



USER'S GUIDE

REACHOUT[®]

for Windows & DOS



Your serial number is on the back of your ReachOut CD-ROM case.
Write this number on your Product Registration card before you mail it.

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1

ReachOut OVERVIEW

Congratulations on purchasing ReachOut!

You now have the fastest complete remote access solution for use with Windows & DOS. With ReachOut, you can link two computers so you can access one from the other. These computers can be in the same room or on opposite sides of the world—with ReachOut, it doesn't matter.

Modem and Network Support

Whether you use ReachOut in Windows  or in DOS , you can connect with a modem or over a network and operate a distant computer just as if you were sitting in front of it.

ReachOut's Capabilities

ReachOut comes with many features that make remote computing both powerful and easy to use. Here are just some of the things you can do:

- Run applications remotely, making the connected computer's programs appear on your desktop
- Move or copy files quickly and reliably between computers
- Synchronize directories; bring them up to date with a single click
- Access another computer's drives as if they were your own
- Print your work at either connected computer
- Type messages that appear instantaneously at the other computer
- Connect to any modem system using ReachOut's terminal emulator
- Automate ReachOut for unattended operation with a powerful scripting language

WorldWide Remote Access

When you are away from your home or office computer, ReachOut lets you work just as if you were there. You can access and control the computer, even your network drives. You can edit documents, check your e-mail, run programs, update spreadsheets and databases, transfer files, and share resources.

ReachOut gives you everything you need. Here are just a few of the ways ReachOut can make you more effective.

To solve this problem ...	Use this ReachOut solution ...
People send you e-mail and add to your online schedule in the evening, but you don't know about the e-mail or schedule changes until you get to the office in the morning.	Connect to the office computer before you leave home. Check your schedule and mail so you can be prepared for the day's events.
You travel a great deal and create database files on your laptop computer. You have to update the central database every day.	Connect to the central database and update the database from your traveling keyboard.
You find the expense of phone calls on the road a burden. And you don't want to wait around until the phone rates are lower.	Depend on ReachOut's callback feature. The Host computer will return the call and be billed it.
Your office uses Lotus Notes™ for sharing information. When you post information files from other locations, you don't have to transfer them first.	Use ReachOut's Drive Mapping to post files from where you are to the Lotus Notes server on a remote system.

ReachOut for Windows & DOS

Using ReachOut for Windows & DOS

ReachOut for Windows and DOS lets you install and use ReachOut from the DOS prompt or under Windows 3.1 or higher. If you have Windows 95 installed, you'll most likely prefer to use ReachOut for Windows 95.

When you use ReachOut for Windows & DOS under Windows 3.1, Windows 95, or DOS you can control another ReachOut computer that uses DOS, Windows, or even Windows 95.

ReachOut Communications

ReachOut communicates using any of several different connection types.

For this type ...	Both computers must ...	ReachOut supports ...
Modem	Have access to a modem and a telephone line.	Most modems, including ISDN and cellular—or define your own. Also supports modem pools, such as NASI/NCIS or NetWare Connect.
Network	Run on the same network.	Popular LANs and WANs, including NetWare, Banyan VINES, WinSock, FTP's TCP/IP, and NetBIOS compatible networks.
Direct Cable	Be connected through serial ports.	Standard null modem cable.

ReachOut Configuration

If you install ReachOut for more than one connection type, you can switch between them. For example, if you use Windows for Workgroups at the office, you may use ReachOut configured for a NetBIOS compatible system over the network. To control your computer at home, however, you'll use a modem.

Chapter 7, *Configuration*, and the ReachOut Help include full details on configuring ReachOut.

Typical ReachOut Session

Here's how you might put ReachOut to work for you. Suppose you are going across town to discuss a new project with a colleague. You are expecting some important e-mail about the project, so you'll want to check in with your computer during the meeting.



Before leaving, you start ReachOut Host, so it is waiting for a ReachOut connection.



While at your colleague's office, start ReachOut Viewer on the local computer and click Remote Control to connect to the waiting computer on your desk.

Your office computer's desktop appears on the Viewer computer.



Check your e-mail. Several files that could be useful in your discussion are attached.

ReachOut for Windows & DOS

Share the information with your colleagues. They need a copy of a file referred to in the e-mail.



In the ReachOut Viewer window, click File Transfer and copy the files from your computer directly onto your colleague's hard disk.



Disconnect the ReachOut session. It's time for lunch.

ReachOut Terminology

Each ReachOut connection involves two computers: Viewer and Host.

The *ReachOut Viewer* computer initiates the ReachOut connection. A user at the ReachOut Viewer can control the connected computer and transfer files with ReachOut File Manager. The Viewer user sees an image of the desktop of the connected Host computer.

The *ReachOut Host* computer waits for a Viewer to connect. The ReachOut Host need not have a user during the session, because the Viewer controls this computer.

In ReachOut *Drive Mapping*, a computer makes some or all of its drives available to the connected computer. Drives or directories on one computer are mapped to drive letters on the other. The Server computer makes drives available; it offers files for access. The computer that gains access to the served drives is called the Client. Chapter 6 shows how to use Drive Mapping in a ReachOut session.

The terms *local* and *remote* are often applied to various ReachOut components. In this User's Guide, we use them only in relationship to the user. The Viewer PC always has a user, so it is convenient to consider the ReachOut Viewer as the local computer and the ReachOut Host as the remote computer. However, if you are a user at a Host PC, that is your local computer. In this User's Guide, we use local and remote only in situations where the reference is clear.

New in ReachOut for Windows & DOS

Our many users have told us what they want in a complete remote access product. This table lists new or enhanced features.

Feature	What it does for you
LZS™ Compression	Lets you accomplish more work in less time, and slash connect costs while you are at it.
More Connection Types	Now supports even more, including WinSock (TCP/IP) for easy use over the Internet. Supports many more high speed, ISDN, and cellular modems, and is optimized for remote node. And you get it all in one package.
SmartSend™	Reduces file transfer time by up to 90% by sending only the changed parts of files.
RapidSync™	Updates files and directories automatically. No more searching for the latest version.
Security Enhancements	Protects your computer and data with new security enhancements. You can create a unique security profile for each user.
Windows Compatibility	Uses Windows DLLs instead of TSRs to give 100% compatibility. Use it with Windows 3.1, Windows for Workgroups, and Windows 95.
Windows 95 Features	Lets you access a computer running Windows 95 from your Windows 3.1 system. You can also use it on a Windows 95 system, but ReachOut for Windows 95 is a better choice.
Scripting to Automate ReachOut	Lets you schedule ReachOut sessions to run at your convenience.
Integrated Help	Context-sensitive help gives you access to as much as you need, when you need it.

Using ReachOut Documentation

We provided several ways you can find the information you need.

Use this ...	For this ...
User's Guide	To get up and running; to learn the basic features of all ReachOut components
ReachOut Help	Full reference information on all dialogs, commands, and functions, along with tips and procedures
Documents for easy printing	Easy printing of full information on using the terminal emulator and automating ReachOut with scripting

User's Guide

The manual provides all the information most people need to get started and use ReachOut. Most of the information applies to both ReachOut for Windows and ReachOut for DOS. Even specific procedures are very similar, because we use a graphical interface with menus for the DOS Viewer and Host applications.

ReachOut for DOS

Wherever ReachOut in DOS is significantly different, you'll see shaded information like this about the equivalent DOS procedure.

Chapter ...	Shows you ...
1 <i>Overview</i>	What ReachOut includes.
2 <i>Installation</i>	How to install ReachOut.
3 <i>Getting Connected</i>	How to set up a Host and Viewer, then connect them over a modem, a network, or a direct connect cable.
4 <i>Remote Control</i>	How to control the connected computer, including Chat, panning, scaling, and printing.
5 <i>File Manager</i>	How to transfer files and synchronize directories.
6 <i>Drive Mapping</i>	How to use one computer's drives as if they were on the other computer.
7 <i>Configuration</i>	How to change your setup or switch between different connection types.
8 <i>Security</i>	How to use ReachOut's security to ensure that your data is safe.
9 <i>Network Operation</i>	How to set up and administer ReachOut in a network environment.
Appendix A <i>Troubleshooting</i>	How to solve problems with ReachOut.
Appendix B <i>Technical Notes</i>	Reference information, including how ReachOut changed your system, along with installation scripts, command line parameters, drive map automation and special DOS considerations.
Appendix C <i>Windows 95</i>	Using ReachOut for Windows & DOS with Windows 95.

ReachOut for Windows & DOS

ReachOut Help

We provide you with help from any dialog or message box. You'll get full information on all the fields and buttons, as well as general information about ReachOut's capabilities.

The Windows help includes Tips, Troubleshooting, and How To information in all areas, along with full reference information about:

- Using the ReachOut terminal emulator
- Automating installation, especially for installing over a network
- Automating ReachOut sessions with a full scripting language
- Command line parameters you can use to tailor your icons and commands

Reference Documents

Because this information is in the Windows ReachOut Help but not in print form, we included additional documents on disk that you can print at your convenience.

- TERMEM.TXT is the Terminal Emulator Reference. Use any text editor or word processor to print it.
- AUTOMATE.WRI is the Automating ReachOut Scripting Reference. Use Windows Write to print it.

2

ReachOut INSTALLATION

When you use ReachOut, you will be accessing one computer from another. For ReachOut to make the connection between the computers, you must install ReachOut on both computers. Your copy of ReachOut comes with a license for up to two installations.

This chapter covers the installation process in Windows and in DOS. If you want full ReachOut capabilities for both environments, you should install under Windows.

Before you install or attempt to use ReachOut, check *Preparing for the Installation* in this chapter to make sure you have all the equipment and information you need. During the installation process, you can click any Help button for immediate context-sensitive help with ReachOut's SetupPilot™.



Configuration

Chapter 7, *Configuration*, tells you how to change any settings after ReachOut is installed.

Preparing for the Installation

Here are a few things you should do ahead of time to make the installation go smoothly:

- If you have any other remote control software on your computer, remove it before you install ReachOut.
- If you will use ReachOut with a modem, be sure the modem is installed properly. You need to know the type of modem you have (brand name and model number), what communication port it is connected to on your computer (usually COM1 or COM2), and its transmission speed (such as 9600, 14400, or 28800 baud). Be sure the modem is plugged into a telephone jack. If you will use an ISDN modem, make sure it is plugged into an ISDN line.
- If you will use ReachOut over a network, you need to know the type of network you have, such as NetWare or NetBIOS. If you will use ReachOut after connecting with remote node software, know which network as well.
- If your computer is directly connected to the other computer with a null modem cable, you need to know which communication port is used on each computer (usually COM1 or COM2).
- If you are sharing a modem on the network, you need to know the type of the Modem Pool software used. ReachOut supports software compatible with Telebit ACS, NASI/NCSI, NetWare Connect, INT 14h, and Modem Assist Plus. If you need help figuring out which one of these to use, ask your system administrator.



Get as much information as you can about your modem or network before you continue with the installation. If you have any questions during the installation, click the Help button.

Installing ReachOut

Your standard copy of ReachOut comes with a license for you to use it on two computers. If you access a computer from several locations, you can install ReachOut on all the calling computers.

Chapter 9, *Network Operation*, explains why you might need to install ReachOut from a network. Each user who installs ReachOut from the network must have a valid ReachOut license. If you are installing ReachOut from a network drive, ask your ReachOut supervisor where to find the setup files on the network.

Install ReachOut directly from the CD-ROM. If one of your computers doesn't have a CD-ROM drive, you may have access to a computer that does. Just load the CD-ROM and examine its folder structure. You can either copy the entire hierarchy to a network drive or create a set of floppy disks for use in installing ReachOut.

To install from CD-ROM or floppy disks



1. Insert the CD-ROM or Disk 1 into the drive.
2. Choose Run from Program Manager's File menu.
3. In the text box, type D:\SETUP.EXE and click OK. (*In this example, D: represents your CD-ROM drive letter*).

Note: *To install ReachOut from the network, follow the above procedures. For step 3, type the full path to the files on the network.*

4. Follow the instructions on your screen.
5. Repeat these instructions to install ReachOut on your other computer.

Personalizing ReachOut

When you personalize ReachOut, you must enter your serial number; you'll find it on the back of your CD-ROM case. ReachOut

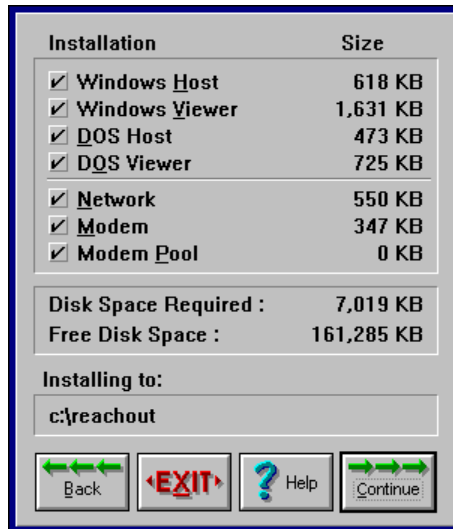
displays the serial number when you choose About from the Help menu in either the Host or Viewer. You can access it at any time.

Complete or Custom Installation

ReachOut lets you choose the type of installation: *Complete* or *Custom*.

Choose *Complete* if you plan to use your computer as a Host and Viewer and if you want to be able to work under DOS as well. A Complete installation lets you use ReachOut with any supported form of modem or network. You can reconfigure ReachOut to use a different connection type after it is installed.

Choose *Custom* if you plan to use your computer only as Host or Viewer, only in or out of Windows, or if you don't have to use ReachOut over all the available connection types.



A Custom installation can save space in memory as well as on your hard disk.

ReachOut for Windows & DOS

Tailoring ReachOut

If you are upgrading from an earlier version of ReachOut, ReachOut uses information you used before, including the computer name, the passwords, and any connection information. But if this is your first ReachOut installation, you'll have to supply a computer name, as well as at least one user name and password for use when this computer is a ReachOut Host. You can change these values at any time.

To install ReachOut from DOS

1. Insert the CD-ROM or Disk 1 in the appropriate drive.
2. At the DOS prompt, type D:\SETUPDOS and press ENTER. (In this example, D: represents your CD-ROM drive.)
3. Follow the on-screen instructions to complete the installation.

ReachOut for Windows

The installation program creates the ReachOut group in Program Manager. The icons in the group depend on the type of installation. If you chose Complete, the program group looks like this:



Once ReachOut is installed, you are ready to connect to other computers. Chapter 3, *Getting Connected*, has details.

Use this icon ... To ...



ReachOut
Host

Start the Host and prepare your computer to be controlled by another computer. For details, see Chapter 3, *Getting Connected*.



ReachOut
Viewer

Start the Viewer and connect to another computer. For details, see Chapter 3, *Getting Connected*.



Configuration

Change your ReachOut configuration, including from modem to network. For details, see Chapter 7, *Configuration*.
Control or change supervisor level security. For details, see Chapter 9, *Network Operation*.



Supervisor
Security



Passwords

Protect your computer against unauthorized access. For details, see Chapter 8, *Security*.



Automating

Create or run scripts for automating ReachOut sessions. For details, see the Automating topic in ReachOut Help.



Help

Get ReachOut Help. Double-click this icon to open the main contents page.



Uninstall

Remove ReachOut from your computer.



Support

Find out who to contact for technical support.

Appendix B explains any changes ReachOut may have made to your system. It also shows how you can use many of the files placed in your ReachOut directory.

ReachOut for Windows & DOS

ReachOut for DOS

If you will be using ReachOut from DOS and expect to use a mouse, be sure the mouse driver is loaded in the CONFIG.SYS or AUTOEXEC.BAT file. In order to be active when you are connected, the mouse driver must be loaded before ReachOut is. You'll even be able to control a Windows session on a Host computer from DOS.

To use ReachOut in DOS, start the DOS Viewer or DOS Host at the DOS prompt. ReachOut uses the current connection type.

HOST	Lets a ReachOut Viewer connect to your computer
VIEW	Lets you connect to a ReachOut Host or other computer
UNLOADMH	Removes ReachOut modem drivers from memory
UNLOADNH	Removes ReachOut network drivers from memory

For details on how to start ReachOut in DOS, see Chapter 3, *Getting Connected*.

Register Today

Don't forget to register your copy of ReachOut. We want to ensure that you get the support you need. We'll also make sure you receive information about new products, product upgrades, and more.

Fill out the registration card from your package, and send it in today.

3

ReachOut

GETTING CONNECTED

You have installed ReachOut. Now you are ready to use it.

A ReachOut connection requires two computers configured for the same connection type; both must be on the same network, configured to use a modem, or directly cabled together. ReachOut can also use a modem to connect a computer to an online service such as CompuServe or a bulletin board system.

In this chapter, we assume you are using a modem and connecting from Windows. But don't worry if you use another connection type or connect from DOS. The steps are similar, although the exact words you see on the screen may not be. For any ReachOut connection you'll have to:



- Start the Host on one computer
- Start the Viewer on another
- Connect the two computers

Once you are connected, you'll be able to switch between Remote Control, File Manager, and Chat. Chapters 4 and 5 cover details of using these functions.

Where necessary, we'll provide additional information for connecting on a network, from DOS, or through ReachOut's terminal emulator.

The ReachOut Connection

A ReachOut connection involves a Host computer that is controlled by a Viewer computer. Normally, the Host computer waits for the Viewer to connect. To reverse telephone charges or for security reasons, the Host can call the Viewer back to complete the connection.

In most cases, you sit at the Viewer computer. From the Viewer, you can view and control the Host completely, use the ReachOut File Manager to transfer or manage files on either computer, or Chat with a user at the Host.

Types of Connections

Both computers in a ReachOut connection must use the same connection type; they must both use a modem, for example, or they must be on the same network. ReachOut can establish several different types of connections, no matter what the means of communications.

- Viewer in Windows controls a Host in Windows
- Viewer in Windows controls a Host in DOS
- Viewer in DOS controls a Host in Windows
- Viewer in DOS controls a Host in DOS

If you did a complete ReachOut for Windows installation, your computer can be a Viewer or a Host under either Windows or DOS. It can even start controlling a computer in DOS or Windows and switch to the other operating environment during the ReachOut session.

Note: *If you want to control another computer from DOS, you may encounter some resolution limitations. While you can control a Windows session on another computer, you won't be able to use a video resolution higher than one set for the Viewer computer. See Appendix A, Troubleshooting, for additional video resolution information.*

Getting Ready

Before establishing a ReachOut connection, be sure your system is ready. During Install, you configured ReachOut for one connection type. If you want to provide additional information about that connection type or change to a different connection type, you'll have to configure ReachOut, as shown in Chapter 7, *Configuration*.

- To connect over telephone lines using a modem, you need a phone line and attached modem on both Host and Viewer.
- To connect directly, you need a null modem cable attached to the configured COM port on each computer.
- To connect over a network, both Host and Viewer must be running on the network. The users need not be logged on, however.
- To connect over the Internet, connect to the Internet before starting ReachOut if you use a modem for Internet access.

Starting the ReachOut Host

The ReachOut Host computer must be ready and waiting so that it can respond when a Viewer calls. Whenever the Host is running, whether open or minimized, a Viewer can connect to it.

To start the Host

1. Go to the computer that is to be controlled.
If ReachOut Host is in the StartUp group, it will be open or minimized. In either case, the Host is ready.
2. Double-click ReachOut Host in the ReachOut program group.



Tip! *If you want the computer to be waiting for a connection every time you start Windows, you can ask ReachOut to put it in your StartUp group. Chapter 7, Configuration, explains how.*

Chapter 3 • Getting Connected



The Host buttons make it easy to perform several ReachOut operations.

To do this ...

Choose this ...

Connect to a waiting Viewer,
which can control this Host



Exchange messages with the
connected computer user



Add or change passwords that
Viewers can use to connect to
this computer



Change drive mappings. Active
only when connected and
mapped drives are available.



(replaces Edit
Passwords)

Close the Host



Get information about ReachOut



End the connection



(replaces Connect)

ReachOut for Windows & DOS

Note: During a new installation, you supplied at least one password. You can change the information by clicking the *Edit Passwords* button. For other security features, pull down the *Security* menu and choose *Options*. The *ReachOut Help* and *Chapter 8, Security*, include full details.

The ReachOut Host menu items let you control many ReachOut features. Chapter 4, *Remote Control*, covers what you can do from the Host during a ReachOut session. ReachOut Help provides detailed information on each menu and command.

ReachOut for DOS

To start the Host under DOS, change to the ReachOut directory and type the command `HOST`. Then press `ENTER`. ReachOut is loaded into memory for the current connection type. (Messages on the screen tell you how to see the screen.) Just press `ALT+RIGHTSHIFT` on the Host keyboard to see the Host screen, no matter what application is running.

The Security menu lets you change passwords and other security features. The Link menu contains commands for connecting to a Viewer from the Host.

Starting the ReachOut Viewer

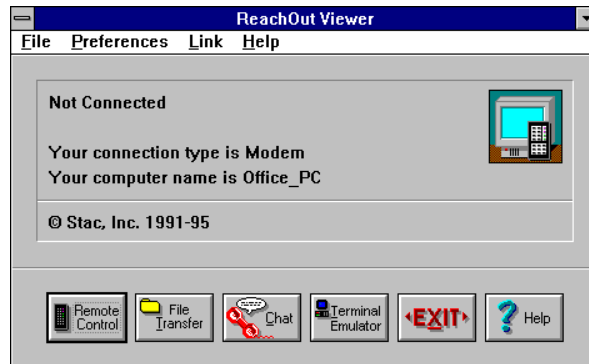
The ReachOut Viewer connects to a waiting ReachOut Host to make the ReachOut connection.

To start the ReachOut for Windows Viewer



1. Go to the computer that you will be connecting from.
2. Double-click ReachOut Viewer in the ReachOut program group.

Chapter 3 • Getting Connected



The ReachOut Viewer buttons make it easy to use ReachOut.

To do this ...

Choose this ...

Connect to a waiting Host



Control a Host computer



Transfer files or
synchronize directories



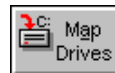
Exchange messages with
another computer user



Start ReachOut's terminal
emulator



Change drive mappings.
Active only when
connected and mapped
drives are available



(replaces Terminal
Emulator)

Close the Viewer



ReachOut for Windows & DOS

To do this ...

Choose this ...

Get information about
ReachOut



End the connection



(replaces Exit)

The menu items let you connect (link), as well as use many ReachOut features that are covered in Chapter 4, *Remote Control*, and Chapter 5, *File Manager*. ReachOut Help provides detailed information on each menu and command.

ReachOut for DOS

To use the ReachOut Viewer under DOS, change to the ReachOut directory. Then type VIEW and press ENTER to load the Viewer into memory. You'll see the DOS ReachOut Viewer screen. You can change connection settings or modify Viewer preferences if you like.

Making the ReachOut Connection

When the ReachOut Viewer is open, you are ready to connect to a waiting Host computer that is configured for the same type of connection. Both computers must use a modem or the same network, or be directly cabled together.

In most cases, you know what you want to do with ReachOut. You might want to use Remote Control to run the other computer, use ReachOut File Manager to transfer files, or use Chat to converse with the Host user. For these situations, just choose the appropriate button to connect. In some cases, you might want to use some other functions, such as Drive Mapping or connecting to a BBS. In these cases, choose Connect Only from the Link menu.

If you are not already connected when you choose what you want to do, ReachOut presents a listing in a phone book format. The screen also includes a field where you can type the phone number or network name of the system you want. Once it connects, you'll be able to perform the function you chose or choose a different one.

Note: *The Connect window displays existing entries in a phone book format. To add an entry, click the Add button. ReachOut Help and Chapter 4, Remote Control, cover managing the phone book in detail.*

To connect from Windows



1. Start ReachOut Viewer, if necessary.
2. Click the Remote Control, File Transfer, or Chat button.
If you prefer, you can choose Connect Only from the Link menu. If you are configured for direct connect cable, the computers connect immediately. Once you are connected, use LEFTSHIFT+RIGHTSHIFT to bring up the Viewer and choose a ReachOut function.
3. Tell ReachOut where the Host is.
 - Modem: select entry or type the Host's phone number.
 - Network: select entry or type the Host's network name.
4. Choose OK.
5. If asked, enter the Host's user name and password, then choose OK.

Note: *The Host system may require callbacks. Callbacks required for security always call back the Viewer at a prespecified number. Callbacks used for other reasons, such as to reverse telephone charges, may ask you to enter the telephone number. After ReachOut establishes the initial connection, the Host prompts for a return call number, if necessary, then disconnects and calls the Viewer. When the Viewer responds, the ReachOut session can begin.*

ReachOut for Windows & DOS

ReachOut for DOS

In most cases, you'll use the ReachOut phone book. Use Edit Phone Book on the Preferences menu to add entries. You can type the phone number or network name if you choose Connect to Host PC from the Link menu to make the connection.

To connect from DOS

1. Choose the mode to use after you are connected.

To do this, choose Once Connected from the Link menu. From the submenu, choose Take Control of Host, Invoke File Manager, Chat with Host User, or Exit to DOS.

2. Choose how to connect from the Link menu.
3. Choose the name from the list or type it in the field.
4. If asked, enter the Host's user name and password.

Successful ReachOut Connection

When ReachOut connects, you are ready to control the Host. What you see depends on how you made the connection. ReachOut Help is available from the Host or Viewer.

Connection	Effect
------------	--------

Connect Only (from the Link menu)	
---	--



	You still see your own desktop. ReachOut's status is Connected. You can use Drive Mapping, Remote Control, File Transfer, or Chat.
--	--

	The viewing window is active. The Host appearance depends on whether you are in Windows or DOS and the relative size and resolution of the Viewer and Host displays. See Chapter 4, <i>Remote Control</i> , for details.
--	--

Connection Effect



Host and Viewer can exchange messages. See Chapter 4, *Remote Control*, for details.



File Manager is active so you can transfer files or synchronize directories. You can use drives and directories on the Viewer and the Host. To control File Manager access, use Options on the Host's Security menu when not connected. See Chapter 5, *File Manager*, for details.

Suppose you are using ReachOut File Transfer and want to control the Host computer. Or you are controlling the Host and want to use File Manager to synchronize directories on both computers. You can change from one ReachOut function to another easily.

To change the ReachOut function

1. Bring up the ReachOut Viewer window.
 - Choose ReachOut Viewer from the control menu.
 - Press LEFTSHIFT+RIGHTSHIFT.
 - Double-click the Host icon in the Viewing window.
This brings up ReachOut Viewer on the local screen.
2. Click Remote Control, File Transfer, or Chat.

While controlling a Host computer, you may want to use your local computer. Here are several ways to transfer control:

- If you can, click anywhere outside the viewing window.
- Press CTRL+ESC. This brings up the local computer's task list so you can choose a task from the local computer.

ReachOut for Windows & DOS

ReachOut for DOS

In DOS, press LEFTSHIFT+RIGHTSHIFT to bring up the Viewer. Choose Chat from the menu bar, or choose Invoke File Manager to transfer files or Exit to Host PC to control the Host. Exit to Viewer PC lets you get back to the local environment.

To return to controlling the Host, close the File Manager or Chat window. If you have exited to the Viewer PC so that LEFTSHIFT+RIGHTSHIFT won't bring up the ReachOut Viewer screen, type VIEW. It won't have to connect this time.

Disconnecting

When you are finished using ReachOut, you must break the connection.

To disconnect a ReachOut session



1. Bring up the ReachOut Viewer or Host. (CTRL+ESC brings up the Viewer task list. If the viewing window is active, press LEFTSHIFT+RIGHTSHIFT.)
2. Click the Disconnect button.
3. Click OK to confirm and end the session.
4. Click Exit to close ReachOut.

ReachOut for DOS

In DOS, choose Disconnect from Link menu. Choose Exit from the File menu or press ESC to close the Viewer; this automatically removes ReachOut from memory on the Viewer computer. In some cases, all the ReachOut drivers can't unload. If this happens, just restart your computer to reclaim all the memory.

You can remove ReachOut's DOS drivers from memory on a DOS Host computer with UNLOADMH or UNLOADNH, depending on whether

ReachOut is configured for modem or network. If other drivers were loaded later, you'll have to restart your computer to reclaim the memory.

Using the Terminal Emulator

The full-featured terminal emulator lets you make non-ReachOut connections over a modem. You can use the same phone book that you use for ReachOut Host connections to dial and connect to a remote computer from the ReachOut Viewer. If you prefer, you can dial directly from the terminal emulator.

To connect using the phone book



1. Start ReachOut Viewer.
2. Choose Connect Only from the Link menu.

The phone book listing includes type T for terminal emulator entries. However, if ReachOut connects to a system that it doesn't recognize as ReachOut, it automatically invokes the ReachOut terminal emulator.

To specify communications parameters (such as data bits or parity), you'll have to add an entry to the phone book. From within the Add or Edit dialog box, check Terminal Emulator Entry, then choose the Term Setup button to specify parameters.

3. Select or type the remote computer's phone number.
4. Choose OK.
5. Use the connected system as usual.
6. To disconnect from the remote computer, click the Hang Up button or choose Hang Up from the terminal emulator's Link menu.

ReachOut for Windows & DOS

To use the terminal emulator directly



1. Start ReachOut Viewer.
2. Click the Terminal Emulator button.
3. Click the Dial button just below the menu bar.

You'll find full information about using the terminal emulator in ReachOut Help. You can also print a document named TERMEM.TXT from your ReachOut directory.

ReachOut for DOS

To use the terminal emulator directly under DOS, type VIEW to start the ReachOut Viewer. Then choose Load Terminal Emulator from the Link menu.

Automating ReachOut Sessions

ReachOut includes an extensive scripting language that you can use to automate ReachOut sessions. You can even have the connection done at or after a specified time. For example, a ReachOut script can connect to your office computer, synchronize two directories, download your e-mail, and disconnect.



For detailed information about using ReachOut's scripting language to automate sessions, open ReachOut Help and click Automating or double-click the Automating icon in the ReachOut program group and choose Topic Contents from the Help menu. The file AUTOMATE.WRI in your ReachOut directory contains the complete text of the Windows help for automating ReachOut.

Just double-click AUTOMATE.WRI in Windows File Manager to review or print it using Windows Write.

4

ReachOut REMOTE CONTROL

ReachOut lets you view and control one computer using the keyboard and mouse of another. If you have computers at both your home and office, you can completely control one from the other location. If you find yourself in different offices over the course of the week, you can always access your main computer, run programs remotely, and even print wherever you are. This chapter shows you how to:



- Run applications on the Host from the Viewer
- Check and respond to your e-mail
- Use the remote clipboard to transfer small amounts of data between the Host and the Viewer
- Use Chat to exchange messages with a user at the other computer
- Keep track of connections with the audit log

Suppose you are in a colleague's office across town when you get an opportunity to spend quality time with some experts in your field. You can use ReachOut to connect to your office computer and check out your e-mail before deciding how much time you can spend here. You respond to critical issues, postpone a meeting for the afternoon, and you are ready.

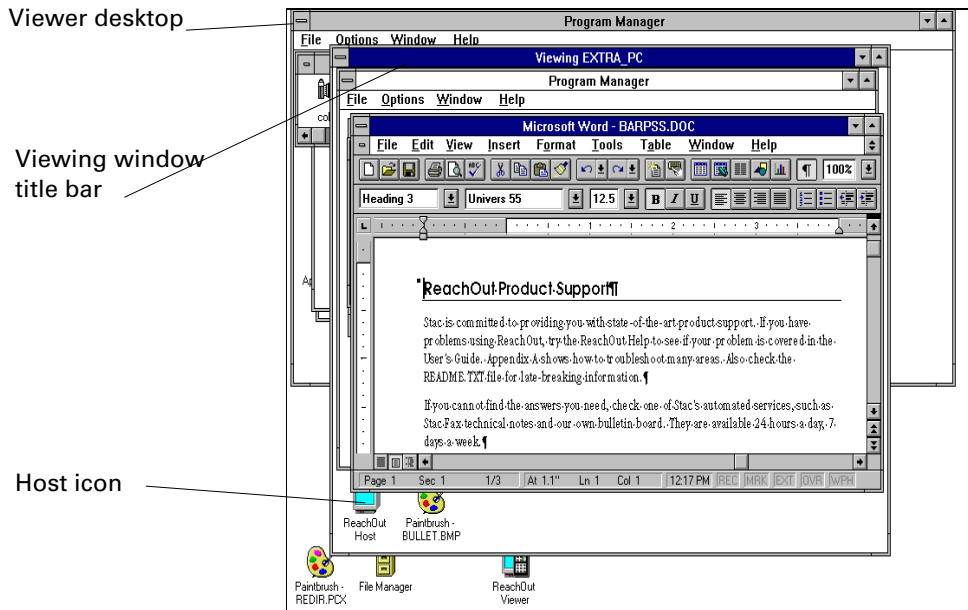
Suppose your manager calls you on the weekend from the office and needs a report right away. You can connect to your office computer, do the work, and print it there.

The ReachOut Viewing Window

When you are viewing and controlling a Host computer, the Host desktop is generally enclosed in a viewing window that includes the name of the Host computer in the title bar. Double-click the ReachOut Host icon to pop up the ReachOut Host screen on the Host and the ReachOut Viewer screen on the Viewer.

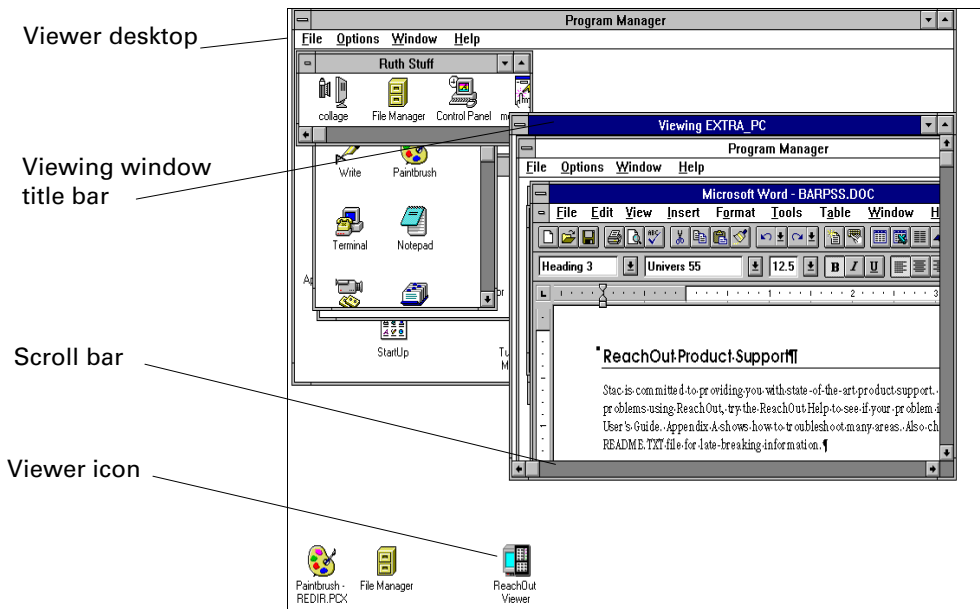
Exactly what you see depends on several factors:

- If the Host display is smaller (in size or resolution) than the Viewer display, you'll see a viewing window that shows the full Host system display, as shown here. You can move the window as needed. You can resize it to less than full size to make it take less space on your own desktop.



ReachOut for Windows & DOS

- If the Host display is larger (in size or resolution) than the Viewer display, you might see a scrollable window showing part of the Host system display. You can pan or use the scroll bars to see other parts. Clicking the maximize icon enlarges the window as much as possible. You can tell ReachOut to scale the display so it fits completely in a window.



- If the Host display is exactly the same size and resolution as the Viewer display, your entire screen will show the Host computer's display, without any title bar. Use CTRL+ESC to switch to another application.

ReachOut for DOS

From a ReachOut DOS Viewer, the Host display appears as a full screen. Use LEFTSHIFT+RIGHTSHIFT to pop up the Viewer screen. Press ESC to remove the ReachOut screen and return to viewing the Host computer.

Managing the Viewing Window

While in a ReachOut session, you can manipulate the viewing window. You can move it to another location, resize it, or minimize it. If you close the viewing window, an application on the Host computer runs faster, because it doesn't have to update the screen.

ReachOut can scale the view of the Host desktop down so it appears in a fixed (no scroll bars) window. Resize the window just as you do any other window, but you can't make it larger than its absolute pixel size.

To scale the viewing window



1. Bring up the ReachOut Viewer, if necessary.
2. Choose Viewer Options on the Preferences menu.
3. Click Scale Host to Window so the field is checked.
4. Choose OK.

Tip! *Resize the viewing window by pointing the mouse cursor to a lower corner. When the cursor changes to a double beaded arrow, click and drag the corner to resize the window.*

When the view of the Host desktop is in a scrollable window, you can use panning to change the portion of the desktop that you see in the window. Panning lets you slide the view of the Host computer to another position in the viewing window.

By default, ReachOut doesn't pan. You can choose a panning hot key if you want. ReachOut can use the right mouse button alone, the SHIFT key pressed with the right mouse button or the CTRL key pressed with the right mouse button.

ReachOut for Windows & DOS

To set the panning hot key



1. Bring up the ReachOut Viewer window, if necessary.
2. Choose Viewer Options on the Preferences menu.
3. In the Pan Key field, choose your key combination.
4. Choose OK.



To pan the viewing window

1. Point to any location in the viewing window.
2. Press your Pan Key or Pan Key combination.
3. Slide the view to position it as you want.
4. Release the Pan Key.

Managing the Phone Book

ReachOut uses a phone book to make it easy to connect with other computers. The phone book applies to Windows and DOS connections. Here's how the modem phone book looks before you connect:

Choose an entry here

or

Type a number here

The "ReachOut Connect" dialog box. It features a table with columns "Description", "Phone Number", and "Type". The table contains four entries: "Home PC" (555-9876, R), "Jim Johnson" (555-2345, R), "Monty's BBS" (1-555-1234, T), and "Stac BBS" (1-619-431-5956, T). To the right of the table are buttons for "Add", "Delete", and "Edit". Below the table is a "Phone Number" text field containing "555-9876" and a checkbox labeled "Wait for any Host to connect". At the bottom are buttons for "OK", "Cancel", "Reset Link", "Setup", and "Help".

Description	Phone Number	Type
Home PC	555-9876	R
Jim Johnson	555-2345	R
Monty's BBS	1-555-1234	T
Stac BBS	1-619-431-5956	T

Manage phone book entries

Chapter 4 • Remote Control

Each line contains a description, a phone number, and a type (R for ReachOut or T for terminal emulator). When ReachOut is first installed, the phone book has a single entry, which uses ReachOut's terminal emulator to call the Stac Bulletin Board System (BBS). You can easily add entries for calling ReachOut Hosts.

Note: *The modem and terminal emulator share the phone book. To use the terminal emulator directly, click the button on the ReachOut Viewer window. ReachOut Help includes full documentation.*

To add a phone book entry



1. Start ReachOut Viewer, if necessary.
2. If you don't want to connect, choose Edit Phone Book from the File menu.

If you prefer, you can choose a command that lets you connect, such as Connect Only from the Link menu, or click the Remote Control, File Transfer, or Chat button.

3. From the phone book, choose the Add button.

Type phone book information in these fields.

A screenshot of the "Add Phone Book Entry" dialog box. It has a blue title bar with the text "Add Phone Book Entry". Inside, there are four text input fields: "Description", "Phone Number", "User Name (Optional)", and "Password (Optional)". Below these fields is a checkbox labeled "Terminal Emulation Entry". On the right side of the dialog, there are four buttons: "OK" (with a green checkmark icon), "Cancel" (with a red X icon), "Terminal Setup" (with a terminal icon), and "Help" (with a question mark icon).

If you select an existing phone book entry and choose Edit, these fields show the current information.

ReachOut for Windows & DOS

4. Type the Description (up to 32 characters) and press TAB.
What you type here appears only in the phone book listing. For example, you might use "Jim at Home" or "Tjefferson." If you want to use this description later in an icon that lets you connect immediately, don't leave any spaces in your description. See *Creating Connection Icons* later in this chapter for more information.
5. Type the phone number.
Use up to 64 characters, with parentheses and dashes. A comma embeds a short pause. You can include area codes and other characters as needed.
If you need the same prefix on all your numbers, such as 9 for an outside line, you can add a global prefix with advanced modem configuration settings. Chapter 7, *Configuration*, and ReachOut Help include details.
6. If the Host computer requires a user name, type it in the User Name field.
7. If the Host computer requires a password, you can type it (up to 16 characters) in the Password field. You'll see asterisks on your screen as you type.
If you omit a required user name or password, ReachOut asks you to enter it when you attempt to connect.
8. If the entry will call a non-ReachOut system, it needs the terminal emulator. Check the Terminal Emulator Entry field.
This makes the Term Setup button available in case you have to supply communications parameters. You'll find detailed information in ReachOut Help.
9. Choose OK.

Modify a phone book entry in much the same way; just highlight it and choose Edit. Choosing Delete removes the selected phone book entry.

ReachOut for DOS

To add, change, or delete DOS ReachOut phone book entries, pull down the Preferences menu and choose Edit Phone Book. The screen display includes all the instructions you'll need to maintain your phone book.

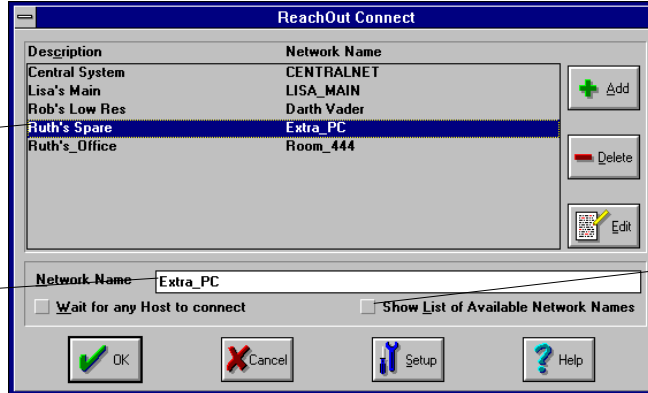
The Network Connect List

The network phone book looks and works much like the modem phone book. The listing doesn't require a Type, because the terminal emulator doesn't apply to networks. You can request a list of available network Hosts on many networks. However, because of the time it takes to have ReachOut search the network for Hosts, and the fact that you may not have access to all those Hosts, most users use the phone book to list the Hosts they call. The phone book lets you enter the password and user name, so ReachOut won't ask you for them while connecting.

Choose a
phone book
or network
list entry
here

or

Type network
name here



Check here
to display
the
network
list

Creating Connection Icons

Once an entry is in either the modem or network phone book, you can create a special icon for your desktop and use it to connect directly to that Host. The Host must be waiting, of course. For the connection to be

ReachOut for Windows & DOS

fully automatic, the phone book entry must include any user name or password required by the Host. The phone book description must not include any spaces.

Use the VIEWER.EXE program in your ReachOut directory. If you prefer to connect directly to ReachOut's File Manager, use FILEMAN.EXE instead.

To create a connection icon

1. Make the ReachOut program group active.
2. In the Program Manager, choose New from the File menu.
3. Choose Program Item, then click OK.
4. In the Description field, type an icon caption, such as "Viewing Home Computer".
5. In the Command Line field, type
`C:\REACHOUT\VIEWER.EXE PHONEBOOK=phonedesc`
Use the directory where your ReachOut files are located. Use the description from the phone book entry for the connection you want to make. The description cannot include any spaces.
6. Click OK.



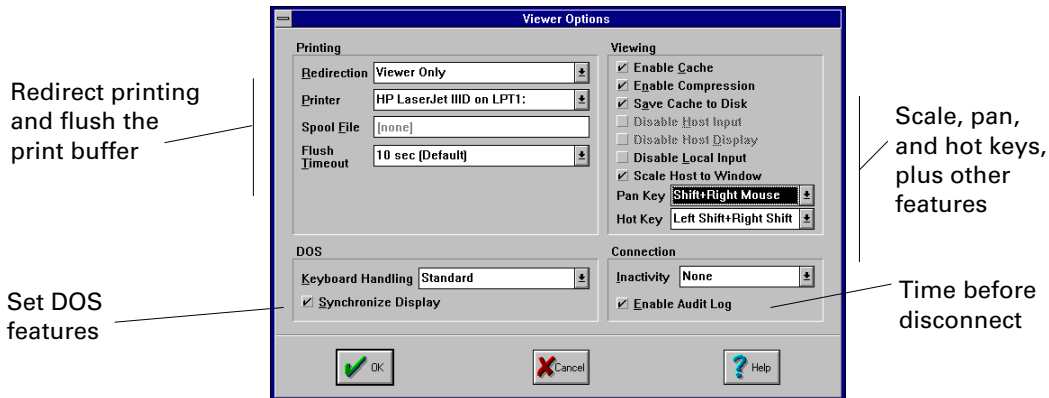
Call Office PC

A special icon with the caption you specified appears in your ReachOut group. Double-click the icon to connect immediately.

Printing while Viewing a Host

The Viewer Preferences dialog box lets you control several aspects of printing during a ReachOut connection. You can redirect the Host computer output in several ways, print to a file for later use, or flush the print buffers.

Chapter 4 • Remote Control



Redirecting Printing

Normally, when you print a file from the Host computer, it is printed as directed by that computer. The Viewer can control where Host output appears: at the Host, at the Viewer, both, or neither. In addition, you can ask ReachOut to print to a file; you can edit the file later or copy it to a printer.

Note: To redirect printing from a Windows 95 Host, see Redirecting Printing in Appendix C, Window 95.

The Host controls whether or not redirection is possible. You may want coworkers to be able to access your office computer on the weekend, but you don't want them to redirect the printing.

To prevent printer redirection



1. Bring up the ReachOut Host window, if necessary.
2. Choose Options from the Security menu.
3. Check Disallow Printer Redirection.
4. Choose OK.

ReachOut for Windows & DOS

To redirect Host computer print output

From the Host

1. Make sure Disallow Printer Redirection is not checked in Host Security.
2. In the Windows Control Panel, select Printers and make sure a driver for the Viewer computer is installed.
3. On the Host system, make sure the printer is connected to LPT1.DOS.

Note: *If you have trouble printing, open the Control Panel and choose Printers again. Click Connect and make sure Set Fast Printing Direct to Port is not checked.*

From the Viewer

1. On the Viewer computer, open the ReachOut Viewer window and choose Viewer Options from the Preferences menu.
2. In the Redirection field, choose Viewer Only. (Unless someone is there, you don't want to rely on the Host printer.)
3. In the Printer field, choose where redirected Host output should appear at the Viewer site.
You can choose from all the printers installed on the Viewer computer. It does not have to match the printer on the Host computer.
4. If you chose Spool file, type a name for your file.
ReachOut will print the document to that file, and store it in the Viewer's ReachOut directory.

Note: *The Viewer printer driver must have the PASSTHRU feature, as most Windows printer drivers do. If you find that redirection doesn't*

work, define a Viewer printer as HP LaserJet II and print to it. The document will print just fine because formatting is done at the Host.

You'll find full redirection details in ReachOut Help.

ReachOut for DOS

Under DOS, use the Host's Security menu to allow or deny redirection. Use the Viewer's Printing menu to specify where to print.

Using the Remote Clipboard

When you are controlling a Host computer, you use its clipboard to transfer data between Host applications. Similarly, you use the Viewer's clipboard to transfer data between Viewer applications.

ReachOut includes a remote clipboard that you can use to transfer data between Viewer and Host applications in Windows. The Host controls whether or not the remote clipboard is available. The Viewer uses the remote clipboard.

The remote clipboard is very useful for transferring small amounts of text and small graphics. For large text blocks and graphics, it's faster and uses less memory to save the data as a file and transfer it with File Manager.

To turn the remote clipboard on or off

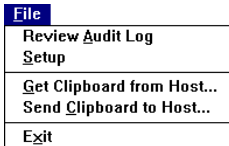


1. In the Host window, while not connected, choose Options on the Security menu.
2. Click the Disable Remote Clipboard field so it is checked.
3. Choose OK.

ReachOut for Windows & DOS

To paste data from the Viewer to the Host

1. From an application on the Viewer computer, place the data in the Windows clipboard the usual way (with cut or copy).
2. Access the ReachOut Viewer.
3. From the File menu choose Send Clipboard to Host.
4. Choose the format for the transfer and click Send.



The list box shows the formats. You can choose as many as you need, but choosing extra ones makes the process take more memory and more time.

5. Through the viewing window, access the application to receive the clipboard and paste it normally.

To paste data from the Host to the Viewer

1. From an application on the Host (through the viewing window), place the data in the Host clipboard the usual way (with cut or copy).
2. Access the ReachOut Viewer.
3. From the File menu choose Get Clipboard from Host.
4. Select the format for the transfer and click Get.

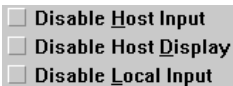
The list box shows the formats. You can choose as many as you need, but choosing extra ones makes the process take more memory and more time.

5. On the Viewer desktop, access the local application to receive the clipboard and paste it normally.

Controlling Host and Viewer Actions

A user at the Host computer can normally use the computer while a Viewer is in control. The Host user can certainly see everything on the screen. Either the Viewer or Host user can start Chat to communicate with the other user. Either can end the connection. And either can disable the display at the other end.

As the Viewer, you can disable any mouse or keyboard input from the Host computer. You might want to disable the display if you are examining confidential data and the Host computer is in a public area. You might want to disable input if there is no security in the area of your Host computer.



To prevent user actions

1. Bring up the ReachOut Viewer (double-click the icon or press LEFTSHIFT+RIGHTSHIFT when the viewing window is active).
2. Choose Viewer Options from the Preferences menu.
3. To control a Host user, check Disable Host Input or Disable Host Display.

If you checked Disable Host Input, any use of the mouse or keyboard at the Host PC have no effect. If you chose Disable Host Display, the Host PC screen goes blank.

4. To make sure your local keyboard doesn't interfere with the Host user, check Disable Local Input.

You can still use the ReachOut Viewer window and the hot keys when local input is disabled.

5. Choose OK.

Host Control of Viewer

While the ReachOut connection is active, a user at the Host can still use the computer. There is no indication on the Host computer that a Viewer is connected. Performance may be affected, because ReachOut duplicates the screen on the Viewer computer.

For confidential work, the Host can disable the Viewer display or the Viewer's use of the mouse and keyboard. The Chat function lets the two users coordinate their work.

To prevent Viewer actions



1. Bring up the ReachOut Host (double-click the icon).
2. Choose Viewer Options from the Preferences menu.
3. Check Disable Viewer Keyboard/Mouse or Disable Viewer Display.
4. Choose OK.

Keeping Track of Connections

ReachOut can maintain an audit log with information on all connections and attempted connections to a computer. An audit log can run on both Host and Viewer. The file contains the date and time of each connection and the length of the call, whether the computer is acting as a Host or as a Viewer. On a Host computer, you'll be able to tell if anyone tried to connect and failed. ReachOut creates or adds to a file named REACHOUT.AUD in the directory where your ReachOut files are stored. Each time you start ReachOut Host, information is added to the log.

To enable auditing

1. Bring up the Host or Viewer, if necessary.



On the Host

2. Choose Options on the Security menu.
3. Check Enable Audit Log in the Security window.
4. Choose OK.



On the Viewer

2. Choose Viewer Options on the Preferences menu.
3. Check Enable Audit Log in the Preferences window.
4. Choose OK.

If the audit file reaches 500 KB in size, ReachOut offers to delete it for you. To save the audit log contents, copy the file and save it under a different name. You may want to delete it periodically to save disk space.

You can examine and manage the audit log whether or not the computer is connected. If a Host has a master password, you'll have to enter it before you can review its audit log.

To review, print, or delete the audit log

1. Pull down the File menu.
2. Choose Review Audit Log.
3. Click Delete or Print to process the file.

ReachOut for DOS

ReachOut DOS includes Audit Log on the Preferences menu for both the Host and the Viewer; set the value on the submenu to On or Off. Review Audit Log is on the File menu in both cases.

ReachOut Security

The Host computer can use ReachOut Security to control access to its files. Additional security is provided at the supervisor level for use on networks. ReachOut provides extensive connection security, as well as security for the File Manager and Drive Mapping.

Chapter 8, *Security*, covers the use of passwords, confirmation, and callbacks in detail. Chapter 5, *File Manager*, covers File Manager security. Chapter 6, *Drive Mapping*, covers security as it applies to Drive Mapping.

More Host and Viewer Features

The following features help you control your ReachOut Remote Control session. ReachOut Help includes complete explanations and shows you how they work.

Voice and Data in One Session

If you have only one telephone line available during a modem connection, ReachOut lets you switch from data to voice, then back to data again. If your connected user has trouble explaining a problem through Chat, you might want to have a voice conversation, then return to the ReachOut session.

The appropriate commands are available on the Link menu when a ReachOut modem connection is in progress. ReachOut Help has complete details.

Inactivity Timeout

It is easy to run up huge telephone bills when connected through a modem. And if several Viewers connect to the same Host in the course of

the day, you want to make sure the Host is available when it isn't actually being used by a Viewer.

You can have ReachOut automatically disconnect if enough time passes without any computer activity. You can set your preference for the inactivity timeout value on either the Host or the Viewer. When the shorter time passes, the connection is automatically ended.

Minimize Host on Startup

You may want the ReachOut Host window to be active whenever the system is waiting for a connection. Or you may prefer that it be minimized when it starts, whether from the StartUp group or by double-clicking the icon. You can set your preference on the Host. When you check Minimize on Startup in the Host Options dialog box, the Host is minimized whenever it starts.

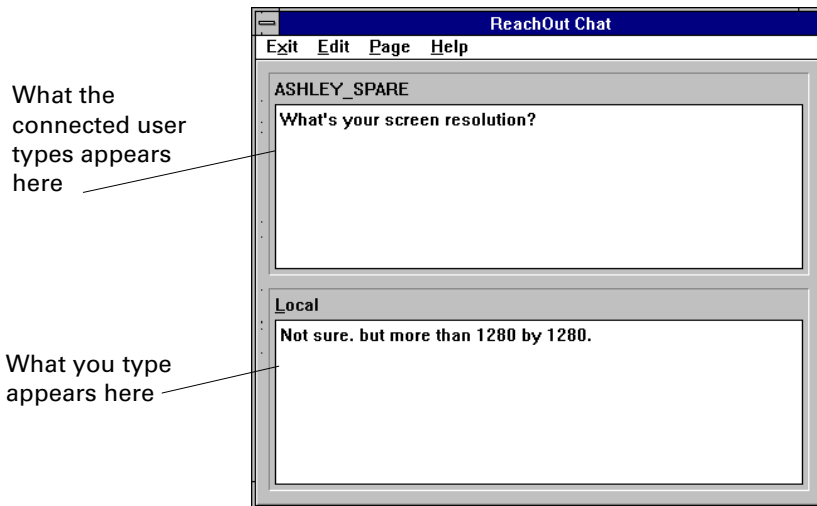


How to Chat

ReachOut's Chat facility lets users at both connected computers exchange typed messages. Either user can start Chat by clicking the Chat button in the ReachOut Host or Viewer.

Once the Chat window appears, either user can use Page to alert the user at the other end with a bell, much like a ringing telephone. Both users can type at the same time. Messages from the other user appear in the upper part of the window.

ReachOut for Windows & DOS



You can use your local Windows clipboard to paste small amounts of text into the message area or to copy text from it to a local document. The Edit menu includes commands to copy from the connected computer (the upper portion of the Chat window) and Paste to your local computer. Choosing Copy from the Edit menu places the entire contents of the upper portion for the entire Chat session into the local Windows clipboard. You can make any local application, such as an editor, active, and choose Paste to Local.

Either user can press ESC or choose Exit to end the discussion. The two computers remain connected.

ReachOut for DOS

To start Chat in a DOS session, press LEFTSHIFT+RIGHTSHIFT at the Viewer or ALT+RIGHTSHIFT at the Host and choose Chat. During Chat in DOS, the messages for the two computers appear side by side. The display lets you know how to alert the other user or end Chat.

5

ReachOut FILE MANAGER

The ReachOut File Manager helps you manage files and transfer them between two connected computers. When you aren't in the office, you can connect to the office computer every day and transfer your data files. You may pick up other files containing data you need in your work. ReachOut can synchronize directories for you. And it saves connection time by transferring only the differences between existing files.



With ReachOut File Manager, you can:

- Transfer files between connected computers
- Synchronize directories
- Start operations from the Viewer
- Monitor operations from the Host

Suppose you are on the road and need to update your working directory on your laptop each night. Connect to the office computer, tell ReachOut to synchronize your directory with one on the office network. ReachOut transfers the differences in the later files and gets the computers ready for the next day's work.

Windows 95 Long File Name Support

If both of the connected computers use Windows 95, you can use ReachOut File Manager to transfer files and still keep their long file names intact. If just one of the connected computers uses Windows 95, ReachOut for Windows & DOS may truncate or ignore long file names. See Appendix C, *Windows 95*, for more information.

The File Manager Display

The ReachOut File Manager helps you transfer files from one computer to the other.

To start File Manager

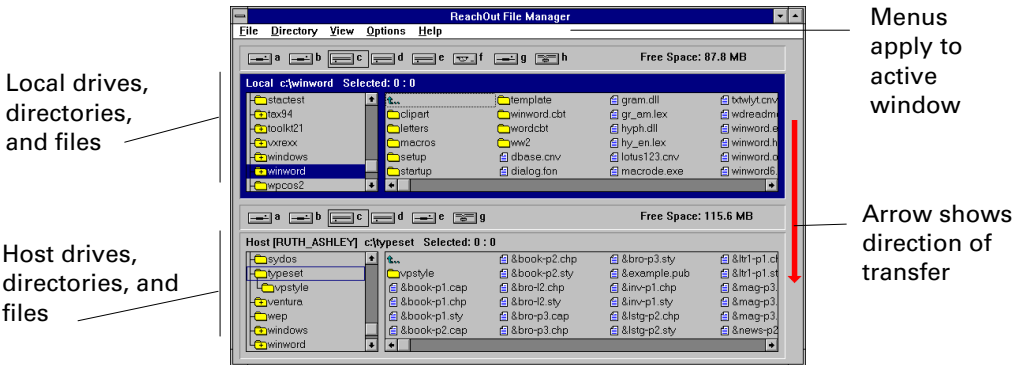
1. Start the ReachOut Viewer.
2. Click File Transfer to connect to a ReachOut Host.

If you are already connected, bring up the Viewer and click File Transfer.

ReachOut for DOS

To connect directly into the File Manager, from the Link menu, choose Invoke File Manager from the Once Connected submenu. If you are already connected, choose Invoke File Manager from the File menu.

It works much like the Windows File Manager. You can see the directories and files on both the local and remote computers as shown here.



ReachOut for Windows & DOS

To switch active windows

- Click anywhere in the other window.
or
- Use the Goto commands on the File or Directory menu.

Handling Drives and Directories

To display a different drive, click the drive icon. To change to a different directory, click the directory icon or use the Change command on the Directory menu. You can use standard Windows techniques or the Directory menu to create, delete, or rename a directory on either computer.

Handling Files

The ReachOut File Manager lets you select, copy, rename, and delete files just as you do in Windows. You can use drag-and-drop to copy selected files to the other window. Just as in Windows File Manager, you highlight the files you want to copy, press the left mouse button, and drag to the other window. The Copy, Delete, and Rename commands from the File menu affect all selected files.

ReachOut includes several features you might want to use when you transfer files. You can specify them on the Options menu.

To do this ...	Choose ...
Save transfer time	Compression
Protect your system from viruses	Virus Checking
Alert you after a transfer	Sound
Let you confirm copies or deletions	Confirmation

SmartSend™

By default, ReachOut uses a smart transfer method that copies only the differences between files being transferred. When a file with the same name exists on both source and destination disk, ReachOut can send only the difference between the two files. The Smart Transfers option on the Options menu lets you control how ReachOut identifies differences.

To transfer ...	Choose ...
Differences in files that have different dates, times, or sizes	Standard
Differences in all files	Vigorous
Complete files, regardless of differences	Disable

When a transfer is interrupted, ReachOut File Manager normally reacts just as the Windows File Manager does. It deletes the partially transferred file in the destination directory. If you are using Standard or Vigorous SmartSend, you can ask ReachOut to save any partially transferred file; check Save Partial Transfers on the Options menu. The next time you start up File Manager, you can resume the transfer from the point of interruption by copying the file again.

Selecting and Tagging Files

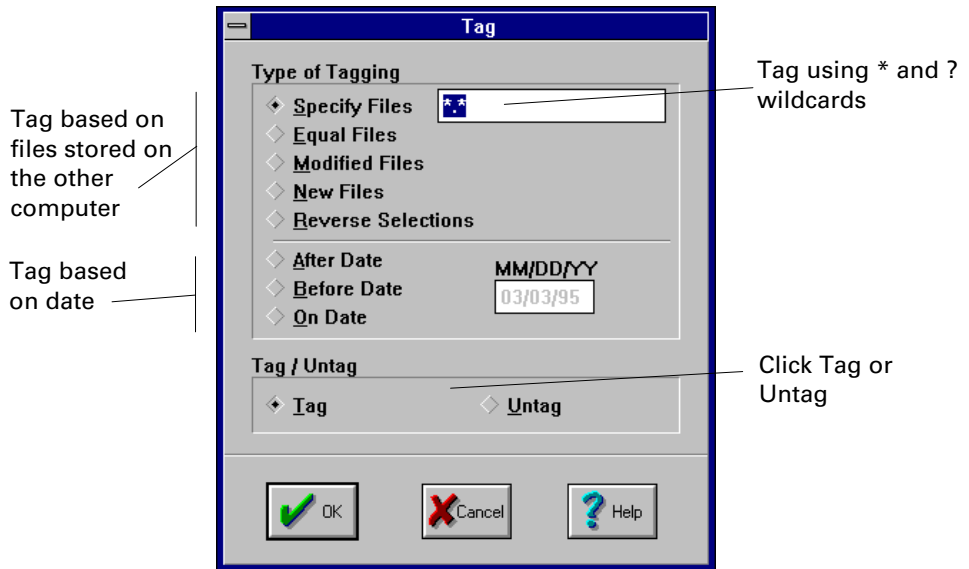
You select one or more files in the ReachOut File Manager by clicking them, just as you do in Windows File Manager. In addition, ReachOut tagging lets you select files that meet certain criteria. For example, suppose you want to transfer any files in the Host WORKING directory that were modified after a certain date to the local computer's WORKING directory. You can Tag those files, then choose Copy. Tagging works with selecting; any tagged files are selected in addition to those that are already selected. To select additional files after using Tag, be sure to hold down the CTRL key while you select them.

ReachOut for Windows & DOS

To select files that meet certain criteria

1. Choose Tag from the File menu.
2. Click the criterion in the Tag dialog box.
3. Click OK.

When you choose Tag from the File menu, you see this dialog box.



Tagging selects files in the active directory in the active window. The Equal, Modified, and New types compare files there with those in the directory currently displayed in the inactive window. Tagging selects files that are identical (Equal), have the same name but a different date or size (Modified), or are present in the active window but not the inactive window (New).

You can choose either Tag or Untag. You can use Tag repeatedly to select or deselect additional files. Suppose you want to select all files with extension PCX except for those whose file names begin with X. Use Tag

once with *.PCX as the Specify Files entry. Then use Tag again with X*.PCX as the Specify Files entry and click Untag.

ReachOut Help contains more details about the various tagging options.

Synchronizing Directories

Many people synchronize directories on two computers. You may want to back up all changed files in a directory, or you may want to reproduce a directory from your office computer on your home computer so all your files are available. ReachOut uses RapidSync™ to synchronize directories on two computers in several ways.

- Clone a directory. ReachOut can create a new directory on one computer that is identical to one on the connected computer.
- Make two directories identical. If file names match, File Manager copies the more recently dated file to the other computer. If a file exists on one computer but not the other, File Manager copies it to the other one. For this method, it doesn't matter which computer or directory is active in the File Manager.
- Bring a directory on only one computer up to date by copying in only one direction. You'll have to make the window (or computer) that contains the files to be copied active before choosing Synchronize. File Manager copies a file from a directory on the active computer if it has a more recent date than the one being synchronized. If a file exists only in the directory on the active computer, File Manager copies it to the one being synchronized.
- Transfer matching files with different times and dates from one computer to the other, but do not copy files that exist in only one of the directories to the other computer.

Note: *If you are synchronizing directories between a Windows 95 system and one that runs an earlier operating system, ReachOut ignores any files with long file names.*

Directory
<u>C</u> ollapse / <u>E</u> xpand
<u>C</u> hange... <u>C</u> reate... <u>D</u> elete... <u>R</u> ename...
<u>S</u> ynchronize...
Goto <u>L</u> ocal Goto <u>R</u> emote

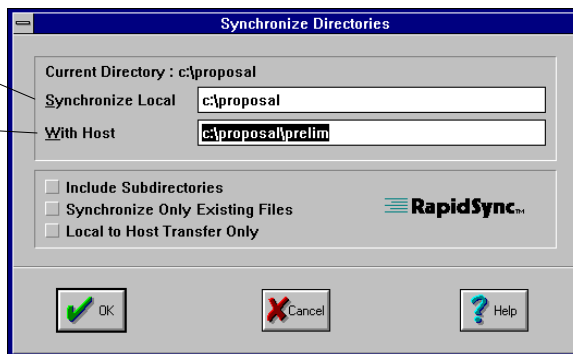
To synchronize directories

1. Start File Manager, if necessary.
2. Make the directory to be synchronized on each computer current.
3. Make a computer from which files will be copied active.
4. From the Directory menu, choose Synchronize.

Name one directory

Name the other

Check if needed



5. To use less than full synchronization, check the field:
 - Synchronize Only Existing Files *or*
 - Local to Host Transfer Only *or* Host to Local Transfer Only
6. Click OK.

Creating a duplicate directory in another location is sometimes called cloning a directory. You can use RapidSync to clone a directory on one computer to the other.

To clone a directory

1. Create a new directory on the computer to receive the clone and make that directory current.

2. On the other computer, make the directory to be cloned active.
3. From the Directory menu, choose Synchronize.
4. Click OK.

Controlling the Display

The ReachOut File Manager includes several ways to manage the display. Use the View menu to specify how you want it to appear.

When Directory Tree is checked, you see a directory tree and file list window for each computer. You can click on a collapsed or expanded directory icon in the directory tree to expand or collapse it. Use Collapse/Expand on the Directory menu to control this without a mouse. When Directory Tree is unchecked, you see only the file list window for the current directory on the current drive on each computer. In this condition, the windows are side by side.

You can also control the contents of the File List window. When File Names Only is checked, that's what you see. When it is unchecked, you can specify which details (size, date, time, and attributes) you want listed. In addition, you can specify the order in which files are listed and an overall filter, such as *.PCX, that limits the display. These features work much as they do in Windows. Details on using these features are included in ReachOut Help.

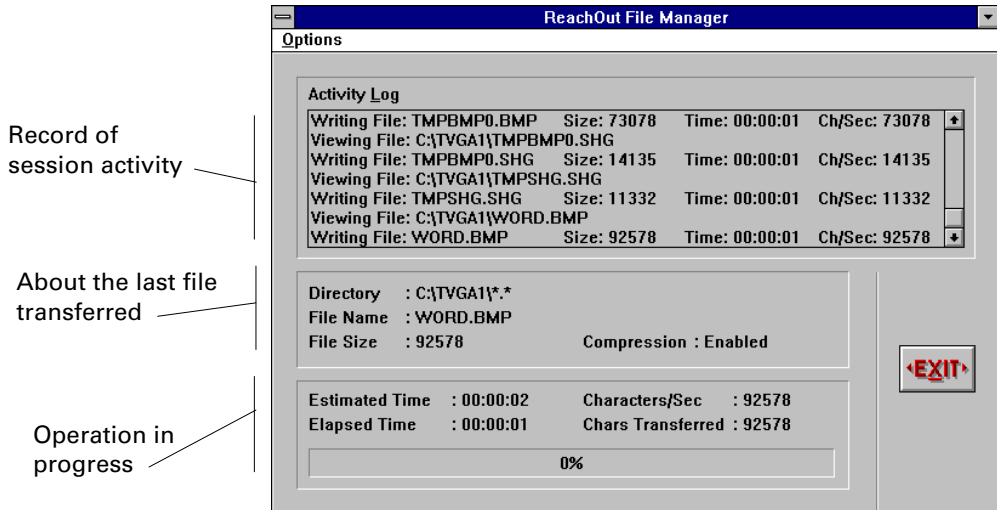
The File Manager Log

While the ReachOut File Manager is active, a user at the Host computer can examine the File Manager log. ReachOut minimizes the File Manager log on the Host when File Manager starts. At the Host PC, double-click the icon to see what is going on. Files are transferred more quickly when the File Manager log is minimized.



ReachOut for Windows & DOS

Note: If the Viewer has disabled the Host display, you won't be able to view the File Manager log.



If you press the Exit button, ReachOut cancels File Manager, including any activity currently in progress. It does not disconnect the two computers.

File Manager Security

As a Host, you may want to control what connected Viewers can do and see with your files. For example, you may want Viewers to be able to copy files to and from your computer, but not to delete or change any existing files. Or you might want users to be able to control your computer, but prevent them from copying confidential files from your computer. To change most security features, ReachOut must be disconnected.

Note: See Chapter 8 for full information on ReachOut security.

File Manager security can be set at several levels:

- At the individual password level in the Host password list. You can set different access for different Host passwords or user names.
- At the Host level, where it applies to all incoming calls. You can set a maximum access for any Viewer that connects.
- At the supervisor level, where it applies to all Hosts that use that version of ReachOut. You can set a maximum access for Viewers connecting to any Hosts within your control.

To let the Viewer ...	Give this access ...
Do all operations	Full
Copy files to and from the Host	Read/Write
Copy files from the Host	Read Only
Not even view the file list	None

In the Host Password List, you can specify File Manager access when you add or edit a password.

The Host can override all individual File Manager security, specifying the highest access that applies to any incoming Viewer. The Host cannot set a higher level than that established by the supervisor.

To limit File Manager access from Host security



1. Start the ReachOut Host, if necessary.
2. When not connected, choose Options from the Security menu.
3. In the File Transfer Access field, choose the maximum access you want to allow.
4. Choose OK.

ReachOut for Windows & DOS

Supervisor security takes precedence over Host security. Chapter 8 covers supervisor security in detail.

To limit File Manager access from Supervisor Security



1. When not connected, double-click the Supervisor Security icon in the ReachOut program group.
2. In the File Manager Access field, choose the highest level of access permitted.
3. Choose OK.

Limiting Specific Access

Suppose you want users to see and work with some of your files in the ReachOut File Manager, but not all of them. You can control which drives and directories appear in the Host section of the ReachOut File Manager. If the file doesn't appear in the window, the user cannot perform any actions on it through the File Manager. The drives and directories you exclude are not available to any Viewer using File Manager.

Limiting access to certain drives or directories during ReachOut File Transfer depends on a file named REACHOUT.PRO in the ReachOut directory. You can create this file if it doesn't exist using any text editor, such as Windows Notepad or DOS Edit. Here's a sample REACHOUT.PRO file. This one makes the ReachOut and DOS directories and the D drive unavailable to the Viewer's ReachOut File Manager.

```
c:\reachout
c:\dos
d:
```

To modify your REACHOUT.PRO file

1. Start a text editor such as Notepad or DOS Edit.
2. Open the file C:\REACHOUT\REACHOUT.PRO.
If the file doesn't exist, some editors will create it. In other editors (such as Notepad), you choose New from the File menu to create it.
3. Type the ReachOut directory path and name on the first line to make sure users can't change this file!
4. On a separate line, type the drive name or path of each drive or directory you wish to hide from the ReachOut File Manager.
5. Save the file.

Additional steps you can take to protect individual files, including REACHOUT.PRO, are to make them hidden or read-only. If you do this, be sure to remove ATTRIB.EXE and similar programs from your Host computer.

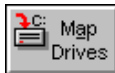
Note: *Security changes made in either Windows or DOS affect ReachOut when used in the other environment.*

6

ReachOut DRIVE MAPPING

Taking remote control of a computer isn't always the best method of gaining access to your data. Some graphics-based programs and other applications need to transmit unusually large amounts of data over the ReachOut link, and may be too slow to run effectively from a Viewer.

Fortunately, ReachOut provides a way to make drives on the remote computer automatically available when you connect—you don't have to run the viewing window or any other ReachOut application. With Drive Mapping, ReachOut creates a link between the directory structures of two computers. Accessing remote files becomes as easy as accessing files from your own hard disk, CD-ROM, network connections, or any other drives defined on your system.



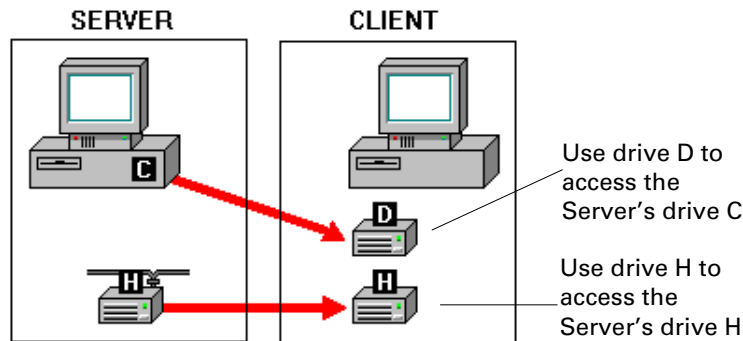
Drive Mapping lets you:

- Run an application locally, and access only data from the other computer
- Allow the Host to access data on the Viewer, as well as the other way around

Drive Mapping solves the problem of what to do when the drive you need is on a different computer. ReachOut Drive Mapping effectively turns the Host or the Viewer into a network server, even when you are connected with a modem!

How Drive Mapping Works

ReachOut Drive Mapping requires a *Server* and a *Client*. The *Server* is the computer that actually contains the drive you want to access; the *Client* is the computer you run the application on.



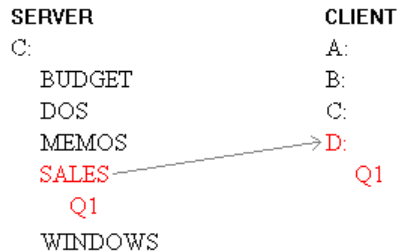
You set up a *drive mapping* from the Server to the Client so that when you connect, the Server drive or directory is available as a new drive to the Client.

If you are controlling a Host computer from a Viewer, you can share drives and directories with the Host, allowing you to use Drive Mapping in conjunction with Remote Control. Then when you connect, your local drive is available as a new drive on the Host. You can use Remote Control to open a Host application and edit Viewer files without actually copying the files to the Host computer. This feature can be useful if you do not want copies of your files to exist on the Host computer, or if your ReachOut File Manager access to the Host is limited to Read Only.

You can also map drives the other way. Suppose your ReachOut Host is a Server. The Host makes the path C:\SALES available to a Drive Mapping Client. When you connect as a Viewer, the Host Server's directory

ReachOut for Windows & DOS

C:\SALES gets mapped to a drive (say D:) on the Viewer—which is the Client.



The Client's D drive now points to the directory C:\SALES on the Server. In other words, the remote directory C:\SALES is the *root* of drive D. The entire directory structure from C:\SALES down is available on the Client's drive D. To open the file C:\SALES\Q1\MARKET.XLS, just change to D:\Q1 and it's there. But the file is still stored in C:\SALES\Q1 on the Server computer, so it is available from both computers.

The Server can make available any of its directory paths, including those stored on network, CD-ROM, or floppy disk drives. For security reasons, the Server can set a path to Read Only or Write Only. Unless a master password exists for the Server, the Client cannot set up Server options or add Server directories to its drive mappings.

When Should You Use Drive Mapping?

Here are some situations in which you might use Drive Mapping.

- You want to use drives on a remote computer but execute programs only on the local computer. For example, it might be difficult to use remote copies of large graphics-based programs because of the amount of data that needs to be continually transferred. But if you run the program locally and just open files that are stored on the remote computer, ReachOut transmits data across the link only when you perform file operations.

- **Drive Mapping**

- You want to use your office e-mail but you can't run the e-mail software on your computer. You can create the mail messages and any file attachments and save them to your local computer before connecting. This way you keep connect time to a minimum, which can help reduce cost if you are using a modem. Use Drive Mapping to map your hard drive to a drive letter on the remote computer. Then connect to the Host, remotely run the e-mail program, and attach files from your local drive. You can also retrieve your e-mail by serving up the office network mail directory to your computer.
- You want to process local data on the remote computer. For example, you might be working at home and want to send your file to an office printer so someone else can read it. Instead of going through the two-step process of copying the file to the office computer and then opening it in an application, you can open it right from your home computer's drive, saving connection time. This is particularly valuable if you aren't sure which file it is and need to examine several before printing.
- You want to back up data on a remote computer by using a tape drive or other hardware connected to yours. You could also back up your local computer using the tape drive of a remote computer.
- You want to install new software on the remote computer. Many software packages force you to install from floppy disks to help prevent piracy, making remote installs impossible. With ReachOut, you can map the local floppy drive, then do the install remotely.
- *Version control*: You want to have the most current copy of a file always stored in the same place so the wrong version doesn't get edited. With Drive Mapping you can edit that file whether it is on a local or a remote drive.
- *Peer-to-peer networking*: You want the Host user to have access to directories on the Viewer, as well as the other way around. Through Drive Mapping, users at the Host and the Viewer can share drives with each other.

Setting Up Drive Mapping

There are three steps required to use ReachOut Drive Mapping:

- First, enable Drive Mapping on the Server.
- Then, create drive mappings on the Server using Share Drives.
- Finally, connect.

You must enable Drive Mapping and run Share Drives to create your drive mappings before you connect.

To enable Drive Mapping



1. On the Server computer, open the ReachOut Host or the ReachOut Viewer.
2. From the Preferences menu, choose Drive Mapping.
3. Check Enabled on the secondary menu.

ReachOut for DOS

1. Change to the ReachOut directory and type RASETUP to run the Drive Mapping Setup program.
2. Under Go Host and Go Viewer, check or uncheck the Client and Server options.
If you want to be able to share drives with another computer and also map drives from another computer, you must check both Client and Server.
3. Press ENTER to accept the changes and exit RASETUP.

Note: In DOS, you must set up both the Server and the Client.

Sharing Your Drives

Share Drives defines the Server directories that will be available to the Client. Run Share Drives on the Server before you connect to a Client.

To share Server drives



1. Open the ReachOut Host or the ReachOut Viewer.
2. From the Preferences menu, choose Drive Mapping, then choose Share Drives from the secondary menu.
3. Choose Add to add a new entry.
4. Under Drive, choose the drive letter that the ServeUp Path will be mapped to on the Client.

To have ReachOut automatically assign the next available drive letter, choose Next Available from the list.

Choose the Client drive letter from this list

Drive	ServeUp Path
Next Available ▾	c:\msoffice\excel

Type the ServeUp path here

IMPORTANT! If you choose a drive letter that the Client is already using, the mapped drive overlays it, making the Client drive unavailable while you are connected.

5. Type the full path name of the directory you want to make available to the Client.
You can also enter this path by double-clicking directory names in the browse list below.
6. Specify the type of file access allowed to the Client.
7. Press ENTER or choose OK to accept the mapping.
8. Choose Yes to save your changes.
You can also save changes by choosing Save from the File menu. You must save the changes before you connect or the drives will not be mapped.

ReachOut for DOS

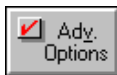
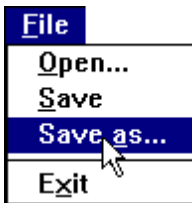
To share drives in DOS, change to the ReachOut directory and type SERVEUP, then follow steps 3 through 8 above. If

ReachOut for Windows & DOS

you have already saved Drive Mapping files in the ReachOut directory, you will be prompted to choose one.

Leave the drive letter field blank to have ReachOut automatically assign a drive letter.

You can edit or delete any of the mappings by selecting them from the Share Drives list and choosing the appropriate command.



Creating Separate Drive Mapping Files

By default, your drive mappings are stored in a file called SERVEUP.SRV in the ReachOut directory. But you can save your Drive Mapping file under a different name by choosing Save as from the Share Drives File menu. If your computer is a Host, you can define multiple passwords and associate a different Drive Mapping file with each one.

To attach a Drive Mapping file to a password

1. Open the ReachOut Host.
2. Choose Edit Passwords.
3. Select a password and choose Edit, or choose Add to create a new password.
4. In the Password List Entry dialog box, choose the Adv. Options button.
5. Under Drive Mapping file, type the name of the Drive Mapping file *without* the file extension .SRV.
For example, type NETDRIVE instead of NETDRIVE.SRV.
6. Choose OK and exit the Password List.

When a Viewer connects as a Server and uses this password, the drive mappings in the associated Drive Mapping file take effect. This way you can share different drives with different users.

Changing Mapped Drive Letters

Once connected, the Client can use Map Drives to change its drive settings.



To change Client drive mappings

1. While connected to a Server, bring up the ReachOut Host or Viewer window.
2. Choose the Map Drives button.
3. The paths listed are Server paths, assigned to Client drive letters. Add, delete, or edit the selected drive assignment by choosing the appropriate command.

ReachOut for DOS

Change to the ReachOut directory and type RAMAP to run Map Drives.

IMPORTANT! *The Client drive letter must be a valid drive letter on the Client computer. To define valid drive letters use the LASTDRIVE command in your CONFIG.SYS file; for example, LASTDRIVE=E allows the letters A through E to be used as drive letters. See the MS-DOS documentation for more information.*

Using Drive Mapping

Once you have set up your server paths, you are ready to use Drive Mapping. Simply connect by following the procedures described in Chapter 3. If you just want to use Drive Mapping, you can connect without starting any other ReachOut function.

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To connect without opening a window

- From the Link menu of the ReachOut Viewer, choose Connect Only.

The drive mappings automatically take effect. Remember that the drive mappings may depend on the password you use to establish the link.

To view the mapped drive contents



1. From the Windows Program Manager, open File Manager (usually in the Main group).
2. In any File Manager window, click on the drive letter icon of the mapped drive.

The File Manager window is updated to display the contents of the drive.

To access files from within an application

1. Open any application.
2. Change to the mapped drive, or type in the complete path.
3. Choose a file to open.

You can use the mapped drive just as you use any other drive.

Depending on the amount of access allowed to the Client, you can open, save, rename, and delete files on the mapped drive.

ReachOut for DOS

You can use the mapped drive as you would use any other drive. If the mapped drive letter is E, type E: at the prompt to change to that drive.

You can use the ReachOut batch files to automate file transfers over mapped drives. Contact the Stac BBS or Stac Fax for updated technical documents describing this procedure.

Drive Mapping Security

ReachOut Drive Mapping includes Read/Write settings you can use to determine the level of access allowed to Client users. Set the Read/Write options in Share Drives when you configure your Server directories.

IMPORTANT! *Drive Mapping Read/Write options are independent of ReachOut File Manager security options (see Chapter 5).*

Read/Write Options

Whether the Server is the Host or the Viewer, you can specify one of three levels of access for each Server path.

- **Read/Write:** This option allows full access to the mapped directories, including the ability to create, rename, and delete files and directories.
- **Read Only:** This option allows the Client to open files located on the Server drive, or to copy them to another drive. Once a file is copied to a writable drive, the Client owns the copy and may edit, rename, or delete it.
- **Write Only:** This option allows the Client to save or copy files to the Server drive, as well as rename and delete files on the Server drive. The Client cannot open or copy files already stored on the drive, so the Client is prevented from viewing sensitive data. This option is useful if you want to allow Clients to back up their information to the Server without being able to open Server files. We recommend, however, that you create an empty Server directory for this purpose, so that files already existing on the Server cannot be renamed or deleted.

Adding New Paths From the Client

A Client must use the Server's master password to change a ServeUp path. The Client must be the Viewer and the Server must be the Host. The Client can then run Share Drives in the ReachOut viewing window.

To change the ServeUp path from the Client



1. From the ReachOut Viewer main window, choose Remote Control.
2. In the viewing window, run SERVEUP.EXE from the Client's ReachOut directory.
You can do this by double-clicking on the file name in Windows File Manager.
3. When prompted, enter the master password.
4. Edit the ServeUp paths as desired.

Note: *You must save the changes to the Drive Mapping file, disconnect, and reconnect before the new drive mappings can take effect.*

For more information on master passwords, see Chapter 8, *Security*.

7

ReachOut CONFIGURATION

You can change the way your computer is set up for remote communication with ReachOut's Configuration utility. The Install program automatically uses the utility for your initial configuration.



Configuration

Suppose you changed your modem or attached it to a different communications port. Just double-click the Configuration icon in the ReachOut program group and tell ReachOut what the changes are.

You can also use the Configuration window to switch from using a modem connection to using a network connection or to modify network parameters. ReachOut remembers the latest configuration for each connection type, so all you have to do is select the type you want and it's ready to use.

Suppose you use ReachOut over a modem to control computers at work. You also want to use it over the Internet occasionally. Use the modem configuration for normal ReachOut work. Configure ReachOut for the Windows Sockets for use over the Internet. Once you are on the Internet, use the ReachOut's Internet configuration to control a waiting Host.

This chapter shows you how to:

- Select a different modem
- Change network or modem pool settings
- Configure ReachOut to connect over an ISDN line
- Modify how ReachOut handles a DOS session
- Switch between different connection types

Connection Types

ReachOut supports several different connection types, depending on the choices you made during installation. You configure one connection type when you install ReachOut. You can configure other types and switch between them using the Configuration icon in the ReachOut program group. You can also configure ReachOut from the Preferences menu within the Host or Viewer.

Type	What it does
Modem	ReachOut handles hundreds of different modem types. You can even define a new modem if yours isn't listed.
Network	ReachOut handles the most common networks, including Novell's NetWare, Microsoft LAN Manager's NetBIOS, Banyan VINES, Windows Sockets, and FTP TCP/IP networks.
Modem Pool/ACS	ReachOut handles common ACS arrangements for sharing modems, as when several modems are available to network users.
Direct Connect Cable	ReachOut lets you control a computer connected directly by a null modem cable to your computer through the COM ports.
Internet	ReachOut sets you up to use Windows Sockets network protocol.
Remote Node	ReachOut lets you connect over a network that you joined using remote node software.
ISDN	ReachOut lets you connect over an ISDN line.
Cellular Modem	ReachOut lets you choose a cellular modem.

ReachOut for Windows & DOS

ReachOut uses one connection type at a time. You may use ReachOut to control other computers on the network when ReachOut is configured for a network. To use ReachOut to control computers outside a network, you can use an individual modem, a modem pool, an ISDN line, or a direct connection.

Starting Configuration

ReachOut's installation program prompts you to configure ReachOut for your first use. You can specify additional options or change your connection type from within the Host or Viewer.

Changes to a computer's current type of configuration take effect the next time you connect to another computer.

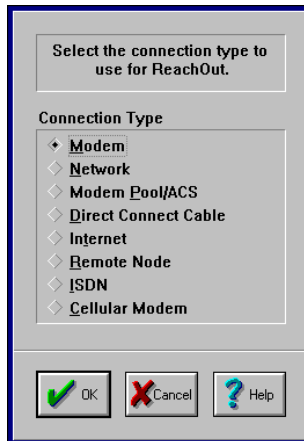
To start the Configuration utility



Configuration

1. In the ReachOut program group in Windows Program Manager, double-click the Configuration icon.
2. Choose the type of connection you wish to configure, then click OK.

Choose one
connection
type to
configure



3. If the master password dialog box appears, type the master password, then choose OK. (See Chapter 8 to learn how to define a master password.)

Note: From the ReachOut Viewer or the ReachOut Host window, you can use the Preferences menu to Select Connection Type or Configure Connection Type. If you select a type that isn't yet configured, the Configuration window opens automatically.

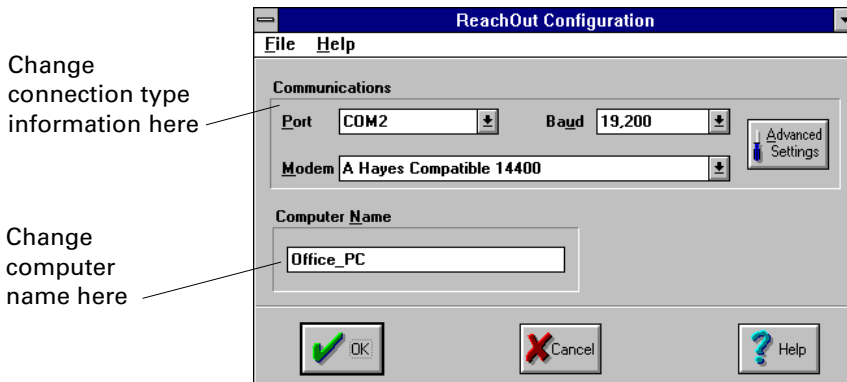
ReachOut for DOS

To open a Configuration window in DOS, change to the ReachOut directory, and type SETUP at the DOS prompt. You'll be able to manage the phone book and password lists as well.

To configure ReachOut to use a network or modem environment for the first time, if you didn't do it during installation, type CONFIG instead.

The Configuration Window

The main Configuration window has similar areas no matter what connection type it deals with. For example, here's how it looks if you are configuring for a modem:



ReachOut for Windows & DOS

The ReachOut Configuration window always includes the Communications section and the Computer Name. The fields in the Communications section vary according to the connection type being configured. For a modem, you see the port, the transmission speed, and the modem for which ReachOut is currently configured. When you are configuring a network or modem pool, the Configuration window includes additional sections.

The File menu lets you create a new ReachOut program group if that becomes necessary, put the Host in the StartUp group, Disable the Window Host, or exit Configuration. When you choose OK, any configuration changes are saved automatically.

Changing Modem Settings

If you change your modem, you must tell ReachOut what the new modem is (name, model number, transmission speed, and so on) before using it to connect. If you change any of your modem's features, you must also inform ReachOut.

Tip! *Windows 95 users can use their existing modem settings with ReachOut for Windows & DOS. Appendix C, Windows 95, shows you how.*

Use the Modem Configuration window to make modem setup changes.

To do this ...	Use this field ...
Specify the communications port your modem is connected to (such as COM1).	Port
Choose your data speed. For modems up to 9600 baud, use the modem rate. For higher speed modems, depend on your UART speed. See Appendix A for more information on setting speed.	Baud

To do this ...	Use this field ...
Choose the type of modem and model number (such as Hayes Accura 14.4).	Modem
Change your computer's name. This name appears in connection lists and on connected computers.	Computer Name

ReachOut for DOS

Change to the ReachOut directory and start SETUP, then use commands on the Comm Settings menu to change the configuration. Commands on the File menu let you save the configuration.

Selecting a Different Modem

If you've changed the modem attached to your computer, you'll have to configure the new one. Both internal and external modems are attached to a communications port.

To configure a new modem



1. Start Configuration. Choose Modem if necessary.
2. In the Modem field, choose the exact type of modem.
If your modem isn't listed, choose "A Hayes Compatible 2400" from the list.
3. In the Port field, choose the correct COM port.
If you are changing from an older modem, the port has probably not changed.
4. In the Baud field, set the data speed based on your UART chip.

ReachOut for Windows & DOS

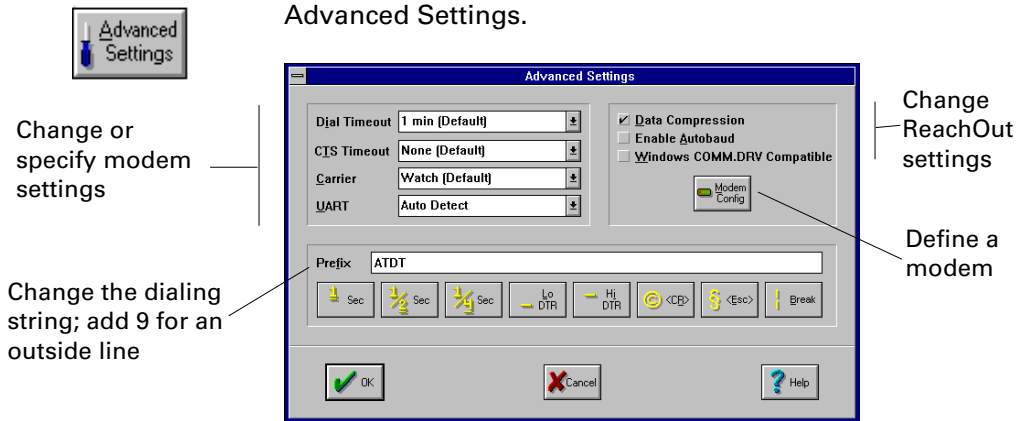
The speed may be greater than the bits per second or baud rated for your modem. For modems of up to 9600 baud, use the rated speed. For higher speeds, you can try the next higher speed in the drop-down list.

Additional Modem Settings

You may want to specify different settings for some of your modem's features. For example, suppose you want to change the timeout value, set a general calling prefix, or turn off data compression or autobaud. You do all this and more through the Advanced Settings dialog box.

To specify advanced modem settings

- From the Configuration window for your modem, click Advanced Settings.

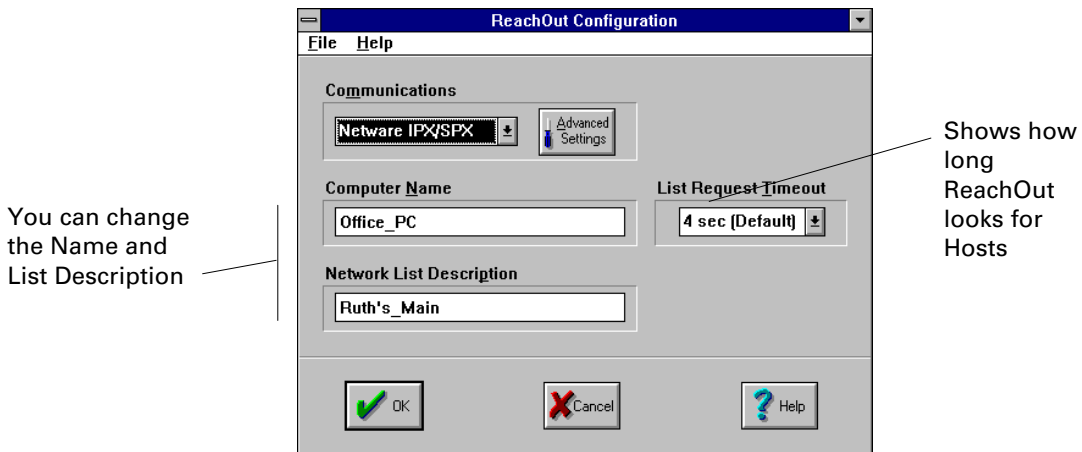


Tip! If your telephone uses pulse rather than tone dialing, change the dialing prefix from ATDT to ATDP. It will apply to all outgoing calls.

You'll find full details for using all advanced settings in ReachOut Help. If you use the Modem Config button to add a new modem to the modem list, you'll need the modem's documentation for information.

Configuring for a Network

Before you can use ReachOut over a network, you must configure it for the network you use. If you work over more than one network, you can reconfigure ReachOut to switch between them. In addition, you can modify settings including your file server, the computer name and description for the network list, and the timeout for preparing the network list.



Your Computer Name and Network List Description appear in ReachOut's network list when a Viewer tries to connect over your network. The name and description can use any alphanumeric characters. The Name is limited to 16 characters, the Description to 32.

When a Viewer is ready to connect over a network, the ReachOut Connect dialog box lets you request a list of waiting Hosts on the network. The Computer Name and Network List Description appear in that list. The List Request Timeout specifies how long ReachOut should search the network for waiting Host computers.

Specifying the Network

Your ReachOut computer can connect to another ReachOut computer on any of these networks or a network that is compatible with them:

- Novell's NetWare IPX/SPX
- Any NetBIOS
- Windows Sockets
- Banyan VINES
- FTP TCP/IP protocol

Additional Network Settings

Each network type may require some additional settings. Use the Advanced Settings dialog box to specify values specific to the network. In most cases, the default values apply.

To specify additional network settings

1. In the Communications field, select the type of network.
2. If it's available, click the Advanced Settings button.



The dialog box that appears depends on the selected network. If you aren't sure what to do, click the Help button for details.

To configure for use over the Internet

- Choose Windows Sockets (for use under Windows) or FTP TCP/IP (for using the Internet under DOS).

To connect to a ReachOut Host over the Internet, you must provide the Host's IP address in your phonebook or in the connection dialog.

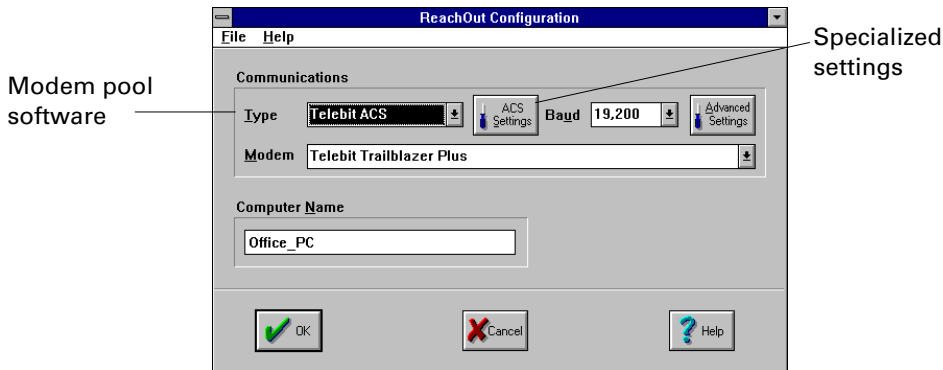
If your computer uses a modem to access the Internet, connect to the Internet first, then start ReachOut Host or Viewer. If your computer is already on a network with Internet access, run ReachOut as usual.

Configuring for a Modem Pool

A group of modems shared by computers on a network or by a single computer make up a modem pool. Special ACS (Asynchronous Communications Services) software controls the availability and assigns modems as needed. Suppose the network at your office includes a bank of shared modems. When you start a ReachOut session to a user who isn't on the network, the modem pool assigns one of its modems to your computer.

The Modem Pool software is a communications interface that makes it appear as though a modem is physically attached to your computer. It selects a modem when ReachOut needs one. You don't need to know exactly which modem is used each time you connect.

You'll use the Modem Pool configuration window to switch to the Modem Pool configuration or to modify your current modem pool setup. Individual fields are the same as for a modem configuration.



Your ReachOut computer can connect to a modem over any of these types of ACS standards or a system that is compatible with them:

- NetWare Connect
- NASI / NCSI

ReachOut for Windows & DOS

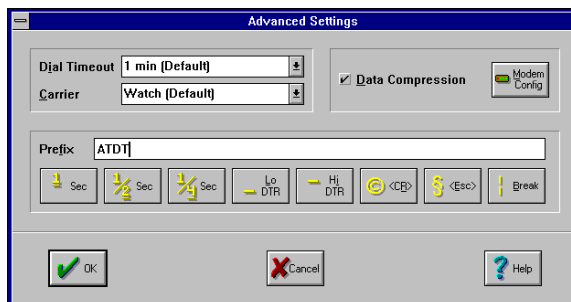
- Telebit ACS
- Modem Assist Plus
- Int14 / 6 Banyan

Modem Pool Settings

Each modem pool type requires some additional information.

To configure the modem pool

1. In the Communications field, select the type of modem pool software. Click ACS Settings if necessary.
The resulting dialog box requests information specific to the type of modem pool. Click Help for details.
2. Enter the appropriate information, then click OK.
3. To specify additional information related to modems in the pool, click the Advanced Settings button.



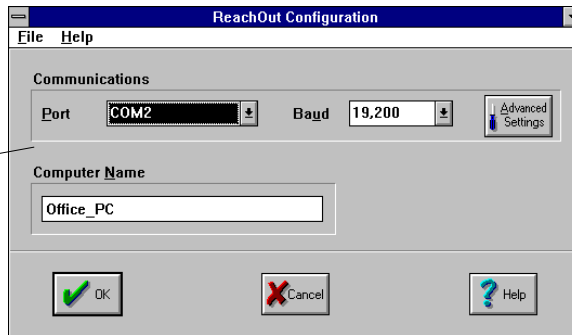
Check ReachOut Help if you need details.

Configuring Direct Connections

If your computer is connected to another computer with a null modem cable, you can set ReachOut to communicate with it directly.

Chapter 7 • Configuration

Specify the
correct COM
port



The screenshot shows the 'ReachOut Configuration' window. It has a menu bar with 'File' and 'Help'. The 'Communications' section contains a 'Port' dropdown menu set to 'COM2', a 'Baud' dropdown menu set to '19,200', and an 'Advanced Settings' button. Below this is the 'Computer Name' section with a text field containing 'Office_PC'. At the bottom are three buttons: 'OK' (with a green checkmark), 'Cancel' (with a red X), and 'Help' (with a question mark).

If you installed ReachOut only for serial and ACS connections, Direct Connect is not on your initial configuration list. In that case, choose Modem when Configuration offers you a choice. From the modem list, choose Direct Connect (Null Modem Cable).

To specify a different port for Direct Connect



1. Start Configuration, and choose Direct Connect.
2. Select the appropriate Port field, and click OK.

For details on changing other Direct Connect options, read *Changing Modem Settings* earlier in this chapter or see ReachOut Help.

Configuring for an ISDN Line

An Integrated Services Digital Network (or ISDN) line is a special type of telephone line that uses only digital communications. ISDN lines let you send and receive data much faster than normal telephone lines.

ReachOut supports two configuration options for ISDN connections.

ISDN Modem

Use the ISDN Modem configuration if you have an ISDN modem on your COM port. When you choose Modem as your ISDN type, ReachOut's

ReachOut for Windows & DOS

modem selection defaults to an ISDN modem. The other fields function as they would if you were configuring ReachOut for a regular modem. For details, see *Changing Modem Settings* earlier in this chapter.

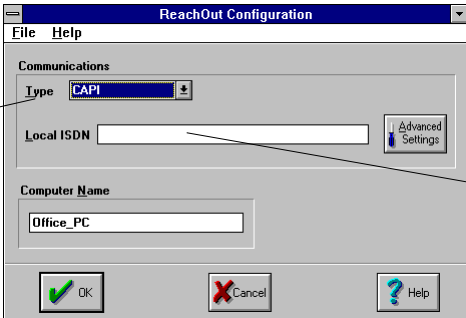
ISDN CAPI Terminal Adapter

An ISDN terminal adapter sends data using an ISDN protocol instead of modem commands. ReachOut supports the CAPI 2.0 protocol.

To configure ReachOut with ISDN CAPI

1. Start Configuration, and choose ISDN.


Configuration
Choose CAPI if
your ISDN adapter
uses the CAPI 2.0
protocol



Type your
ISDN phone
number here

2. Under Type, choose CAPI.
3. For Local ISDN, type the phone number of the ISDN line.
Certain ISDN functions use or display this number.

ReachOut for DOS

To set up ReachOut for ISDN in DOS, change to the ReachOut directory and enter CONFIG. You'll see the ISDN configurations as setup choices.

Changing DOS Settings

If you'll be using ReachOut in Windows to control a DOS Host, you may have to change ReachOut's DOS configuration. You may want to specify a

nondefault screen size for the DOS Host, or set up background file transfer. You can also enable Drive Mapping for your computer.

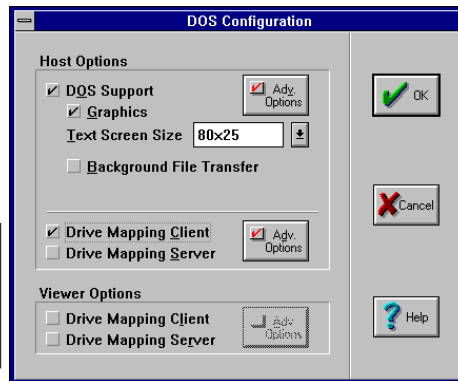
Check ReachOut Help for complete information on the DOS options.

To modify DOS Configuration settings

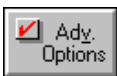
1. In the Host or Viewer, pull down the Preferences menu.
2. Choose DOS Options.
3. Make your changes in the dialog box, then click OK.

Change DOS
control defaults

Set DOS Drive
Mapping



To modify advanced DOS options



1. Click Adv. Options in the Host Options section.
2. Make your changes in the dialog box, then click OK.

ReachOut for DOS

To change your COM port configuration under DOS, change to the ReachOut directory and enter SETUP. You can change any settings for using ReachOut with a modem, a modem pool, or a direct connection. You can even define a new modem or edit a modem definition.

To set up for network or modem for the first time, use CONFIG instead.

Your computer is valuable, and you don't want just anyone to have access to it. The best thing you can do to protect your computer from unauthorized access is to implement strict security measures.

ReachOut comes with a full complement of security measures, some of which prevent unauthorized users from connecting to a Host. This chapter focuses mainly on connection security features, which include:



- Passwords to limit Host access
- Intruder Guard to alert you to unsuccessful connection attempts
- Confirmation feature that lets the Host user decide which Viewers can connect

Other security features allow you to restrict Viewer control over the Host, disable redirected printing, or force minimum file security when files are transferred with ReachOut File Manager. File Manager security is covered in detail in Chapter 5, *File Manager*.



For system administrators and other users who need more restrictive security options, ReachOut provides a separate Supervisor Security utility; the settings here override the Host Security settings. Supervisor Security is covered in Chapter 9 of this User's Guide, since its features are most useful to system administrators.

Levels of Security

ReachOut provides several levels of security options you can use to control access to your computer:

- Host Computer Access
- Host Utility Access
- Supervisor Security

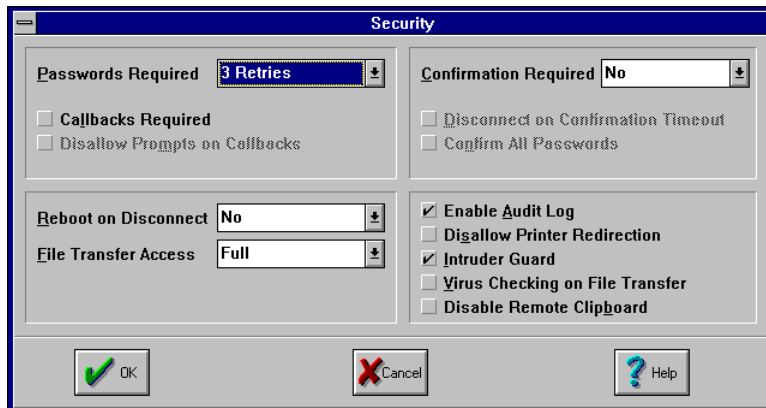


Security

Edit Passwords
Options...

Basic Host access includes viewing and controlling the Host, using ReachOut File Manager, and mapping drives. Set your general security options through the ReachOut Host. The Security menu provides basic control over passwords, ReachOut File Manager access, and the Viewer's ability to use features such as redirected printing and remote clipboard when connected.

Host Security provides basic control over passwords and other security features



If you are in charge of the Host computer, you may want to access ReachOut utilities on the Host, including the Password List, the Audit Log, and Share Drives. Defining a master password prevents others from editing the Host's passwords and allows you to access the Password List and other utilities while connected. So if you know the master password,

ReachOut for Windows & DOS

you can use ReachOut to call the Host computer, open the Password List, and edit it from the Viewer. To learn how to define a master password, see *Master Password* later in this chapter.

IMPORTANT! *Always close Security and Configuration windows and dialog boxes when you are finished with them. If you leave them open, a connected Viewer has access to them even without a master password.*

Passwords

When you require passwords, you secure the Host computer against users who don't know a password. With each password entry, you can specify privileges such as the read/write access allowed to your files and the Drive Mapping file to use with ReachOut Drive Mapping (see Chapter 6). Users who connect to the Host cannot run ReachOut Host utilities such as Configuration and Share Drives. No security features or password lists can be accessed with a regular password while the Host is connected.

To require passwords



1. Open the ReachOut Host.
2. From the Security menu, choose Options.
3. Under Passwords Required, choose any setting other than "No."

The number of retries is how many chances a connecting Viewer has to enter the correct password before being disconnected by the Host.

4. Choose OK.



To define a Host password

1. Open the ReachOut Host.
2. Choose Edit Passwords.
3. If passwords have already been defined, choose Add to add a new password.
If no passwords have been defined, ReachOut automatically brings up the Add dialog box.

The image shows a dialog box titled 'Add Password List Entry'. It has a blue title bar. Inside, there are three text input fields: 'User Name', 'Password', and 'Callback (Optional)'. Below the 'Password' field is a checkbox labeled 'Password Expired'. To the right of these fields is a section titled 'File Manager Access' with a list of options: 'Full', 'Read/Write', 'Read Only', and 'None'. At the bottom of the dialog are four buttons: 'OK' (with a green checkmark), 'Cancel' (with a red X), 'Adv. Options' (with a red flag icon), and 'Help' (with a question mark icon).

4. Enter a user name.
All Host user names must be unique. A user name can be any combination of up to 32 characters.
5. Enter the password.
Passwords are not case-sensitive, which means that "Spot" and "SPOT" are the same. A password can be any combination of up to 16 characters.
6. Choose OK and return to the Host main window to put the new password into effect.

ReachOut for DOS

Press ENTER after typing or selecting the information in each field. Only User Name, Password, and File Access need to be completed; just press ENTER to leave other fields blank. After the last field on the screen, you will return to the Password List. Press ESC at any time to exit without saving.

ReachOut for Windows & DOS

From the ReachOut Password List dialog box, you can also highlight a password entry and choose Edit if you want to change an existing password entry instead.

By default, ReachOut does not require that a connecting Viewer enter a user name. A supervisor can require user names; see *Supervisor Security* in this Chapter 9.

The Password Utility



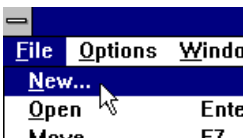
The ReachOut directory contains a file called PASSWORD.EXE. This is the ReachOut Password List that is reached from the Edit Passwords button or the Security menu in the ReachOut Host. If you only want to work with the Password List, you can run PASSWORD.EXE without opening the Host.



If you expect passwords to change frequently, you may find it useful to add PASSWORD.EXE as an icon in Windows Program Manager. On systems where user names are required, having a Password List icon makes it easier to change your Host password.

To add ReachOut Password List as an icon

1. In the Windows Program Manager, highlight the ReachOut group.
2. From the Program Manager's File menu, choose New.
3. Select Program Item and choose OK.
4. In the Description field, type the name that you want to appear below the icon; for example, "Password List".
5. In the Command Line field, type the name of the password utility, including the full path where it is stored; for example, "C:\REACHOUT\PASSWORD.EXE".
6. Choose OK.



Changing Your Password

Through Supervisor Security, you can allow users to change their own passwords on a Host computer. Sometimes you will need to change your password because it is only good for a certain amount of time. Changing your own password also allows you to keep it secret; not even the system administrator can view it (although it can still be expired or removed). You can change your password directly from the Viewer.

To change your password



1. Connect to the Host computer.
2. From the ReachOut Viewer main window, choose Remote Control.
3. In the viewing window, choose the Password List icon.
If there is no Password List icon, you can run PASSWORD.EXE in the ReachOut directory by double-clicking its name in Windows File Manager.
4. Type your current password and your new password below it.
5. Choose OK.

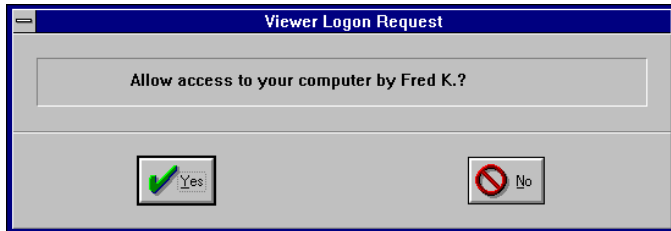
The next time you connect to the Host computer, use your new password.

Password Confirmation

You can add another level of security to Host connections by enabling ReachOut's confirmation feature. Suppose several employees are on the move and routinely call office computers from different places. You can configure ReachOut so that a person sitting at the Host computer can confirm or deny connection attempts. When a Viewer attempts to connect, a prompt appears at the Host asking the Host user to confirm

ReachOut for Windows & DOS

that a connection is allowed by that user. If the connecting Viewer does not enter a user name, then the computer name is used.



When you turn on confirmation, you also set a timeout. When a Viewer tries to connect, the prompt appears on the Host computer for the length of the timeout. If the time elapses and no one at the Host computer has responded, one of two things can happen:

- The Viewer is automatically allowed to connect
- The Viewer is automatically disconnected

You determine which of these options you want by setting Disconnect on Confirmation Timeout in the Security dialog box.

You can choose to use Confirmation instead of passwords, or you can have the Host user confirm all attempted connections with passwords.

To turn on confirmation



1. Open the ReachOut Host.
2. From the Security menu, choose Options.
3. Under Confirmation Required, choose anything except "No." This field displays the number of seconds for which the confirmation prompt will appear on the Host's screen.
4. To confirm users connecting with passwords, check Confirm All Passwords.

5. To have the Viewer be disconnected if and when the confirmation time runs out, check the Disconnect on Confirmation Timeout option.
6. Choose OK.

ReachOut for DOS

Choose Confirmation Options from the Security menu and follow the instructions on the screen.

The Callback Feature

Suppose you work part of your week at home, but you need to use your computer at the office. You could set up your office PC as a ReachOut Host and dial in from home. But if it's a long-distance call and your company is willing to pay the phone charges, you don't want the call to originate from your home. So you have the office PC call back your home computer, and the phone charges are billed to the office.

This is ReachOut's callback feature. It tells the Host computer to automatically call back the Viewer. To use callback, you must define a callback password on the Host. You can specify the callback number associated with the password, or have the Viewer enter the callback number when a connection is established. Using a specific callback number helps to maintain security by forcing ReachOut to confirm the source of the call. Using a prompt callback makes it possible to connect from different locations.



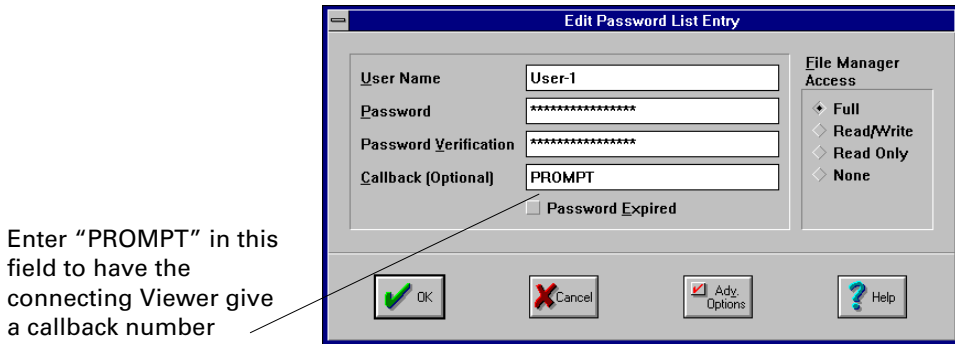
To define a callback password

1. Open the ReachOut Host.
2. Choose Edit Passwords.
3. In the ReachOut Password List dialog box, choose a password and click the Edit button, or choose Add to add a new password.

ReachOut for Windows & DOS

4. Enter the user name (if necessary) and the password.
5. Under Callback, enter the number that the Host will call to complete the connection.

If the connection will be made over a network, enter the computer name of the Viewer in the Callback field.



To have the caller specify a callback number, type the word "PROMPT" (all capital letters) in the Callback field.

6. Choose OK and return to the Host main window to put the new password into effect.

When you connect to a Host using a callback password, the ReachOut Host automatically hangs up and calls you back. If the callback is set up to prompt you for the number, you need to enter it before ReachOut can disconnect and call you back.

Master Password

To use ReachOut utilities such as Supervisor Security and the Share Drives while connected, you must create a *master password* for the Host. With the master password, you can also run the Host's utilities from within a viewing window. If a master password exists, you will need to enter it any time you want to use these utilities—even if you are not connected.

The master password serves a dual purpose:

- It allows you to run ReachOut utilities such as Share Drives and the Password List over the ReachOut link.
- It prevents other users from accessing certain security features on the Host computer, even if they are physically using the Host computer.



To create a master password

1. Open the ReachOut Host.
2. Choose Edit Passwords.
3. In the ReachOut Password List dialog box, choose Add to add a new password or Edit to change an existing one.
4. Type "MASTER" in the User Name field. It is not case-sensitive.
5. Type the password in the Password field.
6. Choose OK and return to the Host window to put the master password into effect.

Changing Host Settings Remotely

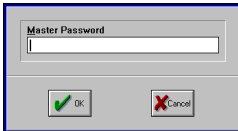
To set the Host computer's Drive Mapping and security options remotely, you must use a master password.

To change settings remotely

1. From the Viewer computer, connect to the Host (using any valid Host password).
2. From the ReachOut Viewer main window, choose Remote Control.



ReachOut for Windows & DOS



3. In the viewing window, open the ReachOut utility that you wish to change.
For example, to change the Host computer's Supervisor Security settings, choose Supervisor Security from the ReachOut group.
4. When prompted, enter the master password.
5. Make your changes and exit the Host's utility.
In many cases you will have to disconnect and then reconnect for the changes to take effect.

ReachOut for DOS

To run the Host's ReachOut utilities while connected, choose Return to Host PC from the File menu after you have connected, then run the Host's ReachOut utilities.

This chapter describes how to use ReachOut's network features. The information in this chapter is primarily intended for system administrators. If you simply want to install and run ReachOut on two computers that are connected to the same network, you do not need to read on. The network version of ReachOut requires no special procedures to run. ReachOut's basic functionality is explained in the first eight chapters of this User's Guide.

The power of a network lies in the fact that you can centralize and control files and applications and still allow multiple users access to them. ReachOut lets you take advantage of these features. A system administrator can control configuration and security features at the highest level, and allow users to set up ReachOut on their computers from a centralized network directory. For example, you can make changes in ReachOut's Supervisor Security on the network and these settings will be in effect on every computer which runs that copy of ReachOut.



Supervisor
Security

ReachOut's network features include:

- "Public" installation of data files from a network directory
- Scripted installation, allowing you to create standard setups
- Centralized security settings, letting you enforce network-wide security standards
- Gateway support, allowing modem users to access network computers for telecommuting and other purposes

Requirements

ReachOut supports five different network protocols:

- Banyan Vines
- FTP's TCP/IP (DOS and Windows)
- NetBIOS
- NetWare IPX/SPX (SAP or Broadcast)
- Windows Sockets (TCP/IP for Windows)

The Windows Sockets configuration lets you make Windows connections between computers running on TCP/IP networks. Most versions of TCP/IP running in Windows are supported by Windows Sockets. For DOS connections between computers running FTP's TCP/IP, use the FTP TCP/IP configuration.

You can also use the Windows Sockets configuration to communicate with ReachOut over the Internet while running in Windows. To do this, connect to the Internet using your provider's software (if you use a modem), then run ReachOut configured for a Windows Sockets connection. If you are already on a network, you won't have to connect directly to the Internet first. You will need to know the IP address of the computer that you want to connect to.

When you are running in DOS, each network type has an associated executable file that controls the ReachOut interface. This executable is a Terminate-and-Stay-Resident program; once it is loaded, ReachOut can be used to link any two computers on the network. The users need not be logged on to a network server to make a ReachOut connection. To link computers on different types of networks, you must use a gateway. See *ReachOut Gateways* later in this chapter.

For specific information on using ReachOut with the different network types, see *Network Technical Information* at the end of this chapter.

Installation and Setup

ReachOut installation is covered in Chapter 2 of this User's Guide. When you reach the Connection Type dialog box, choose Network; then select your network type.

General configuration is covered in Chapter 7. The advanced configuration options are different for each network type. ReachOut provides default values for any required parameters; others are left blank. Note that a NetWare server name is required only if you want ReachOut to communicate between network segments.



For details on the specific settings, see ReachOut Help.

Changing the Connection Type

If a computer is on more than one network, or if you use both network and modem connections, you may want to change the type of connection that ReachOut is using. You can do this at any time with the Configuration utility.

To choose a different network



1. Choose Configuration from the ReachOut program group.
2. Choose Network, Internet, or Remote Node from the list of connection types.
3. For Network or Remote Node connections, select the network type from the Communications drop-down list.
If you choose Internet, ReachOut is automatically configured for Windows Sockets.
4. Choose OK.

ReachOut for DOS

To choose a different configuration, change to the ReachOut directory and type CONFIG, then press ENTER to set up ReachOut for DOS.

Installing Over the Network

Instead of having an independent copy of ReachOut running on each network computer, you can centralize and control ReachOut by installing it onto a network drive. Users can then run ReachOut from the network directory, installing only individual data files and batch files to their own computers. Install's PUBLIC parameter does this automatically.

To install only ReachOut data files

- Change to the network ReachOut directory and type INSTALL PUBLIC.

If users install from a network directory, you can make security settings globally. For details on securing ReachOut on a network, see *Supervisor Security* later in this chapter.

Scripted Installation

If you want to install ReachOut on many different computers, you can use a *script* to determine all the settings so that you do not have to go through all the screens every time you install the program. This allows a network administrator to preconfigure the installation for users. If you fully install ReachOut on a network drive, then INSTALL.EXE can be run on each workstation directly from the network. You can attach a script file to INSTALL.EXE so that ReachOut skips some or all of the setup questions. For example, if you want the computers configured only as Viewers, put the line TYPE=VIEWER in the script file.

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To create an installation script

1. Using any text editor, such as Windows Notepad or DOS Edit, create a new file.
2. On separate lines, type the installation keywords and their settings.
3. Save the file in the ReachOut directory.

To make installation transparent to the user, you may want to bypass all of ReachOut's installation dialog boxes by specifying the options in the script file. Here are some of the features you can set in the script file:

To do this ...	Type this line ...
Install only ReachOut data files and batch files	PUBLIC
Install ReachOut to a specific directory	TARGET=path_name
Specify a directory under which a user can install to any subdirectory	TARGET=path_name\%1
Configure as a Host only	TYPE=Host
Configure as a Viewer only	TYPE=Viewer
Configure as both a Host and a Viewer	TYPE=Both
Configure for Windows only	MODE=Windows
Configure for Network only	NOMODEM
Set the network type	NETWORK=network_protocol (Types: NetBIOS, SPX, IPX, Banyan, SAP, FTP, WinSock)

To do this ...	Type this line ...
Set the computer name	NAME=computer_name
Allow the user to type the computer name with the install command (example: INSTALL NEWPENTIUM)	NAME=%1
Set the NetWare server	SERVER=server_name
Specify no NetWare server	SERVER=
Use the scripted install parameters without letting the user confirm them	AUTO

Full explanations of the installation script commands can be found in Appendix B.

To run an installation script

- Type the name of the script file after the word INSTALL. For example, if the script file is called NOW, change to the ReachOut directory and type INSTALL NOW.

Tip! *ReachOut's default script file name is ROINST (with no file extension). If you create an installation script with the name ROINST and save it to the ReachOut directory, it automatically executes when you run ReachOut's INSTALL.EXE from DOS or from Windows.*

Connecting on the Network

When you connect over a network using ReachOut, the ReachOut Connect dialog box prompts you for the name of another ReachOut computer. You create a network phone book just as you would create a

ReachOut for Windows & DOS

modem phone book, using the Add, Delete, and Edit buttons. Just enter the ReachOut network computer name instead of a phone number.

Managing the Phone Book in Chapter 4 covers the details.

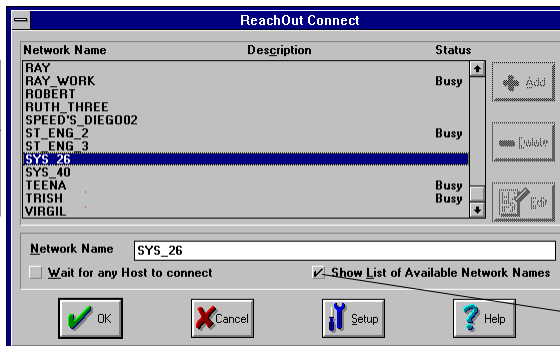
There is also an option to display the names of all of the available ReachOut Hosts.

Note: *Because this option searches the entire network and provides a list of every ReachOut Host available, it can be time-consuming and will increase network traffic. It is recommended that you do not use it unless you actually need it.*

To display all available ReachOut Hosts

- In the ReachOut Connect dialog box, check the box labeled Show List of Available Network Names.

ReachOut displays
a list of network
computer names



Check this
box to
display a list
of available
network
Hosts

ReachOut updates the list every few seconds while the dialog box remains open. If a particular Host computer is already connected to a ReachOut Viewer, you'll see the word "Busy" in the Status column for that entry. To connect, choose a computer from the list or type its name in the Network Name field. Then connect as explained in Chapter 3.

Note: *Show List of Available Network Names is not available on TCP/IP based networks (ReachOut's FTP and WinSock configurations).*

Supervisor Security



Supervisor
Security

If you are a system administrator, you may want to have more control over the security of a Host computer. In addition to Host Security, ReachOut provides a more extensive Supervisor Security program for use by system administrators. You can use Supervisor Security to:

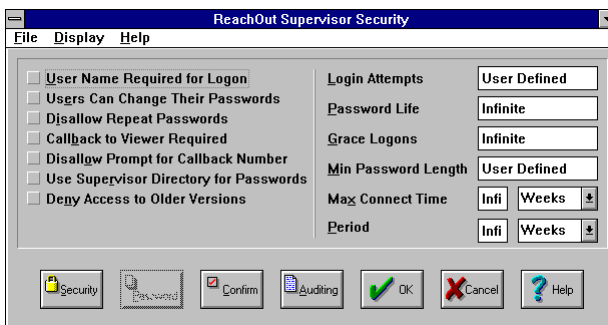
- Set security options that are not available from the ReachOut Host
- Override security options that are available from the ReachOut Host
- Enforce consistent security measures on all network Hosts

For example, you could use Supervisor Security to prevent access by users running older versions of ReachOut. Or you could permanently disable print redirection so that Viewer users cannot turn it on. Other supervisor options are described below.

To enforce Supervisor Security settings on all Host computers, each workstation must do a “public” installation of ReachOut from a secure network directory; refer to *Installation and Setup* earlier in this chapter. Any settings that you do not override can still be configured on the Host computers.



The figure shows the ReachOut Supervisor Security window, and this section outlines some of the main features of ReachOut’s Supervisor Security. For full details about specific security options, click Help.





Passwords and User Names

The password options are various restrictions on the use of passwords. You can set limits on the password life, invalid connection attempts, and the use of repeated passwords, among others. Most of these options are not available through the main Host security.

You can also use Supervisor Security to require user names.

To require user names

1. Click the Password button, or choose Passwords from the Display menu.
2. Check User Name Required for Logon.

Note: *A user name is not the same as the computer name that you give when you install or configure ReachOut. A person who has a valid user name and password can connect from any computer that has ReachOut installed.*

The Password section of Supervisor Security also allows you to enforce a standardized callback procedure.

To do this ...

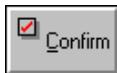
Check this option ...

Invalidate all Host passwords
without callbacks

Callback to Viewer Required

Invalidate all Host passwords with
prompt callbacks

Disallow Prompt for Callback
Number



Password Confirmation

You can set password confirmation from Supervisor Security. If you enable confirmation, it cannot be disabled in Host Security. You can require password confirmation but leave the disconnect and timeout options up to the Host user.

To allow the Host user to set the timeout

1. Click the Confirm button, or choose Confirmation from the Display menu.
2. Type “0” in the Confirmation Timeout field.
The field display will show “User Defined” the next time you open Supervisor Security.

Any other number displayed in Confirmation Timeout specifies the length of the timeout in seconds.



Auditing Connections

With the auditing options you can keep track of all ReachOut connections, whether the computer is a Host or a Viewer. You also have the option of monitoring any file transfers that occur using ReachOut File Manager. Auditing information is saved in a file called an *audit log*.

For information on using the audit log, see Chapter 4, *Remote Control*.



Intruder Guard

The Intruder Guard triggers an error on the Host computer if too many invalid connection attempts are made in a row. To set the Intruder Guard options, click the Security button at the bottom of the Supervisor Security window. You can set two types of Intruder Guards:

- Global Intruder Guard
- Individual Intruder Guard

If you define a global Intruder Guard, it is triggered when the maximum number of consecutive connection attempts has been reached, no matter who tries to connect. Once the global Intruder Guard is activated, no Viewer can connect to the Host until the Intruder Guard has been reset. Someone must physically be at the Host computer to reset the Intruder Guard.

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The individual Intruder Guard is triggered when the unsuccessful connection attempts are made from the same phone number or network computer. ReachOut sends a message informing the Viewer that the maximum number of connection attempts has been exceeded.

If you just set the individual but not the global Intruder Guard, the global Intruder Guard may be turned on in Host Security.

Note: *The number of invalid connection attempts is the number of times that the Intruder Guard will **not** be triggered. For example, if you set the global or individual Intruder Guard to 2, then two consecutive invalid connection attempts are allowed. After the third unsuccessful attempt, the Intruder Guard is triggered.*



Viewer and Host Restrictions

The general Security dialog box also provides a number of options that restrict the tasks you can perform from either the Viewer or the Host computer. For example, you can choose to blank the display on the Host screen whenever the Host is connected. You can also choose to prevent the Viewer from redirecting print jobs from applications on the Host computer to a printer connected to the Viewer. If you enable an option in Supervisor Security, it cannot be changed in Host Security.

Suppose you want to use the Host computer as a file server, similar to a network server. You could disable the Viewer input and restrict the files accessed through ReachOut File Manager. The Viewer would then have access only to the Drive Mapping ServeUp paths you defined on the Host.



Additional details about Host and Viewer restrictions can be found in ReachOut Help.

Enforcing Security Settings

When users run ReachOut from the network directory, the Supervisor Security settings take effect on each computer. ReachOut creates a coded file called REACHOUT.SEC that contains all of the Supervisor Security settings. This file cannot be edited without SECURITY.EXE.

To enforce ReachOut security settings



1. Run Supervisor Security and make any security changes.
2. In the ReachOut directory, create a script file named ROINST and enter the keyword PUBLIC on a line by itself. (See *Scripted Installation* earlier in this chapter.)
3. Make the ReachOut directory read and file-scan only.

Centralizing Passwords

You can force passwords to be read from the shared ReachOut directory. This allows the supervisor to have control of all passwords for any session of ReachOut run from the network; users will not be able to create or edit passwords.

To prevent individual password directories

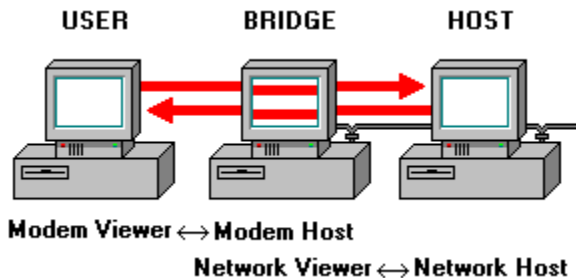


1. From the ReachOut network directory, run the Password List (PASSWORD.EXE).
2. Create a password entry for each user who will run ReachOut from the shared directory.
3. Exit the Password List, and open Supervisor Security.
4. In the Password section of Supervisor Security, check Use Supervisor Directory for Passwords.

ReachOut Gateways

Many times it is convenient for an employee to be able to access an office computer from home. Since most people do not have their home computers linked to the office network, this requires using a modem.

But this does not mean you have to install a modem on every office computer. A ReachOut *gateway* provides a way to connect a Modem Viewer with a Network Host. You do this by using a *bridge* computer, which transfers data between the two. The bridge is a network computer set up to receive a ReachOut call over a modem. A modem user connects to the bridge's Modem Host and uses the bridge's Network Viewer to call any ReachOut Host on the network. If the bridge computer maintains an audit log, it records all ReachOut connections to the network.



Example of a ReachOut gateway configuration

You can also set up a gateway between two different networks, if the bridge computer has network cards installed for both. You can *only* set up a ReachOut gateway between computers running ReachOut over different types of connections. The bridge computer cannot simultaneously run Modem Host and the Modem Viewer, or the Host and the Viewer for the same type of network.

Only one caller can use the bridge at one time. If you expect many ReachOut calls to the network, you may want to set up more than one bridge computer so that multiple users can be connected at the same

time. You can set up your phone lines in a “Hunt group” so that they are all serviced by the same phone number. Your telecommunications manager should know how to do this.

Tip! *You should probably configure your Hunt group in a “rotational” manner rather than a “linear” one. This means you route incoming calls to each computer in turn, instead of always checking the first one. The advantage is that if something goes wrong with the first computer, callers can still connect to another one.*

Setting Up the Bridge Computer

ReachOut’s DOS Host and Viewer automatically negotiate a gateway configuration. For basic setup, you need only run the Host and the Viewer at the same time.

IMPORTANT! *ReachOut gateways can only be configured using the DOS Host and the DOS Viewer. You must exit Windows completely before you can set up a gateway. However, you can connect to or from the bridge using a computer that is running ReachOut for Windows.*

Configuring the Bridge as a Host

To ensure that a gateway configuration remains in place after each user disconnects, you will want to add the Host command to the bridge computer’s AUTOEXEC.BAT file, and have the bridge computer restart after each use.



To configure a bridge computer as a Host

1. If you are in Windows, choose Exit Windows from the Program Manager’s File menu to return to DOS. You cannot use a gateway from a DOS prompt within Windows.

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2. Change to the ReachOut directory, then type HOST and press ENTER to run the ReachOut Host.
3. Press ALT+RIGHTSHIFT to open the Host screen.
4. From the Security menu, choose Reboot Upon Disconnect, then choose "Immediately" or "After 5 Minutes."

You can also change this setting in Supervisor Security.

5. Exit the Host and edit the computer's AUTOEXEC.BAT.
6. On a line by itself, type the command to change to the ReachOut directory; for example,

CD C:\REACHOUT

7. On the next line, type the command to run the appropriate ReachOut Host batch file: GHM.BAT for modem or GHN.BAT for network; for example,

CALL GHM

IMPORTANT! Do not combine steps 6 and 7 to use CALL C:\REACHOUT\GHM. The batch file needs to be run from the ReachOut directory or it will not find the license information and will therefore fail to run.

8. Save AUTOEXEC.BAT.

Configuring the Bridge as a Viewer

When you connect using a ReachOut gateway, you actually connect to two separate computers, each with its own ReachOut configuration and security. The bridge computer can have one password while each network computer has its own separate password. For security reasons, you can require that a user type a password for each computer. Or you can bypass the second logon so the bridge automatically connects to a network computer.

There are several different strategies you can use:

- Have the ReachOut Viewer automatically open on the bridge
- Have the bridge automatically connect to a network Host
- Have the bridge present a lists of different Hosts to connect to

To have the ReachOut Viewer open

- Edit the bridge computer's AUTOEXEC.BAT to include a line that calls the Viewer batch file GVN.BAT. This line must come *after* the line that calls the Host.

If each user will always connect to one particular network Host, you can set up the bridge computer so that it automatically connects to that Host. To do this, create a *command file* and attach it to the user's password. When the user connects to the bridge, the command file automatically runs. This method also has the advantage of automatically disconnecting the bridge computer when the user disconnects from the Host.

To have the bridge automatically call a network Host

Create a command file

1. Using any text editor, create a ReachOut command file. This file must have the extension .CMD.
2. Type CD C:\REACHOUT to have the Host change to the ReachOut directory.
3. Type GVN computer_name.
For example, if the name of the Host is TEST, type GVN TEST. Be sure to use the ReachOut computer name, not the one assigned by the network.
4. Save the command file in the ReachOut directory.

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Attach the command file to a password entry

5. Using the PASSWORD utility, enter the name of the command file in the user's password entry. (The Command File field is in the Password Advanced Options; press F10 when you reach the Password Entry screen. See *Command Files* in Appendix B for details.)

Have the Viewer run the command file

6. In the ReachOut directory, edit GVN.BAT.
You could also create a new batch file for starting the ReachOut Viewer.
7. Locate the line that contains the word VIEWNET.
8. Add /NAME=%1 to the end of the line; for example,
C:\REACHOUT\VIEWNET /NAME=%1
9. Save GVN.BAT.

When a Viewer uses this password to connect to the bridge computer, the bridge automatically calls the Host specified in the command file.

Instead of automatically connecting a Viewer to one particular Host, you can create a simple batch file that gives callers a menu when they reach the bridge. For example, the following batch file presents the user with a list of network computers that the bridge can connect to:

```
echo off
cls
echo Network Hosts:
echo.
echo 1. Engineering Main
echo 2. Bob's Office
echo 3. Carol's Office
echo.
echo.
prompt Type a number (1-3) and press ENTER:
```

One of three files 1.BAT, 2.BAT, or 3.BAT automatically changes to the ReachOut directory, runs the Network Viewer, and connects to the appropriate Host. Set up each batch file the same way you would set up a command file, as described in the previous procedure. (If you use the example above as a menu, you may want to put the line `PROMPT=PG` at the top of each numbered batch file to reset the DOS prompt.)

To display the menu when the bridge restarts

- Add the batch file name to the end of the bridge computer's AUTOEXEC.BAT.
For example, you can name the above file MENU.BAT and add the line
`CALL MENU`
to the end of the bridge computer's AUTOEXEC.BAT.

The following is an example of a bridge computer's AUTOEXEC.BAT file before and after configuring a gateway:

Before ...	After ...
prompt \$p\$g	prompt \$p\$g
lsl	lsl
exp16odi	exp16odi
ipxodi	ipxodi
netx	netx
PATH=C:\WINDOWS;C:\DOS;C:\	PATH=C:\WINDOWS;C:\DOS;C:\
lmouse	lmouse
	cd C:\REACHOUT
	call GHM

Disconnecting Gateways

When you are finished using the gateway, you should always disconnect “cleanly” from both the Host computer and the bridge. This means using the File menu in the ReachOut Viewer. If you hang up your modem without exiting ReachOut, the bridge and the Host may still be connected.

You can set an inactivity timeout on each network Host in case a gateway connection is accidentally interrupted. Then if no data is being transmitted, ReachOut will disconnect the Host after the specified time has elapsed.

To set an inactivity timeout

1. On the Host computer, change to the ReachOut directory and start the Host. Use ALT+RIGHTSHIFT to display the Host screen.
2. From the Preferences menu, choose Inactivity Timeout.
3. Choose an appropriate length of time from the secondary menu.

If you expect the gateway to be used often, you should choose “5 Minutes.”

Network Technical Information

This section contains technical information that may be useful when running ReachOut on a network. See Appendix A for troubleshooting information.

For NetWare and Banyan protocols, ReachOut provides each computer with two 6-character strings, one for the broadcast ID and one for the

group ID. The broadcast ID is used by ReachOut to identify the computer in broadcast network communications. The default broadcast ID is “OCEANI.”

The default group ID is “RCHOUT.” You should only change it if you want to separate groups of ReachOut computers. ReachOut can only communicate with computers that have the same ReachOut group ID.

Novell NetWare

ReachOut runs with any version of NetWare, including Personal NetWare. In Broadcast mode, ReachOut can communicate directly with IPX when configured for a NetWare IPX/SPX connection, or it can communicate with NetWare’s NetBIOS emulator using the NetBIOS configuration.

To operate correctly in NetWare Broadcast mode, ReachOut needs only the file IPX.COM, or the three files LSL.COM, a Network interface card driver such as NE2000.COM or EXP16ODI.COM, and IPXODI.COM—which allow ReachOut to perform peer-to-peer communications with other IPX workstations on the network. To connect across different network segments in Broadcast mode, you need to be running a shell (usually NETX or VLM) and be attached to a file server. On the Viewer computer, you must also specify a server name in NetWare Advanced Settings. To use the SAP configuration, you need to be running a shell.

ReachOut cannot function as a Host or a Viewer on a NetWare file server.

Banyan VINES

You do not have to have the Banyan redirector loaded to use ReachOut.

ReachOut uses its own naming mechanism to make a connection from a Viewer to a Host. The StreetTalk naming function of Banyan VINES is only used if no computer name is specified for ReachOut. Then ReachOut uses the part of the StreetTalk name before the first @ symbol, to a maximum of 15 characters.

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ReachOut's Banyan VINES socket support can function across your Wide Area Network (WAN). ReachOut has been successfully tested on Banyan 9.6K, 19.2K, and 56K baud Wide Area Network links. When using ReachOut across these slower links, have Windows disk caching enabled. This is set under Viewer Options on the Preferences menu in the ReachOut Viewer.

NetBIOS

ReachOut provides a NetBIOS programming interface for accessing many network environments (RCHNETB.EXE).

If you are using LAN Manager, you must be running version 2.0 or greater. ReachOut works with the BASIC or the ENHANCED workstation software. The computer name configured by LAN Manager is also the ReachOut computer name. The NET START WORKSTATION command registers the computer name with NetBIOS. If this command is not executed, ReachOut requires the NAME= parameter on the RCHNETB.EXE command line. Refer to Appendix B for information on ReachOut command line switches.

For Further Assistance

You can order technical documents directly from Stac. Use Stac's Bulletin Board System to download technical notes; the Stac BBS is included as an entry in the ReachOut modem phone book. You can also call Stac Fax to have documents faxed to you. Look in the front of this User's Guide to find the phone number.

Files, including technical notes, are also available for downloading from our World Wide Web page on the Internet.

A

ReachOut

TROUBLESHOOTING

If you have any problems connecting with or using ReachOut, refer to this appendix before you contact product support. The information in this appendix will help you solve problems that may occur.

- Modem Troubleshooting
- Direct Connect Troubleshooting
- Network Troubleshooting
- Modem Pool Troubleshooting
- Mouse Troubleshooting
- Redirecting Printing
- Video Resolution
- DOS Graphics Don't Display

Modem Troubleshooting

If you have any problems getting connected and staying connected over a modem, check this appendix. You should be able to find the problem and solve it quickly. If you use Modem Pool software, check with your system administrator first to be sure you are loading the correct TSR and specifying a valid modem. Then continue with this appendix.

The appendix includes procedures for identifying where the problem may be as well as detailed steps for checking out various pieces of your system. The first step is to determine exactly where the system breaks down:

- ReachOut can't dial the modem
- Incoming call rings, but the modem does not answer
- ReachOut dials, but nothing answers
- A modem tries to answer, but no valid connection is made
- ReachOut connects, but loses the connection quickly.
- ReachOut connects, but not under the conditions you want

Once you identify where the problem occurs, you can investigate in more detail. This appendix includes suggestions for localizing, identifying, and fixing problems. Take time to try one thing at a time.

ReachOut Can't Dial or Answer the Modem

Any internal or external modem connection involves several physical components. Of course, each computer needs a modem, a telephone line, and appropriate cables. The computer needs a serial port, often called a COM port. The COM port includes a UART chip that controls the maximum speed at which the port can transmit and receive data. The

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COM port is also assigned to an IRQ (Interrupt Request). Any one of these can cause problems.

If you can successfully make modem connections outside of ReachOut with the same physical equipment, check for IRQ conflicts first. ReachOut needs an isolated IRQ to make a connection.

Modem Pool. Modem pools require that you run a TSR, or Windows driver, before connecting with a modem accessed from the pool. Check your modem pool documentation or see your system administrator for details. Once the modem pool's TSR, or driver, is loaded, you should be able to connect. Some modem pool software includes monitor programs to help you make connections.

Telephone Line

The telephone line at each end of the connection must be active. If you have made voice calls or used your modem on that line before, it is probably fine. If not, make sure the telephone cable is attached to the correct jacks in the right order. If you have an internal modem, the cable goes from the wall telephone jack to the computer. If you have an external modem, the cable goes from the wall telephone jack to the modem.

If your modem has two jacks, the cable should be plugged into the jack labeled LINE or TELCO, NOT the one labeled PHONE.

To check the telephone line

- Plug a voice telephone into the wall jack to make sure you get a dial tone. Call the Host and see if you get a modem tone.

Cables

External modems require a serial cable plugged into the correct outlets on both the modem and the computer. Check your modem documentation if you aren't sure. Serial cables are usually plugged into COM1 or COM2. PCMCIA and internal modems do not require a cable.

To ignore a carrier signal

- Under Windows, start the Host or Viewer if necessary. Then choose Configure Connection Type from the Preferences menu. Click the Advanced Settings button, then choose Ignore in the Carrier field.

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Type SETUP to start the configuration utility. From the Comm Settings menu, choose Advanced Comm Options. Then choose Ignore Carrier from the Carrier Control submenu.

Modem

Make sure a modem is attached correctly to each computer. A serial modem cable must connect an external modem to a serial (COM) port on the computer. Don't use a null modem or serial printer cable.

- Each modem must be defined and configured correctly in ReachOut.
- Each modem must be turned on and properly connected to the communications (COM) port specified in ReachOut for that computer.

To identify the modem

- For an external modem, check its permanent label.
- For an internal modem, check its documentation.

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If your modem was listed in the modem list and you chose the exact modem, it is probably configured correctly. If your exact modem isn't listed, choose A Hayes Compatible 2400 modem. Then set the baud rate to the transmission speed your system can handle. Modems capable of compression can be set to speeds (baud) higher than the modem's baud. For example, you can set a 14400 baud modem to 19,200 baud. Most 2400 baud modems should be left at 2400 baud.

The modem cannot share an IRQ with another device. See *IRQ Conflicts* later in this section.

To define a generic modem in ReachOut for Windows

1. In Windows, open the ReachOut Viewer.
2. From the Preferences menu, make sure Modem is selected. Then choose Configure Connection Type.
3. If necessary, enter the master password.
4. In the Configuration window, open the Modem drop-down list and choose A Hayes Compatible 2400.
5. Close the Configuration window.
6. From the Link menu, choose Modem Diagnostics.
If the second line shows OK, the generic modem is communicating with ReachOut. Now you want to use the highest possible speed. In the gray area, notice what UART chip is used.
7. Return to the ReachOut Viewer.
8. From the Preferences menu, choose Configure Connection Type.

9. Set the speed to match your UART chip (19,200 for UART 8250 or 38,400 for UART 16550).
If your modem is actually a 2400 baud modem, set the speed at 2400 baud.
10. Check Modem Diagnostics again. If you still see OK, try using ReachOut over the modem you have just defined.

ReachOut for DOS

In DOS, run SETUP to select a modem. Start the Viewer, and choose Modem Diagnostics from the Link menu to see if OK is displayed after the reset string. If an ERROR is displayed, you probably have not selected the correct COM port.

To identify the COM port

1. Make sure the speaker for the modem or computer is on. Check your modem documentation if necessary.
2. At a DOS prompt, type `ECHO ATH1>COM1` and press ENTER.
 - If you hear a dial tone, you have found the serial port for your modem. Type `ECHO ATH0>COM1` and press ENTER to turn it off.
 - If you don't hear a dial tone or if you get any kind of error message, you have not found the right port. Repeat step 2 for COM2, COM3, and COM4.

You can run the same test with the modem plugged into the computer and the wall telephone jack, then a voice telephone plugged into the modem. Pick up the handset and listen to the dial tone. When you find the right port, you'll hear a click or the phone might seem to go dead.

You can also use modem diagnostics to see if you have configured the correct COM port. (In Windows, choose it from the Link menu. In DOS, type `RCHMDIAG` at the DOS prompt.) If you see just a flashing cursor in

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the text area, the COM port is probably wrong. Change it and check modem diagnostics again.

If you can't find the COM port, you may have a hardware problem. Check your computer documentation or contact the manufacturer.

IRQ Conflicts

DOS and Windows let different functions share IRQs, but ReachOut requires that the serial port be independent. By default, COM 1 and COM 3 often share an IRQ, as do COM 2 and COM 4. If you have only two COM ports and an external modem, you won't have this problem. However, some network adapters may also share an IRQ with a serial port.

Many internal modems are configured, by default, to use COM 2 on IRQ 3. This causes a conflict with a previously existing COM 2, whether the device is in use or not. Refer to your modem's manual to change the COM and IRQ settings, or disable your computer's COM 2. COM ports on most serial cards are set by jumpers on the card. Refer to your computer's documentation for details on changing it.

To check for IRQ conflicts

1. If necessary, exit to DOS.
2. At the DOS prompt, type MSD and press ENTER. (If necessary, change to the DOS directory.)
3. Type Q to see the IRQ (Interrupt Request) information.
4. Locate the COM port your modem uses and see the number of the IRQ. Typically IRQ 3 and IRQ 4 are used for all the COM ports.

5. If your modem's COM port shares an IRQ with another device, notice what COM ports are detected and what other IRQs are available. IRQ 5 is frequently not assigned, for example.

If you have only two serial devices, you can assign one to COM 1 and one to COM 2. If you have three serial devices, you'll have to change the IRQ assignment of one of the ports.

Nonstandard IRQ

If you aren't able to start up the Host or start a connection with the Viewer, you may see a message that the "communications port is not available." This may occur if your modem's COM port uses a nonstandard IRQ. This process is required for internal modems set to COM 3 using IRQ 5.

To change it, open the Windows Control Panel. Click the Ports icon and select the COM port your modem uses. Click Settings, then Advanced Settings.

Change the Interrupt Request Line (IRQ) field to show the interrupt your modem is actually set to. After making the changes in Control Panel, exit Windows and try ReachOut again.

Dial, But No Answer

Sometimes you can tell that ReachOut is dialing, but it doesn't make a connection. If the line is busy or out of order, try again a bit later. If your modem doesn't get an answer, try one of these:

- Make sure the phone number is correct.

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- Try calling the Stac BBS to verify that your basic configuration is OK, then try your own connection again. The Stac BBS is already included in your phone book. You may have to modify the number by adding 9 to the beginning of it (if your phone system requires that you dial 9 first) or removing the area code (if you are in the area code listed).

If the BBS connects, your Viewer's modem is functioning. To verify your Host, exit the Host menu, start the Viewer menu, and connect this machine to the BBS also.

- If you were using Windows, try the original connection in DOS. Try the BBS under DOS, too. Here's how:
 1. Close Windows and exit to DOS.
 2. Change to the ReachOut directory and type VIEW.
 3. Use the Link menu to try to connect using ReachOut for DOS.
- Make sure your modem is defined correctly. If there is any question, define a generic modem (explained earlier in this Appendix) and try connecting with that.

Attempted Answer, No Connection

You can tell when ReachOut tries to connect. You may hear different noises. You may see dialog boxes or prompts on the Viewer screen. Here are some things to check if this happens to you:

- Are you using the correct values? In addition to the correct phone number, the Host may require a password and maybe even a user name. If the Host uses a callback number, make sure it uses the telephone number of the line attached to your modem.

If you aren't absolutely sure, check and try again. You might try calling the number with a standard telephone to see if you get an electronic tone.

- Does ReachOut have enough time to connect?

The default is usually plenty. If you have an involved connection, such as starting at 2400 and switching to 14400, or establishing an international connection, ReachOut may need more time. In Windows, configure the Dial Timeout or CTS Timeout field. If you can't connect under DOS, you can add the CTSTMO parameter to your RCHSRL communications driver line. See Appendix B for more information on DOS command line parameters.

You can also change your modem's S7 register.

To set the S7 register

1. Double-click the Configuration icon.
 2. Choose Modem, then click the Advanced Settings button.
 3. In the Prefix field, change the dialing prefix from ATDT to AT S7=255 DT. This will increase the modem's time-out.
 4. If you prefer to change your modem's reset string, click the Modem Config button. Choose your modem and click Edit. Then add S7=255 just before the final carriage return symbol.
- Is the transmission speed correct?

The real limiting factor on speed is the UART in your computer. The UART chip determines how fast your computer can reliably transmit data to the modem.

UART	Maximum speed
8250	19,200 bits per second
16550	38,400 bits per second

If you have a very high speed internal modem or an accelerator card (such as Hayes ESP), you can get even more throughput. These are maximum values, however. The speed of your computer and the modem's rated speed also influence what you can get.

Connection Not Maintained

ReachOut may be able to connect some or all of the time, but have trouble maintaining a connection. Here are the usual causes:

- Your transmission speed may be too high.

If you specify too high a speed, you'll get lots of errors, which you can see in the modem diagnostics in Windows. And when too many errors occur, ReachOut may lose the connection. Try lowering the baud rate to the next lower number.

 - Under Windows, use Configure Connection Type in either the Host or Viewer Preferences menu, then change the Baud field.
 - Under DOS, type SETUP, then choose Data Speed from the Comm Settings menu.
- Your telephone line may have excessive noise.

Try configuring ReachOut to use a slower speed on your modem. Make the connection again later. Line noise is erratic and the connection may hold fine in a few hours.
- Your COM port may be sharing an IRQ.

See *IRQ Conflicts* earlier in this Appendix.
- Hardware flow control

If the flow control is set differently at both ends, the modems will connect, but disconnect within a few seconds. ReachOut only works with CTS/RTS (Hardware) flow control. You may have to change your modem's reset string to enable hardware flow control. See the modem diagnostic online help for details.

Connection Not as Desired

After doing a bit of troubleshooting, you may find that you can connect to the Stac BBS or other systems in the ReachOut Terminal Emulator, but you can't connect to a ReachOut Host. Or you may find that you can connect under DOS, but not under Windows. Or you may find that you

can maintain a connection at 2400 baud but not at a higher rate. Here are some suggestions:

If you connect in Terminal mode but don't see a ReachOut Host:

- Verify the following for both Host and Viewer:
 - Modem's COM port and IRQ. Be sure the IRQ is not being shared with any other device.
 - Transmission speed (baud). See the UART section above for maximum speed settings.
- Use modem diagnostics to verify that an OK is displayed after the reset string.
- Try the connection with both computers in DOS. Run GVM on the Viewer, GHM on the Host.

If you connect under DOS but not Windows:

- The problem may be with your modem definition. ReachOut for Windows requires a precise modem definition. For example, suppose you have an external 9600 baud modem that isn't in the list. However, an internal one with a similar name from the same manufacturer is listed. If you choose the listed internal modem, the external modem will work fine with ReachOut under DOS. However if your modem does not appear on the list, select A Hayes Compatible 2400. Try a connection; if successful, increase your baud to 9600. Try connecting again; if successful, increase your baud to 19,200.
- Occasionally, two modems of different brands and speeds won't communicate well. They may work fine under DOS, but not with the additional overhead of Windows. Try another modem on one end if possible.

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- You may have Windows memory conflicts. Try adding the line `Emmexclude=A000-FFFF` in the `[386Enh]` section of `SYSTEM.INI` to see if you have any upper memory problems. If you can connect under DOS, you can narrow down the memory exclusion.

If you can use ReachOut at a slow speed but not at or above your modem's rated speed:

- You may not be using all your modem's features. This can happen if you defined a generic modem because yours wasn't on the list. You can get an up-to-date list from the Stac BBS. Just download `MTABLE.EXE`. When you run `MTABLE`, the result is `MTABLE.RCH`, the latest version of the modem list. You can copy this into your ReachOut directory and see if your modem is listed now. One caution though: if you edited any of the modem definitions earlier, replacing `MTABLE.RCH` overwrites your changes.
- Your transmission speed may be limited by the UART chip. See the UART table earlier in this appendix.
- Occasionally, two modems of different brands and speeds won't communicate well. Try another modem on one end if possible.

Direct Connect Troubleshooting

If you can't connect directly, first check these things:

- Is Direct Connect Cable the selected connection type on each computer?
- Are they connected by a null modem serial cable? This is not the same as a standard serial cable, such as one you might use for a modem or serial printer. Most null modem cables include a DTR line; if yours doesn't, try a different cable.
- Set the baud the same on both Host and Viewer.

- Troubleshooting

- Is each end of the null modem cable plugged into a COM port and is ReachOut configured to use that COM port? The COM port cannot be shared with any other device and it must have a unique IRQ. Use MSD under DOS to check the use of your COM ports and IRQs.

Network Troubleshooting

Both the Host and Viewer computers must be connected to the configured network and it must be running in order to make a connection.

When you configured ReachOut to use the network, be sure the network you chose is compatible with the one you use. For example, if you have Windows for Workgroups, make sure you chose the network that is actually in use. The MS-NET built into Windows for Workgroups uses NetBIOS, but your network may actually be NetWare IPX/SPX or even Window Sockets. If you have Windows for Workgroups, you can check the Network Setup icon in the Network program group to see which network is being used. If you can't determine it, see your network administrator.

If network list doesn't show an available Host:

- Your List Request Timeout may be too short, so ReachOut doesn't have time to scan the entire network. Use the Configuration program to specify a longer time.
- The Host you are looking for may not be active. ReachOut lists only the Hosts that are currently waiting for a connection.
- If you are using NetWare IPX/SPX or Banyan VINES network, your computer may have a Group ID or a Broadcast ID specified. ReachOut won't list any Hosts that don't have that same Group ID and Broadcast ID.

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- For NetWare IPX/SPX, you may not have specified a file server. ReachOut scans only the local segment or network number unless you specify a server. If you specify any server on the net, ReachOut can search all servers for available Hosts and connect to any of them. You may want to specify a server close to the Host in a very large system.
- Your network may not support this feature. For example, TCP/IP doesn't.
- If you are running ReachOut on a Wide Area Network (WAN) and there are bridges or routers that must be traversed to make the connection, then they *must* let the ReachOut packet through. If they do not, you may need to modify your Broadcast ID or key your router to allow broadcast packets with Banyan port #0EEh to pass through. To modify the Broadcast ID in Windows, use the Configuration Advanced Settings. In DOS, use the "BRCST=" switch on the RCHBANV command line. See Appendix B for information on DOS command line switches.

If ReachOut will not connect to a listed Host:

- Someone may have connected to it since the list was generated. Click Show List of Available Network Names to turn off the list, then click it again to let ReachOut generate a fresh list of available Hosts.

If you can't connect or lose connections easily:

- Your system may have an IRQ conflict. Network cards use an IRQ in much the same way a modem does. See the IRQ conflict section under Modem Connections. See your system administrator if you can't easily resolve an IRQ conflict.

- Your system may have a memory conflict. You have to make sure that your Windows default EMS page does not conflict with the memory address space of your video card or the Host's network card. You can use the `emmexclude=` parameter in the `[386enh]` section of `SYSTEM.INI` to exclude any areas already in use. Use the same values that appear on a 386 memory manager line in `CONFIG.SYS`. The Microsoft files `SYSINI3.TXT` and `NETWORKS.TXT` in your Windows directory provide guidelines for loading networking software. Your network administrator may be able to help. Adding `Emmexclude=A000-FFFF` in the `[386Enh]` section of `SYSTEM.INI`, is a quick way of determining upper memory problems.

If Remote Control functions very slowly:

- If you are using Novell's SAP configuration, you need to be running in a network shell.
- If you are using an older version of Banyan VINES, try enabling disk caching. In the ReachOut Viewer, choose Viewer Options from the Preferences menu and check Enable Cache.
- Remote Control can be sluggish when you are performing ReachOut NetBIOS communications in the NETBEUI environment of LAN Manager. Because of the NetBIOS packet size ReachOut uses, NETBEUI inserts 0.1-second delays between transmitted packets. To fix this problem, insert the following line under the `[NETBEUI_XIF]` in LAN Manager's `PROTOCOL.INI` file:

`PIGGYBACKACKS=0`

This should be done for every Host and Viewer PC running LAN Manager.

Modem Pool Troubleshooting

Software that lets you share modems generally includes special drivers that control it. Some modem pool software also includes a program that lets you monitor connections.

When you configure ReachOut to use a modem pool, be sure and choose an entry that is compatible with the one you will use. For example, the US Robotics Shared Access LAN modem uses a MASI interface, which is compatible with the NASI/NCISI modem pool available in the list. You must load the MASI TSR before starting Windows and using a modem from the pool. ReachOut help includes additional information about modem pools.

See your Modem Pool software documentation or administrator for help with problems. If your problems are with a modem used by the modem pool, check the Modem Troubleshooting section earlier in this Appendix.

Mouse Troubleshooting

For a DOS Viewer mouse to be active on a connected Host, a DOS driver must be loaded before DOS Viewer (VIEW) is loaded.

A Windows Viewer mouse is active while remote controlling a Windows Host. If you want a mouse to be active while you control the connected system in DOS, you'll have to load a mouse driver in DOS on both Host and Viewer computers before starting ReachOut.

Occasionally, the DOS Viewer's mouse in the viewing window moves easier in one direction than the opposite direction, or extremely slow movement of the Viewer's mouse in one direction doesn't move the mouse at all. In either case, you can add a parameter to the command that loads the mouse on the Viewer.

The Microsoft DOS mouse driver is usually loaded on the Viewer in the CONFIG.SYS or AUTOEXEC.BAT file. (If you have the option, MOUSE.SYS is a bit more reliable than MOUSE.COM.) The line usually says:

```
DEVICE=C:\WINDOWS\MOUSE.SYS /Y          CONFIG.SYS
```

```
C:\WINDOWS\MOUSE /Y          AUTOEXEC.BAT
```

Use an editor such as Microsoft's DOS EDIT to add /Sn following the /Y. Use a number between 50 and 100.

```
DEVICE=C:\WINDOWS\MOUSE.SYS /Y /S50     CONFIG.SYS
```

```
C:\WINDOWS\MOUSE /Y /S50     AUTOEXEC.BAT
```

Experiment with numbers between 50 and 100 to adjust for your particular mouse.

If you are using a Logitech mouse, be sure to use its drivers.

Redirecting Printing

In order to redirect printing from the Host computer to the Viewer, the ReachOut Host must allow printer redirection. You can verify this through Host Security Options. Supervisor Security may also limit redirection.

Note: For information on redirecting printing from a Windows 95 Host computer, see Appendix C, Windows 95.

Host:

A compatible printer driver for the Viewer's printer must be installed on the Host.

To tell Windows to use the Viewer printer driver

1. On the Host PC, connect that printer to LPT1.DOS.

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In the Windows Control Panel, select Printers. Choose the printer driver that matches the Viewer printer. Then click Connect.

2. In the resulting dialog box, choose LPT1.DOS. Make sure Fast Printing Direct to Port is not checked.
3. Close the Control Panel.
4. If the Host is connected to a network, disabling the network printer redirection during a ReachOut session will be helpful

Viewer:

ReachOut redirects printing to a printer with the Pass Through option. (You can install the HP LaserJet Series II driver if your printer driver doesn't support Pass Through.) Make the Pass Through printer the default printer. Set it to the same printer port as the printer you will really use. All formatting for the print will be done at the Host system, so it doesn't matter whether the definition is correct at the Viewer.

When connected:

1. Choose the Pass Through printer.
2. Print as usual.

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In DOS, the same printer driver is required on both Host and Viewer systems.

Host:

1. Enable redirection through the Security menu on the Host computer.
2. Make sure the same printer driver you will use on the Viewer is available.

Viewer:

1. Specify the desired redirection on the Printing menu.
2. On the Printing menu, choose Your Print Device and specify the port.

When connected:

1. Choose the printer driver, if necessary.
2. Print as usual.

Video Resolution

If you have a muddled display, the problem may be in video resolution. ReachOut works best when the Viewer has the same or better video resolution than the Host.

ReachOut does not support Windows with CGA and Hercules cards.

A DOS Viewer is limited to 640x480x16 colors (VGA) or 800x600x16 colors (SuperVGA).

DOS Graphics Don't Display

A few DOS programs depend heavily on graphics to accomplish their work. ReachOut provides a special TSR that you can use to make DOS Graphics programs display nicely. It takes about 10 KB extra in memory.

Add this command to GHN.BAT or GHM.BAT, depending on whether you control DOS graphic programs over a network or with a modem:

```
C:\REACHOUT\DOSGRAPH
```

Use any text editor to insert the line immediately following the line with RCHDOS that specifies your computer name. Use the correct path to your ReachOut directory if you used a different drive or directory.

This appendix includes technical information you may want to have on hand. It includes:

- System Requirements
- After Installation
 - Files You May Want to Use
 - System Changes
- Installation Script Keyword Reference
- DOS Information
 - ReachOut TSRs
 - ReachOut Viewer
 - Command Files
 - Command Line Switches

System Requirements

To run ReachOut under Windows, each computer must have:

- IBM AT, PS/2, Compaq, or 100% compatible PC
- Intel 386 compatible processor or higher
- MS-DOS or PC DOS 3.1 or higher (5.0 recommended)
- Windows 3.1 or 3.11 (Enhanced Mode), or Windows 95 (if using ReachOut in Windows)
- 7 MB of disk space for complete installation (less for custom installation)
- 4 MB RAM (ReachOut for DOS requires only 640K)
- VGA or SVGA display, up to 2048 x 1280 resolution, 256 colors (ReachOut for DOS requires CGA, EGA Hercules, monochrome, or MCGA display; supports up to 800 x 600 resolution, 16 colors)

You also need at least one of the following:

- Modem: Hayes AT Compatible 2400 bps (9600 bps or higher recommended), High Speed V.34
- Network: Novell NetWare IPX/SPX, Banyan VINES, Artisoft Lantastic or any 100% compatible NetBIOS, FTP's TCP/IP, or WinSock TCP/IP
- Null modem serial cable

Optional:

- ISDN (either modem or network access)
- Internet access
- Remote Node software
- For gateways: NetWare Connect, Telebit ACS, NASI/NC SI, Modem Assist, INT 14/6B, or Shiva ACS

After Installation

ReachOut adds files to your computer and changes to your system when you install. This section contains information about those changes.

Files You May Want to Use

During the installation process, files are copied to your hard disk in the REACHOUT directory (or whatever directory you specified). The table below lists and describes specific files you may need or want to access. Note that many ReachOut files have two versions, one for when you are using ReachOut in Windows, and the other for when you are using ReachOut in DOS; the latter have a “D” at the end of the file name.

Batch Files	File	Description
	VIEW.BAT	Starts the DOS Viewer for the current connection type. For more information, see Chapter 3, <i>Getting Connected</i> .
	GVM.BAT	Starts the DOS Viewer for a modem connection.
	GVN.BAT	Starts the DOS Viewer for a network connection.
	HOST.BAT	Starts the DOS Host for the current connection type. For more information, see Chapter 3, <i>Getting Connected</i> .
	GHM.BAT	Starts the DOS Host, configured for a modem connection.
	GHN.BAT	Starts the DOS Host for a network connection.
	UNLOADMH.BAT	Unloads the Modem Host TSR.
	UNLOADNH.BAT	Unloads the Network Host TSR.
	CONFIG.BAT	Configures ReachOut under DOS.

Executables

VIEWMENU.EXE	Runs the ReachOut Viewer for Windows (ReachOut Viewer icon).
HOSTMENU.EXE	Runs the ReachOut Host for Windows (ReachOut Host icon).
SETUP.EXE	Configures ReachOut (Configuration icon).
RCHSCRIPT.EXE	Opens the Scripting window (Automating icon).
SECURITY.EXE	Runs Supervisor Security (Supervisor Security icon).
REMOVE.EXE	Removes ReachOut from your computer (Uninstall icon).
AUDIT.EXE	Opens the ReachOut Audit Log.
FILEMAN.EXE	Starts ReachOut File Manager.
MODEMCFG.EXE	Opens the ReachOut Modem Editor so you can define or edit the modem ReachOut uses.
PASSWORD.EXE	Opens the ReachOut Password List.
RAMAP.EXE	Runs Map Drives.
RCHMDIAG.EXE	Opens the Modem Diagnostics window.
RCHTERM.EXE	Run the ReachOut Terminal Emulator.
SERVEUP.EXE	Runs Share Drives.
VIEWER.EXE	Opens the ReachOut viewing window for viewing and controlling a Host.
INSTALL.EXE	Installs ReachOut under Windows.
INSTALLD.EXE	Installs ReachOut under DOS.
SETPATH.EXE	In DOS, sets the path where ReachOut looks for executable files.

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DOS TSRs

PHONEBK.EXE	Opens the ReachOut for DOS Phone Book.
DISC.EXE	In DOS, disconnects a Host from a Viewer.
VDISC.EXE	In DOS, disconnects a Viewer from a Host. For use with Drive Mapping Automation; contact Stac Fax or the Stac BBS for a technical note.
DOSGRAPH.EXE	Allows DOS graphics to be viewed over the ReachOut link.
HOSTMDM.EXE	On the Host computer, lets you access the DOS Modem Host.
HOSTNET.EXE	On the Host computer, lets you access the DOS Network Host.
RACLIENT.EXE	Configures the computer as a ReachOut Drive Mapping Client. This means the computer can access mapped drives.
RASERVER.EXE	Configures the computer as a ReachOut Drive Mapping Server. This means the computer can make its drives available to a connected computer.
RCHACS.EXE	Configures ReachOut to use a modem pool connection.
RCHBANV.EXE	Configures ReachOut to use a Banyan VINES network connection.
RCHDOS.EXE	Starts ReachOut for DOS.
RCHFILE.EXE	Allows background file transfer while you perform other operations.
RCHFTP.EXE	Configures ReachOut to use an FTP TCP/IP network connection.
RCHNETB.EXE	Configures ReachOut to use a NetBIOS network connection.

RCHSPX.EXE	Configures ReachOut to use a NetWare network connection.
RCHSRL.EXE	Configures ReachOut to use a modem connection.
RCHWS.EXE	Configures ReachOut to use a Windows Sockets network connection.
VIEWMDM.EXE	Opens the ReachOut Modem Viewer for DOS.
VIEWNET.EXE	Opens the ReachOut Network Viewer for DOS.
VWREXEC.EXE	Enables the ReachOut for DOS Viewer. This file automatically loads when you run GVM.BAT or GVN.BAT.

Miscellaneous

MTABLE.RCH	Contains the list of modem configurations you can use with ReachOut. You can add modem definitions to this list, and you can download an updated default list from the Stac BBS. See the Windows online help for more information.
README.TXT	Includes last minute information that didn't make it in the manual at the time of printing.
RO_HELP.HLP	ReachOut Help for Windows. (Help icon).
ROINFO.EXE	Displays technical information about ReachOut in Windows.
ROVER.EXE	Displays version numbers for the ReachOut files.

ReachOut also places the ReachOut Windows information file, REACHOUT.INI, into your Windows directory. For technical notes on the settings in REACHOUT.INI, contact the Stac BBS or Stac Fax.

System Changes

If you install ReachOut under Windows, the following lines are automatically added to the [386Enh] section of your SYSTEM.INI file (Windows directory):

```
device=C:\REACHOUT\vrchsys.386      ; added by ReachOut
device=C:\REACHOUT\vrchdos.386      ; added by ReachOut
device=C:\REACHOUT\traclient.386     ; added by ReachOut
```

And if ReachOut is configured to use a modem:

```
device=C:\REACHOUT\vrchsrl.386      ; added by ReachOut
```

These lines tell Windows to load special drivers needed by ReachOut to run in Windows.

If you uninstall ReachOut, the lines are removed from SYSTEM.INI.

Installation Script Keyword Reference

Following is a complete list of the installation scripting keywords available in ReachOut. Unless you are a network administrator, you will probably not need to use this information. See Chapter 9, *Network Operation*, for related network information.

You can use the underlined part of a keyname or parameter as an abbreviation for the word itself. Install prompts the user for any values you do not set.

Keyname	Parameters	Description
AUTO	——	Performs installation without prompts.
AUTOSTARTHOST=	yes no	Determines if ReachOut Host is added to the StartUp

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		group.
COMM=	ACS <u>D</u> irect <u>M</u> odem <u>N</u> etwork	Sets the connection type.
<u>COMPANYNAME</u> =	<i>company</i>	Sets the company name for licensing information.
<u>EXECUTE</u> =	<i>file_name</i>	After install, exits Windows, runs the named program, and restarts Windows.
<u>EXITWINDOWS</u>	——	After install, exits Windows.
FILE=	no 1, 2, 4, 8	Sets the size of the file transfer buffer (in K) for ReachOut File Manager.
<u>GRAPHICS</u> =	yes no	Determines if DOS graphics are supported (default=no).
<u>GROUP</u> =	<i>name</i>	Sets the name of the Program Manager group.
<u>HIDDEN</u>	——	Suppresses all the installation screens.
<u>ICONS</u> =	<i>program,desc.;</i> <i>...;program,desc.</i>	Puts icons in the ReachOut group.
INT=	<i>hex_integer</i>	Sets the FTP TCP/IP interrupt vector.
MODE=	<u>W</u> indows DOS Both	Sets the operating system ReachOut is used in.

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NAME=	<i>computer</i> %1	Sets the network computer name. (Leave blank by typing NAME=. If blank on Novell networks, ReachOut uses the Novell logon name.)
<u>NETWORK</u> =	<u>B</u> anyan FTP IPX <u>N</u> etBIOS SAP SPX <u>W</u> inSock	Sets the network type.
<u>NOCOMM</u>	——	Skips asking for COM port.
<u>NOGROUP</u>	——	Does not create a Program manager group.
<u>NOMODEM</u>	——	Skips modem configuration.
<u>NOPASSWORD</u>	——	Skips asking for password.
NOSETUP	——	Skips the setup part of install and just copies files (DOS only).
<u>PUBLIC</u>	——	Installs only data files.
<u>RACLIENT</u>	——	Configures as a Drive Mapping Client.
<u>RANONE</u>	——	Does not set up Drive Mapping.
<u>RASERVER</u>	——	Configures as a Drive Mapping Server.

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REM	<i>statements</i>	Indicates comments.
<u>RESTARTWINDOWS</u>	——	After install, restarts Windows.
<u>SERVER=</u>	<i>server</i>	Sets the NetWare server name.
SOURCE=	<i>path</i>	Sets directory installed from (DOS only).
<u>TARGET=</u>	<i>path</i> <i>path\%1</i>	Sets directory installed to.
TYPE=	Host <u>Viewer</u> Both	Sets Remote Control function.
<u>USERNAME=</u>	<i>name</i>	Sets the user name for licensing information.
WINDOWSSERVER		Configures the computer to be a ReachOut Drive Mapping Server.

Note: *There is a limit to the length of each text line in an installation script. ReachOut ignores anything after the first 200 characters on a line. For most installation keywords, this is not a problem, but it limits the number of icons you can place in the ReachOut group with the ICONS= keyword.*

DOS Information

ReachOut automatically creates batch files that you run to start the DOS Host or Viewer. The contents of these batch files depend on the configuration options currently in effect. You should be able to change to the ReachOut directory and type HOST or VIEW to start ReachOut.

ReachOut for Windows & DOS

HOST.BAT and VIEW.BAT call the specific batch files needed to communicate either with a modem or over a network. These batch files are:

- GHM.BAT (Host Modem)
- GVM.BAT (Viewer Modem)
- GHN.BAT (Host Network)
- GVN.BAT (Viewer Network)

The first command each batch file carries out is to set the *rchpath* environment variable; it indicates the directory in which ReachOut is stored. If you rename the directory or move ReachOut to another directory, you may have to edit the batch files to reflect this change.

You can use the batch files UNLOADMH.BAT or UNLOADNH.BAT (depending on whether you are using a modem or a network) to remove the ReachOut Host from memory.

ReachOut TSRs

Each ReachOut batch file loads TSRs (Terminate-and-Stay-Resident programs) that ReachOut needs to function in DOS:

- The communications module (RCHSRL, RCHACS, RCHBANV, RCHFTP, RCHNETB, RCHSPX, or RCHWS)
- RCHDOS

RCHSRL.EXE is the communications program for using ReachOut over a modem; RCHACS is for modem pools. The other communication TSRs are for the various network protocols. The communications TSR must be loaded before RCHDOS.

The ReachOut Viewer loads VWREXEC, which provides the viewing capabilities for ReachOut.

Five optional TSRs provide further capabilities for ReachOut:

- **HOSTMDM or HOSTNET:** On the Host computer, lets you access the DOS Host.
- **DOSGRAPH:** Allows DOS graphics to be viewed over the ReachOut link. If you don't load this TSR and you try to view a graphics application, ReachOut displays a message indicating that the Host is running a graphics application. To clear the message, exit the Host application.
- **RCHFILE:** Allows background file transfer while you perform other operations.
- **RACLIENT:** Configures the computer as a ReachOut Drive Mapping Client. This means the computer can access mapped drives.
- **RASERVER:** Configures the computer as a ReachOut Drive Mapping Server. This means the computer can make its drives available to a connected computer.

You must unload TSRs in reverse order. On the Viewer computer, ReachOut does this automatically when you exit the Viewer. On the Host, run UNLOADMH.BAT or UNLOADNH.BAT.

To manually unload a TSR

- Type the TSR name along with the UNLOAD switch and press ENTER. For example, to unload RASERVER.EXE, change to the ReachOut directory and type:

RASERVER UNLOAD

Avoiding TSR Conflicts

When using network communications, avoid loading other TSRs after loading network software and before loading ReachOut. This could cause problems with ReachOut File Manager.

ReachOut for Windows & DOS

Check that the hot keys used by ReachOut do not interfere with the hot keys used by other programs you may be running. The default key combinations for displaying ReachOut are:

- ALT+RIGHTSHIFT (ReachOut Host)
- LEFTSHIFT+RIGHTSHIFT (ReachOut Viewer)

ReachOut Viewer

You need at least 1 MB of free disk space to run the DOS Viewer.

You can connect to a Host running Windows even if the Viewer computer does not have Windows. You can run the DOS Viewer from within Windows, but you should not change the Viewer's .PIF file.

Highlight any menu or menu item and press F1 to get help in the ReachOut Host or the ReachOut Viewer.

Command Files

ReachOut command files allow you to automate functions upon making a DOS-to-DOS connection to a Host. A command file is a text file containing a list of keystroke commands that are placed directly into the Host's keyboard buffer. This is useful for automating a network logon, or running a batch file. You create a command file on the Host computer, then attach the file to a password so that it executes when the user connects with that password.

To create a command file

1. Using any text editor (such as DOS EDIT), create a new file.
2. Type in order the DOS commands you want to run when a connection is made.
Type each command on a new line.

3. Save the file to the ReachOut directory with a file name that uses the extension .CMD.

You can create as many command files as you want, and attach each to a different password.

To attach a command file to a password

1. Change to the ReachOut directory.
2. Type PASSWORD and press ENTER to open the ReachOut Password List.
3. Edit an existing password entry, or create a new one.
4. In the Command File field, type the name of the command file to use with this password. Do *not* type the extension “.CMD.” For example, if you saved your command file as TEST.CMD, type TEST in the Command File field.

Your command file can consist of any commands you normally type at the DOS prompt. Refer to the MS-DOS documentation for help on these commands.

In addition, you can use batch file programming within a command file. Here is an example of a command file that changes to the directory C:\USER1. If the directory does not exist, the command file creates it.

```
IF NOT EXIST C:\USER1\NUL MD C:\USER1
CD C:\USER1
```

You can also use ReachOut commands and variables in the command file. For a list of ReachOut command line switches, see *Command Line Switches* later in this Appendix.

For another example of a command file, see *ReachOut Gateways* in Chapter 9.

Command Line Switches

ReachOut's DOS executables (*.EXE) support a number of command line switches. Some of these switches let you configure ReachOut directly at the DOS prompt; others provide ways to pass variables to the executable.

The DOS executables that support command line switches are grouped below according to their functions.

Note: For Windows command line switches, see *ReachOut Help*.

Installation and Setup

The following switches apply to the file INSTALLD.EXE.

INSTALLD	Switch	Description
	CONFIGURE	Runs the configuration part of install.
	PUBLIC	Installs only data files and batch files. (ReachOut must be installed in the source directory. The target directory must be unique for each user.)

Communications Modules

The communications modules are the files that configure ReachOut for various connection types; they are RCHACS, RCHBANV, RCHFTP, RCHNETB, RCHSPX, RCHSRL, and RCHWS. The following switches apply to all communications modules.

All Communications Modules

Switch	Description
APIINT= <i>integer</i>	Changes the API interrupt value from standard mode (Windows).
KBD= <i>file</i>	Sets an alternate Windows keyboard intercept file.
NAME= <i>computer</i>	Sets the ReachOut computer name.

NO386	Does not load Windows 386 drivers.
NOHOST	Does not load Windows Host support.
UNLOAD	Unloads the communications TSR from memory.

The following switches apply to all of the network communications modules—the files RCHBANV.EXE, RCHFTP.EXE, RCHNETB.EXE, RCHSPX.EXE, and RCHWS.EXE.

**RCHBANV
RCHFTP
RCHNETB
RCHSPX
RCHWS**

Switch	Description
INGTMO= <i>integer</i>	Number of seconds ReachOut searches for network Hosts.
PROMPT	Prompts for computer name when you start the Host or Viewer.

The following switches apply to RCHBANV.EXE and RCHSPX.EXE.

**RCHBANV
RCHSPX**

Switch	Description
BRCST= <i>ID</i>	Sets a six-character broadcast ID.
GROUP= <i>ID</i>	Sets a six-character group ID.

The following switch applies to the file RCHBANV.EXE.

RCHBANV

Switch	Description
HOP= <i>integer</i>	Sets the number of networks to hop for broadcast communications.

The following switch applies to the file RCHFTP.EXE.

RCHFTP

Switch	Description
TCPINT= <i>hex_integer</i>	Sets the TCP Interrupt vector (default is 61h).

ReachOut for Windows & DOS

The following switches apply to the file RCHNETB.EXE.

RCHNETB

Switch	Description
LANA= <i>integer</i>	Sets the LAN adapter to use, if the PC has more than one (range: 0–9).
NAMETYPE= <i>integer</i>	Sets the last character of the 16-character NetBIOS name (range: 0–255; default is 15).

The following switches apply to the file RCHSPX.EXE.

RCHSPX

Switch	Description
COMPAT	Ignores router information, sending a broadcast packet only.
NOWATCH	Disables watchdog timer.
OPNTMO= <i>integer</i>	Sets the number of seconds to wait for an IPX connection.
SERVER= <i>server</i>	Sets the NetWare server name.
SAP	Configures ReachOut to use the NetWare Service Advertising Protocol (SAP).

The following switches apply to the modem communications module—the file RCHSRL.EXE.

RCHSRL

Switch	Description
AUTOBAUD	Lets ReachOut automatically determine the maximum transmission speed.
CTSTMO= <i>integer</i>	Sets the number of seconds for CTS to go high before transmitting data (default is 10).
DEBUG	Allows connections without error correction.

HIRELY	Disables ACK/NAK of packets, so any bad packet terminates the link.
IGNORECARRIER	Forces ReachOut to ignore carrier detect signal.
NOCOMPRESS	Turns off communications level compression.
OBEYCARRIER	Forces ReachOut to use the carrier detect signal to determine if connected modems are ready.
OLDNASI	Uses old NASI method to get connection status.
RCVTRIG= <i>integer</i>	Sets the rcv FIF trigger for a buffered UART (range: 0–3, for FIFO 1, 4, 8, or 14; default is 2, for receiving FIFO at 8).
UART= <i>integer</i>	Sets UART type (0-8250 or 8250-B, 1-8250A or 16450, 2-16550, 3-16550A, 4-82510, 5-auto).

DOS Connections

DOSGRAPH

The following switches apply to the file DOSGRAPH.EXE.

Switch	Description
COLOR	Tells ReachOut to display graphics using the Host computer's color palette, so you view the screen as it appears on the Host. Use this if you have DOS applications that alter the default palette.
UNLOAD	Unloads the DOS graphics TSR from memory.

RCHDOS

The following switches apply to the file RCHDOS.EXE.

Switch	Description
COLDBOOT	Sets reboot to do a full memory test.
HARDBOOT	Sets hard reboot.

ReachOut for Windows & DOS

SOFTBOOT	Sets reboot similar to pressing CTRL+ALT+DEL.
WARMBOOT	Sets reboot without memory test.
DOSBUF= <i>integer</i>	Sets the DOS communications buffer size, in kilobytes.
DOSFLUSH= <i>integer</i>	Sets the number of 1/18-second intervals to wait before flushing a partial DOS command buffer to the Viewer (default: 1).
DOSIGNORE	Sets a six-second timeout before connecting.
DSPSIZE= <i>integer</i>	Sets the number of text characters to be displayed.
I09ENTRY= <i>integer</i>	Sets the level of checking to be done before forcing a scan code into the software INT 09h of the Host computer. Valid settings are 2, 3, 4, and 5; I09ENTRY=4 works best.
I10ASYNC= <i>integer</i>	If 0, INT 10H BIOS commands are immediately intercepted and reflected to the Viewer. If 1, ReachOut allows the screen to be updated asynchronously over 1/18-second intervals to redirect Int10h commands to a Viewer, such as 25th line messages.
INACTIVEDISPLAY	Makes display packets reset the inactivity timeout.
INT1A= <i>integer</i>	If 0, INT 1ah is not intercepted (default: 0).
KYBFEEED= <i>integer</i>	If 0, emulates keyboard codes back to back into the Host; otherwise, emulates at 1/18-second intervals.
KYBMSK	Disables Host keyboard input.

NOGRAPH	Suppresses message when DOS graphics cannot be displayed.
NOLISTEN	Ignores Auto Connect.
NOMOUSE	Disables the DOS mouse.
PHONYLPTS= <i>integer</i>	Defines fake LPT ports for the Host to allow redirected printing if the Host has no LPT ports.
RBTMO= <i>integer</i>	Sets the number of seconds to wait for an “Immediate” reboot after disconnection (default: 5).
SHOWPARAMS	Displays internal variable settings.
SSCOUNT= <i>integer</i>	Sets the maximum number of single-step instructions to execute after IN AL,60h is encountered in extended keyboard handling (default: 250).
UNLOAD	Unloads the DOS TSR from memory.
VIDEO= <i>integer</i>	Sets the Host video device (0-Mono, 1-Hercules, 2-CGA, 3-Comp CGA, 4-EGA, 5-VGA, 6-MCGA).

ReachOut Host and Viewer

The following switches apply to HOSTMDM.EXE and HOSTNET.EXE.

HOSTMDM HOSTNET

Switch	Description
NOCHARSET	Ignores saving the video text characters when you display the DOS Host.
NOHOTKEY	Disables hot key display of Host.
MONO	Sets Host display to Mono.
PROMPTLINK	Prompts for a Viewer to connect to when you display the Host.

ReachOut for Windows & DOS

UNLOAD	Unloads the ReachOut Host from memory.
--------	--

The following switches apply to VIEWMDM.EXE and VIEWNET.EXE.

VIEWMDM VIEWNET

Switch	Description
/ALTPOP=1	Changes the hot key for displaying the Viewer to LEFTCTRL+RIGHTSHIFT.
/CACHE=0	Disables 512K disk cache.
/LIST=0	Disables connection using network list.
/NAME= <i>computer</i>	Automatically connects to the computer name specified. Use %1 in a batch file to pass the command line name to the executable.
/NAME=%1	
/PHONEBOOK= <i>"username"</i>	Automatically connects to the Host in the phone book with the username specified. Use %1 in a batch file to allow you to pass the username to the executable.
/PHONEBOOK= <i>"%1"</i>	
/SVGAMODE= <i><rax>, <rbx></i>	Sets values if you cannot view SuperVGA. Look in SYSTEM.INI or your video card manual.

File Transfer

The following switches apply to the file RCHFILED.EXE.

RCHFILED

Switch	Description
BUFFER_SIZE= <i>integerK</i>	Sets the size of the buffer for background file transfer.
UNLOAD	Unloads the file transfer TSR from memory.

Drive Mapping

The following switches apply to the Drive Mapping configuration files—RACLIENT.EXE and RASERVER.EXE.

RACLIENT RASERVER

Switch	Description
BUFFER_SIZE= <i>integerK</i>	Sets the size of the buffer for transmitting data with Drive Mapping.
UNLOAD	Unloads the Drive Mapping TSR from memory.

The following switches apply only to the file RACLIENT.EXE.

RACLIENT

Switch	Description
EXEC	Allows programs to be run from a mapped drive.
SEARCH_AHEAD= <i>integer</i>	Sets the number of directory entries that are pre-read (default: 23).



ReachOut WINDOWS 95

ReachOut for Windows & DOS has been optimized to take advantage of many Windows 95 features—including long file names and all Windows 95 video drivers. If you are using ReachOut for Windows & DOS under Windows 95, you can:

- Use Telephony with ReachOut, so that ReachOut works more smoothly with your other modem, FAX, and telephone applications
- Use your Windows 95 modem setup information for ReachOut
- Preserve long file names when using ReachOut to transfer files between Windows 95 computers
- Redirect printing from a Windows 95 Host.



The following pages describe these features and how you can take advantage of them if you are using ReachOut for Windows & DOS under Windows 95.

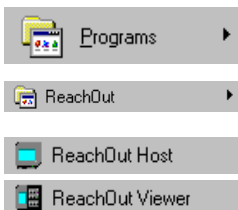
Getting Started

To install ReachOut, follow the instructions in Chapter 2 of this part of the ReachOut User's Guide. The Windows 95 Run command is located on the Start menu. The name of the directory to which you install ReachOut must have eight or fewer characters.



To start ReachOut

1. From the Windows 95 Start menu, choose Programs.
2. Click ReachOut.
3. Choose ReachOut Host if you want your computer to be a Host, or choose ReachOut Viewer if you want to remotely control another computer.



Modem Connections

Windows 95 comes with Microsoft's Telephony Application Programming Interface (TAPI). ReachOut now lets you take advantage of this Telephony feature to organize your incoming calls. If you have already set up a modem on your Windows 95 computer, ReachOut can use your existing configuration; you don't have to configure the modem again in ReachOut.

If you choose not to use Telephony with ReachOut, you can still use ReachOut's Configuration settings to set up your modem. See *Turning Off the Telephony Option* later in this appendix.

What is Telephony?

The Telephony feature acts like a manager for all your incoming calls. For example, suppose you have a FAX program and a bulletin board system (BBS) that use the same communications port. When you receive a call, TAPI determines if the incoming call is a FAX or a BBS call and sends it to the appropriate software. That way you are less likely to have problems such as your FAX software trying to answer a BBS call, and vice versa. You can leave both applications running, and calls are automatically sent to the correct application.

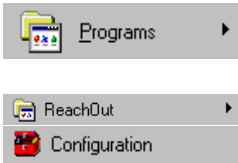
The only requirement is that all your communications programs be able to register themselves with TAPI. Some programs may do this automatically. Once you've configured your various programs to use Telephony, it will handle all your calls.

Activating Telephony in ReachOut

Registering ReachOut with Telephony tells Windows 95 to track ReachOut calls along with your other calls. All you have to do is configure your modem with the Telephony option.

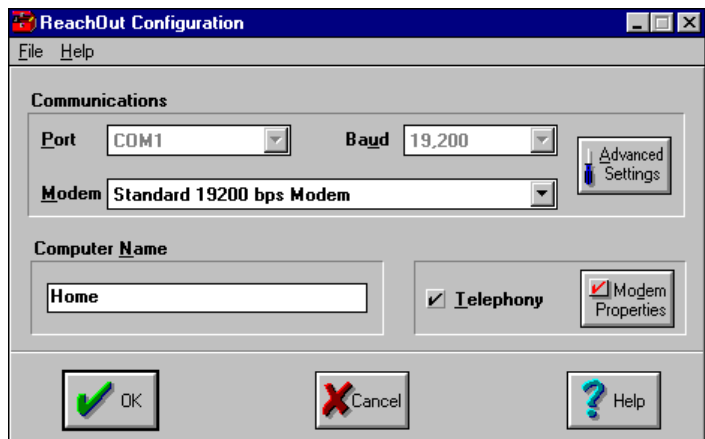
ReachOut for Windows & DOS

To turn on Telephony



1. From the Windows 95 Start menu, choose Programs.
2. Click ReachOut, then Configuration.
3. Choose Modem, then click OK.

You'll see the ReachOut Configuration window.



4. Click the Telephony check box.
You should notice several changes:
 - The Modem Properties button becomes available.
 - The Port and Baud fields become unavailable. You can set these options through the Modem Properties dialog box.
 - The selected modem may change, depending on which modems are already set up in Windows 95. The names of the modems may also change slightly to match the Windows 95 names for these modems.
5. If you use more than one modem, you can choose which one to use with ReachOut by clicking the Modem drop-down list box.

Appendix C • Windows 95



6. To configure your modem, click Modem Properties.
If you've never set up a modem on your computer, you'll be guided through the process. Then when you return to the ReachOut Configuration dialog box, you'll need to click Telephony again to activate it.
7. When you've finished, click OK and exit ReachOut Configuration.

The Modem Properties dialog box has three tabs:

- | | |
|------------|--|
| General | Click the General tab to specify basic properties for your modem. You can change the communications port your modem is using, set the volume, and specify the speed at which your modem can connect. |
| Connection | Click the Connection tab to change settings for your modem connections. Windows 95 provides standard defaults, but you might need to change these settings when you connect to different computers. Many systems use 8 data bits, no parity, and 1 stop bit. For explanations of these settings, see the topic <i>Data Bits, Stop Bits, and Parity</i> in ReachOut Help. |
| Options | Click the Options tab to set miscellaneous preferences for the current call. Use these options to dial with a credit card, dial an operator-assisted call, or open a terminal window before dialing. |



To get help in the Modem Properties dialog box, click the question mark in the upper right-hand corner, then click any part of the dialog box. You'll see a brief description of the field or button you clicked.

Defining a New Modem in Windows 95

If you use the Telephony configuration for your modem, then you won't be able to add a new modem directly through the ReachOut

ReachOut for Windows & DOS

Configuration program. You need to use the Windows Control Panel instead.

See Windows Help to learn how to set up a new modem.

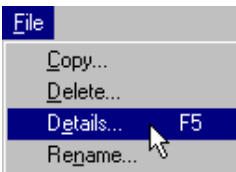
Turning Off the Telephony Option

Although the Telephony option makes configuring a modem easier for most Windows 95 users, there may be circumstances in which you want to use ReachOut's Configuration settings instead. For example, if you have a nonstandard modem, it may not be listed in the Windows 95 modem list. ReachOut's list contains some modems that the Windows 95 list does not. Plus, you can easily define a new modem using ReachOut's Modem Editor, and then set your configuration options within ReachOut. Advanced users may also want to use the ReachOut Modem Editor to change the modem strings.



See ReachOut Help for instructions on using the Modem Editor.

Long File Names



You can get more information on a file by choosing Details from the File menu, or by right-clicking its name

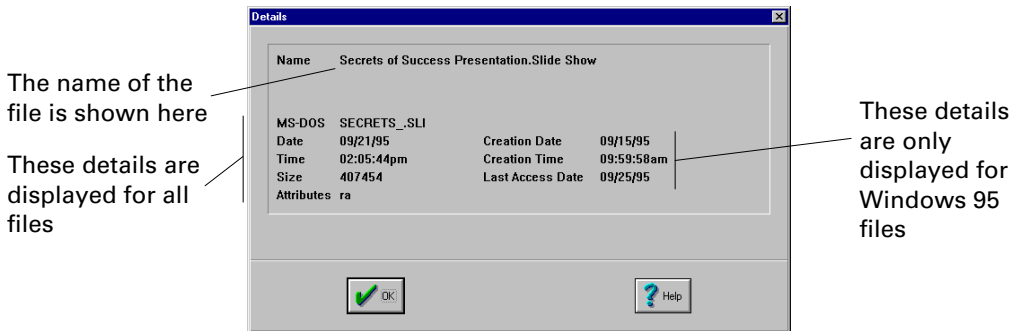
ReachOut File Manager supports long file names in Windows 95. The File Manager displays Windows 95 files with their full file names. You can preserve these file names when you copy the files between Windows 95 computers. When you synchronize directories between a Windows 95 computer and a Windows 3.1 computer, ReachOut ignores any files that have long file names.

You can also copy files with long file names to computers running other versions of Windows and DOS. ReachOut shortens the file names so that they each have a maximum of eight characters with a three-character extension. Before you copy a file, you can see what name ReachOut will give the file by looking at its details.

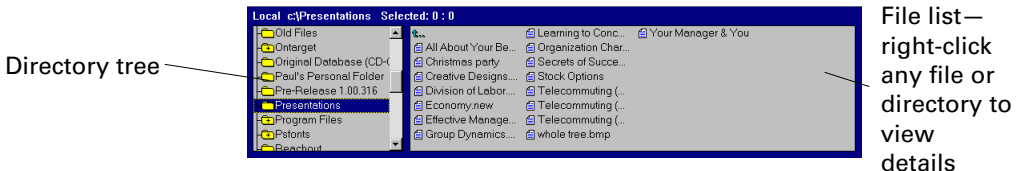
To View Details about a File

- In ReachOut File Manager, right-click the file name.

If the file is stored on a Windows 95 computer, you'll see the full name of the file as well as the MS-DOS shortened name that ReachOut assigns to it. This dialog box also displays the creation date and the date that the file was last accessed (opened or copied).



From within the file list, you can also get details on a directory. However, the Details command is not available from the directory tree.



Copying and Deleting Files

If you want to use the Copy or Delete command on two or more files at once, you can use spaces to separate the file names in the dialog box. However, if you enter a long file name that contains a space, you need to put quotation marks around the entire file name, like this:

Charts.xls "Spending cuts" Organization

ReachOut for Windows & DOS



IMPORTANT! *It's a good idea to keep File Overwrite Confirmation turned on. (Confirmation is on the Options menu.) If you copy files with similar long file names to a Windows 3.1x computer, ReachOut may overwrite one file with another. For example, the files "John's file 1" and "John's file 2" are both truncated to JOHN'S_F.*

Redirecting Printing from a Windows 95 Host

Windows 95 handles printers differently than Windows 3.1 does. As a result, you can't print to both the host and viewer from a Windows 95 Host computer.

When you install ReachOut for Windows & DOS on a Windows 95 system, the installation program creates a new port named RCHOUT.PRN in your REACHOUT directory. Windows 95 considers this an "unknown local port." While connected with print redirection enabled, ReachOut can have any printing from the remotely controlled computer occur on the Viewer printer. You'll have to change the Host printer back to the standard one before you can print successfully to the Host printer.

On the Windows 95 ReachOut Host

1. On the Start menu, choose Settings, then Printers.
2. Select the printer, then right-click.
3. On the context menu, choose Properties, then click the Details tab.
4. In the "Print to the following port" field, choose rchout.prn.
5. Notice that the "Print to the following driver" field still identifies the usual printer. Whatever you print is formatted for that printer. Click OK.

On the ReachOut Viewer

1. On the Viewer window, choose Viewer Options from the Preferences Menu.
2. In the Redirection field, choose Viewer Only. Choosing Both prints only to the Viewer as well.
3. In the Printer field, choose a printer that supports PASSTHRU. (If you aren't absolutely sure your printer supports PASSTHRU, install the HP Laserjet Series II from your Windows disks. You don't need this type of printer, but assign it to a valid port.)
4. Click OK.

If your Viewer runs under Windows 95:

1. On the Start menu choose Settings and click Printers.
2. Select the printer to which print is redirected. Right-click and choose Properties.
3. On the Details tab, click the Spool Settings button.
4. In the Spool Data Format field, make sure RAW is the format selected.
5. Choose OK.

Note: *If you'll be redirecting print from your Windows 95 Host often, you may want to define a second printer driver just like the one you normally use. Leave one set for the normal driver and one for rchout.prn. Then you can just select the ReachOut printer driver definition to redirect printing and the normal printer for standard printing at the Host.*

If no printing occurs:

Your printer probably doesn't support PASSTHRU. Try this:

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1. Install the HP Laserjet Series II driver to the Viewer computer from your Windows disks.
2. Connect it to the printer port you usually use, such as LPT1.
3. Choose this printer in the Viewer Preferences.

Since ReachOut does the formatting at the Host, the document should print just fine next time you try.

If printing occurs on a nonPostscript printer, but the document isn't readable

On the Host computer

1. Select the printer that's set to the RCHOUT.PRN port and right-click.
2. From the context-menu, click Properties, then the Fonts tab.
3. Click Print True Type as graphics, then click OK.

If printing is not correct on a postscript printer, the two printers may have incompatible drivers. Install the HP Laserjet Series II driver on the Viewer, select it as the target printer, and try again.

Host Computers on the Network

If you plan to connect to a computer running ReachOut for Windows & DOS under Windows 95 that's on a network (such as your office computer), you can use ReachOut's Reboot on Disconnect feature (in Security Options) to have the Host computer automatically restart when you disconnect. Then the computer will be logged off the network, ensuring security while it is unattended.

You can put ReachOut Host in your StartUp group to have it open when the computer restarts. However, Windows 95 prompts you to log on each time the computer starts. You need to prevent the prompt from appearing, or the Host won't start, and you won't be able to connect.



Passwords

To suppress the network logon prompt

1. From the Windows 95 Start menu, choose Settings.
2. Choose Control Panel.
3. Double-click the Network icon.
4. In the list box at the top, click the network client.
5. Choose Properties.
Note: *If the Properties button is unavailable, you probably have Novell's NetWare client, version 3.x. You might have to use a later version, or remove it and add Microsoft's NetWare client instead.*
6. Clear Enable logon script processing, and click OK.
If you have other clients, follow steps 4–6 for each one.
7. Under Primary Network Logon, choose Windows Logon.
8. Choose OK, but don't restart your computer when asked.
9. Double-click the Passwords icon.
10. Click Change Windows Password.
11. Type your old password. (Don't enter a new one.)
12. Choose OK, and restart your computer.

If you want to access the network while you're connected with ReachOut, you can reconnect to any of your network servers.

To reconnect to a network server



1. On your desktop, right-click Network Neighborhood.
2. Choose Map Network Drive.
3. Under Drive, choose the letter you want to assign the drive to. If the drive letter is already being used, you'll see a network path next to it in the list.
4. Under Path, select or type the server and volume name.

ReachOut for Windows & DOS

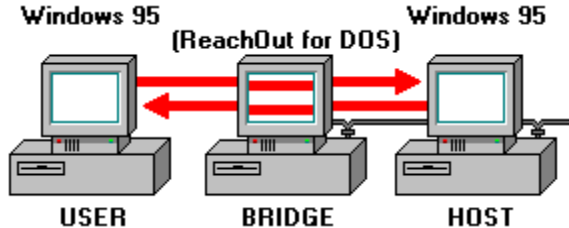
Note: You should not choose *Reconnect at logon*, or the connection will be restored when your computer restarts.

5. **IMPORTANT!** When prompted to enter a password, clear the check box that's labeled *Save this password in your password list*.

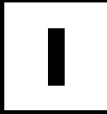
Gateways

ReachOut gateways let you use a modem to connect to a computer running on a network, or to connect computers that are running on two different types of networks. To set up a gateway, you need to have a *bridge* computer, which passes information between ReachOut's modem Host and network Viewer. ReachOut gateways are explained in detail in Chapter 9, *Network Operation*.

You can connect Windows 95 computers through a ReachOut gateway, but the bridge computer must be running MS-DOS.



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