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laplink gold.12

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Trademarks

Patents

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

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Technical Support Contact Information

Please visit www.laplink.com/support for any technical support issues or questions that you may have.

For other inquiries, please see contact details below:

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Laplink Gold User's Guide

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Chapter 8 - Using Text & Voice Chat

Chapter 9 - Troubleshooting

1 Introducing Laplink Gold

Welcome

With Laplink Gold 12, access files on remote PCs and servers; transfer and synchronize data between PCs; run database applications on remote computers; provide remote technical support to co-workers or friends; operate, maintain, and even reboot remote PCs or servers - Laplink Gold 12 allows you to do all of this with a single application, no matter where you or your PCs may be located. If you want to keep your data synchronized or you are an IT professional needing to support remote users, Laplink Gold 12 gives you a level of mobility, independence and control you may never have thought possible within a single application.

What's new in Laplink Gold 12

Laplink Gold 12 sets the standard in PC connectivity with its new Laplink Remote Desktop, Laplink Internet, integrated antivirus scanning, streamlined user interface and Laplink USB 2.0 cable connectivity.

Laplink Remote Desktop

Laplink Remote Desktop allows users to use Remote Desktop control features built into Microsoft XP Professional, Windows Server 2000 and 2003 while taking advantage of all the other features of Laplink Gold 12, such as its secure Internet connectivity via Laplink Internet.

Laplink Internet

Enables users to reliably and easily connect to remote computer(s) through firewalls and proxy servers without compromising security or setting special port configurations.

Integrated Antivirus Scanning

Allows users to transfer files and ensure that they are virus-checked, cleaned and, if necessary, quarantined.

User Interface

The new user interface is user friendly with a Microsoft Windows XP look and feel. Included is a Windows Explorer-like sidebar to keep common tasks accessible while hiding tasks that cannot be currently performed.

USB 2.0 Support

Laplink Gold 12 supports enhanced USB 2.0 cables for dramatically increased file transfer speeds. The retail box version of Laplink Gold 12 includes a USB 2.0 cable. Volume discounts available for bulk purchases.

System requirements

Your computers must meet these requirements to install and run Laplink Gold 12:

- Microsoft Windows 98 SE, Me, 2000, XP or Server 2000 and 2003
- Laplink Gold 12 does not support Windows 95 or NT
- 133 MHz or higher Pentium-compatible CPU
- At least 64 megabytes (MB) of RAM; more memory generally improves responsiveness
- 30 MB of available hard disk space (for a complete installation)
- CD-ROM or DVD drive
- Display VGA or higher resolution monitor
- Keyboard and mouse required

However, Laplink Gold 12 will connect to computers running Laplink versions 7.5 and higher.

Versions of Laplink prior to 7.5 may have trouble connecting to Laplink Gold 12. For more information see "General security" on page 16

About this guide

This documentation will assist you in using Laplink Gold 12 and acquaint you with its features, operation, and will provide a detailed product overview.To improve the usability of this guide, step procedures are now located in the online help system.

While you are setting up and using Laplink Gold 12, activate the **Quick Steps** window and the Laplink help system.

Key terms

Guest: The computer you are using. Regardless of location, the computer initiating an outgoing connection is the Guest computer.

Host: The computer to which you are connecting. It is **hosting** your connection. Regardless of location, the computer accepting an incoming connection is the Host; it is allowing the Guest to control it.

NOTE Laplink Software also offers Laplink Gold Host for volume license customers who require the ability to gain remote control of Host computers to provide technical support and administration. Laplink Gold Host only allows incoming connections to be completed onto the Host computer(s) by authorized users who have Laplink Gold running on their Guest computers.

Local: Used to refer to the location of a printer. A "local" printer is connected to its computer.

Icons

Product icons are used in this document to acquaint you with the features of the product.

Contacting Laplink

If you are unable to resolve the issue, please contact Laplink support at www.laplink.com/support

Have the following information available when contacting Laplink support:

- The serial number of your version of Laplink Gold 12.
- The version of Microsoft Windows running on the Host and Guest computers.

2 System Overview

Features, Tools and Users

You can do so much more than share files with Laplink Gold 12. It is ideal for troubleshooting computers at remote locations or for working on your office computer while you're on the road. Features like Xchange Agent and Remote Control save time and simplify your work. Tools like Address Book and Security allow you to manage who can access your computers and what features are available to them. Laplink Gold gives you the freedom to leave the office without giving up access to your office computer and network resources. Whether you're traveling on business or working from home, you can still read your e-mail, share the latest files with co-workers, access network programs and databases, browse the Internet and collaborate with colleagues. Things you once could do only in the office you can now do remotely.

Features

File Transfer transfers files between computers.

With File Transfer, you can move or copy files between computers. Customizing any of the several File Transfer settings simplifies complicated transfers. Laplink's patented SpeedSync technology makes updating files faster because files are compared, and only changes —not entire files—are transferred. A comprehensive security system, including encryption and virus checking protects your valuable data at all times.

Xchange Agent synchronizes files and folders.

With Xchange Agent, you can synchronize sets of files or folders between two computers or between local drives. Use Xchange Agent to transfer vital information to and from a portable computer, or to back up important files. You can schedule Xchange Agent to run regularly, so that your information is always up to date; Xchange Agent automatically connects, transfers files, and disconnects.

Remote Control lets you work on a computer at another location.

With Remote Control, control another computer as though you were sitting at that computer using its keyboard, mouse, and programs while looking at its screen. Whether your computer is controlling or being controlled, you have the same setup and start-up procedures. You can even copy information from one computer application and paste it to the other.

Laplink Remote Desktop lets you access Windows Remote Desktop on Microsoft Windows XP Professional, Server 2000 and Server 2003.

With Remote Desktop, access the enhanced remote control experience available via the Remote Desktop features built into Windows XP Professional and the Terminal Services features built into Microsoft Windows Server 2000 and Server 2003. You may need to purchase Microsoft Terminal Services Server licensing separately.

Connecting through firewalls with Laplink Internet.

With Laplink Internet, securely connect to PCs and servers behind firewalls without needing to reconfigure, disable or open up ports on firewalls and/or proxy servers. Once you create your Laplink Internet account and associate the computers you will want to connect with your account, log onto any of those computers from any other computer running Laplink Gold 12. The first year of the Laplink Internet service is included at no additional cost.

Text and Voice Chat features let you communicate in real time with the person on the other computer.

With Text Chat, exchange messages with someone by typing messages in a window. This is useful if you need to communicate with the person at the other end while performing other services like File Transfer and Remote Control. Text Chat information is saved, and you can also cut and paste text into the Text Chat window.

With Voice Chat, talk with someone while you perform other services like File Transfer and Remote Control. Voice Chat requires a microphone and sound card on each computer.

Print Redirection lets you print documents on a printer attached to another computer.

With Print Redirection, you can print a document from a Host computer to your local printer over Remote Control, or print local documents to a printer at a Host location. This means you don't have to use File Transfer to get documents printed where you want them.

Tools

Address Book stores your host computer connection types and permissions.

With Address Book, create lists of the Host computers to which you want to connect. The Address Book stores the connection type used to access the Host and the services you want to start automatically upon connecting.

Security sets access privileges on your computer.

Laplink provides two authentication methods: Microsoft Windows Authentication and the standard Laplink authentication. With Windows Authentication, now you can give Windows domain users access to your computer, allowing them to use their domain usernames and passwords. You can easily limit the services available to any users and set up log-in credentials. **Encryption** and **Lock Out** options provide another layer of security.

Antivirus checks incoming and outgoing files for virus infection.

A new integrated Antivirus feature keeps your Guest and Host computers safe from computer virus infection by checking all incoming and outgoing files with a powerful virus scanning engine. Automatic updates keep your computers safe while you can configure preferences to allow you to determine the level of protection you need.

Users

Most Laplink Gold 12 users will use Laplink to connect to their personal information, to synchronize their workstation and laptop, or access network resources.

Advanced users are typically IT and Support professionals who use Laplink Gold 12 to access large groups of computers and users, offer integrated support and troubleshoot problems. Advanced users would use features such as the Address Book's section in "Importing and Exporting" on page 42 to manage large lists of users and their credentials.

Advanced features are available to everyone.

3 Getting Started

Getting Started

Now that you have installed and started Laplink Gold, you need to determine your permissions, credentials and connection types. Then you will be ready to configure Laplink Gold 12 for incoming Laplink connections using Security settings and for outgoing connections using the Address Book. Laplink's versatility allows connectivity over a dial-up connection, office network, the Internet and more.

How will you use Laplink Gold 12?

Before you set up Laplink Gold 12, take a few moments to determine how you want to use Laplink Gold 12.

Laplink Gold 12 is a versatile remote access product that helps you solve your multi-computer connectivity challenges.

This section gives brief scenarios of the typical tasks you can perform with Laplink Gold 12.

Staying connected

Laplink Gold 12 allows you to remain connected to the data and devices that you need to use no matter where you are. While traveling, use a connection at the hotel to retrieve data stored on the network at the office. At home, access critical information. Laplink's robust features give you the information you need when you need it.

IT and support - Advanced features

Laplink Gold features like **Global Address Book** and **Windows Authentication** help you manage large groups of users within your organization. Using the powerful Address Book features, all connection information can be stored centrally. This allows you to share saved connections with your IT team so that everyone has needed connection information at their fingertips. Microsoft Windows Authentication lets you set up domain users easily with their current network credentials. With Laplink, you can offer remote support and troubleshooting to your users, no matter your or their locations.You can also help spread the workload and share information.

Connecting for the first time

If you have never used Laplink before, you will need to determine credentials, permissions and connection types for your incoming and outgoing connections. The information in this chapter will help you determine your requirements

If you are upgrading to Laplink Gold 12, there are no special procedures you need to follow. All of your previous settings will appear in Laplink Gold 12. While it is advantageous to install Laplink Gold 12 on all computers you will be accessing, you will be able to connect to computers running Laplink Gold 7.5 and higher.

Security

Security settings manage incoming connections; they

determine who is allowed to connect to your computer and what Laplink services they have access to.

Before you configure your security settings you need to know the authentication type you will be using.

Laplink Authentication

Laplink authentication allows you to assign credentials (User Name and Password) to incoming connections. The

advantage of Laplink Authentication is that you control the access credentials, which allows you to modify them at any time.

- If you are the only one accessing your computers via Laplink, assign yourself a User Name and Password.
- If another Laplink user is accessing your computer, you will need to tell them their Laplink User Name and Password.

Windows Authentication

If you are on a network domain, you may be able to use Windows Authentication to grant permissions. The advantage to using Windows Authentication is that users have familiar credentials to access Laplink - they are the same ones they use on the office network. To grant credentials to a network user:

- You must be logged onto the network domain.
- You must know their user name.

Address Book

The Address Book manages outgoing connections. It configures the connection type and default services you will use to access a Host.

Before you configure your Address Book you need to know the credentials granted to you by the Host computer. For each Address Book entry,

- know your connection type;
- know the credentials (User Name and Password) needed to connect to the Host;
- know what services you have been given permissions to (File Transfer, Remote Control, etc.);
- Know the Laplink computer name.

Connecting through Firewalls

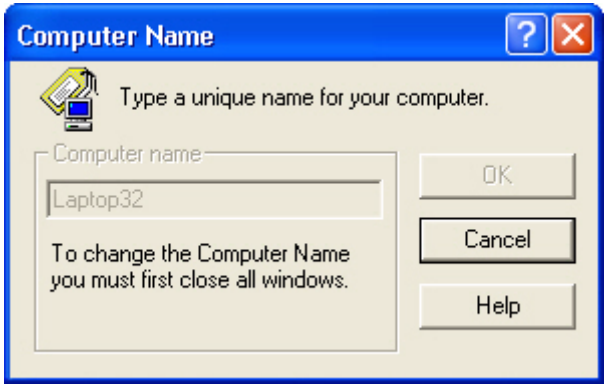
Laplink Gold 12 provides several options for making connections through firewalls. The easiest is Laplink Internet. Laplink Internet ensures secure connections and requires no special configuration of firewalls. To use Laplink Internet, you must first create an account with the Laplink Internet service. The first year of the Laplink Internet service is included at no additional cost.

See “Connection Types” on page 37.

Once connection is completed, log in from any Laplink Gold 12 computer and see any of your computers associated with your Laplink Internet accounts as long as they are running Laplink Gold 12, and are currently online and available for connections.

However, you may choose to establish connections by reconfiguring the firewall. There is a detailed tutorial available on the Laplink support site (http://www.laplink.com/support), that will guide you through step-by-step instructions for configuring a firewall connection.

Computer Name



When you first installed Laplink, you were asked to enter a unique name for your Laplink Computer. In order to configure outgoing connections in your address book, you need to know the name of the computers you will be connecting to.

From the main menu select **Options > Computer Name** to see or change the computer name on a Laplink computer.

NOTE You must close all connections prior to modifying a Laplink computer name.

Configuring Security

Before you can receive incoming connections, you need to configure your Laplink Security settings. By default, Laplink is installed to only allow outgoing connections. There are four security tabs in Laplink Gold 12 - **General, Local, Encryption** and **Lockout.** This section walks you through these security options, and explains the value of each feature. For detailed step-by-step instructions on configuring your security settings, go to the on-line Help system. To access Laplink's Security features, from the main menu select **Options** and then **Security**.

General security

From the General security tab you determine the level of security for incoming connections and set credentials and permissions.

Allowing incoming connections

As a safety precaution, Laplink's default security setting is **Private System**. After you install Laplink, you can connect to other computers, but other computers cannot open connections to yours, except by cable or infrared.

To allow incoming connections, you can change the security setting to Public System. For more security, change the security setting to **Protected System** and create one or more entries in the **Log-in List**. In each entry, specify the password and the login name the user must provide to open an incoming connection, and grant the user permission to use services and other features.

The safest way to allow incoming connections is to set up password-protection by creating entries in the **Log-in List**. If you will be the only person to connect to this computer, make a single Log-in List entry and grant yourself whatever privileges you want. For other users, create separate entries for each user.

Specifying passwords

Laplink Gold passwords are case-sensitive (*i* and *I*, for example, are treated differently). For incoming connections from computers running Laplink Gold, you can create secure passwords by mixing capital letters and lower case letters.Case sensitivity has these important consequences:

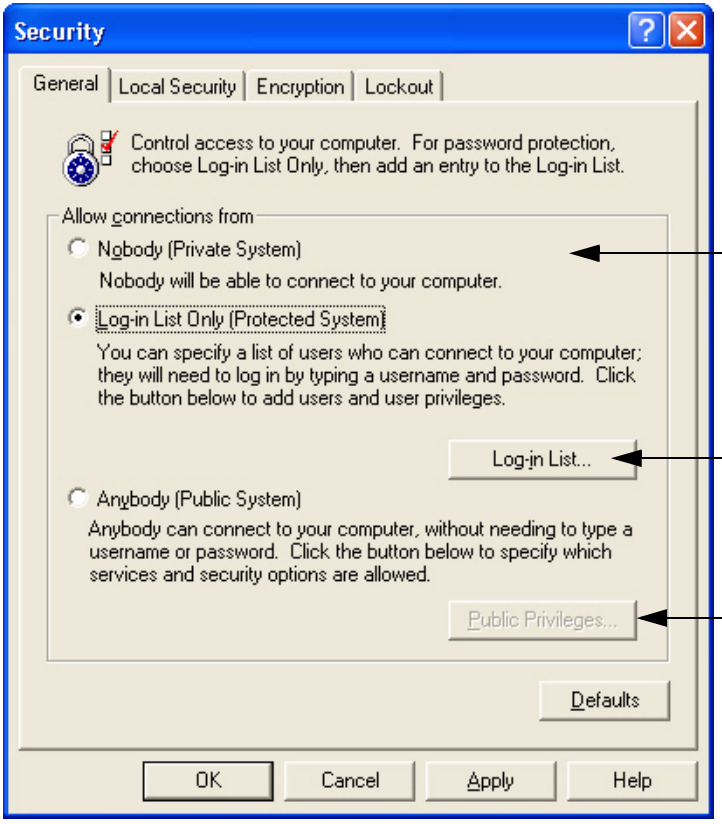
- By default, security is not imposed on incoming connections over a cable. If you set up password protection for modem and network connections, however, you can extend that protection to cable and wireless connection as well. On the Local Security tab, check this box: Enforce Security for Local Connections
- If your Log-in List contains passwords assigned in an earlier Laplink version, other computers that have also upgraded may not be able to connect to your computer until you assign new passwords.
- For incoming connections from computers running versions earlier than Laplink 2000, type passwords using **ALL CAPITALS.** If your Log-in List has passwords for such connections, retype them as all capitals, or assign new passwords.

Creating your Log-in List

Laplink Gold supports two different ways of allowing controlled access to your computer: Laplink Authentication and Microsoft Windows Authentication. Both can be used at the same time. The following section outlines the security features of Laplink Gold 12.

You can modify your security settings at any time.

Manage your incoming connections by configuring security



Nobody is the highest level of security. It allows you to connect to other computers and prohibits incoming connections.

IT professionals might use this setting on a computer used for support that does not require user access.

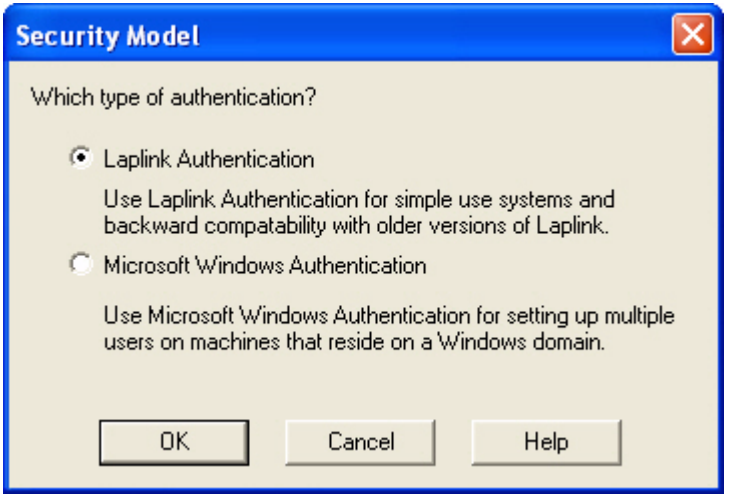
In order to set **Log-in** privileges, you must know the security model you want to use, and the credentials for all incoming connections you want to add.

Anybody allows incoming connections from all Laplink enabled computers who can see your machine.

To enhance security you can limit access to folders available to incoming connections by selecting **Public Privileges**.

Security Model window

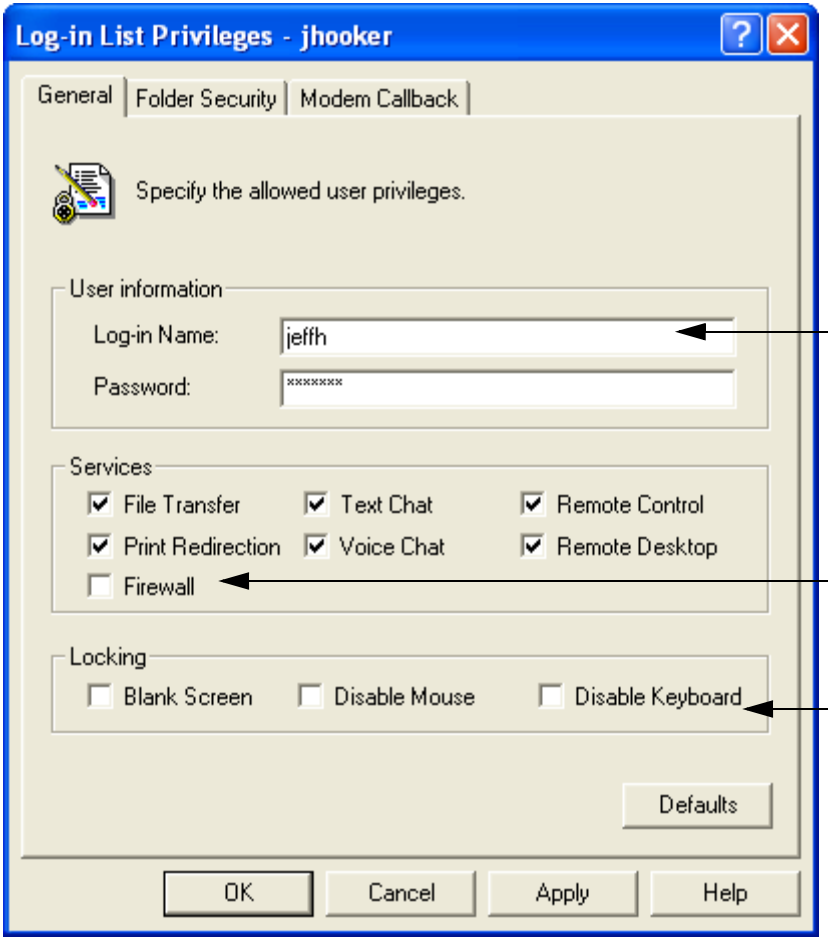
Your security model determines how you assign credentials—User Name and Password—to incoming connections



Laplink Authentication involves creating a login list of user names and passwords. A login list is unique to the computer that it is created on and cannot be exported or shared with other Laplink computers.

Microsoft Windows Authentication is extremely useful for people who are on a Windows Active Directory Network. This feature allows you to give Laplink access to network users, so that users need only their Windows network user names and passwords to access the Laplink functions of your computer.

Security Model - Laplink Authentication



Enter the log-in credentials for the incoming connection to your Host.

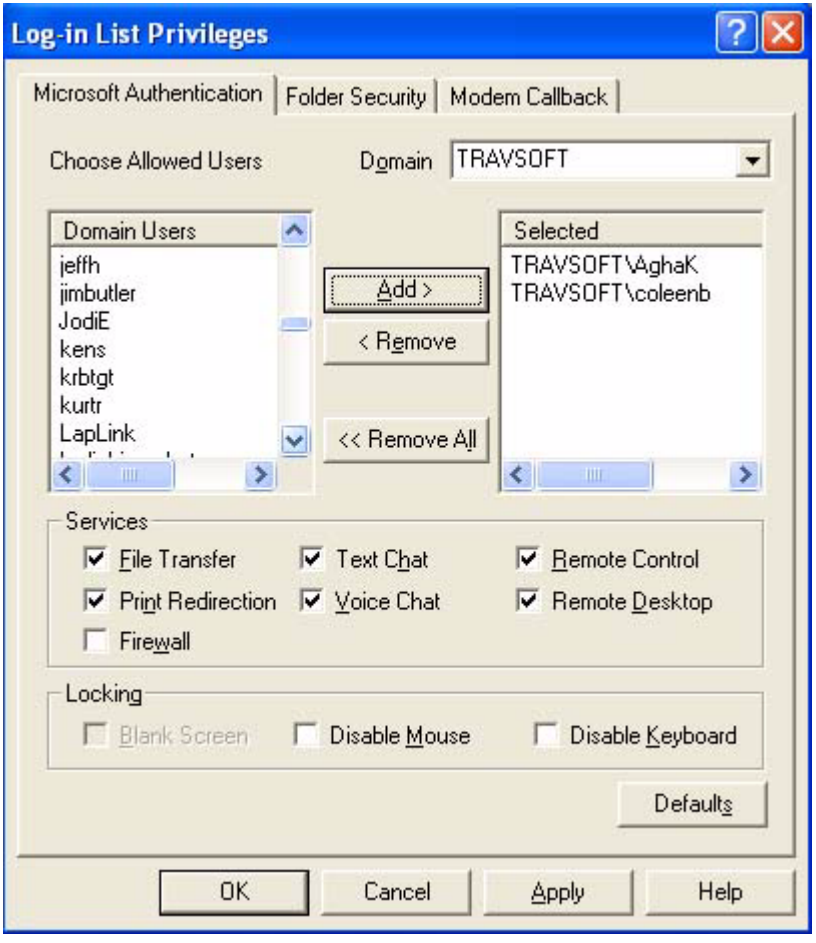
Make sure the Guest has this information.

TIP For more information on configuring Firewall connections see the tutorial on the Laplink support site. From Laplink's main menu, select **Help**, then **Tutorials on the Web**.

Select the services you want the Guest to have on your Host computer.

When allowing Remote Control access to the Host, you can choose to have the Host's screen, mouse and Keyboard disabled.

Security Model - Microsoft Windows Authentication



Select the **Domain** on which the Guest is located.

Select and **Add** user(s) from the Domain User list.

TIP For more information on configuring Firewall connections see the tutorial on the Laplink support site. From Laplink's main menu, select **Help** > **Tutorials on the Web**.

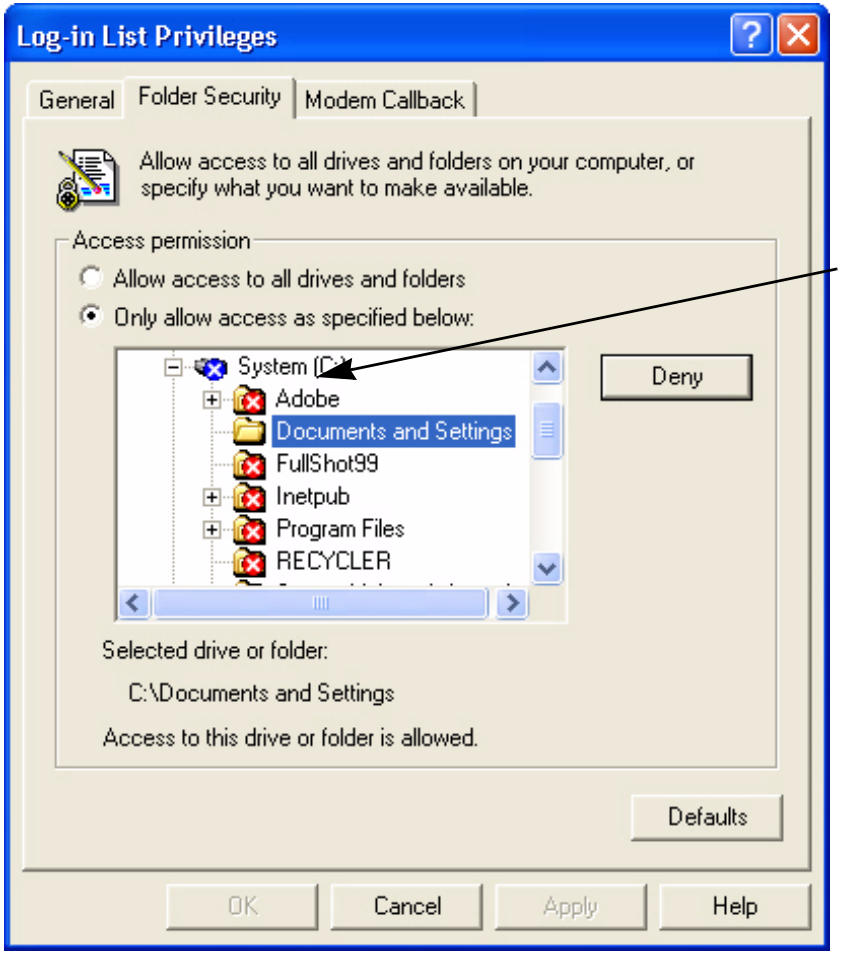
Select the services you want the Guest to have on your Host computer.

When allowing a Remote Control access to the Host, you can disable the Host's screen, mouse and keyboard.

Folder security

Whether you use Laplink Authentication or Microsoft Windows Authentication, when you open your computer to incoming connections, you can specify if all drives and folders—or only certain ones—are accessible to users who connect to your computer for File Transfer. You can also grant different privileges to different users.

Folder Security window



Folder Security is an option available for both Log-in List and Public Security.

Folders denied access do *not* appear in File Transfer windows on a Remote computer.

Opening your computer to incoming connections does not mean that files on all your drives and folders need to be accessible to other users. You can "hide" certain drives and folders so that other users will not see them in their File Transfer windows and cannot copy files to or from them.

CAUTION You can specify a different setup for each entry in your Log-in list. Until you specify otherwise, every user in your Log-in List is allowed access to all of your drives and folders.

CAUTION Denying access to a drive or folder makes it invisible to anyone who connects for File Transfer but has no effect in Remote Control. Anyone who connects for Remote Control can still access all of your files.

TIP Navigate through the drives and folders on the **Folder Security** tab much as you do in a File Transfer window. For fastest navigation, double-click a drive or folder or click the plus sign beside it.

Modem Callback

When you allow incoming modem connections, you can require that the Guest computer be called back before a connection is opened. Or you can let the Guest computer determine whether to be called back. In both cases you can supply the phone number ahead of time or leave the number to the Guest computer.

A callback occurs when one computer attempts to connect to another. 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.

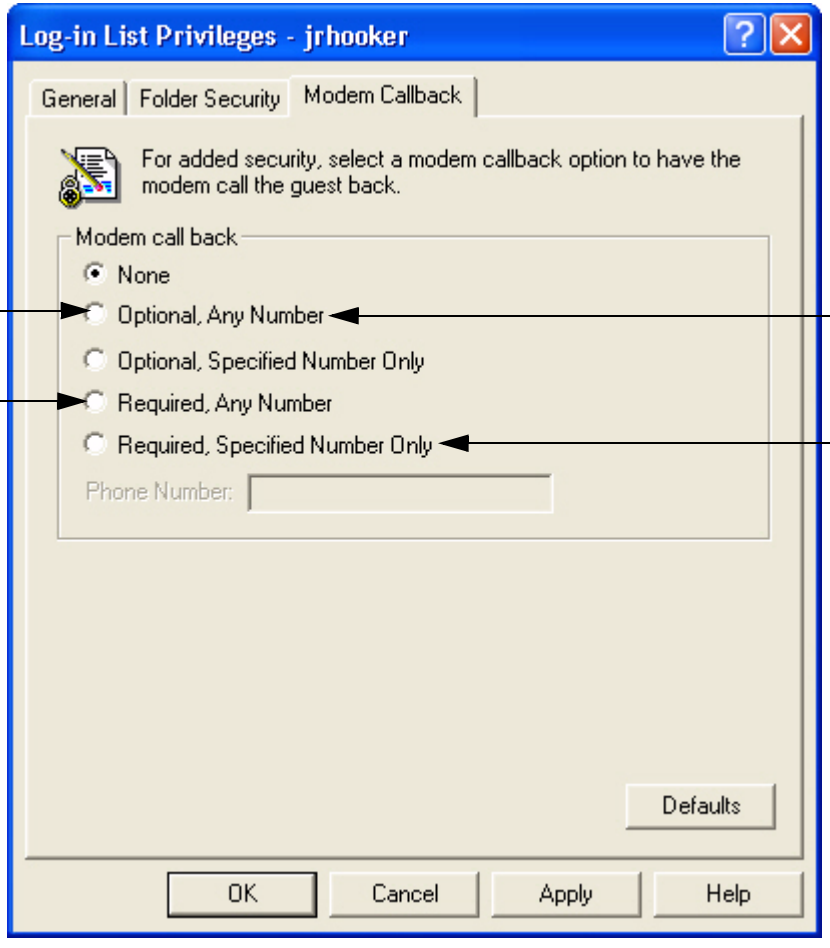
You can use callbacks as a security measure. For example, set callbacks to require a callback to a phone number you specify. Or you can use callbacks to save money, as when you are connecting to your office from a hotel room.

You can set callback options when you secure your computer using the Log-in List. If necessary, specify a different option for each listed entry.

- **None** Prevents callbacks. (Default)
- **Optional, Any Number** Lets the guest user decide whether to be called back; users who choose to be called back can specify the number to dial. This is the most flexible of all the options.
- **Optional, Specified Number Only** Lets the guest user decide whether to be called back to the number you specify or to open the connection without any callback. Only the number you specify in the Phone Number box can be dialed for the callback.
- **Required, Any Number** Requires Guest user to be called back but allows them to specify the number to be dialed. The number can vary from session to session.
- **Required, Specified Number Only** Requires the Guest to be called back to the number you specify in the **Phone Number** field.

  CAUTION Do not require callbacks from computers that connect by running Xchange Agents. The agents will not finish because they cannot perform callbacks.

Modem Callback window



Laplink will call you back using a number you enter, or will connect without reversing the call.

Laplink will call you back at a number you specify, or will disconnect.

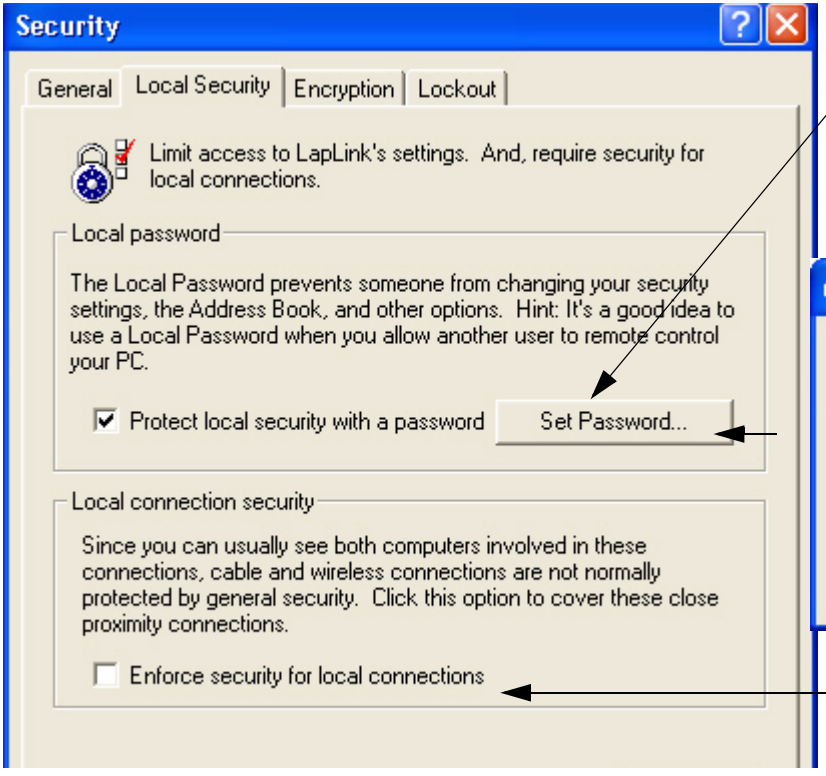
Laplink will call you back at a number that has been specified, or will connect you without reversing the call.

Laplink will call you back at a number that has been specified, or will disconnect.

Local security

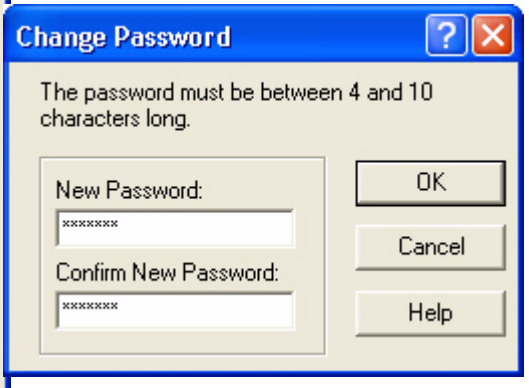
The Local Security tab provides another level of security for Host machines and those accepting local (cable or infrared) connections. Creating password protection for your Laplink security settings prevents unauthorized users from compromising your security system; it also keeps them from viewing your Address Book entries and using them to open connections to other computers. Protecting your security settings is a particularly good idea if you allow others to control your computer as guests.

Local security settings



To enhance security, check **Protect Local Security with a Password** and click the **Set Password** button.

NOTE The same password is required for access to Connect Over Modem and certain logging features.



Click to enforce credentials for cable and infrared connections to enable local connection security.

Without knowledge of your password, users cannot view or change any of this information.

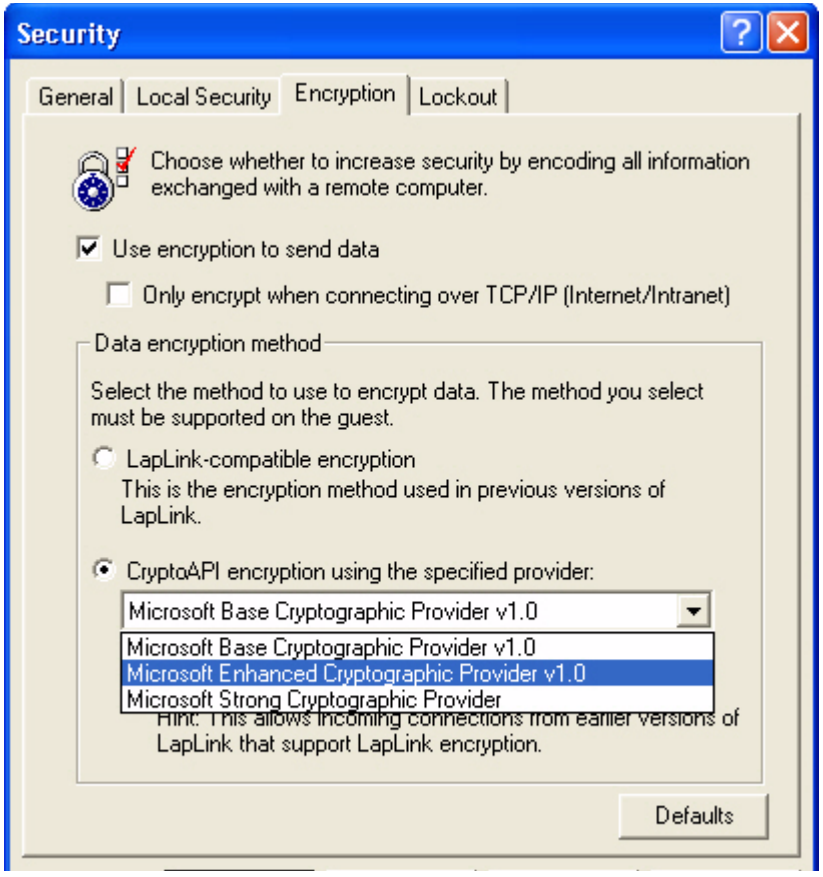
- Log-in names, passwords, and other security settings;
- Phone numbers, passwords, and other information stored in your Address Book entries;
- Privileges you have granted to Guest computers and other settings in Remote Control Options;
- Antivirus options;
- Laplink Internet options.

Encryption

On the **Encryption** tab, you can choose to encrypt the data you send, and choose the encryption method you want to use.

Encryption is a good idea over Internet and other connections where your information might be intercepted and compromised. You can use encryption methods provided in Laplink, or use the powerful encryption options available in the Windows operating system. The settings you make on the Host computer determine encryption level for incoming connections. By default, Laplink encrypts log-in names and

Encryption protects the data you are transmiting



Be sure to enable encryption before a connection is opened. Changing the setting during a connection won't have any effect until the next connection.

passwords, but nothing else. This setting is usually fine for transmitting data over office networks or other secure connections.

On the Internet, intranets, or wide area networks, however, it is usually a good idea to encrypt your data, including files, text from chat sessions, and instructions sent to the remote computer during Remote Control.

While opening your Host computer to incoming connections, you can specify if and how data transmitted over those connections will be encrypted. The settings on the Guest computer are irrelevant. It is the settings on the Host computer that determine encryption.

NOTE The only exception occurs when you connect to a computer running a version older than Laplink 2000. In this case only, the settings on your newer Guest computer determine encryption levels.

Lockout

On the Lockout tab, set the number of failed login attempts you will accept from any user. When you open your computer to incoming connections, it's a good idea to include Lockout protection so that anyone who supplies an incorrect password more than a particular number of times is denied access to your computer.

Like combination safes, security passwords can be compromised. Password crackers use a variety of techniques; some techniques are more sophisticated than others, but almost all require guessing.

In order to gain access to your computer in Laplink, a hacker would also need Laplink installed and running on their system, and would need to locate your Laplink Host, which is nearly impossible over the Internet. If you are using Laplink with a firewall or router, the hacker would need to get around that security as well, before they would be able to attempt to crack passwords. All of this protection makes Laplink Gold very secure.However, use Lockout as an additional guard against unauthorized access and bar anyone who makes repeated attempts at guessing a password for entry to your computer.

Monitoring failed login attempts

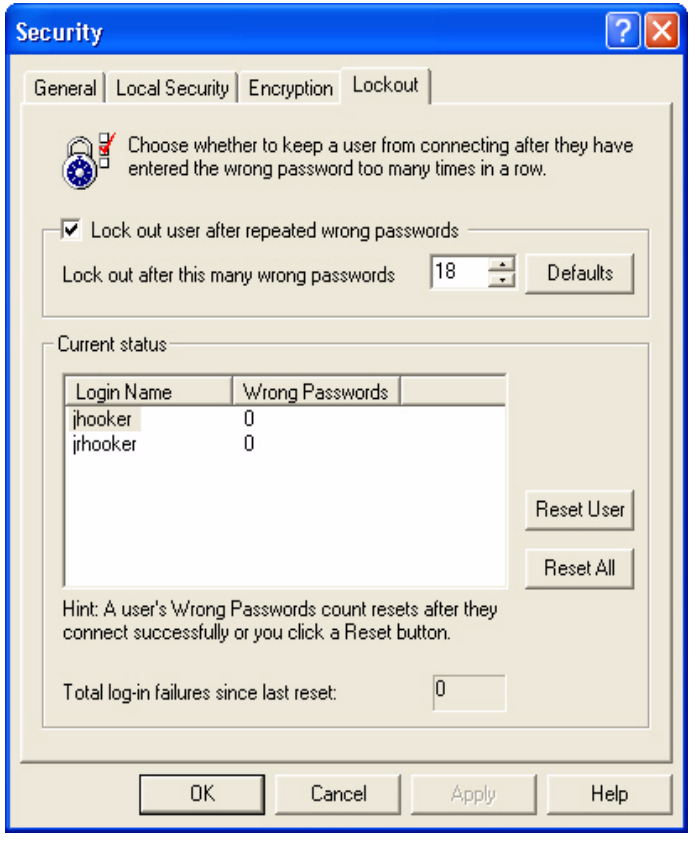
Lockout is designed to monitor and control access according to the login names in your Log-in List. A separate count of failed attempts is kept for each login name; when a count reaches the maximum you have defined for a specific user, that user is locked out and can no longer connect to your computer.

Beside the login names listed on the Lockout tab appear numbers indicating the maximum number of failed login attempts that the account is allowed to accumulate. When a count reaches the maximum, the login name is labelled *Locked Out*.

You can reset the count to zero for any or all of the log-in names. This action also makes a locked out name usable once again.

Unless a log-in name has been labeled *Locked Out,* its count is reset to zero automatically whenever a user connects using that log-in name and the correct password. For this reason, only consecutive failed attempts are recorded permanently, not cumulative failed attempts.

Security Lockout window



Use **Lockout** to protect against someone who attempts to guess your passwords.

As displayed, Lockout will take effect after 18 (default) failed attempts for each log-in name.

Tips for more secure passwords

- Use at least six characters.
- Include letters (both lower case and capitals), numbers, punctuation, and symbols.
- Passwords for incoming connections from versions earlier than Laplink 2000 are the exception. They must be all capital letters.
- Avoid any words found in dictionaries. (Some password-cracking programs rely on dictionaries to guess passwords.)

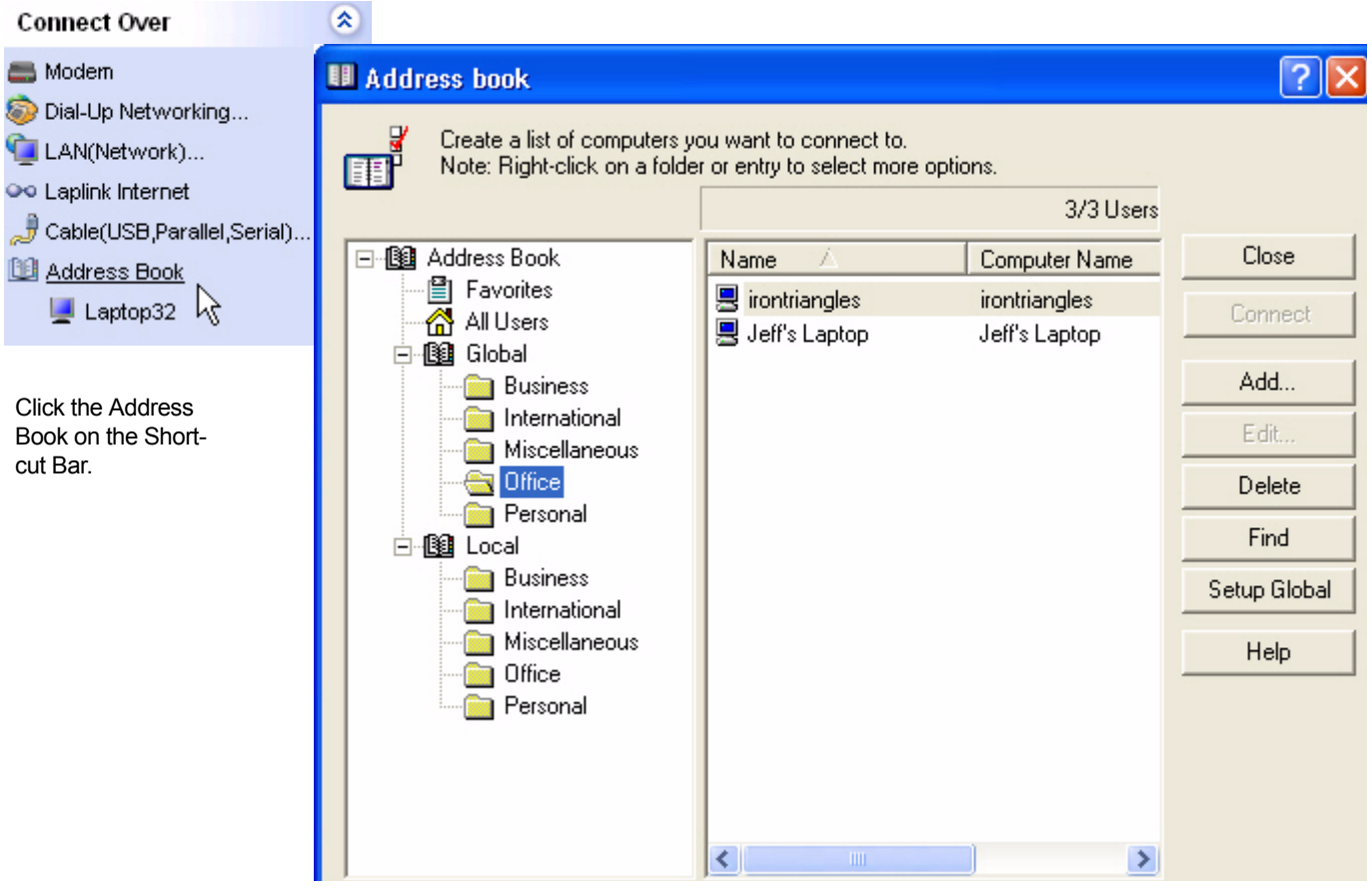
TIP Change your passwords at regular intervals.

TIP Don't make passwords so complex or long that you can't remember them.

Configuring the Address Book

Laplink Gold's **Address Book** offers flexibility and control to users. It allows you to save frequently used connections, create folders, organize your connections, and connect directly from the Address Book. Advanced features include the ability to import and export connection information to and from a global database.

Address Book main window



Click the Address Book on the Short-cut Bar.

View options and folders

The **Address Book** provides a folder structure and other options for viewing connections to computers.

Laplink Gold allows you to mark Laplink computers you connect to as **Favorites** when you create address book entries. One click on the Favorites icon in the Address Book tree lists all users you have marked as Favorites in the pane on the right. These might be frequently accessed computers, VIP's or other connections you want to keep on your Favorite list for easy access.

Favorites are also displayed in the Shortcut bar.

Selecting **All Users** lists all connections you have in your entire address book, including all folders and subfolders.

Choosing **Global** lists the Global folders. Global folders contain connections that may be accessed by many different users in your organization. For instance, it might be useful to provide a group of connections to your entire tech support team, and another list to your IT team. Global folders can be shared among your teams using the Import/ Export features, which will be discussed later in this chapter

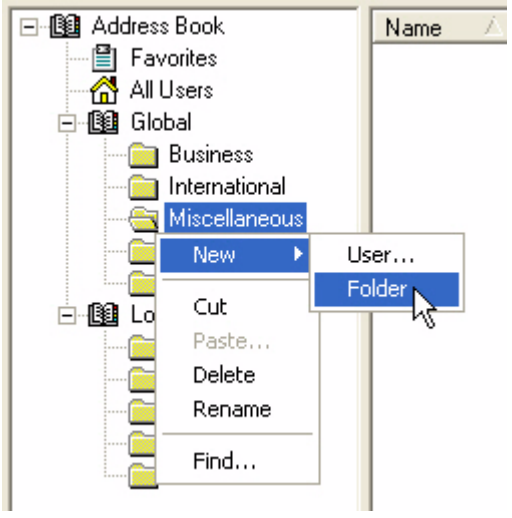
Choosing **Local** lists the Local folders on your system. Local folders are used to store connections that you wouldn't need to share with the group. Local folders are not affected by importing or exporting.

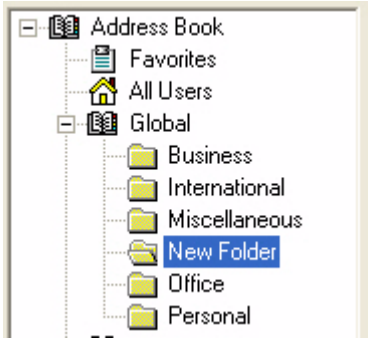
Renaming, adding & deleting folders

Laplink Gold allows users to the ability to add, rename or delete Address Book folders. (Folders will only be changed on the machine you are using, not on each Laplink computer.) Laplink folders behave just like folders in Windows or Internet Explorer. If you are familiar with how to modify folders, you can skip this section.

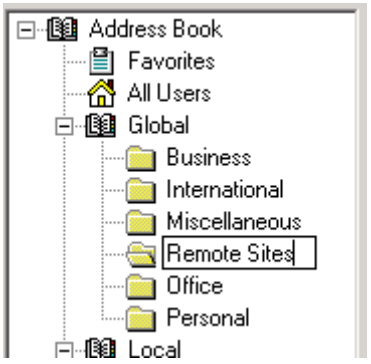
Adding a folder

To add a folder, select where in your address book you'd like the new folder to appear. Right-click on the location you selected to see your User and Folder options. Choose **Folder.**





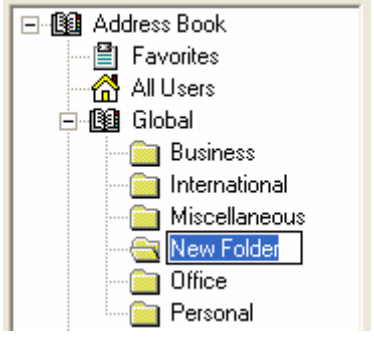
A new folder will appear under the Global list called **New Folder**, as shown left.



Type in the new folder name in the box. The new folder below is called **Remote Sites**. Once finished, click outside the folder name text box to finish.

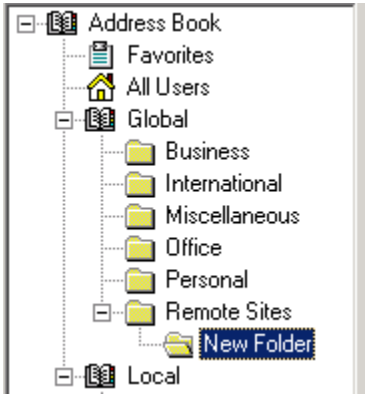
Renaming a folder

To rename a folder, right-click on the folder you want, and choose **Rename**.

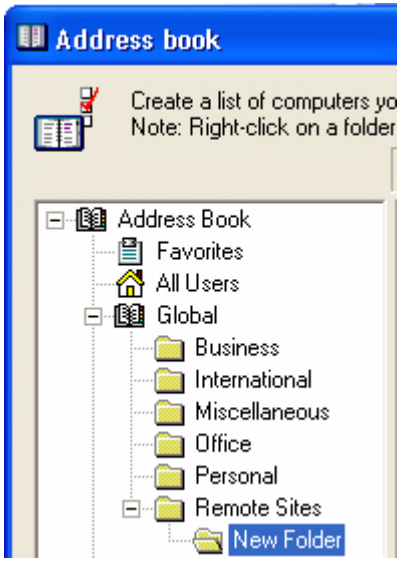


Adding a sub-folder

It is just as easy to create a sub-folder using Laplink Gold. Simply highlight the folder in which you'd like to create a sub-folder, right-click, then choose **Folder** again.

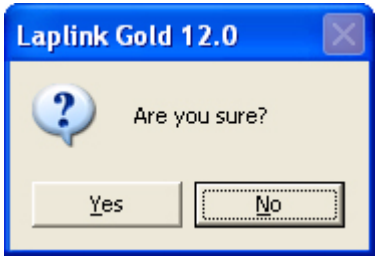


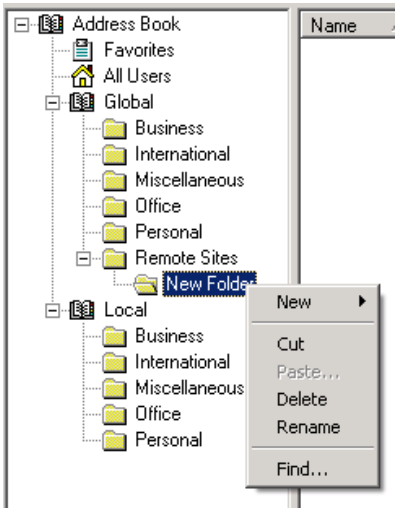
Deleting a folder



To delete a folder, highlight the folder, then right-click to view folder options. Select Delete to remove this folder.

CAUTION Laplink Gold prompts you with the confirmation screen below, but it is important to understand that deleting a folder will delete the folder and all of its contents including any entries in that folder.



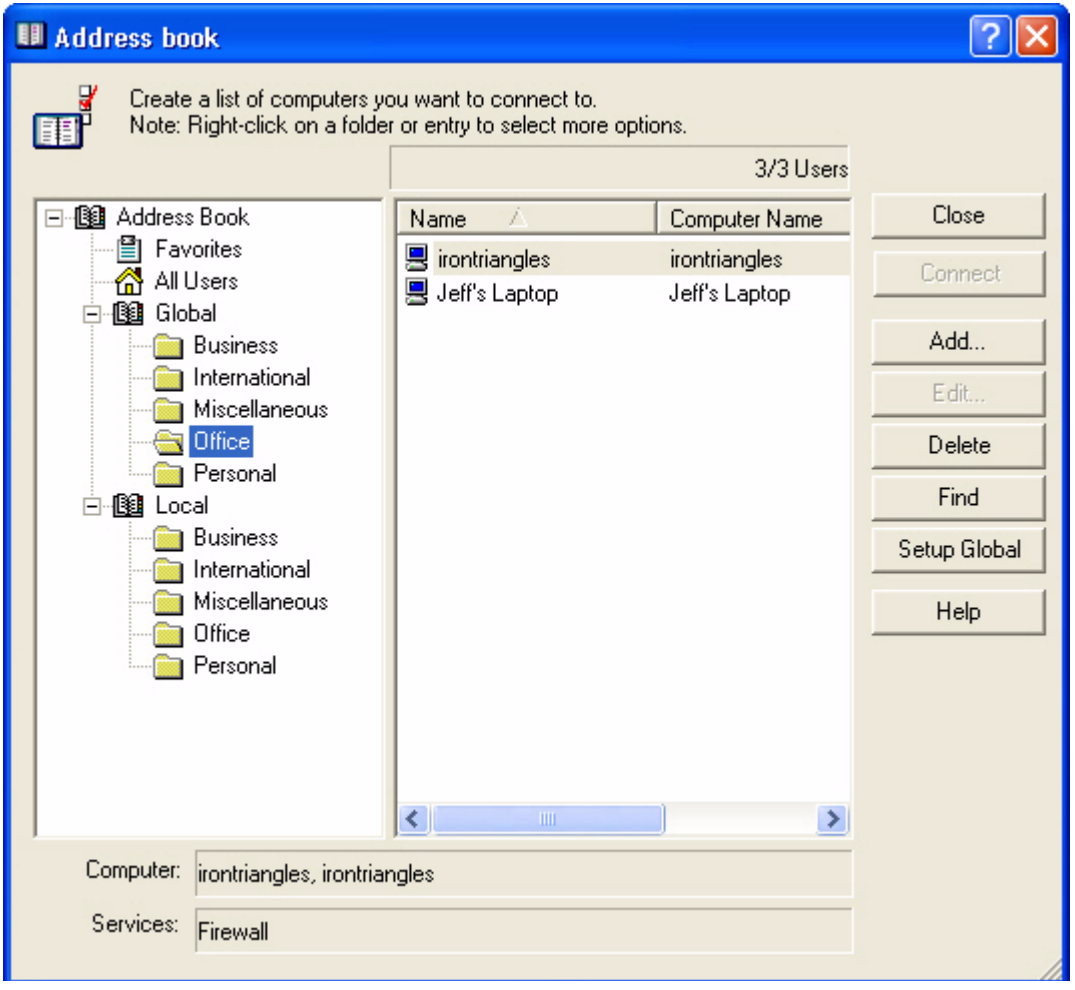


Laplink Gold also allows you to **Cut and Paste** a folder, and any connections in the selected folder. You can delete the folder from your Address Book, or paste it to a new location. For instance, you might have a local folder you want to share with your entire team.

Tip For Advanced users, cut and paste this folder from the Local folders to your Global folders, and export it so that everyone can use the connections. Importing/Exporting tasks are explained in detail later in this section.

Address Book window

The Address Book button bar allows control of user functions in the Address Book. Below is a brief description of the function of each button.



Close- Exits the user from the Address Book.

Connect- Connects you to the selected computer.

Add- Brings up the **Add User** screen.

Edit- Allows you to edit a selected entry.

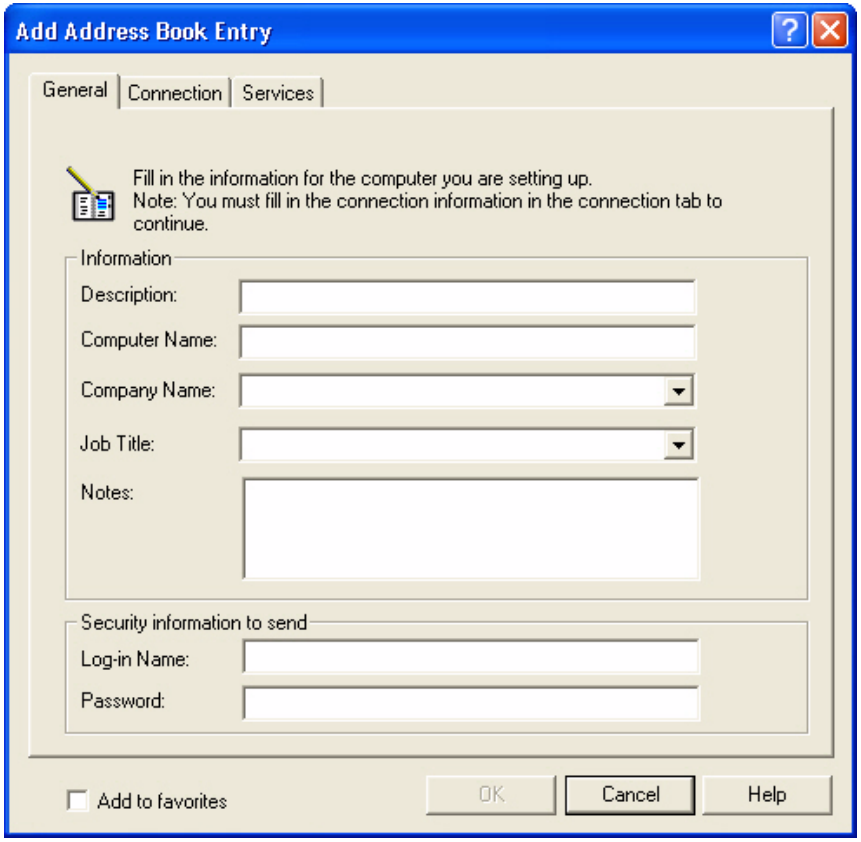
Delete- Deletes the selected entry.

Find- Brings up a search interface for finding entries.

Setup Global- Allows for the importing and exporting of a global database.

Adding an Address Book entry

Add Address Book Entry window



Description, Company Name and Job Title are fields that allow you to describe the connection you are making. Laplink Gold automatically populates whatever is typed in the Description field to the Computer Name field, though it is not necessary for these fields to be identical.

Computer Name must **exactly** match the *Laplink* name of the computer you're connecting to and is case-sensitive. This is not necessarily the same as the Windows computer name. To see or change the computer name on the Host computer you are connecting to, click **Options** in Laplink on that machine, and choose **Computer Name.**

TIP When you add an address book entry to your **Favorites**, it then appears both in the Address Book favorites list and in the Laplink Shortcut bar. You can have an unlimited number of favorites in the Address Book, however, the Laplink Shortcut Bar displays up to 10 entries.

Security Information to send are the login credentials you have been given to connect to the Host computer. If you do not know what this information is, contact the Host's support administrator.

Clicking **Add** on the Address Book toolbar opens the **Add Address Book Entry** screen on the **General** tab. The address book allows you to create and save connections so that frequently used connections can be instantly accessed, without having to redefine the connection information each time.

NOTE Once these fields contain data, the OK and Connect buttons become enabled, but this does not guarantee a connection. Make sure to use the correct computer name, and that your connection type is correct before attempting to make a connection.

NOTE There are four fields in each entry that must be filled in order to save an entry, and for a connection to be possible.

On the **General** tab

- The **Description** and **Computer Name** fields must contain characters.

On the **Connection** tab

- A **Connection Type** must be selected

On the **Services** tab

- At least one **Service** must be selected

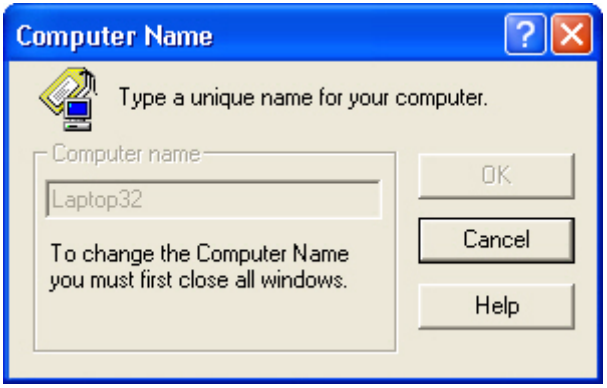
Description

This describes the connection you are making. Laplink Gold automatically populates whatever is typed in the Description field to the Computer Name field, though it is not necessary for these fields to be identical.

If you share this entry, the other fields in the top section (Company Name, Job Title, Notes) allow you to further describe the connection for everyone who will use it.

Computer Name

The computer name information entered must **exactly** match the *Laplink* name of the computer you're connecting to and is case-sensitive. This is not necessarily the same as the Windows computer name. To see or change the computer name on the host computer you are connecting to, go to the Options menu in Laplink on that machine, and choose **Computer Name.**



NOTE You must close all connections prior to modifying a Laplink computer name.

Security information to send

If you are connecting to a computer that requires you to login and use a password, enter these pieces of information here.

NOTE Remember that the **password field** is case-sensitive.

Add To Favorites checkbox

Checking this box will allow this entry to be viewed when clicking Favorites on the left Address Book pane and in the Laplink Shortcut Bar.

NOTE The Laplink Shortcut Bar only displays the first 10 favorites.

Address Book - Connection tab

The connection tab allows you to define how you want to connect to this computer. Laplink Gold allows many connection options, and these are discussed below.

Requirements

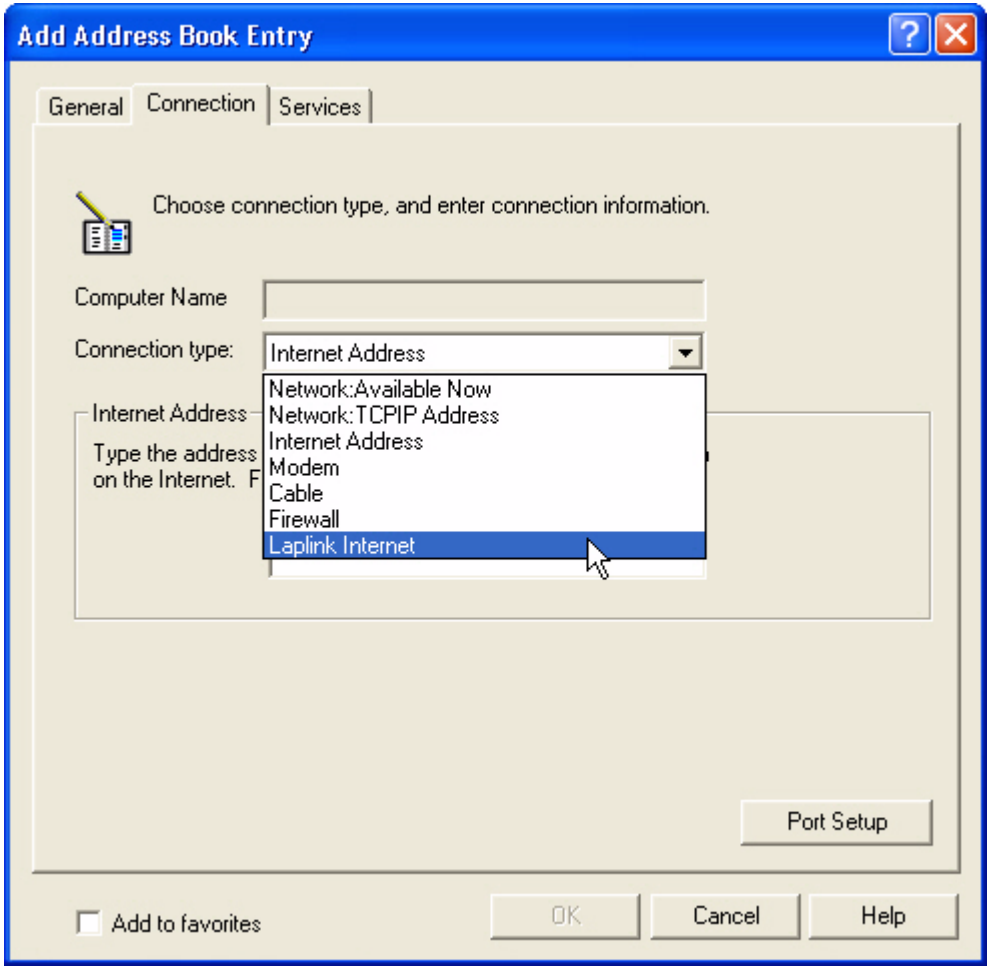
Laplink Gold must be installed and running on both machines. No connection is possible, regardless of connection method, unless Laplink Gold is running on both your computer and the Host computer

Security Must Allow a Connection.

On the Host computer, security must be set to allow a connection. Otherwise, a connection is not possible. To learn more about creating secure connections and host options, See "Allowing incoming connections" on page 16..

A Port Must Be Enabled: Each connection type has different requirements for connection, and Laplink Gold requires a port to be configured for each connection type. Click **Port Setup** to configure Laplink Gold to use your different port options.

For more information on connections see See "Connection Types" on page 37. and the online Help system.



Connection Types

Laplink allows many different methods to connect to other Laplink computers. To learn more about ways of connecting using Laplink Gold go to "See "Types of Connections" on page 77.

Network: Available Now

Use this connection type if the computer you are connecting to normally appears in the list of available computers when you use Connect over LAN (Network).

Network: TCPIP Address

Use this connection type if you want to connect to this computer using a TCPIP address.

Internet Address (Internet Locator Service)

This connection type uses the address that the host computer has published to the ILS server, such as JaneDoe@ACME.com.

Modem

Use **Modem** if you use a modem on your machine to connect directly to a modem on the host machine. Simply enter in the modem number in the **Phone Number** fields.

Cable

Laplink Gold accepts use of parallel, serial, or USB cable as connection types.

> **NOTE** It is generally not necessary to create an address book entry for cable connections, as Laplink Gold automatically creates the connection when the cables are attached (by default).

Laplink Internet

Laplink Internet offers great flexibility by also allowing you to access other Laplink computers using any Internet connection. With Laplink Internet you connect directly over the Internet to your Host with no firewall or VPN configuration required!

Upon installing Laplink Gold 12, you were prompted to create a Laplink Internet account. If you did not create an account, you can do so at any time. For more information see, See "Connecting by Laplink Internet" on page 84.

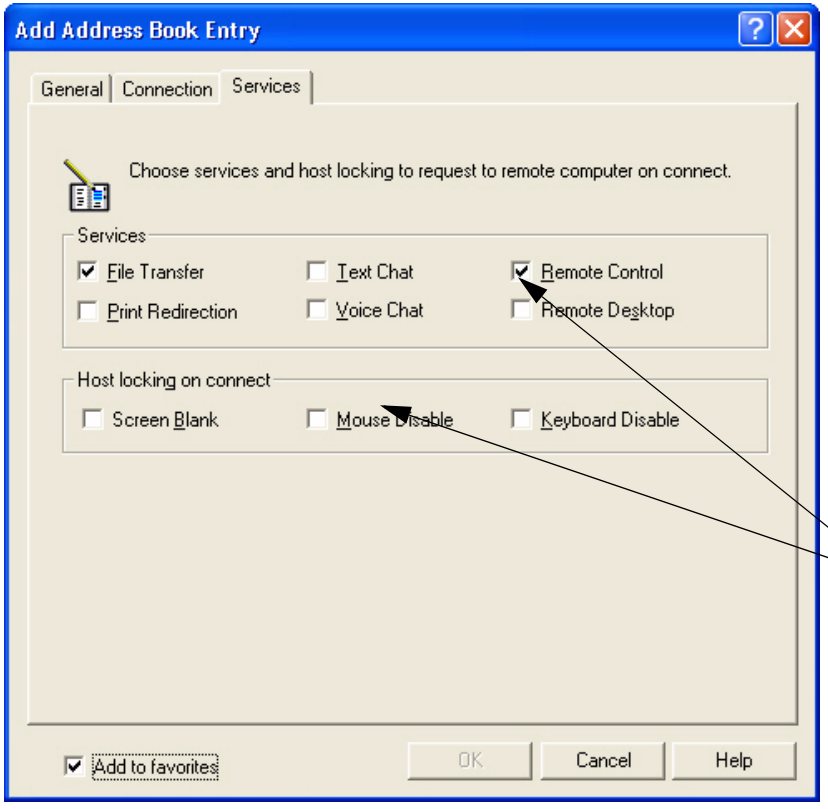
Services tab

The Services tab is where you can define what you'll be able to do once your connection is established. You can choose as few or as many different services as you need.

Host Locking on Connect

From the Guest Computer, you can ensure privacy and prevent interruptions at the Host by disabling its keyboard and mouse and blanking its screen. Enable the options you want to control once you connect by checking the appropriate checkboxes.

Once you've completed your selections on the three Address Book tabs, **General, Connection** and **Services**, click **OK** to save your changes.



To learn more about any of these services, click the links below:

- See "About File Transfer" on page 45.
- See "Laplink Remote Desktop & Laplink Remote Control" on page 106.
- See "Using Text Chat" on page 134.
- See "Using Print Redirection" on page 128.

NOTE Host Locking options are only enabled when the Remote Control service is checked.

More Address Book toolbar options

The toolbar has several other buttons that allow you to manage your Address Book in different ways.

Connect

Once you've created your Address Book entry, click

Connect to instantly connect you to this computer. This is useful for connections you use frequently.

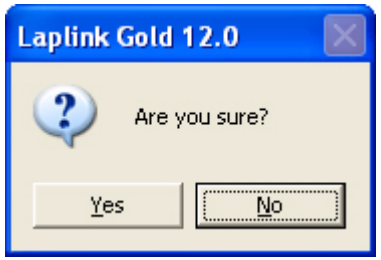
Edit

If you need to change information in a particular Address Book entry, select the entry and click **Edit** to make changes.

Delete

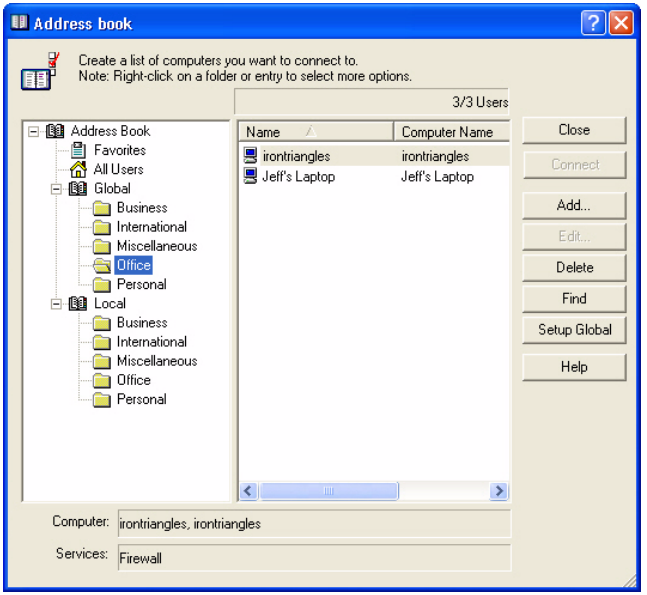
If you want to delete an entry or a folder from your Address Book, choose the entry or folder and click **Delete.**

CAUTION You will see the confirmation screen to the right, but it is important to remember that if you choose a folder, the folder and all entries in the folder will be deleted.



Find

Find allows you to search your Address Book for a particular entry or computer on your system. Search from a particular folder, or from any of the options on the Address Book tree in the left pane. **Find** searches for computer names only.

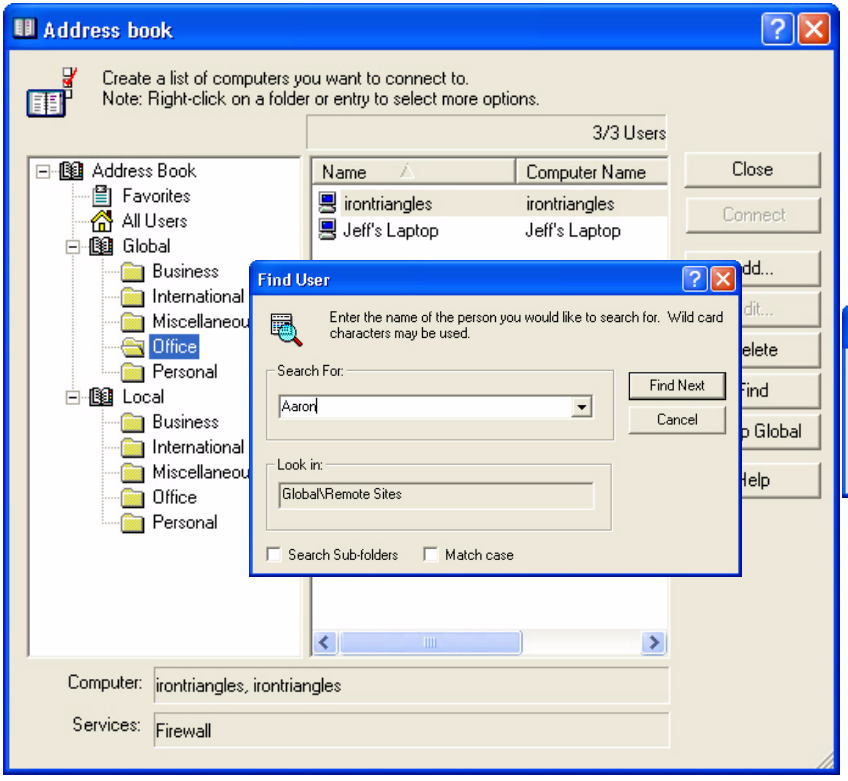


Using Find

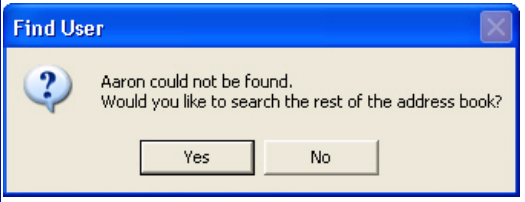
Choose the folder on the left pane you want to search, then click **Find** and enter the computer name you are looking for.

.

Find Address window



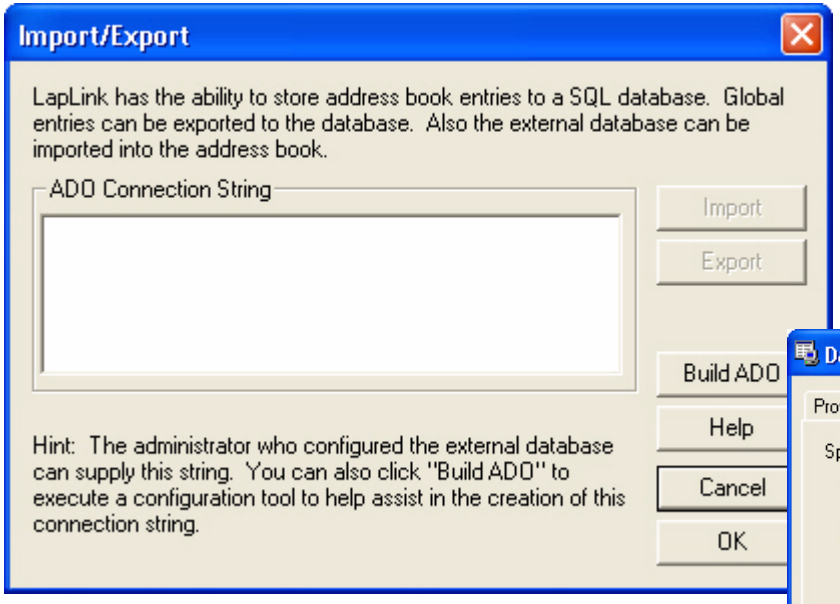
NOTE If Laplink Gold is not able to locate this computer in the selected folder, it will ask you whether you'd like to look through the rest of the Address Book to find it.



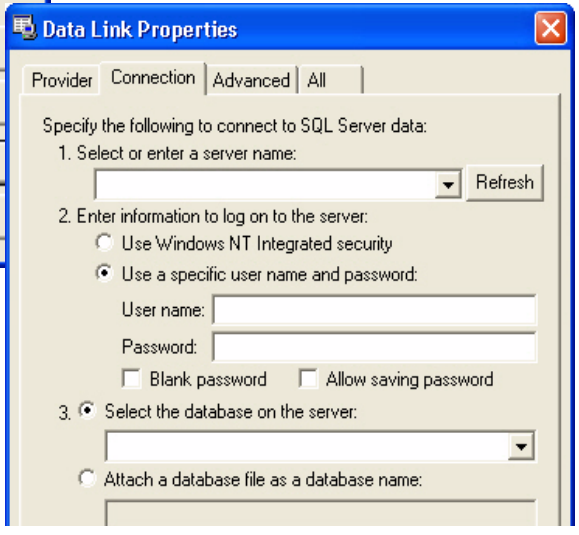
At this point, Laplink Gold will search the rest of the Computer Names in the Address Book for the name or name segment you entered, and provide you all matches.

Setup Global

For advanced users such as IT professionals, Laplink Gold provides the ability to link to a SQL database through the Address Book. This allows you to create a Global Address book and share this Address Book with anyone in your corporation you choose (provided Laplink Gold is installed on their desktop). This makes it easy to create a single address book and share it with your tech support or IT teams



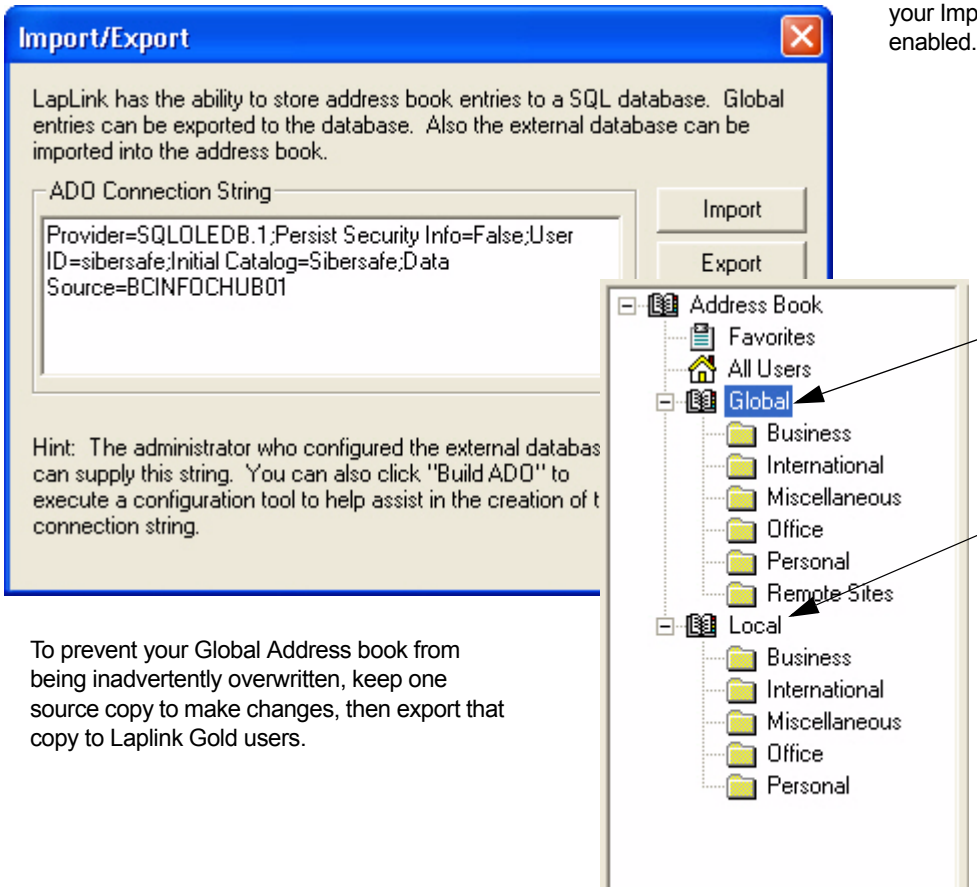
Click **Setup Global**. The **Import/Export** window appears. Laplink Gold requires a connection to an SQL database through an ADO string. If you or your administrator know this information, then enter it on the left. Alternately click the **Build Ado** button, which will bring up the **Windows Data Link Properties** screen.



Laplink Gold uses Microsoft's **Data Link Properties** utility to step you through the process of connecting to your database. If you have questions about creating this connection, please consult your company's database administrator.

Importing and Exporting

Importing and Exporting allows you to share Global Address entries



Once you've clicked the **Build ADO** button and established a connection to your database, your Import/Export buttons are enabled.

Importing and Exporting **ONLY** affect the Global folders.

Connections in your **Local** folder can't be shared.

To share Local addresses, copy them from your Local folders to your Global folders, and then share these connections using **Import/Export**.

To prevent your Global Address book from being inadvertently overwritten, keep one source copy to make changes, then export that copy to Laplink Gold users.

Importing

Importing allows you to download a local copy of the Global Address book. As the Address Book is updated, users may

add or delete users or folders. Importing allows you get any new folders and entries made in your Address Book.

NOTE To import, you must have read access privileges to the database. See your database administrator for more information.

Exporting

Exporting allows you the capability of making changes to your Address Book, then Exporting those changes to the database. Exporting is primarily an administrative function.

NOTE If you've made changes to your Global Address list, and you want to share these changes with other Laplink Gold users, you must first use Export to send those changes back to the main database before other Laplink Gold users can Import the changes.

CAUTION If you make changes to your Global Address Book and then click **Export**, those changes are permanent, both in your Address Book, and in anyone's Address Book who later imports it.

CAUTION Exporting requires write privileges. Database administrators should carefully manage which users have Address Book exporting capabilities.

Help

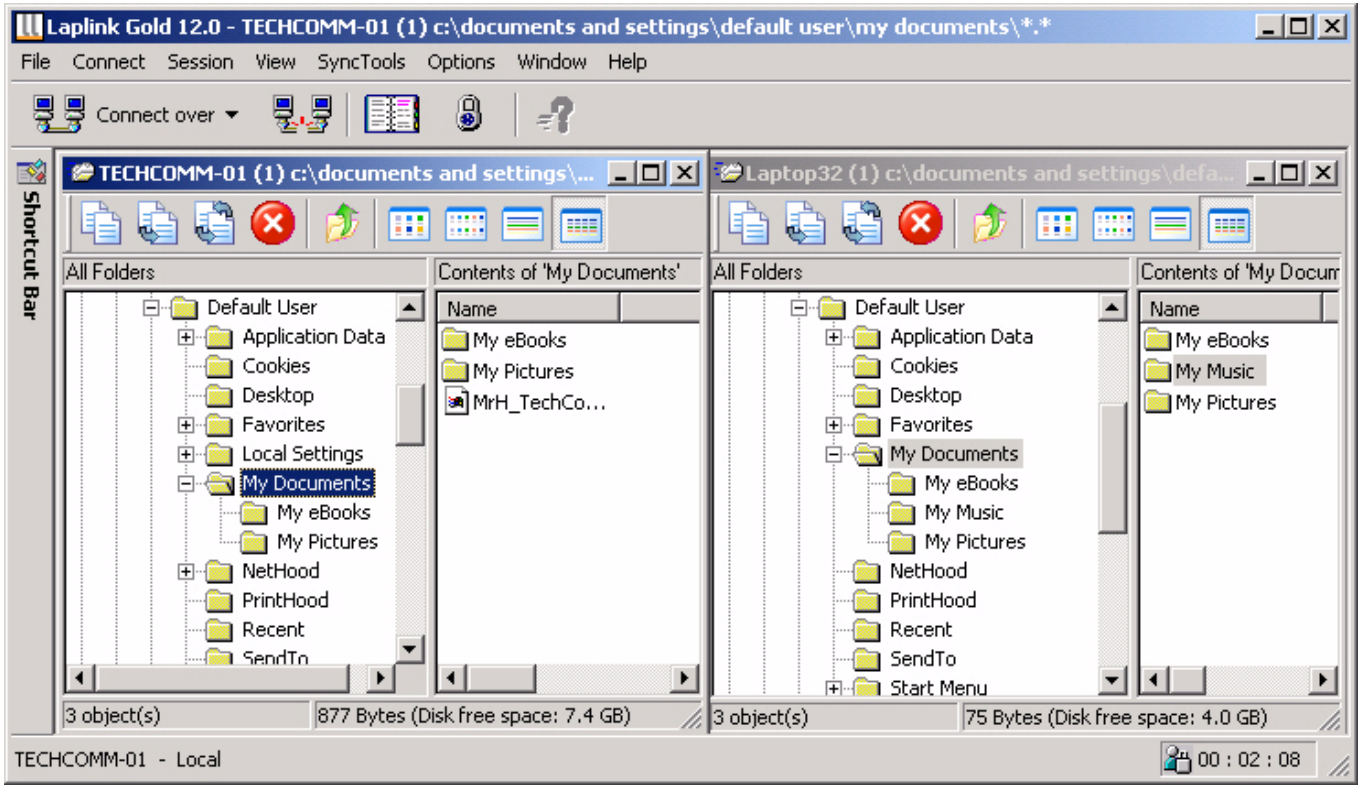
Click **Help** to obtain more information on all of Address Book components.

4 Using File Transfer

About File Transfer

If you have more than one computer, or if you share data with others, you know how challenging it can be to make sure you have the most recent information and to keep your data synchronized. With File Transfer you can quickly move and synchronize files and folders; it streamlines the process of managing your data. With Laplink Gold you can drag and drop files, or use SyncTools to manage your data.

You can transfer or synchronize files and folders by dragging and dropping the entire contents, using SmartXchange to update only the newest files, or creating Xchange Agents to manage synchronization. You can manually transfer files and folders, or setup Laplink to do it for you automatically.



File Transfer windows can be opened between a Guest and Host computer or you can use File Transfer to update files on the same computer.

Navigate File Transfer windows the same way you navigate in Microsoft Windows Explorer. If you are unfamiliar with Microsoft Windows file navigation see "Navigating through drives and folders" on page 71.

File transfer terms

Source: The selected file or folder.

Target: The destination folder into which you are transferring data.

To open File Transfer windows:

For step procedures on how to configure and use the File Transfer service and Sync Tools, see the on-line Help system.

- Connect to another computer with the File Transfer service selected, or click the File Transfer button on the Shortcut bar.

  TIP If you want to transfer files within your computer, open a File Transfer session when you do not have a connection to a Host.

- Two File Transfer windows appear: one for the Host computer, one for your computer. Using these windows, you can view all the files on any drive on both computers.

Security settings on the Host determine which folders you have access to.

The name of each computer appears in the title bar. The Guest computer appears on the left and the Host computer on the right.

Configuring File Transfer Options

Certain File Transfer options play a crucial role when you are copying or moving files. Depending on how you set them, you can include or exclude subfolders, prevent the overwriting of files except by newer copies, or copy only files you have backed up before. Before you confirm a copy or move operation, you can change the settings for that operation.

To open **File Transfer** options window from the main menu, select **Options**, and then **File Transfer Options**.

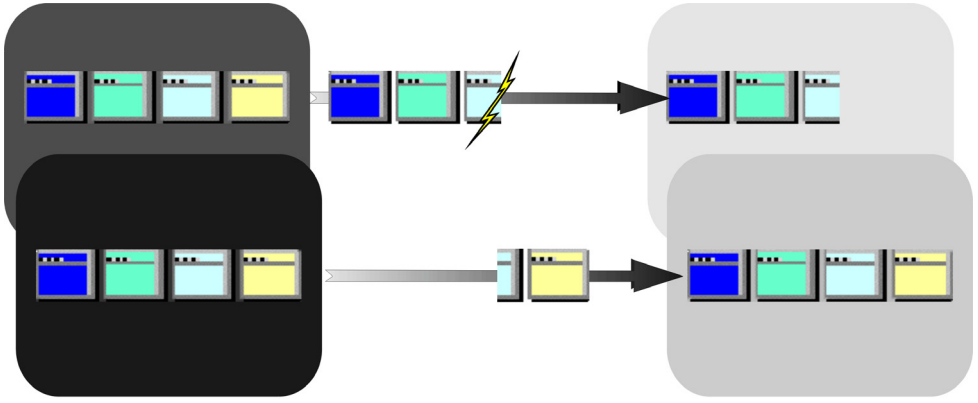
Copy/Move tab

On the **Copy/Move tab**, enable or disable File Transfer recovery and choose which verification messages you want displayed.

File Transfer Recovery - Overview

If you lose your connection to another computer while transferring files, **File Transfer Recovery** lets you connect again and continue the transfer where it left off. Any file—or portion of a file—copied before the interruption is skipped; only the untransmitted data is copied.

File Transfer Recovery is set on the Copy/Move tab of File Transfer Options.



If you lose a connection while transferring a file, the data transferred at the point of interruption is stored on the target computer.

When you reconnect and resume the transfer, the missing part of the file—not the entire file—is copied, along with the remaining files.

File Transfer Recovery lets you resume a file transfer when you have lost a connection. Instead of starting the transfer at the beginning, File Transfer Recovery resumes at the point where the connection was lost:

- Only the missing part of the interrupted file is copied.
- Files successfully copied before the interruption are not copied again.

  TIP File Transfer Recovery is particularly useful when you copy large files over an unreliable modem connection.

To resume an interrupted file transfer:

- If you were running an Xchange Agent when the interruption occurred, run the agent again.
- If you were transferring from File Transfer windows:

  1 Re-establish the connection.

  2 *Select the same files and folders.*

  3 Begin the transfer again.

Configuring File Transfer Recovery

Three options must be enabled for File Transfer Recovery to work effectively. All three appear on File Transfer Options window and are enabled by default.

- Enable File Transfer Recovery. Located on the Copy/Move tab, this box must be checked for File Transfer Recovery to occur. See “Copy/Move tab” on page 47.
- Use SpeedSync on All File Transfers. Located on the **Performance tab**, this box must be checked to allow the transfer to resume with the missing part of a file. When it is cleared, the entire file must be sent again. See “Using SpeedSync” on page 51.
- Transfer Only If Files Are Newer
- Located on the **Filter tab**, this box must be checked so that files successfully copied before the interruption are not copied again. See “Filter tab” on page 49.

When a transfer is interrupted, File Transfer Recovery creates a file in the target folder containing whatever part of the file has been transferred successfully. The file is named **Laplink.TSI**.

When File Transfer Recovery resumes a transfer, this file is compared with the source file to determine what’s missing. Once the file is complete, **Laplink.TSI** is given its original name. (If you do not use File Transfer Recovery to resume the transfer, the file remains in the folder and can be safely-deleted.

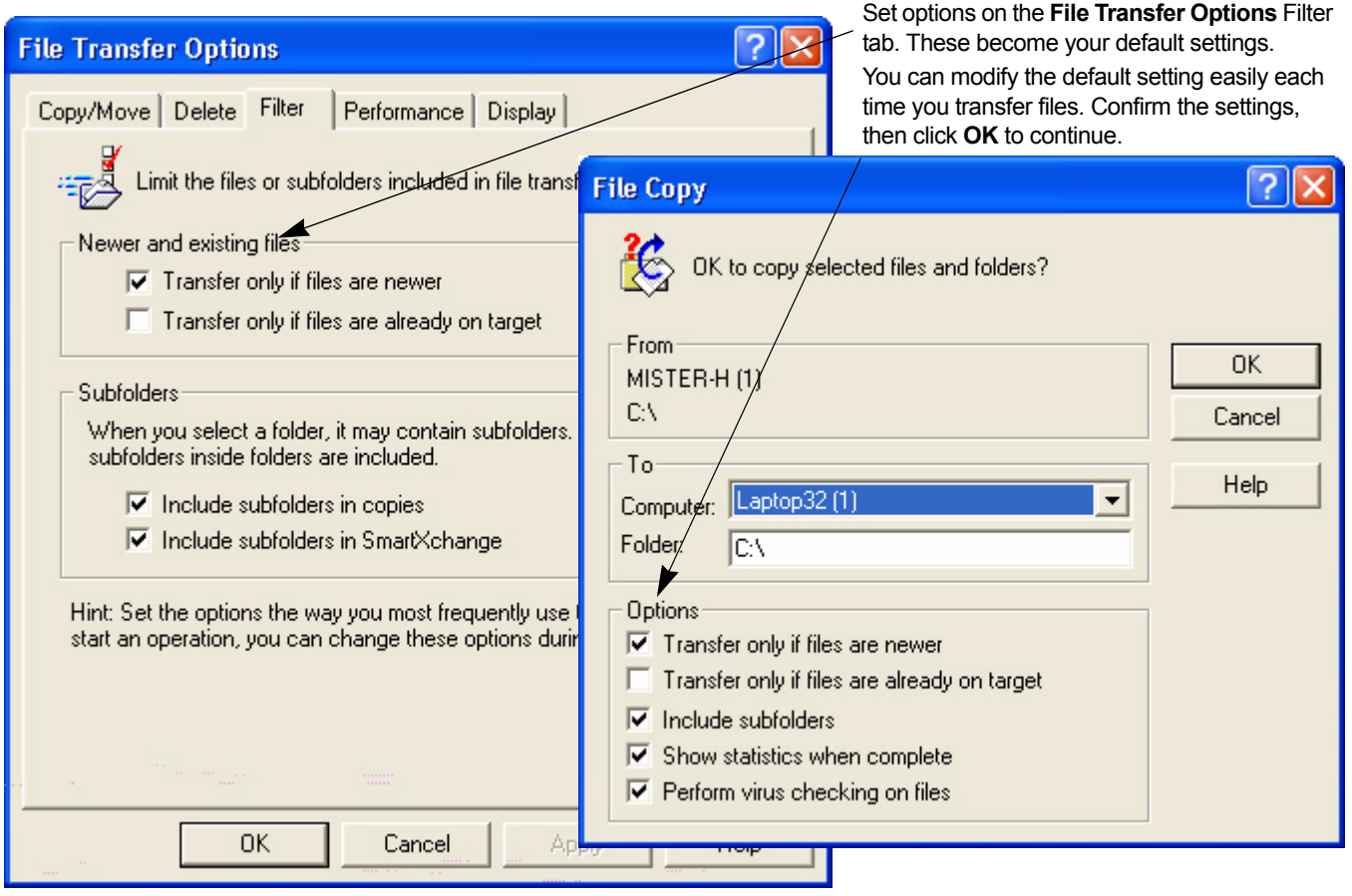
Delete tab

The **Delete tab** you determine how you want deleted data to be handled. By default, any files you delete from a hard drive are *recycled*, that is, moved to the **Windows Recycle Bin** where you can retrieve them later.

NOTE Whether files are recycled or permanently removed is determined solely by the settings on the **Guest** computer.

Filter tab

Filter Options are accessible by clicking **Options,** and then **File Transfer Options.** Click the **Filter** Tab and from within File Transfer, click confirmation dialog boxes.



Set options on the **File Transfer Options** Filter tab. These become your default settings.

You can modify the default setting easily each time you transfer files. Confirm the settings, then click **OK** to continue.

There are three File Transfer options that determine which files are transferred and which are overwritten:

- **Transfer Only** If Files Are Newer
- Include **Subfolders in Copies**
- Transfer Only If **Files Are Already on Target**

The first two options are in effect until you change them.

To change your default preferences for Filter options:

- Select **Options,** and then **File Transfer Options.** Click the **Filter tab** and then check the appropriate boxes.

  For step procedures, see the online help system.

The options on the Filter tab set the default settings to handle file transfers. You can configure these options for each file transfer you perform.

> **CAUTION** Before transferring files between computers, ensure that their clocks are synchronized. If they are not, files that appear to be older may actually be newer, and you could lose your most recent work.

Protecting newer copies of files

Transfer Only If Files Are Newer is designed to preserve files that represent your most recent work. It is also useful for speeding up file transfers; files that do not need to be updated are excluded from the operation.

When the box is checked, **Transfer Only If Files Are Newer** ensures that files are not overwritten by older copies of those files. (Files not already on the target will be copied anyway.) When the box is cleared, files are overwritten without regard to their dates and times.

This must be enabled in order to use **File Transfer Recovery**. See “File Transfer Recovery - Overview” on page 47.

Including or excluding subfolders

Include Subfolders in Copies is designed for copying a hierarchy of folders and subfolders. It can make the difference between copying hundreds of files or only a few.

When the box is checked, **Include Subfolders in Copies** extends your selection to include any subfolders within the folders you have selected. When the box is cleared, your selection is limited to the selected files and folders (including the files in those folders). Subfolders within folders are excluded.

Updating older copies of files

Transfer Only If Files Are Already on Target simplifies the task of updating older copies of files without adding new ones. It is designed for anyone who regularly updates the same set of files. No matter how many files you select on the source, only those already on the target will be copied; the others will be ignored.

In preparation for using this option the first time, copy the files to the target with the box cleared. When you are ready to update the same files, check the box.

Performance tab

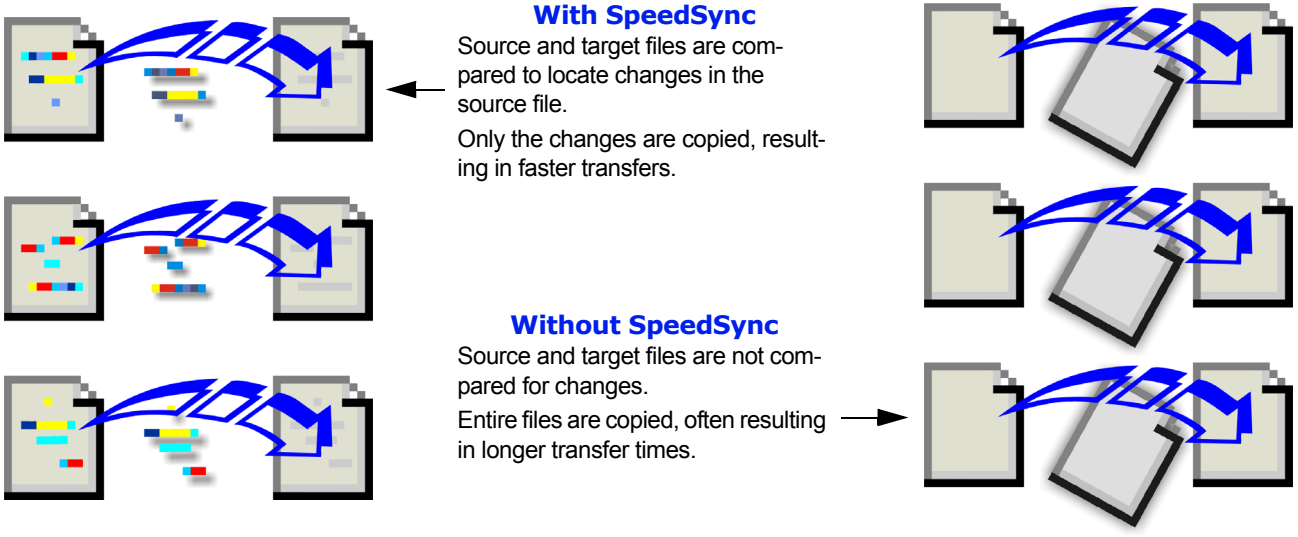
To improve performance (speed) of file transfers you can configure each transfer to use Laplink’s **SpeedSync** and Compression. For detailed information on SpeedSync, see ”SpeedSync and Compression” on page 51.

Display tab

On the **Display tab** you determine how you want new file transfer windows to be displayed, and if SmartXchange statistics are displayed. See ”SmartXchange” on page 58 for more information on SmartXchange.

SpeedSync and Compression

When you are updating files, SpeedSync can shorten transfer times 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. Compression speeds file transfers by “shrinking” files before they are sent and restoring them to their original sizes afterward. Compression is most effective with large files that have not been compressed already. Though both features are in effect by default, there may be circumstances in which you might improve transfer times by disabling them.



Using SpeedSync

To enable or disable SpeedSync, select **Options**, and then **File Transfer Options.** Click the **Performance** tab.

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

Before a file is copied, SpeedSync searches the target 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 a few circumstances, e.g.; when you are updating many small files over a fast connection.

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 program in which they were created.

Using compression

To enable or disable Compression click **Options,** and then **File Transfer Options.** Click the **Performance** tab**.**

Because compression usually results in the transfer of less data, it is particularly useful when you transfer large files by modem: the larger the files, the greater the savings.

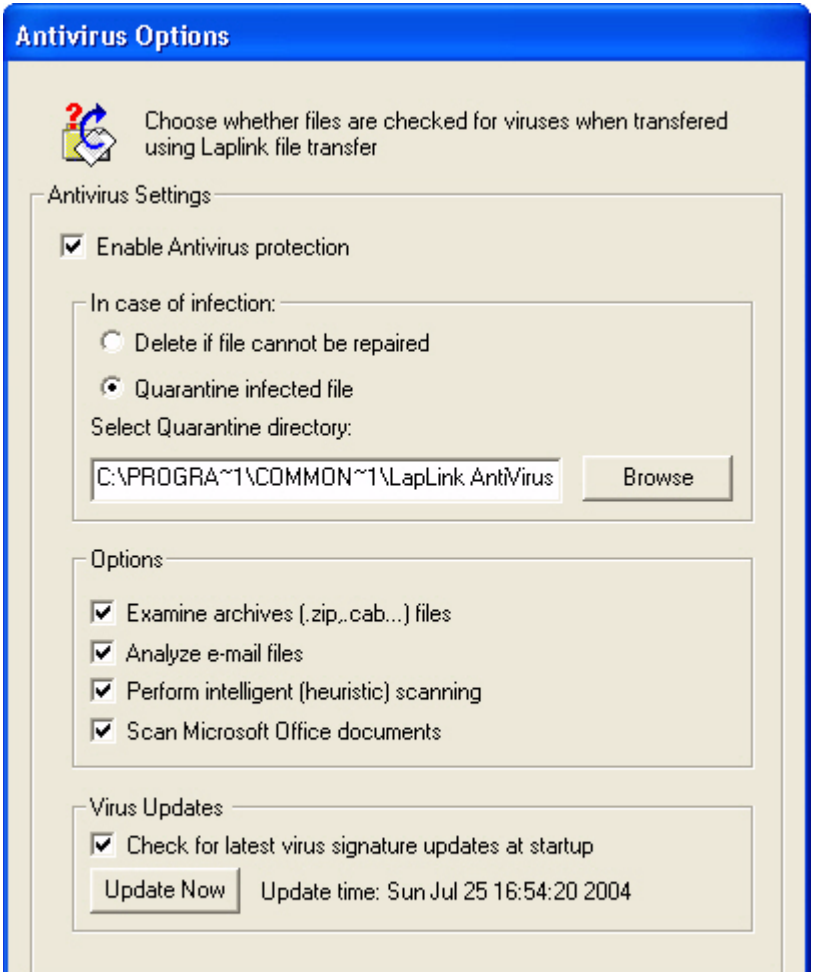
Since compression would actually slow the transfer of files that have already been compressed (or zipped by another file-compression program), Laplink automatically turns this feature off while it is transferring such files.

NOTE Whether SpeedSync and Compression are used, in file transfers depends entirely on the settings of the Guest computer.

Antivirus options

To enable or disable Antivirus scanning, click **Options**, and then **Antivirus Options.**

Laplink's new integrated Antivirus feature keeps your Guest and Host computers safe from computer virus infection by checking all incoming and outgoing files with a powerful virus scanning engine. Automatic updates keep your computers safe while you can configure preferences let you determine the level of protection you need.



To configure your antivirus settings click **Options,** and then **Antivirus Options**.

Antivirus protection is enabled by default.

You can select to automatically delete infected files, or Quarantine them (default) for your review.

Antivirus options allow you to select the file types you want scanned.

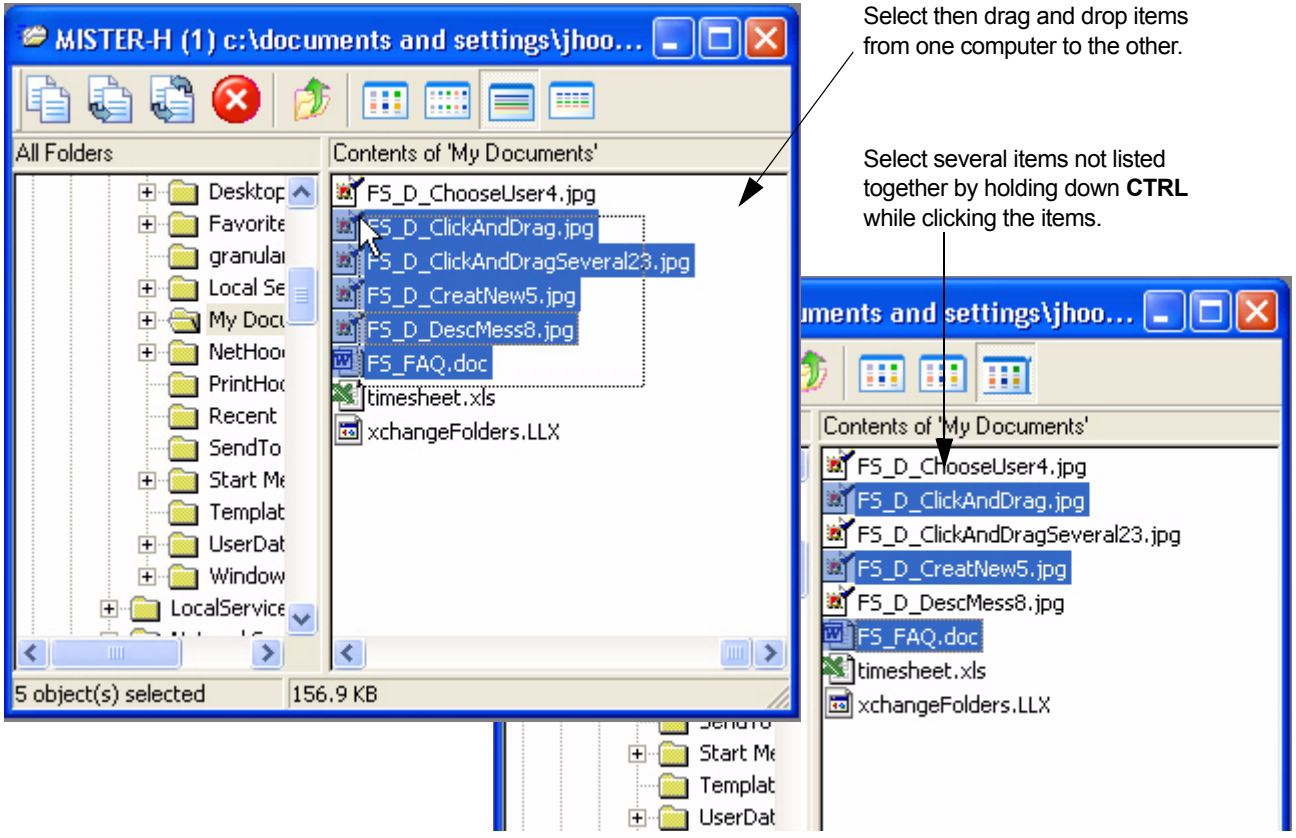
By default, when you start Laplink it checks for antivirus updates automatically.

Click the **Update** button to get the most recent antivirus signature.
NOTE: Laplink Antivirus updates are included for the first year of service, at no additional cost.

Manually Transferring Files & Folders

With Laplink you can easily drag and drop or copy and move items to update the contents of your folders, or you can synchronize the contents by comparing files, and updating folder pairs with the most up-to-date information. Laplink folders work the same as Microsoft Windows Explorer folders so that you quickly transfer files using the familiar interface.

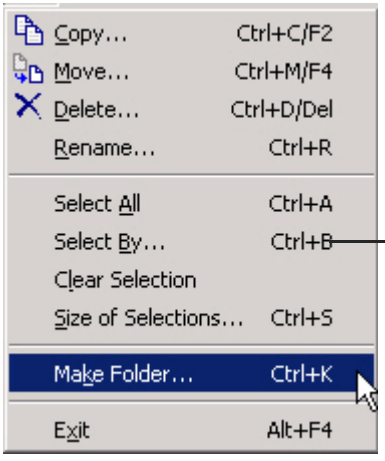
Drag and Drop



Copy or Move

Once you have displayed the target and selected the items to be transferred, you are ready to use the Copy or Move command, or you can use the mouse to drag the items and drop them onto the target. Before the transfer is started, you see a confirmation dialog box showing details of the operation you are about to perform. You can then proceed immediately, change certain conditions, or cancel the operation entirely.

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



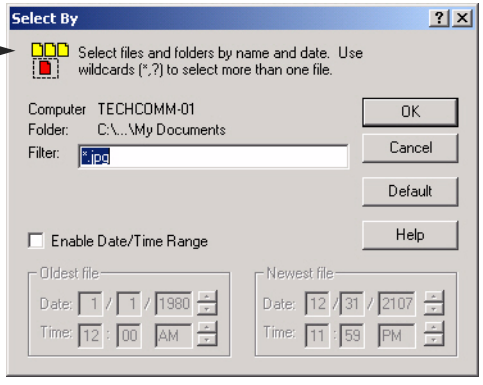
If you want to know the total size of the files being transferred, highlight those files and choose **SIze of Selections.**

Use **Copy** to copy a file from one folder to another. Use **Move** to move a file from one folder to another. Move will delete the file from its source location

Use **Select All** to select the entire contents of a folder.

You cannot use File Transfer to select the contents of your root directory.

To assist you in finding a specific file use **Select By** to enter search criteria.



TIP To drag and drop,

- Hold down **Shift** when moving a file
- When copying local-local, hold down **CTRL** to copy.

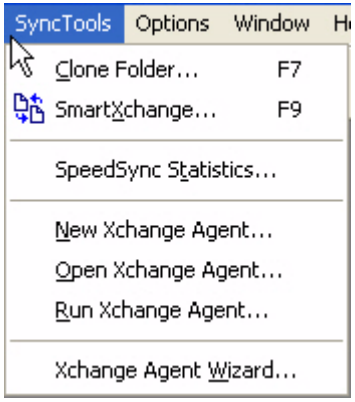
NOTE By default, selecting a folder selects all of its files and its subfolders. See “Filter tab” on page 49. You can modify this option for each transfer.

When you copy or move, you transfer items from one location (the *source)* to another (the *target).* You can transfer items using the **Copy** or **Move** commands or by dragging them with the mouse.

- Dropping selections onto a drive puts the selections at the highest level of the folder hierarchy.
- Dropping selections onto a folder puts the selections inside the folder.
- Dropping selections onto a file puts the selections on the same level as the file.

SyncTools

Laplink's SyncTools allow you to enhance performance and manage synchronization of your data. You can easily synchronize once, or set up Xchange Agents for data that you frequently synchronize. You can even schedule synchronization to occur automatically.



Clone Folder — replicates one folder onto another.

Smart Xchange — synchronize two folders in a two-way exchange of files.

Xchange Agent — takes the function of SmartXchange to a higher level by automating synchronization.

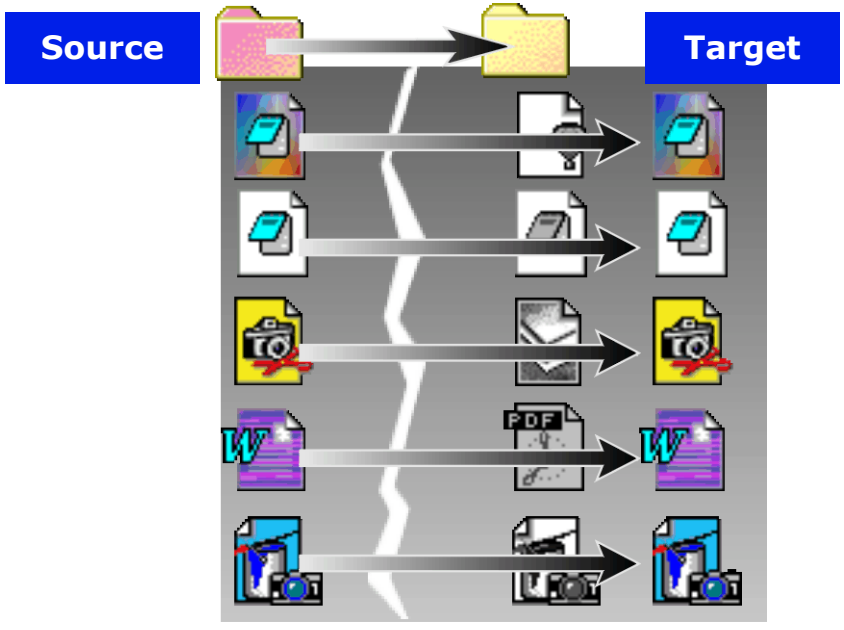
Clone Folder

Clone Folder replicates one folder (the source) onto another (the target) by adding, deleting, and updating files on the target until they match those on the source. After opening the target and the source folders, click **SyncTools**, and then **Clone Folder.** Then choose whether to include or exclude subfolders.

The effect is the same as deleting everything on the target and copying everything from the source.

Cloning a folder adds and updates target files until they are identical to those on the source. In addition, it deletes any target file that is not on the source.

NOTE With Clone Folder, you determine the items to be copied by selecting the folder containing the items, not by selecting the items themselves.



Use Clone Folder to replace the contents of one folder (the target) with the contents of another (the source).

Clone Folder has the effect of erasing the target and copying the entire source.

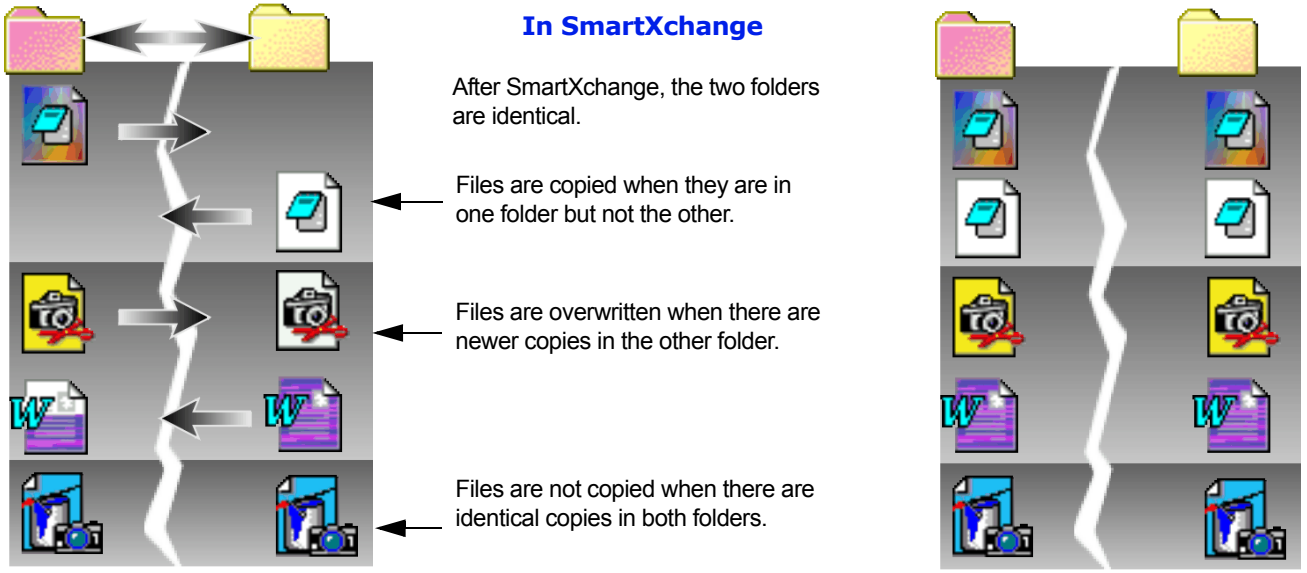
CAUTION This is the **ONLY** synchronization function of Laplink Gold that allows data deletion. Since this function cannot be undone, consider carefully before using Clone Folder.

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

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

SmartXchange

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



Synchronizing folders

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, Laplink SmartXchange synchronization works in two directions: from one folder to the other and back again.

NOTE With SmartXchange, you determine the items to be copied by selecting the folder containing the items, not by selecting the items themselves.

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

NOTE SmartXchange is a tool for exchanging files between folders. It does **not** merge the contents of files. If you need to merge databases, schedules, or other shared files, see the documentation for the program in which they were created.

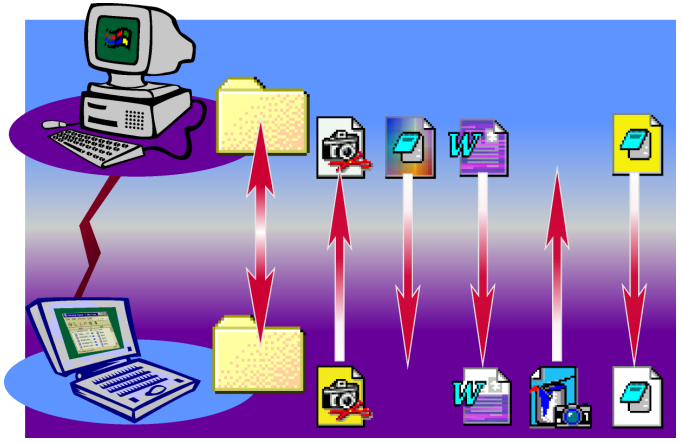
Tips on using SmartXchange:

For step-by-step instructions on using SmartXchange, see the on-line Help files.

- If you synchronize the same folders on a routine basis, consider using Xchange Agent instead of SmartXchange. See "Customizing an Xchange Agent" on page 66.
- To verify which folder is open, look at the title bar, at the top of the File Transfer window.
- Laplink cannot synchronize an entire drive, the folders containing the Windows operating system, or any other data that is locked (in use).
- Any files that you intentionally delete on one computer will be automatically replaced by two-way synchronization. If you wish to use a two-way transfer, you must manually delete the files in question on both computers before running the SmartXchange. For more information on deleting data, see page 56.
- If you want to include subfolders in the exchange, check **Include Subfolders** when prompted.
- If you want to update files and not add new ones, check **Transfer Only If Files Are Already on Target** when prompted.
- Make sure that **One-way Transfer Only** is NOT selected, unless you are performing a backup of data.

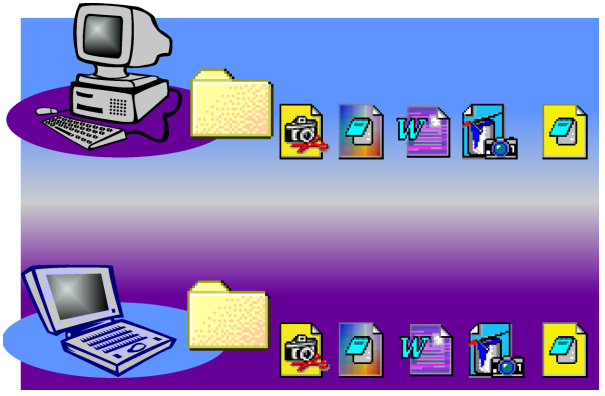
Xchange Agents

Xchange Agents automate and save the functionality of SmartXchange. To set up an Xchange Agent, open a connection to another computer, choose the pairs of folders to be synchronized; then preview and perform the synchronization. After working on files in either computer, run the saved agent to reconnect and update the older copies of the files automatically. You can run an agent by double-clicking its shortcut icon or by scheduling it to run unattended.



Xchange Agent automatically copies the newer versions of all files regardless of which computer they are on. Files that have no match are copied onto the computer that lacks them.

Files in the synchronized folders are identical.



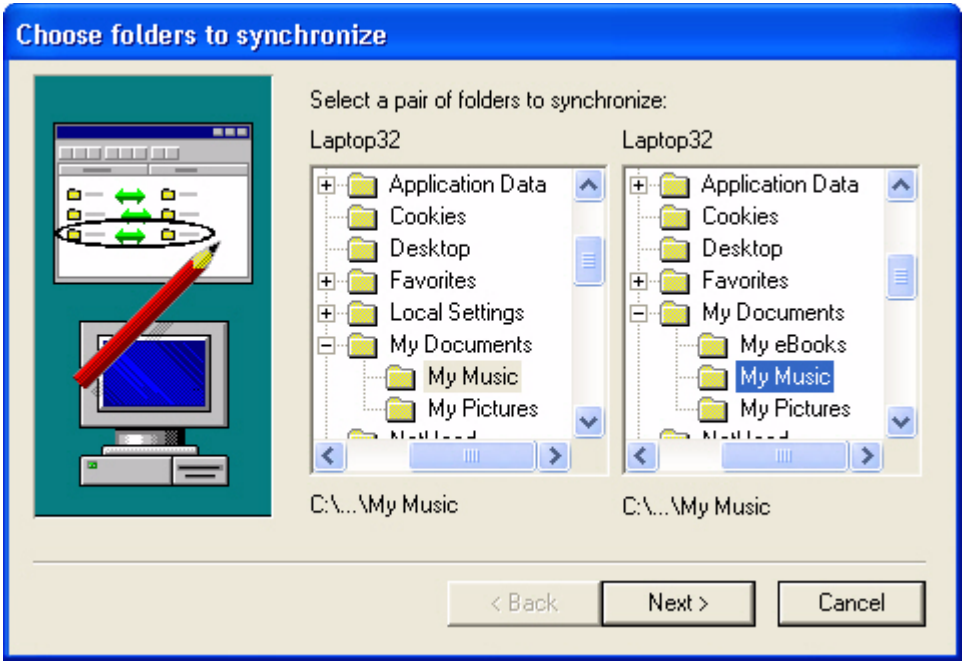
Xchange Agent simplifies the repetitive process of keeping two computers in sync. Whether your most recent work appears on one or both of the computers, Xchange Agent transfers files so that both have only the newer copies of your files.

Xchange Agent automates the process of opening connections, selecting the pairs of folders to be synchronized, setting the appropriate options, initiating the exchange, and disconnecting. To prevent unwanted results, you can preview beforehand.

TIP Xchange Agent is also useful for local synchronizations, as when you keep files on your desktop synchronized with files on a local network.

Creating an Xchange Agent

Once you connect to another computer, you create an Xchange Agent by selecting the pairs of folders—one folder on each computer—which you want to keep synchronized. You can select the pairs from a window displaying the folders on both computers, or you can drag folders from File Transfer windows onto the Xchange Agent window. In either case, you can preview the agent to ensure that you have set up the synchronizations as intended.



Xchange Agent wizard

The wizard guides you through the process of selecting pairs of folders to be synchronized. After naming and saving the agent file, you can preview the agent and change its settings.

To make the files in each folder pair identical, click the **Run** button on the toolbar.

NOTE There are two *modes* in Xchange Agent: **edit** and **preview**. Certain operations are available in one mode and not the other. To save an agent, for example, you must be in edit mode. To change to edit mode from preview mode, click the Close Preview button on the toolbar.

New Xchange Agents

Choose **SyncTools > New Xchange Agent** and select the pairs of folders to be synchronized.

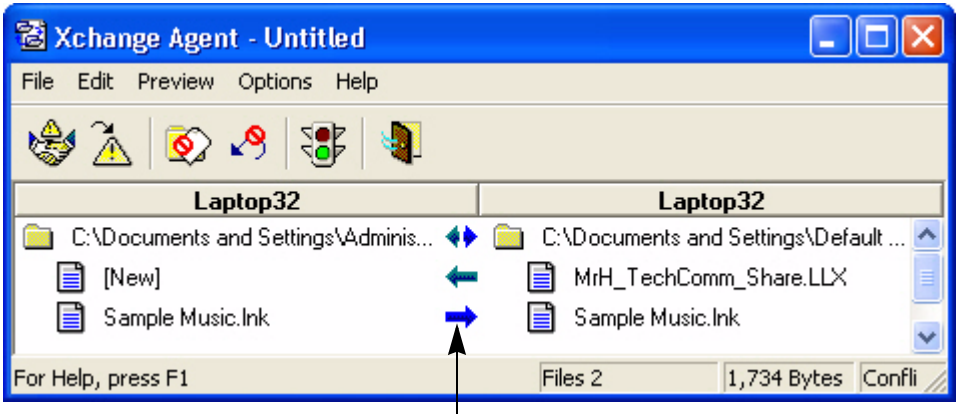
- On the Edit menu, click **Add Folder Pair**. After specifying whether the synchronization is **Local-Local** or **Local-Remote**, click a folder on each side of the window. Repeat the procedure to add other folder pairs.
- Drag folders from File Transfer windows onto the Xchange Agent window. Drag a folder first from one File Transfer window, then from the other one. Repeat the procedure to add other folder pairs.

Once you have selected the pairs to be synchronized, you can do any of the following:

- Preview the agent: click **Preview**.
- Name and save the agent file: On the File menu, click **Save.** In the **File Name** box, type a name, and click **OK**.
- Run the agent to make the files in each folder pair identical: click **Run** on the toolbar.

Previewing and running an Xchange Agent

Previewing an Xchange Agent lets you see exactly which folders will be synchronized and which files will be overwritten. It also lets you skip pairs of folders and files and resolve conflicts. Unless you specify otherwise, you preview each agent before you run it. You can run an agent from the Windows desktop, from within Laplink, or you can schedule it to run in your absence.



While previewing an Xchange Agent, you can tell the direction of copy from the arrows.

When both files have been modified since a previous synchronization. You can specify how these “conflicts” are handled.

Previewing

By default, a preview appears whenever you run Xchange Agents. You can also open an agent and preview it.

NOTE By default, only agents that you schedule to run unattended will proceed without a preview. To set up agents to run without a preview, see page 67.

While previewing an agent you can do any of the following:

- **Select files or folders to be omitted from the current synchronization only** Click a pair and click the Skip Pair button on the toolbar. Skipping a folder skips all the files and subfolders it contains.
- **Put skipped pairs back into a synchronization**

  Click a skipped pair and then click **Undo Skip** on the toolbar.
- **Resolve conflicts** Click a pair showing a conflict icon, click **Resolve Conflict**, and specify how you want the conflict resolved. For more information about resolving conflicts, see page 65.

  NOTE In a preview, arrows indicate the direction in which files will be copied, and thus which files will be

overwritten. Special icons indicate conflicts between files.

- To select every pair of folders and files in the agent, click **Edit,** and then **Select All**.
- To locate a pair with a conflict, click the **Next Conflict** button on the toolbar.

  CAUTION Once you have resolved conflicts or marked pairs to be skipped, run the agent *before closing the preview.* Your modifications will be lost otherwise.

To close a preview:

- Click **Close Preview** on the toolbar. You are now in edit mode.

  TIP While in edit mode you can customize an agent in several ways. For more information see page 66.

Running an Xchange Agent

There are several ways to run a saved Xchange Agent:

- Double-click the agent's shortcut icon on the desktop. To create a shortcut icon for an open agent, click **Create Desktop Shortcut** on the File menu.
- Schedule the agent to run at an appointed time. For more information see page 69.
- Run the agent from within Laplink. Click **Run Xchange Agent** on the SyncTools menu. Then click the name of the agent file and click **Open**.
- Run an agent you have opened in Xchange Agent. Click the **Run** button on the toolbar.
- In Windows Explorer, double-click the agent file. By default, agent files have .LLX extensions, and are saved to the **My Documents** folder.

Once an agent finishes synchronizing files, the connection to the Host computer is closed. If Laplink was not running to begin with on the Guest computer, it is shut down automatically.

TIP For a record of your latest synchronizations, refer to the Laplink log file located by clicking **Options,** and then **Logging**.

Dealing with conflicts

When you are keeping folders on two computers in sync, a conflict occurs when a file has been modified on both computers since the last time you synchronized. You can handle these conflicts when you preview or run the agent, or you can set options to handle them automatically.

Conflicts between files

Conflicts occur when you modify a file on both of your computers. Since both files are new, you need to decide how to handle them:

- Copy either the older or the newer file to the other folder, replacing the file already in that folder;
- Copy either the older or the newer file to the other folder and give the file a new name. Nothing is replaced;
- Skip the conflict without copying either file.

When you skip a conflict you carry it over to future synchronizations. There are two categories of conflicts:

- **New conflicts** Files have been changed on both computers since the previous synchronization;
- **Old conflicts** Conflicts were left unresolved in earlier synchronizations. The two computers now have different versions of the same file, and both are dated prior to the latest synchronization. You can either treat these conflicts as new conflicts or ignore them and let both versions remain.

Changing how all conflicts are handled By default, each conflict is presented for resolution when you run an Xchange Agent. You can change this so that conflicts are handled automatically.You can modify the conflict setting from the Xchange Agent's Properties tab.

Ignoring old conflicts By default, old and new conflicts are treated alike, according to the settings on the Xchange Agent **Properties > Run Options** tab. For example, if you specify that conflicts are to be displayed every time you run an agent, old conflicts will appear every time you run the agent. The alternative is to exclude old conflicts, regardless of how other conflicts are handled.

> **NOTE** To retain both versions of files in old conflicts, click this option on the Advanced tab in Properties: **Exclude Previously Skipped Files**.

Other conflicts

You may encounter other kinds of conflicts in these situations:

- When you attempt to copy a file or folder with a long name to a drive that does not accept long names;
- When you attempt to synchronize a file with a folder; this happens only when a file and a folder have exactly the same name.

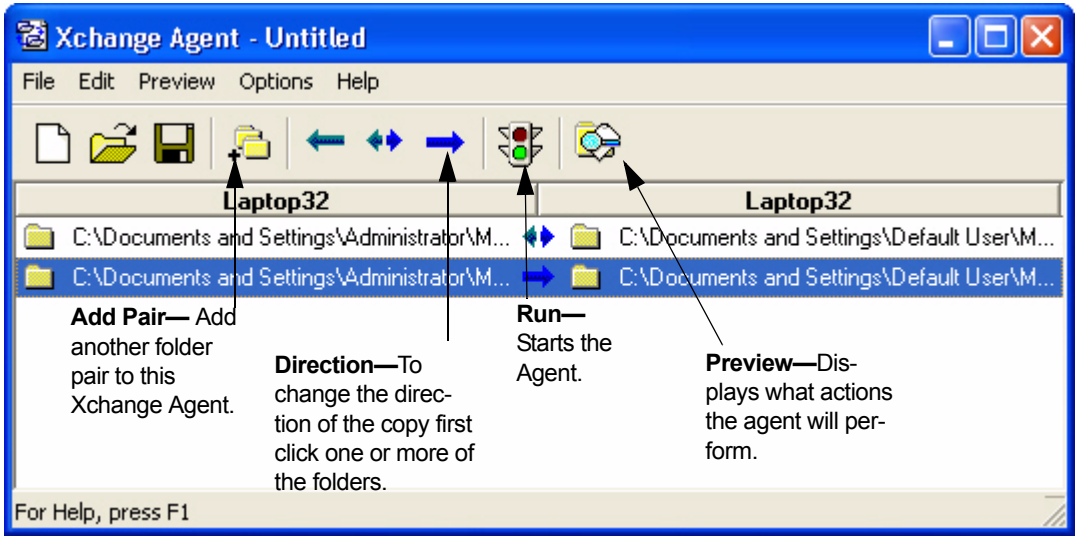
Long name conflicts If you do not shorten long names, you are given this choice when you run an agent: either copy the file and give the copy a short name, or skip the conflict without copying the file.

Conflicts between files and folders If you do not rename the file to avoid the conflict, you are given this choice when you run an agent: either copy both the file and folder and give the copies new names, or skip the conflict without copying either.

The best way to handle either of these conflicts is to rename files: shorten the long names or rename the file so that it does not conflict with the name of the folder. True synchronization cannot occur otherwise. If you set an agent to run unattended, for example, neither file in a conflict is copied.

Customizing an Xchange Agent

Instead of a two-way synchronization, you can customize an agent so that files within folder pairs are copied in one direction only, from one computer to the other. Among other modifications, you can create a shortcut icon to run an agent directly from the desktop, run an agent without a preview, and limit synchronizations just to the files that already appear on both computers.



To customize an agent, you must open it from within Laplink or Xchange Agent.

- Select **SyncTools** and then **Open Xchange Agent**. Click the agent file and then click **Open**.

  OR

- In Xchange Agent, select **File,** and then click **Open Xchange Agent.** Click the agent file and then click **Open**.

Changing the direction of copy

When you create an Xchange Agent, all folder pairs are set for a two-way exchange of files. Files are copied in both directions until the folders on both computers are identical.

You can modify this by specifying that files in a folder pair be copied in one direction only, so that only one folder updates the other.

NOTE To customize an agent, you must be in edit mode. If you are previewing, click the **Close Preview** button on the toolbar.

Adding folder pairs

With the Agent open, click the **Add Pair** icon in on the main menu.

To delete a pair of folders, click the pair and click **Delete Pair(s)** on the **Edit** menu. Then click **Yes**. The folders are deleted from the agent, not from the computers.

Changing how an Xchange Agent is run

There are several ways to customize how an agent is run:

- Create a shortcut icon for running an agent from the desktop: on the **File** menu, click **Create Desktop Shortcut**.
- Schedule the agent to run at the time you want: Select **File**, and then **Schedule**. For more information see page 69.
- Set up the agent to run unattended: Click **File, and then Properties.** Then click **Run Options tab,** and then **Run Unattended without Preview or Confirmations**. Determine how conflicts will be handled by clicking either of these options: a.) **Copy the Newer File over the Older** or b.) **Do Not Copy Either; Keep Both Files.**

Changing which files are included in synchronizations

By default, subfolders within folder pairs are included in synchronizations. Read-only files are also included, but hidden files and system files are not. To change these settings, click **File,** and then **Properties.** Click **File Options tab** and change the settings as necessary.

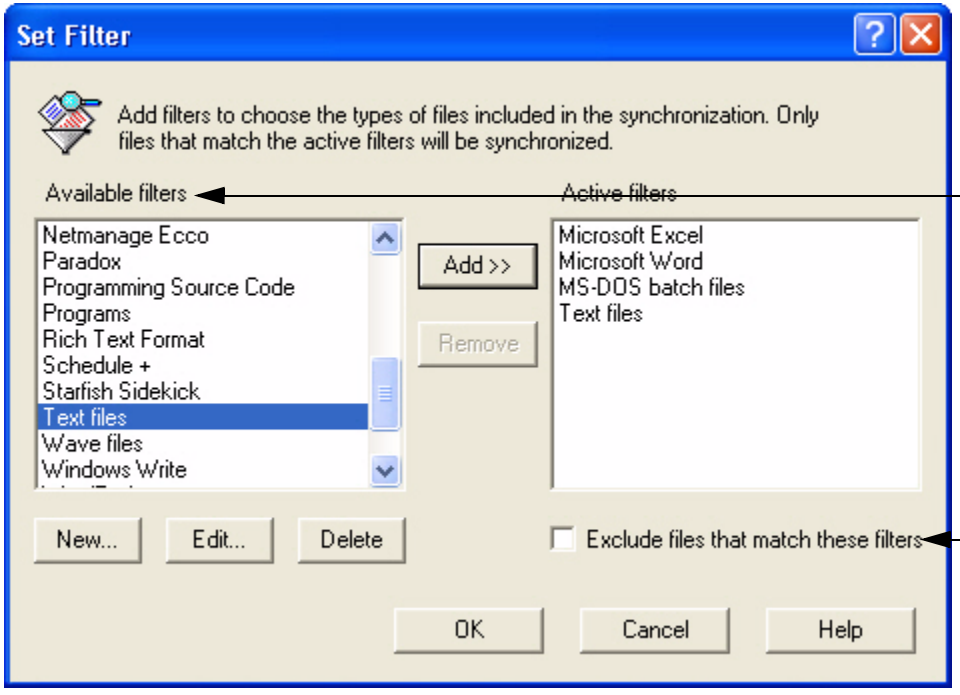
With **File Options tab**, you can set an option to limit synchronizations by exchanging only files that already appear on both computers. To exclude files that have been added to one computer and not the other, check the box: I**nclude Files Only If They Are Present in Both Folders.**

NOTE Filters offer another way of determining which files are included in synchronizations. For more information, see page 68.

TIP Instead of changing the various options every time you create a new agent, you can set default options to apply to any agents you create in the future. These defaults will take effect in new agents unless you specify otherwise in Properties. To change the defaults, click **Options,** and then **Properties for New Agents**.

Using filters to include or exclude files

Using preset filters or filters you create yourself, you can limit synchronizations by including only certain files or types of files. Or you can use the same filters to exclude files and file types.



Click a filter in the list of available filters. Then click the Add button.

By default, filters limit synchronization to files that match the filters.

If you prefer, you can use filters to *exclude* matching files—and synchronize the rest.

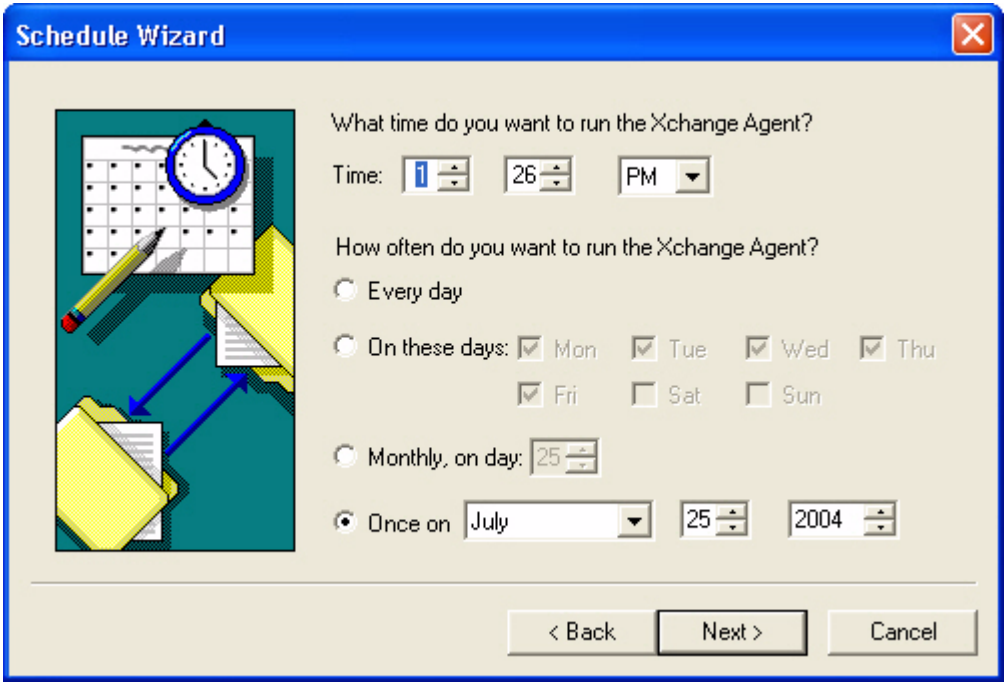
Xchange Agent includes filters for some of the most common types of files, including Microsoft Office file types, Lotus 1-2-3, and dBase. File types are defined by one or more extensions. Word files, for example, are defined by the extensions .DOC and .DOT.

You can also create your own filters for different file types—or for specific files.

You can use filters to synchronize only the files matching the filters. Or you can exclude the files matching the filters and synchronize the rest of the files.

Scheduling an Xchange Agent to run automatically

You can schedule an Xchange Agent to run at a certain time on the days you specify. Scheduled agents can be configured to run unattended: there is no preview, and conflicts are handled automatically. Xchange agents can be scheduled using the Laplink Schedule Wizard. To run the agent on schedule, simply leave the scheduler running on the Guest computer.



You can schedule an Xchange Agent to run unattended.

When the scheduled time comes, Laplink starts, the connection is opened, files are synchronized, the connection is closed, and Laplink shuts down.

You can set up an Xchange Agent to run at a particular time on one of these schedules:

- Just once, on a particular date.
- Every day
- On certain days of the week (such as Monday and Friday)
- Once a month on a particular day (such as the first day of each month)

Laplink does not have to be running on the Guest computer for an agent to run as scheduled. When the scheduled time comes, Laplink starts, the connection is opened, files are synchronized, the connection is closed, and Laplink shuts down.

Laplink prepares an Xchange Agent to run on schedule by setting it up in the Laplink scheduler program.

NOTE You can also use the Windows Task Scheduler included in Windows 98, ME, 2000, XP, and 2003. For more information, consult your Windows documentation.

Running an agent unattended

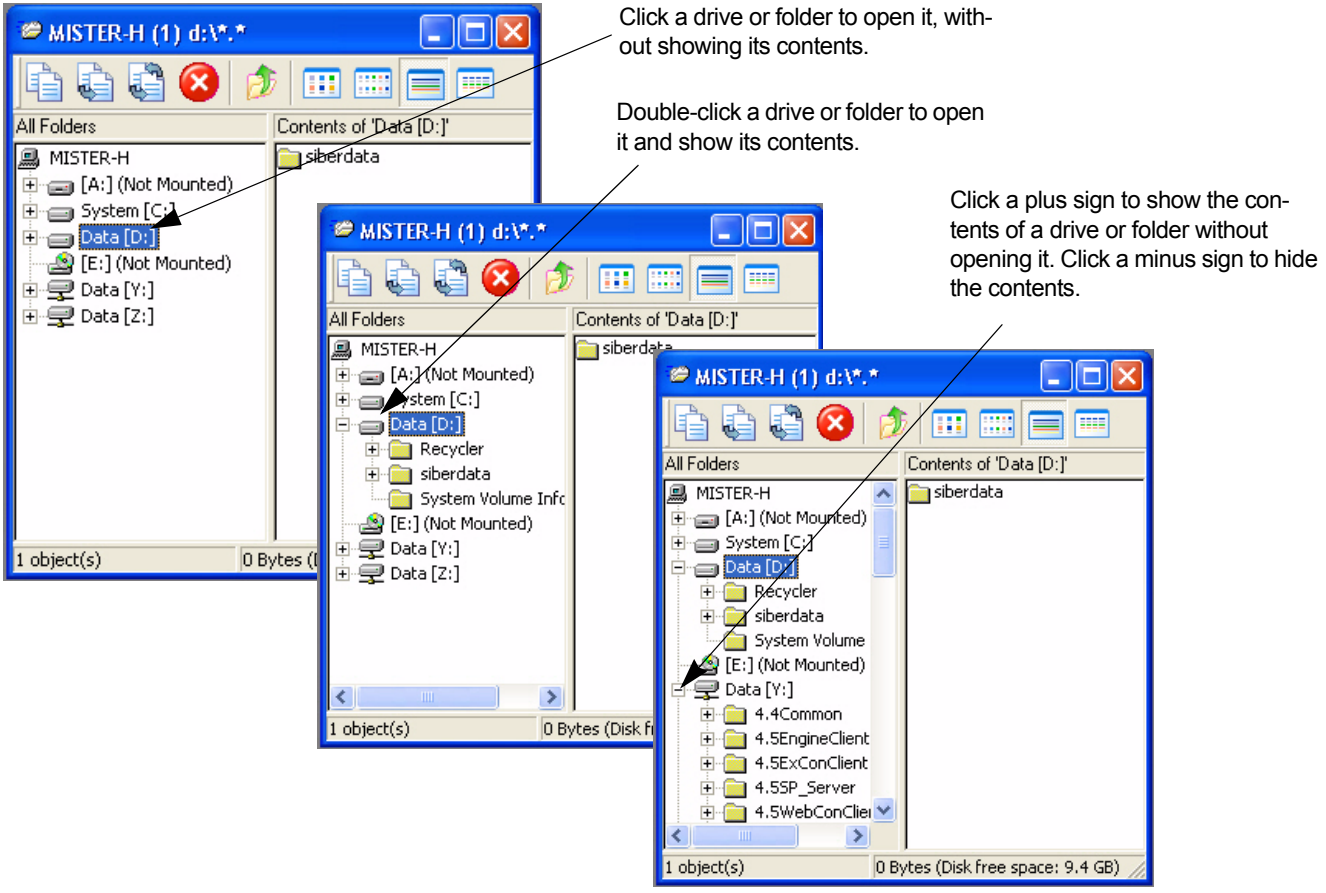
A scheduled agent runs without preview, even if you have specified preview on the Run Options tab of Properties.

When conflicts are encountered, they are ignored; neither file is copied. If you prefer to have the newer file in each conflict copied over the older one,
Click **File,** and then **Properties**. In Run Options, click **Run Options tab,** and then **Run Unattended, without Preview or Confirmations**. Then click **Copy the Newer File over the Older**.

TIP To ensure that an agent runs and synchronizes as scheduled, the agent should originally be created while connected to the host via an Address Book entry. This stores the log-in name and password required by the Guest computer to open the connection.

Navigating through drives and folders

Each File Transfer window is split into a left and a right side. The left side is designed for navigating through drives and folders: click or double-click a drive or folder to open it and display its contents. On the right side, you see the contents of the open drive and folder. Commands on the View menu let you change the appearance and the order of the contents.



Follow these guidelines to navigate through the left side of a File Transfer window:

- **Double-click a drive or folder** Opens and expands the drive or folder, displaying its subfolders immediately below. (Double-clicking is the fastest way to navigate downward in a hierarchy of folders.)
- **Click a drive or folder** Opens the drive or folder without expanding it.
- **Click a plus sign (+)** Expands the drive or folder, displaying its subfolders immediately below. The drive or folder is not opened.
- **Click a minus sign (-)** Collapses the drive or folder, hiding its subfolders.

  TIP Want to locate a particular folder 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.

Changing the view

When you open a drive or folder, you see its contents—subfolders and files—on the right side of the File Transfer window.

By default, the contents appear in Detail view: file name, size, type (based on the MS-DOS name extension), modification date, and attributes.

To change the appearance of the items displayed on the right side of a File Transfer window:

- On the View menu, click one of these commands: Large Icons, Small Icons, or List.

Try the different views to find your preference. To return to the original view, click Detail.

Sorting files and folders

Regardless of the view, you can rearrange the folders and files on the right side of a File Transfer window according to name, size, date, and so on.

To change the order of files and folders:

- On the View menu, point to Arrange Icons; then click one of these commands: By Name, By Type, By Size, By Date, or By Attributes.

If you are displaying files in Detail view, you can sort them by name, size, type (file name extension), modification date, or attribute: click the corresponding button at the top of a column. Clicking the same button again reverses the order.

Step one: display the target

To use the drag-and-drop method of copying and moving files, first find your target and make it visible on your screen. A target is the drive or folder you want to transfer the files to.

To display the target:

1. Identify the target window: it may be the window for your computer or the Guest computer—whichever you want to receive the files.
2. On the left side of the target window, double-click the target drive.
3. Click the target folder. Its contents now appear on the right.
4. If you are looking for a subfolder, click the plus sign (+) beside the folder containing the subfolder. Then click the subfolder itself.

   NOTE To determine which File Transfer window is which, look for the computer name in the title bar, at the top of each window. In the case of a local-to-local connection, each window will show the same name, followed by a (1) or (2).

Step two: select the files

In the opposite File Transfer window, select the files you'll be transferring to the target you just displayed.

To select the folders and files you want to transfer:

- On the right side of the window, click the folder or file you want to transfer.
- To select more than one item, do either of the following:
  - Hold down **CTRL** as you click each item.
  - To select two or more items listed next to each other, click the first item and press **SHIFT** while you click the last item.

Step three: drag and drop

Using the drag-and-drop method simplifies file transfers. Keep in mind the difference between copying and moving: **Copying** puts a copy of the files on the other computer, leaving the originals where they were. **Moving** puts the files on the other computer, deleting the originals.

To drag and drop the selected files:

- To copy the files, hold down **CTRL** and your left mouse button as you drag them to the target folder.
- To move the files, hold down **SHIFT** and your left mouse button as you drag them to the target folder.

If you drag without using **CTRL or SHIFT,** files are *copied* when you drag to a different drive or computer and *moved* when you drag to another location on the same drive.

To select a single file or folder:

- Place the mouse pointer on its name or icon, and click the left mouse button.

To select a group of items, do either of the following:

- Click the first item, and press **SHIFT** while you click the last item.
- Click at a right corner of the group and drag to the opposite corner to form a selection box.

To select two or more items out of sequence:

- Press **CTRL** while you click the items.

To select all folders and files in the current folder:

- On the **File** menu, click **Select All**.

Using the Select By command for files and folders:

1 On the **File** menu, click **Select By**.

2 In the **Filter** box, type the name of a file or folder. Or use wildcards to specify items with similar names.

For example, typing `*.DOC` selects all files with the .DOC extension. The default (`*.*`) selects all files and folders.

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 those extensions.

3 If you want to select according to date, check the **Enable Date/Time Range** box. Then type the dates and times under **Oldest File** and **Newest File**. Click **OK**.

Clearing selections

To clear an individual selection:

1 Hold down **CTRL** when you click the item.

To clear all selections:

1 Click **File,** and then click **Clear Selection.**

5 Connecting

Types of Connections

Whether you're in a hotel on the road, at home on a Saturday, or with your laptop anywhere, Laplink Gold lets you use any connection type you have to get access to everything you need. Laplink Gold supports connecting via a modem, a network, a network server, the Internet and more. You determine how to connect by considering your office setup and what you want to accomplish when you are connected, and Laplink Gold helps you to get it done.

Connection overview

Laplink Gold supports multiple connection types. You can configure Laplink for the connections you use frequently, or select your connection when you start Laplink. All that is required is that a version of Laplink (7.5 or higher) runs on both the Guest and Host computers and that your computer is able to make a connection.

Before you can use Laplink Gold to connect to another computer, you must determine how to make that connection using the resources available to the two computers.

Once you have setup your connection you can modify or create Address Book entries. See"Configuring the Address Book" on page 29 for more information.

About cable connections

If both computers are in the same location, you can use Laplink's USB 2.0 (included in boxed purchases) to link the two computers. Laplink will connect automatically, unless configured otherwise. See "Local security" on page 24.

About Laplink Internet connections

Now you can use Laplink Internet to easily and securely connect to other Laplink Gold 12 computers over the Internet. Laplink Internet is accessible to Laplink Gold 12 users who sign up for Laplink Internet accounts and associate their computers to those accounts. This type of connection gives you the full range of Laplink Gold features from any Internet connection. The Host computer must allow Laplink Internet connections and be registered with the service.

About LAN (Network) connections

If your office has a network, you can connect to the network via a VPN or other methods, and then to any computer running Laplink Gold on the network. Using the Remote Control service, you can access any network resources normally available to you from the office.

About modem connections

If your connecting (Guest) computer is equipped with a modem, then you can connect to the office computer directly. The Host must allow incoming modem connections. See "Modem Callback" on page 22.

Leave Laplink Gold running when you leave the office, and ensure that it can be connected to by modem. Then connect as a Guest to run programs and transfer files as you would normally.

About Dial-Up Networking connections

Use Dial-Up Networking to access a network remotely. By dialing in to a dial-up server (RAS) on the network, you can connect to any computer running Laplink on that network.

About other connections

Laplink Gold also supports the following types of connections:

CAPI/ISDN

If you have CAPI/ISDN configured on your machine, you can make a connection.

Internet Locator Service

If the Host computer has a published ILS address, you can use this to connect. However, Laplink Internet is the preferred way of using the Internet to make Laplink connections.

Wireless (Infrared)

Wireless (Infrared) connections are only supported for Windows 98 SE and Windows Me. If both computers are running Laplink, you can use this connection, unless the Host computer is configured to enforce Local security. See "Local security" on page 24.

Wireless connections via your mobile phone, Aircard or other wireless device are treated like 'wired' connections.

Determine your connection type

Now that you have read about the different connection types available, you can determine which ones you will want to use.

Table 1: Connecting over the Internet

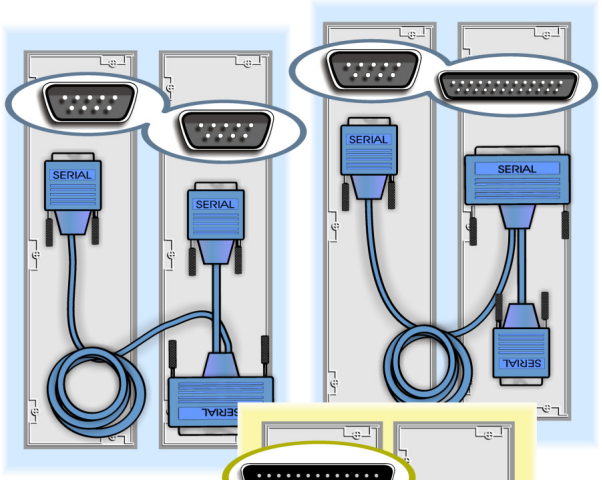
Can you connect to the Internet on your Guest computer?	Then connect to a Laplink Gold Host computer over the Internet this way:	For details see
No, but the office has VPN server.	*Establish a VPN connection to the office, then use **Connect Over LAN (Network)** to supply the IP Address of the Host computer.*	*page 85*
Yes	*If either computer is located behind a firewall, consider using **Connect over Laplink Internet** for simple, secure connections without the hassle of configuring a firewall.*	*page 84*
No, but the office has a direct connection to the Internet.	*Use **Connect Over Dial-Up Networking** to dial in to a network server and connect over the office Internet connection.*	*page 91*

Table 2: Connecting over cable, networks or modems

What resources are available for connections		Then connect to another Laplink computer this way:	For details see
on the Host computer?	on the Guest computer?		
USB, parallel or serial port	*USB, parallel or serial port*	*Attach a Laplink USB, parallel, or serial cable to each computer. The connection opens automatically. To connect manually, choose **Connect Over Cable**.* *Serial connections are available in all versions of Windows.* *Parallel connections are available in Windows 98 and Windows ME.* *USB connections are available in Windows 98, ME,2000, XP and 2003.*	*page 81*
TCP/IP or IPX network	*TCP/IP or IPX network*	*Use **Connect over LAN (Network)**.* *Network connections are available in all versions of Windows.*	*page 85*
modem	*modem*	*Use **Connect over Modem** and dial in to the modem on the Host computer.* *Modem connections are available in all versions of Windows.*	*page 89*
modem	*modem and network*	*Use **Connect over Modem** to connect directly to the Host computer and access all of the network resources available to that computer.*	*page 89*
modem	*network with a dial-up server*	*Use **Connect over Dial-Up Networking** to dial in to the dial-up server and connect to any Laplink Gold Host computer on the network.*	*page 91*
network	*network*	*Use **Connect over LAN (Network).***	*page 85*

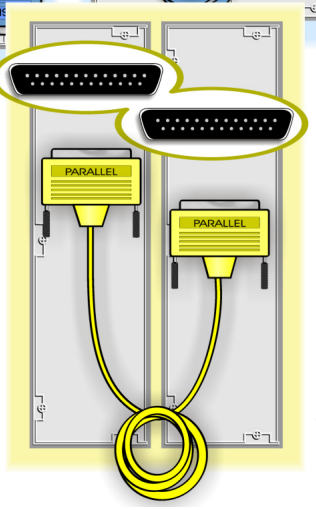
Connecting by Cable

To connect two computers by Laplink cable, attach a serial, parallel, or Universal Serial Bus (USB) to the computers and start Laplink on both computers. No separate USB cable driver installation is required. Autoconnect, the default setting for cable connections, opens a connection automatically. To manually connect select **Cable** (USB, Parallel, Serial) from **Connect Over** on the Shortcut bar.



The blue Laplink serial cable has two connectors at one end, but only one connector is attached at a time: Use the larger connector if one of the computers has an older 25-pin serial port. Otherwise, attach one of the smaller connectors to each computer.

Attach one end of the **Laplink USB** cable to a USB port on each computer.



NOTE - USB-to-serial adapter or gender-changing devices of any kind are not supported for use with Laplink Gold.

Attach one end of the yellow Laplink parallel cable to a parallel port on each computer.

Only available for Windows 98/ME

USB Network and parallel cable connections are the fastest. USB cables can transfer data up to 500 times faster than serial cables.

In addition, you can attach a USB cable to any USB peripheral that incorporates a “hub” to which other devices can be connected. This feature lets you use more than one USB-compatible device at a time.

Choose the type of cable (serial, parallel, or USB) you are going to use based on the cables and ports you have available. A retail Laplink USB 2.0 cable is included in the Laplink Gold package. To purchase more cables in bulk with volume discount, visit http://www.laplink.com or call Laplink sales.

Ports are the connectors to which you attach cables and peripherals like printers and external modems. To find out which types of ports are available, consult the documentation or the Windows Device Manager for your computer.

Once you decide which kind of cable connection you'll use, plug a Laplink cable into both computers.

Before you connect by cable

- Attach a Laplink USB cable to each computer.

  NOTE When attaching the USB cables that come with Laplink Gold for the first time, Windows will detect the device and install the drivers automatically. Click **Next** and then **Finish** in the **Found New Hardware** wizard to complete driver installation and hardware setup.
- Ensure that the proper port (serial, parallel, or USB) is enabled in Laplink on both computers. See "Connecting by Cable" on page 81"
- Run Laplink on both computers.

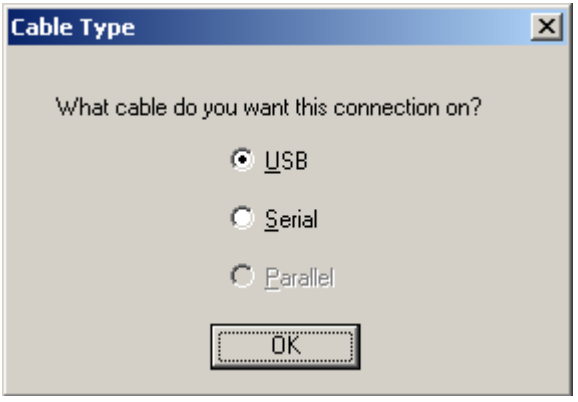
Connecting the computers

When you start Laplink on two computers connected by cable, they automatically connect. Autoconnect is the default setting for cable connections. If you change this setting, you can connect to the other computer manually. See "Connecting by Cable" on page 81" for more information.

TIP If the connection does not open automatically, click **Options,** and then **Port setup.** Verify that the appropriate port (COM, LPT, or USB) is enabled for cable.

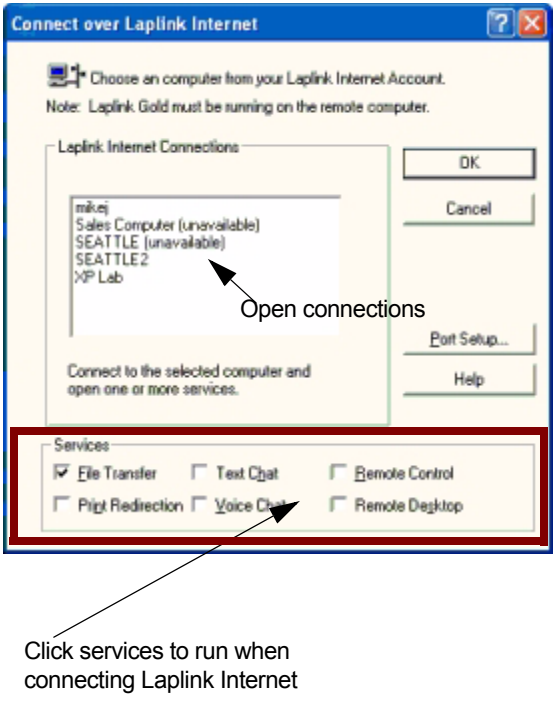
Connecting by cable when multiple cable ports are enabled

If your computer has multiple cable ports enabled, Laplink Gold offers you the option of connecting through the cable connection type you choose. You will see the following screen only when connecting from the Address Book.



Laplink USB cable speeds are significantly faster than serial or parallel cables.

To connect via Laplink Internet



Now that you have activated your Laplink Internet account and associated the computers to that account, you may establish an connection with those computers. To connect,

1. Open Laplink Gold on both machines on your account. Laplink Gold 12 must be running on machines with which you will establish a connection.
2. On the Shortcut Bar, click **Connect Over Laplink Internet.**
3. This will bring up the **Laplink Internet Logon** dialog box. Enter your username and password and click **OK.**
4. The **Connect Over Laplink Internet** selection dialog box appears. Click the computer name that you wnat to connect to, and select the services that you want to use.
5. Click **OK.** The connection will be established with the services that you have selected.

Connecting by Laplink Internet

If you can connect to the Internet, you can connect to other Laplink Gold 12 computers. Laplink Internet lets you reliably connect around firewalls, routers, and proxy servers using a Laplink Internet account. When you launch Laplink Gold 12 for the first time you are prompted to create a Laplink Internet account and configure your PC to use Laplink Internet. From the Laplink Internet Web page, you can sign up for, configure, and manage your account. The first year of Laplink Internet service is included at no additional cost.

About Laplink Internet

If you have Internet access you can use Laplink Internet to connect your computers. To use Laplink Internet you must:

- Create a Laplink Internet account.
- Associate each of your computers with your Laplink Internet account. Laplink Internet is a service available to Laplink Gold 12 users. The first year of Laplink Internet is included at no additional cost.

Creating a Laplink Internet account

To create a Laplink Internet account for the first computer to which you will want to connect, click the popup dialog that first appears when you start Laplink Gold 12. Then do the following:

1 Start Laplink Gold 12.

2 Click **Yes** in the popup dialog that appears asking if you want to register with Laplink Internet.

3 You will be presented with a Web page. Fill in all the required fields and click **Submit.**

You have created your Laplink Internet account. You will now need to associate computers that you want to connect to with this account.

To add additional computer(s) to which you will want to connect

1 Start Laplink Gold 12 on the computer you want to add.

2 Click **Yes** in the popup dialog box that automatically appears asking you if you want to register with Laplink Internet.

3 A registration Webpage appears. Click the hyperlink, **Click here to assign this PC to that account.**

4 Enter your username and password and a descriptive name for this PC. (This is the name that will appear in the **Connect Over Laplink Internet** dialog box).

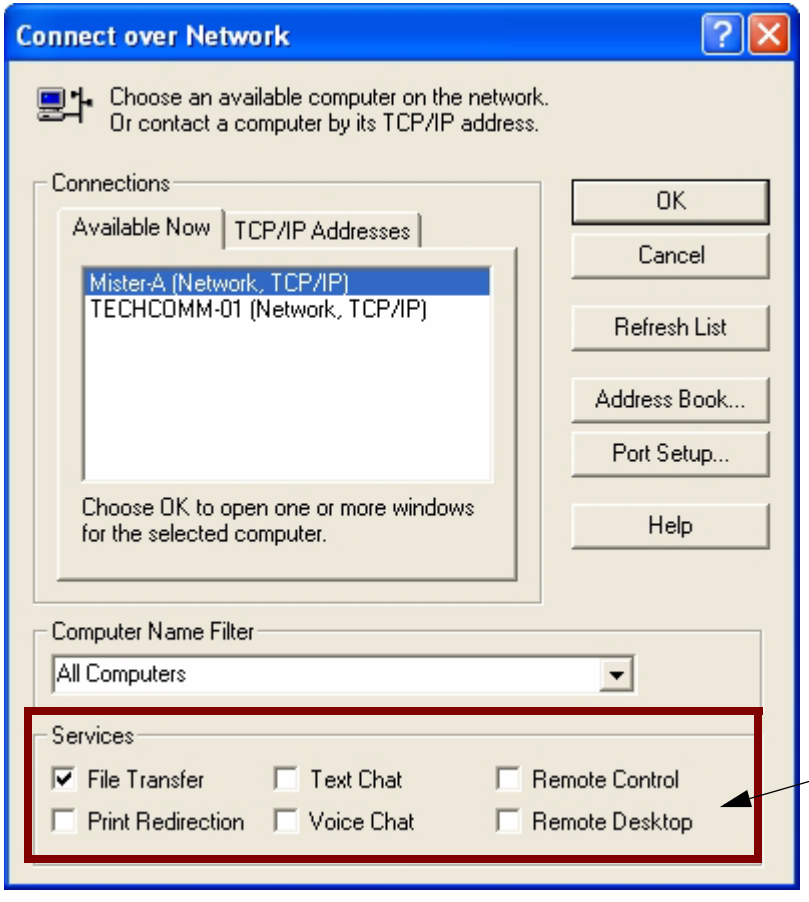
5 Click **Submit**.

You have assigned the computer to your account and can connect to and receive connections from computers associated with your Laplink Internet account.

Laplink Internet resolves Internet connections automatically. Only Laplink Gold 12 allows you to securely connect your computer to any other computer without needing to configure firewalls or routers. You will be able to log in and access any of your other computers provided that they have valid Internet accounts, are online and available for connections, and are running Laplink Gold 12.

Connecting by LAN (Network)

To connect to any computer running Laplink Gold on your Local Area Network, select LAN (Network) from the Shortcut bar, then pick the network computer you want to connect to or supply its TCP/IP address or name.



Use Connect over LAN (Network) to link computers on a home or office network.

You can click the name of a computer or switch to the **TCP/IP Addresses** tab and enter the computer's IP address or name.

Clicking the **Refresh List** button updates the list of computers available since you first opened the window.

Clicking the **Address Book** button, opens the Address Book. From the Address Book, select the connection you want to open

Clicking the **Port Setup** button, opens the Port Setup options window.

If you have a large list of computers to choose from, **Computer Name Filter** allows you to limit the list by entering a full or partial name for the Host computer you are looking to connect, then clicking **Refresh List.**

Select the **Services** you want to open with your connection. File Transfer is the default service.

NOTE Choose Services **before connecting.** Once you connect, you cannot select more Services to run.

You can establish a Laplink connection to another computer on your home or office network, whether it is an IPX (Novell NetWare) network or a TCP/IP network.

You can usually open a network connection by clicking the computer's name in a list of Laplink computers on the network. To open a connection to a computer that lies outside your portion (subnet) on a TCP/IP network, however, you must provide the computer's TCP/IP address or name.

Before you use Connect over LAN (Network)

- The security setup of the Host computer must be configured to allow incoming connections. See "Allowing incoming connections" on page 16.
- The network ports (either TCP/IP or IPX) must be enabled in Laplink on both computers. See "Connecting by LAN (Network)" on page 85. If you aren't sure which protocol is being used on your LAN, contact your network administrator.
- Laplink must be running on both computers.

  NOTE Not only does Connect over LAN (Network) work over local networks, but it also connects over the Internet. For details see "Connecting by LAN (Network)" on page 85

Manually connecting

If the computer you want to connect to does not appear on the connections list of available computers, you may be able to connect to it manually. You will need to know the TCP/IP address of the Host computer in order to connect.

To find out a computer's TCP/IP address in Windows 98, or Windows ME:

1 On the **Options** menu, click **Port Setup**.

2 Click **TCP/IP Network** in the Ports list, and then click **Configure.**

3 The TCP/IP address appears in the IP Address box.

To find out a computer's TCP/IP address in Windows 2000, XP or 2003:

1 Click the Windows Start button, click **Programs**, and then **Accessories**. Click **Command Prompt**.

2 Type `IPCONFIG` and press ENTER.

  The TCP/IP address for that computer appears in the IP Address line.

Filtering the list of available network computers

You can display the name of a particular computer in the **Connect Over LAN (Network)** dialog box by typing all or part of the name in the Computer Name Filter box. Click **Refresh List**. This filter is saved.The next time you connect over LAN (Network) it will be used.

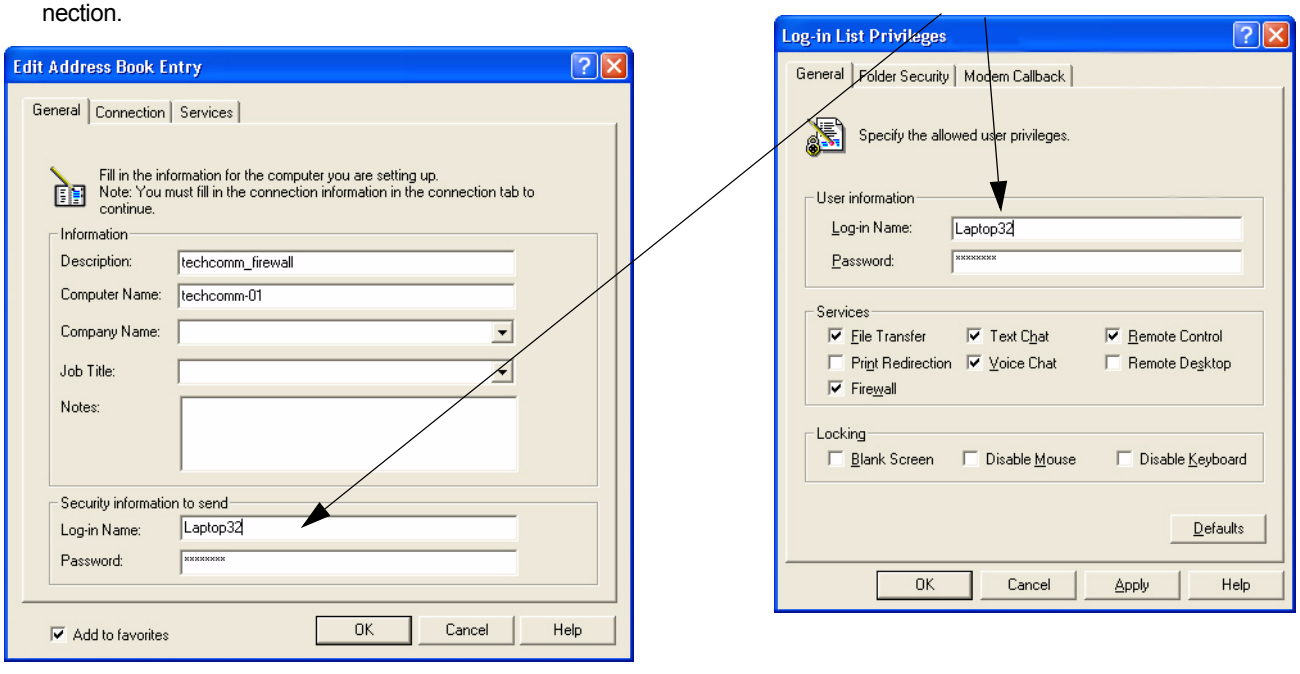
To display the names of all available computers again, click the arrow next to the Computer Name Filter box, click **All Computers**, and then click **Refresh List**.

Connecting to previous Laplink versions behind firewalls

Although Laplink Internet is the easiest way to connect to Laplink Gold 12 computers, you may need to connect to older versions of Laplink that are running behind a firewall. You can use Laplink Gold's Firewall Connection Service to make the connection. A detailed tutorial on configuring firewall connections is available at http://www.laplink.com/support. From the main menu, click **Tutorials.**

When the Guest computer (outside the firewall) requests a connection, the Host computer (inside the firewall) uses the Address Book entry to initiate the connection.

The Log-in name and password in the Log-in List entry must match the log-in name and password in the Address Book entry.



You must configure both computers before you can make a firewall connection. First, configure the Host computer (inside the firewall) to accept incoming connections using either a Log-in List or configuring a Public System (Log-in List is more secure) and then create an Address Book entry.

You must also create a Log-in list entry on the Guest computer outside the firewall. This entry must match the Address Book entry you created on the computer inside the firewall.

NOTE A detailed tutorial is available by clicking on the Help menu, and choosing “Tutorials on the Web.”

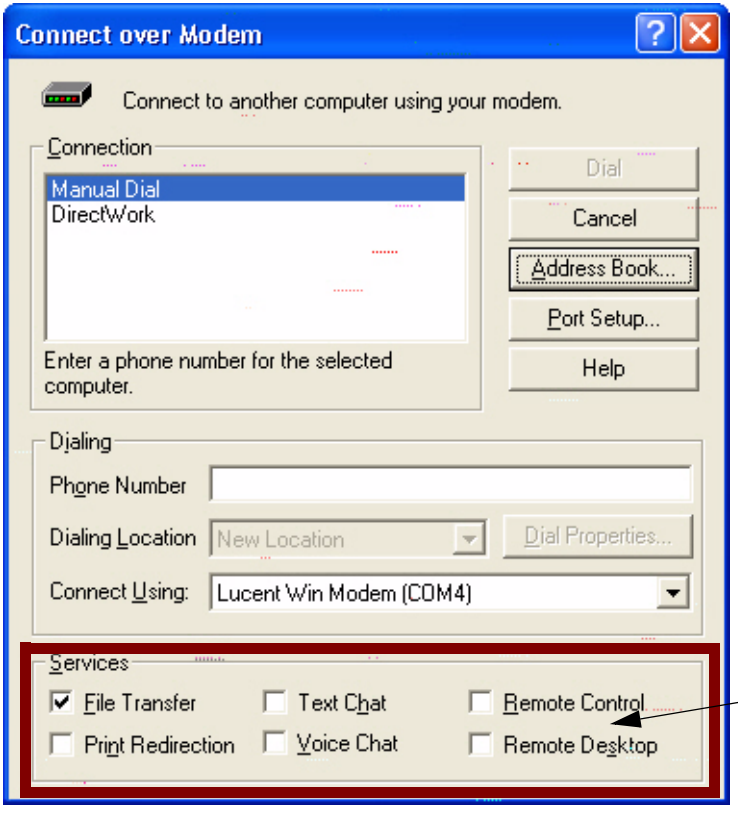
Before you connect to a computer behind a firewall:

- Both computers must have an active connection.
- Only one of the two computers can be behind a firewall. It is not possible to connect if both computers are behind a firewall (note that the Laplink Internet feature can connect even if both computers are behind firewalls).
- The computer inside the firewall must publish its Internet address through the Laplink Internet Directory server.
- The computer inside the firewall must have an Address Book entry that includes a unique computer name, user name, and password for the computer outside the firewall to use.
- The computer outside the firewall must be configured to allow incoming connections.
- Laplink must be running on both computers.

Connecting by Modem

Using modems and a phone line, you can connect to another computer or to an office network. For a direct, Laplink to Laplink connection, dial to a modem on another computer using Connect over Modem.

Connect over Modem window



Use Connect over Modem to dial a modem on the Host computer and open a Laplink connection.

Entries you have created for modem connections in the Address Book appear in the Connect over Modem Window. Select one of these options or enter a new phone number to dial.

For Best Results: Use only hardware-based modems, such as external (serial) modems. Most internal (software) modems are unreliable for Laplink connections. For the latest information, visit www.laplink.com/support.

NOTE Choose Services **before connecting.** Once you connect, you cannot select more Services to run.

Before connecting over a modem

- The Laplink security setup of the Host computer must be changed to allow incoming connections. See "Allowing incoming connections" on page 16
- Laplink must be running on both computers.
- Modem ports must be enabled in Laplink on both computers.

Using modem connections

You can dial a modem connection three ways:

- Create an Address Book entry, and dial directly from the Address Book.

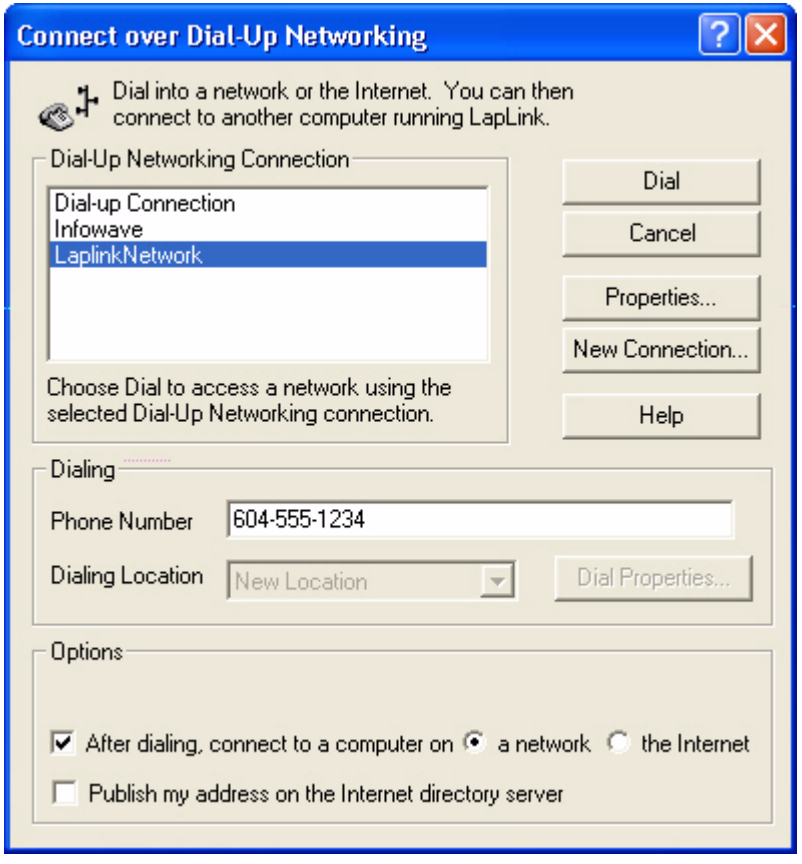
  TIP If you added the connection to your favorites, you can connect from the Shortcut Bar.
- In the Shortcut Bar **Connect Over** panel, click **Modem** and choose an entry from the list
- Select **Connect Over**, and then **Modem** and manually enter the number you want to dial.

  NOTE Laplink dials the number exactly as you type it, regardless of how you have set up Dialing Properties in other address book entries.

Connecting by Dial-Up Networking

Use Dial-Up Networking to connect to a dial-up server (RAS) and log on to a network from outside the office. Then connect to other Laplink computers on the network and use network resources as if you were still in the office.

Connect over Dial-Up Networking window



Use Dial-Up Networking to connect to a dial-up server on your network. Then open connections to other Laplink computers on the network.

Your existing Dial-Up Networking connections are displayed when you select **Connect Over > Dial-Up Networking.**

Before you use Dial-Up Networking

Use Dial-Up Networking to access a network remotely. By dialing in to a dial-up server (RAS) on the network, you can connect to any computer running Laplink on that network.

You can also connect to Laplink computers on the Internet and browse the Internet using the Internet connection in the office. In short, you can access the same network resources you use in the office.

- Dial-Up Networking, a Windows feature, must be installed on the Guest computer. See Windows help for instructions.
- Your network must have a dedicated dial-up server (such as Novell NetWare Connect, Windows Remote Access Server, or Shiva NetModem). The computer you connect to must be connected to an IPX or TCP/IP network.
- The Laplink Gold security setup on the Host computer must be configured to allow incoming connections. For more information, See "Allowing incoming connections" on page 16.
- Laplink must be running on both computers.
- TCP/IP or IPX ports must be enabled.

Using Dial-Up Networking connections

For step-by-step instructions on how to create and use a Dial-Up Networking connection, see the on-line Help system.

You can use a Dial-Up Networking connection two ways:

- Select **Connect Over,** and then **Dial-Up Networking** and choose an entry from the list
- Select **Connect Over,** and then **Dial-Up Networking** and manually enter the number you want to dial.

  NOTE Laplink dials the number exactly as you type it, regardless of how you have set up Dialing Properties in other address book entries.

Other Connection Types

Laplink Gold 12 supports a number of alternate ways to connect. It supports wireless (infrared) CAPI, ISDN, and Internet Locator Services (ILS). Requirements for using these types of connections vary.

Connecting over wireless (infrared)

If you are running Laplink Gold 12 on a Windows 98 or Windows ME computer, you can connect to a Host using infrared. When you start Laplink, the Guest computer automatically detects the Host and opens a connection.

Using Laplink, you can open short-range connections between computers equipped with infrared (IrDA) ports. Wireless connections are only supported in Windows 98 and ME.

NOTE Other wireless devices, such as mobile phones, Aircards and other wireless modems, are treated just like a other 'wired' modems, and can be used with Dial-Up Networking over a LAN or with any other connection method.

See your Windows documentation for instructions on how to setup infrared connections.

TIP When you install the infrared driver, specify any COM port from COM1 to COM9 as the redirected port. In Laplink, click Port setup (Options menu) and enable the same redirected port for wireless communications.

Before connecting by wireless (infrared)

- Make sure both Guest and Host computers are within range of each other.
- Ensure that the wireless port on each computer is enabled in Laplink.
- Run Laplink on both computers.

Connecting by wireless (infrared)

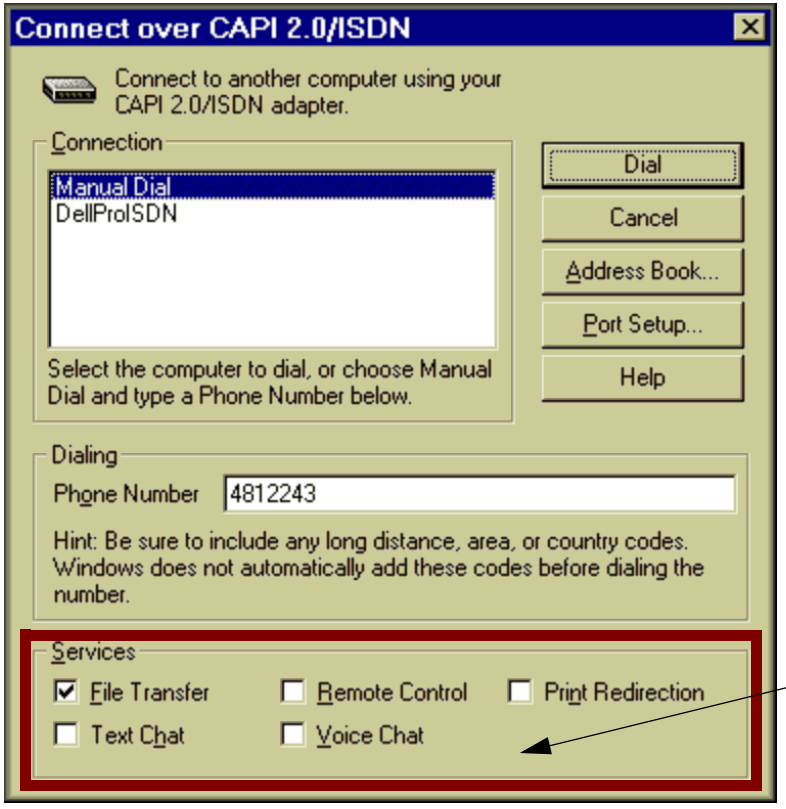
For step-by-step instructions on using wireless (infrared) connections refer to the on-line Help system.

When you start Laplink on both computers, a connection opens automatically over their wireless devices. Autoconnect, the default setting for wireless connections, forces the computers to connect to each other. See "Allowing incoming connections" on page 16". If you change this setting, you can connect to the other computer manually.

TIP If the connection does not open automatically, click **Options,** and then **Port setup** and verify that the appropriate port is enabled.

Connecting over CAPI 2.0/ISDN

If CAPI 2.0/ISDN lines are available on the Guest and Host computers, and if both computers are set up for CAPI 2.0/ISDN communications, you can open a high-speed connection to use Laplink services. CAPI/ISDN options are only available if CAPI/ISDN is already configured for use on your computer. To connect, click the **Connect** pulldown menu and select **CAPI 2.0/ISDN.**



Use C**onnect over CAPI 2.0/ISDN** to link computers wherever the CAPI 2.0 version of ISDN is available.

NOTE Both modems must be ISDN modems. Digital modems cannot communicate directly with analog modems.

NOTE Choose Services **before connecting.** Once you connect, you cannot select more Services to run.

Before using CAPI 2.0/ISDN

- A CAPI 2.0/ISDN adapter and driver must be installed on both computers.
- Both computers must be running a version of Laplink that supports CAPI 2.0/ISDN.
- The security setup of the Host computer (the one you are connecting to) must be configured to allow incoming connections. See "Allowing incoming connections" on page 16".
- CAPI 2.0/ISDN ports must be enabled in Laplink on both computers.
- Laplink must be running on both computers.

Connecting over CAPI 2.0/ISDN

For step procedures to use CAPI/ISDN connections, refer to the online help system.

CAPI 2.0/ISDN is an implementation of ISDN, an international communications standard for sending voice, video, and data over digital telephone lines, at faster rates than those possible using modems.

CAPI 2.0/ISDN is widely used in Europe, particularly in Germany. In North America, ISDN seldom is implemented as CAPI 2.0, but you can still use your ISDN device for high-speed Laplink connections. If you use your ISDN device as a modem, use Connect over Modem in Laplink. If you use it to dial in and logon to a network, click **Connect Over LAN** (Network) in Laplink.

Changing CAPI 2.0/ISDN performance in Laplink

Before using CAPI 2.0/ISDN in Laplink, you may want to customize the way that Laplink responds to CAPI 2.0/ISDN calls and uses the two channels available for Laplink communications. For example, you can specify that Laplink not respond to any incoming calls to a particular channel, or you can double the rate at which data is transmitted over your CAPI 2.0/ISDN connections.

To change CAPI 2.0/ISDN performance in Laplink,

1 Enable a connection.

2 Click **Options**, then **Port Setup**.

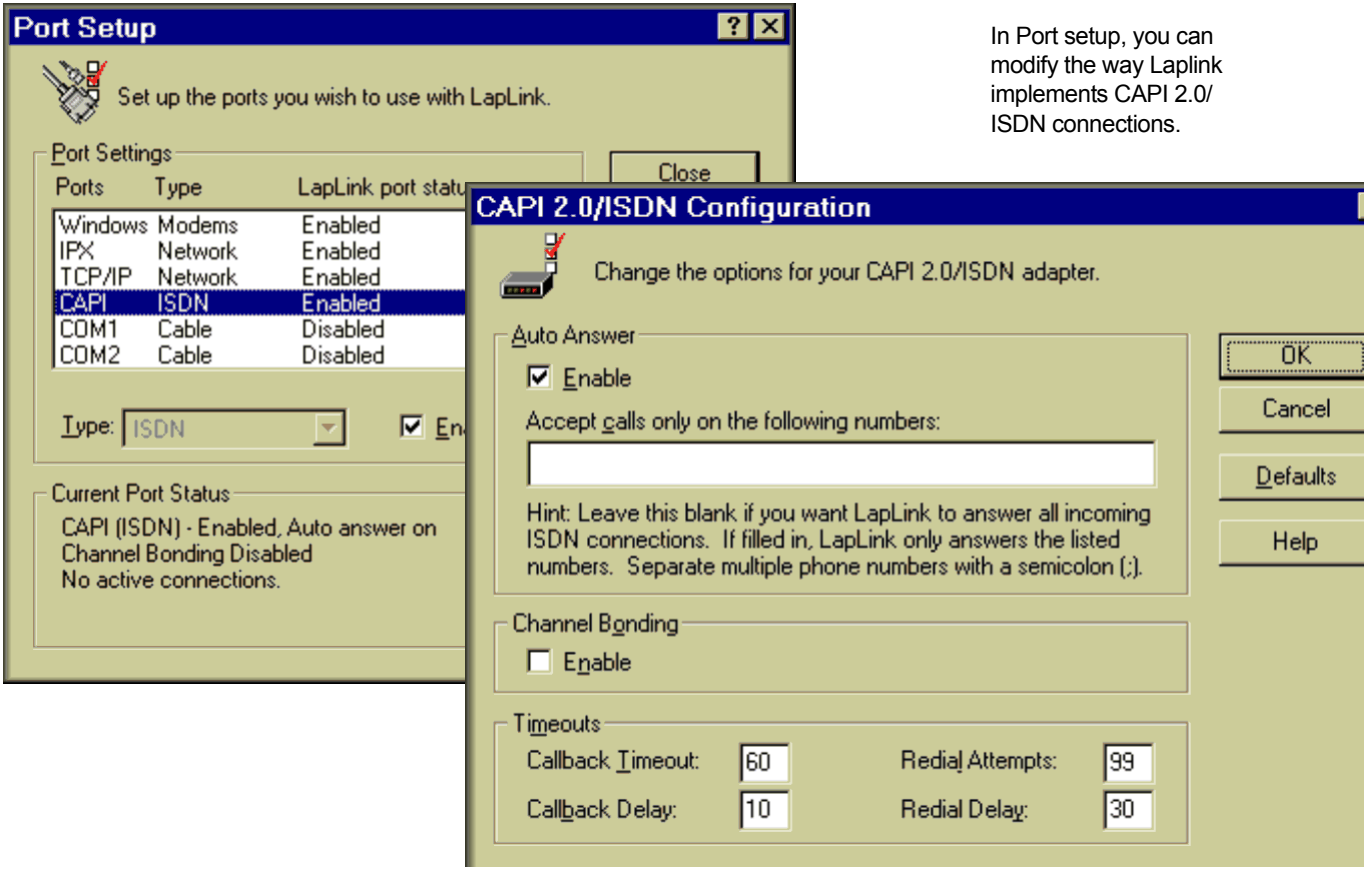
3 Under **Port Settings**, click **CAPI**.

4 Click **Configure**. If you do not want Laplink to answer any incoming CAPI 2.0/ISDN calls, clear **Enable box under Auto Answer**.

5 To answer calls to only one number, type the number in **Accept Calls Only on the Following Numbers**.

6 If you want to combine the two CAPI 2.0/ISDN channels for faster connections, check **Enable** under **Channel Bonding.** Be sure that channel bonding is also enabled on the computer you will connect with.

7 Customize the **Timeout** options as necessary.The **Callback Timeout, Callback Delay**, and **Redial Delay** settings are specified in seconds.



In Port setup, you can modify the way Laplink implements CAPI 2.0/ ISDN connections.

Answering calls

By default, Laplink is set up to answer all incoming CAPI 2.0/ISDN calls on both channels. You can modify this so that it does not answer any of these calls or it answers calls to just one of the channels.

NOTE If you don't want Laplink to answer any incoming calls, clear the **Enable** box under **Auto Answer**.

Ensure that the **Accept Calls Only on the Following Numbers** box is blank.

TIP When typing the number to accept calls to, use only numerals; avoid characters like dashes, parentheses, slants, and periods. When typing more than one number, use a semicolon to separate them.

Channel bonding

CAPI 2.0/ISDN provides two channels that can be used for Laplink communications. Each channel has a transmission speed of 64 Kbps. By combining (“bonding”) these channels, the transmission rate can double to 128 Kbps.

By default, Laplink does not use channel bonding, even when both channels are available. This setting keeps transmission costs to a minimum for users who pay additional fees for each channel connection.

For faster transmissions, enable channel bonding. When both channels are available, Laplink can then transmit at speeds up to 128 Kbps.

> **NOTE** Be sure to enable channel bonding on both computers. Laplink may not be able to make a connection between them otherwise.

When one channel is already in use, Laplink uses the available channel to transmit at 64 Kbps, even when channel bonding is enabled.

Connecting via Internet Locator Service

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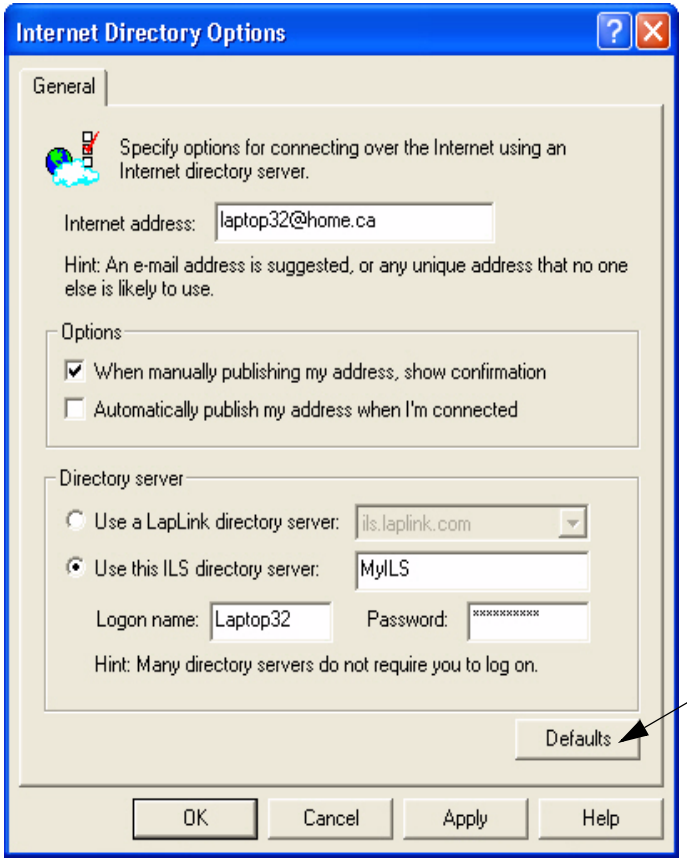
Internet Locator Service configuration window

If you need to connect over the Internet, you will find Laplink Internet to be a fast, easy, and secure method. However, if you are upgrading a prior version of Laplink Gold and you choose to continue using Laplink's Internet Locator service, please refer to the following.



You can use your own ILS directory server or the Laplink ILS server.

NOTE Choose Services **before connecting.** Once you connect, you cannot select more Services to run.

Before you connect over ILS

- Make sure Laplink is configured to publish your ILS address.

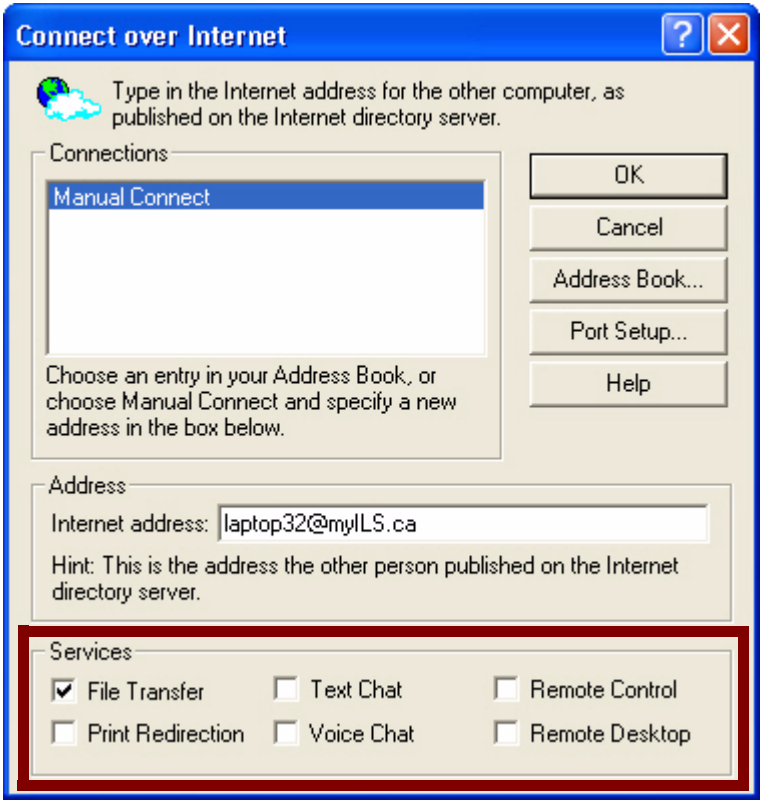
  NOTE ILS connections are configured by clicking **Options,** and then **Internet Directory Options.**
- Know the Internet address of the Host computer.
- Run Laplink on both computers.

Connecting by ILS

For step procedures on using ILS connections, refer to the online help system.

You can manually enter an ILS address to connect to, or if you have one configured in the Address Book, select it from the list of available connections.

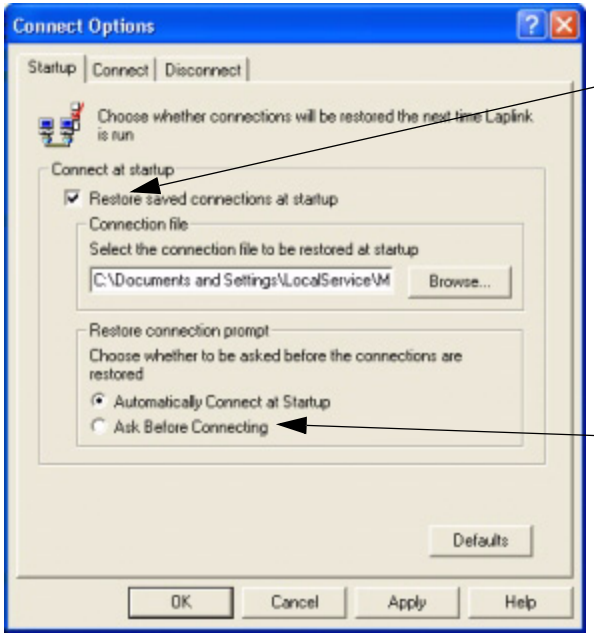
TIP Laplink Internet also allows you to connect over the Internet and does not require firewall configuration.



Description of the Connect Options Dialog Box

Laplink Gold 12 offers instant connectivity so that you can perform any function on a remote computer as if you were sitting at that computer. Connect Options configures all connection settings and alerts. It is important to configure Connect Options before making a connection because configuration cannot be changed once a connection is made.

The Laplink Gold 12 Connect Options control dialog helps you select services and set alerts easily and quickly. You can even choose to have a connection start automatically or prompt you to connect when you start Laplink Gold 12. Check boxes make it simple to enable or disable services used during remote sessions.



Clicking the **Restored saved connections at startup** dialog allows you to save a connection, then have that connection start automatically, or prompt you before connecting, when you start Laplink Gold 12.

TIP Create a folder to save the connection file(s) that you want to have restored at startup. Before closing Laplink Gold 12, make sure that you have the correct connection file selected.

Checking these buttons turns the **Restore Connection** prompt dialog (Ask Before Connecting) on and off.

Choosing Connect Options

In the **Connect Options** dialog box, click **Enable Autoconnect** if you want to enable functions during a remote session. The default setting for **Connect Options** is File Transfer. Other services will not run during a remote session unless you check them first.

In certain cases, you may not want some services to be active during a remote session. Below is a brief summary of services and their functions:

- **File Transfer**

  Enables the Host and Guest to exchange and synchronize files
- **Print Redirection**

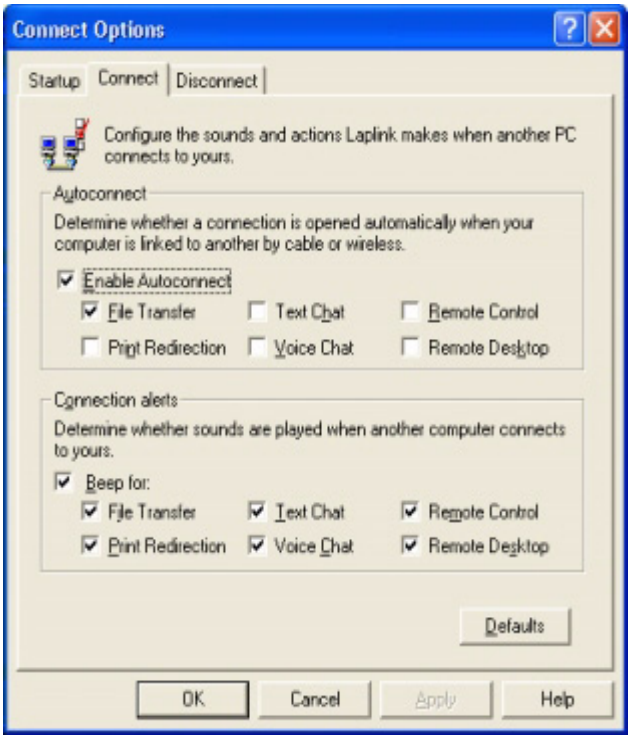
  Enables printing services for Host and Guest to print on either a remote or local printer.
- **Text Chat**

  Enables Host-Guest text chat communications.
- **Voice Chat**

  Enables Host-Guest voice chat communications,
- **Remote Control**

  Enables traditional Laplink Rremote Control.
- **Remote Desktop**

  Enables Laplink Remote Desktop to use the Microsoft Remote Desktop feature in Microsoft Windows XP Professional and Server 2000 and Server 2003 running Terminal Services.



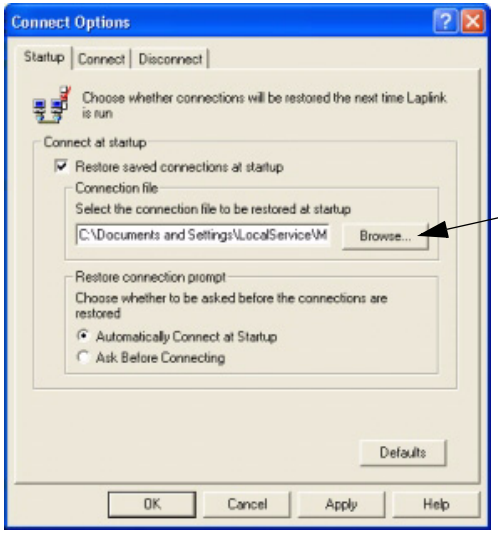
Clicking the checkbox for **Connection Alerts** notifies you when another computer connects to yours to use the services that you select in **Enable Autoconnect**.

Enabling Disconnect options

You can determine whether you want an inactive connection to be automatically closed. Click **Disconnect Inactive Connections,** and then type the desired number in the field.

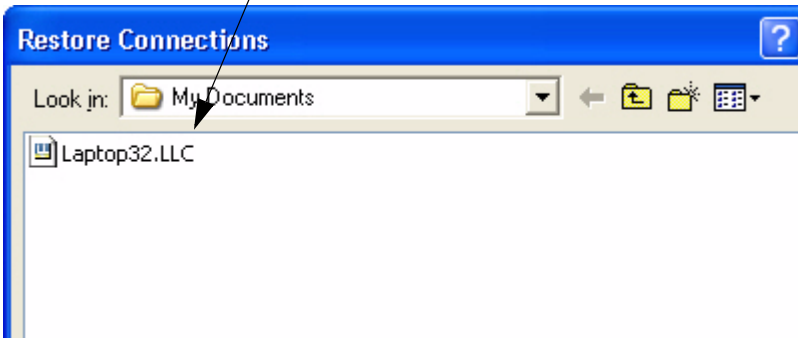
Configuring and Saving Connections

Once you have established a connection, you can save it for easy restoration later. You can restore a saved connection by double clicking a shortcut icon, setting up Laplink to restore the connection automatically when you start Laplink, or restoring the connection while running Laplink. When Laplink restores a connection, it connects to the same computer or computers and opens the same services.



You can restore a saved connection three ways:

- Double-click its desktop icon.
- Set Laplink to restore the **Connection at startup**, whenever you run Laplink.
- **Restore** the connection yourself while using Laplink.



Configuring connections determines how you want you connections to be handled—automatically or manually. Instead of spending time connecting to the same computer and opening the same services time after time, you can save the connection and use the saved connection as a convenient way to reconnect later.

TIP Saving a connection is not the same as creating an address book entry, but another way to access your frequently used connections.

NOTE When you save a connection, you record such details as the number and types of connections (modem, network, Internet, cable), the names of computers, the user name and password if necessary, and the kinds of services in use. Each connection is saved in My Documents as a **.LLC** file. Opening the file reopens the connections and services and arranges windows to appear as before.

Handling Saved Connections

Connect Options determine how you want your saved connections handled - automatically or manually. You can also configure how cable and infrared connections are managed.

You can access these options from the main menu. Click **Options,** and then **Connect Options**. For step procedures on Connect options, view the online help system

Saving a connection

Once you open a connection, select **Connect,** and then **Save Connections...** from the main menu.

Saved connections are not the same as Address Book entries.

> **NOTE** By default connections are saved in the **My Documents** folder. For ease of use, do not change this location as by default, Laplink opens My Documents to look for connections.

Restoring a saved connection

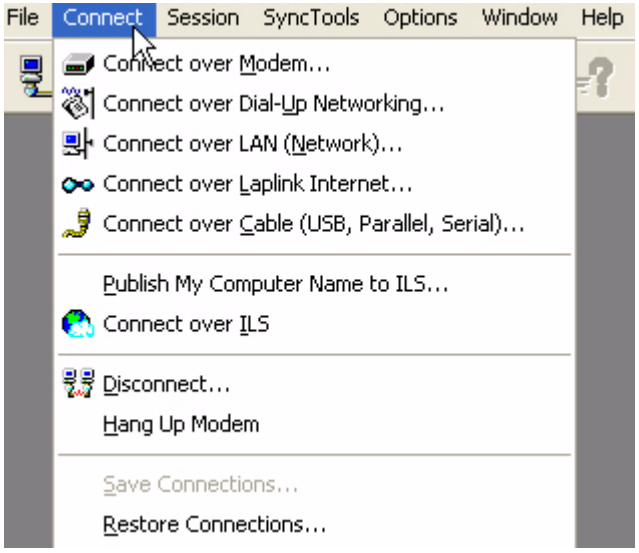
Once you have saved a connection, you can restore it three ways:

- If you created a shortcut icon on your Windows desktop, double-click the icon.
- Set up Laplink to restore the connection when you run Laplink again.
- Open the connection file while running Laplink. From the main menu, click **Connect**, and then **Restore Connection.**

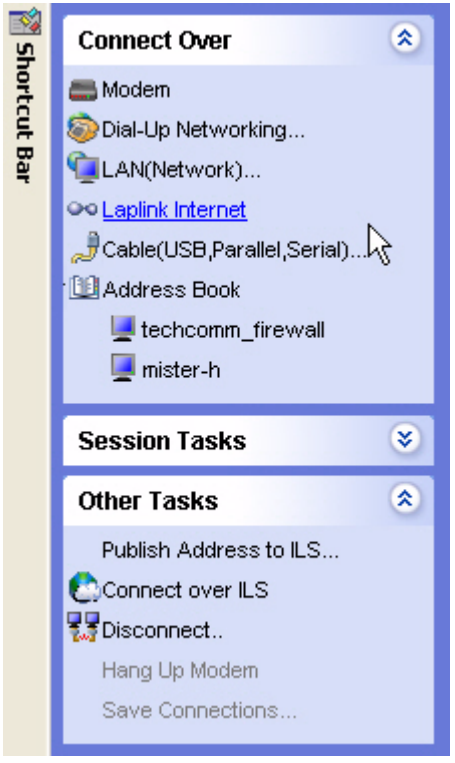
How to Connect

For your convenience, Laplink offers a variety of ways to connect. You can connect from the Address Book (see ""Configuring the Address Book" on page 29, or open a saved connection from its shortcut on your desktop (see "Configuring and Saving Connections" on page 102), or access connection options from the menu bars. Once you have your connections set up and configured, then you're ready to connect!

Connect from the Main Menu



Connect from the Shortcut Bar



You can open the Address Book from the Shortcut Bar.

Your first ten entries in your Favorites are displayed under the Address Book.

6 Remote Desktop & Remote Control

Laplink Remote Desktop & Laplink Remote Control

Laplink Remote Desktop and Laplink Remote Control are two similar but different ways of using Laplink to take over and control a Host computer from a Guest location. Both features have strengths that make them the best choice for specific situations.

About Laplink Remote Desktop

Laplink Remote Desktop feature lets you utilize the WIndows Remote Desktop feature built into Windows XP Professional, Windows Server 2000, and Windows Server 2003 running Terminal Services.

While Windows 98 SE and Windows 2000 computers running Laplink Gold 12 can connect to and establish Remote Desktop sessions with XP Professional and Windows Server 2000/2003 computers running Terminal Services, the reverse is not true. Windows Remote Desktop is not a feature available in Windows 98, Me or XP Home so Remote Desktop sessions cannot be established.

In the event that Laplink Gold 12 detects that the Laplink Remote Desktop session cannot be established, it will automatically establish a Laplink Remote Control session.

About Laplink Remote Control

The Laplink Remote Control feature uses Laplink's Remote Control software, which is installed with Laplink Gold. Laplink's Remote Control software can run on any Laplink-compatible machine. Remote Control sessions can be established between any two Laplink-equipped computers.

With Laplink Remote Control, two Laplink-equipped computers agree that one of them will connect to the other and control its resources.

Terminology

When you open a remote control window with either Laplink Remote Desktop or with Laplink Remote Control on your computer, the computer initiating the session becomes the **Guest** computer and the computer allowing the connection and being control becomes the **Host** computer.

About Laplink Remote Desktop

The Laplink Remote Desktop feature in Laplink Gold 12 enables you to utilize the Remote Desktop feature built into Windows XP Professional and the Windows Terminal Services feature in Windows Server 2000 and Windows Server 2003. This new feature provides an alternative to Laplink Remote Control already well known to past Laplink users.

Windows Remote Desktop on its own allows you to control another machine on your network. However, if either of those computers is behind different firewalls, or not on the same network, or needs to be accessed via the Internet, Windows Remote Desktop cannot be used. When you use Laplink Gold 12 to access Windows Remote Desktop features, you get the best of both worlds. You get Laplink's connection management and the user experience you are used to, and the ability to securely connect through firewalls using Laplink Internet.

Requirements

Before you use Laplink Remote Desktop, you'll need to meet the following requirements on the Guest and Host computers

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What software is available on the Guest computer?	What software is available on the Host computer?	Can I use Laplink Remote Desktop Feature?
Laplink Gold 12	*Windows Remote Desktop and Laplink Gold 12*	*Yes*
	Terminal Services Client and Laplink Gold 12	*No*
	Terminal Services Server and Laplink Gold 12	*Yes*

Enabling Windows Remote Desktop

In order to use Laplink's Remote Desktop connection, Windows XP Remote Desktop must be enabled. To use Laplink Remote Desktop,

1. Click **Start,** and then **Control Panel.** Click the **System** icon.
2. If you can't see the **System** icon, click the **Switch to Classic View** link in the Control Panel Shortcuts menu.
3. Click the **Remote** tab and select the **Allow users to connect remotely to this computer** check box.
4. Ensure that you are either an administrator or a member of the Remote Desktop Users group on your computer.
5. Click **OK**. For more information on using Windows XP Remote Desktop, consult your Windows XP online help system.

About Laplink Remote Control

When you open a Laplink Remote Control window, you can view and operate the Host as if you were sitting in front of it. Images from the Host appear on your screen in a Laplink Remote Control window within the Laplink workspace. In a Laplink Remote Control session, you are a Guest on the Host computer.

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

Requirements

The Host computer must allow you to run a Laplink Remote Control session. See, See "Configuring Security" on page 16.

To optimize performance on your computers see, See "Customizing Laplink Remote Control Performance" on page 125.

Before you use Remote Control

Because Laplink supports multiple connections, you can open Laplink Remote Control sessions on multiple Hosts. Prior to initiating a Laplink Remote Control session, make sure the Host you are going to connect to:

- allows you to initiate a Connection
- grants you permission to use Laplink Remote Control.

For more information see, See "Allowing incoming connections" on page 16.

The Host screen appears on your screen as a window within Laplink. The name of the Host computer appears in the window's title bar. You can move, resize, minimize, or maximize the window as you would any other window. Use the scroll bars to view other parts of the Host screen.

Hosting a Laplink Remote Control Session

For Remote Control to take place the Host needs to be running Laplink—you do not need to be at the computer. Sensitive information is protected by the conditions of the connection. You can grant greater access, or limit these conditions, through the Laplink security system. See “Configuring Security” on page 16.for further information.

When you configure your computer to accept incoming connections you specify who can connect to the computer and the kinds of services they can use. For example, you can limit a Guest to Laplink Laplink Remote Control only, or you can allow access to Text Chat and File Transfer as well. You can even allow a Guest to blank your computer’s screen or disable the mouse and keyboard. All of these options are set in the Laplink security system.

You can leave the Host computer unattended, giving an authorized user exclusive control, 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.

When in a Laplink Remote Control session, both users can end up competing to control the mouse and keyboard, which can be frustrating and confusing for both parties. To avoid this problem, consider using **Host Locking On Connect** to disable the Host machine’s keyboard and mouse, and if you choose, to blank the Host machine’s screen. See See “Disabling the Host keyboard and mouse and blanking its screen” on page 115.” for more information.

TIP A Host can be *controlled* by only one Guest computer at a time. However, other computers can connect using any other services.

What you see on a Host

When a Guest connects and begins Remote Control, your Laplink workspace is minimized on the Host. If you double-click the icon, the Laplink workspace is restored to a window.

At the bottom of the restored Laplink workspace, you see an icon for the Laplink Remote Control connection. The icon is identified by the name of the Guest computer. Clicking this icon displays a Windows menu with standard commands. Clicking Close closes the Remote Control connection.

TIP You can make the Laplink workspace remain a window when a Guest connects: Click Remote Control Options on the Options menu, and then click the Host tab. Clear this box: Minimize Laplink When This Computer Is a Host.

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 Laplink Remote Control, the current Laplink Remote Control connection must be broken on either computer. Then, as the prospective Guest, you open a Laplink Remote Control window and begin controlling the other computer.

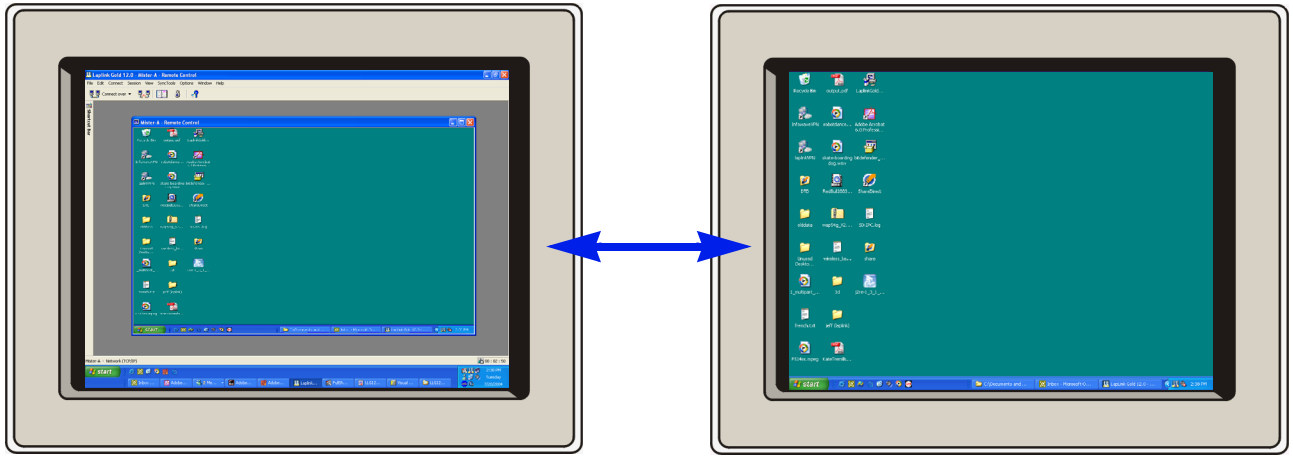
To avoid breaking the network connection when a Laplink Remote Control connection is closed, make sure that there is at least one other service window open, such as File Transfer. If Laplink Remote Control is the only service in use, open another service window *before* closing Laplink Remote Control.

Controlling a Laplink Remote Control Session

As the Guest, you control the Laplink Remote Control session. You can determine if the Host has access to its computer while you are in control. You can modify how the Host screen is displayed. You have a shared clipboard between the computers, can take screenshots on the Host and save them to the Guest, and share system information. This section walks you through all options and functions you have for controlling a Host.

Viewing the Host

As a Guest, you can alternate between two views of the Host screen. Your first view appears in a window within Laplink. Inside the window, you control the Host; outside the window, you perform other tasks, in Laplink or in other applications on your computer. Switch to a full-screen view when you want to maximize your view of the Host and use Laplink Remote Control exclusively. When you cannot see the entire Host screen even in full screen, you can change the resolution of the Host screen or scale its image to fit within your view.



To alternate between a window and a full-screen view of the Host, press CTRL+SHIFT+F.

Devoting your entire screen to a view of the Host

You can view the Host screen in two ways:

- In a window within Laplink (the default)
- As a full-screen display, hiding Laplink and the rest of your Windows workspace

In a window view, you have quick access to File Transfer, Text Chat, and other Laplink features. You can also switch to other applications on your computer.

To maximize the area in which you view and control the Host, switch to a full-screen view. Your entire screen is now devoted to controlling the Host; you do not have access to your own applications. When you want to do something other than control the Host, switch back to the window view.

To switch between window and full-screen view:

- Press **CTRL+SHIFT+F**.

  TIP In full screen, you can also switch to a window from the copy of Laplink running on the Host: If Laplink is an icon, click it to restore it to a window. Then click the icon representing your Laplink Remote Control window, and click Guest Full Screen to clear the check mark.

  TIP To make Laplink Remote Control alternate between full screen and window bypassing the window view, click **Options,** and then **Remote Control Options.** On the **Guest** tab, check the **Always Use Full-Screen** box.

Viewing the entire Host screen at once

There are two ways to fit the Host screen into your view. For step procedures, see the online help system.

- From your computer, lower the resolution of a higher-resolution Host screen to match that of your screen.
- Scale the image of the Host screen to fit within your view by pressing **CTRL+SHIFT+S**.

Temporarily changing the resolution of the Host display adapter When using a laptop to control a desktop, you often can't view the entire Host screen at once if the desktop operates at a higher screen resolution. From your laptop, you can lower the desktop's screen resolution to match your laptop's.

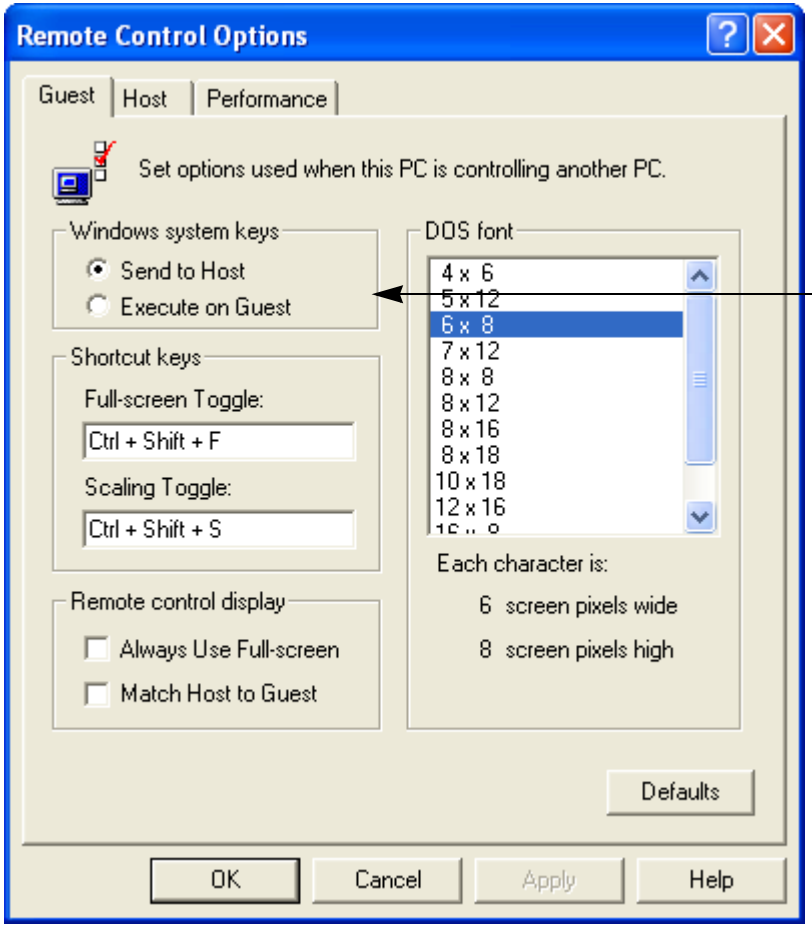
NOTE You cannot lower the resolution of a Host computer unless its monitor and display adapter allow the change without restarting Windows. The Host must also be running a version of Laplink that supports this feature.

You can then view all of the Host screen in full-screen view. The original resolution is restored automatically on disconnect or at your direction.

Scaling the image of the Host screen to fit You can also view the entire Host screen at once by scaling the image to fit within the Laplink window. You always see all of the Host's screen, whether you are working in full screen or window, though the image may be distorted or compressed.

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 working in a Laplink Remote Control window, select **Options > Remote Control Options** > **Guest tab > Execute on Guest**. Through Remote Control Options, you can also change the key combinations that control your view of the Host.



TIP When you are working in a Remote Control window click **CTRL+TAB** and other Windows system keys you press on your computer (the Guest) take effect on the Host.

To have system keys take effect on your computer instead of the Host computer, click **Execute on Guest.**

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. The Windows Start key found on most keyboards is another example. By default, Laplink sends most system keys to the Host during Laplink Remote Control: pressing ALT+TAB on the Guest therefore switches to the program last used on the Host.

You can make system keys work on your own computer when you are working in a Laplink Remote Control window.

TIP Windows system keys (except CTRL+ALT+DELETE) always take effect on the Host when you are using Laplink Remote Control in the full-screen view.

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

Laplink 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 page 111 for more information.)

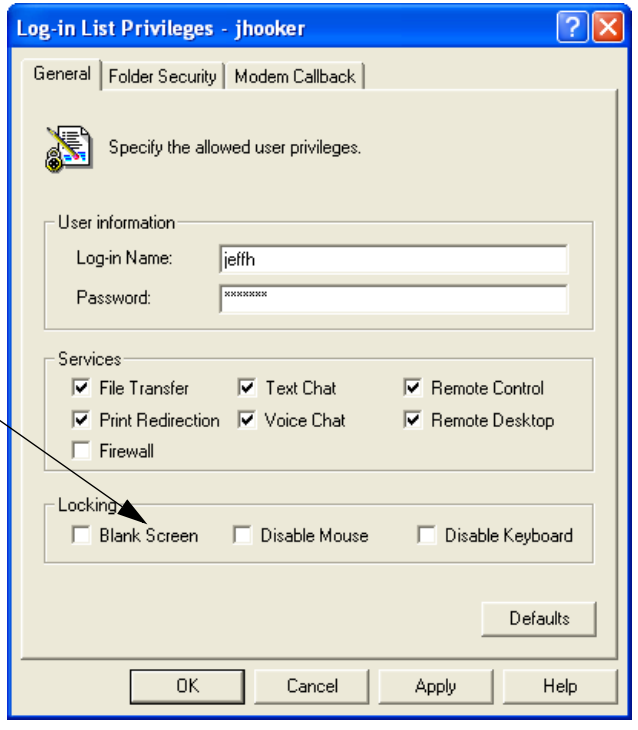
You can change these default key combinations to certain other combinations. (To avoid interference with other Laplink and Windows shortcut keys, you are limited in your choice of replacements.)

Disabling the Host keyboard and mouse and blanking its screen

From a Guest computer, you can ensure privacy and prevent interruptions at the Host by disabling its keyboard and mouse and blanking its screen. To perform any of these "locking" operations from the Guest, click the appropriate command on the Session menu. On the Host, you must allow locking by changing the default security setup.

On the Host: Allow users to blank the screen and disable the keyboard and mouse when you grant them access through the Log-in List.

On the Guest: Blank the Host screen and disable its keyboard and mouse through the Session menu.



Configuring a Host for locking

You can configure a Host to determine who can lock it and how it will be locked. Guests cannot lock the Host without your permission, and locking privileges you grant cannot be changed during a Laplink Remote Control session.

Whether you permit any kind of locking depends on how you intend to use Laplink. If you want to use Text Chat, for example, there should be no locking.

You grant locking permission by changing the security setup on the Host computer: On the Shortcut Bar, click **Security,** and then choose from the following two options:

- Set up a **Log-in List** by specifying Log-in List (Protected System) and adding one or more entries. In each entry, check any of the three boxes under **Locking Permissions**. The permissions apply only to Guests whom you provide with the appropriate log-in name and password. For more information about setting up a Log-in List, see "Allowing incoming connections" on page 16
- If security is not an issue, open the system to any Laplink user by clicking **Anybody** (Public System). Click **Public Privileges,** and then on the General tab, check **Remote Control** box, and then check any of the three boxes under Locking Permissions. The permissions apply to all Guests.

Locking the Host from the Guest

With the permission of the Host computer, you can:

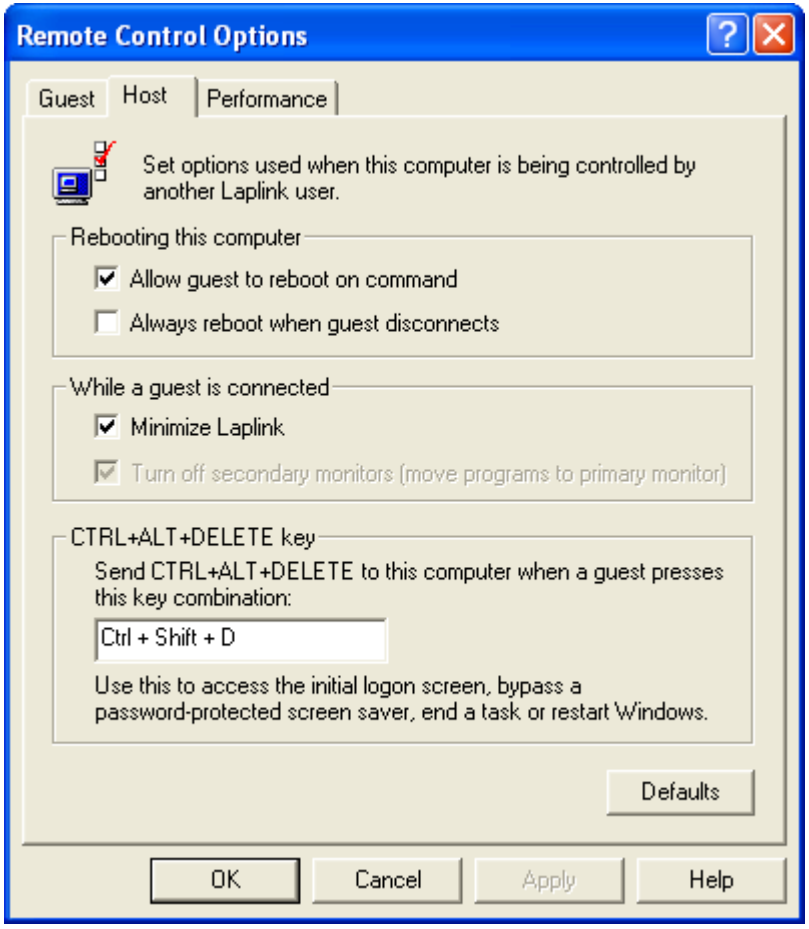
Blank the Host screen The Host's screen is darkened, preventing your work from being viewed at the Host.

- **Disable the Host mouse** The Host's mouse is locked, preventing anyone at the Host from using the mouse to interrupt your work.
- **Disable the Host keyboard** The Host's keyboard is locked, preventing anyone at the Host from using the keyboard to interrupt your work.

  TIP Through the **Address Book**, you can request the kinds of locking you want to take effect as soon as you open a Laplink Remote Control session. Your requests will be honored as long as they are allowed by the Host. For information on using the Address Book to make connections, see "Configuring the Address Book" on page 29

Rebooting and logging on to the Host

From a Guest computer, you can reboot a Host computer and restart Windows. To reboot a Host from the Guest during Laplink Remote Control, click the **Reboot Host** command in the **Session** menu. To configure a Host for rebooting and restarting Windows, click **Remote Control Options** on the **Options** menu.



On the Host: Allow users to reboot the computer in **Remote Control Options**.

On the Guest: Reboot the Host from the Session menu.

Rebooting the Host from the Guest

From a Guest computer you may want to restart a Host to put into effect changes you have made on that computer. Or you may want to restart a Host computer to ensure that no one else can call in after you disconnect.

To reboot the Host from the Guest during Laplink Remote Control:

- On the Session menu, click Reboot Host.

  If Reboot Host is dimmed on the Session menu, the Host has not set the option to allow rebooting by a Guest.

Logging onto Windows 2000, XP or 2003 from the Guest

You must always press CTRL+ALT+DELETE before you can log on to Windows.

To send CTRL+ALT+DELETE to the Host, do one of these:

- Press the key combination specified for this purpose on the Host. By default: **CTRL+SHIFT+D**.
- On the Host's Session menu, click **Send CTRL+ALT+DELETE** to the Host.
- Click the **Remote Control** icon at the bottom of the Host's Laplink workplace, and then click Feed **CTRL+ALT+DELETE**.

Configuring the Host for rebooting

You must configure a Host to allow any Guest to restart it during a Laplink Remote Control session. You can also require that the Host be restarted whenever a Laplink Remote Control connection is disconnected.

To configure a Host computer for rebooting:

- Click Options, then the **Host** tab in **Remote Control Options,** and check either or both of these boxes:
  - **Allow Guest to Reboot on Command** Check this box to allow Guests to restart the Host using the Reboot Host command on their computers.
  - **Always Reboot When Guest Disconnects** Check this box to require that the Host be restarted whenever a Guest breaks a connection or the connection is broken accidentally.

Ensuring access to the Host after a reboot

At the same time you are configuring a Host for rebooting, you can configure it so that a Guest can resume a Laplink connection after the Host is rebooted. You can do this by setting up Laplink to run whenever Windows is started.

To configure a Host so that it automatically runs Laplink each time Windows is started:

- On the Advanced tab of Program Options (Options menu), check **Always Start Laplink before Windows Logon Prompt**.

When a Windows 2000, XP or 2003 Host requires the user to press CTRL+ALT+DELETE at logon, a Guest can press a special key combination specified on the Host.

To specify the key combination for CTRL+ALT+DELETE:

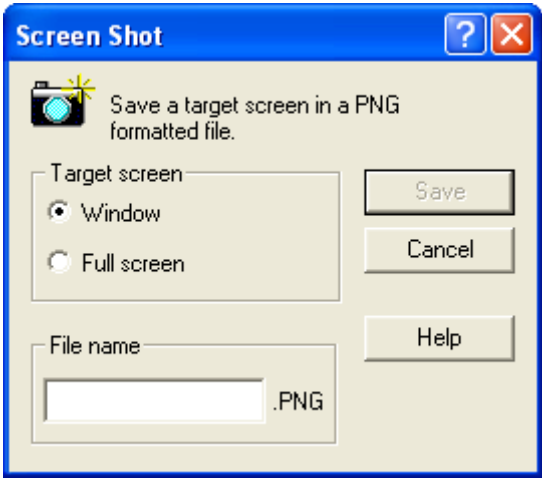
- Click **Options**, and then the **Host** tab in **Remote Control Options**, and change the key combination in this box: Send **CTRL+ALT+DELETE** to this computer when a Guest presses this key combination.By default, it is CTRL+SHIFT+D.
- Press one of the chosen key combinations

Screen Shots & System Information

Laplink now allows you to snap a screen shot from the Host computer and save it to your hard drive during a Laplink Remote Control session. This is very useful for capturing error messages, odd displays, or other behavior that might be hard to describe. Using **Screen Shot** saves technicians time when troubleshooting.

Taking a screen shot

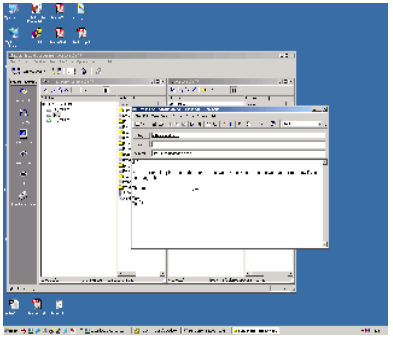
To take a screen shot, you must first establish a Remote Control session with a Host computer. Once this connection has been established, select **Session,** and then click **Screen Shot** to take a snapshot of the Host desktop. You will see the dialog box below.



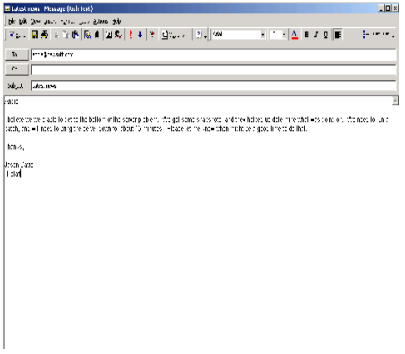
Window or full screen?

Laplink allows you to take two different types of screen shots. If you use Window, you will get a snapshot of the current active window on the remote desktop. Choosing **Full Screen** will provide you a picture of the entire remote desktop screen. View the difference below:

Full Screen view



Window view



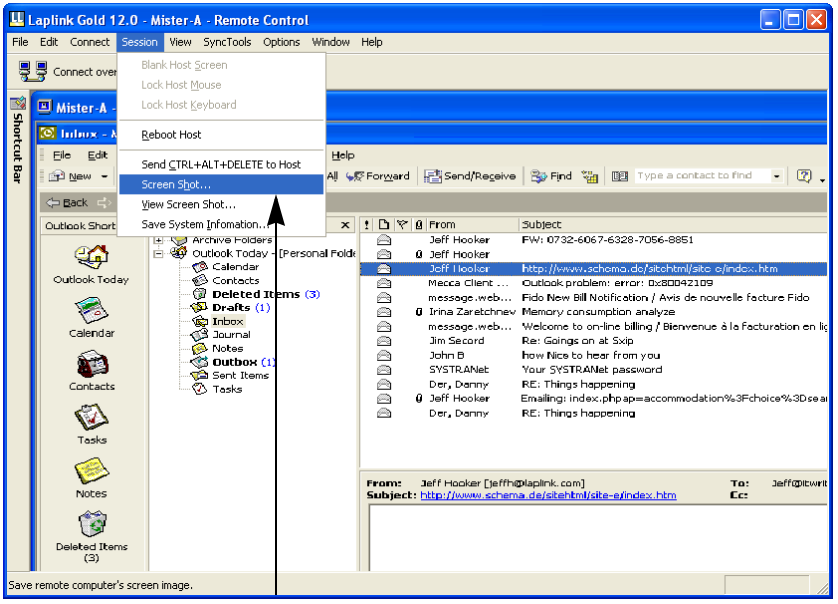
Saving a screenshot

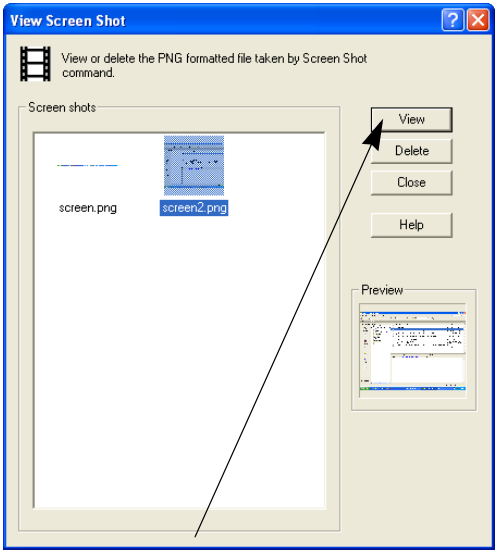
Once you've taken a snapshot of the screen, you can save it to your hard drive for later viewing. Laplink saves the snapshot as a PNG file, which by default are viewed with Internet Explorer.

NOTE Internet Explorer 5.0 or higher must be in use in order to view PNG files.

Viewing a screen shot

To review snapshots you've taken, click on the Session menu, and select View Screen Shot. This opens the View Screen Shot dialog, where you can view thumbnail screens of your snapshots, view them full screen, and delete screenshots you no longer need. You can view captured screens any time, whether connected or not.





Highlight a thumbnail, and click View to view captured screens.

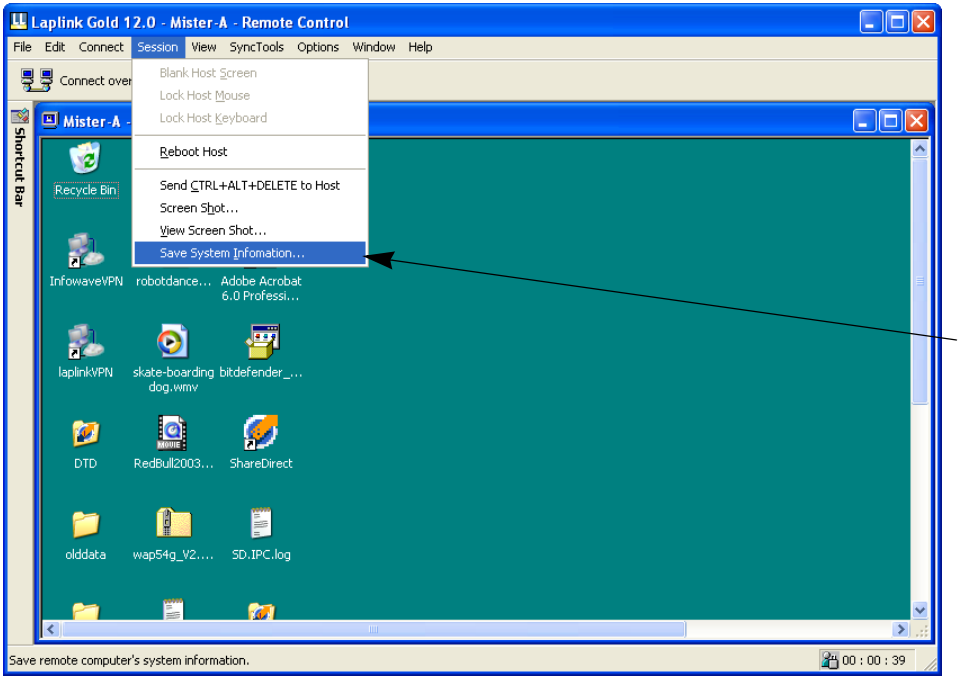
Select Session, View Screen Shot to access previously captured screens.

From the Session menu, choose **View Screen Shot**. Viewing is enabled both during a session and when not connected and is the only Session option available when not connected. Once you've selected a thumbnail snapshot, and clicked **View**, Laplink launches Internet Explorer or whatever application your computer has associated with PNG files.

TIP If you want to access the PNG files themselves, Laplink Gold saves them to the C:\WINNT\TSI32\LLW directory.

Saving system information

Laplink makes it possible to capture important system information on the Host computer, and save it to a file on your local machine. This troubleshooting tool provides your support professionals with a single report offering a great deal of useful information.



To save system information from the Host computer to your local machine, you must first be connected via a Laplink Remote Control session.

Once this connection has been established, click **Session,** and then **Save System**

Laplink saves all Windows system information from the Host computer, and exports it to your computer. For this reason, you'll see a dialog asking you where the information should be saved. Indicate a location and the Host computer's information will be saved as a text file in the indicated location.

Creating a report

Laplink creates a report that saves your Windows System Information. Below are just a few of the headings of information contained in your Laplink report.

- System summary information
- Hardware resources
- IRQ information
- Memory
- Components
- Audio and Video Codecs
- Devices
- Display
- Keyboard
- Adapters

Sharing clipboard information

Computers in a Laplink Remote Control connection share a common clipboard: you can copy or cut information to the clipboard on one computer and paste this information on another.

When you cut or copy information for pasting in another document, the information is stored temporarily in the clipboard. Normally, clipboard information is transferred between documents on the same computer. When you use Laplink Remote Control, however, you can use the clipboard to transfer information from one computer to another. You can copy text or graphics on the Host computer, for example, and paste it on the Guest.

Only information placed in the clipboard *during* Laplink Remote Control can be pasted on other computers. You cannot share any information copied or cut to a clipboard before a Laplink Remote Control connection is opened.

TIP When you clear the contents of the clipboard on one computer, you clear the clipboard contents of the other computer as well.

Pasting from the clipboard during Laplink Remote Control

When you copy or cut information to the clipboard during Laplink Remote Control, only a small part of the information is transferred to the other computer immediately. The rest of the information is transferred when you paste.

To prevent the loss of information added to the clipboard from the remote computer during Laplink Remote Control, paste the information before disconnecting.

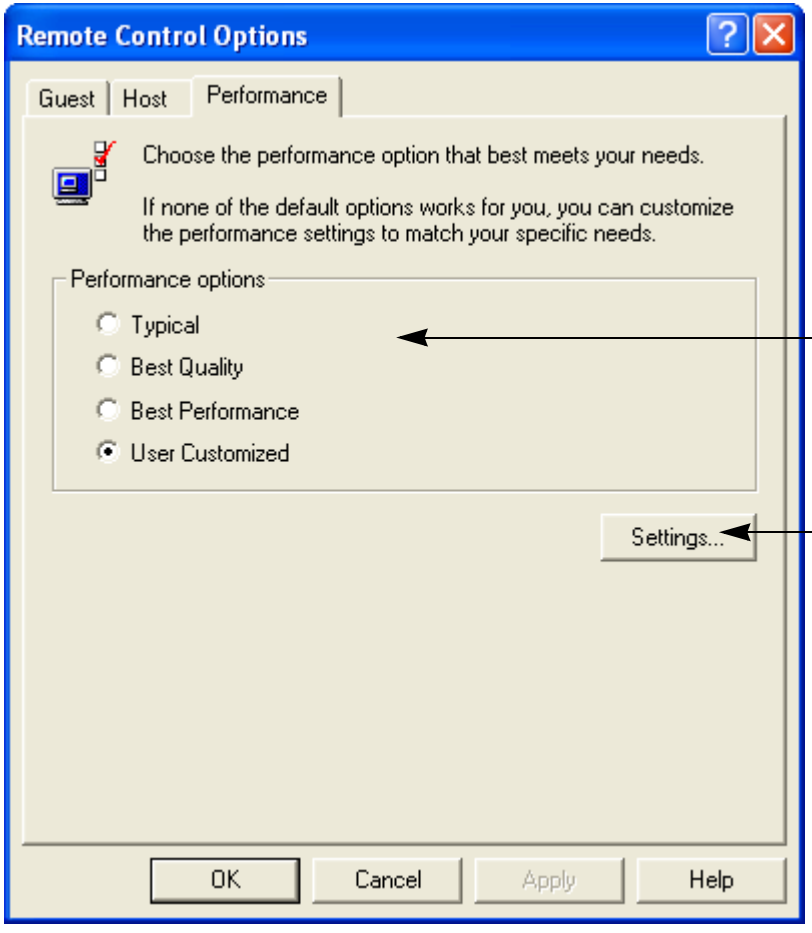
If you are controlling several Host computers, information in the clipboard on your computer is available to any of them. If you want to transfer clipboard information from one computer to another, however, you must first paste the information into a document on your Guest computer; then paste it into a document on another Host computer.

Disabling clipboard sharing

By default, clipboard sharing is available during Laplink Remote Control sessions.

Customizing Laplink Remote Control Performance

As a Guest, you can change several Laplink Remote Control settings either to speed up performance or to enhance your view of the Host screen. When speed is your priority, change the settings to enhance performance. When you want the best view of the Host screen, turn off the performance enhancements.



Click one of the preset options.

Or click the Settings button and specify your own settings.

TIP Choose between enhancing your view of the Host screen and speeding up Laplink Remote Control performance.

To improve Laplink Remote Control performance, Laplink temporarily alters the Host screen by removing its wallpaper, screen saver, and other visual enhancements. You can restore any of these enhancements. Or you can improve performance even more by minimizing the number of bitmaps and bitmap colors transferred over a connection.

Click the **Settings** button in **Remote Control Options** to change the quality of your view of the Host screen without affecting the Host screen itself.

On the Guest Display tab, adjust these options:

Send Font Information Displays text and symbols on the Guest computer. Checking this box speeds display performance but may not present the most accurate representation of text and symbols.

Prevent Display of Large Bitmaps Determines the size of the largest bitmap to be displayed in your view, ranging from 32 by 32 to 512 by 512 pixels. Choosing a smaller size improves performance but may cause bitmaps not to appear in some dialog boxes, wizards, and buttons. (Experiment with the setting, increasing it as necessary to display larger bitmaps.)

On the Guest Colors tab, adjust these options:

Use Solid Colors Displays solid colors instead of dithered, or patterned, colors. Performance is not affected, but your view of the Host may improve.

Bitmap Color Selects the palette used to display bitmaps. The values range from Monochrome to True Color (24 bit). Choose a palette with fewer colors to improve performance.

Temporarily changing the Host screen

Click the **Settings** button in **Remote Control Options** to alter your view of the Host by changing the appearance of the Host screen itself. When you disconnect, the Host screen is restored to its original appearance.

On the **Host Display** tab, change these settings:

Disable Screen Saver Keeps the Host's screen saver from running.

Disable Special Windows Effects Disables several Windows features, including desktop wallpaper or patterns, animated windows, and Web Page view.

7 Using Print Redirection

Using Print Redirection

There are two ways to print over a Laplink connection. While controlling a Host computer, you can print from that computer directly to your local printer. Or reverse direction and print directly from your Guest computer to a Host printer. Either way, you can use Print Redirection to send a document over Laplink to be printed at the opposite end of the connection.

Once you have opened a Laplink connection, you can use Print Redirection to send a document from the computer at one end of the connection to a printer at the other end.

There are two ways to use Print Redirection over a Laplink connection:

- **Print from Host to Guest** While using Remote Control to view and operate a Host computer, you can send a document from the Host computer to a printer at your location. For example, you can prepare a document on your office computer from home and print the document on your home printer.
- **Print from Guest to Host** When connected to a Laplink Host computer, you can print a document from your computer to a printer attached to the Host. For example, after working on a report at home or on the road, you can connect to your office computer and print the report to a high-quality laser printer in your office.

  Without Print Redirection, you'd have to transfer the document to the other computer and then use Remote Control to run a program on the guest computer and print the document.

Printing a document over a Laplink connection is much like printing it on a local printer; all you do is choose the Print command. In Print Redirection you select the printer at the opposite end of the connection from the document.

Requirements for Print Redirection

To print documents from a computer to a printer at the other end of a Laplink connection, you need to set up the destination printer on that computer, using the exact same driver. If you want to print reports on the office printer while at home, for example, set up the office printer on your home computer.You setup a printer for Print Redirection using Print Redirection options in Laplink.

Requirements for using Print Redirection:

- You must connect to another version of Laplink that supports Print Redirection.
- The default security setup on the other computer must be changed to allow Print Redirection.
- Both Laplink computers must have the same printer driver (software) installed.

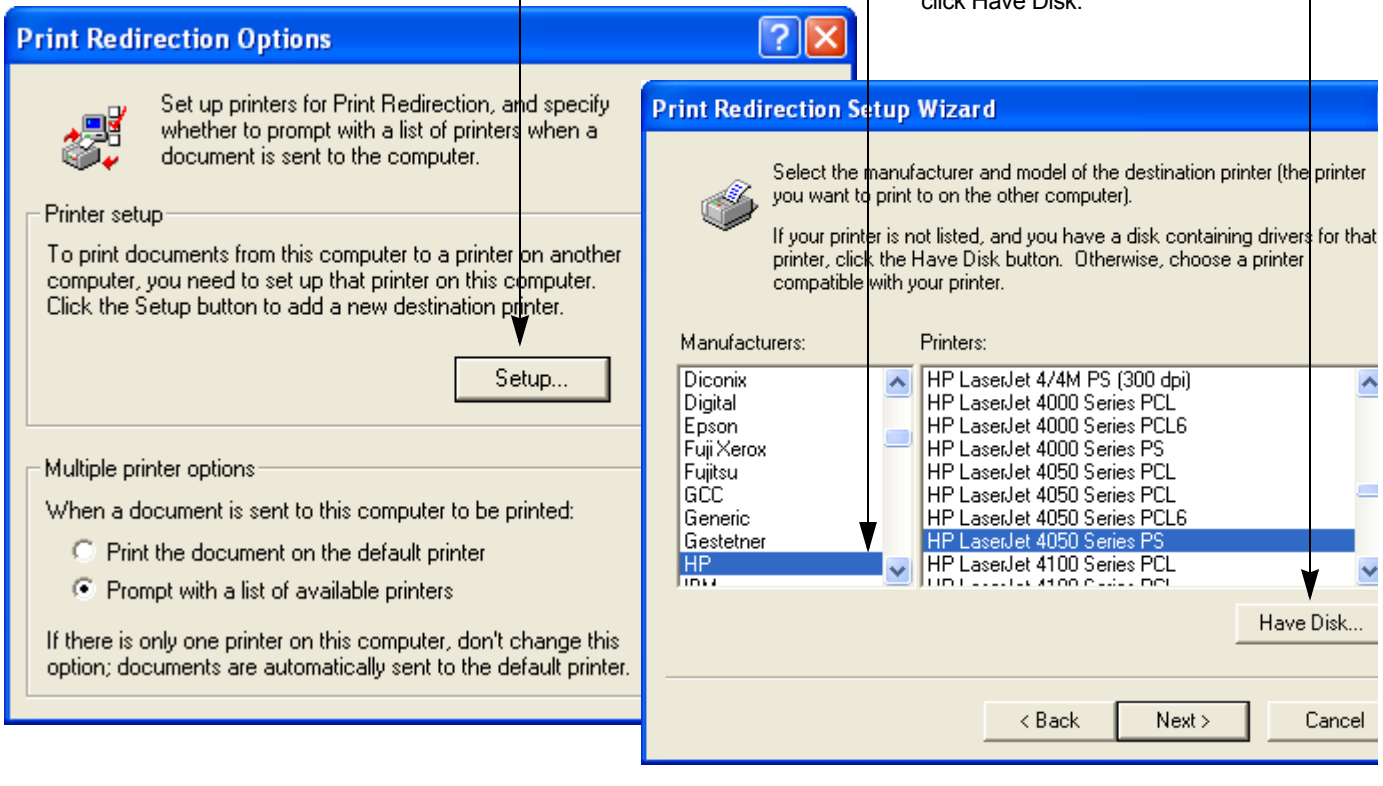
Setting up Print Redirection

To print documents from a computer to a printer at the other end of a Laplink connection, you need to set up the destination printer on that computer. If you do not set it up while installing Laplink, you can set it up later, using the Print Redirection Options.

To set up a new printer, click the Setup button in the Print Redirection Options dialog box.

Choose the printer from the list.

If your printer arrived with a setup disk, click Have Disk.



Before you can use Print Redirection, you need to add a printer for Print Redirection to the computer from which you'll be printing.

For example, if you're remote controlling your office computer and want to print a document on that computer to your printer at home, you need to set up your home printer on the office computer.

The print driver you set up must match the destination printer exactly. Use the same installation method—CD ROM, downloaded driver—on both computers.

CAUTION Using the Printer Redirection wizard in Laplink Gold will not ensure that both computers are using the same printer drivers. For more information about configuring a printer for Laplink Printer Redirection, see technical document #36 at www.laplink.com/support.

Setting up a printer

To set up a printer, click **Options,** and then click **Print Redirection Options.** Then click **Setup** to access the **Print Redirection Setup Wizard.** Just as in Windows, you can choose your printer manufacturer and printer name from a list, type a name for your printer, and then click **Finish.**

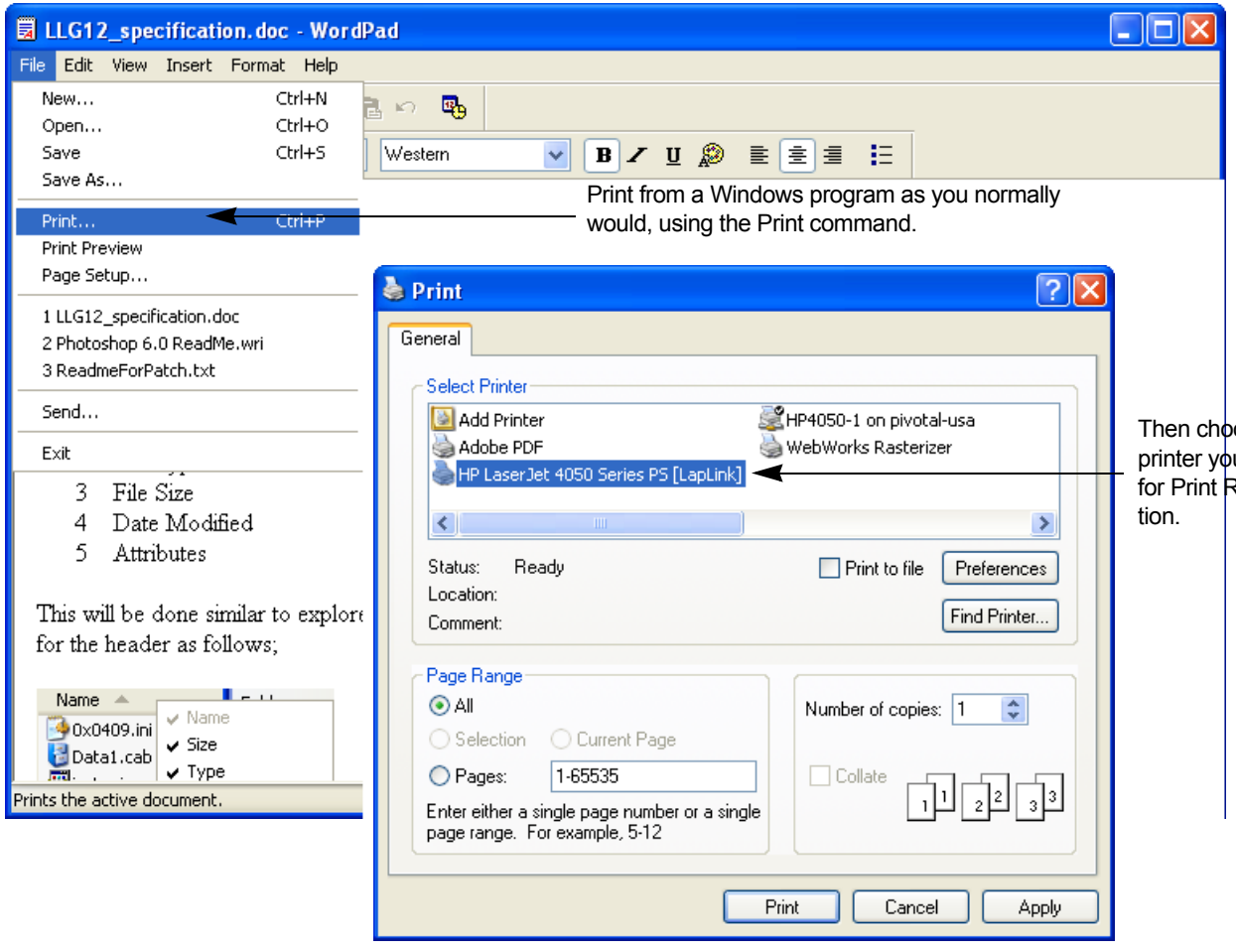
For step procedures on installing print drivers, see the online help system or manufacturer's documentation.

Once the printer is set up, you can print to it, and your document is sent over your Laplink connection.

NOTE In order to print, Laplink must be installed and connected on both computers.

Printing Over a Laplink connection

To print over a Laplink connection, choose the standard Print command in any Windows program and then choose a printer set up especially to receive print jobs from remote computers. The document is then transmitted over the Laplink connection to a printer at the other end.



Printing over a Laplink connection is much like printing to a local printer. You simply choose a different printer—one that has been installed especially to print over Laplink.

When printing from a Host computer to a local printer, choose a local printer from the Host computer using Remote Control. When printing from local to a Host computer, choose a Laplink printer from the local computer.

For detailed instructions on setting up and using Print Redirection, see the on-line help system.

Printing tips

There are a couple of items to note when you are using Print Redirection:

- The Print Redirection icon on the Laplink status bar animates as the document is sent over a Laplink connection to the destination printer. When the animation ends, the document has arrived at the other computer. You can then close Laplink if you want.
- You can monitor the document print status after it has been sent over a Laplink connection. On the computer to which the printer is attached, click **Windows Start**, point to **Settings**, and click **Printers**. Then double-click the printer icon.
- You can use Print Redirection over a Laplink connection even when it is not one of the services currently open. Print Redirection is available on demand.

Choosing among several printers

Normally, Print Redirection sends documents to the printer that has been set up as the default printer on the connected computer. If you send a print job from home to the office, for example, the printer designated as the default on the office computer automatically gets the job. (If there is only one printer set up on a computer, that printer is always used.)

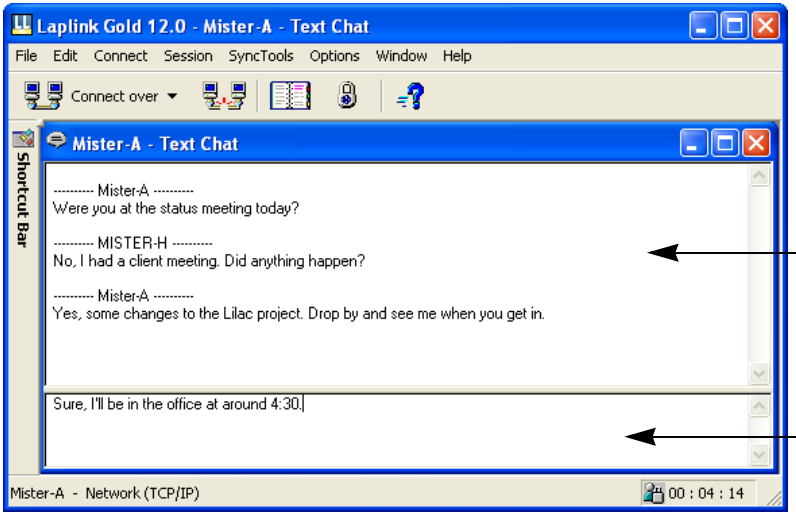
If you want to use a printer other than the default, you need to set up Laplink to prompt you with a list of available printers whenever you print. Change this setting on the computer the printers are attached to, *not* the computer with the document.

TIP If you're not in front of that computer, you can still change this setting by using Remote Control.

8 Using Text & Voice Chat

Using Text Chat

Text Chat lets you exchange typed messages with another Laplink user. Text Chat is useful for exchanging brief messages and sending instructions. If you have a microphone, sound card, and speakers, you can also use Voice Chat.



Opening Text Chat

For step-by-step instructions on using Text Chat, see the on-line Help system.

To open Text Chat select the service when you connect to the Host. If you have an active connection Text Chat can be opened from the Window menu or the Shortcut bar.

Text Chat options

You can configure a Text Chat window to open anytime someone sends you a message. Text Chat is configured from the Options menu.

Working in Text Chat

The Text Chat window is divided in two. The lower section is where you type your message. Messages are received and displayed in the upper section.

TIP To start a new paragraph, press **CTRL+ENTER**.

Text Chat supports cut/copy and paste from any text editor. Instead of typing messages while connected, you can pre-

pare them ahead of time and paste them into the Text Chat. This is especially useful if you have an urgent message to send to multiple Laplink computers.

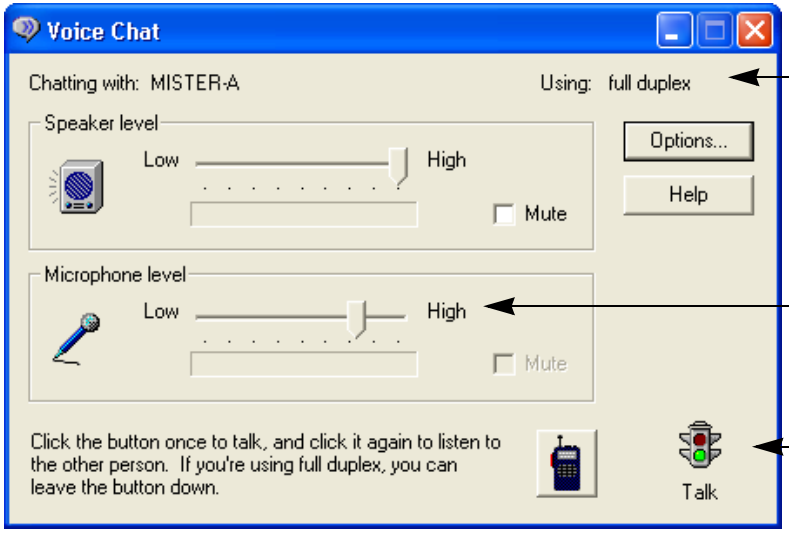
Text Chat and Remote Control

As a Guest during Remote Control, you can carry on a Text Chat conversation with the Host (the computer you are connected to) only by viewing the Host screen in a window. (In full-screen view, you cannot see your own Text Chat window.)

To arrange the Text Chat window beside the Remote Control window, click Tile Side by Side on the Window menu.

Using Voice Chat

Voice Chat lets you speak with a person at the other end of a Laplink connection using the same line that transfers data between the two computers. Both computers must be configured for full duplex if you are to talk as you would on the telephone. If either computer is configured for half duplex, you must wait for the other person to stop talking before you begin speaking.



TIP How you talk to the other person in Voice Chat depends on whether the current conversation is using half duplex or full duplex.

You can adjust the volume of the speaker and microphone or mute them entirely.

When you're using half duplex, watch the icon to determine when to talk and when to listen.

Requirements for Voice Chat

To use Laplink Gold Voice Chat you need:

- A computer that is capable of recording and playing sound.
- Microphone.
- Speakers or headphones.
- Sound card; a full duplex sound card is recommended.

Opening Voice Chat

For step-by-step instructions on using Voice Chat, see the on-line Help system.

To open Voice Chat select the service when you connect to the Host. If you have an active connection Voice Chat can be opened from the Window menu or the Shortcut bar.

TIP If you have opened a connection to multiple remote computers, select a window for the connection *before* starting Voice Chat.

Talking with Voice Chat

Adjust your speaker and microphone volumes so that you can hear and be heard comfortably.

TIP For best performance, use Laplink, not Windows, sound control levels.

Depending on the configuration of the sound card in both computers, you may be able to talk as you would on a telephone; that is, your voice and the voice of the other user can be transmitted simultaneously. This is known as full duplex.

If you and the other user are not using full duplex, you must talk as you would on a walkie-talkie; that is, you must wait for the other person to finish before you begin. The transmission of just one voice at a time is known as half duplex.

Voice Chat conversations are always half duplex unless both sound cards are configured for full duplex.

NOTE Over slower connections, you may not be able to use full duplex, because of the lower bandwidth of the connection.

Talking using half duplex

When you are having a half-duplex conversation, refer to the stoplight icon in the lower right corner of the Voice Chat window to know when you can talk. When the light is green or the text says “Talk,” you can talk. When the light is red or the text says “Don’t Talk,” you should wait until the other person has finished talking.

TIP Saying “over” when you are finished talking may help facilitate conversation.

Configuring your sound card for full duplex

Some sound cards can be reconfigured for full duplex by updating to new sound card driver software. Contact your sound card manufacturer to find out whether your sound card is capable of full duplex. Updated sound card drivers are usually available on the manufacturer’s website.

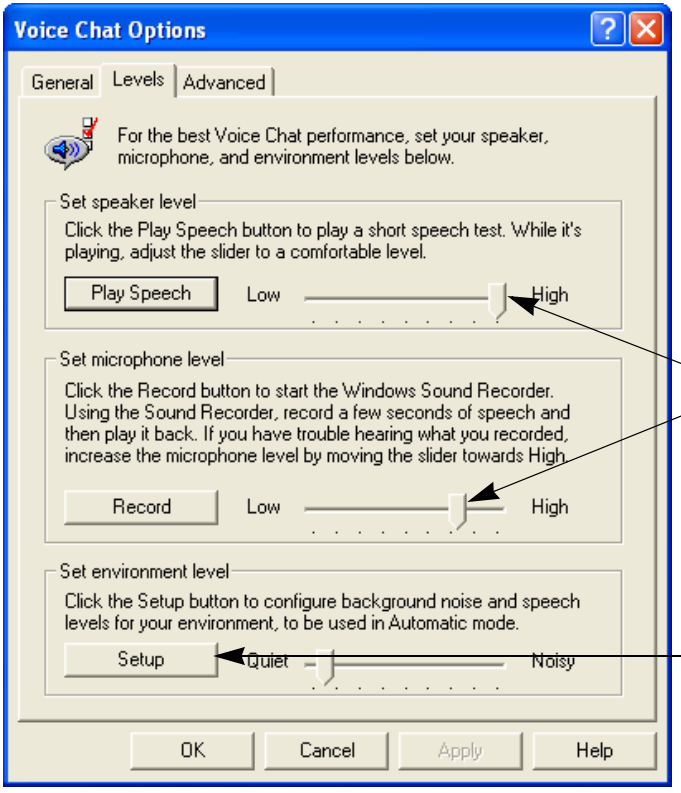
The sound card of the person you’re talking to also must be configured as full duplex in order for you to talk in full duplex.

NOTE Voice Chat provides an alternate method you can use to talk known as Manual mode; see page 140.

Improving Voice Chat performance

To improve Voice Chat performance, click the **Levels** tab in the Voice Chat Options dialog box, and then configure the microphone and speaker levels and specify information about your environment.

The **Levels** tab on the Voice Chat Options dialog box lets you perform recording and playback tests and measure other speech qualities. Adjust the Levels tab prior to using Voice Chat.



Use the Levels tab of the Voice Chat Options dialog box to configure your speaker, microphone, and environment levels.

For the speaker and microphone levels, click and drag the sliders to the desired level.

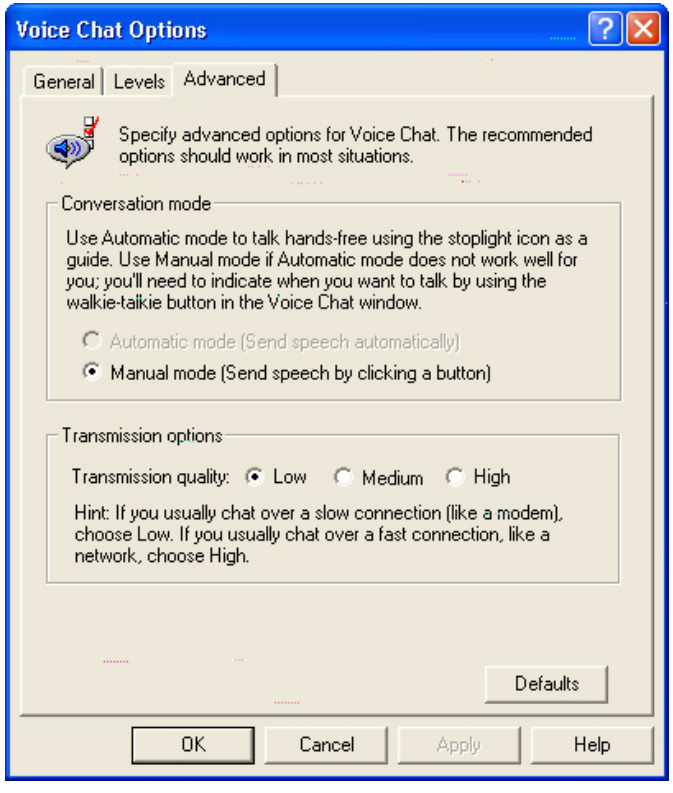
Setting the environment level helps avoid transmitting sound that is not speech. It is recommended that you use the Setup button, and not the slider, to adjust this level.

If you have already used a program that records and plays sound in Windows, you probably do not have to change settings for your speakers and microphone before using Voice Chat. (For exceptions, see online help.)

However, Voice Chat lets you change settings for your speaker, microphone, and environment to improve performance in Voice Chat. It is recommended that you do this before you start using Voice Chat.

Improving quality over a fast connection.

Voice Chat works best over a fast connection. If you use Voice Chat over a network or other fast connection, you can improve the Voice Chat sound quality. Click **Options,** and then **Voice Chat Options.** Click **Advanced tab** to modify quality settings.



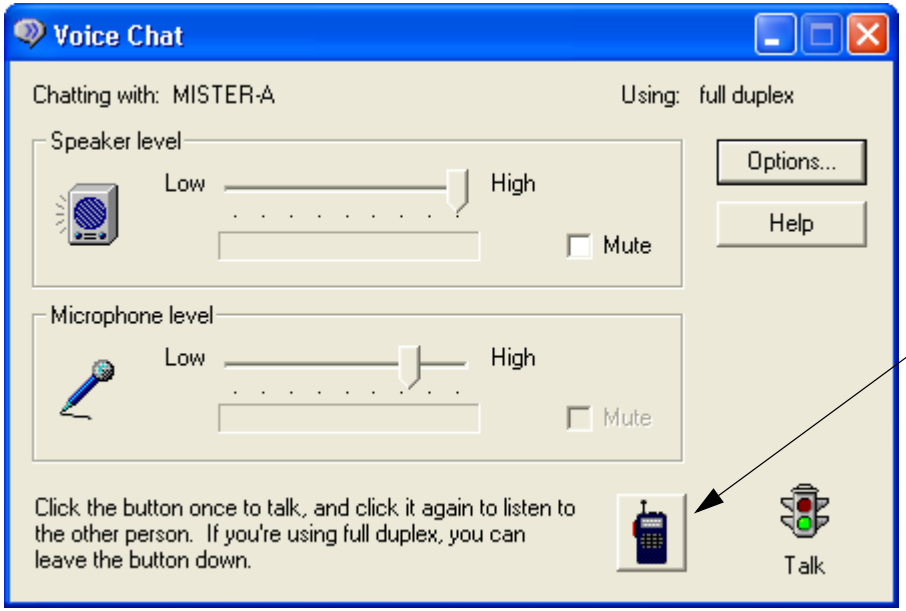
It is recommended that you set up your environment level every time you change the transmission quality.

A walkie-talkie button appears in the Voice Chat window when you select manual mode.

When you have a slow connection, using Medium or High may cause problems with your connection.

Using Manual conversation mode

Use Voice Chat's Manual conversation mode if you're having problems using Voice Chat or you want additional control over when speech is sent over the connection. Manual mode requires that you press a button in order to talk.



In Manual mode, click the walkie-talkie button in order to talk.

If you are using full duplex, you can leave the button down and hear the other person. If you are using half duplex, you must release the button to hear the other person.

Voice Chat has two conversation modes: Automatic and Manual.

- Automatic is the normal conversation mode, and allows hands-free operation of Voice Chat. Automatic mode sends speech whenever you talk.
- Manual mode requires you to click a button in order to talk.

In most cases, Automatic mode is recommended.

Use Manual mode if:

- You're having problems using Automatic mode
- Your sound card does not support Automatic mode.
- Your work environment is very noisy
- You want to control exactly when speech is sent.

Talking in manual mode

Manual mode works differently depending on whether your conversation is full duplex or half duplex.

- When using half duplex, you click the walkie-talkie button once in order to talk. While you're talking, the other person cannot talk to you (he or she sees a "Don't Talk" icon) until you click the button again to release it. The other person can then talk.
- When using full duplex, you also click the walkie-talkie button once in order to talk, but you don't need to release it to allow the other person to talk, since in full duplex, you can both talk at the same time.

9 Troubleshooting

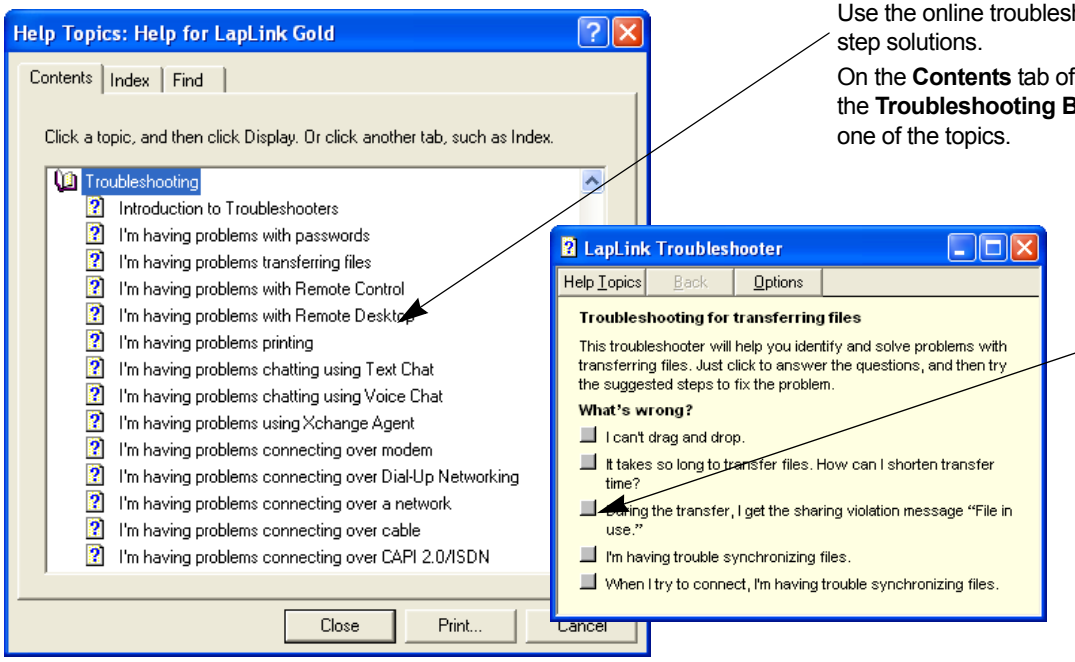
Introduction to Troubleshooting

This chapter provides checklists for solving problems and improving performance. These checklists are designed as a quick overview of possible solutions.

For detailed, step-by-step information, consult the troubleshooters in online Help. The troubleshooters are designed to solve problems you may encounter in opening connections and using the services once you have opened connections.

To use an online troubleshooter, open the **Troubleshooting** book in **Help Topics** and display one of the topics. Then answer the questions about your problem and try the suggested remedies. In some cases you will find shortcut buttons to dialog boxes; use these buttons to resolve the problem faster.

For further assistance, visit www.laplink.com/support. In addition to the latest technical information, you'll have access to the following support options: FAQs, Knowledge Base, Web incident (email) support, live chat support, and fee-based telephone support.



Use the online troubleshooters for step-by-step solutions.

On the **Contents** tab of Help Topics, open the **Troubleshooting Book** and display one of the topics.

Try the solution that best describes your problem.

Checklist for Modem Connections

NOTE use a hardware (controller-based) modem, such as an external (serial) modem. Laplink Gold works best when all the functions of the modem are performed on the modem device itself. Use of software-based (controllerless) modems often result in poorer performance and reliability, and may be incompatible with Laplink Gold. For a list of modems that are known to be incompatible with Laplink Gold, visit www.laplink.com/support.

Run Laplink on both computers

No connections are possible by modem or any other means unless Laplink is running on both computers. You can connect to a computer running Laplink Gold or another Windows-based version of Laplink.

Ensure that the modem can answer a call or dial out

A modem cannot answer an incoming call unless the Auto Answer option is on. Click **Options**, and then **Port Setup.** Then click **Windows Modems**. Click **Configure**, and then verify that **Enabled under Auto Answer** is checked.

Test the modem outside of Laplink Gold

Does the modem work with other applications? Test the modem with other Windows tools, such as dialing your Internet Service Provider (ISP) or, if you are using Hyperterminal, ensure the modem is working properly.

Check the settings for a Windows modem

If your modem does not answer calls or dial after you have enabled it as a Windows modem in Laplink, exit Laplink, and make sure the modem is turned on. In the Windows Control Panel, double-click **Modems**, click the **Diagnostics** tab, and click the appropriate port. Click **More Info**. If the test fails, click the **General** tab, and remove the modem. Shut down the computer and then restart it. Return to **Modems** in the Control Panel and reinstall the modem.

Disable error control and data compression on both computers

Some modems communicate better if error control and data compression are disabled on both computers. to disable error control, Click **Options**, and then **Port Setup**, click **Windows Modems**, **Configure**, and then **Properties**. On the Connection tab, click **Advanced.** Then clear **Use Error Control**. Repeat this procedure on the other computer.

Set a longer timeout value

If the computer you are dialing takes a long time to answer and complete the connection, try increasing its modem timeout. To configure timeout, click **Options**, and then **Port Setup**. Click **Windows Modems**, and then click **Configure** and **Properties**. On the **Connection** tab, type a larger number in this box: **Cancel the Call If Not Connected Within**.

Lower the modem speed on the computer opening the connection

In **Options**, click **Port Setup**, and then click **Windows Modems**. Click **Configure** and then **Properties**. On the **General** tab, click a lower speed in the **Maximum Speed** box.

Check the security setup on the remote computer

If you are denied the use of Remote Control or one of the other services while connected to another computer, check the security setup on that computer. You can gain access to services by clicking **Options,** and then **Security**.

NOTE To let other computers connect to your computer by modem, you must change the security setup established during installation. Remember that passwords are case-sensitive.

Disable call waiting and answering machines

Ensure that the call waiting feature is disabled on the telephone systems at both ends of the connection. Call waiting and answering machines can interfere with modem connections when incoming calls are detected.

Use Dialing Properties to simplify the dialing process.

In the Telephone Number box, type the number as it is to be exactly dialed, including numbers dialed to get an outside line, area codes, country codes, and a “1” when dialing long distance.

Disable other programs that use COM ports while running Laplink

You may experience problems if you use Laplink to connect by modem while running any other programs that monitor serial (COM) ports; modem and fax programs as well as PDA software, typically monitor serial ports for incoming calls or faxes and may cause a modem to disconnect unexpectedly. Disable such programs while using Laplink.

Checklist for Dial-Up Networking Connections

Ensure that Dial-Up Networking is installed

You can connect over Dial-Up Networking only if Microsoft Dial-Up Networking has been installed. Dial-Up Networking should already be installed. However, if necessary, you can install this feature from your Windows 98/Me CDROM as follows: In the **Windows Control Panel,** double-click **Add/Remove Programs**. Click the **Windows Setup** tab, and double-click **Communications**. If Dial-Up Networking is checked, it is installed. If it is not checked, click **Dial-Up Networking**, and then click **OK** to begin installation.

NOTE For more information about Microsoft Dial-Up Networking, consult Windows Help.

Once connected using Dial-Up Networking, connect to your corporate network

When you connect over Dial-Up Networking in Laplink, you dial in to a remote access server and connect to a network. Then you make Laplink connections in the Connect Over LAN (Network) dialog box. Unless you specify otherwise, the list of available Laplink connections appears automatically as soon as you are connected to the network. If the list of connections does not appear automatically, click the Shortcut Bar, then **Connect**. Click **Network.**

TIP To connect to another Laplink computer once a Dial-Up Networking connection is established, make sure that this box is checked in the Connect over Dial-Up Networking dialog box: After Connecting to the Network, Choose a Laplink Connection.

Ensure that your computer is set up for network connections

Making connections to other Laplink computers through Dial-Up Networking requires that your computer meet the requirements for network connections in Laplink:

- a network protocol must be installed
- your network ports must be enabled in Laplink
- for more information about network connections, see page 148.

NOTE To let other computers connect to your computer through Dial-Up Networking, you must change the security setup established during installation.

Run Laplink on both computers

No connections are possible by Dial-Up Networking or any other means unless Laplink is running on both computers. You can connect to a computer running Laplink Gold or another Windows-based version of Laplink. Verify that the computer has a network port enabled for the same kind of network connection as your network port.

Use Dialing Properties to simplify the dialing process.

In the Telephone Number box, type the number EXACTLY as it is to be dialed, including numbers dialed to access an outside line, area codes, country codes, and a “1” when dialing long distance.

Disable other programs that use serial (COM) ports while running Laplink

You may experience problems if you use Laplink to connect by modem while running any other programs that monitor serial (COM) ports; modem and fax software, as well as PDA

programs, typically monitor serial ports for incoming calls or faxes and may cause a modem to disconnect unexpectedly. Disable such programs while using Laplink.

Disconnect a Dial-Up Networking connection manually

When connecting by modem, you can instruct Laplink to break a connection after a specified number of minutes in which there is no activity at either end of the connection: Click Connect Options (Options menu). On the Disconnect tab, check the Disconnect Inactive Connections box, and type the number of minutes below.

In most cases, the connection is completely broken after the specified period. With Dial-Up Networking connections, however, you must complete the process: click Disconnect (Connect menu) and then click Disconnect All.

TIP Consult the network administrator to ensure that the RAS server is accessible and responding to connection requests.

Checklist for Network Connections

Enable the network port for Laplink connections

Access to a network does not automatically provide network access in Laplink. To connect over LAN (Network) in Laplink, your network port must be enabled—that is, made available for Laplink's use. To enable a network port in Laplink, click **Options**, and then **Port Setup**. Click the type of network—either IPX or TCP/IP—in the Ports list. Then check the **Enable Port** box. If the network is IPX, click **Configure**, and ensure that Internetwork **Name Broadcast** is checked.

Run Laplink on both computers

No connections are possible by network or any other means unless Laplink is running on both computers. You can connect to a computer running Laplink Gold or Windows version 7.5 or higher of Laplink. Verify that the computer has a network port enabled for the same kind of network connection as your network port.

Refresh the list of connections

If Laplink was started on the other computer after you started connecting, you may need to refresh the list of available connections in order to include the computer in the list. Click **Refresh List**, and wait while the list of Laplink computers is updated.

Ensure that the network is installed

Laplink cannot connect by network unless a network protocol—either IPX or TCP/IP—is installed. Network protocols are installed using the Networks option in the Windows Control Panel. See your Windows Help and documentation for information on adding network protocols, or consult your network administrator.

Type the password carefully

In Laplink Gold, passwords are case-sensitive. For more information, see the Getting Started chapter.

Type the TCP/IP name or address

If you do not see a computer listed as an available connection over a TCP/IP network, you may have to type the computer's IP address. Click the Connect button on the LinkBar, and then click Network. On the TCP/IP Addresses tab, type the IP address or the Windows computer name in the TCP/IP Name or Address box. (This name usually differs from the name assigned to the computer in Laplink.)

TIP To determine the TCP/IP address for a Windows 98 or Me computer, click **Options**, and then **Port Setup**. Then click **TCP/IP** in the Ports list; and then click **Configure**. The computer's address appears in the IP Address box.

TIP To determine the TCP/IP address for a Windows XP, 2000, or 2003 computer, click **Start** button, and then **Run,** and then at the command line, type **CMD.EXE**, and press Enter. Then type `IPCONFIG` and press **ENTER**. The address appears on the IP Address line.

TIP If you cannot connect after typing a TCP/IP address, disable any firewall software on the Host machine.

Check the security setup of the Host computer

If you receive a "not authorized" error message, be sure to change the security setting on the Host from the default of

“Private System”. Access security settings from the Options menu, then choose Security.

IPX connections: change the type of frame on both computers

Some IPX connections work better if the frame type for the IPX connection is preset rather than selected automatically; try setting the frame type to Ethernet 802.2 or Ethernet 802.3. This setting should be changed on both computers making a Laplink connection. Network protocols are installed using the Networks option in the Windows Control Panel. See Windows Help and documentation for information on changing the frame type.

Checklist for Laplink Internet Connections

Both computers must be on the Internet and running Laplink Gold 12

It doesn't matter how it's done—by dialing in to an ISP or connecting over a high-speed connection—but both computers must be connected to the Internet before they can connect using Connect over Laplink Internet. Laplink Gold 12 must be running on both computers.

Both computers must be logged on to the Laplink Internet service

On the Host computer, select **Options**, and then click **Laplink Internet Options**. On the Guest computer, you can either perform the same procedure or log in with your Laplink Internet user name and password when you connect.

Check the security setup on the Host computer

If you receive a "not authorized" error message, be sure to change the security setting on the Host from the default of *Private System*. To access security settings, select **Options**, and then click **Security**.

Internet connections between computers behind proxy servers may require special configuration

If one or both of the computers is behind a network protected by a proxy server, select **Options**, and then click **Laplink Internet Options**. Click **Advanced** and fill in the proxy server's authentication information.

Checklist for ILS-based Internet connections

While the ILS feature remains in Laplink Gold, for connections through the Internet (and through firewalls), the Laplink Internet feature is the best choice.

The computer you want to connect to must have its Internet address published by an Internet directory server (and you must know what the address is)

Connect over ILS is designed for connecting to a computer whose Internet address is *published* to the Laplink ILS server. To set up the computer for this kind of connection, click **Options**, and then select **Internet Directory Options** and type an e-mail address or other unique identifier to be published as the computer's Internet address. Let other Laplink users connect by sharing the address with them.

TIP Set up Internet Directory Options to have the address published automatically. Or publish the address yourself, when you are online: on the **Connect** menu, click **Publish My Internet Address.**

TIP If you are connecting to a computer which has an IP address you know, use **Connect Over LAN (Network)** instead and supply the IP Address.

Both computers must be on the Internet and running Laplink

It doesn't matter how it's done—by dialing in to an ISP or connecting over a high-speed connection—but both computers must be connected to the Internet before they can connect using Connect over ILS. Laplink must be running on both computers.

Enable a TCP/IP port in Laplink

To connect over the ILS in Laplink, a TCP/IP network port must be *enabled*, that is, made available for use in Laplink. To enable a TCP/IP port in Laplink, click **Options**, and then click **Port Setup**. Click **TCP/IP** in the **Ports** list and then check the **Enable Port** box.

Check the security setup on the Host computer

If you receive a "not authorized" error message, be sure to change the security setting on the Host from the default of *Private System*. Access security settings from the **Options** menu, then choose **Security.**

Internet connections between computers behind routers and firewalls may require special configuration

Without proper configuration, Laplink connections over the ILS may be prevented if either of the computers is behind a firewall or router. This may be a personal router appliance, or a corporate network's firewall.

To facilitate Laplink connections over the Internet, Laplink has registered port 1547 with the Internet Assigned Numbers Authority. This port is used by the Host computer. To allow Laplink connections through a router or firewall, a network administrator should configure the router or firewall to forward TCP port 1547.

> **NOTE** If you have any questions about your corporate network, consult your network administrator.

Checklist for Cable Connections

Important: Different cable types are supported for different versions of Windows.

Serial cable: All versions of Windows

Parallel cable: Windows 98/Me

USB cable: Windows 98, Me, 2000, XP, and 2003.

Ensure that Autoconnect is turned on

Autoconnect opens cable connections for you automatically. To ensure that Autoconnect is in effect, click **Options**, and then click **Connect Options**. On the **Connect** tab, verify that this box is checked: **Enable Autoconnect**. Below the option, verify that the services you want to use are also checked.

TIP If you have trouble maintaining a cable connection, try disabling Autoconnect on one or both of the computers.

Run Laplink on both computers

No connections are possible by cable or any other means unless Laplink is running on both computers.

> **NOTE** For USB connections with the Gold USB 1.1 cable or the Iogear Smartlink 2.0 USB cable, the other computer must be running Laplink Gold, version 11.5 or higher.

Check the cable

Make sure that each end of the cable is securely attached to the proper port; check the port labels for proper identification. Check a parallel cable for damaged pins. Try reconnecting the cable to each port or even reversing the cable ends.

TIP Attach a yellow Laplink cable to parallel/LPT (printer) ports. Attach a blue Laplink cable to serial/COM (modem or mouse) ports; connect only one end to each computer.

Laplink does not work over most other serial cables or any printer cables. Attach a Laplink USB cable to a USB port at each computer. Do not use a non-Laplink USB cable.

Consult the Windows Device Manager when in doubt about USB or other kinds of ports

If you are not certain whether you have a USB port or another kind of port, check the Windows Device Manager: Right-click **My Computer**, and then click **Properties**. Look on the Device Manager tab, or click the **Device Manager** button on the **Hardware** tab.

All Laplink USB cables should appear in the Windows Device Manager.

> **NOTE** Serial and parallel cable connections never appear in the Device Manager.

Enable the port

You cannot connect by cable until a port is enabled—that is, made available specifically to Laplink. To enable a port for cable connections, click **Options**, and then click **Port Setup**. Click the port you want to enable. Then check the **Enable Port** box.

TIP If a port is listed as unavailable, quit any program that may be using the port, such as Palm software, fax, and other applications. Make sure that the cable is attached to an available port.

TIP Do not install any separate USB drivers for all Laplink USB cables. Laplink Gold has the built-in drivers. If the gold cable has been configured on either computer for use with an older version of Laplink (using USB network drivers), you may experience problems connecting. Contact Laplink

technical support for assistance. Visit www.laplink.com/support for more information.

Serial cable connections: lower the speed of a serial port

In **Options**, click **Port Setup**, click the COM port to which the cable is attached. Click **Configure**. In the **Port Speed** box, click 57600. Repeat this procedure on the other computer. If you still can't connect, repeat the procedure, lowering the speed one step at a time until you can connect.

Restart the computer

If all else fails, remove the cable from both computers, and restart the computers. Reattach the cable, and try the connection again.

Improving parallel cable performance in Windows 98 and ME

There are three drivers you can use in Laplink for parallel ports: the Laplink Enhanced driver (the default), the Laplink Standard driver, and a Windows driver. The Laplink Enhanced driver is preferable when you alternate between parallel communications and other types of communications: you can leave the parallel port enabled without experiencing any degradation of performance. The Windows driver, on the other hand, generally provides better performance for parallel connections; use the Windows driver if you intend to use parallel connections exclusively. If you then want to switch to modem or some other type of communication, be sure to disable the parallel port beforehand.

> **NOTE** For maximum performance from an ECP port, use the Windows driver for the parallel port to which the cable is attached.

To change the parallel port driver, click **Options**, and then click **Port Setup**. Select the appropriate LPT port. Ensure that the **Enable Port** box is checked. Click **Configure** and then click one of these options: a.) **Use the Windows Driver**, b.) **Use the Laplink Enhanced Driver**, or c.) **Use the Laplink Standard Driver**.

Checklist for CAPI 2.0/ISDN Connections

Run CAPI-compatible versions of Laplink on both computers

No connections are possible by CAPI 2.0/ISDN or any other means unless Laplink is running on both computers. Ensure that the version of Laplink running on that computer is compatible with CAPI 2.0/ISDN.

Check the security setup on the remote computer

If you are denied the use of Remote Control or one of the other services while connected to another computer, check the security setup on that computer. You can gain access to services by clicking **Options**, and then clicking **Security**.

Ensure that Laplink is set up to answer calls over CAPI 2.0/ISDN

CAPI cannot answer an incoming call unless the Auto Answer option in Laplink is enabled. In **Options**, click **Port Setup**. Then select **CAPI 2.0/ISDN**, and click **Configure**. Verify that the **Enable** box under **Auto Answer** is checked.

If you are using ISDN in North America, avoid using the Laplink CAPI 2.0/ISDN

In North America, ISDN doesn't usually include CAPI 2.0 but you can still use your ISDN device in Laplink. If the device is set up as a Windows (TAPI) modem, you can open a Laplink connection using Connect over Modem or Connect over Dial-Up Networking. Simply ensure that the device is enabled as a Windows modem by clicking **Options**, and then **Laplink Port Setup**. If your ISDN device is set with its own dialer, use the dialer to log on to a network. Then, in Laplink, use Connect Over LAN (Network) to connect to other computers running Laplink on that network.

Close some Laplink services to allow connections over both channels

Normally CAPI 2.0/ISDN Hosts on which channel bonding is not enabled can handle incoming connections on both channels. When only one connection is possible, try closing services on that connection.

Checklist for File Transfer

Drop files directly on target folder

The most common mistake in drag and drop is dropping files on the wrong target folder (the folder to receive the files). To help prevent this mistake, open the target folder first; the name of the folder now appears in the title bar. Then open the source folder and select and drag the files until the mouse pointer rests on the open folder and the folder is highlighted. As soon as you release the mouse button, you receive a confirmation dialog box showing, among other things, the target you just dropped on. Check the target, and change it if necessary.

TIP To ensure that files are copied, press **CTRL** while dragging. To ensure that files are moved, press **SHIFT** while dragging.

TIP If you are copying an entire folder (rather than files *within* a folder), drop the folder on the target one level higher than where you want the files to appear; this may be another folder or a drive letter. Assume that you want to update your Letters folder on your desktop computer with your Letters folder from your laptop, and the Letters folder appears at the highest level of folders on drive C. Drag the folder from the laptop to the desktop and drop it on drive letter C.

TIP If you have File Transfer difficulties, such as error messages or disconnections, try reducing the amount of data being sent, either by reducing the number of files sent or size of sent files.

> **CAUTION** Do NOT attempt to move the entire contents (root) of a drive. Windows may create hidden files or folders that could be in use and cannot be transferred. Likewise, do not attempt to transfer directories containing the Windows operating system. Laplink Gold cannot move any data that has been locked or is in use, such as the Windows Registry. If you wish to 'clone' a drive for the purpose of making a bootable operating system on the target drive, use drive imaging software designed for these purposes instead of Laplink Gold. If you need to copy the entire contents of your computer, try Laplink's PCMover. More information can be found at: www.laplink.com/products

Use the Copy or Move command

Instead of using drag and drop, use the **Copy** or **Move** command. First, click the target folder. After selecting the files to be transferred, click **File**, and then click **Copy** or **Move**. Then verify that the source and target are correct.

Make File Transfer available to other computers

If you are denied the use of File Transfer or one of the other services while connected to another computer, check the security setup on that computer. You can gain access to services by clicking **Options**, and then **Security**.

Log on to Windows before trying to use File Transfer

As a security measure, Laplink does not allow users to connect to a computer and open File Transfer while the computer is waiting to be logged on to Windows. (When you attempt to open a File Transfer connection to a computer running Laplink and displaying the Windows logon dialog box, you see the error message: **Creation of window failed**.

The solution is to open a Remote Control connection first. Log the remote computer on to Windows and then open **File Transfer**.

> **NOTE** To set up Laplink to run before the Windows logon dialog box appears, click **Options** and choose

Program Options. Choose the **Advanced** tab, and check this box: **Always Start Laplink before Windows Logon Prompt.**

General tips for faster transfers

Follow these suggestions to improve transfer speeds:

- Check the folders and files you have selected for transfer, making sure that you are not including more than necessary. For example, have you selected an entire folder when you want to transfer only a few files within the folder?
- Use SpeedSync to improve file transfer times when updating files, particularly over modems: on the Performance tab of File Transfer Options, make sure that the **Use SpeedSync on All File Transfers** box is checked.
- Disable any ports that are not in use. To disable unused ports, click **Options**, and then 9. Click an unused port, and then clear the **Enable Port** box.
- Close other service windows and any connections to other computers you may have opened in Laplink.
- On laptop computers, disable power management functions. Attach the AC adapter to the computer to ensure steady voltage throughout the transfer.
- Disable screen savers, and close other programs.
- Serial cables transfer data at 0.4Mbps, while the Laplink Gold USB 1.1 cable can transfer data at up to 5Mbps. For Laplink USB 2.0 cable connections, transfer rates can be up to 100 Mbps.

Tips for transfers over a serial cable

- Ensure that the serial port is configured for maximum speed. Click **Options**, and then click **Port Setup**. Select the appropriate COM port. Click **Configure** and ensure that Port Speed is set at 115200.
- Change the transfer mode to standard. Click **Options**, and then **Port Setup.** Select the appropriate COM port; click **Configure**, and select **Standard under Transfer Mode**.

Tips for transfers over modems

Consult the documentation for your modem and verify that the port speed is set for optimum performance. Click **Options** and then click **Port Setup**. Click **Windows Modems**, and then click **Configure**, select the modem you are using, and then click **Properties**. In the **Maximum Speed** list on the General tab, click the maximum speed your modem can use.

Tips for transfers over a network

- Transfer your files when there is less network traffic.
- Ask your system administrator to verify that the network drivers are current.

Tips for SmartXchange

Use SmartXchange to update files in two folders so that the folders share the latest files. Since SmartXchange always overwrites older files, do not use it if you want to *merge* the contents of two files. Use SmartXchange by opening the two folders you want to update; do not select the individual files. Click **SyncTools**, and then click **SmartXchange**. Verify that you have opened the right folders. If you do not want to add new files to either folder, check this box: **Transfer Only If Files Are Already on Target**.

Ensure that you have read access rights to network files you want to copy

If you can locate the files you want to copy but then are denied access when you attempt to copy them, contact the network administrator. You can copy only files to which you have been assigned read access.

Checklist for Xchange Agent

Ensure that Laplink is running on the Host computer

Laplink must be running on the Host computer before an agent can connect to it and synchronize files. On the Guest computer, keep Windows actively running. (Laplink will start automatically when the agent runs.)

Make sure that a scheduler program is running

To schedule Xchange Agents—and have them run on schedule—you must have a supported scheduler program running.

> **NOTE** When Laplink Scheduler is running, a red alarm clock icon appears on the Windows taskbar.

Change an Xchange Agent schedule in your scheduler program

Once you've created an Xchange Agent schedule in Laplink, revise or delete the schedule in the scheduler program itself.

Close an Xchange Agent before it is scheduled to run

An agent cannot run on schedule while it remains open in Xchange Agent.

Create an Address Book entry to meet the security requirements of the remote computer

If the remote computer requires a name and password, create an Address Book entry and include the name and password required by that computer. Laplink can then send this information and connect automatically.

Turn off the Laplink callback feature

If the Host computer requires or requests a callback before opening a modem connection, the agent cannot run. On the Host computer, turn off the callback feature: Click the Security button on the LinkBar. On the **Log-in List** tab, click the name of the Guest computer and then click **Edit**. Under **Modem Callback,** click **None**.

Avoid moving or deleting agent files for which you have created shortcut icons

If you have moved or deleted the Xchange Agent file, the shortcut icon can no longer run the agent. Create the agent again. You can reuse the shortcut icon by saving the new file in the same location, with the same name, as the original file. Or you can create a shortcut icon for the new agent file.

Create a filter to synchronize a single file

Xchange Agent always synchronizes by folder pairs, but you can create a filter so that only one file within a folder pair is synchronized. Open the agent in Xchange Agent and click the folder pair. On the **Edit** menu, click **Set Filter** and then click **New**. After typing a description for the filter, type the complete name of the file, including its extension. (To add more than one file name, type a semicolon and then the next file name.) Click **OK**. Click the filter's name in the **Available Filters** list, and then click **Add**.

TIP Preview the agent to see if the correct files are included in the synchronization.

Use Preview to limit the files to be copied in the current synchronization

While previewing an agent, you can specify that certain pairs of files and folders will be omitted from the current synchronization: Click a pair of files or folders and then click the **Skip Pair** button on the toolbar. Repeat this procedure for any other pairs you do not want synchronized. Then, before closing Preview or quitting Xchange Agent, run the agent.

TIP You can omit file and folder pairs only from the current synchronization. To remove them from a future synchronization, you must use Preview again.

Use Xchange Agent to overwrite, not merge, files

Xchange Agent overwrites files. Unless you specify otherwise, it copies the newer file to the other computer. It does not merge files. To merge databases and other shared files, use the program in which the files were created.

Checklist for Remote Control

Improve performance from the Guest

On the Guest, you may be able to speed up Remote Control connections by changing settings by clicking **Options,** then **Remote Control Options** on your computer. On the **Performance** tab, click the **Best Performance** option. (To further customize settings, click the **Settings** button.) Your view of the Host should be updated faster, though you will now be viewing the Host screen in black and white, and larger bitmaps will not be displayed.

Control the display properties of the Host from the Guest

By default, Laplink is configured to speed up Remote Control connections: any wallpaper or screen saver on the Host is temporarily disabled, along with certain other visual enhancements. From the Guest, you can restore these enhancements to the Host screen through settings on your computer. In **Options**, click **Remote Control Options**, and then click the **Performance** tab. Select **Best Quality**. (To further customize settings, click the **Settings** button.) Keep in mind that changing these settings may slow Remote Control connections.

Make Remote Control available to other computers

If you are denied the use of Remote Control or one of the other services while connected to another computer, check the security setup on that computer. You can gain access to services through Security (Options menu).

Use the keyboard to view the Host screen

If the window in which you are viewing the Host screen does not show all of the Host screen, you can use your keyboard to view areas beyond the borders of the window: press **CTRL+ALT+SHIFT** and any of the arrow keys, **PAGE UP, PAGE DOWN, HOME**, or **END**.

Use the latest driver for your video adapter

Contact the manufacturer of your video adapter, on its Web site or elsewhere, to verify that you are using the latest driver.

New computers do not necessarily ship with the most current drivers installed.

Avoid changing the color depth or display properties of a Host

From the Guest, avoid changing the number of colors displayed on the Host while you're connected to it using Remote Control. Also avoid changing the Refresh Frequency and other settings in the Host's Display Properties while connected. To safely change these properties, you should be seated at the Host and fully informed of the capabilities of its monitor. Incorrect settings can damage a monitor.

Use a special key combination to log on to a Windows 2000, XP or 2003 Host

When you restart a Windows Host, you must press **CTRL+ALT+DELETE** to log on to Windows again. You can accomplish this from the Guest by pressing a special key combination specified on the Host. (Pressing CTRL+ALT+DELETE on the Guest affects the Guest, not the Host.) To specify a key combination for use on the Guest, start Laplink on the Host and click Remote Control Options (Options menu). On the Host tab, type the key combination in this box: Send CTRL+ALT+DELETE to This Computer When a Guest Presses This Key Combination.

TIP The easiest way to send a CTRL+ALT+DEL to the Host machine is to:

1 Establish a Remote Control session with the Host machine.

2 Click on the Session menu, and select **Send CTRL+ALT+DEL** to Host.

Do not install other remote control products and Laplink on the same computer

Because of possible incompatibilities, avoid installing Laplink Gold and another remote control product, such as PCAnywhere®, on the same computer.

CAUTION Installing Laplink Gold with another remote control application installed may result in a failure to reboot (except in Windows Safe Mode.) For more information on allowing these programs to coexist with Laplink, visit www.laplink.com/support.

Avoid pressing CTRL+ALT+DELETE when viewing a Windows 2000, XP or 2003 Host in full-screen Remote Control

Pressing **CTRL+ALT+DELETE** on a Windows computer always displays the Windows Security dialog box on that computer. When you are working in a full-screen Remote Control session, pressing CTRL+ALT+DELETE not only displays the Security dialog box locally but also causes the CTRL and ALT keys to be pressed—but not released—on the Host computer. To release these keys and resume normal keyboard operation press **CTRL** and **ALT** again.

TIP To have CTRL+ALT+DELETE take effect on a Host computer, click **Send CTRL+ALT+DELETE** to Host on the Guest's Session menu.

Keep Laplink running before the Windows 2000, XP or 2003 logon prompt

If you have set up Laplink on the Host computer to run before the Windows logon dialog box appears, avoid closing Laplink on that computer unless you have administrator rights. If you close Laplink, you will have to restart the computer in order to reset Laplink so that other people can connect. (Restarting Laplink is not sufficient.)

Avoid running a Windows 2000, XP or 2003 Host in VGA mode

When a Windows computer is running in VGA mode you can make Laplink connections from it to other computers using Remote Control and File Transfer, but the computer cannot serve as a Remote Control Host. That is, it cannot be remotely controlled by other computers.

Run DOS in a window on a Windows 2000, XP or 2003 Host

You cannot control full-screen DOS programs on a Windows Host. When you attempt to do so, Laplink minimizes the program and displays a warning message. (To close the DOS program, right-click the icon, and click **Close**.)

Avoid this problem by setting up the Windows Host to display DOS programs in a window. If you use a shortcut to a DOS program, for example, right-click the shortcut icon, click **Properties**, and then click the **Options** tab. Below **Display Options**, check **Window**.

Checklist for Laplink Remote Desktop

Activating Windows Remote Desktop on the Host Computer

Before you can connect Laplink Remote Desktop the Host computer must be set to accept Remote Desktop connections.

To activate Windows Remote Desktop in Windows XP:

1 On the Host computer, click **Start,** and then **Control Panel**.

2 If your Control Panel is set to display in **Category View,** click **Performance and Maintenance**, and then click **System**.

If your Control Panel is set to display in **Classic View**, click **System**.

3 From the **System** dialog box, click the **Remote** tab.

4 Select the **Allow users to connect remotely to this computer** checkbox.

5 Click **OK** .

User account passwords and Remote Desktop

Windows 2000 and Windows XP Professional both have settings that allow for the creation of user accounts that are not protected by passwords. The Windows Remote Desktop feature will not connect to a computer that has no password-protected accounts. If at least one account is password-protected, Remote Desktop will connect and display a login screen. If the account used to log in is not password protected the login is refused and the connection closed.

To password-protect an account in Windows XP:

1 On the Host computer, click **Start,** and then **Control Panel**

2 Click U**ser Accounts**.

3 From the accounts available, choose the account which you want to password-protect.

NOTE You can also simply create a new account.

4 Select **Create a password**.

5 Create a password and a password hint.

6 Click **Create Password**.

Has the Host computer granted permission?

Before you can connect, the Host computer must give you permission to use Remote Desktop.

If you are the owner of the Host computer, you can grant permission by changing the **Security** options on that computer.

Checklist for Print Redirection

Use the same printer driver on both ends of a connection

For best print results in **Print Redirection**, both computers must be set up with the exact same printer driver. To add a printer driver, you may a disk from the printer manufacturer, or you may be able to download the latest driver from the manufacturer's website.

Use the Windows Control Panel to get additional information

If the document you printed is sent over Laplink correctly but does not print, examine the printer queue, accessed by clicking **Start, Programs**, and then **Printers** to get additional information about why the document didn't print. Make sure the printer is connected correctly and has enough paper, and the printer cartridge is not empty.

When several printers are available, you can set up Laplink to prompt you for the printer to use

Normally, Laplink automatically directs print jobs to the printer currently set up as the default printer at the other end of the connection. When there are several printers available, however, you may want to use a printer other than the default.

To set up Laplink to allow you to choose among the available printers, click **Options**, and then click **Print Redirection Options** on the computer the printers are attached to. Then click **Prompt with a List of Available Printers**.

When printing from 16-bit programs, use the default printer

Before printing from 16-bit Windows programs (programs written for versions of Windows prior to Windows 95, Windows 98, and Guest 4.0), set up the destination printer as the default printer on the computer to which it is attached. When using Print Redirection from the 16-bit Windows program, print to the default printer instead of selecting a printer from the list of available ones.

Some printer drivers do not support Print Redirection

To use Print Redirection you must set up a printer to direct print jobs to a special TSI port instead of the usual parallel port. You cannot use a printer driver that does not allow you to change the port in this way. You may want to contact the printer manufacturer to see if an updated driver is available.

Checklist for Text Chat

Press ENTER to send your message

Type your message in the lower part of the Text Chat window. (In some cases, you may have to click in the lower part of the window before you can begin typing.) To send your message to the remote computer, press **ENTER**.

TIP To begin a new paragraph, press **CTRL+ENTER**.

Open a Text Chat window after connecting

If you are connected to more than one computer, be sure to specify which computer you want to use Text Chat with: Click the name of the computer on the **Window** menu. Then click the **Open Text Chat** button on the Shortcut Bar or **Open Text Chat** in the Windows menu.

Make Text Chat available to other computers

If you are denied the use of Text Chat or one of the other services while connected to another computer, check the security setup on that computer. You can gain access to services by clicking **Options**, and then **Security**.

Save your Text Chat conversation from time to time

As a Text Chat conversation grows in length, the most recent messages begin to replace the earliest. This starts to happen when the conversation exceeds 32,000 characters. If you intend to save a lengthy conversation, begin saving before this limit is reached. To save a conversation, scroll to the upper part of the Text Chat window, click **Edit**, and then **Select All**. Then click **Edit**, and then select **Copy**. You can then switch to another Windows program such as Notepad, paste the text, and save it as a file.

Shorten connection time by preparing messages beforehand

Instead of typing text while connected, you can prepare it ahead of time in Notepad or a similar Windows program and send it to a remote computer through Text Chat. In the other application, select the text, and press **CTRL+C** to copy. In the lower part of the Text Chat window, press 9 to paste. Then press **ENTER** to send.

Use File Transfer for long messages

Text Chat can send as many as 2,048 characters at once. When you attempt to send a message that exceeds that limit, part of the message will not be transmitted to the other computer. Try sending the message in parts. Or save the message as a file, and send the file using File Transfer. You can still use the Text Chat window to let the remote user know what you're sending and to pass along additional notes.

Checklist for Voice Chat

Use full duplex sound card drivers on both ends of the connection

Voice Chat is easiest to use over a full duplex connection; you can hear and be heard at the same time, as on the telephone.

For full duplex, both ends of the connection must have sound cards with drivers that support full duplex. Contact your sound card manufacturer to determine whether your sound card supports full duplex; and find out whether drivers are available.

When using half duplex, wait for the other person to finish talking

A common problem in half duplex conversations is knowing when to start talking. Use the stoplight icon in Laplink as a guideline for when you can talk and when you can't. In some cases, a verbal signal that you are finished speaking (saying "over," for instance) might be helpful, or it might help to simply pause a few seconds when you are done speaking.

If you're using Manual mode, be sure to release the walkie-talkie button; you might not be able to hear the other person otherwise.

Adjust your microphone to a comfortable level

Many microphones require adjustment in order to send clear speech. Make sure your microphone is placed at a good distance from your mouth—not too far and not too close—and then adjust the microphone level. Click **Voice Chat Options,** and then use the **Levels** tab.

Adjust your speakers or headphones to a comfortable level

Most speakers, and some headphones, have a manual control that you can use to adjust volume. It is recommended that you leave the manual controls at a medium level, and adjust the volume of speakers and headphones in Laplink. For best results, adjust the Laplink sound levels, not those available in Windows.

Minimize background noise, if possible

Try moving your microphone away from telephones, loud computer power supplies, radios, and so on. Move your speaker and microphones farther apart.

If the person you're talking to hears a lot of noise in your background or doesn't hear your voice, you might want to reset your environment level by clicking **Voice Chat Options**, and then use the **Levels** tab.

Tips for improving Voice Chat performance

Perform the tests by clicking **Voice Chat Options**, and then selecting **Levels** tab to get the best performance. Adjust transmission quality to match the conditions of the connection: In the **Options** menu, click **Voice Chat Options**, and then select the **Advanced** tab. Click **Low** if you are talking over a modem or other slow connection. Click **High** if you are talking over a network or other fast connection.