then choose Terminal.
- 2 After the terminal window is displayed, insure that the ANSI Color Attributes option is not checked.
3. Push the Colors button. This will display the current color selections.
- 4 Select the colors you want for the foreground and background.
5. Choose OK to accept the these changes.

Default colors are only used when the ANSI Color Attributes option is not checked.

Preferences

To set the user Preferences including the Redial Count, Timeout value, Pause value, default Directory filename, Delete Partial File option, Prompts option, Elapsed Time Clock option, Return from Iconic option, Quick Initialization option and Warning Beeps option, perform the following steps:

1. Choose Settings, then choose Preferences.
2. Enter the Redial Count, Timeout value and Pause value.
3. Enter the Directory filename or select the Directory button to display a listing of available directory files.
4. Check the Delete Partial File, Prompts, Elapsed Time Clock, Return from Iconic, Quick Initialization and Warning Beeps options.
5. Choose OK to accept these changes.

The **Redial** value indicates the number of times MicroLink will attempt to retry to connect to the remote computer. The range is from 0 to 99.

The **Timeout** value indicates how long MicroLink instructs the modem to wait to receive a connection. The range is from 15 to 120 seconds.

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The **Pause** value indicates how long MicroLink will wait before redialing. The range is from 0 to 120 seconds.

The **Directory** file must reside in the default directory path. If the directory file you entered does not exist, MicroLink will attempt to open it as a new directory file.

The **Delete Partial File** option indicates whether MicroLink should automatically delete files that are a result of a failed file transfer.

The **Prompts** option indicates whether MicroLink should display additional dialog boxes during file transfers.

The **Elapsed Time Clock** option indicates whether MicroLink should display the amount of time you have been connected to the remote computer.

The **Return from Iconic** option indicates whether MicroLink should restore the window to a full screen when it has completed background processing, such as background dialing and background file transfers.

The **Quick Initialization** option indicates whether MicroLink should bypass the modem initialization process after the first initialization has been completed.

The **Warning Beeps** option indicates whether MicroLink should emit audible beeps to indicate connection and completed file transfers.

Creating a Dialing Directory Database

You may want to store the terminal, port, and session settings of a remote computer for later use. MicroLink allows you create your own *yellow pages* of remote computer profiles. You can use these profiles for quick access. For example, if you can have your favorite BBS's stored in a directory file, all you need to do is open the directory listing file and select that entry. From that dialog box, you can have MicroLink begin the connection process for that entry.

To build a listing of directory entries, perform the following steps:

1. Choose File, then choose Directory.

To Add a record to the directory listing, do the following:

2. Set the phone number and the file transfer protocol. The file transfer protocol may need to be configured as appropriate for your modem. The port and terminal settings should be changed as necessary by clicking on the current port or terminal settings to

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- display the port or terminal selections.
3. Select the Add button. Enter the name of the entry on the title field of the Add Record dialog box.
 4. Choose OK to add the entry to your directory listing.

To Change an entry, do the following:

2. Select the entry to be changed.
3. Make any necessary changes to the entry, then select the Change button.

To Delete an entry, do the following:

2. Select the entry to be deleted.
3. Select the Delete button.

The directory file used is the one which you have chosen in the Preferences dialog box.

If you make changes to an entry thru Settings and then choose Directory, you will be prompted with the message "Record has been changed. Update record?". By choosing **Yes**, the record will be updated in your Directory listing.

If you make changes to the title of an entry thru Settings and then choose Directory, you will be prompted with the message "(Entry) does not exist. Add record to file?". By choosing **Yes**, the record will be added to your Directory listing.

After selecting an entry, you may select the Dial button to immediately begin the dialing process.

Getting Help

To get help with whatever you are trying to accomplish, open the Help menu (the menu item at the far right). Once the pull down Help menu is visible you will see six choices, plus the About command. To get help, select the menu item that is closest to the kind of help you need. If you need help using the keyboard with MicroLink, select Keyboard. If you are confused about the action a particular command performs, select Commands. Selecting Index will display an index of all of the commands available with MicroLink, sorted in alphabetical order. The Using Help option will provide you with general information on using Windows.

Once you have made the appropriate choice, the Help window will be displayed. It also has push buttons that function similar to those within MicroLink. To jump to an associated section either click on the word with a mouse or, using the tab key, position the pointer on that topic and press enter.

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Words within the help file that are underlined will enable you to jump to a different section within the manual. Words that have a dotted line are words that have a definition that you can see. By clicking the left mouse button, the definition will appear on the screen in a small box. Pressing the **Esc** key will cause the box to disappear. Keyboard support is the same for underlined words, however you must hold down the enter key to display the definition box. For more information on using the Help system, refer to your Windows documentation.

Ending MicroLink

When you are finished with a MicroLink session, you should exit MicroLink properly. The steps to correctly exit MicroLink appear below:

1. Choose Exit from the file menu of the MicroLink window. After selecting this option, MicroLink will automatically disconnect you from any computer you may be currently connected to.
2. Set the Save Changes box if you want MicroLink to remember your current settings and screen location when you quit.
3. Select OK.

Communicating with MicroLink

Once you have initialized the required variables, you are ready to begin communications using MicroLink. This chapter will provide you with step-by-step instructions for communicating with a remote computer.

Dialing a Remote Computer

After you have entered the session, port, and terminal settings as described earlier, you are ready to dial. To connect MicroLink to a remote computer choose Session, then choose Dial or select the Dial button from the Tools Bar. The Lights Bar will be updated indicating that MicroLink will first initialize the modem and then attempt to dial and connect to the remote computer.

If MicroLink is unable to properly initialize the modem, dialing will fail. After the modem initialization completes, MicroLink will display a dialog box indicating the title of the remote computer it is dialing; its phone number; the number of seconds left until MicroLink issues a timeout; the remaining number of times MicroLink will attempt to connect to the remote computer; and the last error that has occurred.

You may cancel at any time by pressing the Escape key or selecting the Cancel button. Selecting the Background button will minimize MicroLink, thereby entering background processing.

Since proper initialization takes time, it is recommended that you set the Quick Initialization option, located in the Preference dialog box.

MicroLink does not automatically restore itself on the screen after background processing is complete. To enable restoration check Return From Iconic, located in the Preferences dialog box.

When MicroLink has not dialed to a remote computer, the icon is the comet. Once MicroLink has dialed and connected to a remote computer, the icon changes to a modem.

Once you have connected to the remote computer, you can begin your communication session with the remote computer. Characters you type will be sent to the remote computer and characters sent by the remote computer will be displayed on the screen. If none of the characters you type appear on the screen, enable the Local Echo option under Terminal settings. Further, if the screen becomes filled with unreadable characters, verify that your

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Port settings are correct.

Using the Clipboard

During your communications session, you may want to use the clipboard to copy portions of the session and/or to paste text to the remote computer.

To copy the contents of a marked block to the clipboard, perform the following steps:

1. Scroll thru the session buffer to bring the text you want to copy into view.
2. Using the mouse, move to the upper left hand corner of the block and press and hold the left mouse button down.
3. Drag the mouse to the lower right hand corner of the block. The text that appears within the block will become inverted.
4. Choose Edit, then choose Copy or select the Copy button from the Tools Bar.

To copy the contents of the Clipboard to the remote computer (Paste) choose Edit, then choose Paste or select the Paste button from the Tools Bar. MicroLink will then begin transmitting the contents of the file to the remote computer. You may cancel the Paste command at any time by pressing the **Esc** key.

At this time, MicroLink cannot automatically scroll thru the session window when marking characters. Therefore only the contents of the session buffer that are visible can be copied to the clipboard at anytime.

Copying From and Pasting To Files

You can also mark a block and copy it to a file for later reference. Similarly, you can send the contents of a file to the remote computer.

Copy To Command

To create a file and copy the contents of a marked block to it, perform the following steps:

1. Scroll thru the session buffer to bring the text you want to copy into view.
2. Using the mouse, move to the upper left hand corner of the block and press and hold the left mouse button down.
3. Drag the mouse to the lower right hand corner of the block and release the left mouse button. The text that appears within the block will become inverted.
4. Select Edit, then choose Copy To.
5. Type or select the name of the file you want to copy to. If the target directory is not the current directory, either type the directory name in front of the filename or select the directory from the Directories box.
6. Choose OK to begin copying to the file.

If the file already exists, MicroLink will display a dialog box giving you the option to cancel the operation or erase the contents of the file. Selecting OK will instruct MicroLink to destroy the contents of the current file.

Paste From Command

To open a file and copy its contents to the remote computer, perform the following steps:

1. Select Edit, then choose Paste From.
2. Type or select the name of the file you want to paste from. If the document is not listed in the current directory, either type the directory name in front of the document name or select the directory in the Directories box.
3. Choose OK to begin pasting the file.

MicroLink will then begin transmitting the contents of the file to the remote computer. You may cancel the paste command at any time by pressing the Escape key.

Sending and Receiving Files

You may need to send files to or receive files from the remote computer. MicroLink has several built-in file transfer protocols to ensure that you will be able to transfer files from nearly any computer.

To send a file to the remote computer, perform the following steps:

1. Select Session, then choose Send or select the Send button from the Tools Bar.

If you have Prompts enabled, do the following:

2. Select the protocol you want to use.

If your default protocol is ASCII, XModem, or YModem, do the following:

3. Type the name of the file you want to send. If the source directory is not the current directory, type the directory name in front of the file name or select the directory from the Directories box.
4. Choose OK to begin sending the file.

If your default protocol is YModem G, YModem Batch, or ZModem, do the following:

3. Select the name of the file(s) you wish to send by first choosing the directory where the file(s) resides and then marking the appropriate file(s). When you have finished marking the selections from that directory, select the Add button. You may then repeat this process thru the remaining directories.

To remove a file you have added to the Selected Files list, mark the file(s) and select the Delete button.

4. Choose OK to begin sending the file(s).

If MicroLink is unable to synchronize properly with the remote computer the file transfer will fail. After the initialization is complete, MicroLink will display a dialog box indicating the name of the file being sent, the estimated time remaining to complete the file transfer, the time that has elapsed since the file transfer was initiated, and the last error which has occurred.

You may cancel sending a file at any time by pressing the Escape key or selecting the Cancel button. Selecting the Background button will minimize MicroLink and enter background processing.

To receive a file from the remote computer, perform the following steps:

1. Select Session, then choose Receive or select the Receive button from the Tools Bar.

If you have Prompts enabled, do the following:

2. Select the protocol you want to use.

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If your default protocol is ASCII, XModem, or YModem, do the following:

3. Type the name of the file you want to receive. If the target directory is not the current directory, type the directory name in front of the file name or select the directory in the Directories box.
4. Choose OK to begin receiving the file.

If your default protocol is YModem G, YModem Batch, or ZModem, do the following:

3. Type the complete pathname where the receiving file is to be placed.
4. Choose OK to begin receiving the file.

As in sending files, if MicroLink is unable to synchronize properly with the remote computer, the file transfer will fail. After the initialization is complete, MicroLink will display a dialog box indicating the filename of the receiving file, the estimated time remaining to complete the file transfer, the time that has elapsed since the file transfer was initiated, and the last error that has occurred. With YModem G, YModem Batch, or ZModem, the total size of the file to be received will be known and the thermometer will be active.

You may cancel receiving a file at any time by pressing the Escape key or selecting the Cancel button. Selecting the Background button will minimize MicroLink and enter background processing.

Some Notes on File Transfer Protocols

Sending and receiving files is one of the most important capabilities to be handled by a communications program. To do so, a connection must be made between the two computers. Then several things are necessary:

- The sending computer must know what file is wanted.
- The receiving computer must know what name to use when storing it.
- The sending computer needs to know when to start sending, and when to pause if it is sending faster than the receiving computer can store the data.
- Errors from a bad phone connection should be detected and corrected.
- A way must be provided to signal the end of the transmission.

These needs are handled by the file transfer protocol that is chosen. MicroLink supports the most popular file transfer protocols, and in most cases, you'll simply choose the most sophisticated protocol available on both computers.

ASCII Transfer Protocol

ASCII is the most primitive (in fact, most experts wouldn't consider it a protocol at all) but

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it is the most universally available. No error detection is employed (unless you're using MNP.) The end of file is signified by a Ctrl-Z character (ASCII 26). Because binary files might have Ctrl-Z's and other control characters anywhere, they can't be sent reliably with ASCII.

Unless the data to be sent is pure text, don't use ASCII. Even for text files, use ASCII transfers only when no other protocol is available.

XModem

In XModem transfers, a file is sent in blocks of 132 bytes. The transfer is started by the receiver, which sends a NAK character (ASCII 21) at 10-second intervals until the sender responds with the first block. Validity checking is done by evaluating the checksum and the other non-data bytes in the block.

The receiver also expects no more than a 1 second interval between bytes. If an error is detected, the receiver sends a NAK and the block may be resent up to 10 times. Otherwise, an ACK (ASCII 6) is sent to acknowledge correct receipt. An EOT character (ASCII 4) instead of another block indicates end of file, and the receiver responds with a final ACK. The Ctrl-X character (ASCII 24) between blocks by sender or receiver requests cancellation of the transfer.

An XModem Block

1 Byte SOH (ASCII 1)
1 Byte Sequence Number 0-255
1 Byte Complement (255-seq number)
128 Bytes Data
1 Byte Checksum

XModem CRC

The XModem CRC protocol improves on XModem by using CRC instead of a checksum for validity checking. This provides a much better chance that errors due to a bad phone line will be caught. Instead of the initial NAK character(s), the receiving computer sends "C" until the first block is received.

YModem - XModem 1k

The YModem protocol, sometimes called XModem-1k, is like XModem CRC, but faster transfers can be achieved (when a phone connection is good) because 1024 bytes of data are sent per block. The sender may also use 128 byte blocks, at its discretion. Blocks with 1024 bytes have STX (ASCII 2) as the start of block character instead of SOH.

YModem Batch

One (usually insignificant) problem of XModem, XModem CRC, and YModem transfers is that the file size on the receiving computer is always an even multiple of 128 bytes. (ASCII zeros are padded onto the end.) YModem Batch solves this problem and allows more than one file to be sent in a single transfer by including file name(s) and size(s) along with the data. After requesting file(s) from the sender, the receiver only needs to specify the drive and path for local storage.

In batch transfers the initial block number is zero (instead of one) to indicate that it contains a file name and size. After each file, another "filename block" is expected. A filename block with ASCII zeros instead of a file name indicates the end of the batch.

Because file naming is handled automatically, YModem batch (and G) are well suited for unattended operation in scripts.

YModem G

These protocols correspond to YModem Batch but can be much faster because the sender does not wait for an ACK character before sending each block. In addition, the timing is relaxed to make it more suitable for use on some transmission links where data is sent in bursts, with (sometimes) more than one-second intervening delays.

YModem G are the preferred protocols for use with MNP, because MNP does its own error checking and correcting. They should not be used otherwise.

To start a YModem G, the receiver sends "G" instead of "C" to say it's ready. One disadvantage of the "G" protocols is that cancellation (using Ctrl-X) is sometimes messy. By the time the sender receives the Ctrl-X, a lot of data may already be in transit. The receiver may need to ignore several pages of unintelligible data on the screen before the sender's menu is redisplayed.

ZModem

The Zmodem protocol provides reliable file transfer between application programs. End-To-End data integrity is insured with the CRC16 or CRC32 data verification schemes. File transfer is simplified with advanced file management features, Automatic Receiver Transfer (AutoDownload), AutoFile Restart (Crash Recovery), and selective file transfers. Binary Data Escape techniques are implemented with a minimum amount of overhead allowing transfer rates above the Kermit or YModem Batch protocols and almost as good as YModem G. Selective buffering and windowing techniques allow Zmodem to operate on systems that do not support streaming protocols.

Hanging Up

Once you have completed your communications session you need to disconnect from the remote computer. To do so select Session, then choose Hang Up or select the Hang Up button from the Tools Bar.

Scripting

Scripts are a set of instructions you can create for MicroLink to follow. Ranging from very simple to extremely complex, scripts are a short-cut which will save you considerable effort over time. These mini-programs can be created for most anything, including the automation of a logon process. Examples of several scripts are provided throughout this chapter.

Script Reference

Script File Name

A script file name can be any valid filename. The default file extension for a script file is MSL, which stands for MicroWerks Script Language. An example of a valid script file name is "MYSCRIPT.MSL".

Contents of a Script File

A MSL script, regardless of size, consists of statements, functions and variables. A statement is a command that specifies the operations which should be performed. Functions manipulate variables, which store values used during the execution of the script. It is suggested that you end every script you create with the END statement.

Constant

A constant is a value which will be interpreted literally by MicroLink. Constants specify actual information, as opposed to information that is contained within a variable and identified by a name. In the following example, "Hello World" is a string constant.

```
RPRINT "Hello World"
```

Character (string) constants can contain any alphanumeric characters and special symbols. Character constants are enclosed in double quotes.

Numeric constants identify numeric values and can be used in arithmetic operations. Numeric constants should not be delimited. If delimiters are used, the numbers will be interpreted as a string. In the following example, "9" is a numeric constant.

Getting Started

```
x = 9
```

Variables

Variables are temporary storage bins for information. The variables and their contents are released when a script is terminated by a syntax error, a runtime error, or when a script reaches an END statement. The name you assign to a variable may contain numerics, letters, or the underscore character ("_"), however the first character must be a letter. The name can be up to 10 characters in length. Variables can be assigned with either a constant or another variable by using the equal sign "=" . Several statements can also assign data to a variable. The following examples demonstrate different methods used to assign a value to a variable.

```
intro$ = "Hello World"           ' Assigned by a constant
first$ = last$                   ' Assigned by a variable
INPUT "Enter Password:", pw$ ' Assigned by a statement
```

The variable type is determined by its name. A string variable must end with a dollar sign (\$). In the following example, "Hello World" is stored in a string variable named "intro\$".

```
intro$ = "Hello World"
```

String variables can be concatenated (combined) together using the plus sign (+), as demonstrated in the following example.

```
hello$ = "Hello "
intro$ = hello$ + "World"
```

Numeric expressions can be used in mathematical expressions or whenever a numeric value is needed by a statement. The following examples demonstrate the use of numeric variables.

```
FOR i = 1 to 10
  j = i % 2
  IF j = 1
    RPRINT "Its odd...^M"
  ELSE
    RPRINT "Its even...^M"
  ENDIF
NEXT
```

' otherwise, print "it even"

Getting Started

The following list shows the symbol used and the calculation performed by each supported mathematical operator

Symbol	Calculation Performed
+	Addition.
-	Subtraction.
*	Multiplication.
/	Division.
%	Modulus. The modulus operator returns only the remainder of the division operator.
()	Used to set the order of operations.

The next section provides detailed instructions regarding every command and function currently available. Numerous examples are given to aid your understanding of script file assembly.

AUTOANSWER Statement

Action: Sets the modem to auto answer mode.

Syntax: **AUTOANSWER**

Remarks: The **AUTOANSWER** statement sets the modem to auto answer mode.

Example: The following example uses **AUTOANSWER** to place the modem into auto answer mode:

```
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PROTOCOL YMODEMB
SET TITLE "Simple Host Mode"

AUTOANSWER               ' Set AA mode
RPRINT "Welcome to my PC^M"
SLEEP 5
RPRINT "Send me the name of the file you want^M"
RINPUT "Enter filename:", file$
RPRINT "^M^M"             ' Send 2 CRs
RPRINT "When your ready to receive the file "
RPRINT "using YMODEMB, send me 'OK'^M"
WAITFOR "OK"
RPRINT "Sending file " + file$ + " using YMODEMB^M"
SEND file$
RPRINT "Bye"
HANGUP
END
```

BEEP Statement

Action: Makes a sound through the speaker.

Syntax: **BEEP**

Remarks: The **BEEP** statement makes a sound through the speaker.

Example: The following example uses **BEEP** to indicate a successful log on to a remote computer:

```
ONERROR DialFailed
DIAL "9,123-4567"
WAITFOR "Enter FIRST name: "
RPRINT "John^M"           ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"           ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"     ' Send Password
MPRINT "Connection Complete!"
END
```

```
DialFailed:
BEEP
MPRINT "Did not connect"
END
```

CLEAR Statement

Action: Clears the display and the contents of the scrollback buffer.

Syntax: **CLEAR**

Remarks: The **CLEAR** statement clears the display and the contents of the scrollback buffer.

Example: The following example uses **CLEAR** to remove the contents of the scrollback buffer:

```
ONERROR DialFailed
DIAL "9,123-4567"
WAITFOR "Enter FIRST name: "
RPRINT "John^M"           ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"           ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"      ' Send Password
MPRINT "Connection Complete!"
CLEAR
END

DialFailed:
MPRINT "Did not connect"
END
```

CLOSELOG Statement

Action: Closes the open log file.

Syntax: **CLOSELOG**

Remarks: The **CLOSELOG** statement closes the open log file.

Example: The following example uses **CLOSELOG** to close the log file:

```
LOG$ = "LOGFILE.LOG"           ' Log File Name
OPENLOG LOG$                   ' Open a log File
HOLDLOG
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                 ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"           ' Send Password
RESUMELOG
```

```
REM Keep the script running in background until the BBS
REM ends the session and sends "Goodbye".
```

```
WAITFOR "Goodbye"
CLOSELOG
MPRINT "Log File Closed."
END
```

CLS Statement

Action: Clears the display.

Syntax: **CLS**

Remarks: The **CLS** statement clears the display and saves its contents to the scrollback buffer.

Example: The following example uses **CLS** to indicate the successful log on to a remote computer:

```
ONERROR DialFailed
DIAL "9,123-4567"
WAITFOR "Enter FIRST name: "
RPRINT "John^M"           ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"           ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"     ' Send Password
MPRINT "Connection Complete!"
END

DialFailed:
MPRINT "Did not connect"
END
```

DIAL Statement

Action: Starts the dialing connect process.

Syntax: **DIAL** [*phonenumber*]

Remarks: The optional argument *phonenumber* is a string expression that specifies the phone number MicroLink will use when performing a dial command. If this argument is not supplied, the **DIAL** statement will use the default phone number.

Example: The following example uses **DIAL** to connect to a remote computer:

```
ONERROR DialFailed
DIAL "9,123-4567"
WAITFOR "Enter FIRST name: "
RPRINT "John^M"           ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"           ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"      ' Send Password
MPRINT "Connection Complete!"
END

DialFailed:
MPRINT "Did not connect"
END
```


END Statement

Action: Stops a script.

Syntax: **END**

Remarks: The **END** statement stops script execution, closes all files and returns control to the user. You can place an **END** statement anywhere in the script to terminate execution.

Example: The following script uses the **END** statement to end script execution:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"
WAITFOR "Password-> "
INPUT "Enter Password:", PW$ ' Get Password
RPRINT PW$
RPRINT "^M"
MPRINT "Log-on Complete!"
SLEEP 10
MPRINT "Finishing Up..."
X = 1

Again:
IF X = 5 THEN
    GOTO Done
ENDIF
WAITFOR "Continue? "      ' Wait for 5 Continues
MPRINT "^M"              ' and send each a CR
X = X + 1
GOTO Again

Done:
CLS
MPRINT "All Done..."
END
```


FOR...NEXT Statement

Action: Repeats a group of instructions a specified number of times.

Syntax: **FOR** *counter*=*start* **TO** *end*
 [*statementblock*]
[EXIT FOR]
 [*statementblock*]
NEXT

Remarks: The FOR statement utilizes the following arguments:

Argument	Description
<i>counter</i>	A numeric variable used as a loop counter.
<i>start</i>	The initial value of the counter.
<i>end</i>	The final value of the loop counter.

A **FOR...NEXT** loop executes only if *start* is less than *end*. Within the **FOR...NEXT** loop, the program lines following the **FOR** statement are executed until the **NEXT** statement is encountered. Then the counter is incremented and compared by the final value, *end*.

Avoid changing the value of counter within the loop. Changing the value of counter is poor programming practice and can make the program difficult to read and debug.

The **EXIT FOR** statement provides a convenient method to exit a **FOR...NEXT** loop.

Example: The following example uses a **FOR...NEXT** loop in a script:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"
WAITFOR "Password-> "
INPUT "Enter Password:", PW$ ' Get Password
RPRINT PW$
```

Getting Started

```
RPRINT "^M"  
MPRINT "Log-on Complete!"  
SLEEP 10  
MPRINT "Finishing Up..."  
X = 1
```

Again:

```
IF X = 5 THEN  
    GOTO Done
```

```
ENDIF
```

```
WAITFOR "Continue? "
```

' Wait for 5 Continues

```
MPRINT "^M"
```

' and send each a CR

```
X = X + 1
```

```
GOTO Again
```

Done:

```
CLS
```

```
MPRINT "All Done..."
```

```
END
```

GOTO Statement

Action: Branches unconditionally to the specified label.

Syntax: **GOTO** *label*

Remarks: The **GOTO** statement provides a way to branch unconditionally to another label.

Example: The following example uses the **GOTO** statement:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"
WAITFOR "Password-> "
INPUT "Enter Password:", PW$ ' Get Password
RPRINT PW$
RPRINT "^M"
MPRINT "Log-on Complete!"
SLEEP 10
MPRINT "Finishing Up..."
X = 1

Again:
IF X = 5 THEN
    GOTO Done
ENDIF
WAITFOR "Continue? "     ' Wait for 5 Continues
MPRINT "^M"              ' and send each a CR
X = X + 1
GOTO Again

Done:
CLS
MPRINT "All Done..."
END
```


HANGUP Statement

Action: Disconnects the modem and ends an active session.

Syntax: **HANGUP**

Remarks: The **HANGUP** statement disconnects the modem and ends an active session.

Example: The following example uses **HANGUP** to end an active session:

```
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PROTOCOL YMODEMB
SET TITLE "Simple Host Mode"

AUTOANSWER               ' Sets AA mode
RPRINT "Welcome to my PC^M"
SLEEP 5
RPRINT "Send me the name of the file you want^M"
RINPUT "Enter filename:", file$
RPRINT "^M^M"             ' Sends 2 CRs
RPRINT "When you are ready to receive the file "
RPRINT "using YMODEMB, send me 'OK'^M"
WAITFOR "OK"
RPRINT "Sending file " + file$ + " using YMODEMB^M"
SEND file$
RPRINT "Bye"
HANGUP
END
```

HOLDLOG Statement

Action: Pauses the logging of text to a file.

Syntax: **HOLDLOG**

Remarks: The **HOLDLOG** statement pauses the logging of text to a file.

Example: The following example uses **HOLDLOG** to pause the logging of text to a file:

```
LOG$ = "LOGFILE.LOG"           ' Log File Name
OPENLOG LOG$                   ' Open a log File
HOLDLOG
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                 ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                  ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"            ' Send Password
MPRINT "Log File Opened."
RESUMELOG

REM Keep the script running in background until the BBS
REM ends the session and sends "Goodbye".

WAITFOR "Goodbye"
CLOSELOG
MPRINT "Log File Closed."
END
```


IF...THEN...ELSE...ENDIF Statement

Action: Allows conditional execution, or branching, based on the evaluation of a Boolean (true or false) expression.

Syntax1: `IF booleanexpression THEN statement [ELSE statement]`

Syntax2: `IF booleanexpression THEN
 [statementblock]
[ELSE]
 [statementblock]
ENDIF`

Remarks: The argument boolean expression is any expression that evaluates to true (no zero) or false (zero). If the boolean expression is true the statements following the **THEN** are executed. If the boolean expression is false and an **ELSE** statement exist, the statements that follow the **ELSE** statement are executed. The program continues execution following the line after the **ENDIF** statement.

The single-line form of the statement is best used for short, straightforward tests where only one action is taken. Otherwise it is recommended that the block form of the statement be used. Programs that use the block form of the statement are usually easier to read, maintain and debug.

Example: The following example uses the **IF...THEN...ELSE...ENDIF** statement:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"
WAITFOR "Password-> "
INPUT "Enter Password:", PW$ ' Get Password
RPRINT PW$
RPRINT "^M"
MPRINT "Log-on Complete!"
SLEEP 10
MPRINT "Finishing Up..."
```

Getting Started

```
X = 1
```

```
Again:
```

```
IF X = 5 THEN
```

```
    GOTO Done
```

```
ENDIF
```

```
WAITFOR "Continue? "
```

```
' Wait for 5 Continues
```

```
MPRINT "^M"
```

```
' and send each a CR
```

```
X = X + 1
```

```
GOTO Again
```

```
Done:
```

```
CLS
```

```
MPRINT "All Done..."
```

```
END
```

INPUT Statement

Action: Displays a dialog box with a given prompt to allow the user to enter an expression from the keyboard and place the results in a specified memory variable.

Syntax: **INPUT** *stringexpression* \$, *stringID* \$ [**USING SUPPRESS**]

Remarks: The argument *stringexpression* \$ can be any string variable, string constant, or string expression. It is the prompt message that appears before the input area. The *stringID* \$ is the name of the string variable where the result of the evaluation is placed. The optional argument **SUPPRESS** allows the inputted information to be hidden, replaced only by asterisks (*).

Example: The following example uses the **INPUT** statement to accept dynamic input:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
INPUT "Enter Password:", PW$ USING SUPPRESS
```

```
WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"
WAITFOR "Password-> "
RPRINT PW$
RPRINT "^M"
MPRINT "Log-on Complete!"
CLS
END
```

LOWER Function

Action: Returns a string with all letters in upper case.

Syntax: **LOWER**(*stringexpression*\$)

Remarks: The argument *stringexpression*\$ can be any string variable, string constant, or string expression. Both the LOWER and UPPER functions are useful when making string comparisons.

Example: The following example uses the **LOWER** function to convert a string to lower case:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
INPUT "Enter Password:", PW$ USING SUPRESS
PW$ = LOWER(PW$)
```

```
WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"
WAITFOR "Password-> "
RPRINT PW$
RPRINT "^M"
MPRINT "Log-on Complete!"
CLS
END
```

MPRINT Statement

Action: Prints text in the Status Bar.

Syntax: **MPRINT** *stringexpression*\$

Remarks: The argument *stringexpression*\$ can be any string variable, string constant, or string expression.

Example: The following example uses the **MPRINT** statement to print text in the Status Bar:

```
LOG$ = "LOGFILE.LOG"           ' Log File Name
OPENLOG LOG$                   ' Open a log File
HOLDLOG
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                 ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                  ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"            ' Send Password
MPRINT "Log File Opened."
RESUMELOG
```

```
REM Keep the script running in background until the BBS
REM ends the session and sends "Goodbye".
```

```
WAITFOR "Goodbye"
CLOSELOG
MPRINT "Log File Closed."
END
```

ONERROR Statement

Action: Branches unconditionally to the specified label whenever a runtime error occurs.

Syntax: **ONERROR** *label*

Remarks: If the SET ERROR statement is set to OFF, the ONERROR statement will be ignored.

Example: The following example uses the ONERROR statement to end a script due to a runtime error:

```
ONERROR DialFailed
DIAL "9,123-4567"
WAITFOR "Enter FIRST name: "
RPRINT "John^M"           ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"           ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"     ' Send Password
MPRINT "Connection Complete!"
END

DialFailed:
MPRINT "Did not connect"
END
```

OPENLOG Statement

Action: Opens a log file.

Syntax: **OPENLOG** *filename*\$

Remarks: The argument *filename*\$ can be any string variable, string constant, or string expression. If the *filename*\$ is the file name without a path, the opened log command will prefix it with the path specified in the log path setting. Any opened log files will be closed.

Example: The following example uses **OPENLOG** to open a log file:

```
LOG$ = "LOGFILE.LOG"           ' Log File Name
OPENLOG LOG$                   ' Open a log File
HOLDLOG
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                 ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"           ' Send Password
MPRINT "Log File Opened."
RESUMELOG

REM Keep the script running in background until the BBS
REM ends the session and sends "Goodbye".

WAITFOR "Goodbye"
CLOSELOG
MPRINT "Log File Closed."
END
```

REM Statement

Action: Allows explanatory remarks to be inserted in a script.

Syntax1: **REM** *remark*

Syntax2: ' *remark*

Remarks: Statements that exist after the **REM** statement are not executed. A remark is terminated by a carriage return.

Example: The following is an example of the use of the REM statement to make a script more readable:

```
LOG$ = "LOGFILE.LOG"           ' Log File Name
OPENLOG LOG$                   ' Open a log File
HOLDLOG
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                 ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"           ' Send Password
MPRINT "Log File Opened."
RESUMELOG
```

```
REM Keep the script running in background until the BBS
REM ends the session and sends "Goodbye".
```

```
WAITFOR "Goodbye"
CLOSELOG
MPRINT "Log File Closed."
END
```


RECEIVE Statement

Action: Receives a file from the remote computer.

Syntax: **RECEIVE** [*filename*\$] [**USING** *protocol*]

Remarks: The argument *filename*\$ is optional when the default file transfer protocol is one which sends the name of the file to be received. YMODEMB, YMODEMG and ZMODEM protocols are of this type. The argument *filename*\$ can be any string variable, string constant, or string expression. If the *filename*\$ is the file name without a path, the receive command will prefix it with the path specified in the receive path setting.

The optional argument *protocol* can be ASCII, XMODEM, XMODEMCRC, XMODEM1K, YMODEM, YMODEMB, YMODEMG and ZMODEM. This argument will modify the default file transfer protocol. The **RECEIVE** statement is not case sensitive.

Example: The following example uses the **RECEIVE** statement to receive a file from the remote computer:

```
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF            ' Sets Local Echo
SET TEXTWRAP ON        ' Sets Text Wrap
SET TERMINAL ANSI
SET PROTOCOL YMODEMB
SET TITLE "Simple Host Mode"

AUTOANSWER              ' Sets AA mode
RPRINT "Welcome to my PC^M"
SLEEP 5
RPRINT "Send me the name of the file I need.^M"
RINPUT "Enter filename:", file$
RPRINT "^M^M"           ' Sends 2 CRs
RPRINT "When your ready to send the file "
RPRINT "using YMODEMB, send me 'OK'^M"
WAITFOR "OK"
RPRINT "Receiving file " + file$ + " using YMODEMB^M"
RECEIVE file$
RPRINT "Bye"
HANGUP
```

Getting Started

END

RESUMELOG Statement

Action: Resumes the logging of characters to a file.

Syntax: **RESUMELOG**

Remarks: The **RESUMELOG** statement resumes the logging of characters to a file.

Example: The following example uses the **RESUMELOG** statement to resume the logging of characters to a file:

```
LOG$ = "LOGFILE.LOG"           ' Log File Name
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                  ' Sets Inbound CR->LF
HOLDLOG
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                 ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                  ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"            ' Send Password
MPRINT "Log File Opened."
RESUMELOG

REM Keep the script running in background until the BBS
REM ends the session and sends "Goodbye".

WAITFOR "Goodbye"
CLOSELOG
MPRINT "Log File Closed."
END
```

RINPUT Statement

Action: Displays a given prompt to allow the remote user to enter an expression from the keyboard and place the results in a specified variable.

Syntax: **RINPUT** *stringexpression* \$, *stringID* \$ [**USING SUPPRESS**]

Remarks: The argument *stringexpression* \$ can be any string variable, string constant, or string expression. It is the prompt message that appears before the input area. The *stringID* \$ is the name of the string variable where the result of the evaluation is placed. The optional argument **SUPPRESS** allows for the inputted information to be hidden, replaced only by asterisks (*).

Example: The following example uses the **RINPUT** statement to accept dynamic input:

```
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PROTOCOL YMODEMB
SET TITLE "Simple Host Mode"

AUTOANSWER               ' Sets AA mode
RPRINT "Welcome to my PC^M"
SLEEP 5
RPRINT "Send me the name of the file you want^M"
RINPUT "Enter filename:", file$
RPRINT "^M^M"           ' Sends 2 CRs
RPRINT "When your ready to receive the file "
RPRINT "using YMODEMB, send me 'OK'^M"
WAITFOR "OK"
RPRINT "Sending file " + file$ + " using YMODEMB^M"
SEND file$
RPRINT "Bye"
HANGUP
END
```

RPRINT Statement

Action: Sends text to the remote computer

Syntax: **RPRINT** *stringexpression*\$

Remarks: The argument *stringexpression*\$ can be any string variable, string constant, or string expression.

Example: The following example uses the **RPRINT** statement to send text to the remote computer:

```
WAITFOR "Enter FIRST name: "  
RPRINT "John^M"           ' Send First Name  
WAITFOR "Enter LAST name: "  
RPRINT "Doe^M"           ' Send Last Name  
WAITFOR "Enter Password: "  
RPRINT "PASSWORD^M"      ' Send Password  
CLS                       ' Clears the screen  
BEEP                      ' Log on complete  
END
```

SEND Statement

Action: Sends a file to the remote computer.

Syntax: **SEND** *filename*\$ [**USING** *protocol*]

Remarks: The argument *filename*\$ can be any string variable, string constant, or string expression. If the *filename*\$ is the file name without a path, the send command will prefix it with the path specified in the send path setting.

The optional argument *protocol* can be ASCII, XMODEM, XMODEMCRC, XMODEM1K, YMODEM, YMODEMB, YMODEMG and ZMODEM. This argument will modify the default file transfer protocol. The **SEND** statement is not case sensitive.

Example: The following example uses the **SEND** statement to send a file to the remote computer:

```
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PROTOCOL YMODEMB
SET TITLE "Simple Host Mode"

file$ = "c:\dos\command.com"
AUTOANSWER               ' Sets AA mode
RPRINT "Welcome to my PC^M"
SLEEP 5
RPRINT "Send me the name of the file you want^M"
RINPUT "Enter filename:", file$
RPRINT "^M^M"           ' Sends 2 CRs
RPRINT "When your ready to receive the file "
RPRINT "using YMODEMB, send me 'OK'^M"
WAITFOR "OK"
RPRINT "Sending file " + file$ + " using YMODEMB^M"
SEND file$
RPRINT "Bye"
HANGUP
END
```

SET BAUDRATE Statement

Action: Sets the Baud Rate option.

Syntax: **SET BAUDRATE** *baudrate*

Remarks: The argument *baudrate* can be 300, 600, 1200, 2400, 4800, 9600 or 19200.

Example: The following example uses the **SET BAUDRATE** statement to change the baud rate:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON      ' Sets Carrier Detect
SET LOCKBAUDRATE OFF      ' Sets Lock Baud Rate
SET PARITYCHECK OFF       ' Sets Parity Check

CLS
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                     ' Connects
END
```

SET CARRIERDETECT Statement

Action: Sets the Carrier Detect state.

Syntax: **SET CARRIERDETECT** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET CARRIERDETECT** statement to change the carrier detect state:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF          ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                   ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```


SET COMPORT Statement

Action: Sets the Ports option.

Syntax: **SET COMPORT** *comport*

Remarks: The argument *comport* can be COM1, COM2, COM3 or COM4.

Example: The following example uses the **SET COMPORT** statement to change the communications port:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF          ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                   ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```

SET DATABITS Statement

Action: Sets the Data Bits option.

Syntax: **SET DATABITS** *databits*

Remarks: The argument *databits* can be 6, 7 or 8.

Example: This following example uses the **SET DATABITS** statement to change the data bits:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF          ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                    ' Sets Local Echo
SET TEXTWRAP ON                 ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                             ' Connects
END
```

SET ECHO Statement

Action: Sets the Local Echo state.

Syntax: **SET ECHO** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET ECHO** statement to change the local echo state:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF            ' Sets Parity Check

CLS
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                  ' Sets Inbound CR->LF
SET ECHO OFF                    ' Sets Local Echo
SET TEXTWRAP ON                 ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                             ' Connects
END
```

SET ERROR Statement

Action: Sets the Error state.

Syntax: **SET ERROR** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET ERROR** statement to disable error processing.

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE
SET ERROR OFF

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF            ' Sets Parity Check

CLS
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                  ' Sets Inbound CR->LF
SET ECHO OFF                     ' Sets Local Echo
SET TEXTWRAP ON                 ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                             ' Connects
END
```

SET FLOWCONTROL Statement

Action: Sets the Flow Control option.

Syntax: **SET FLOWCONTROL** *flowcontrol*

Remarks: The argument *flowcontrol* can be NONE, RTS, CTS, XON. The **SET FLOWCONTROL** statement is not case sensitive.

Example: The following example uses the **SET FLOWCONTROL** statement to change the flow control:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF          ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF               ' Sets Outbound CR->LF
SET INCRLF OFF                ' Sets Inbound CR->LF
SET ECHO OFF                  ' Sets Local Echo
SET TEXTWRAP ON               ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                           ' Connects
END
```

SET INCRLF Statement

Action: Sets the Inbound CR->CRLF state.

Syntax: **SET INCRLF** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET INCRLF** statement to change the inbound carriage expands to carriage return plus line feed state:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF          ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                   ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```

SET LOCKBAUDRATE Statement

Action: Sets the Lock Baud Rate state.

Syntax: SET LOCKBAUDRATE *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the SET LOCKBAUDRATE statement to change the lock baud rate state:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

SET OUTCRLF OFF                '
Sets Outbound CR->LF
SET INCRLF OFF                 '
Sets Inbound CR->LF
SET ECHO OFF                   '
    ' Sets Local Echo
SET TEXTWRAP ON                '
Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL
END
```

SET OUTCRLF Statement

Action: Sets the Outbound CR->CRLF state.

Syntax: **SET OUTCRLF** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET OUTCRLF** statement to change the outbound carriage expands to carriage return plus line feed state:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF          ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                    ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```


SET PARITY Statement

Action: Sets the Parity.

Syntax: **SET PARITY** *parity*

Remarks: The argument *parity* can be NONE, ODD, EVEN, MARK, or SPACE. The **SET PARITY** statement is not case sensitive. The parity setting must match the setting of the remote computer. Improper parity settings will result in frame errors.

Example: The following example uses the **SET PARITY** statement to change the parity:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                   ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```

SET PARITYCHECK Statement

Action: Sets the Parity Check state.

Syntax: **SET PARITYCHECK** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET PARITYCHECK** statement to change the parity check state:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF           ' Sets Parity Check

CLS
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                   ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```

SET PHONENUMBER Statement

Action: Sets the Phone Number to the specified string.

Syntax: **SET PHONENUMBER** *phonenumbers*

Remarks: The argument *phonenumbers* can be any string variable, string constant, or string expression that passes validation. Valid strings cannot contain the alpha characters, the tilde "~" character or exceed 25 characters in length.

Example: The following example uses the **SET PHONENUMBER** statement to change the phone number used when dialing:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF            ' Sets Parity Check

CLS
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                  ' Sets Inbound CR->LF
SET ECHO OFF                    ' Sets Local Echo
SET TEXTWRAP ON                 ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                             ' Connects
END
```

SET PROTOCOL Statement

Action: Sets the default File Transfer Protocol.

Syntax: **SET PROTOCOL** *protocol*

Remarks: The argument *protocol* can be ASCII, XMODEM, XMODEMCRC, XMODEM1K, YMODEM, YMODEMB, YMODEMG and ZMODEM. The **SET PROTOCOL** statement is not case sensitive.

Example: The following example uses the **SET PROTOCOL** statement to change the default file transfer protocol:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF            ' Sets Parity Check

CLS
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                  ' Sets Inbound CR->LF
SET ECHO OFF                     ' Sets Local Echo
SET TEXTWRAP ON                 ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                             ' Connects
END
```

SET STOPBITS Statement

Action: Sets the Stop Bits option.

Syntax: **SET STOPBITS** *stopbits*

Remarks: The argument *stopbits* can be 1 or 2.

Example: The following example uses the **SET STOPBITS** statement to change the stop bits:

```
CLS
SET COMPORT COM1
SET BAUDRATE 2400
SET PARITY EVEN
SET DATABITS 7
SET STOPBITS 1
SET FLOWCONTROL NONE

SET CARRIERDETECT ON           ' Sets Carrier Detect
SET LOCKBAUDRATE OFF           ' Sets Lock Baud Rate
SET PARITYCHECK OFF            ' Sets Parity Check

CLS
SET OUTCRLF OFF                 ' Sets Outbound CR->LF
SET INCRLF OFF                 ' Sets Inbound CR->LF
SET ECHO OFF                   ' Sets Local Echo
SET TEXTWRAP ON                ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                            ' Connects
END
```

SET TERMINAL Statement

Action: Sets the Terminal Type.

Syntax: **SET TERMINAL** *terminaltype*

Remarks: The argument *terminaltype* can be ANSI, TTY and VT100. The **SET TERMINAL** statement is not case sensitive.

Example: The following example uses the **SET TERMINAL** statement to change the terminal type:

```
CLS
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                     ' Connects
END
```

SET TEXTWRAP Statement

Action: Sets the Text Wrap state.

Syntax: **SET TEXTWRAP** *state*

Remarks: The argument *state* can be either ON or OFF.

Example: The following example uses the **SET TEXTWRAP** statement to change the text wrap state:

```
CLS
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                     ' Connects
END
```

SET TITLE Statement

Action: Sets the optional Title to the specified string.

Syntax: **SET TITLE** *title*\$

Remarks: The argument *title*\$ can be any string variable, string constant, or string expression that passes validation. Valid strings cannot contain the tilde "~" character or exceed 25 characters in length.

Example: The following example uses the **SET TITLE** statement to change the caption bar:

```
CLS
SET OUTCRLF OFF           ' Sets Outbound CR->LF
SET INCRLF OFF           ' Sets Inbound CR->LF
SET ECHO OFF             ' Sets Local Echo
SET TEXTWRAP ON         ' Sets Text Wrap
SET TERMINAL ANSI
SET PHONENUMBER "9,123-4567"
SET PROTOCOL ZMODEM
SET TITLE "Bill's Computer"
DIAL                     ' Connects
END
```


SLEEP Statement

Action: Suspends the execution of the running script for a specified period of time.

Syntax: **SLEEP** *seconds*

Remarks: The argument *seconds* determines the number of seconds to suspend the script.

Example: The following example uses the **SLEEP** statement to suspend execution for ten seconds.

```
CLS
RPRINT "Taking a ten second nap..."
SLEEP 10
    ' Pause 10 seconds.
RPRINT "Awake!"
END
```

STRING Function

Action: Returns the string equivalent to a numeric value.

Syntax: **STRING**(*numericexpression*)

Remarks: The argument *numericexpression* can be any numeric variable, numeric constant, or numeric expression.

Example: The following example uses *Scripting* the **STRING** function to convert a numeric value to a string:

```
' Prints the value of i  
  
FOR i = 1 TO 10  
    output$ = STRING(i)  
    RPRINT output$ + "^M"  
NEXT  
  
END
```

UPPER Function

Action: Returns a string with all letters in upper case.

Syntax: **UPPER**(*stringexpression*\$)

Remarks: The argument *stringexpression*\$ can be any string variable, string constant, or string expression. Both the LOWER and UPPER functions are useful when making string comparisons.

Example: The following example uses the **UPPER** function to convert a string to upper case:

```
FIRST$ = "John"           ' First Name
LAST$ = "Doe"            ' Last Name
INPUT "Enter Password:", PW$ USING SUPRESS

WAITFOR "First Name-> "
RPRINT FIRST$
RPRINT "^M"
WAITFOR "Last Name-> "
RPRINT LAST$
RPRINT "^M"

WAITFOR "Password-> "
INPUT "Enter Password:", PW$ USING SUPRESS
PW$ = UPPER(PW$)

RPRINT PW$
RPRINT "^M"
MPRINT "Log-on Complete!"
CLS
END
```

VAL Function

Action: Returns the numeric value for a string expression.

Syntax: **VAL**(*stringexpression*\$)

Remarks: The argument *stringexpression*\$ can be any string variable, string constant, or string expression.

Example: The following example uses the **VAL** function to convert a string to a numeric value :

```
INPUT "Enter a number:", value$  
  
val = VAL(value$)  
  
val = val + 100  
  
RPRINT STRING(VAL)  
  
END
```

WAITFOR Statement

Action: Suspends the execution of the running script until a specified string is received from the remote computer.

Syntax: **WAITFOR** *stringexpression*\$

Remarks: The argument *stringexpression*\$ can be any string variable, string constant, or string expression.

Example: The following example is a log on script that uses the **WAITFOR** statement:

```
WAITFOR "Enter FIRST name: "
RPRINT "John^M"                ' Send First Name
WAITFOR "Enter LAST name: "
RPRINT "Doe^M"                 ' Send Last Name
WAITFOR "Enter Password: "
RPRINT "PASSWORD^M"           ' Send Password
CLS
                                ' Clear the screen
MPRINT "Log-on Complete!"
BEEP                            ' Log on complete
END
```

Command Summary

Here is a description of every command included in MicroLink.

File Menu

The print command will be disabled (gray) whenever the contents of the scrollbar buffer are empty.

Directory Command

Builds the Directory database file.

To build a listing of directory entries, perform the following steps:

1. Choose File, then choose Directory.

To Add a record to the directory listing, do the following:

2. Set the phone number and the file transfer protocol. The file transfer protocol may need to be configured as appropriate for your modem. The port and terminal settings should be changed as necessary by clicking on the current port or terminal settings to display the port or terminal selections.
3. Select the Add button. Enter the name of the entry on the title field of the Add Record dialog box.
4. Choose OK to add the entry to your directory listing.

To Change an entry, do the following:

2. Select the entry to be changed.
3. Make any necessary changes to the entry, then select the Change button.

To Delete an entry, do the following:

2. Select the entry to be deleted.
3. Select the Delete button.

The directory file used is the one which you have chosen in the Preferences dialog box.

If you make changes to an entry thru Settings and then choose Directory, you will be prompted with the message "Record has been changed. Update record?". By choosing

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Yes, the record will be updated in your Directory listing.

If you make changes to the title of an entry thru Settings and then choose Directory, you will be prompted with the message "(Entry) does not exist. Add record to file?". By choosing **Yes**, the record will be added to your Directory listing.

After selecting an entry, you may select the Dial button to immediately begin the dialing process.

Save Configuration Command

To save your settings to MicroLink's initialization file, select Save Configuration. This option performs the same function as the Save Changes option that is located on the Exit dialog box.

Print Command

Prints the contents of the scrollbar buffer.

To print the current screen or the entire scrollbar buffer, perform the following steps:

1. Choose File, then choose Print or select the Print button from the Tools Bar.
2. Select either Current Screen or Entire Buffer.
3. Choose OK to begin printing.

To print a selected block of text, perform the following steps:

1. Scroll thru the session buffer to bring the text you want to copy into view.
2. Using the mouse, move to the upper left hand corner of the block and press and hold the left mouse button down.
3. Drag the mouse to the lower right hand corner of the block. The text that appears within the block will become inverted.
4. Choose File, then choose Print or select the Print button from the Tools Bar. The Selected Text option will be selected by default.
5. Choose OK to begin printing.

You may cancel the print command at any time by pressing the Escape key.

Printer Setup Command

Configures the default printer used by MicroLink.

To select the default printer used by MicroLink and configure the printer's settings, perform the following steps:

1. Choose File, then choose Printer Setup.
2. Select the printer MicroLink will use.
3. Push the Setup button if the printer's settings need to be altered.
4. Choose OK to accept changes.

Exit Command

Closes the MicroLink Window.

When you are finished with a MicroLink session, you should exit MicroLink properly. The steps to correctly exit MicroLink appear below:

1. Choose Exit from the file menu of the MicroLink window. After selecting this option, MicroLink will automatically disconnect you from any computer you may be currently connected to.
2. Set the Save Changes box if you want MicroLink to remember your current settings and screen location when you quit.
3. Select OK.

MicroLink will automatically disconnect if you are connected to a remote computer.

Edit Menu

The Copy command in the Edit menu is disabled (gray) until you have selected some text. The Paste command is disabled until you have an active session and there is some text in the Clipboard.

Copy Command

Copies selected text to the Clipboard.

To copy the contents of a marked block to the clipboard, perform the following steps:

1. Scroll thru session buffer to bring the text you want to copy into view.
2. Using the mouse, move to the upper left hand corner of the block and press and hold the left mouse button down.
3. Drag the mouse to the lower right hand corner of the block. The text that appears within the block will become inverted.
4. Choose Edit, then choose Copy or select the Copy button from the Tools Bar.

Paste Command

Pastes text from the Clipboard.

To copy the contents of the Clipboard to the remote computer choose Edit, then choose Paste or select the Paste button from the Tools Bar. MicroLink will then begin transmitting the contents of the file to the remote computer. You may cancel the paste command at any time by pressing the Escape key.

Copy To Command

Copies selected text to a file.

To create a file and copy the contents of a marked block to it, perform the following steps:

1. Scroll thru session buffer to bring the text you want to copy into view.
2. Using the mouse, move to the upper left hand corner of the block and press and hold the left mouse button down.
3. Drag the mouse to the lower right hand corner of the block. The text that appears

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within the block will become inverted.

4. Choose Edit, then choose Copy To.
5. Type or select the name of the file you want to copy to. If the target directory is not the current directory, either type the directory name in front of the filename, or select the directory from the Directories box.
6. Choose OK to begin copying to the file.

If the file already exists, MicroLink will display a dialog box giving you the option to cancel the operation or erase the contents of the file. Selecting OK will instruct MicroLink to destroy the contents of the current file.

Paste From Command

Pastes the contents of a file.

To open a file and copy its contents to the remote computer, perform the following steps:

1. Choose Edit, then choose Paste From.
2. Type or select the name of the file you want to paste from. If the document is not listed in the current directory, either type the directory name in front of the document name, or select the directory in the Directories box.
3. Choose OK to begin pasting the file.

MicroLink will then begin transmitting the contents of the file to the remote computer. You may cancel the paste command at any time by pressing the Escape key.

Session Menu

Some Notes On Dialing

Since proper initialization takes time, it is recommended that you set the Quick Initialization option, located in the Preference dialog box.

MicroLink does not automatically restore itself on the screen after background processing is complete. To enable restoration check Return From Iconic, located in the Preferences dialog box.

When MicroLink is not connected to a com port the icon is the comet. Once MicroLink has open a com port, the icon changes to a modem.

Dial Command

Connect to a remote computer.

To connect MicroLink to a remote computer choose Session, then choose Dial or select the Dial button from the Tools Bar. The Lights Bar will be updated indicating that MicroLink will first initialize the modem and then attempt to dial and connect to the remote computer.

If MicroLink is unable to properly initialize the modem, dialing will fail. After the modem initialization completes, MicroLink will display a dialog box indicating the title of the remote computer it is dialing; its phone number; the number of seconds left until MicroLink issues a timeout; the remaining number of times MicroLink will attempt to connect to the remote computer; and the last error that has occurred.

You may cancel at any time by pressing the Escape key or selecting the Cancel button. Selecting the Background button will minimize MicroLink and enter background processing.

Batch Dial Command

Builds a list of Directory records to dial.

To build a batch dialing list, perform the following steps:

1. Choose Session, then choose Batch Dial.
2. Select the name of the directory records you wish to use by marking the appropriate

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entries. When you have finished marking the selections select the Add button.

To remove a file you have added to the Selected list, mark the entries and select the Delete button.

3. Check the Continuous Loop, Quick Initialization and Override Redial options as desired. If you choose to temporarily override the redial value you have entered in Preferences, you must enter the new redial value.
4. Choose OK to begin the batch dialing process.

The **Continuous Loop** option indicates whether or not MicroLink will repeat its attempts to connect with every entry selected until they have all been connected to. If you do not select this option MicroLink will end the batch dialing process after it connects to any of the entries you have selected.

The **Quick Initialization** option indicates whether or not MicroLink should bypass the modem initialization process after the first initialization has been completed.

The **Redial** value indicates the number of times MicroLink will attempt to retry to connect to the remote computer. The range is from 0 to 999.

The **Lights Bar** will be updated indicating that MicroLink will first initialize the modem and then attempt to dial and connect to the remote computer.

If MicroLink is unable to properly initialize the modem, dialing will fail. After the modem initialization completes, MicroLink will display a dialog box indicating the title of the remote computer it is dialing; its phone number; the number of seconds left until MicroLink issues a timeout; the remaining number of times MicroLink will attempt to connect to the remote computer; and the last error that has occurred.

Auto Answer Command

Sets MicroLink into a host mode.

To configure MicroLink to automatically answer the phone choose Session, then choose Auto Answer or select the Auto Answer button from the Tools Bar. The Lights Bar will be updated indicating that MicroLink will first initialize the modem and then attempt to enter auto answer mode.

If MicroLink is unable to properly initialize the modem, dialing will fail. After the modem initialization completes, MicroLink will display a dialog box indicating that MicroLink has entered auto answer mode.

You may cancel at any time by pressing the Escape key or selecting the Cancel button.

Getting Started

Selecting the Background button will minimize MicroLink and enter background processing.

Connect Local Command

Re-opens the COM port to allow you to enter commands directly.

To bypass any modem initialization and open the communications port choose Session, then choose Connect Local or select the Connect Local button from the Tools Bar. Once MicroLink has opened the communications port you will be able to enter modem commands and control the modem directly.

Hang Up Command

Disconnects MicroLink from the remote computer.

To disconnect from the remote computer choose Session, then choose Hang Up or select the Hang Up button from the Tools Bar.

If Carrier Detect is enabled, MicroLink automatically performs a hang up once you have logged off from the remote computer and the carrier is lost . To enable carrier detect check Carrier Detect , located in the Session dialog box.

Open Log Command

To open an existing or creates a new log file, perform the following steps:

1. Choose Session, then choose Open or select the Open button from the Tools Bar.
2. Type or select the name of the file you want to log to. If the target directory is not the current directory, either type the directory name in front of the log name or select the directory in the Directories box.
3. Choose OK to open the log file.

If the file already exist MicroLink will display a dialog box giving you the option of canceling the operation, appending the file, or erasing the contents of the file. Selecting No when asked to truncate the file will instruct MicroLink to preserve the contents of the selected log file. Selecting Yes will instruct MicroLink to destroy the contents of the current file. MicroLink will begin echoing every character received to the selected file. The Status Bar will be updated to indicate that MicroLink is logging characters to the file.

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At any time during logging you may temporarily stop the logging of characters by selecting Hold. To resume logging select Hold again. To close the log file permanently, select Close.

Hold Command

Stops/resumes the logging of characters.

To temporarily stop/resume the echoing of characters to a log file choose Session, then choose Hold or select the Hold button from the Tools Bar. The Status Bar will be updated to indicate that MicroLink is either logging or temporarily holding from logging characters to the file.

Close Command

Closes an open log file.

To close an open log file choose Session, then choose Close, or select the Close button from the Tools Bar. The Status Bar will be updated to indicate that MicroLink has closed the log file.

Send File Command

Sends a file or group of files to the remote computer.

To send a file to the remote computer, perform the following steps:

1. Choose Session, then choose Send or select the Send button from the Tools Bar.

If you have Prompts enabled, via the Preferences dialog box:

2. Select the protocol you want to use.

If you have selected ASCII, X modem, or Y Modem:

3. Type the name of the file you want to send. If the source directory is not the current directory, either type the directory name in front of the log name, or select the directory in the Directories box.
4. Choose OK to begin sending the file.

If you have selected Y modem G, Y modem Batch, or Z modem:

3. Select the name of the file(s) you wish to send by first choosing the directory where the file(s) reside and then marking the appropriate file(s). When you have finished marking the selections from that directory, select the Add button. You may then repeat

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this process thru the remaining directories.

To remove a file you have added to the Selected Files list, mark the file(s) and select the Delete button.

4. Choose OK to begin sending the file(s).

If MicroLink is unable to synchronize properly with the remote computer, the file transfer will fail. After the initialization is complete, MicroLink will display a dialog box indicating the filename of the sending file, the estimated time remaining to complete the file transfer, the time that has elapsed since the file transfer was initiated, and the last error that has occurred.

You may cancel sending the file at any time by pressing the Escape key or selecting the Cancel button. Selecting the Background button will minimize MicroLink and enter background processing.

Receive File Command

Receives a file or group of files from the remote computer.

To receive a file from the remote computer, perform the following steps:

1. Choose Session, then choose Receive or select the Receive button from the Tools Bar.

If you have Prompts enabled, via the Preferences dialog box:

2. Select the protocol you want to use.

If you have selected ASCII, X modem, or Y Modem:

3. Type the name of the file you want to receive. If the target directory is not the current directory, either type the directory name in front of the log name, or select the directory in the Directories box.
4. Choose OK to begin receiving the file.

If you have selected Y modem G, Y modem Batch, or Z modem:

3. Type the complete pathname where the receiving files are to be placed.
4. Choose OK to begin receiving the file.

If MicroLink is unable to synchronize properly with the remote computer, the file transfer will fail. After the initialization is complete, MicroLink will display a dialog box indicating the filename of the receiving file, the estimated time remaining to complete the file transfer, the time that has elapsed since the file transfer was initiated, and the last error that has occurred. With Y modem G, Y modem Batch, or Z modem, the total size of the file to be received will be known and the thermometer will be active.

You may cancel receiving the file at any time by pressing the Escape key or selecting the Cancel button.

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Selecting the Background button will minimize MicroLink and enter background processing.

Settings Menu

To save your settings to MicroLink's initialization file, select the Save Changes checkbox when you exit MicroLink. None of the text fields allow the tilde character "~" to be entered, as it is reserved.

The Tool Bar is designed to automatically wrap the buttons and expand the height of the Tool Bar to ensure that every button is visible on the screen. As a result, the session window may become reduced in size. If this is undesirable, either expand the size of the application window or reduce the number of buttons that appear on the Tool Bar.

Modem Command

Sets the Modem settings.

To configure the Modem settings including Modem Type, Line Type, Modem Volume, Initialization String, and Dialing Prefix, perform the following steps:

1. Choose Settings, then choose Modem.
2. Select the Modem Type, Line Type and Modem Volume.
3. Enter the Initialization String and Dialing Prefix.
4. Choose OK to accept these changes.

The **Initialization String** allows you to add additional initialization strings to be sent to the modem. Enter initialization strings without the **AT** prefix, as this prefix is already included. **DP, DT, E, E0, L, M, Q, S1, S7** and **Z** commands cannot be included in the initialization string as these codes are used internally.

The **Dialing Prefix** allows you to insert additional characters in front on the phone number. Codes such as "*70" for call waiting and "9," for business PBX's should be placed here.

Paths Command

Sets the default file paths.

To set the default file path and directory used by MicroLink for transferring files, directory files, script files, and log files, perform the following steps:

1. Choose Settings, then choose Paths.
2. Type the complete pathname including the drive letter, such as "**C:\MYSUBDIR**", for each pathname option.

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3. Choose OK to accept changes.

If necessary MicroLink will automatically attempt to create a subdirectory when verifying the path entered.

Preferences Command

Sets the default user preferences.

To set the user Preferences including the Redial Count, Timeout value, Pause value, default Directory filename, Delete Partial File option, Prompts option, Elapsed Time Clock option, Return from Iconic option, Quick Initialization option and Warning Beeps option, perform the following steps:

1. Choose Settings, then choose Preferences.
2. Enter the Redial Count, Timeout value and Pause value.
3. Enter the Directory filename or select the Directory button to display a listing of available directory files.
4. Check the Delete Partial File, Prompts, Elapsed Time Clock, Return from Iconic, Quick Initialization and Warning Beeps options.
5. Choose OK to accept these changes.

The **Redial** value indicates the number of times MicroLink will attempt to retry to connect to the remote computer. The range is from 0 to 99.

The **Timeout** value indicates how long MicroLink instructs the modem to wait to receive a connection. The range is from 15 to 120 seconds.

The **Pause** value indicates how long MicroLink will wait before redialing. The range is from 0 to 120 seconds.

The **Directory** file must reside in the default directory path. If the directory file you entered does not exist, MicroLink will attempt to open it as a new directory file.

The **Delete Partial File** option indicates whether MicroLink should automatically delete files that are a result of a failed file transfer.

The **Prompts** option indicates whether MicroLink should display additional dialog boxes during file transfers.

The **Elapsed Time Clock** option indicates whether MicroLink should display the amount of time you have been connected to the remote computer.

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The **Return from Iconic** option indicates whether MicroLink should restore the window to a full screen when it has completed background processing, such as background dialing and background file transfers.

The **Quick Initialization** option indicates whether MicroLink should bypass the modem initialization process after the first initialization has been completed.

The **Warning Beeps** option indicates whether MicroLink should emit audible beeps to indicate connection and completed file transfers.

Port Command

Sets the Port settings.

To set the Port settings including serial (COM) port, baud rate, data bits, stop bits, flow control, parity, lock baud rate, parity check, and carrier detect, perform the following steps:

1. Choose Settings, then choose Port.
2. Select the serial (COM) port that your modem is attached to and its appropriate communications parameters.
3. Choose OK to accept these changes.

The **Baud Rate** group specifies how fast information is transferred through the port; **Data Bits** specifies the number of data bits in each packet of information; **Parity** specifies the error-checking method used; **Stop Bits** specifies the number of stop bits in each packet of information; and **Flow Control** specifies the method used to control the transmission, or flow, of data.

The **Lock Baud Rate** option indicates whether MicroLink should modify the connection speed between the computer and the modem. This option should be enabled when using modems that can connect at baud rates that are not supported by Windows. For example, several US Robotics modems can connect at baud rates of 14,400. To support a modem at this speed, set the baud rate to 19,200 and enable the Lock Baud Rate option.

The **Parity Check** option indicates whether MicroLink should translate the high order bit on the characters it receives.

The **Carrier Detect** option indicates whether MicroLink should automatically delete the loss of carrier to automatically perform a hang up.

It is important that these port options are set correctly. It is recommended that you refer to the manual from your modem to find its maximum baud rate and that you verify the settings of the remote computer. If these settings are incorrect a Receiving Framing error may occur.

Session Command

Sets the session parameters.

To set the Session settings including the Session Title, Phone Number, default File Transfer Protocol, and Logon Script, perform the following steps:

1. Choose Settings, then choose Session.
2. Enter the Session Title and Phone Number.
3. Select the default File Transfer Protocol. If the chosen protocol requires additional settings the Configure button will be enabled. The Configure button allows you to choose additional settings for the selected protocol. For example, ZModem allows you to configure send and receive options and enable its auto download feature.
4. Enter the Logon Script filename or select the Logon Script button to display a listing of available scripts.
5. Choose OK to accept these changes.

The maximum number of characters for the **Title** is 25.

The maximum number of characters for the **Phone Number** is also 25. Special dialing codes such as "*70" for call waiting or "9," for business PBXs, should be entered in the dialing prefix option located in the Modem dialog box.

The default **File Transfer Protocol** is the method of file transfer you use most often when transferring files to this remote computer.

The **Logon Script** is the script that is automatically invoked once a connection has been made. This script file must reside in the default scripts directory.

Scripts Command

Sets the optional script buttons.

To set the Script buttons that appear on the Tool Bar, perform the following steps:

1. Enter the Script filename or select the Script button to display a listing of available scripts.
Script files must reside in the default script directory.
2. Choose OK to accept changes.

Terminal Command

Sets the Terminal settings.

To set the Terminal settings including Terminal Type, the default Font Name and Size, the Caret Type, scrollback buffer size and dimensions, outbound Carriage Return expands to Carriage Return plus Line Feeds options, Local Echo, and ANSI Color Attributes, perform the following steps:

1. Choose Settings, then choose Terminal.
2. Select the Terminal Type, Font Name, Font Size and Caret Type.
3. Enter the scrollback Buffer size in lines, the number of Rows per page, and the Column width.
4. Select CR->CR+LF options, Local Echo and ANSI Color Attributes.
5. Choose OK to accept these changes.

The minimum number of lines in the scrollback **Buffer** is 50 and the maximum is 2000. The minimum number of **Rows** per page is 25, the maximum is 50 and the default setting is 25. The minimum number of **Columns** per page is 40, the maximum is 240 and the default setting is 80.

If **ANSI Color Attributes** is set on, MicroLink will translate the colors the remote computer sends thru escape sequences. Disabling ANSI Color Attributes allows you to set the colors for the session window, thereby overriding the remote color sequences. You can change the default colors by selecting the Colors button, which will display the colors dialog box. For more information on setting colors, see the related topic Colors below.

MicroLink will display every fixed space typeface that resides in your system. However, the list of available font sizes is a standard one and may not represent the actual font sizes you have in your system. It is designed to accommodate Adobe Type Manager, Bitstreams FaceLift and True Type, which create fonts on the fly. As a result, typefaces such as terminal may display the same font for various sizes.

Terminal - Colors Command

The Terminal - Colors Command sets the screen colors of the session window .

To select the foreground and background colors used in the session window, perform the following steps:

- 1 Choose Settings, then choose Terminal.
- 2 After the terminal window is displayed, insure that the ANSI Color Attributes option is

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not checked.

3. Push the Colors button. This will display the current color selections.
4. Select the colors you want for the foreground and background.
5. Choose OK to accept the these changes.

Default colors are only used when the ANSI Color Attributes option is not checked.

Tools Command

Sets the Tool bar.

To toggle the display of the various buttons that available on the Tool Bar, perform the following steps:

1. Choose Settings, then choose Tools.
2. Check the buttons that you desire to appear on the Tool Bar.
3. Choose OK to accept changes.

Buttons that are not enabled will appear dimmed.

Windows Command

Sets the contents of the MicroLink window.

To toggle the display of the Status Bar, Tool Bar, and Lights Bar, perform the following steps:

1. Choose Settings, then choose Windows.
2. Check the child windows that you desire to be visible.
3. Choose OK to accept changes.

The **Tools Bar** contains a set of push buttons designed to provide mouse accelerators for various commands. The push buttons that appear are definable via the Tools command.

The **Function Key Bar** contains a set of push buttons that represent the function keys on your keyboard. These keys may be programmed via the Function Keys command.

The **Lights Bar** is a set of indicators about the active port. **IM** indicates modem initialization; **HS** indicates high speed; **AA** indicates auto answer mode; **CD** indicates carrier detected; **OH** indicates off hook; **RD** indicates receiving data; **SD** indicates sending data; **TR** indicates terminal ready; and **MR** indicates modem ready.

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The **Session Window** displays all incoming characters and, optionally, all outgoing characters. This window is scrollable, retrieving up to 2,000 lines of previously displayed text. The choice of typeface, font size and fore- and background colors may be customized via the Terminal command.

The **Status Bar** is the horizontal bar that appears along the bottom of MicroLink's window. It contains the current time or connected time; the current port settings; an indicator as to whether a log file is opened, closed, or temporarily on hold; and an indicator as to whether a script file is currently recording, paused or stopped.

Scripts Menu

The Pause and Stop commands in the Scripts menu are disabled (gray) until you have started recording a script.

Record Script

Automatically creates a script file.

To create a new script file and echo all commands to it, perform the following steps:

1. Choose Scripts, then choose Record or select the Record button from the Tools Bar.
2. Type or select the name of the file you want to open or create.
3. Choose OK to begin creating the script file.

If the file already exists, MicroLink will display a dialog box giving you the option to cancel the operation or erase the contents of the file. Selecting OK will instruct MicroLink to destroy the contents of the current file. MicroLink will begin to echo commands into the script file. The Status Bar will be updated to indicate that MicroLink is recording a script.

At any time during recording you may temporarily pause the recording of commands by selecting Pause. To resume recording select Pause again. To close the script file *Command Summary* permanently, select Stop.

Pause

Pauses or Resumes the recording of commands to a script file.

To temporarily stop/resume the recording of commands to a script file, choose Scripts, then choose Pause or select the Pause button from the Tools Bar. The Status Bar will be updated to indicate that MicroLink is either recording or temporarily paused from recording commands to a script file.

Stop

Stop the recording of commands to a script file.

To stop the recording of a script file choose Scripts, then choose Stop or select the Stop button from the Tools Bar. The Status Bar will be updated to indicate that MicroLink has

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terminated the recording of a script file.

Script Editor

Opens a script Editor Window.

To open a Script Editor Window choose Scripts, then choose Script Editor. The Script Editor allows you to create script files or edit scripts files that were automatically created by the Record Script command.

Currently this command invokes the Windows Notepad.

Help Menu

Index

Lists all Help topics available for MicroLink. Index items are arranged alphabetically within each category.

Notes on using the Help System

To choose a help topic:

Mouse Point to the underlined topic you want to view and click the mouse button. When the pointer is over an item you can choose, the pointer changes to a hand icon.

Keyboard Press Tab to move the highlight to the underlined topic you want to view, and then press Enter.

Keyboard

Lists the keys used in MicroLink and describes their actions. For more information on the keys used by MicroLink please see appendix 2.

Commands

Lists every command and provides detailed information that is available when using the online help system.

Using Help

This command provides detailed information on learning about Windows. Information is provided to learn how to use Help, gain basic Windows skills and a Windows glossary.

About MicroLink Command

Displays copyright notice and the release number of MicroLink. To view this information choose Help, then choose About. Select OK to remove the dialog box.

Errors and Troubleshooting

If you encounter a problem in communications you have many things to consider.

- Operating procedures
- The computer, its display and disk Drives
- Modem setups
- The modem itself
- Cables to and from the modem
- Power supplies
- The phone line and connection quality
- The computer at the other end
- Operating procedures the other computer expects

Looking through the following topics may help.

Modem Is Not Working

One of the most common problems with modems is having more than one device on the same COM port (even if the other device is not in use.) This may causes "hanging up" the phone as soon as a call is dialed or answered, or other erratic behavior.

For an external modem, disconnect it. The *Dial* command should show "Modem Initialization Failed" error dialog box.

Modem Is Dialing Too Fast

Sometimes modem won't be able to get a CONNECT because it is dialing too fast.

Make sure MicroLink is not using Touch Tone dialing on a Pulse System. (This is corrected by going to the Setting Menu and changing the Tone Pulse option via the Modem dialog box.)

Make sure MicroLink is not dialing before it should. Pauses can be inserted between different parts of a phone number by inserting commas. Use the "," to insert a pause on a phone number. For example the phone number "9,123-4567" causes MicroLink to dial a 9, followed by a pause, then the rest of the phone number.

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The time-spacing between touch tones can be a problem on some systems. Use the *Modem* command and consider adding S11=150 to the Initialization String. (Replace 150 with whatever value you choose.)

Modem Needs Resetting

It is possible to get the modem into a state where it doesn't seem to want to accept your commands.

The first thing to try is the *Dial* command. This may bring an incorrect Port setting to your attention. It also makes multiple attempts to reset the modem, and usually succeeds.

If your modem has a reset button, try it.

Next, try powering down your entire system, then turning it back on.

In other cases, you may get the modem to respond by issuing one of the reset commands. First perform the *Direct Connect* command then try entering one or both of these commands at the session window:

"ATZ [Enter]"	Reset modem and revert to switch settings
"AT&F [Enter]"	Reset modem and revert to factory defaults (*)

* Not valid on some modems.

Modem Is Not Connected to a Phone

This is a problem more often than you might think.

Check your connections. Make sure the cable that goes to the wall outlet is plugged into the correct jack at the back of the modem.

Hearing touch tone sounds doesn't necessarily mean the modem is connected. (You need to hear a dial tone first!)

Try a regular phone on the line and listen for the dial tone. Then, try listening to the dial tone through the modem's speaker. This can be done by issuing a *Dial* command. You need to check your modem settings and ensure that you have Modem Volume on. (This option is set via the *Modem* command.)

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Modem Is Not Waiting Long Enough

You may have set MicroLink to "give up" before the remote system has answered.

You can determine the delay needed by calling the remote system (on a voice line) and timing how long it takes between the last digit dialed and the moment you first hear a whistling sound.

When MicroLink dials, you'll notice a countdown indicator on the dialing dialog box. If MicroLink hangs up (due to a "NO CONNECT" message) before the remote system has answered, you may need to extend the time MicroLink will wait for a CONNECT message. You can set this value via the *Preferences* dialog box.

Wrong Number

Make sure the phone number is correct. Make sure the dialing prefix is correct. Consider whether or not a 1 and/or area code is required before the number. Try dialing the number on a voice line. You should hear a "whistle tone" when the remote computer answers.