Installation and User's Guide

LAPLINK®

FOR *WINDOWS*

16-bit, for Windows 3.1

Copyright Notice

No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any human or computer language, in any form or by any means, without the express written permission of Traveling Software, Inc., 18702 North Creek Parkway, Bothell, Washington, 98011, U.S.A.

Trademarks

Traveling Software, the Traveling Software logo, LapLink, SpeedSync and SmartXchange are trademarks or registered trademarks of Traveling Software, Inc.

AirShare is a registered trademark of National Semiconductor Corporation.

Other brand and product names are trademarks or registered trademarks of their respective holders.

Patents

SpeedSync® U.S. Patent Number 5,446,888

Contents

Chapter 1   Introducing LapLink for Windows

Chapter 2   Making connections and opening services

Chapter 3   Using the Services: Remote Control, File Transfer, and Chat

1 Introducing LapLink for Windows

Contents

What is LapLink for Windows?

LapLink for Windows is an integrated package of services for communicating with one computer, or several computers at the same time. Whether you're using a modem, network, wireless device, or cables, you can connect with other computers that are also using LapLink. You can transfer files between PCs, when you're in the office or when you're on the road. You can use files and programs on your office PC while you're on the road. You can even "chat" with someone at your office PC while you transfer or work on office files from a remote location.

Go to illustration ➜

LapLink for Windows is Traveling Software's new integrated software package for communicating with other computers.

Connect as you want

. . . .
In this manual, "Wireless" refers to AirShare Radio Modules. The use of these modules is restricted in some countries. Wireless connections can also be made with other devices. To connect with a cellular modem, use Connect over Modem. To connect with a wireless LAN adapter, use Connect over Network.
. . . .

Using a modem, network, wireless device, or cable, you can connect with other computers using the same device. In one session, you can connect with several PCs, using a variety of these devices, limited mainly by the number of devices you can put on your PC.

Different situations call for specific devices. Cables are better for short distances. Wireless devices work well when "docking" your laptop to your desktop PC. Networks make it easier to connect with many different PCs in your company. Modems work well at any time when you can use a phone line to connect—when you're at home, on the road, or you're communicating with someone in another company.

Using LapLink's services

LapLink's services—File Transfer, Remote Control, and Chat—offer three ways to communicate with other PCs, no matter what device you use. You can select one or more services as you connect, and add other services as you need them. In one session, you can use different services simultaneously or at different times, on one or more PCs.

◆ With **File Transfer**, you can move or copy files between PCs. Transferring files becomes easier to manage, since you can synchronize directories on the two PCs.

Traveling Software's new SpeedSync™ technology makes updating files faster because files are compared, and only changes—not entire files—are transferred. A comprehensive security system protects your valuable data at all times.

Welcome to LapLink for Windows

This Remote Control window displays the screen of one of the remote computers.

You can use Remote Control as a window within the LapLink workplace (as shown here) or as a full-screen display.

This computer has simultaneous connections to two computers. File Transfer and Remote Control services are in use.
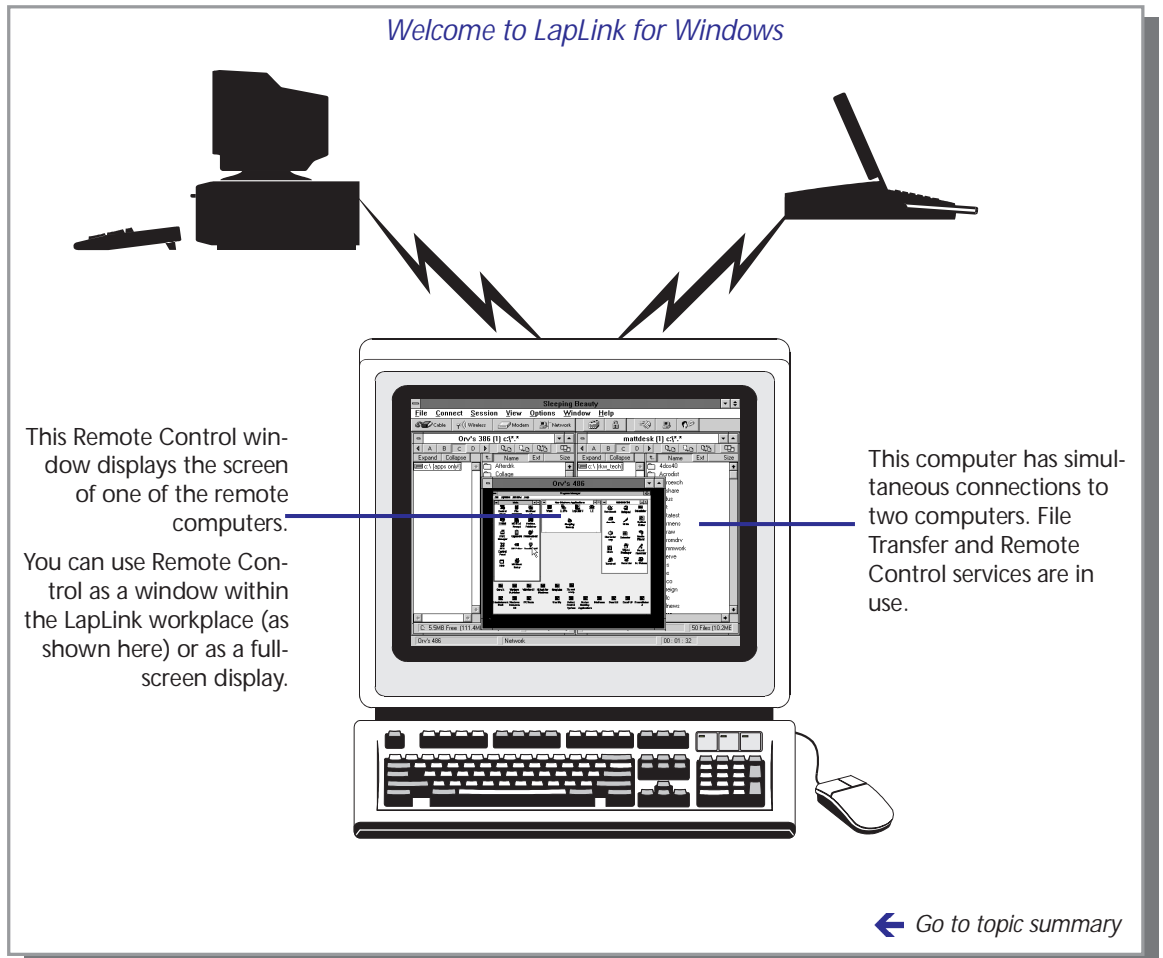
- ◆ With **Remote Control**, you control another PC as though you were sitting at that PC, using its keyboard, mouse and programs while looking at its screen. Whether your PC is controlling or being controlled, you have the same setup and startup procedures.

- ◆ With **Chat**, you can "talk" with someone at the other PC, exchanging messages in a written conversation. When you have only one phone line, you can use your modem to connect to the remote PC for File Transfer or Remote Control, using Chat to talk to the person at the other end. Chat is especially helpful for collaborative writing and exchanging ideas while working on the same PC from a distance.

X

What you can do in LapLink for Windows

LapLink for Windows gives you three services for working with other PCs. Use File Transfer to transfer files between computers. Use Remote Control to work on another computer. Use Chat to talk with someone using another computer. In one session, you can change from one service to another, making LapLink for Windows ideal for troubleshooting PCs at remote locations or for working on your office computer while you're on the road. Features like SpeedSync and the Address Book save you time and simplify your work.

Go to illustration ➜

Choosing the right service for the job you need to do is simple when you're using LapLink for Windows. You have three services to choose from: File Transfer, Remote Control and Chat. Being familiar with their distinctions makes choosing the right service easier.

LapLink for Windows is versatile, designed specifically so you can use services when you want, as you want. Use one service at a time, or all services at once. Use one service when connecting to the first remote PC; use a different service when connecting to another PC.

Transferring files between PCs?

Whether you're hundreds of miles away or in the same room, use the File Transfer service to transfer files between PCs. You can even transfer files between two other PCs, using your PC as an intermediary.

Streamline file transfers by taking advantage of LapLink's wide variety of SyncTools. Using SmartXchange, you can synchronize files and directories on two PCs.

Working on a remote PC?

Using the Remote Control service, you can operate a remote PC, driving it from your PC's keyboard and mouse. You can use the remote PC's applications and network connections.

Since all the work you do is actually performed on the remote PC, Remote Control is especially helpful to laptop owners who can't use their office PC's programs on their laptop. Remote Control is also helpful when you're providing technical support from a distance or telecommuting.

Sending and receiving messages?

Use the Chat service to hold a two-way conversation with someone at another PC. You can simply "talk," or combine this service with Remote Control or File Transfer to exchange messages and files, and run programs. Combining Chat with Remote Control makes customer support and training easier.

Choosing services for different tasks

Transferring files from one computer to another is easy with LapLink for Windows. You can copy, move, delete, and even synchronize your files and directories.

Chatting with a remote user is like talking over the telephone, except you can use one phone line to transfer files and remote control, while you chat.

Controlling another computer helps you work on your own PC or someone else's computer from a distance. Combine with Chat to collaborate or instruct.

← *Go to topic summary*

Saving time and protecting your PC

◆ Connecting to another PC becomes easier with the Address Book. Just select the name of a PC you've added to your Address Book, and you automatically connect.

◆ You can set up your security system to protect your files by naming those who you allow to connect with your PC. You can also set which services these people can use on your PC.

◆ One of the greatest timesavers in LapLink for Windows is Speed-Sync, especially if you're using slower devices like modems. Speed-Sync updates changes to files, rather than copying entire files. Overall times for transferring files can be drastically cut.

X

Requirements for using LapLink for Windows

Before you begin setting up LapLink for Windows, make sure you have the hardware and software you need to use the program. Depending on how you will connect to other PCs—over modem, Novell network, wireless or cable—you will need specific components. If LapLink for Windows is already installed on your computer, skip to Chapter 2 "Making connections and opening services."

Go to illustration ➜

General Requirements for each PC

◆ MS-DOS or PC-DOS 3.3 or later (5.0 or later recommended)

◆ Microsoft Windows 3.1 or Microsoft Windows for Workgroups (386 enhanced mode required)

◆ Intel or compatible 386 or better

◆ 4MB RAM (8MB recommended)

◆ 6MB hard disk space for complete installation

◆ VGA monitor (or better recommended)

Requirements for modem communication

◆ Hayes-compatible 2400 bps (9600 bps or higher recommended)

◆ One RS-232 serial port on each PC (external modems)

Requirements for network communication

◆ Novell NetWare shell version 3.26 or higher, or

◆ Novell Personal NetWare 1.0 or higher, or

◆ Microsoft Windows for Workgroups 3.x with IPX

Requirements for wireless communication

◆ AirShare modules

◆ One RS-232 serial port on each PC

Requirements for cable communication
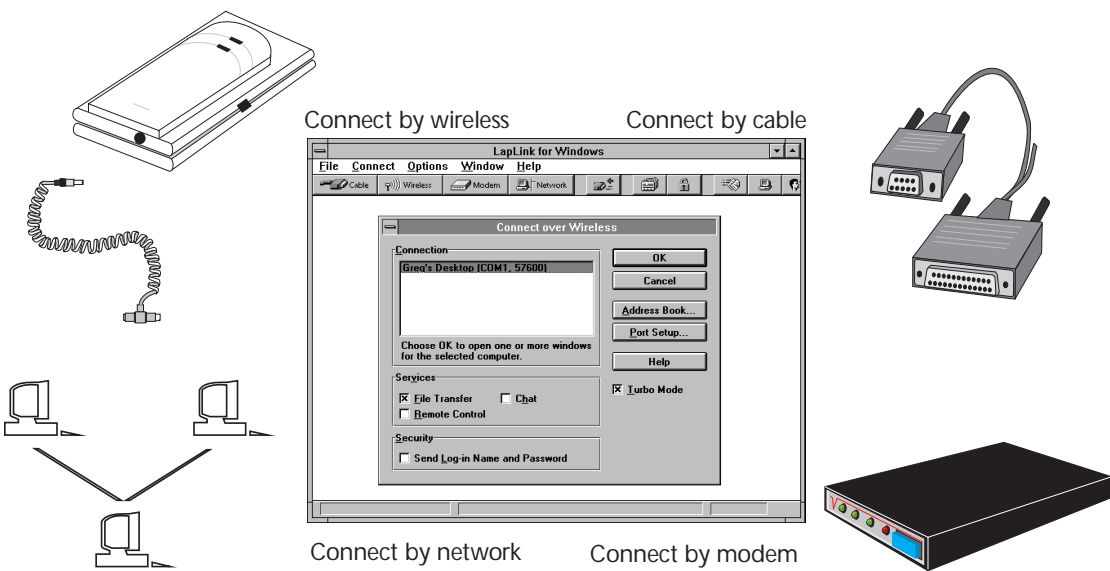
◆ LapLink cable

◆ One RS-232 serial port or parallel (printer) port on each PC

Requirements for Remote Control DOS host (optional)

◆ 60K DOS conventional RAM free for minimum (modem only) installation

. . . .
In this manual, "Wireless" refers to AirShare Radio Modules. The use of these modules is restricted in some countries. Wireless connections can also be made with other devices. To connect with a cellular modem, use Connect over Modem. To connect with a wireless LAN adapter, use Connect over Network.
. . . .

Choosing your connection type

Connect by wireless   Connect by cable

LapLink for Windows

File   Connect   Options   Window   Help

Cable   Wireless   Modem   Network

Connect over Wireless

Connection

Greg's Desktop (COM1, 57600)

Choose OK to open one or more windows
for the selected computer.

OK

Cancel

Address Book...

Port Setup...

Help

Services

☒ File Transfer   ☐ Chat
☐ Remote Control

☒ Turbo Mode

Security

☐ Send Log-in Name and Password

Connect by network   Connect by modem

← *Go to topic summary*

Tips for checking requirements

✓ To determine the free memory available in Windows, choose About Program Manager from the Windows Help menu.

✓ To determine the mode you're running in Windows, choose About Program Manager from the Windows Help menu. You should be running Windows in 386 Enhanced Mode.

✓ Set up your version of Windows for network communications if you're going to connect using the network. If LapLink "locks up" after you start Microsoft Windows for Workgroups, ask your network administrator to update your workstation's drivers as LapLink requires the most current drivers.

X

Setting up LapLink for Windows

Before you can connect to other computers, you need to install the LapLink for Windows software. To install the software, choose Run from the File menu. Insert the Setup disk and type A:\SETUP. You will be asked to make some choices as the Setup program runs. After you're done installing, start LapLink for Windows by double-clicking the program's icon found in LapLink's program group. To quit, choose Exit from the File menu.

Installing the software

Before you install, make sure you can answer these questions:

- ◆ What communication type or device—modem, cable, network, or wireless—will you use most often to connect to other computers?
- ◆ What port—LPT1, COM2—will you be using for this main device?
- ◆ If you're using a modem, what is the manufacturer's name and model?

To install the software:

1   Start Windows. The Program Manager window appears.

    Insert the Setup disk in the appropriate floppy disk drive.

2   Choose Run from the File menu. The Run dialog box appears.

3   Type A:SETUP.

4   Choose OK.

5   Follow the instructions on your screen. If you have questions about any of the instructions, choose Help. Or, refer to "Answering the Setup questions," page 10.

6   Quit and restart Windows before starting LapLink for Windows.

Registering your copy

Online Registration quickly registers your copy of LapLink for Windows. All you need is a modem so you can dial Traveling Software's registration line.

Setting up and starting LapLink for Windows

File
New...
Open   Enter
Move...   F7
Copy...   F8
Delete   Del
Properties...   Alt+Enter
Run...
E**x**it Windows...

To begin installing, choose Run from the File menu.

Type A:\SETUP.   Choose OK.

Run

Command Line:
a:\setup

☐ Run Minimized

OK
Cancel
Browse...
Help
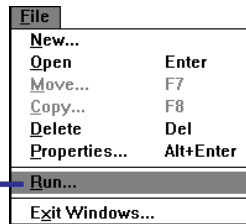
The Setup program creates a program group for LapLink for Windows.

To start LapLink for Windows, double-click the LapLink for Windows icon.

LapLink for Windows

LapLink for Windows   Release Notes   Traveling Software Online Registration   Uninstall
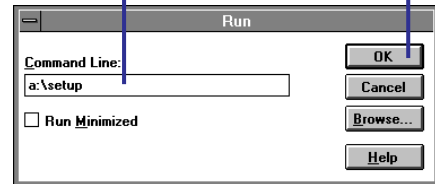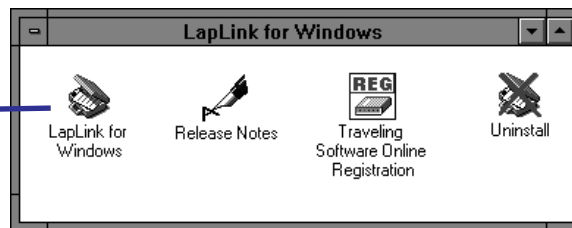
To register your copy of LapLink for Windows:

1   Double-click the Online Registration icon in the LapLink for Windows program group.

2   Follow the instructions on your screen. If you have questions, choose Help.

. . . .
If you didn't choose modem during Setup, set up your modem and port when you use Online Registration.
. . . .

Starting the program

The Setup program creates a new program group for LapLink for Windows. The icons in this program group include the main program icon, LapLink for Windows, which you use to launch the program.

To start LapLink for Windows:

1   Open the LapLink for Windows program group.

2   Double-click the LapLink for Windows icon.

    You are now in LapLink for Windows, and can connect to other computers that are also running LapLink for Windows.

To quit LapLink for Windows:

■   Choose Exit from the File menu.

▶

Answering the Setup questions

When you install LapLink for Windows, the Setup program changes your directory structure and system files, customizing LapLink for your needs. These changes are based on your answers to some basic questions: where you want LapLink installed, what name you want to give your computer, and what connection type you primarily use. Setup records these custom settings in your system files.

Go to illustration ➜

Where do you want LapLink installed?

When you install LapLink for Windows, the Setup program will install the main LapLink program files in C:\LLW, or the directory you specify. Other program files are put in the C:\WINDOWS directory and TSI subdirectories.

Three main initialization files are modified by Setup, and used by Laplink for Windows: WIN.INI, SYSTEM.INI, and LLW.INI. The LapLink initialization file, LLW.INI, records information like port configuration. For example, when you tell LapLink that you're going to use a modem on your COM2 port, this information is recorded in LLW.INI.

What is your computer name?

The name you give your computer will be seen by others when you connect to other PCs or when others try to connect to your PC. This name is stored in your LLW.INI file.

What is your primary connection type?

You can select one of the options given: modem, network, cable, or wireless (AirShare). If you have more than one connection type, you can need to add these after you've installed LapLink for Windows. These settings are stored in LLW.INI.

After you choose the connection type, tell Setup which port it is using. If you chose modem, you will also need to specify the manufacturer's name, model and speed (baud, or bps).

✓ A port is "unavailable" if Windows is using this port for your mouse, if another application is using the port, or if the port is physically unavailable on your PC.

Directory structure created by Setup

C: —— LLW ———————— Program files are in this directory, or the directory you specify as the location during Setup.

—— WINDOWS ——————— Changes are made to WIN.INI and SYSTEM.INI.

—— SYSTEM ——— A limited number of files are placed in the System directory.

—— TSI

—— LLW ——— Initialization and log files for LapLink for Windows and other Traveling Software products are placed in these directories.
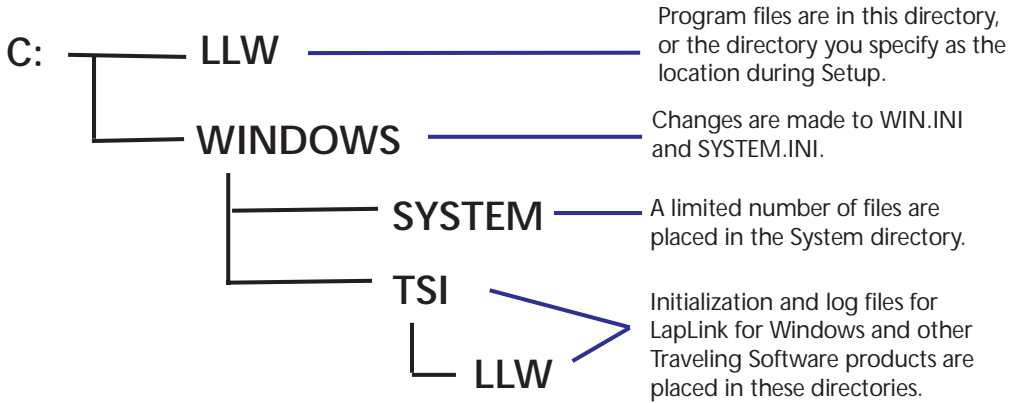
← *Go to topic summary*

Use this table as a quick reference to the communication types, or devices, used on various ports:

Communication Type	Port	Considerations
Serial cable (blue)	COM	Port often used for modem, mouse
Parallel cable (yellow)	LPT	Faster than serial; port often used for printer
Modem	COM	Port often used for cable, mouse
Network	IPX	Must use Novell network or compatible
Wireless	COM	Up to 30 feet between computers

In this manual, "Wireless" refers to AirShare Radio Modules. The use of these modules is restricted in some countries. Wireless connections can also be made with other devices. To connect with a cellular modem, use Connect over Modem. To connect with a wireless LAN adapter, use Connect over Network.

▶

Post installation: Customizing and uninstalling

After you install LapLink for Windows, you may want to fine tune your LapLink system. You can add more connection types or devices, if you use more than one. You may want to change your computer name. If you need to remove LapLink for Windows from your computer, double-click the Uninstall icon to remove the program files and changes made to system files.

Go to illustration ➜

Setting up additional connection types

LapLink for Windows initially uses the settings you supplied during Setup for your primary connection type. With LapLink, you can use any combination of four types of devices: cables, modems, network, and wireless. If you need to add more devices, or change the information you gave during Setup, you can change your port setup at any time directly in LapLink for Windows.

To add or change devices:

1   Choose Port Setup from the Options menu in LapLink for Windows. The Port Setup dialog box appears.

2   In the Port Settings box, select the port's name.

    ◆   In the Type box, select the type from the pulldown list.

    ◆   To make the port active, select Enable Port.

. . . .
If you need to give more detailed information, choose Configure. You must do this if you're setting up a modem.
. . . . . .

3   Click Close to save the settings. These settings are recorded in LLW.INI, the initialization file for LapLink for Windows.

Changing your computer's name

The name you gave your computer during Setup will be seen by others when you connect to other PCs or when others connect to your PC.
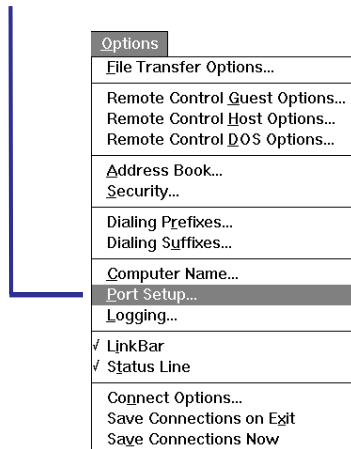
To change your computer name:

1   Choose Computer Name from the Options menu. The Computer Name dialog box appears.

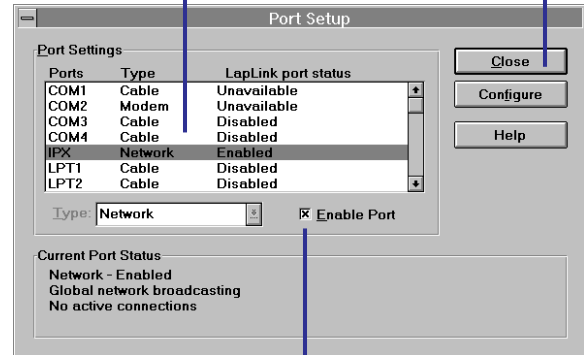2   Type the new name.

3   Click OK.

Setting up ports and uninstalling LapLink for Windows

To change your port settings, choose Port Setup from the Options menu.

Select the port your primary device is connected to.

Choose Close to save these settings.

Options

File Transfer Options...

Remote Control Guest Options...
Remote Control Host Options...
Remote Control DOS Options...

Address Book...
Security...

Dialing Prefixes...
Dialing Suffixes...

Computer Name...
Port Setup...
Logging...

√ LinkBar
√ Status Line

Connect Options...
Save Connections on Exit
Save Connections Now

Port Setup

Close
Configure
Help

Port Settings

Ports	Type	LapLink port status
COM1	Cable	Unavailable
COM2	Modem	Unavailable
COM3	Cable	Disabled
COM4	Cable	Disabled
IPX	Network	Enabled
LPT1	Cable	Disabled
LPT2	Cable	Disabled

Type: Network   ☒ Enable Port

Current Port Status
Network - Enabled
Global network broadcasting
No active connections

Select to make the port active.

LapLink for Windows

LapLink for Windows   Uninstall

To remove LapLink for Windows, double-click the Uninstall icon.

← *Go to topic summary*

Uninstalling LapLink for Windows

If you need to remove LapLink for Windows from your computer, the Uninstall program simplifies this process for you. Not only does it remove program files for LapLink for Windows, it also removes references to LapLink for Windows in your system files. Use Uninstall instead of deleting files using the Windows File Manager or DOS.

To remove LapLink for Windows from your PC:

■ Double-click the Uninstall icon, located in your LapLink for Windows program group.

Follow the instructions on the screen.

X

2

Making connections and opening services

Contents

Connecting over modems

To open a modem connection with another computer running LapLink, click the Modem button on the LinkBar or choose Connect over Modem from the Connect menu. Type a number to dial or select one of your Address Book entries as it appears in the dialog; then select one or more of the services you want to open. *To allow other users to connect to your computer by modem, you must grant them permission with the LapLink security system.*

Go to illustration ➜

To connect to another computer by modem:

1   Click the Modem button on the LinkBar or choose Connect over Modem from the Connect menu.

. . . .
If you attempt to connect by modem without having enabled a modem port, you are asked if you want to go directly to the Port Setup dialog. In that dialog you can enable the port to which the modem is attached.
. . . .

2   In the Connection list, leave the highlight over Manual Dial unless you have created an Address Book entry for the computer you are calling. In the Phone Number box, type the number to dial.

If you have an Address Book entry for the computer, select it. The settings in the entry now appear in the dialog box. Unless you want to change settings, choose Dial to begin dialing.

3   If you want to add a prefix or a suffix to the telephone number, select Prefix or Suffix and choose from entries in the corresponding drop-down box.

If you want to create a suffix or prefix entry, choose Prefixes or Suffixes. For more information, see page 18.

. . . .
When you dial a modem using an Address Book entry, you provide not only the number to dial but preset requests for services and security information required by the computer you are dialing. If you do not use an Address Book entry, you will be prompted to provide any security information required by the remote computer.
. . . . . .

4   Select Redial if no answer to dial the number again if the attempt fails.

The number of attempts and the delay between them are determined by settings for the modem port. You can change those settings after choosing Port Setup in this dialog. For more information, see page 90.

5   Under Services, select the windows you want to appear when the connection is made.

6   Under Security, select Send Log-In Name and Password to use an Address Book entry that includes security information you want to send to the other computer.

7   Choose Dial to begin dialing.

Allowing incoming connections

When you start LapLink the first time, you can open connections to other computers, but other computers cannot open connections to your

Connecting over modems

| ▓▓▒ Cable | 📶 Wireless | 📠 Modem | 🖥 Network | | 📇 | 📠 | 🔒 | | 🖐 | 🖥 | ☎ |

Connect over Modem

Connection
Manual Dial
My home computer

Dial
Cancel
Address Book...
Prefixes...
Suffixes...
Port Setup...
Help

Enter a phone number for the selected computer.

Phone Number

☐ Prefix
☐ Suffix
☐ Redial if no answer

Services
☒ File Transfer   ☐ Chat
☐ Remote Control

Security
☐ Send Log-in Name and Password

To connect to another computer by modem, click the Modem button or choose Connect over Modem from the connect menu.

Once you have created entries for modem connections in the Address Book, the entries appear in this box. Highlight an entry to select it.

To type a telephone number, leave the highlight over Manual Dial, and type the number in the Phone Number box.

Before dialing, be sure that you have selected the services you intend to use and set the other options as you want them.

← *Go to topic summary*

computer except by cable or wireless. To give other computers access by modem or network, change the default security settings.

! The procedure described next disables the security system entirely, giving other LapLink users complete access to the files on your computer—and to any network resources available to it. To set up password protection and prevent unauthorized access, see page 74.

To change the default security settings and allow unrestricted access to your computer:

1 Choose Security from the Options menu or click the corresponding button on the LinkBar.

2 Under Allow Connections From, select Anybody (Public System).

3 Then select any or all of the services you want to make available: File Transfer, Remote Control, or Chat.

4 Choose OK.

   Your computer is now accessible to any computer running LapLink for Windows.

▶

Creating dialing prefixes and suffixes

Prefixes and suffixes are useful for such purposes as reaching an outside line, inserting pauses in the dialing process, and charging calls to credit cards. After choosing Dialing Prefixes or Dialing Suffixes from the Options menu, you can create your own prefixes or suffixes. They will then be available when you connect over modems.

A prefix is sent *before* a telephone number. Prefixes are used most often to make an outside line available from an office or a hotel. If your telephone is equipped with call waiting, you can use a prefix to disable the feature for the duration of your modem connection. (With call waiting enabled, your modem connection will be broken whenever someone tries to call you.)

A suffix is sent *after* a telephone number. Suffixes are used most often to charge calls to credit cards.

With LapLink, you can create your own prefixes and suffixes. You can choose among them when you dial using Connect over Modem.

✓ You can also create prefixes and suffixes after choosing Connect over Modem: choose Prefixes or Suffixes in the Connect over Modem dialog.

To create a prefix or suffix:

1   From the Options menu, choose Dialing Prefixes or Dialing Suffixes.

    If you have set up password protection for your security system, you are now asked to type the password.

2   Choose Add.

3   In the Description box, type a brief description of the prefix or suffix you are creating. When you attempt to dial, you will see this description rather than the suffix or prefix.

4   In the Dialing String box, type the prefix or suffix. When you are through, choose OK.

5   You now see the description you just created. If you want to create another entry, choose Add and repeat the previous two steps. Otherwise, choose Close to exit.

Tips for creating prefixes and suffixes

✓ At a point where you want the dialing to pause, type one or more commas, depending on the length of the pause. (Each comma pro-

Creating a dialing prefix or suffix

Dialing Prefixes

Prefixes

Close

Add...

Edit...

Copy...

Delete

To create a prefix, choose Dialing Prefixes from the Options menu. To create a suffix, choose Dialing Suffixes instead.

Then choose Add.

Add Dialing Prefix

Description:

Dialing String:

OK

Cancel

Help

Type a description of the suffix or prefix. This description will appear in the Connect over Modem dialog.

Type the characters you want to use as your prefix or suffix.

duces a pause of two seconds.) Insert a pause, for example, before a credit card number.

✓ If your office telephone system requires that you dial 9 for an outside line, you might create a prefix named "Outside line" and enter these two characters: 9,

✓ To disable call waiting, type *70 or whatever code is required by your telephone system. (Consult your telephone directory if in doubt.)

Managing your list of prefixes or suffixes

To change entries in your list of prefixes or suffixes:

1 From the Options menu, choose Dialing Prefixes or Dialing Suffixes.

2 Select an entry and choose any of the following:

   ◆ Edit to revise the entry.

   ◆ Copy to duplicate the entry, which you can then revise for a new entry.

   ◆ Delete to remove the entry.

X

Connecting over a network

To connect to another network computer running LapLink, click the Network button on the LinkBar or choose Connect over Network from the Connect menu. Select one of the available network connections; then choose the services you want to open: File Transfer, Remote Control, and Chat. *To allow other users to connect to your computer over a network, you must grant them permission with the LapLink security system.*

Go to illustration ➜

. . . .
If you attempt to con-
nect over a network
without having en-
abled the network
port, you are asked if
you want to go directly
to the Port Setup dia-
log. In that dialog, you
can enable the port to
which the network is at-
tached.
. . . .

To connect to another computer over a Novell network:

1 Click the Network button on the LinkBar or choose Connect over Network from the Connect menu.

2 In the Connection list, select the name of the computer to connect to. The list shows the names of all the computers that are on the network running LapLink.

3 Under Services, select the services you want to appear when the connection is made.

4 Under Security, select Send Log-In Name and Password if you have created an Address Book entry for the computer. Selecting this option ensures that the password and other information in the entry is passed automatically to the remote computer.

5 Choose OK to open the connection.

Allowing incoming connections

When you start LapLink the first time, you can open connections to other computers, but other computers cannot open connections to your computer except by cable or wireless. To give other computers access over a network, you must change the default security settings.

! The procedure described next disables the security system entirely, giving other LapLink users complete access to the files on your computer—and to any network resources available to it. To set up password protection and prevent unauthorized access, see page 74.

To change the default security settings and allow unrestricted access to your computer:

1 Choose Security from the Options menu.

2 Under Allow Connections From, select Anybody (Public System).

3 Then select any or all of the services you want to make available: File Transfer, Remote Control, or Chat.

Connecting over a network

Cable	Wireless	Modem	Network					

Connect over Network

Connection
- Kristin's Klunker
- mike
- Mike's Desktop
- mzjet
- SteveP's 486/33
- SteveT's 386 33
- Techv Dell Left 8.2

Choose OK to open one or more windows for the selected computer.

OK
Cancel
Address Book...
Port Setup...
Help

To connect to another computer over a network, click the Network button or choose Connect over Network from the Connect menu.

The names of other network computers running LapLink appear in this box. Highlight an entry to select it.

Services
- ☐ **File Transfer**   ☐ **Chat**
- ☒ **Remote Control**

Before choosing OK, select the services you intend to use.

Security
- ☐ **Send Log-in Name and Password**

If you have created an Address Book entry for the selected computer, select this option to ensure that the password and other information in the entry is passed automatically to the remote computer.

← Go to topic summary

4 Choose OK.

Your computer is now accessible to any computer running LapLink.

Using the Address Book to automate network connections

You can simplify the process of making connections over a network by adding entries to the Address Book for the computers you connect to regularly.

In each entry you can record the log-in name and password required by the remote computer. You can also request the kinds of services you want to use when you connect.

When you connect to a network computer using the Connect over Network command, the security information you have entered in the Address Book is passed along automatically. Your requests for services appear as defaults in the Connect over Network dialog.

For detailed information about the Address Book, see page 78.

X

Connecting over a cable

When you run LapLink for Windows on computers connected by a LapLink cable, two File Transfer windows are opened automatically on each computer. You can use either computer to exchange files. You can also open a Remote Control window on either computer and Chat windows on both.

Go to illustration ➜

On installation, LapLink for Windows is set up so that you can open a connection with another computer over a LapLink cable simply by running LapLink for Windows on both computers. (For instructions on attaching a parallel or serial cable, see the next section.)

. . . .
If you attempt to connect over a cable without having enabled a serial or parallel port, you are asked if you want to go directly to the Port Setup dialog. In that dialog, you can enable the port to which the cable is attached.
. . . .

When LapLink starts, the computers are connected automatically, and two File Transfer windows appear on both. The left window shows directories and files on the local computer (the one you are sitting in front of). The right window shows directories and files on the remote computer. You can transfer files from either computer. You can also open Remote Control and Chat windows on either computer.

To open a Remote Control or Chat window once you have established a cable connection:

■   Click the Remote Control or Chat button on the LinkBar or choose Open Remote Control or Open Chat from the Window menu.

Changing Autoconnect

The way in which LapLink reacts to a cable connection is determined by the Autoconnect option. You can use this option to instruct LapLink not to make automatic cable connections. Or you can change the service windows that appear automatically.

To disable Autoconnect:

1   Choose Connect Options from the Options menu.

2   Under Autoconnect, clear Enable Cable and Wireless Autoconnect.

3   Choose OK.

When you want to connect by cable in the future, you must open the connection manually.

To change the service windows that appear automatically:

1   Choose Connect Options from the Options menu.

2   Under Autoconnect, select or clear any of these options: File Transfer, Remote Control, or Chat.

3   Choose OK.

Changing the Autoconnect feature

```
┌─────────────────────────────────────┐
│ ─        Connect Options             │
│ ┌─Saved Connections───────┐  ┌──────┐│
│ │ ☒ Restore Saved         │  │  OK  ││
│ │   Connections at Startup│  └──────┘│
│ │   ◉ Automatically       │  ┌──────┐│
│ │     Connect at Startup  │  │Cancel││
│ │   ○ Ask Before          │  └──────┘│
│ │     Connecting          │  ┌──────┐│
│ ├─Autoconnect─────────────┤  │Defaults││
│ │ ☒ Enable Cable and      │  └──────┘│
│ │   Wireless Autoconnect  │  ┌──────┐│
│ │   ☒ File Transfer  ☐ Chat│ │ Help ││
│ │   ☐ Remote Control      │  └──────┘│
│ ├─Connection Alerts───────┤          │
│ │ ☒ Beep for:             │          │
│ │   ☒ File Transfer ☒ Chat│          │
│ │   ☒ Remote Control      │          │
│ │ ☒ Restore Chat          │          │
│ │   Automatically         │          │
│ ├─Automatic Disconnects───┤          │
│ │ ☐ Disconnect Inactive   │          │
│ │   Connections           │          │
│ │   After ____ minutes    │          │
│ └─────────────────────────┘          │
└─────────────────────────────────────┘
```

By default, LapLink opens two File Transfer windows automatically as soon as two computers running LapLink are connected by cable.

If you prefer to make a cable connection manually, choose Connect Options from the Options menu. Then clear this option.

Or leave the option selected and change these options if you want different service windows to appear on connection.

Opening connections manually

If you disable Autoconnect, you must open cable connections manually.

To open a cable connection manually:

1 Click the Cable button on the LinkBar or choose Connect over Cable from the Connect menu.

2 In the Connection list, make sure that the name of the computer you want to connect to is selected.

3 Under Services, select the windows you want to appear when the connection is made.

4 Under Security, select Send Log-In Name and Password if the other computer has password protection and you have an Address Book entry for that computer.

5 Choose OK to open the connection.

✓ By default, LapLink imposes no security protection on cable connections. If you want the same security protection for cable connections as for modem and network connections, choose Security from the Options menu. Under Cables and Wireless, select Enforce Security for Connections.

▶

Attaching the LapLink cable

For a cable connection choose either LapLink cable and attach it to the appropriate port of each computer. For a serial connection, choose the blue cable (labeled SERIAL) and attach one connector at each end to a serial port on both computers. For a parallel connection choose the yellow cable (labeled PARALLEL) and attach each connector to a parallel port on both computers.

Go to illustration ➔

LapLink allows two kinds of cable connections: serial and parallel. Choosing between them may be as simple as looking at the backs of the two computers. If either of them lacks a parallel port, for example, you must use a serial connection. Or if one has a mouse attached to its only serial port, you may want to retain the use of the mouse and use a parallel connection instead.

If you have a choice, choose parallel because it is considerably faster. On the other hand, if you want to use Remote Install, choose serial. You can't use Remote Install over a parallel cable.

✓ Choosing between parallel and serial does not affect the way you use LapLink. Whether you are using File Transfer or one of the other services, the procedures are the same for parallel and serial.

Identifying parallel and serial ports

A parallel port almost always has 25 holes. It is sometimes labeled, LPT1, LPT2, LPT3, or PRINTER.

Serial ports come in two sizes: a DB9 serial port has just 9 pins; the larger DB25 port, 25 pins. If you have a serial port with holes instead of pins, you must purchase a gender changer before you can attach the LapLink cable. A serial port is sometimes labeled COM1, COM2, COM3, COM4, or SERIAL.

! If in doubt about the ports on your computer, proceed carefully. Attaching the LapLink cable to a monitor port, in particular, may damage the computer. (A monitor port is sometimes labeled RGB and typically has 9 holes.) Consult the documentation for your system, or contact your dealer or manufacturer.

Attaching the cable

To connect two computers by the LapLink cable.

1   Choose the serial or parallel cable according to your preference and the availability of ports.

Identifying serial and parallel ports
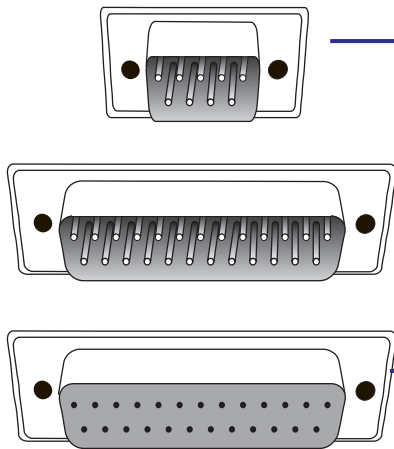
You may find one or both of these types of serial ports on your computers. Both types usually have pins instead of holes. The smaller type (DB9) has 9 pins. The larger type (DB25) has 25 pins. A serial port may be labeled COM1, COM2, COM3, COM4, or SERIAL.

A parallel port typically has holes instead of pins. There are 25 holes in all. A parallel port is sometimes labeled PRINTER, LPT1, LPT2, or LPT3.

← *Go to topic summary*

2   Connect each end of the cable to the appropriate port of each computer.

The serial cable has two types of connectors at one end or both ends, but only one of them is to be used at any time. If the serial port on one of your computers has 25 pins, attach the larger connector to that port. Otherwise, attach only the smaller, 9-pin connector.

✓ Use only a LapLink cable to connect your computers. LapLink does not work over most other serial cables or any printer cables. (For more information, call Customer Service at the number listed near the end of this guide.)

✓ LapLink III cables can be used with LapLink for Windows, though they will not provide the fastest transmission rate when you are transmitting over a parallel connection. LapLink Pro and LapLink V cables are completely compatible with LapLink for Windows.

X

Connecting over wireless

If your wireless device was ready to use when you installed LapLink, you should be ready to connect by wireless to another computer running LapLink. Once the wireless devices are within range of each other, two File Transfer windows are opened on both computers. You can then use either computer to exchange files. You can also open a Remote Control window on either computer and Chat windows on both.

Go to illustration ➜

On installation, LapLink for Windows is set up so that you can open a connection with another computer over wireless devices simply by running LapLink for Windows on both computers and placing the computers within range of each other.

. . . .
In this guide, "wireless" refers to AirShare Radio Modules. The use of these modules is restricted in some countries. To connect over a cellular modem, use Connect over Modem. To connect over a wireless LAN adapter, use Connect over Network.
. . . .

When LapLink starts, the computers are connected automatically, and two File Transfer windows appear on both. The left window shows directories and files on the local computer (the one you are sitting in front of); the right window shows directories and files on the remote computer. You can transfer files from either computer. You can also open Remote Control and Chat windows on either computer.

To open a Remote Control or Chat window once you have established a wireless connection:

■ Click the Remote Control or Chat button on the LinkBar or choose Open Remote Control or Open Chat from the Window menu.

Changing Autoconnect

The way in which LapLink reacts to a wireless connection is determined by the Autoconnect option. You can use this option to instruct LapLink not to make automatic wireless connections. Or you can change the service windows that appear automatically.

. . . .
If you attempt to connect over wireless devices without having enabled a wireless port, the Port Setup dialog appears. You can then enable the port to which the wireless device is attached.
. . . .

To disable Autoconnect:

1 Choose Connect Options from the Options menu.

2 Under Autoconnect, clear Enable Cable and Wireless Autoconnect.

3 Choose OK.

When you want to connect over wireless devices in the future, you must open the connection manually.

To change the service windows that appear automatically:

1 Choose Connect Options from the Options menu.

2 Under Autoconnect, select or clear any of these options: File Transfer, Remote Control, or Chat.

Changing the Autoconnect feature

Connect Options

Saved Connections
- ☒ Restore Saved Connections at Startup
  - ● Automatically Connect at Startup
  - ○ Ask Before Connecting

Autoconnect
- ☒ Enable Cable and Wireless Autoconnect
  - ☒ File Transfer   ☐ Chat
  - ☐ Remote Control

Connection Alerts
- ☒ Beep for:
  - ☒ File Transfer   ☒ Chat
  - ☒ Remote Control
- ☒ Restore Chat Automatically

Automatic Disconnects
- ☐ Disconnect Inactive Connections
  - After ▢ minutes

OK
Cancel
Defaults
Help

Installation prepares LapLink to open two File Transfer windows automatically as soon as two computers running LapLink are connected by wireless devices.

If you prefer to make a wireless connection manually, choose Connect Options from the Options menu and clear this option.

Or leave the option selected and change these options if you want different service windows to appear on connection.

3 Choose OK.

Opening connections manually

If you disable Autoconnect, you must open wireless connections manually.

To open a wireless connection manually:

1 Click the Wireless button on the LinkBar or choose Connect over Wireless from the Connect menu.

2 In the Connection list, make sure that the name of the computer you want to connect to is selected.

3 Under Services, select the windows you want to appear when the connection is made.

4 Under Security, select Send Log-In Name and Password if you have created an Address Book entry for the computer and included security information.

5 Choose OK to open the connection.

✓ By default, LapLink imposes no security protection on wireless connections. If you want the same security protection for wireless connections as for modem and network connections, choose Security from the Options menu. Under Cables and Wireless, select Enforce Security for Connections.

X

Remote Install to a computer without LapLink

If LapLink is not installed on a computer that you wish to connect to, you can install LapLink on that computer from the floppy disks or over a serial cable using Remote Install. In addition to copying files to the second computer, Remote Install prepares Windows to run LapLink. After Remote Install, start LapLink on the second computer. You can then use either computer to open a connection.

Go to illustration ➜

Before you can open a connection between two computers, LapLink must be running on both. The Setup program on the LapLink disks provides the fastest installation, but if for some reason you cannot install from the disks, you can connect the computers by serial cable and use Remote Install.

. . . .
A remotely installed copy of LapLink on any computer not remaining under your direct control is a temporary convenience for you, and must be deleted after use. See your license agreement for details.
. . . .

Remote Install copies all the required files to the remote computer and then prepares Windows to run LapLink on that computer. A remote-installed copy of LapLink contains all of the features of a disk-installed copy with this exception:

◆ The remote-installed copy of LapLink cannot perform further remote installations.

Requirements for Remote Install

These are the requirements for Remote Install:

◆ LapLink for Windows must be running on one of the computers.

◆ The computers must be connected by serial cable.

◆ The serial port on the computer running LapLink must be enabled.

. . . .
You can use Remote Install over AirShare wireless modules as well as a serial cable.
. . . .

◆ The remote computer must meet the Windows and disk space requirements specified on the opposite page.

Using Remote Install

On the computer without LapLink, Remote Install uses the basic communication capabilities provided by DOS. During the installation, you must type DOS commands on that computer.

To start Remote Install:

■ Choose Remote Install from the Connect menu.

Follow the on-screen instructions, or see the next section for details.

Requirements for a computer receiving a Remote Install	
Requirement	**Notes**
Windows requirements	The requirements for the remote-installed version of LapLink are the same as for the version originally installed on your local computer. The computer must have Windows version 3.1; it must be capable of running in the 386 enhanced mode; and it must have at least 4 megabytes of memory.
Disk space requirements	Almost all LapLink for Windows files are copied to the remote computer. (DOS support and the help file are optional.) At least 4.5 megabytes of hard disk space must be free.

← *Go to topic summary*

Deleting a remote-installed copy of LapLink

The easiest way to remove a remote-installed copy of LapLink is to use the Uninstall program. Not only does it remove LapLink program files, it also removes references to LapLink from your Windows system files. Use Uninstall instead of deleting files using the Windows File Manager or DOS.

To remove a remote-installed copy of LapLink:

■ Double-click the Uninstall icon in your LapLink for Windows program group.

Follow the instructions on the screen.

▶

Remote Install to a computer without LapLink
Remote Install over a serial cable

With Remote Install, you can connect to any computer that has a free serial port. Attach the serial cable to both computers and, on the local computer, choose Remote Install from the Connect menu. During the process you'll be asked to type DOS commands on the second computer. Do not start Windows on the remote computer. It should be waiting at the DOS prompt.

Go to illustration ➜

. . . .
If you attempt to use Remote Install without having enabled a serial port, you are asked if you want to go directly to the Port Setup dialog. In that dialog, you can enable the port to which the cable is attached.
. . . .

. . . .
You can use Remote Install over AirShare wireless modules as well as a serial cable.
. . . .

If you want to connect to a computer that doesn't have LapLink installed, you can use Remote Install to copy LapLink to the second computer and begin communicating over the ports.

To install LapLink on another computer by serial cable:

1   Make sure that the remote computer is not running Windows and that it is displaying the DOS prompt.

!   You cannot Remote Install into a DOS box or prompt under Windows. You must Remote Install into DOS.

2   LapLink is installed to whatever directory is current on the receiving computer. It's a good idea to create and move to a new directory on the remote computer.

3   Choose Remote Install from the Connect menu.

4   Under New Computer Name, type in a name for the remote computer.

5   Select the serial ports to which the cable is attached. Local Port refers to the computer running LapLink; Remote Port refers to the computer without LapLink.

6   Under Send Optional Files, select or clear the options for help files and DOS Remote Control support. Then choose OK. LapLink reminds you to make sure the remote computer is not running Windows. Choose OK.

7   On the computer without LapLink, type the lines that now appear in the instructions on the local computer.

8   On the local computer, choose OK.

   LapLink copies all its program files to the remote computer. This may take 10 to 15 minutes. On the remote computer, Windows will then be started and changes are made to create a program group for LapLink. At the end of that process, you are asked to respond to a prompt to restart Windows.

Remote Install over a serial cable

Remote Install

New Computer Name

Loretta's PC

OK

Cancel

Send Optional Files

☒ Help Files
☒ DOS Remote Control

Port Setup...

Help

Local Port

Com2 - Cable ▼

Remote Port

Com1 ▼

Speed

115200 ▼
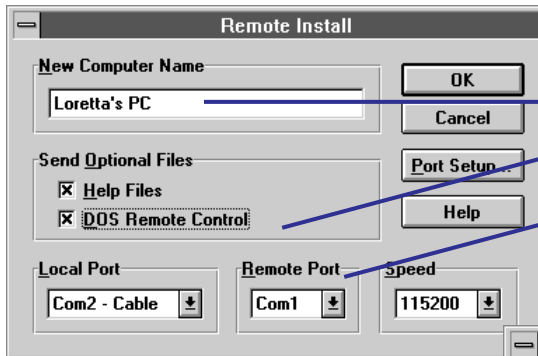
After choosing Remote Install from the Connect menu—

◆ Assign a name to the remote computer.

◆ Determine whether to send help files and files to support DOS Remote Control.

◆ Identify the serial ports to be used on both computers.

On the local computer you then see instructions to be carried out on the remote computer.

After following these instructions, return to the local computer and choose OK.

Remote Install Cable Instructions

Preparing the Remote Computer

Using DOS, create a new directory on the remote computer. Then use the DOS CD command to change to this new directory.

Next enter the following commands on the remote computer.

```
mode com1:2400,n,8,1,p
ctty com1
```

Select OK when all commands are entered.

OK

Cancel

Help
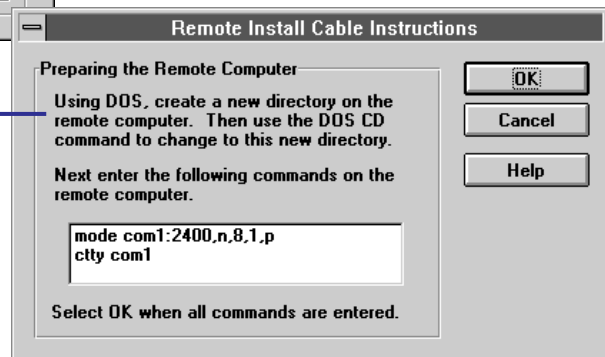
← Go to topic summary

9   To make the connection, start LapLink for Windows on the remote computer. Depending on your Autoconnect settings, the connection will be opened automatically, or you must choose Connect over Cable from the Connect menu.

What the Remote Install commands do

The two commands you type on the receiving computer tell DOS to allow communication over the designated serial port. They are:

◆ MODE COM1:2400,N,8,1,P. Sets the speed and other parameters for the serial port.

◆ CTTY COM1. Tells DOS to accept commands directly from the serial port instead of the keyboard. That's why the keyboard on the receiving computer stops working after typing the second line. Control returns to the remote keyboard when Remote Install is complete.

X

3

Using the Services: Remote Control, File Transfer, and Chat

Contents

Copying and moving files and directories—Overview

With File Transfer, you can transfer files and directories between your computer and remote computers—and between remote computers. This section summarizes the basics of File Transfer. Subsequent sections provide detailed instructions.

Go to illustration ➔

To allow other computers to connect to your computer by modem or network, you must relax the security setup established during installation. .

To transfer files between your computer and another computer, open two File Transfer windows. One window (the *local*) represents your computer. The other window (the *remote*) represents the other computer.

To open local and remote File Transfer windows at the same time you open a connection, use any of the Connect over . . . commands on the Connect menu. To open local and remote windows after the connection has been opened, choose Open File Transfer from the Window menu or click the corresponding button on the LinkBar.

✓ You can also use File Transfer to copy and move files on the local computer, without connecting to another computer. To open two local File Transfer windows, choose Open Local File Window from the Window menu.

Working in a File Transfer window

A File Transfer window graphically displays the directories and files on the drives of your choice. The window is split into two panes:

◆ On the left, a directory tree showing the organization of directories and subdirectories on disk drives. Directories and subdirectories appear as branches off the root directory.

◆ On the right, a pane showing the contents of the directory that is currently selected in the left pane. The contents may include subdirectories as well as files.

Work in the left pane to navigate through a drive. Once you display a drive in the left pane, you can expand the drive to show its subdirectories. You can display any or all of your drives in the same pane.

Once a directory appears in the left pane, select it and make it the current directory. Its contents (files and subdirectories) then appear in the right pane.

Selecting and transferring

When you copy or move items, you transfer them from the *source* to the *target*. You prepare the *target* by navigating in the target window to display the directory into which you want to transfer the items. The directory may appear in either pane.

Copying and moving
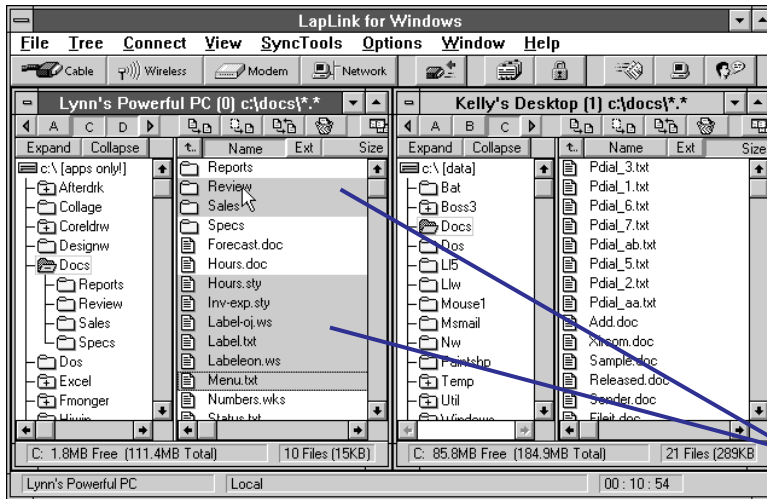
Two File Transfer windows have been opened in preparation for transferring files from one computer to another. One window represents the local computer; the other window, the remote.

✓ The name of the computer and the current drive and directory appear in the title bar of each window. By default, the left window is local and the right window is remote.

These directories and files on the source have been selected for copying or moving.

You can copy or move them using drag and drop or the Copy or Move command.

← *Go to topic summary*

You prepare the *source* by selecting the items you intend to transfer. You can select a single directory, a single file, or many directories and files. Unless you want to select a single directory, work in the right pane to make your selections.

Then use the mouse to drag the items and drop them onto the target.

✓ If you prefer, choose Copy or Move from the File menu—or click the corresponding buttons in the File Transfer window—instead of using drag and drop.

Before performing any transfer, LapLink asks you to verify the source directory and the target directory. You can specify a different target directory and change certain options.

▶

Copying and moving files and directories
Opening and managing File Transfer windows

To open File Transfer windows while connecting to another computer, choose one of the Connect Over . . . commands from the Connect menu, and select File Transfer. You then see two File Transfer windows, one representing the local computer, the other the remote. To open File Transfer windows after you make a connection, choose Open File Transfer from the Window menu. You can have several File Transfer windows open at once. You can arrange them as you arrange other kinds of windows or reduce them to icons.

Go to illustration ➜

To open File Transfer windows while connecting:

■ Choose one of the Connect over . . . commands from the Connect menu or click the corresponding button on the LinkBar. Under Services, select File Transfer. (For complete information about the Connect over . . . commands, see chapter 2.)

To open File Transfer windows after a connection has been opened:

■ Choose Open File Transfer from the Window menu or click the corresponding button on the LinkBar.

. . . .
By default, new File Transfer windows are arranged side by side. If you want them arranged one above the other, choose File Transfer Options from the Options menu. Under File Transfer Window, clear the New windows tiled side by side option.
. . . . .

Two File Transfer windows are opened. One represents the local computer; the other, the remote computer.

✓ The Autoconnect feature automates this process when you connect over a cable or by wireless. With Autoconnect, a local and a remote File Transfer window are opened automatically. (You can modify the Autoconnect to include Remote Control and Chat as well.)

✓ If you have opened windows for more than one connection, select a window for a particular connection before choosing Open File Transfer. If, for example, you have Remote Control windows for computers A and B and you want to open a File Transfer window for computer B, select the Remote Control window for computer B beforehand.

Opening local File Transfer windows

With LapLink, you can transfer files from one location on the local computer to another. Transferring files on the local computer does not require a connection to another computer.

To open File Transfer windows for the local computer only:

■ Choose Open Local File Window from the Window menu. Or click the LinkBar button corresponding to the Open File Transfer command.

Opening and managing File Transfer windows

Window

Open Local File Window	
Open File Transfer	
Open Remote Control	
Open Chat	
Cascade	Shift+F5
Tile Vertically	Shift+F4
Tile Side by Side	Shift+F3
Arrange Icons	
Refresh	F5
Duplicate	F6
Close All	
1 Kelly's Desktop [1] c:\docs*.*	
√ 2 Lynn's Powerful PC [0] c:\docs*.*	

The Open File Transfer command appears on the LinkBar as this button:

The Duplicate command appears in the File Transfer window as this button:

Clicking either button has the same effect as choosing the corresponding command from the menu.

◆ Choose Open Local File Window to open local File Transfer windows and work with files on the local computer.

◆ After opening a connection to another computer, choose Open File Transfer to open File Transfer windows and exchange files with the remote computer.

◆ Choose either of these commands to arrange windows side by side or one above the other. These commands tile all service windows. To tile only File Transfer windows, minimize (reduce to icons) the other windows beforehand.

◆ After minimizing windows, choose Arrange Icons to move the icons so that they do not overlap.

◆ Choose Refresh to update information in a File Transfer window, as when you change floppy disks or use network drives.

◆ Choose Duplicate to create an exact copy of the active File Transfer window.

← *Go to topic summary*

Managing File Transfer windows

Since File Transfer windows are windows, you can manipulate them as you would other windows. You can, for example, close, move, resize, and reduce them to icons. For more information about working with windows, see the User's Guide for Windows.

LapLink also provides special commands for displaying and arranging windows. These commands appear on the Window menu and are described in the illustration above.

▶

Copying and moving files and directories
Navigating through File Transfer windows

To add a drive to a File Transfer window, click the corresponding drive button. (More than one drive can appear at a time.) To select a drive and make it current, click the drive in the left pane. To display the first level of directories in a drive, double-click the drive. To display all levels of directories, select the drive and click the Expand button on the LinkBar. Click a directory to select it and make it the current directory; its contents now appear in the right pane.

Go to illustration ➜

A File Transfer window is split into a left and a right pane. The left pane is designed for navigating through drives and directories. It can display one or more drives of a local or a remote computer, though only one drive and directory is current at a time. You can change the level of information by expanding and collapsing a directory or an entire drive.

. . . .
Want to locate a particular directory or file? Type the first letter of its name. The highlight moves to the next item beginning with that letter. Typing the letter again finds the next occurrence. In the left pane, you can search for any displayed directory in the current drive; in the right pane you can search for any displayed subdirectory or file in the current directory.
. . . .

To navigate through a drive and its directories:

1 If necessary, add the drive to the File Transfer window:

    ◆ Click the appropriate drive button near the top of the window. Or choose Select Drives from the Tree menu, select the drive, and choose OK.

2 In the left pane, click the drive to select it and make it the current drive.

    The drive is now highlighted, and its contents appear in the right pane.

3 Expand the drive to show directories:

    ◆ To expand just the first level of directories, double-click the drive, or select the drive and choose Expand One from the Tree menu.

    ◆ To expand all levels, select the drive; then click the Expand button or choose Expand All from the Tree menu.

4 Click a directory to select it and make it the current directory.

    The directory is now highlighted, and its contents appear in the right pane. The current drive and directory also appear in the title bar of the File Transfer window next to the name of the computer whose contents you are viewing.

    You can expand one directory at a time as long as it has at least one level of subdirectories below it. Expandable directories appear in the left pane with plus signs inside their icons.

Navigating through a File Transfer window

| ▭ | Orv's Station [0] d:*.* | ▼ | ▲ |
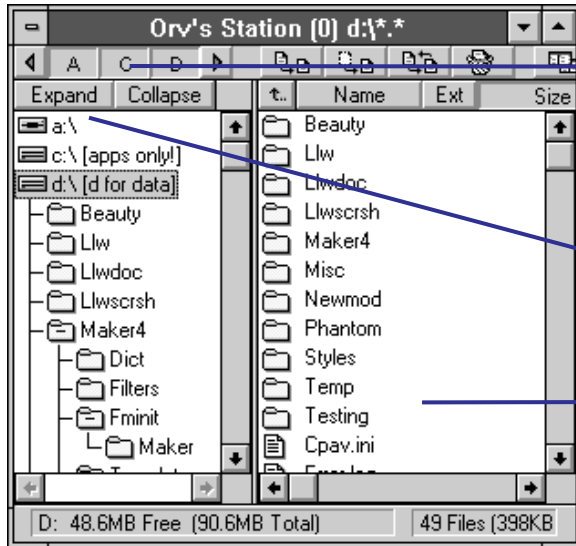
Click a drive button to add a drive to the File Transfer window. (Click it again to remove the drive.)

✓ If a drive is not listed, click the arrow buttons to show more drives.

Double-click a drive icon to show the first level of directories.

Select a drive and click the Expand button to show all levels, as shown in the left pane.

The files and directories in the selected directory appear in the right pane.

The name of the current drive and directory also appear in the title bar of the window.

← *Go to topic summary*

To expand the first level of a directory:

■ Double-click the directory, or select it and choose Expand One from the Tree menu.

To expand all levels of a directory:

■ Select the directory; then click the Expand button or choose Expand Branch from the Tree menu.

Collapsing drives and directories

Collapsing is the reverse of expanding; when you collapse, you "hide" directory levels you have displayed. You can collapse an entire drive at once or one directory at a time.

To collapse an entire drive at once:

■ Double-click the drive icon; or select one of its directories and choose Collapse All from the Tree menu.

To collapse a single directory:

■ Double-click the directory, or select the directory and choose Collapse Branch from the Tree menu.

To move upward in the directory tree (left pane) one level at a time, click this button:

Copying and moving files and directories
Selecting items

In the left pane of a File Transfer window, you can select only one directory at a time. In the right pane, you can select multiple directories and files. To select a single item, point to it and click the left mouse button. To select several items in sequence, click the first item; then hold down SHIFT while you click the last item. To select items out of sequence, hold down CTRL while you click each one. You can also choose Select All or Select By from the File menu. To cancel an individual selection, hold down CTRL and click the item.

Go to illustration ➔

You must select an item (directory or file) before you can copy or move it. When you select an item, its name and icon are highlighted.

You can select a single item or several items:

◆ You can select a single directory in either pane of a File Transfer window.

◆ You can select files and multiple directories only in the right pane.

✓ By default, selecting a directory selects all of its files and its subdirectories. To change the default, choose File Transfer Options from the Options menu and clear Include subdirectories in copies. (You can override the default when you are asked to confirm a copy or move operation.)

To select a file or directory:

■ Click the name of the file or directory.

. . . .
If you want information about your selections—such as the number of files and the total size—choose Size of Selections from the File menu.
. . . .

To select two or more items in sequence:

1 Click the first item.

2 Hold down SHIFT while you click the last item.

To select two or more items out of sequence:

■ Hold down CTRL while you click the items.

To select all directories and files in the current directory:

■ Choose Select All from the File menu.

✓ To select everything in a drive, select the drive in the left pane before choosing Select All.

To select directories and files using the Select By command:

1 Click the source File Transfer window to make it active.

2 Choose Select By from the File menu.

Selecting files and directories

In this pane, you can select one directory at a time.

In this pane, you can select files as well as multiple directories.

```
┌─┬────────────────────────────────────────────────┬───┬─┐
│ ─ │  Lynn's Powerful PC (0) c:\docs\*.*          │ ▼ │ ▲ │
├──┬───┬───┬───┬────┬──────┬──────┬──────┬──────────┤
│ ◀ │ A │ C │ D │ ▶ │ 🗗 │ 🗗 │ 🗗 │ 🗑 │      🗗 │
├────────┬────────┬───┬──────┬──────┬──────────────┤
│ Expand │ Collapse │   │ t.. │ Name │ Ext │ Size │
├────────────────────┬─┬──────────────────────────┬─┤
│ 🖳 c:\ [apps only!] │▲│ 📁 Reports              │▲│
│ ├ 🗁 Afterdrk       │ │ 📁 Review               │ │
│ ├ 🗀 Collage        │ │ 📁 Sales                │ │
│ ├ 🗁 Coreldrw       │ │ 📁 Specs                │ │
│ ├ 🗀 Designw        │ │ 📄 Status.txt           │ │
│ ├ 🗁 Docs           │ │ 📄 Menu.txt             │ │
│ │ ├ 🗀 Reports      │ │ 📄 Label.txt            │ │
│ │ ├ 🗀 Review       │ │ 📄 Numbers.wks          │ │
│ │ ├ 🗀 Sales        │ │ 📄 Forecast.doc         │ │
│ │ └ 🗀 Specs        │ │ 📄 Labeleon.ws          │ │
│ ├ 🗀 Dos            │ │ 📄 Label-oj.ws          │ │
│ ├ 🗁 Excel          │ │ 📄 Hours.doc            │ │
│ ├ 🗁 Fmonger        │▼│ 📄 Inv-exp.sty          │▼│
│ 🗀 Hiwin            │ │ 📄 Hours.stu            │ │
├─┬──────────────┬─┬─┤ ├─┬──────────────────┬─┤
│◀│              │▶│ │ │◀│                  │▶│
├────────────────────┴───┴──────────────────────┤
│ C: 1.8MB Free (111.4MB Total)  │ 10 Files (15KB) │
└────────────────────────────────────────────────┘
```
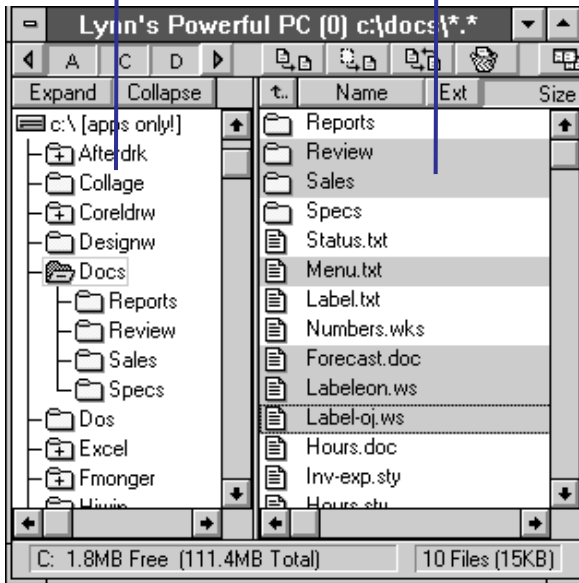
Click an item to select it. It is now highlighted.

To select a group of items, click the first item. Hold down SHIFT while you click the last.

To select items out of sequence, hold down CTRL while you click them.

You can also select items using the Select All and Select By commands on the File menu.

← *Go to topic summary*

3   In the Filter box, type the name of a file or directory. Or use wild-cards to specify items with similar names. For example, typing *.DOC selects all files with the .DOC extension. Leaving the default *.* selects all files and directories.

You can specify several criteria at once by typing them one after another and inserting a space or a comma between them. For example, typing *.DOC,*.TXT displays all files with these extensions.

4   If you want to select according to date, select Enable Date/Time Range. Then type the dates and times under Oldest File and Newest File.

5   Choose OK.

Clearing selections

To clear an individual selection:

■   Hold down CTRL while you click the item.

To clear all selections:

■   Choose Clear Selections from the File menu.

▶

Copying and moving files and directories

Copying or moving using drag and drop

Before transferring items using drag and drop, navigate in the target window until you see the drive and directory to which you want to transfer the items. In the source window, select the items. Then make sure that the source and the target are both showing and the source window is active. To copy, drag the selection and drop it onto the target (if you are copying to a target on the same drive, hold down CTRL while you drag and drop). To move, hold down SHIFT while you drag and drop (if your are moving to the a different location on the same drive, you do not have to use SHIFT).

You can transfer items by dragging them with the mouse. Or you can use the Copy and Move commands, as explained in the next section.

Before attempting to transfer between computers, open a File Transfer window for each of them.

When you copy or move, you transfer items from one location (the source) to another (the target). With the mouse, you can simplify the process through LapLink's "drag and drop" feature.

You can copy or move a single directory, a single file, or many selected directories and files. (The process of selecting is covered in the previous section.)

You can copy or move items:

◆ From one File Transfer window to another.

◆ From one location in a File Transfer window to another location in the same window.

◆ From one File Transfer window to the icon of another File Transfer window. Select the target directory before minimizing the window.

To copy or move items using drag and drop:

1 Navigate in the left pane of the target window to display the directory into which you want to transfer the selections.

2 In the source window, select the items you intend to transfer. Make sure that the source and the target are both showing.

3 Place the mouse pointer over a single item or one of several items you have selected on the source.

4 Hold down the left mouse button, drag the selection to the target, and release the mouse button.

◆ If you are dragging to a different drive, the selections are copied.

◆ If you are dragging to the same drive, the selections are moved.

◆ Holding down CTRL during drag and drop always copies. Holding down SHIFT always moves. Press each key before you start to drag; release it after releasing the mouse button.

Copying and moving using drag and drop

To copy a different drive, drag from the source and drop on the target.

To copy to the same drive, hold down CTRL while you drag and drop.

To move, hold down SHIFT while you drag and drop.

You can drag to a target:

◆ In the same window

◆ In another File Transfer window

◆ In a window that has been reduced to an icon (the files are transferred to the directory that was current when the window became an icon)
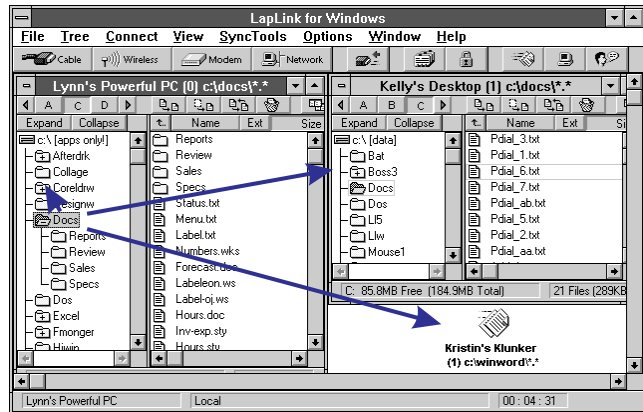
← *Go to topic summary*

5   The dialog displayed next lets you verify the source and the target, change the target, and set options. Do any of the following:

   ◆ Under To, verify the target. You can choose a different computer from the Computer drop-down list; in the Directory box, you can type any drive and directory already on the target.

   ◆ Under Options, select or clear the options as you wish.

6   Choose OK.

   You now see a dialog box reporting on the operation as it proceeds. Choose Cancel to halt the operation.

7   If a confirmation dialog appears, select the files you want to transfer and choose OK.

8   You now see a dialog reporting on such details as the number of files transferred and the transmission time. Choose OK.

Tips for drag and drop

✓ Dropping onto a drive puts the selections at the first level of the drive (the root directory).

✓ Dropping onto a directory puts the selections inside the directory.

✓ Dropping onto a file puts the selections on the same level as the file.

✓ When you transfer directories that are not on the target already, the directories are created automatically. You do not have to create them yourself.

▶

Copying and moving files and directories
Copying or moving using commands

Before transferring items using the Copy or Move commands, you can save time by navigating in the target window until you have selected the target directory. In the source window select the items and make sure that the window itself is selected. Choose Copy or Move from the File menu. Ensure that the target computer name and directory are correct. Change them if they aren't. Select or clear the options as you wish. Choose OK to begin the transfer.

Go to illustration ➜

. . . .
Before attempting to transfer between computers, open a File Transfer window for each of them.
. . . .

When you copy or move, you transfer items from one location (the source) to another (the target). You can copy or move a single directory, a single file, or many selected directories and files.

To copy or move items using commands:

1   Navigate in the left pane of the target window to select the directory into which you want to transfer the selections.

2   In the source window select the items you intend to transfer.

3   With the source window still active, choose Copy or Move from the File menu. Or click the corresponding button near the top of the window.

4   The next dialog lets you verify the source and the target, change the target, and set options. Do any of the following:

   ◆   Under To, verify the target. You can choose a different computer from the Computer drop-down list and type a different drive and directory in the Directory box.

   ◆   Under Options, select or clear the options as you wish. These options are explained in detail later in this chapter.

5   Choose OK.

   You now see a dialog box reporting on the operation as it proceeds. Choose Cancel to halt the operation.

6   If a confirmation dialog appears, select the files you want to transfer and choose OK.

7   You now see a dialog reporting on the number of files transferred and the transmission time, among other matters. Choose OK.

✓   When you transfer directories that are not on the target already, the directories are created automatically. You do not have to create them yourself.

Using the Copy and Move commands

This window has been prepared as the target. It will receive files in the current directory (in this case, the DESIGNW directory).
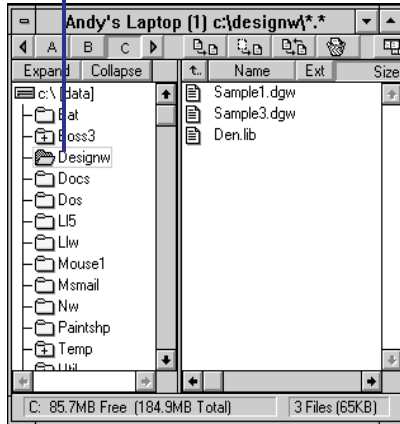
This window has been prepared as the source. Several files have been selected and the window remains active, as indicated by the color of the title bar.

Andy's Laptop (1) c:\designw*.*
A	B	C	▶	🗗 🖪	🖫 🗗	🖫 🗗	🖉
Expand	Collapse	t..	Name	Ext	Size
🖴 c:\ [data]		📄 Sample1.dgw
📁 Bat		📄 Sample3.dgw
📁 Boss3		📄 Den.lib
📂 Designw
📁 Docs
📁 Dos
📁 LI5
📁 Llw
📁 Mouse1
📁 Msmail
📁 Nw
📁 Paintshp
📁 Temp
📁 Util
C: 85.7MB Free (184.9MB Total)	3 Files (65KB)

Boyd's Super PC (0) c:\designw*.*
A	C	D	▶	🗗 🖪	🖫 🗗	🖫 🗗	🖉
Expand	Collapse	t..	Name	Ext	Size
🖴 c:\ [apps only!]		📄 Kitchen.dgw
📁 Afterdrk		📄 Symbols.lib
📁 Collage		📄 Beds.lib
📁 Coreldrw		📄 Mortgage.hlp
📂 Designw		📄 Sample1a.dgw
📁 Docs		📄 Baths.lib
📁 Dos		📄 Uninstal.exe
📁 Excel		📄 Kitchens.lib
📁 Fmonger		📄 Sample1.dgw
📁 Hjwin		📄 Sample3.dgw
📁 Hockey		📄 Den.lib
📁 LI5		📄 Dining.lib
📁 Msmail		📄 Sample4.dgw
📁 Nw		📄 Living.lib
C: 1.8MB Free (111.4MB Total)	23 Files (1.1MB

To copy selected items, choose Copy from the File menu or click this button: 🖫 🗗

To move selected items, choose Move from the File menu or click this button: 🖫 🗗

File Move

OK to move selected files and directories?

From
Computer: **Boyd's Super PC (0)**
Directory: **c:\designw**

To
Computer: **Andy's Laptop (1)** ▼
Directory: **C:\DESIGNW**

Options
☒ Transfer only if files are <u>n</u>ewer
☐ T<u>r</u>ansfer only if files are already on target
☒ <u>I</u>nclude subdirectories
☒ <u>S</u>how statistics when complete

[OK]
[Cancel]
[Help]

Verify that you have selected the correct window as the source. If you haven't choose Cancel and reselect the source.

Verify here that the target is correct.

✓ If you have other File Transfer windows open, you can select one of them as the target from the Computer pull-down list.

✓ You can type a different target drive and directory in the Directory box.

Before choosing OK, select or clear these options as necessary.

X

Synchronizing directories with SmartXchange

You can use the SmartXchange command to synchronize two directories in a two-way exchange of files. You can limit the scope of the operation by including only the files already in both directories. You can also use SmartXchange to update an archive directory quickly. In either case, older files are overwritten, but no files are deleted.

With SmartXchange, you determine the items to be copied by selecting the directory containing the items, not by selecting the items themselves. Select the directory in the left pane of a File Transfer window.

The SmartXchange command appears in a File Transfer window as this button:

Synchronizing directories

If you have ever copied files back and forth between computers so that they share the latest files, you have synchronized. Unlike the usual copy operation, synchronization works in two directions: from one directory to the other and back again.

With SmartXchange you can accomplish this in one operation, one directory at a time. You can increase the scope of the operation by including subdirectories within the directory. You can limit its scope by exchanging only the files that are on both directories already.

To use SmartXchange to synchronize directories:

1 In the left pane of both File Transfer windows, select the directory (not an entire drive) containing the files you want to exchange.

2 From the SyncTools menu, choose SmartXchange or choose the corresponding button in the File Transfer window.

3 Verify that the source and target are correct. If necessary, change the target.

4 If you want to include subdirectories in the exchange, make sure that Include Subdirectories is selected.

5 If you want merely to update files—and not add new ones—select Transfer only if files are already on target. If you want the two directories to be identical, clear the option.

6 Make sure that One-way transfer only is not selected.

7 Choose OK.

Updating directories

You can also use SmartXchange to simplify the process of updating a set of files you have archived already.

To use SmartXchange to update an archive directory:

1 In the left pane of the target (archive) window, select the directory you want to update.

Synchronizing directories
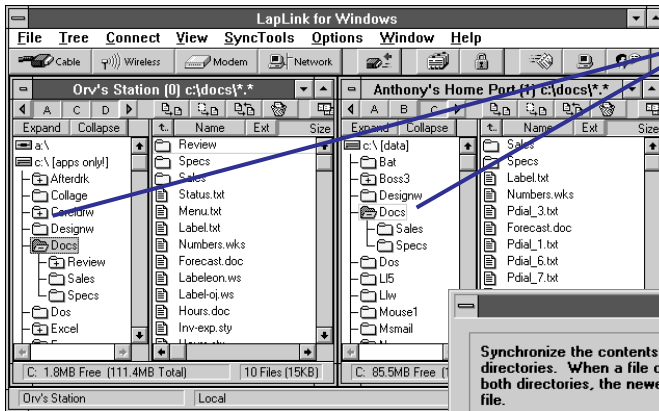
The directories to be synchronized are selected in the left panes of both File Transfer windows.

When the operation is complete, the directories will be identical.

To include the subdirectories within the selected directories, select this option.

To copy every file—and make the directories identical—clear this option. Select it if you want to update just the files that are already in both directories.

To ensure that files are copied in both directions, clear this option.
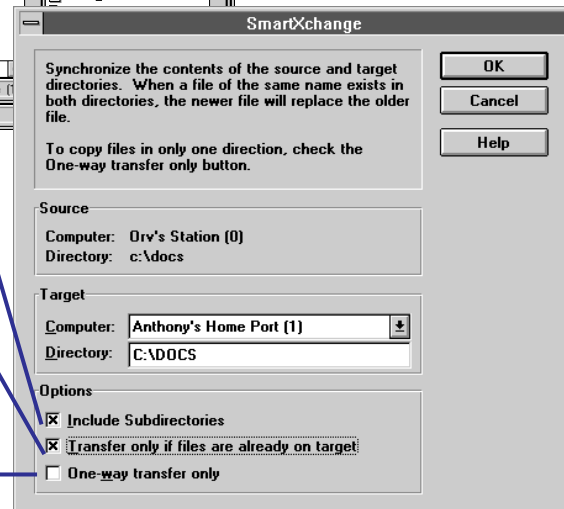
2 In the left pane of the source window, select the directory containing the files you want to archive.

3 From the SyncTools menu, choose SmartXchange.

4 Verify that the source and target are correct. Change the target if necessary.

5 If you want to include subdirectories in the exchange, make sure that Include Subdirectories is selected.

6 If you want merely to update files—and not add new ones—select Transfer only if files are already on target. If you want the two directories to be identical, clear the option.

7 Make sure that One-way transfer only is selected.

8 Choose OK.

X

Replacing one directory with another: Clone Directory

The Clone Directory command replicates one directory onto another by adding, deleting, and updating files on the target until they match those on the source. After opening the target and the source directories, choose Clone Directory from the SyncTools menu. You then have the choice of including or excluding subdirectories.

With Clone Directory, you determine the items to be copied by selecting the directory containing the items, not by selecting the items themselves. Select the directory in the left pane of a File Transfer window.

Clone Directory replaces one directory (the target) with another (the source). The effect is the same as deleting everything on the target and copying everything from the source.

Cloning a directory adds and updates target files until they are identical to those on the source. In addition, it deletes any target file that has no counterpart on the source.

It's the deletion of files that makes Clone Directory useful, particularly when you are maintaining a backup directory. With the usual copy operation, the backup directory over time accumulates all the files you have deleted from the source. With Clone Directory, those unwanted files are removed with each backup.

! Use this command with caution. Any subdirectory or file not on the source will be deleted from the target.

To replace one directory with another:

1 In the left pane of the target window, select the directory whose contents you want to replace.

2 In the left pane of the source window, select the directory whose contents you want to reproduce.

3 With the source window still active, choose Clone Directory from the SyncTools menu.

4 Verify that the source and target are correct. Change the target if necessary.

5 If you want to reproduce subdirectories, make sure that Include Subdirectories is selected.

6 Choose OK.

Cloning an entire drive

Used with caution, Clone Directory is an efficient way to replicate an entire drive onto another. If you are a system administrator or experienced user, you might find Clone Directory useful for setting up new computers.

Replacing one directory with another

This directory has been selected as the source.

This directory has been selected as the target.

With Clone Directory, the contents of the source will be replicated onto the target. If a file is on the target but not the source, it will be deleted.

To include the subdirectories within the selected directories, select this option.

Go to topic summary

Caution: Do not clone one boot drive onto another unless the computers are operating under the same version of DOS. Do not clone a non-boot drive onto a boot drive, even if the DOS versions match. Also, do not copy hidden system files; LapLink will not copy these files without your confirmation.

To replace one drive with another:

1   In the left pane of the target window, select the drive whose contents you want to replace.

2   In the left pane of the source window, select the drive whose contents you want to reproduce.

3   With the source window still active, choose Clone Directory from the SyncTools menu.

4   Verify that the source and target drives are correct.

5   Make sure that Include Subdirectories is selected.

6   Choose OK.

Speeding file transfers with SpeedSync

W hen you are updating files, SpeedSync can shorten the transfer time by sending only the parts of the files that have changed since the last update. SpeedSync is most effective when you update files that have not been changed extensively since the last update. In other circumstances, you may speed transfers by choosing SpeedSync from the SyncTools menu and disabling it.

Go to illustration ➜

SpeedSync is designed to cut transfer times when you are updating files. It has no effect when you are copying files that are not on the target before you copy.

SpeedSync works like this:

◆ Before a file is copied, the target is searched for a file with the same name. If none is found, the entire file is copied. Otherwise, the two files are compared to locate changes in the source file.

◆ Only the changes located in the source file are copied.

The time necessary to locate changes is usually more than offset by the smaller amount of data that has to be transferred. The reverse may be true in some circumstances, particularly when you update many files that have been changed extensively. In such cases you can cut transfer time by disabling this feature.

SpeedSync is ideal for updating your own files, downloading changes to files that you carry for informational purposes only (such as price lists), and for backing up your own information (contact-manager files, for example).

! SpeedSync is a tool for decreasing transfer times. It does **not** merge the contents of two files. The contents of one file will always replace the contents of the other. If you need to merge databases, schedules, or other shared files, see the documentation for the application in which they were created.

To disable SpeedSync:

■ From the SyncTools menu, clear SpeedSync (remove the check mark).

Determining the effects of SpeedSync

LapLink records statistics about File Transfer operations in which Speed-Sync is in effect. It records the number of bytes that would have been transferred without SpeedSync and the number that was actually transferred. It also calculates the difference.

How SpeedSync works

With SpeedSync

With SpeedSync, source and target files are compared to locate changes in the source files.

Only the changes in the source files are copied, usually resulting in faster transfers.
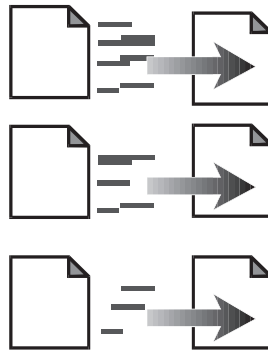
Without SpeedSync

Without SpeedSync, source and target files are not compared for changes.

Entire files are copied, usually resulting in slower transfers.
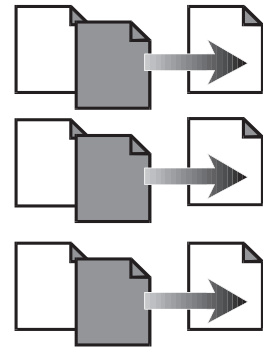
Except for a difference in transfer times, the results are identical.

SpeedSync Statistics

SPEEDSYNC™

OK

Reset History

Help

Most Recent Transfer

■ Total: 145.9 KB
■ Sent: 53.6 KB
□ Savings: 92.3 KB

History

■ Total: 369.3 KB
■ Sent: 79.0 KB
□ Savings: 290.3 KB
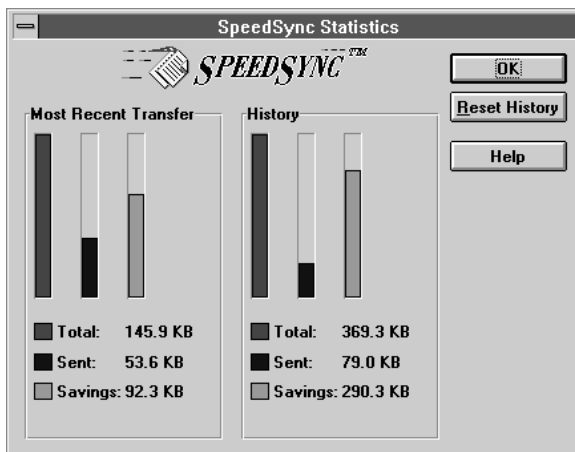
To review the effect of SpeedSync on your past file transfers, choose Speed-Sync Statistics from the SyncTools menu.

The statistics for your most recent copy operation appear on the left; the compiled statistics for earlier operations appear on the right.

To view SpeedSync statistics:

■ From the SyncTools menu, choose SpeedSync Statistics.

You now see a graphic representation of the statistics for your most recent SpeedSync transfer as well as a history of previous SpeedSync transfers.

✓ To delete all statistics from the history, choose Reset History. Only the statistics for the most recent transfer are retained.

X

Controlling a host computer

When you open a Remote Control window on your computer, you become the guest, and the remote computer displayed on your screen becomes the host. As a guest, you can view and operate the host computer as if you were sitting in front of it. The host images appear on your screen in a Remote Control window within the LapLink workplace.

Remote Control provides a way to operate another computer at a distance. You begin Remote Control as soon as you open a Remote Control window. While you are working in this window, your mouse moves the mouse pointer on the remote computer, your keyboard types characters on the remote computer, and your Remote Control window shows the remote computer's screen.

Remote Control terminology

A Remote Control session creates two kinds of LapLink users:

You cannot open a connection to a remote computer by modem or network unless the default security setup on that computer has been changed to grant you access.

Guest.   The Remote Control window and your mouse and keyboard are your links to the host computer. Working in the Remote Control window, you use your mouse and keyboard to operate the host. Your work is processed on the host computer.

Host.   There is no command associated with becoming a host. Your computer need only be running LapLink and set up to allow incoming connections and serve as a host. You do not need to be at your computer. On the other hand, you may want to join the guest as an observer or as an active participant.

✓ If a host is to be controlled at DOS, it must be prepared by loading LapLink TSR programs beforehand. For more information, see page 62.

Opening a Remote Control window

No one else can control your computer while you are using Remote Control. Nor can a computer be controlled by anyone else while you are controlling it..

As a guest, you can open a Remote Control window at the same time you connect to the host or after the connection is made. Because LapLink supports multiple connections, you can maintain several Remote Control windows, one for each host computer.

To open a Remote Control window while connecting:

■ Choose one of the Connect over . . . commands from the Connect menu or click the corresponding button on the LinkBar. Under Services, select Remote Control. (For complete information about the Connect over . . . commands, see chapter 2.)

Viewing the host screen within the LapLink workplace
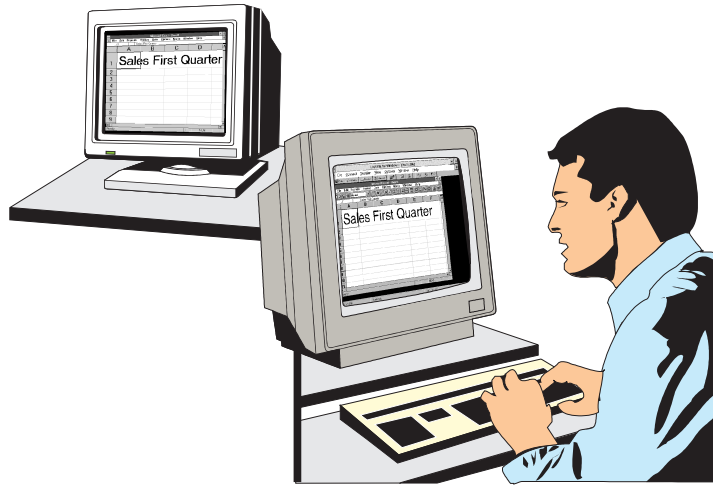
← *Go to topic summary*

To open a Remote Control window after a connection has been made:

■ Choose Open Remote Control from the Window menu or click the corresponding button on the LinkBar.

✓ If you have more than one connection, select a window for the desired connection before choosing Open Remote Control.

What you see

The host screen appears on your screen as a window within the LapLink workplace. The name of the host computer appears in the window's title bar. You can move, resize, minimize, or maximize it as you would any other window.

If you prefer to display the host screen across your entire screen, instead of a window, press CTRL+SHIFT+F. Press CTRL+SHIFT+F again to return to the window view. For more information about changing your view of the host, see the next section.

✓ A host screen can be made to display full screen by default. To set this option choose Remote Control Guest Options from the Options menu and select Always Use Full-screen. The Remote Control window then alternates between full screen and icon; the window view is not available.

▶

Viewing the host

As the guest, you can change your view of the host in two ways. To switch between a window and a full screen view, press CTRL+SHIFT+F To switch between a normal (partial) view to a view that is scaled to fit within the viewing area, press CTRL+SHIFT+S If you are viewing the host in a window, you can make the same changes by choosing Full Screen or Scale to Fit from the View menu.

Go to illustration ➜

. . . .
You can change the key combinations used for changing the view of the host by choosing Remote Control Guest Options from the Options menu. For more information see the next section.
. . . .

There are two ways in which you change your view of the host:

◆ Full screen vs. window. With full screen, the image of the host occupies all of your screen; all of your windows, including the LapLink workplace, are hidden. Otherwise, the image appears in a window within the LapLink workplace.

◆ Scaled-to-fit vs. normal. With scaled to fit, you always see all of the host's screen, whether you are working in full screen or window. Unless the image is scaled to fit, you may see only part of the host's screen at a time.

Alternating between full screen and window view

Viewing the host in full screen gives more area in which to view and control the host. Since the rest of your LapLink workplace is hidden, however, you must switch to a window view before you can choose LapLink commands or use other service windows.

To switch from window to full screen view:

■ Choose Full Screen from the View menu. Or press CTRL+SHIFT+F.

To switch from full screen to window view:

■ Press CTRL+SHIFT+F.

✓ While working in full screen, you can also switch to a window from the LapLink workplace on the host: If LapLink is an icon, double-click it to restore it to a window. Then click the icon representing your Remote Control window and choose Guest Windowed View.

✓ To make Remote Control alternate between full screen and icon, bypassing the window view, choose Remote Control Guest Options from the Options menu and select Always Use Full Screen.

Alternating between scaled-to-fit and normal view

When you cannot see the entire host screen, you can scale the image to fit within the window or screen in which it is displayed. Unless the

Changing your view of the host computer

CTRL+SHIFT+F
or Full Screen

CTRL+SHIFT+F
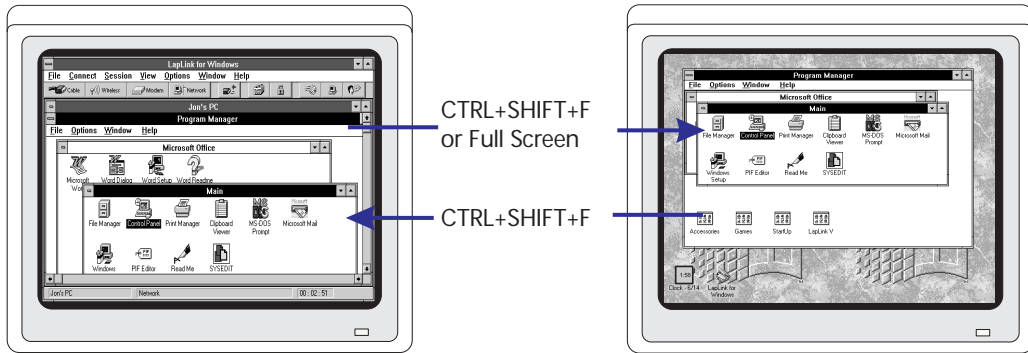
By default, your view of the host screen appears in a window within the LapLink workplace.

When you switch to full screen view, the host screen occupies your entire screen, hiding the LapLink workplace.

CTRL+SHIFT+S
or Scale to Fit
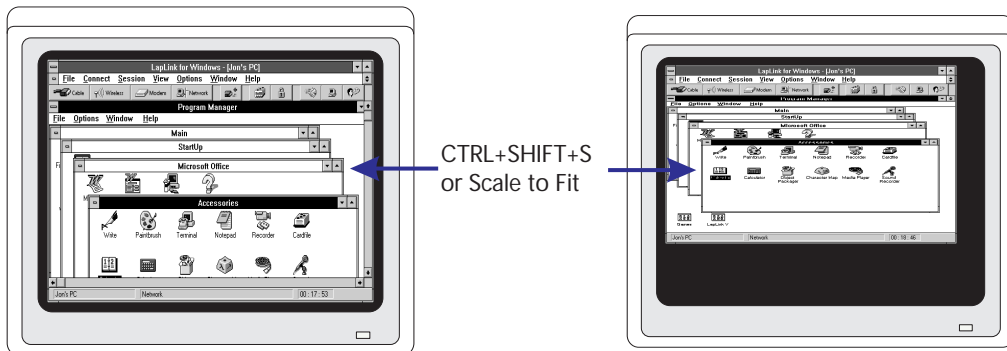
Until you scale your view of the host to fit within your viewing area, you may not see all of the host screen at once.

When you scale the view to fit, you see the entire host screen at once.

← *Go to topic summary*

host image is scaled to fit, you may have to use the scroll bars to see parts of the screen that do not fit within the viewing area.

To switch between scaled-to-fit and normal view do either of these:

■ While working in a window, choose Scale to Fit from the View menu. Or press CTRL+SHIFT+S.

■ While working in full screen, press CTRL+SHIFT+S. Or click the icon in the host's LapLink workplace which represents your connection, and choose Guest Scale to Fit.

▶

Customizing keyboard control

By default, Windows system keys pressed on the guest computer take effect on the host. If you want the system keys to operate on the guest while you are working in a Remote Control window, choose Remote Control Guest Options from the Options menu and select Execute on Guest. This command also lets you change the key combinations that control your view of the host.

Go to illustration ➜

Windows system keys

Windows system keys are key combinations that perform a variety of tasks. Pressing ALT+TAB, for example, switches to the program you used last. By default, LapLink sends most system keys to the host during Remote Control: pressing ALT+TAB on the guest therefore switches to the program last used on the host.

With certain exceptions, you can make system keys work on your own computer (the guest) when you are working in a Remote Control window.

✓ Windows system keys always take effect on the host when you are using Remote Control in the full screen view.

To change the Windows system keys default settings:

1 Choose Remote Control Guest Options from the Options menu.

2 Under Windows System Keys, select Execute on Guest.

3 Choose OK.

Listed below are keys that are not affected by this setting:

Keys	Where they are executed
CTRL+ESC (Windows Task List)	Guest
F1 (Help) Arrow keys	Host
PRINT SCREEN ALT+PRINT SCREEN	Both guest and host

If you intend to control a remote computer using the keyboard exclusively (without a mouse), set the Windows system keys to execute on your computer (the guest). When you want the keys to execute on the remote computer (the host), switch to the full screen view.

Remote Control shortcut keys

LapLink offers two shortcut keys to change your view of a host screen. Pressing CTRL+SHIFT+F switches between full screen and window view of the host. Pressing CTRL+SHIFT+S switches between scaled-to-fit and normal view. (See the previous section for more information.)

Customizing keyboard options for Remote Control
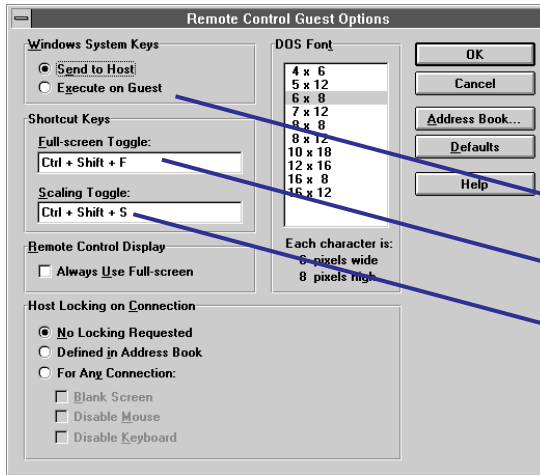
When you are working in a Remote Control window, the Windows system keys you press on your computer take effect on the remote computer.

If you prefer to have these keys take effect on your computer, select this option.

With this option, you can change the shortcut key that alternates between full screen and window view.

With this option, you can change the shortcut key that alternates between scaled to fit and normal view.

← *Go to topic summary*

You can change these default key combinations to certain other combinations. (To avoid interference with other LapLink and Windows shortcut keys, you are limited in your choice of replacements.)

To change the LapLink shortcut key combinations:

1 Choose Remote Control Guest Options from the Options menu.

2 Click in one of these boxes:

 ◆ Full-screen Toggle. Changes the shortcut key that alternates between full screen and window.

 ◆ Scaling Toggle. Changes the shortcut key that alternates between scaled to fit and normal view.

3 Press a key combination. LapLink records any valid key combination, replacing the original. For valid replacements, see the table below.

Allowable shortcut key combination	
Full Screen Toggle	ALT+SHIFT
	CTRL+SHIFT
	ALT+SHIFT+*N* (where *N* is a number or letter)
	CTRL+SHIFT+*N* (where *N* is a number or letter)
	ALT+CTRL+SHIFT+*N* (where *N* is a number or letter)
Scaling Toggle	Same as above

X

Hosting a Remote Control session

When you allow your computer to be remote controlled, you become the host to a guest computer. For Remote Control to take place you need only be running LapLink for Windows—-you do not need to be at your computer. Sensitive information is protected by the conditions of the connection. You can grant greater access, or limit these conditions, through the log-in list in the LapLink security system.

Go to illustration ➜

As a host you have control over who can connect to your computer and the kinds of services the guests can use. For example you can limit a prospective guest to Remote Control only, or allow access to Chat and File Transfer as well. You make these determinations through the LapLink security system. You can also use the Remote Control Host Options command to grant locking privileges to guests.

To allow other computers to control your computer by modem or network, you must relax the security setup established during installation. The only other action needed to prepare a host is to run LapLink.

You can leave the host computer unattended, giving one authorized user exclusive control at a time. Or you can stay at the computer and interact with the guest by trading off control. For example, the two of you could edit a document together, participate in a training session, or explore a new program.

✓ A computer can serve as a host to only one other computer at a time. In the meantime, other computers can open File Transfer and Chat connections to the host.

What you see as a host

When a guest connects to your computer and begins Remote Control, your LapLink workplace is minimized. When you double-click the icon, the LapLink workplace is restored to a window.

✓ You can make the LapLink workplace remain a window when a guest connects: choose Remote Control Host Options from the Options menu and clear Minimize when this computer is a host.

At the bottom of the LapLink workplace you see an icon for the Remote Control connection. The icon is identified by the name of the remote computer. Clicking this icon displays a Windows menu with standard commands. Choosing Close closes the Remote Control connection.

Hosting a Remote Control session in DOS

There may be times when a guest needs to run your DOS programs in DOS or as a full-screen display in Windows. Under such circumstances you will have to ensure that your computer's port is enabled for com-

Hosting a Remote Control session

To prepare a computer to host a Remote Control session:

✓ Start LapLink for Windows and leave it running.

There is no special host setup procedure.

To prepare a computer to serve as a host the first time after installation, you must also change the security setup, using the Security command.

The default setup prevents incoming connections over modem or network.

Security

Allow Connections From
- ⦿ Nobody (Private System)
- ○ Log-in List Only (Protected System)
- ○ Anybody (Public System)
  - ☐ File Transfer   ☐ Chat
  - ☐ Remote Control

Cables and Wireless
- ☐ Enforce Security for Connections

Local Security Password
- ☐ Password on Security Dialogs
- Set Password...

OK

Cancel

Log-in List...

Help
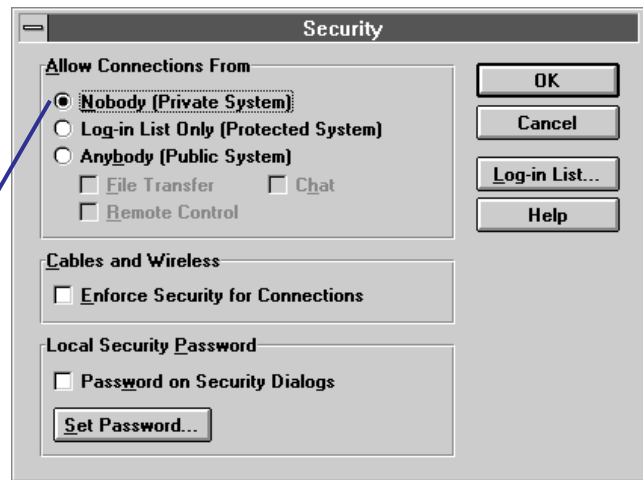
← *Go to topic summary*

munications to the guest and the appropriate TSR programs are loaded. For more information, see page 60.

Reversing a Remote Control session

There may be times when the guest and you want to switch roles, so that you become the guest controlling the remote computer.

To reverse the direction of Remote Control, the current Remote Control connection must be broken. This can be done on either computer. Then, as the prospective guest, you open a Remote Control window and begin controlling the other computer.

✓ To avoid breaking the connection when a Remote Control connection is closed, make sure that there is at least one more service window is open. If Remote Control is the only service in use, for example, open Chat windows *before* closing Remote Control.

X

Using DOS Remote Control

As a guest, you can always control remote DOS programs in windows within the Windows environment. For full DOS support, however, the host computer must be prepared by loading TSR (Terminate and Stay Resident) programs when Windows is not running. At connection time, the host can be running either Windows or DOS, but the guest computer must be running Windows. Full DOS support is available only over modems and network.

Go to illustration ➜

. . . .
Once the LapLink TSRs
are loaded on the host,
the guest can freely
switch between DOS
and Windows opera-
tions on the host.
. . . .

LapLink provides DOS Remote Control through TSR programs. These programs must be loaded on the host before Windows is started.

As a guest, you may find that you have enough access to DOS and DOS programs from Windows even when the TSRs are not loaded on the host. If you are satisfied with remaining in Windows and accessing DOS through a window, the TSRs are not necessary.

✓ If you attempt to run a full-screen DOS program on a host that is not running the TSRs, LapLink minimizes the DOS program. With the icon selected, press ALT+ENTER to run the program in a window.

As the host, you must load LapLink's TSR programs on your computer if the guest intends to perform either of these operations:

◆ Operate the host in DOS (when Windows is not running).

◆ Run full-screen DOS programs within Windows.

The TSRs must be loaded from the DOS prompt on the host, when Windows is not running. In addition, the appropriate port—either modem or network—must also be enabled. (DOS Remote Control is not available over cable or wireless.)

If you do not have access to the host, someone will have to load the TSRs and enable the port for you.

Once the TSRs are loaded and ports are enabled, the host can be left running Windows or DOS.

Running a DOS session when the TSRs are loaded on the host

When you begin a Remote Control session with a host running the LapLink TSRs, you may see the DOS prompt, a DOS program, or a Windows program, depending on the status of the host.

From the DOS prompt, you can run DOS programs and use DOS commands. You can also start Windows.

Using DOS in Remote Control
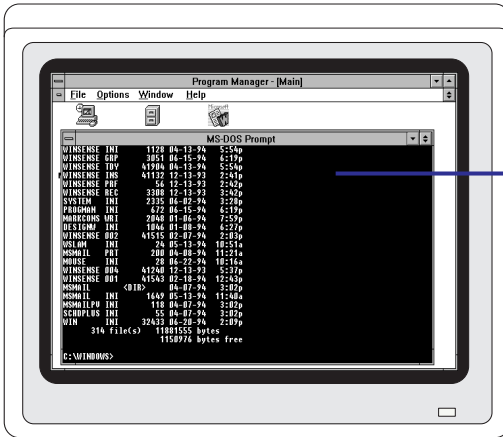
In the Remote control session shown here, the guest is accessing DOS on the host through a window ("DOS box").

When a guest accesses DOS and DOS programs through a window, there is no need to load the DOS Remote Control TSR programs on the host.
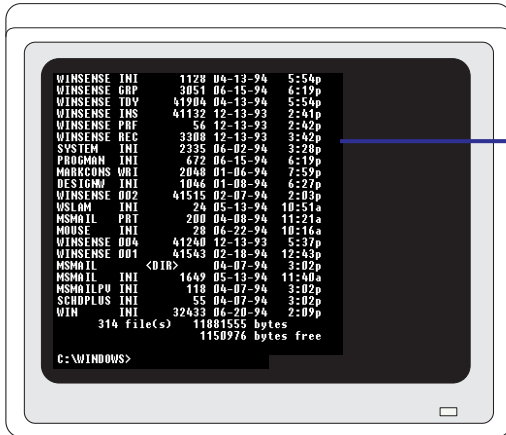
In the Remote Control session shown here, the guest is accessing DOS in a full-screen view, either from within Windows or while Windows is not running.

To allow a guest to view the DOS prompt or a DOS program in a full-screen view, the DOS Remote Control TSRs must be loaded on the host.

← Go to topic summary

From Windows, you can run full-screen DOS programs. You can also exit Windows and operate the programs from DOS.

! Some DOS programs run full screen in exclusive mode. These programs can substantially reduce the speed of communications between the computers. It's best to avoid operating these programs during a Remote Control session unless you can use them in something other than the exclusive mode.

✓ If you are using a DOS program that can run in either text or graphics mode, use text mode to speed communications.

▶

Preparing a host for DOS Remote Control

To prepare a host computer for DOS Remote Control, exit Windows and load the LapLink TSR programs by typing LOADRC in the LapLink directory.

Loading the TSRs

If you enabled a modem or network port when you installed LapLink, you should be ready for a DOS Remote Control session over that port.

To load the TSRs:

1   If you are running Windows, exit and return to DOS.

2   Move to the directory in which LapLink was installed.

3   Type the following and press ENTER:

LOADRC

You can now run Windows or remain in DOS. A guest can connect in either case.

Unloading the TSRs

When you no longer need the TSRs, you can unload them and free memory for use by DOS.

To unload the TSRs:

1   If you are running Windows, exit and return to DOS.

2   Move to the directory in which LapLink was installed.

3   Type the following and press ENTER:

UNLOADRC

✓   If you instructed the LapLink Setup program to modify your AUTOEXEC.BAT file, the TSRs are loaded whenever you boot your computer. To modify the file so that the TSRs are no longer loaded automatically, delete the line that loads LOADRC.BAT.

Determining which TSRs are loaded on the host

When you load the TSRs, you prepare the host for DOS Remote Control by modem or network, by modem only, or by network only. (When a host is prepared for modem or network, a guest can connect to it over either modem or network, but not both at the same time.) You can determine which type of connection is to be allowed by the TSRs you load.

To determine the type of connection allowed in a DOS session:

1　Start LapLink on the host.

2　From the Options menu, choose Remote Control DOS Options.

3　Under DOS Connection Options, select one of these options: Modem Only, Network Only, or Modem and Network.

After each option you see the number of kilobytes of memory required by the TSR for that type of connection. You can accept the current setting or select a different one.

4　Choose OK.

If you changed the setting, the change will not take effect until you reload the TSRs: Exit Windows, unload the TSRs if they are loaded, and load them again.

✓　You can set up a host so that a guest's view of the host screen is updated more often: type a lower value in the Scan Priority box, under DOS Video Options. (A lower value will also slow operations somewhat.)

Conserving DOS memory by loading the TSRs high

When you type LOADRC, you are using a batch file (LOADRC.BAT) which loads three TSRs into memory. Using this batch file, however, may not take maximum advantage of the memory available on your computer. Instead of using LOADRC.BAT, you can create your own batch file to load as much as possible of the TSRs into the Upper Memory Blocks (UMBs) of your computer's memory.

To load the TSRs, you would then run your batch file instead of LOADRC.BAT.

Include these lines in your batch file:

LH TBCOM0 *N*/L /P*c:\windows\tsi\llw*
LH CMDOS/L /P*c:\windows\tsi\llw*
LH RCDOS/L /P*c:\windows\tsi\llw*

—where *N* is the type of connection: 1 for network or modem, 2 for modem only, and 3 for network only.

✓　Depending on your upper-memory manager, you may have to substitute a different command for LH in each of the batch file lines. If in doubt, consult the documentation for your memory manager.

For instructions on creating a batch file, see your DOS User's Guide.

. . . .
If you use your own batch file to load the LapLink TSRs high, the settings in the Remote Control DOS Options dialog may not reflect which TSRs are actually loaded. Nor can you use this dialog to change the settings. To allow a different kind of connection, modify your batch file.
. . . .

X

Chatting with a remote user

Chat lets you exchange typed messages with the person sitting at a remote computer. Used with Remote Control, File Transfer, or by itself, Chat is useful for exchanging brief messages and sending instructions.

. . . .
To allow other comput-
ers to connect to yours
by modem or network,
you must relax the
security setup estab-
lished during installa-
tion.
. . . . .

Opening Chat windows

Chat windows can be opened from the computer at either end of a LapLink connection. Opening a Chat window on one computer auto-matically opens a Chat window on the other, allowing for two-way communications.

You can open Chat windows as part of the process of connecting to an-other computer: from the Connect menu, choose Connect over Mo-dem or one of the other Connect over . . . commands. Choose the name of the computer and select Chat. (For complete information about the Connect over . . . commands, see chapter 2.)

Once you are connected to another computer for Remote Control or File Transfer, you can still open Chat windows: choose Open Chat from the Window menu, or click the corresponding button on the LinkBar.

✓ If you have opened more than one connection, click a window for the desired connection before opening Chat.

Working in a Chat window

. . . .
By default, a Chat win-
dow pops to the fore-
ground on your screen
whenever the remote
user sends a message.
To keep the Chat win-
dow from activating
automatically, choose
Connect Options from
the Options menu, and
clear Restore Chat Auto-
matically.
. . . .

A Chat window consists of two panes:

◆ The upper pane displays both the messages you have sent to the re-mote user and those the remote user has sent to you. Each message is identified by the name of the computer from which it was sent.

◆ The lower pane serves as a notepad on which you write your mes-sages. It clears each time you send a message.

To send a message to the remote user:

1 Click the Chat window.

2 Type your message.

   Avoid pressing ENTER until your message is complete. To start a new paragraph, press CTRL+ENTER. To enter a tab, press CTRL+TAB.

3 Press ENTER to send the message.

   The message is sent to the remote user and appears in the upper pane of your Chat window, preceded by the name you have as-signed your computer.

The LapLink Chat window

```
┌─────────────────────────────────────────────────────┐
│ ─   Anthony's Home Port - Chat              ▼ ▲       │
│ ┌──────────────────────────────────────────────┐▲    │
│ │ ──── Anthony's Home Port ────                │ │    │
│ │ I want to fit the entire host screen within  │ │    │
│ │ my remote control window. How do I do it?    │ │    │
│ │                                              │ │    │
│ │ ──── MIS Central ────                        │ │    │
│ │ See the Window menu? Open it and select the  │ │    │
│ │ Scale to Fit command.                        │ │    │
│ │                                              │ │    │
│ │ ──── Anthony's Home Port ────                │ │    │
│ │ OK, that's better. Is there any other way I  │ │    │
│ │ can display the host screen on my computer?  │ │    │
│ │                                              │▼    │
│ ├──────────────────────────────────────────────┤     │
│ │ Yes. Let me show you.                        │▲    │
│ │                                              │ │    │
│ │                                              │▼    │
│ └──────────────────────────────────────────────┘     │
└─────────────────────────────────────────────────────┘
```

To open a Chat window after connecting to another computer, choose Open Chat from the Window menu, or click this button on the LinkBar:

Type your messages in this pane of the Chat window.

In this pane, you see the Chat conversation: the messages you have sent as well as those you have received.

← *Go to topic summary*

You receive a message when the same operation is performed on the remote computer.

❗ Text that appears in the upper pane of a Chat window is stored temporarily in a special place in memory called a "buffer." When the buffer fills, the most recent text begins to replace the oldest text. As a precaution against losing text, you could copy it onto the Clipboard. See the next section for details.

Tips for using Chat with Remote Control

✓ As a guest, use Remote Control in a window instead of full screen. (Press CTRL+SHIFT+F to alternate between full screen and window.)

✓ Make the Chat window visible on both the guest and the host computer. (If Chat appears as an icon at the bottom of the LapLink workplace, double-click the icon to restore the window.) As a guest, you may see two Chat windows: your own and the Chat window of the host computer within your Remote Control window.

✓ As the guest, you may find it convenient to place your Chat window beside the Remote Control window: If you have other windows open, minimize them to icons; then choose Tile Side by Side from the Window menu.

X

Copying text to and from a Chat window

Instead of typing text to send to another user, you can copy it from Notepad or a similar program and paste it into the lower pane of a Chat window. You can also copy text from the upper pane of a Chat window and paste it into another program.

Copying to your Chat window

There may be occasions when you know what you want to say even before connecting to another computer. Assume that you are going to conduct a tutorial session using Remote Control and Chat. Before the session, prepare step-by-step instructions in Notepad. During the session, save time by copying the text in Notepad, pasting it into your Chat window, and sending it to the remote user.

To paste text into a Chat window:

1   In Notepad or another Windows ASCII-text editor, select the text and copy it onto the Clipboard.

2   In LapLink, click the lower pane of the Chat window.

3   Choose Paste from the Edit menu. Or press CTRL+V.

    To send the pasted text, press ENTER.

Copying from your Chat window

You may copy all or part of a Chat conversation simply to keep a record of what was said. Or you may want to use the text in another program. Text copied from a Chat window can be pasted into any Windows program that lets you paste text from the Clipboard.

To copy your Chat conversation:

1   Do either of the following:

    ◆   In the upper pane of a Chat window, highlight text. If the text you want to copy has moved out of sight, use the scroll bar on the right edge of the Chat window to make the text visible again.

    ◆   To select all of the text in the upper pane, including text that has scrolled out of sight, click the upper pane. Then choose Select All from the Edit menu.

2   Choose Copy from the Edit menu. Or press CTRL+C.

    You can now switch to another Windows program and paste from the Clipboard. Or you can switch to Program Manager, double-click the Clipboard Viewer icon, and save the text as a Clipboard file.

Copying text to and from a Chat window

You can copy all or part of your conversation from this pane. Once copied, the text can be pasted into another windows program.

Anthony's Home Port - Chat

——— MIS Central ———
Remember to press Ctrl+Shift+F to toggle between full screen and window view.

——— Anthony's Home Port ———
Got it. Now I'm ready for the instructions on setting up this computer so that I can remote control it at the DOS prompt without running Windows.

To prepare a host computer for DOS Remote Control:
1. If you are running Windows, exit and return to DOS.
2. Move to the directory in which LapLink was

After copying plain text in another Windows program, you can paste it into this pane and send it to the other computer.

For use in either pane:

Choose this command to copy text you have selected in the active pane.

Choose this command to select all text in the active pane, including text that has scrolled out of sight.

Edit

Undo	Ctrl+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Select All	
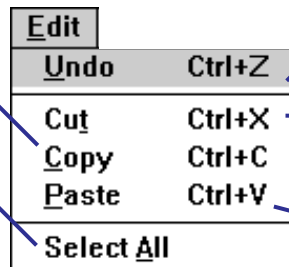
For use in the lower pane:

Choose this command to reverse your latest editing action.

Choose this command to remove selected text from the lower pane and place it on the Clipboard.

Choose this command to paste previously copied text into the lower pane.

✓ To remove selected text from the lower pane and place it onto the Clipboard, choose Cut from the Edit menu. Or press CTRL+X. You can then paste the text into another Windows application.

✓ To reverse your latest typing or copy or paste operation in the lower pane, choose Undo from the Edit menu. Or press CTRL+Z.

✓ Chat also uses these standard keyboard shortcuts for entering and manipulating text:

◆ SHIFT+DEL cuts.

◆ CTRL+INSERT copies.

◆ SHIFT+INSERT pastes.

◆ ALT+BACKSPACE undoes the previous editing operation.

◆ CTRL+M starts a new line.

X

4

Securing your computer and using the Address Book

Contents

Security and the Address Book—Overview

With the Security command, you can set up password protection to prevent unauthorized access to your computer. You can also control what remote users can do when they connect to your computer. With the Address Book command, you can store the passwords required by other computers. You can also store requests for privileges when you connect to other computers. The information you save in your Address Book is used when you use Connect over Modem or any of the other Connect over . . . commands. Security and Address Book are available on the Options menu and the LinkBar.

Go to illustration ➜

Security and Address Book complement each other. With Security, you require a password of anyone connecting to your computer. (You may have one password for all callers, for example, or a separate password for each one.) With Address Book, you enter a password to be sent to a remote computer to meet the security requirements of that computer.

With Security, you grant privileges to remote users. (You might restrict one user to File Transfer, for example, while allowing another to use Remote Control and Chat.) With Address Book, you request the services and other features you want to use when you connect to other computers. Your request will be honored as long as the Security privileges granted to you on the remote computer permit.

Using Security, you can grant three kinds of privileges to remote users:

◆ Services: Whether to allow File Transfer, Remote Control, and Chat—or any combination of the three.

◆ Remote Control locking: Whether to allow the screen to be blanked and the keyboard and the mouse disabled while your computer is being controlled remotely—or any combination of the three.

◆ Modem callback: Whether to require that anyone calling your computer by modem must be called back before the connection is made—or to let the caller decide whether to be called back.

With Address Book, you can request the kinds of services you want to use and the kind of locking, if any, that you want to impose on the remote computer while you are using Remote Control. Callbacks, on the other hand, are handled when you attempt to connect: Depending on the Security settings of the remote computer, you may be asked whether you want to be called back, the number to be dialed, or both.

✓ With Security, you can also set up password protection for the security system itself. Only someone knowing the correct password then will have access to Security and other commands in which Security information might be compromised.

Using Security and Address Book

Add Log-in List Entry

Guest Information

Log-in Name: Sam

Password: Xanadu

OK

Cancel

Defaults

Help

Services
- ☒ File Transfer
- ☒ Remote Control
- ☒ Chat

Locking Permissions
- ☒ Blank Screen
- ☒ Disable Mouse
- ☒ Disable Keyboard

Modem Callback

Use Security to determine who has access to your computer and what they can do while connected.

Anyone supplying this log-in name and password …
… will have access to the privileges you grant here.

Add Address Book Entry

Description: My office desktop

Computer Name: Henry's 486

Connection Type: Modem

Phone Number: 500-123-4567

OK

Cancel

Help

Services
- ☒ File Transfer
- ☒ Remote Control
- ☒ Chat

Host Locking on Connect
- ☒ Screen Blank
- ☒ Mouse Disable
- ☒ Keyboard Disable

Security Information to Send

Log-in Name: h w longfellow

Password: ********

Use Address Book to automate the process of connecting to other computers.

Store your requests for services and locking privileges here.

Store the log-in name and password required by the remote computer here.

This information will be passed to the remote computer when you use any of the Connect over … commands.

← *Go to topic summary*

Sending Address Book information to a remote computer

The Address Book stores information and requests that will be sent automatically to a remote computer when you open a connection using Connect over Modem or one of the other Connect over . . . commands. You do not open a connection from the Address Book itself.

Assume that you have created an Address Book entry for Joe's desktop. When you choose Connect over Modem, you see the description you wrote for that entry, along with Joe's telephone number, and your requests for services. You can change the telephone number and your requests before dialing. (These changes are not saved to the Address Book.)

You also see an option for sending the password and log-in name you entered in the Address Book.

X

Using the security system

After you install LapLink, you can open connections to other computers but other computers cannot open connections to yours over modems or a network until you change the security setup. After choosing Security from the Options menu, you can open the system to any remote user or set up password protection to limit access to authorized users. You can also set up password protection for the security system itself.

Go to illustration ➔

. . . .
You can choose Security from the Options menu or click this button
on the
LinkBar:
. . . .

To gain access to the LapLink security system:

■ From the Options menu, choose Security. Or click the corresponding button on the LinkBar. Then select options as described next.

Allow Connections From: These options determine the level of security for all modem and network connections.

◆ *Nobody (Private System).* This option is selected by default during installation. It prevents other computers from connecting to yours by modem or network. Even after you set up password protection, you can select this option again to temporarily block all incoming connections by modem and network. (Any password information you have created is retained for later user.)

◆ *Log-in List Only (Protected System).* Select this option as the first step in setting up password protection. For more information, see the next section.

◆ *Anybody (Public System).* Select this option only if you want to disable the security system for modem and network connections. Then select the kinds of services you want to make available to any LapLink user who connects to your computer over modem or network. *Use this option with caution!*

Cables and Wireless: Because security breaches are less likely over cable or wireless connections, the Enforce Security for Connections option is off by default after installation. The result is that anyone can connect to your computer by cable and wireless. Select this option if you want to extend password protection to cable and wireless connections. For instructions on setting up password protection, see the next section.

Local Security Password: When you set up password protection for your computer, it's a good idea also to protect the security system from unauthorized access—either by someone using your computer in your absence or by remote users.

Setting a security password limits access not only to the Security command but to any other commands in which security information

Defining your security system

Security

Allow Connections From

- ● Nobody (Private System)
- ○ Log-in List Only (Protected System)
- ○ Anybody (Public System)
  - ☐ File Transfer   ☐ Chat
  - ☐ Remote Control

Cables and Wireless

- ☐ Enforce Security for Connections

Local Security Password

- ☐ Password on Security Dialogs

[Set Password...]

[OK]
[Cancel]
[Log-in List...]
[Help]

This option is selected at installation. No one can connect to your computer until you select either of the options below it.

Select this option if you want to set up password protection. Then click Log-in List to begin setting up the passwords in the log-in list.

Select this option—and the services—to allow anyone to connect to your computer.

Select this option if you want the password protection of your log-in list to apply to cable and wireless connections.

Select this option then click Set Password to set a password for the security system.

← *Go to topic summary*

might be viewed and changed. These commands include Address Book, Connect over Modem, Connect over Network, Remote Control Host Options, and portions of Logging.

Setting up password protection for your security system is particularly important if your computer is to serve as a host to other users in Remote Control sessions.

To set a password for the security system:

1 Under Local Security Password, select Password on Security Dialogs.

2 Click Set Password.

3 In the next dialog, type the password under New Password.

4 Under Confirm New Password, type the password again.

5 Choose OK.

✓ In LapLink, passwords are not case-sensitive: Capitals and lowercase letters are equivalent.

▶

Using the security system
Setting up password protection

To set up password protection, create one or more entries in the log-in list. In each entry, specify the password and the log-in name the user must provide to gain access to your computer. Then grant privileges to use services and other features. Any LapLink user who provides the password and log-in name can connect to your computer and operate within the restrictions you impose.

Go to illustration ➜

The number of entries you make in your log-in list will be determined by the number of special cases you have in mind. If you want to allow one user to use only File Transfer, for example, and another to use only Remote Control and Chat, create two entries, with different log-in names and passwords.

On the other hand, a single entry would be enough if you intend only to connect to the computer from your home, using both File Transfer and Remote Control. A single entry will also suffice if you want to grant several users the same privileges.

To create an entry in the log-in list:

1   From the Options menu, choose Security. Or click the corresponding button on the LinkBar.

    Make sure that Log-in List Only (Protected System) is selected. If you want to extend password protection to cable and wireless connections, select Enforce Security for Connections, under Cables and Wireless.

2   Choose Log-in List.

3   In the dialog displayed next, choose Add.

4   Type the information and select the options as described below. When you are through, choose OK.

5   You now see your log-in list, with the log-in name you just created. If you want to create another entry, choose Add or Copy and repeat the previous step. Otherwise, choose Close and then OK to exit Security.

Log-in names and passwords can contain 1–20 characters, including letters, numbers, and spaces. Passwords are not case-sensitive: capitals and lowercase letters are equivalent.

Security options

Guest Information: Type the log-in name and the password the user must provide in order to make a connection to your computer.

Services: Select the services you want to make available to the user: File Transfer, Remote Control, Chat, or any combination of the three.

Adding an entry to the log-in list

Security

Allow Connections From
- ○ Nobody (Private System)
- ◉ Log-in List Only (Protected System)
- ○ Anybody (Public System)
  - ☐ File Transfer   ☐ Chat
  - ☐ Remote Control

OK
Cancel
Log-in List...
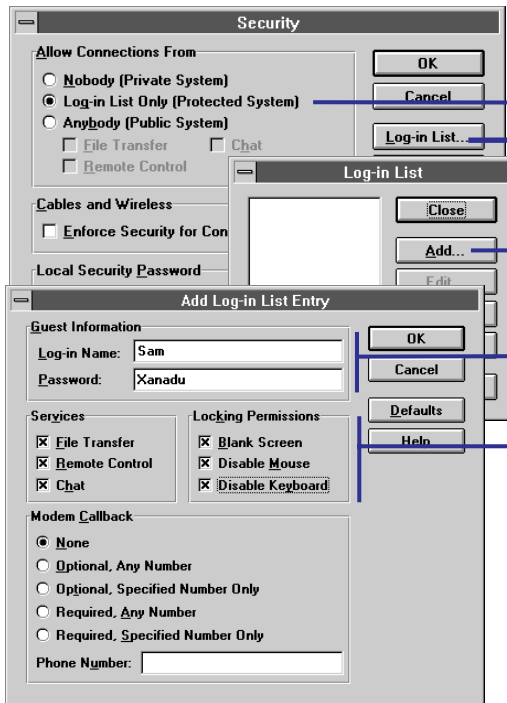
Select this option to add password protection to all modem and network connections.

Click this button to begin work on the log-in list.

Cables and Wireless
- ☐ Enforce Security for Con

Local Security Password

Log-in List

Close
Add...
Edit

Click this button to create an entry in the log-in list.

Add Log-in List Entry

Guest Information
- Log-in Name: Sam
- Password: Xanadu

OK
Cancel
Defaults
Help

Type a log-in name and a password.

Services
- ☒ File Transfer
- ☒ Remote Control
- ☒ Chat

Locking Permissions
- ☒ Blank Screen
- ☒ Disable Mouse
- ☒ Disable Keyboard

Select these options according to the privileges you want to grant the user.

Modem Callback
- ◉ None
- ○ Optional, Any Number
- ○ Optional, Specified Number Only
- ○ Required, Any Number
- ○ Required, Specified Number Only
- Phone Number:

← *Go to topic summary*

Locking Permissions: If you make Remote Control available, select options to specify whether the user can blank the screen of your computer and disable its mouse and keyboard—or any combination of the three.

Modem Callback: Select one of the Modem Callback options to determine whether, or how, the user will be called back when opening a connection.

✓ For information about the callback options see the next section.

Managing your log-in list

To manage your log-in list:

1 From the Options menu, choose Security. Then choose Log-in List.

2 In the log-list, select a log-in name and choose any of the following:

   ◆ Edit to revise the entry.

   ◆ Copy to duplicate the entry, which you can then revise.

   ◆ Delete to remove the entry.

▶

Using the security system
Setting up callback protection

LapLink for Windows offers a flexible callback feature for use over modems. You can require a callback to a number you supply or to one the caller supplies. You also can let the caller decide whether to be called back. You set up callback protection in your log-in list, one entry at a time. The log-in list is available through the Security command on the Options menu.

A callback occurs when someone attempts to connect to your computer. Instead of completing the connection, LapLink reverses the call by hanging up and then dialing the caller's modem. When the caller's modem answers, the connection is completed, and service windows are opened.

You can use callback to further secure your data: Assign a telephone number to each entry in your log-in list, and require a callback to that number. (Even if someone has managed to get hold of one of your passwords without your knowledge, he won't be able to connect unless he also happens to be calling from that number.)

Callbacks can also be used to save money, as when users call into the office from hotel rooms.

To add callback protection to an entry in your log-in list:

1   From the Options menu, choose Security. Or click the corresponding button on the LinkBar.

2   Choose Log-in List.

3   In the dialog displayed next you see your log-in list. Select one of your entries. Then choose Edit.

4   Under Modem Callback, choose one of the options. They are explained in detail on the opposite page.

5   If you want the caller to be called back at a certain number (and not leave it to the caller's discretion), type the number in the Phone Number box.

   ✓   Make sure that the callback number is complete, including any prefix or suffix information that may be required. Prefixes and suffixes created in Connect over Modem do not take effect during a callback.

6   Choose OK. If you want to add password protection to another entry, select it and choose Edit. Otherwise, choose Close and then OK to exit Security.

The callback options and their effects

Callback option	What it does
None	The connection is completed without a callback.
Optional, Any Number	The caller is asked whether to be called back. If the answer is yes, the call is placed to the number provided by the caller. If the answer is no, the connection is completed without a callback.
Optional, Specified Number Only	The caller is asked whether to be called back. If the answer is yes, the call is placed to the number entered in the *Phone Number* box. (The caller sees the number but cannot change it.) If the answer is no, the connection is completed without a callback.
Required, Any Number	The caller is notified that a callback is required and asked whether to proceed. If the answer is yes, the call is placed to the number provided by the caller. If the answer is no, LapLink terminates the call without completing the connection.
Required, Specified Number Only	The caller is notified that a callback is required and asked whether to proceed. If the answer is yes, the call is placed to the number entered in the *Phone Number* box. (The caller sees the number but cannot change it.) If the answer is no, LapLink terminates the call without completing the connection.

← *Go to topic summary*

X

Using the Address Book

Making entries in the Address Book for the computers you frequently connect to simplifies the process of making the connections and opening windows. For each Address Book entry you can specify the kind of connection (modem, network, cable, or wireless), the kinds of services (File Transfer, Remote Control, and Chat) to be opened automatically, any security information required by the remote computer, and, with modems, a telephone number. The information you save in the Address Book is used when you use Connect over Modem or one of the other Connect over . . . commands on the Connect menu.

Go to illustration ➜

. . . .
You can choose Address Book from the Options menu or click this button
on the LinkBar:
. . . .

To create an entry in the Address Book:

1 From the Options menu, choose Address Book. Or click the corresponding button on the LinkBar.

   If you have set up password protection for your security system, you are now asked to type the password.

2 In the dialog displayed next, choose Add.

3 Type the information and select the options as described below. When you are through, choose OK.

4 You now see your Address Book, with the description you just created.

   If you want to create another entry, choose Add and repeat the previous step. Otherwise, choose Close to exit Address Book.

Address Book options

. . . .
Your computer was named during installation. To change the name, close all service windows and choose Computer Name from the Options menu.
. . . .

Description: For your own reference, type a description of the remote computer.

Computer Name: Type the exact name assigned to the remote computer.

Connection Type: From the pull-down list, select the kind of connection: Cable, Wireless, Modem, or Network.

Phone Number: If you selected Modem as the type of connection, type the number to dial.

Services: Select the services you want to use when you connect to the remote computer: File Transfer, Remote Control, Chat, or any combination of the three. (You will be able to change your selections later, as part of the connection process. You will also be able to request new services after you connect.) Your requests for services will be honored only if the security setup of the remote computer permits.

Creating an entry in the Address Book

Add Address Book Entry

Description:	My office desktop
Computer Name:	Henry's 486
Connection Type:	Modem
Phone Number:	500-123-4567

OK
Cancel
Help

Services
- ☒ **File Transfer**
- ☒ **Remote Control**
- ☒ **Chat**

Host Locking on Connect
- ☒ **Screen Blank**
- ☒ **Mouse Disable**
- ☒ **Keyboard Disable**

Security Information to Send

Log-in Name:	h w longfellow
Password:	********

Describe the remote computer.

Type the exact name assigned to the remote computer.

Select the type of connection. If the connection is by modem, type the number to dial in the Phone Number box.

Make your requests for services and locking privileges.

Type the log-in name and password required by the security system of the remote computer.

← *Go to topic summary*

Host Locking on Connect: If you request Remote Control as one of the services, select the kind of locking, if any, you want to take effect on the remote computer when you begin using Remote Control. Determine whether you want to blank the screen and disable the mouse and keyboard—or any combination of the three. These options help ensure that no one at the remote computer can interrupt your Remote Control session or view sensitive information.

Security Information to Send: Type the log-in name and the password you must provide in order to gain access to the remote computer.

. . . .
Information you store in the Address Book is passed to the remote computer when you use any of the Connect over . . . commands to open a connection. You do not open a connection from the Address Book itself.
. . . .

Managing your Address Book

To manage your Address Book:

1 From the Options menu, choose Address Book.

2 In the Address Book, select an entry and choose any of the following:

   ◆ Edit to revise the entry.

   ◆ Copy to duplicate the entry, which you can then revise.

   ◆ Delete to remove the entry.

X

5 Working with ports and troubleshooting

Contents

Enabling and disabling ports

When you install LapLink for Windows, you can enable only one port for use in LapLink. Until you enable other ports, you can make connections only through this port. If you want to make a connection through other ports, choose Port Setup from the Options menu and mark the ports as Enabled.

During installation, you can designate a single port for LapLink communications. This process is called enabling a port. While LapLink is running, it can use only the enabled port. Meanwhile, the other ports on your computer can be used by other programs. To use additional ports in LapLink, you must enable them. To free ports for use by other programs, you must disable the ports.

When LapLink is running, it periodically "queries" any enabled port. These queries may interfere with the use of the port by other programs—even though LapLink is not actively connecting to another computer through the port. If you do not intend to open a LapLink connection over a particular port, disable the port. If you later want to make a connection through a disabled port, enable the port again.

To enable a port:

1 Choose Port Setup from the Options menu.

2 In the list of ports, select the port you want to enable.

   If you select a COM (serial) port, select one of these connections from the Type drop-down list:

   ◆ *Cable (blue)* for a cable connection.

   ◆ *Modem* for a modem connection.

   ◆ *Wireless* for a wireless AirShare connection.

3 Select Enable Port.

✓ Before enabling COM3 (or COM4) for a cable or modem connection, be sure that COM1 (or COM2) is disabled. After enabling COM3 or COM4 for a cable connection, set the port to *Polled.* (For more information, see page 100.)

4 Choose Close.

To disable a port:

1 Choose Port Setup from the Options menu.

2 In the list of ports, select the port you want to disable.

3 Clear Enable Port (remove the check mark).

On most computers, COM1 cannot be used at the same time as COM3. Nor can COM2 and COM4 be used at the same time. Setting a COM3 or COM4 serial port to *Polled* may prevent a conflict with a COM1 or COM2 port.

Enabling a port

Port Setup

Port Settings

Ports	Type	LapLink port status
COM1	Modem	Enabled
COM2	Serial	Not used by LapLink
COM3	Serial	Not used by LapLink
COM4	Serial	Not used by LapLink
IPX	Network	Enabled
LPT1	Cable	Disabled
LPT2	Cable	Disabled

Close

Configure

Help

Type: Modem

[X] **Enable Port**

Current Port Status

Modem (Serial, COM1) - Enabled, Auto answer off
Hayes 2400 or Compatible
2400 bps, Address = 3F8, IRQ = 4
No active connections

To enable a port:

◆ Choose Port Setup from the Optionos menu.

◆ Select the port in the list of ports.

◆ Select this option.

If you select a serial port, select the type of connection from this drop-down list.

← *Go to topic summary*

4   Choose Close.

✓   Serial and parallel ports not used for a cable connection should be disabled. For example, disable a parallel port used for a printer or a serial port used for a mouse or other device such as a scanner or serial printer. Disabling the port tells LapLink not to use the port and reserves its use by the other device.

Configuring cable and wireless ports

For LapLink cable and wireless connections, enabling a serial or parallel port and using the default settings is usually sufficient. On certain computers, however, the default settings may have to be changed before a connection can be made. To change the default settings, choose Port Setup from the Options menu, select the port, and choose Configure.

In this guide, "wireless" refers to AirShare Radio Modules. The use of these modules is restricted in some countries. To connect over a cellular modem, use Connect over Modem. To connect over a wireless LAN adapter, use Connect over Network.

The default settings for cable and wireless ports are designed to work on most computers. If you cannot make a connection, however, you may have to change one or more of the defaults.

These are the two most common reasons for changing the default settings for a cable or wireless port: to eliminate a conflict between two ports and to lower the port speed (the rate at which data is transferred through the port).

To change the default settings for a cable or wireless port:

1   Choose Port Setup from the Options menu.

2   In the list of ports, select the port. (The port type is either Cable or Wireless.)

3   Choose Configure.

    The options are described next. There are also examples of situations in which a default may have to be changed.

Serial cable ports

Port Speed: Sets the speed (baud rate) at which information is transferred between the ports. Most serial ports can communicate at the highest speed, 115,200. If you have an older serial port, however, you may have to lower the speed. The default speed is 115,200.

Interrupt Mode: There are two options: Use Interrupts (the default) and Polled. When Use Interrupts is selected, LapLink uses a hardware interrupt when communicating through the port. This option provides faster communication speeds but may conflict with another device that uses the same interrupt. Such devices include the COM1 and COM3 ports (usually interrupt 4), the COM2 and COM4 ports (usually interrupt 3), as well as scanners, sound cards, and network cards.

When Polled is selected, LapLink does not use the hardware interrupt. This option may slow communication speeds but usually prevents a conflict with another device. Polled should be selected when an interrupt conflict may occur. On computers with a COM3 or a COM4 port,

for example, there may be a conflict with COM1 or COM2. In this case, one of the COM ports—COM1 or COM3, or COM2 or COM4—should be set to polled. Before setting a port to polled, disable the other port first. For example, to set COM1 to polled, be sure that COM3 is already disabled. After setting COM1 to polled, you can then enable COM3 and select Use Interrupts if you intend to use both ports in LapLink. Leave the port disabled otherwise.

Transfer Mode: Sets LapLink to use either 3 or 7 wires of the cable during communications. With Standard selected, 3 wires are used. With Enhanced selected, 7 wires are used. You may have to select Standard mode if you have an older serial port or you are using a 3-wire LapLink-compatible cable. The default is Enhanced mode.

✓ You cannot use Remote Install when Standard mode is selected.

Serial wireless ports

Port Speed: Sets the speed (baud rate) at which information is transferred between the ports. Most serial ports and wireless modules can communicate at the highest speed, 115,200, but you may have to lower the setting if you have an older serial port or the wireless modules do not connect. The default speed is 115,200.

Interrupt Mode: Same as for serial cable ports.

Transfer Mode: Same as for serial cable ports.

Parallel cable ports

I/O Address: The internal address of the parallel port. Parallel port addresses are 03BC, 0378, and 0278. LapLink recognizes a parallel port's address when the port is enabled. If a parallel connection cannot be made, see if the address has changed since you installed LapLink. A hardware diagnostics program such as Microsoft's MSD.EXE can check the parallel port address. If necessary, change this setting to match the address listed in the diagnostics program.

Transfer Mode: Sets LapLink to send either 4 bits or 8 bits of data at a time. With Standard selected, 4 bits are sent; with Enhanced selected, 8 bits are sent. For Enhanced mode, the parallel port must be able to control the flow of the extra 4 bits. If it can't, LapLink will drop to Standard mode automatically. Standard mode should be selected if a parallel connection cannot be made or if the LapLink cable is connected to a mechanical switch box on the parallel port. The default is Enhanced mode.

Configuring a serial port for a modem—The basics

If you specified your modem model during the installation, your modem should be ready for LapLink communications. If not, you may have to use Port Setup to configure the modem port for use in LapLink.

During installation, you can only select one port for LapLink communications. If you selected a serial or parallel port and now want to make a modem connection, for example, you have to configure the modem port.

To configure a serial port for a modem:

1   Choose Port Setup from the Options menu.

2   In the list of ports, select the serial (COM) port your modem uses.

3   From the Type drop-down list, select Modem.

4   Choose Configure.

5   From the Modem Type drop-down list, select your modem. If your modem doesn't appear in the list, select another modem from the same manufacturer having the same baud rate (speed) as yours. If you don't find a match, see "Configuring a serial port for an unlisted modem," below.)

6   Under Modem Settings, make sure Auto Answer and Tone Dial are set appropriately. Leave the other settings as they are. (For details about the options in this dialog, see page 89.)

7   Select Enable Port.

    A stopwatch appears while LapLink checks to see if your modem is using this port and is responding.

8   Choose OK then Close to save your settings.

Configuring a serial port for an unlisted modem

Many modems are similar in features and in the commands they require for use in LapLink. If you don't find your modem in the list of supported models, you may be able to select another model with similar features.

Many models that support the V.42 or MNP mode of data compression, for example, use the same commands. V42 and MNP are well-advertised features and should be mentioned in the modem's documentation.

Configuring a serial port for a modem

Port Setup

Port Settings

Ports	Type	LapLink port status
COM1	Modem	Enabled
COM2	Serial	Not used by LapLink
COM3	Serial	Not used by LapLink
COM4	Serial	Not used by LapLink
IPX	Network	Enabled
LPT1	Cable	Disabled
LPT2	Cable	Disabled

Close
Configure
Help

Type: Modem   ☒ **Enable Port**

Current Port Status
Modem (Serial, COM1) - Enabled, Auto answer off
Hayes 2400 or Compatible

Modem Setup - COM1

Modem Settings
☒ Auto Answer
☒ Tone Dial
☒ Drop DTR on Hangup

Speed:
14400

OK
Cancel
Defaults
Help

Communications Driver
● Use LapLink Driver
○ Use Installed Windows Driver

Modem Timeouts
Answer Rings: 1   Redial Attempts: 3
Dial Timeout: 60   Redial Delay: 30
Callback Delay: 10

Modem Type
Microcom DeskPorte FAST ES 28.8   **Customize...**

Choose Port Setup from the Options menu.

Select the port in the list of ports.

Select this option.

Select Modem from this drop-down list. Then choose Configure.

Select your modem from this drop-down list.

Select the baud rate of your modem from the drop-down list.

✓ To allow your modem to answer calls, be sure that Auto Answer is selected.

✓ If you are using a rotary dial telephone system, clear Tone Dial.

Check your modem's documentation and select a modem according to the following table.

If your modem …	Select this modem from the Modem Type list
Supports V.32, V.42, or the 14,400 baud rate	*Zoom VFP V.32*. If this doesn't work, select *Hayes Ultra 14400.*
Supports any version of MNP	*MNP Compatible* (located near the top of the list)
Is a generic 2400 baud modem that doesn't support data compression or error correction	*Hayes 2400 or Compatible* (located near the top of the list)
Is a PCMCIA modem that supports the 14,400 or 9,600 baud rate. (The back of the card should read "14.4," "14,400," or "9600.")	*Zoom VFP V.32*. If this doesn't work, select *Hayes Ultra 14400.*
Is a PCMCIA modem that is describes as "2400" or "96/24"	*Hayes 2400 or Compatible* (located near the top of the list)

If your modem doesn't fit into any of the above categories, see page 91.

Configuring a serial port for a modem
Advanced modem configuration

For LapLink modem connections, configuring the modem port for your modem is usually sufficient. In certain cases, however, default settings may have to be changed to "fine tune" the way in which your modem and LapLink work together.

To check the current settings for your modem port:

1 Choose Port Setup from the Options menu.

2 In the list of ports, select the COM port showing Modem as its type.

3 Choose Configure.

   The options are described next. There are also examples of situations in which a setting may have to be changed.

Modem Settings

Auto Answer: Sets the modem to answer an incoming call automatically. This option is selected by default; if you clear it, the modem will not answer calls.

Tone Dial: Prepares the modem for use on a "Touchtone" type of phone system. For older "Rotary Pulse" phone systems, clear this option. This option is selected by default.

Drop DTR on Hang Up: Drops the DTR (Data Terminal Ready) signal when a modem connection is broken. This option is selected by default, but it should be cleared if the modem uses the DTR signal for power or to turn itself on and off.

Speed: Sets the DTE (Data Terminal Equipment) speed between the computer and the modem. This speed can be set up to 4 times higher than the speed of the modem itself. For example, a 9,600 baud modem can be set at 38,400. If the modems drop the connection or do not connect while operating at different speeds, set the value to the highest rate supported by both modems.

Communications Driver

There are two Communications Driver options. Only one can be selected at a time.

Use LapLink Driver: Uses the built-in LapLink driver for modem communications. This option is selected by default.

Use Installed Windows Driver: Uses the installed Windows driver for modem communications. Most modems do not use their own soft-

ware driver but some (particularly parallel modems) do. If your modem (or serial port for the modem) required the installation of software for use in Windows, select this option. Check the modem's documentation for further information. By default, this option is cleared.

Modem Timeouts

Answer Rings: Specifies the number of rings before the modem answers. The default is 2. You may want to change the value, for example, if your modem and phone share the same line: setting a higher value will give you the chance to pick up a call before your modem answers.

Dial Timeout: Sets the time that LapLink waits to establish a connection after dialing. The default is 60 seconds, but you may want to increase this value (to 90, for example) if the modems cannot connect in this period.

Callback Delay: Sets the time that LapLink waits before making a callback, as defined in your Security settings. The default is 10 seconds, but you may want to increase the value if the modem cannot reset itself and dial in this period.

Redial Attempts: Sets the number of times the modem redials to make a connection if the first attempt fails. The default is 3.

Redial Delay: Sets the time that LapLink waits before redialing. The default is 30 seconds.

Creating or customizing a modem's settings

If your modem—or a similar model—does not appear in the list of LapLink-supported modems, you need to create an initialization string that prepares the modem to dial and answer calls. You may also have to change other settings as required by your modem.

Creating a custom initialization string

To create an initialization string for a modem:

1   Choose Port Setup from the Options menu.

2   In the list of ports, select the COM port showing Modem as its type.

3   Choose Configure.

4   In the Modem Type drop-down list, verify that Hayes 2400 or Compatible (at the top of the list) is selected. Then choose Customize.

   ✓ If you intend to modify the initialization string of a different modem—and know exactly the changes required—select that modem instead of Hayes 2400 or Compatible.

5   Choose New to create a new modem setting. In the Modem Name box, keep the default (User-defined Modem), or type a name of your choice.

6   In the Initialization box, you see a default initialization string. Modify this string as described below. When you finish, choose OK.

   Under Modem Type, you see the name you specified in the previous step.

7   From the Speed drop-down list, select the baud rate of your modem.

8   If necessary, select Enable Port.

9   Choose OK, then Close.

LapLink requires certain settings in the initialization string, as described below. Check the modem's documentation if you're unsure which commands your modem uses for these settings. If you can't find all of the commands, use the commands you can find.

For most modems, you can start with the default initialization string. Keep the commands in this string and limit yourself to adding commands as necessary. When adding commands, insert them near the end of the string, between the &D2 command and the ^M command.

Hardware flow control: Modems typically use one of two methods for controlling the flow of data: hardware flow control (sometimes referred to as RTS/CTS) and software flow control (sometimes referred to as XON/XOFF flow control). LapLink requires hardware flow control. Commands to enable hardware flow control differ from modem to modem; even similar modems from the same manufacturer may use different commands.

On a Hayes V-series Ultra Smartmodem 9600, for example, the command &K3 enables RTS/CTS flow control. On a US Robotics Courier V.32, two commands are required: &H1 sets the transmit flow control to CTS, and &R2 sets the receive flow control to RTS. A Worldport MNP modem uses \G0 to disable XON/XOFF software flow control and \G3 to enable RTS/CTS hardware flow control. Modems without error correction or data compression rarely support either type of flow control.

DTE or serial port rate: To make your modem compatible with LapLink, disable serial port rate auto-adjust, or set the modem so that the DTE (speed between the modem and the computer) and DCE (speed between the modems) can operate independently.

Example: many MNP modems use \J0 (zero), and many US Robotics modems use &B1.

✓ Some modems set this automatically when hardware flow control is enabled. Ignore this setting if you don't see a comparable command in the modem's documentation.

DTR (Data Terminal Ready) signal status: LapLink expects to use the DTR signal to hang up the modem. Set the modem to monitor this signal and to hang up and enter the command state when DTR goes from ON to OFF.

Example: &D2 (this setting is already in the default string).

Carrier detect: LapLink expects to use the carrier detect signal to detect the presence of another modem's carrier speed. Set the modem to track the status of carrier detect.

Example: &C1 (this setting is already in the default string).

Enable compression and error correction: If the modem supports both MNP 5 and V.42 or V.42bis modes, set the modem to use V.42 or V.42bis. If the modem cannot connect in either of these modes, it should fall back to MNP.

Example: %C1 or controlled through the S registers.

✓ Ignore this setting if you don't see a comparable command in the modem's documentation.

Result codes: LapLink has these requirements for result codes:

◆ Result codes must be sent to and from the modem as words (or verbose), not numbers (or numeric). Example: V1 (this setting is already in the default string).

◆ These strings must be sent to the modem: BUSY, CONNECT, and IGNORE DIAL TONE. Example: X3 for MNP and Hayes modems (this setting is already in the default string).

◆ Result codes must be sent to the modem. Example: QO for MNP and Hayes modems (this setting is already in the default string).

Customizing other setting strings and the timeout value

The defaults for the other setting strings and the timeout value seldom have to be changed. You should change the setting strings only after consulting the documentation for your modem.

✓ The AT and ^M commands are used throughout the setting values. AT gets the attention of the modem and is required before a modem command. ^M is a carriage return that sends the command to the modem.

Dial: Commands sent to prepare the modem to dial. The default is ATD. AT is attention, and D is dial. (If Tone Dial is selected, ATDT is sent to the modem; if it is not selected, ATDP is sent.)

Dial Suffix: Command that sends the numbers to the modem and directs the modem to dial. The default is ^M (a carriage return).

Reset: Commands to reset the modem so that it is ready to dial or receive an incoming call. The default is ~ATZ^M~~.

Auto Answer: Determines the number of rings before the modem answers. The default is ATS0=#^M, where # reflects the setting of the Answer Rings option in the previous dialog (Modem Setup). If you substitute a number for # (ATS0=5^M, for example) you override the option setting.

Hangup: Commands sent to the modem when you choose Hang Up Modem from the Connect menu.

Modem Response Timeout: Sets the number of seconds your modem waits for an OK response from the remote modem before reporting an error. Unlike the previous settings, the timeout value is not specific to a modem. The default is 15 seconds, but you might increase this if you are using a long initialization string, for example, or the modem is slow in responding to commands.

Customizing the response strings

Response strings are sent from the modem when the modem carries out a command. LapLink uses these responses to display messages on the screen.

Change the response strings only if the documentation for your modem specifies different strings. The strings should consist of words rather than numbers.

OK: What the modem sends when it receives an OK from the other modem. The default is OK.

Error: What the modem sends when it doesn't receive a positive response. The default is ERROR.

No Dial Tone: What the modem sends when it doesn't see a dial tone. The default is NO DIAL TONE.

No Carrier: What the modem sends when it doesn't detect a carrier signal from the remote modem. The default is NO CARRIER.

Ringing: What the modem sends when dialing out. The default is RING.

Busy: What the modem sends when dialing a number that is busy. The default is BUSY.

No Answer: What the modem sends when the remote modem does not answer. The default is NO ANSWER.

Connect: What the modem sends when it connects to a remote modem. The default is CONNECT XXXXX, where XXXXX represents the carrier speed.

Troubleshooting modem connections

Consult this section if you are having a problem communicating by modem in LapLink for Windows.

If you're having trouble using your modem in LapLink, look at the following solutions first. If you continue to have troubles, see the problems and solutions that follow.

◆ If you have an external modem, make sure it is turned on and the cable is securely attached to the modem and the correct serial port.

◆ If you have an external modem, make sure you are using the right type of cable. The cable should have at least nine pins, and all pins must be in use. (Some cables have nine pins, but some of the pins may not be connected to the opposite end of the cable.) Cables for serial printers do not work either.

◆ Check the telephone wire for a solid connection from the telephone jack to the modem on both computers. If a modem has two jacks, use the jack that's marked as "line" or "wall," not "telephone." If the jacks are not marked, try both, or check the modem's documentation.

◆ Make sure the COM port the modem is using is enabled for modem communication in LapLink. (See page 86.)

◆ Make sure the COM port enabled for a modem in LapLink is the port the modem is actually using. For external modems, make sure the enabled port is the serial port the modem is attached to. For internal modems, make sure the enabled port is the port the modem is set to with its hardware settings. Check the modem and computer's documentation if you are unsure.

◆ Disable "call waiting" if the local or remote phone system has this feature. Call waiting will interfere with modem connections when it signals an incoming call. (See page 19.)

PROBLEM: The modem cannot dial out or initialize. LapLink responds with the message "Unable to communicate with modem."

■ The wrong modem model is selected in LapLink's Port Setup:

1. Choose Port Setup from the Options menu.

2. Select the port showing Modem as its type.

3. Choose Configure.

4.   Under Modem Type, select your modem from the drop-down list.
      If your modem doesn't appear in the list, see page 86 for help in
      configuring a port for an unlisted modem.

5.   Choose OK, then Close.

■ The modem is not responding to a command in the initialization
   string. Use the initialization string for the Hayes 2400 or Compat-
   ible modem:

   1.   From the Options menu, choose Port Setup.

   2.   Select the port showing Modem as its type.

   3.   Choose Configure.

   4.   From the Modem drop-down list, select Hayes 2400 or
         Compatible.

   5.   From the Speed drop-down list, select the speed of your modem if
         it is higher than 2,400.

   6.   Choose OK, then Close.

■ Your modem is using a non-standard interrupt (IRQ). Windows
   must be set up to use this interrupt as well. If you know the non-
   standard IRQ for your modem, you can modify Windows through
   the Windows Control Panel:

   1.   Start the Control Panel from the Windows Main program group.

   2.   Choose Ports.

   3.   Select the COM port your modem uses.

   4.   Choose Settings, then Advanced.

   5.   In the Interrupt Request Line (IRQ) list, note the present IRQ.
         (Record this value and use it later in case you discover that the IRQ
         is actually standard.) Then select a new IRQ.

         Common non-standard IRQs are 2 and 5, but check your
         modem's settings or documentation to be sure.

   6.   Choose OK twice, then Close.

   7.   Restart Windows in order for the changes to take effect.

■ The modem is using COM4 when it should be using COM3. This is
   a common problem on systems in which there are three serial
   ports, COM1, COM2, and COM4, and COM4 is configured for a
   modem. If your system fits this description, configure COM3 for
   the modem:

   1.   Start the Control Panel from the Windows Main program group.

2. Choose Ports.

3. Select COM3.

4. Choose Settings, then Advanced.

5. Check the current setting in the Base I/O Port Address box. If this setting is not 02E8 (the address for COM4) , your problem is not the one addressed here. Choose Cancel three times to leave the Ports setup.

6. In the Interrupt Request Line (IRQ) box, note the present IRQ. (Record this value and use it later if you discover that this solution does not solve the problem.) Then select 3 as the new IRQ.

7. Choose OK twice, then Close.

8. Restart Windows.

9. Run LapLink and make sure that COM4 is disabled. (See page 82.) You won't use this port for modem communications.

10. Still in LapLink, configure COM3 for modem communications. (See page 86.) You can now use COM3 for your modem communications in LapLink and other Windows applications.

✓ This solution is valid for any COM4 serial port, including a port to which a serial cable is attached. If are having a problem with a cable instead of a modem, follow steps 1–9, above. As the last step, configure COM3 for cable communications.

■ Another serial device is set to the same COM port or interrupt as the modem. An internal modem and a serial port are both set to COM1 or to the same interrupt for example. Disable the other device or set it to a different COM port.

PROBLEM: The modem can dial out, but the connection is not completed. LapLink responds with the message "Modem is not responding." Or the modem can dial out and complete the connection, but disconnects shortly thereafter.

■ The modems are not negotiating for the correct speed. On each computer, set the modem speed in LapLink to the highest baud rate supported by both modems:

1. Choose Port Setup from the Options menu.

2. Select the port showing Modem as its type.

3. Choose Configure.

4. From the Speed drop-down list, select the highest baud rate supported by both modems.

5.   Choose OK, then Close.

✓ Repeat this procedure on the other computer.

■ The wrong modem model is selected in LapLink's Port Setup on one or both of the computers:

1.   Choose Port Setup from the Options menu.

2.   Select the port showing Modem as its Type.

3.   Choose Configure.

4.   Under Modem Type, select your modem model from the drop-down list. If your modem doesn't appear in the list, see page 86.

5.   Choose OK, then Close.

✓ Check both computers for the right modem selection.

PROBLEM: The modem can dial out, but the connection is not completed. LapLink responds with the message "Dialing Failed. No Carrier."

■ LapLink did not get a response from the remote modem. Make sure the remote computer is running LapLink for Windows, its modem is turned on and connected, and the modem port is enabled.

■ The remote modem is not set to answer an incoming call in LapLink. Make sure Auto Answer is checked in the Port Setup for the modem. (See page 86.)

PROBLEM: You cannot use LapLink to communicate over a parallel modem attached to a parallel port.

■ A parallel modem should be configured to communicate over a serial (COM) port, not a parallel (LPT) port. Parallel modems come with software drivers that make the modems appear to be using a serial port. Check the modem's documentation to see which serial port the modem is set to use. Then configure that port for the parallel modem:

1.   Choose Port Setup from the Options menu.

2.   In the list of ports, select the COM port the parallel modem uses.

3.   In the Type drop-down list, select Modem.

4.   Choose Configure.

5.   From the Modem Type drop-down list, select your modem. If your modem doesn't appear in the list, select a modem from the same manufacturer having the same baud rate as yours. If you don't find a match, see page 86.

6. In the Speed drop-down list, verify that the baud rate of your modem is selected.

7. Under Modem Settings, make sure Auto Answer and Tone Dial are set appropriately. (For details about the options in this dialog, see page 89.)

8. Select Enable Port.

   (A stopwatch will appear while LapLink checks to see if your modem is using this port and is responding.)

9. Choose OK, then Close to save your settings.

Troubleshooting cable connections

Consult this section if you can't open a cable connection after installing LapLink for Windows, enabling a serial or parallel port, or connecting the cable.

PROBLEM: LapLink does not automatically open a connection when the computers are connected by a cable. Or the remote computer is not available when you attempt to connect using the Connect over Cable command.

■ The cable is attached to the wrong port. For help in attaching the cable, see page 24.

■ The port to which the cable is attached has not been enabled in LapLink. (See page 82.) If a mouse was previously used on a serial port for a DOS program, revise the AUTOEXEC.BAT or CONFIG.SYS file so that the mouse software is not loaded when you boot the computer.

■ A serial port must be set to Polled on either or both of the computers.

1. Choose Port Setup from the Options menu.

2. Select the COM port the cable is attached to.

3. Choose Configure.

4. Under Interrupt Mode, select Polled.

5. Choose OK then Close.

✓ If you still can't connect, repeat this procedure on the other computer.

■ The serial ports must be set to a lower speed, or to the Standard transfer mode:

1. Choose Port Setup from the Options menu.

2. Select the COM port the cable is attached to.

3. Select Configure.

4. Under Port Speed, select 57600 from the drop-down list.

5. Under Transfer Mode, select Standard.

6. Choose OK then Close.

✓ Perform this procedure on both computers. If the computers still don't connect, lower the speed one step at a time. If lowering the

speed results in a connection, change Transfer Mode back to En-hanced.

■ The serial cable is using COM4 when it should be using COM3. This is a common problem on systems in which there are three se-rial ports, COM1, COM2, and COM4, and COM4 is configured for a serial cable. If your system fits this description, configure COM3 for the serial cable:

  1. Start the Control Panel from the Windows Main program group.

  2. Choose Ports.

  3. Select COM3.

  4. Choose Settings, then Advanced.

  5. Check the current setting in the Base I/O Port Address box. If this setting is not 02E8 (the address for COM4) , your problem is not the one addressed here. Choose Cancel three times to leave the Ports setup.

  6. In the Interrupt Request Line (IRQ) box, note the present IRQ. (Record this value and use it later if you discover that this solution does not solve the problem.)

     Then select 3 as the new IRQ.

  7. Choose OK twice, then Close.

  8. Restart Windows.

  9. Run LapLink and make sure that COM4 is disabled. (See page 82.) You won't use this port for serial cable communications.

  10. Still in LapLink, configure COM3 for cable communications. (See page 82.)

■ The cable is not firmly attached to the port. Reconnect the cable to each port for a secure connection. Reversing the cable ends and re-connecting them may help as well.

■ You are not using a LapLink cable. LapLink does not work over most other serial cables or any printer cables. LapLink III cables can be used with LapLink for Windows though they will not provide the fastest transmission rate over parallel connections. LapLink Pro and LapLink V cables are completely compatible with LapLink for Windows. Cables can be purchased by calling the Customer Service number listed near the end of this guide.

Troubleshooting network connections

Consult this section if you cannot make a LapLink for Windows connection to another computer on your network.

To make a LapLink connection over a network, you must be using one of these networks:

◆ Novell Netware version 2.2, 3.11, or 4.0.

◆ Novell Personal Netware version 1.0 or higher.

◆ Windows for Workgroups version 3.11.

◆ Networks that fully support IPX (Internet Packet Exchange).

See your network administrator if you aren't sure which network you are using. If you are using one of these networks and are having troubles, see the following problems and solutions.

Novell Netware version 2.2, 3.11, or 4.0

PROBLEM: The LapLink port status for IPX shows as Unavailable even though the port is Enabled.

■ During the installation, LapLink checks the network files on your computer to see if network connections are supported. If the network IPX port is no longer available, your network files may have been changed since you installed LapLink. The files are usually stored in a directory on your hard drive, not the network. LapLink requires the following files and versions:

◆ LSL.COM version 1.2 or higher.

◆ IPXODI.COM version 1.2 or higher.

◆ NETX.COM version 3.26 or higher. (Required for Internetwork Name Broadcasts.)

To determine the version of these files on your computer:

1. Change to the directory containing your network files.

2. Type the name of the file and a question mark, then press ENTER. For example, LSL.COM ? ENTER.

   Check the version of each file. If any of them do not meet LapLink requirements, contact your network administrator for assistance.

■ In addition to the above files, Novell Netware connections require another file that is specific to your network card and its manufac-

turer. The name of the file varies from manufacturer to manufacturer:

◆ Arcnet network cards may use a file named TRXNET.COM.

◆ Ethernet network cards may use a file named NE2000.COM.

◆ Token Ring network cards may use a file named OSH39XR.COM.

These card-specific files must be dated later than the release of Windows 3.1 (approximately 3/10/92). If the other network files meet the requirements and you have difficulties with Novell Netware connections, contact your network administrator for the latest version of the card-specific file.

■ A file LapLink requires for network connections is not being referenced in the Windows SYSTEM.INI file. Check the SYSTEM.INI file to see if the file reference has been replaced since you installed LapLink:

1. Make a backup copy of the SYSTEM.INI file. (The file is stored in the Windows directory, usually C:\WINDOWS.)

2. Run Windows System Editor, Notepad, or other program capable of reading ASCII text. Open the SYSTEM.INI file.

3. In the [386Enh] section of the file, locate this line: DEVICE=C:\WINDOWS\TSI\TSIVID.386. (The drive and directory may be different depending on your installation.)

4. If the file has been replaced, you will see a semicolon (;) or the letters REM at the beginning of the line.

5. To use this file when running Windows, remove the semicolon or REM, and save the file. Then restart Windows.

   ✓ If you find that the TSIVID.386 line has been altered, the change may have occurred when you installed another program. You may have trouble running that program with your revised SYSTEM.INI file. To run that program again, replace the SYSTEM.INI file with the backup file you created in step 1. To use LapLink network connections, use the revised SYSTEM.INI file.

■ Windows is not set up for the Novell network. Check the Windows Setup program and select the Novell 3.26 network:

1. Start the Windows Setup program from the Main program group.

2. Check the Network box. Novell Netware (shell versions 3.26 and above) should appear in the box. If so, exit the setup program. Otherwise, proceed with the following steps.

3.   Choose Change System Settings from the Options menu.

4.   From the Network drop-down list, select Novell Netware (shell versions 3.26 and above). You need the Windows disks if this network has not been previously installed on the computer.

5.   Follow the on-screen instructions.

Windows for Workgroups 3.11

PROBLEM: LapLink cannot be enabled for network connections. The LapLink port status for IPX is listed as Unavailable.

■ Make sure the network card is configured properly for Windows for Workgroups. (Run the Network Setup icon in the Network program group.) Also verify that you can make connections to other computers on the network outside of LapLink.

■ A file LapLink requires for network connections is not being referenced in the Windows SYSTEM.INI file. (See page 103.)

All supported networks

PROBLEM: No remote computers are available when you attempt to connect using the Connect over Network command.

■ No other network computers are running LapLink. Make sure any network computers you want to connect to are running LapLink.

■ The IPX network port is disabled on the network computer you're trying to connect to. (See page 82.)

PROBLEM: After selecting a network computer for connection, LapLink responds with the message "Remote computer not responding."

■ The remote network computer is experiencing one of the problems outlined in this section. Check the remote computer for a solution.

Troubleshooting AirShare wireless connections

Consult this section if you cannot make a LapLink for Windows connection to another computer over AirShare modules. Since AirShare modules attach to serial ports, many of the solutions for serial connections may also solve problems with AirShare modules.

PROBLEM: On both modules, the Red and Green LED lights are on, but no connection is made.

- Try all three channels (A,B, and C) separately. Be sure that both modules are set to the same channel as you try each one.

- If switching channels doesn't work, set the serial ports of both computers to a lower port speed and to the Polled interrupt mode:

   1. Choose Port Setup from the Options menu.

   2. Select the COM port the module is attached to.

   3. Choose Configure.

   4. From the Port Speed drop-down list, select 57,600.

   5. Under Interrupt Mode, select Polled.

   6. Choose OK, then Close.

   ✓ If 57,600 does not result in a connection, try again using the next lower Port Speed setting, 38,400.

- If other serial ports are available, attach an AirShare module to one of them. The AirShare units may be communicating with each other, but the serial ports are not. Make sure any serial port you use is enabled for Wireless connections. (See page 82.)

- Make sure that you are using an Air module to connect to a Share module. (Each module is labeled as either "Air Module" or "Share Module.")

PROBLEM: The LapLink connection is inconsistent. LapLink connects over the AirShare modules but disconnects afterwards. Or the Red and Green LED lights are on for one module, but only the Red light is on for the other.

- There may be interference between the AirShare modules, or they may be picking up signals from another device using the same channel:

   ◆ Move the modules closer together.

In this guide, "wireless" refers to AirShare Radio Modules. The use of these modules is restricted in some countries. To connect over a cellular modem, use Connect over Modem. To connect over a wireless LAN adapter, use Connect over Network.

◆ Move the modules away from metal surfaces or any sources of interference such as laptop screens, PC monitors, and electrical transformers.

◆ Try all three channels (A,B, and C) separately. Be sure that both modules are set to the same channel as you try each one.

PROBLEM: The Red LED light of an AirShare module is not on.

■ The Red LED light indicates that sufficient power is being supplied to the AirShare module. If the light is not on:

◆ Make sure each module is firmly attached to the serial port.

◆ If you're connecting to the mouse port, the laptop may not be supplying sufficient power to the module. Try another power source.

◆ Try all three channels (A,B, and C) separately. Be sure that both modules are set to the same channel as you try each one.

◆ If no other power source is available, change the batteries in one or both of the modules. (Change the batteries on each separately if you only have one battery pack.)

◆ Ensure that the port to which each module is attached has been enabled in LapLink. (See page 82.) If a mouse was previously used on a serial port for a DOS program, revise the AUTO-EXEC.BAT or CONFIG.SYS file so that the mouse software is not loaded when you boot the computer.

The Green light flashes but does not stay on consistently.

■ The modules may be in a "null" area where they cannot pick up signals from each other. Move the modules closer together or to a different location, away from the "null" area.

Troubleshooting Remote Install

Consult this section if you encounter problems when using Remote Install to install LapLink for Windows on another computer over a serial cable.

Troubles with Remote Install usually occur at either of these stages:

◆ Stage 1: When LapLink attempts to connect to the remote computer.

◆ Stage 2: When LapLink attempts to transfer its files after opening a connection.

Stage 1

PROBLEM: The computers don't connect. This message appears on the sending computer: "Remote computer is not responding."

■ You are using the wrong cable. Remote Install works only over the blue Traveling Software serial cable. (Cables can be purchased by calling the Customer Service number listed near the end of this guide.) Make sure that the cable is securely attached at both ends.

■ You selected the wrong remote port in the Remote Install dialog. For the Remote Port setting, select the port to which the cable is attached on the receiving computer. If in doubt, attach the cable to another port or select a different remote port in the Remote Install dialog.

■ You selected the wrong local port in the Remote Install dialog. For the Local Port setting, select the port to which the cable is attached on the sending computer. If in doubt, attach the cable to another port or select a different local port in the Remote Install dialog. Also verify that this port is enabled in LapLink. (See page 82.) If a mouse was previously used on the serial port for a DOS program, revise the AUTOEXEC.BAT or CONFIG.SYS file so that the mouse software is not loaded when you boot the computer.

■ The MODE command did not run on the receiving computer. If the message "Bad command or file name" is displayed when running the MODE command, add the DOS directory to the receiving computer's PATH statement in the AUTOEXEC.BAT file; or copy the MODE.COM file to the directory you're running the command from. (See your DOS User's Guide for information on the PATH statement and AUTOEXEC.BAT file.)

Stage 2

PROBLEM: The computers connect and begin to send the LapLink files, but hang or stop responding afterwards.

■ One or both of the computers are running a memory-resident program that interferes with Remote Install. Remove any unnecessary programs or devices from each computer's AUTOEXEC.BAT and CONFIG.SYS files. Keep the HIMEM.SYS line, any data compression drivers, and the Windows directory in the PATH statement. (Make a backup copy of these files before removing the programs.) If your computer runs DOS 6 or higher, you can press the F8 key as the computer starts and choose which programs are run. The most common programs that interfere with the Remote Install are DOS Share and screen saver programs. Remove these programs if they run on either computer.

To return the computers to their original state, restore the backup copy of the AUTOEXEC.BAT and CONFIG.SYS files and restart the computers.

■ The receiving computer's disk drive is entering "sleep mode" or "time out" during Remote Install. If the computer is a laptop, turn off its power management settings to disable these settings temporarily. (See the computer's documentation if you are unfamiliar with this procedure.)

■ The serial port on the sending computer must be set to a lower speed. On the sending computer:

1.   Choose Port Setup from the Options menu.

2.   Select the COM port the cable is attached to.

3.   Select Configure.

4.   From the Port Speed drop-down list, select 57600.

5.   Choose OK, then Close.

6.   Repeat Remote Install.

Troubleshooting screen displays

Consult this section if you encounter problems with the host's screen display while using Remote Control.

PROBLEM: The host computer's screen cannot be blanked, displays strange colors, or does not pass the LapLink screen-blank test.

■ The host computer's video card and software driver do not allow the screen to be blanked. Change the video software driver on the host computer to the standard Windows VGA driver:

1. On either computer, break the connection.

2. On the host computer, exit LapLink, and start the Windows Setup program from the Windows Main group.

3. Choose Change System Settings from the Options menu.

4. In the Display box, note the present video driver. (Record this setting so that you can restore it later.)

   From the Display drop-down list, select VGA.

5. Choose OK.

   You'll be prompted for the Windows disks if the VGA driver wasn't previously installed on the computer.

6. Follow the on-screen instructions.

7. On the host computer, run LapLink.

8. On the guest computer, reopen a Remote Control window and blank the host's screen.

✓ To return the host screen to its original display mode, repeat this procedure. In step 4, select the original video driver.

Using Xircom adapters

Two types of Xircom adapters can be used with LapLink for Windows: the Xircom Pocket Ethernet Adapter and the Parallel Port Multiplexor Adapter. Both adapters communicate through parallel ports. Consult this section if you have problems with either type.

The Xircom Pocket Ethernet Adapter is a portable network card that provides network connections through the port. The Parallel Port Multiplexor Adapter allows a LapLink cable and a printer (cable) to share a single parallel port.

Xircom Pocket Ethernet Adapter

PROBLEM: A network connection cannot be made: No network computers are available when you attempt to connect, or computers are available sporadically. (Their names appear, then disappear.)

■ The port the adapter is connected to is enabled in LapLink for parallel connections. To use the port for network connections, you must disable the port; then enable the IPX Network port. (See page 82.)

■ No other network computers are running LapLink, or their network ports are not enabled.

Parallel Port Multiplexor Adapter

PROBLEM: A parallel connection cannot be made: LapLink does not automatically connect the computers when they are connected by parallel cable, or the remote computer is not available when you choose Connect over Cable.

■ The software that initiates the Multiplexor has not been started. See the Multiplexor's documentation for information on starting the software.

■ The cable is attached to the wrong slot on the adapter. Attach the yellow LapLink cable to slot A, and the printer cable to slot B.

■ The parallel port the adapter is attached to is disabled. (See page 82.)

■ The parallel port needs to be set to the Standard mode in LapLink:

 1. Choose Port Setup from the Options menu.

 2. Select the LPT port the adapter is attached to.

 3. Choose Configure.

 4. Under Transfer Mode, select Standard.

 5. Choose OK, then Close.

Index

Traveling Software License Agreement

IF YOU BREAK THE SEAL OR OTHERWISE OPEN THE PACKAGE CONTAINING THE SOFTWARE DISK-
ETTES, YOU ARE BY THAT ACT AGREEING TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS LI-
CENSE AGREEMENT.

Ownership of Software. You acknowledge and agree that all of the computer programs and associated documentation contained in this package (collectively, the "Software") are owned exclusively by Traveling Software and/or its licensors. The Software is protected under copyright and other intellectual property laws of the United States and international copyright treaties. You acknowledge and agree that the price paid by you for the Software is a license fee granting you only the rights set forth in this License Agreement.

License. Traveling Software grants to you, and you accept, a limited, non-exclusive and revocable license to use the Software, in machine-readable, object code form only.   You agree to use the Software only as author-
ized in this License Agreement. This License Agreement does not convey to you any ownership rights or any other interest in the Software.

Scope of License. This is a single-user, multiple computer license, which means you are authorized to use the Software on up to a total of three personal computers that are used exclusively by you (e.g., office, laptop and home). A valid license must be purchased for each person who will use the Software. You may only use the Software to link with a computer not used solely by you if (1) the user of that computer has a valid li-
cense, or (2) you delete the Software from the other computer immediately after you complete your file transfer or remote operation.

**If you remotely install or OTHERWISE INSTALL the Software on another user's computer for file transfers or other remote operations, you must delete the Software FROM THE OTHER COMPUTER IMMEDIATELY after YOU COMPLETE YOUR transfer or remote opera-
tion.**

If this software is to be installed on a network server, or more than one user can run the Software, you must purchase an additional license for each user or work station. Please contact the location where your pur-
chased the Software and this license, or contact Traveling Software, to obtain additional licenses.

You may not copy or make any changes or modifications to the Software, and you may not translate, decom-
pile, disassemble, or otherwise reverse engineer the computer program(s). You may not loan, rent, lease or sublicense the Software or any copy to others for any purpose. You agree to use all reasonable efforts to pro-
tect the Software from unauthorized use, modification, reproduction, distribution or publication. You are not permitted to make any uses or copies of the Software that are not specifically authorized by the terms of this License Agreement, and Traveling Software reserves all rights that are not expressly granted to you. Your adherence to this License Agreement will allow Traveling Software to continue developing innovative and useful products and providing a high level of customer service and support.

Term. This license will become effective on the date you acquire the Software and will remain in force until terminated. You may terminate this license at any time by removing the Software from your computer and destroying the original Software and all copies. This license will automatically terminate if you breach any of the terms or conditions set out in this License Agreement. You agree to remove the Software from your com-
puter, and either to destroy the original Software and all copies of the Software and documentation or to re-
turn them to Traveling Software, upon termination of this license for any reason.

Transfer. You may transfer your license of the Software to another party by transferring the original program diskettes and all applicable documentation, including the original of this License Agreement, to the recipient, who agrees to the terms of this Agreement. All other copies of the Software must be deleted and/or destroyed. Any transfer of possession of the Software terminates your license and all associated benefits under this License Agreement. You must notify Traveling Software in writing of such a transfer.

Archival Copy. You may make one copy of this Software and associated documentation solely for backup or archival purposes. Alternatively, you may transfer this Software to a single hard disk drive, provided that you keep the original program diskettes and accompanying documentation in your possession for backup or archival purposes. Any such copies of the Software or documentation shall include Traveling Software's copyright and other ownership notices. No other copies of Software or documentation may be made by you or any person under your authority or control.

Limited Warranty. Traveling Software warrants the physical diskettes, cable(s) and physical documentation to be free from defects in materials and workmanship for a period of 90 days from the date of your purchase. If you notify Traveling Software of defects in materials or workmanship during the warranty period, Traveling Software will replace the defective diskettes or documentation or, at its option, refund the purchase price. Your remedy for breach of this warranty shall be limited to replacement or refund and shall not encompass any other damages. No dealer, distributor, agent or employee of Traveling Software is authorized to make any modification or addition to the warranty and remedies stated above.

TRAVELING SOFTWARE SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. TRAVELING SOFTWARE DOES NOT WARRANT THE PHYSICAL DISKETTES, CABLE, PHYSICAL DOCUMENTATION OR COMPUTER PROGRAM(S) OTHER THAN AS EXPRESSLY STATED ABOVE, NOR DOES TRAVELING SOFTWARE PROVIDE ANY WARRANTY AS TO THE OPERATION OF THE SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR APPLICATION, USE, OR PURPOSE.

Limitations of Liability and Remedies. IN NO EVENT SHALL TRAVELING SOFTWARE OR ITS LICENSORS BE LIABLE FOR ANY LOSS OF PROFIT OR ANY OTHER COMMERCIAL DAMAGE, INCLUDING BUT NOT LIMITED TO SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER DAMAGES, EVEN IF TRAVELING SOFTWARE OR ITS LICENSORS ARE ADVISED, IN ADVANCE, OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE LIABILITY OF TRAVELING SOFTWARE OR ITS LICENSORS EXCEED THE PURCHASE PRICE PAID FOR THE SOFTWARE, LESS ALL APPLICABLE TAXES AND DUTIES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE AFOREMENTIONED LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

U.S. Government Restricted Rights. The Software is provided with Restricted Rights. Use, duplication, or disclosure by the United States Government is subject to restrictions set forth in subparagraph (c)(1)(ii) of The Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or subparagraphs (c)(1) and (2) of the Commercial Computer Software—Restricted Rights at 48 CFR 52.227-19, as applicable. Contractor/Manufacturer is Traveling Software, Inc., 18702 North Creek Parkway, Bothell, Washington 98011 U.S.A.

Updates. To receive notification of future Software updates, please complete and return the registration card. Also, please locate the serial number of your copy of the Software on the labels of the original diskettes. You will need this number to receive updates and technical support from Traveling Software.

Trademarks. TRAVELING SOFTWARE, LAPLINK and the associated logo(s) are registered trademarks of Traveling Software, Inc. No right or license to any trademarks owned by Traveling Software or others appearing in the Software or packaging is granted to you by this License Agreement.

Miscellaneous. Unless otherwise restricted by law, you agree that this License Agreement shall be construed, interpreted and governed by the laws of the State of Washington of the United States of America, without regard to the laws governing conflicts of law. If any action is brought by either party against the other regarding any subject matter of this License Agreement, the prevailing party shall be entitled to recover, in addition to any other relief granted, reasonable attorney fees and expenses of litigation. You further agree that any claim relating to this License Agreement shall be brought in the courts of competent jurisdiction in the State of Washington. If any term of this License Agreement is declared void or unenforceable by any court of competent jurisdiction, enforcement of the remaining terms shall not be affected. No waiver of any right under this License Agreement shall be effective unless in writing and signed by both parties. No waiver of any past or present right arising from any breach or failure to perform shall be deemed to be a waiver of any future right arising under this License Agreement. This License Agreement sets forth the entire agreement between Traveling Software and you with respect to all matters covered herein.

IF YOU HAVE ANY QUESTIONS CONCERNING THIS LICENSE AGREEMENT, PLEASE CONTACT TRAVELING SOFTWARE AT 18702 NORTH CREEK PARKWAY, BOTHELL, WASHINGTON 98011 U.S.A. (206-483-8088), OR CONTACT YOUR REGIONAL TRAVELING SOFTWARE OFFICE.