
QUICK START

and
REFERENCE GUIDE
for

PC

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Introduction

Your new 56K faxmodem is a high-speed, reliable tool—whether you are surfing the Internet; keeping in touch with colleagues, friends, and family through e-mail; managing fax communications; using voice mail; or doing videoconferencing with a video camera.

This **Quick Start and Reference Guide** provides easy installation instructions for your internal or external faxmodem and the communications software that came with it.

What You Need to Use Your Faxmodem

Make sure that you have received the following items:

- Faxmodem
- Phone cord
- Power adapter (external models only)
- Installation and communications software on the CD-ROM disc or diskette.

You also need the following:

- A telephone jack to plug the modem into, so the modem can dial out or receive calls.
- **For internal models:**
A Windows or DOS computer with a 16-bit ISA or EISA Bus slot, and a tool for removing and replacing the computer cover (see your computer's manual)
- **For external models:**
An available serial port (also called an RS-232 port, COM port, or modem port) on the back of your Windows or DOS computer

A serial cable with hardware flow control. This is typically called a “modem cable” or an “RS-232 serial cable.” The COM port on your computer may have a large or small connector. Be sure to purchase a cable that matches your connector.

Plan of this Quick Start

This **Quick Start and Reference Guide** covers the following topics:

Chapter 1: Installation Road Map is your key to the rest of the guide. Choose your operating system (Windows 95/98; Windows NT; Windows 3.1/3.11/DOS). Then the list of Key Steps for your system guides you through the rest of the Quick Start.

Chapter 2: Setting an Internal Modem's COM Port and IRQ with Jumpers provides information and instructions for setting internal jumpers on the internal faxmodem. It is intended for installation under Windows 3.1, 3.11, NT 4.0, and DOS.

Chapter 3: Installing Your Faxmodem shows you how to install and connect your external or internal faxmodem.

Chapter 4: Installing and Using COMMUNICATE! LITE guides you through the process of installing **COMMUNICATE! LITE**, a full-featured program for faxing, data communications, and more.

Chapter 5: Using the Faxmodem with Other Software provides general advice for setting up and using your new faxmodem with other software.

Chapter 6: Solving Common Problems is a troubleshooting guide for your new faxmodem.

The **Appendixes** provide additional information you may find useful in installing or using your new faxmodem.

Chapter 1: Installation Road Map

This **Road Map** provides instructions and trouble-shooting information for installing and using an external or internal faxmodem on an IBM-compatible computer running Windows 95, 98, 3.1, 3.11, NT 4.0, or DOS. Each of the following sections covers one set of operating systems and provides a list of **Key Steps** for proceeding through the rest of the **Quick Start**:

Windows 95 and 98 (page 7). This is an enhanced Plug and Play installation in which the modem drivers are pre-installed before installing the external or internal faxmodem.

Windows NT 4.0 (page 9). The modem drivers are pre-installed. If you are installing an internal faxmodem, you are then guided through the process of determining and setting the COM port and IRQ with jumpers. Then you install the external or internal faxmodem.

Windows 3.1 and 3.11 and DOS (page 11). If you are installing an internal faxmodem, you are guided through the process of determining and setting the COM port and IRQ with jumpers. Then you install the external or internal faxmodem.

<p>Note: Normal installation requires drivers or installation utilities on the CD. If you do not have a CD drive in your computer, see Appendix C: Installing and Setting Up Your Faxmodem without a CD on page 49 for special instructions.</p>
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Key Steps—Windows 95 and 98

1 Getting Started

- If you are replacing an existing internal modem, read **Appendix A** (page 45) to decide whether to keep or remove it.
- Insert the CD in your CD drive. Wait about ten seconds for it to auto-run.

If the CD does not auto-run:

Double-click on **My Computer** and then on the icon for your CD drive. In the right panel, double-click on **Setup** or **Setup.exe**.

- When the interface appears, click on **Install Drivers**. Follow the prompts.
- Leave the CD in the drive and shut down your computer.

2 Installing the Faxmodem

Go to Chapter 3 to install your external (page 18) or internal faxmodem (page 22).

3 Completing the Installation

In this part of the installation, Windows detects your newly-installed modem and drivers.

- If it is not already running, start your computer. Windows will detect your new modem and the new drivers and add the drivers to its database.
- You may be guided through an on-line registration process at this time.

Note: If the Plug and Play setup does not proceed properly, **Problems with Plug and Play Setup in Windows 95 or 98** on page 42.

In the final step, you set the speed at which your computer communicates with your faxmodem and perform a brief test.

- Open **Control Panel** in Windows and double-click

on the **Modems** icon. Click on the entry for your new faxmodem and then click on **Properties**.

- Set the **Maximum speed** to the highest speed available (probably 115,200). This sets the speed at which the computer communicates with the faxmodem.
- Click on the **Diagnostics** tab. Highlight the port next to the entry for your new faxmodem and click on **More info**.
- Note the **Port** and **Interrupt** entries under **Port Information** and write the information in the **Important Information** table on page 56.

This last operation also tests your faxmodem by querying it with **AT** commands. A list of responses means the modem is properly connected.

You may also want to use **HyperTerminal** or another terminal program to call a bulletin board system.

4 Installing the Software

Go to Chapter 4 (page 25) to install **COMMUNICATE! LITE**, a complete faxing and communications package that will help you get the most out of your new faxmodem. Also explore the other software offerings on the CD. The CD describes each program and offers easy point-and-click installation. You may install the programs you want now or at a later time.

That's it! Enjoy the use of your new faxmodem.

Key Steps—Windows NT 4.0

1 Getting Started

- If you are replacing an existing internal modem, read **Appendix A** (page 45) to decide whether to keep or remove it.
- Insert the CD in your CD drive. Wait about ten seconds for it to auto-run.

If the CD does not auto-run:

Double-click on **My Computer** and then on the icon for your CD drive. In the right panel, double-click on **Setup** or **Setup.exe**.

- When the CD interface appears, click on **Install Drivers**. Follow the prompts.
- **Internal faxmodem only:** Go to Chapter 2 on page 12 to determine COM port and IRQ settings and set the jumpers.
- Leave the CD in the drive and shut down your computer.

2 Installing the Faxmodem

Go to Chapter 3 to install your external (page 18) or internal faxmodem (page 22).

3 Completing the Installation

First Windows detects your modem and installs the drivers.

- If it is not already running, start your computer. Open the **Control Panel** and double-click on **Modems**. Click **Add**. Let Windows NT detect your modem and install the drivers.
- You may be guided through an on-line registration process at this time.
- Exit the CD interface. You may leave the CD in the drive.

Finally, set the speed at which your computer communicates with your faxmodem and perform a test.

- Open **Control Panel** in Windows and double-click on the **Modems** icon. Click on the entry for your new faxmodem and then click on **Properties**.
- Set the **Maximum speed** to the highest speed available (probably 115,200). This sets the speed at which the computer communicates internally with the faxmodem.
- Click on the **Diagnostics** tab. Highlight the port next to the entry for your new faxmodem and click on **More info**.
- Note the **Port** and **Interrupt** entries under **Port Information** and write the information in **Important Information** table on page 56.

This step also tests the modem by querying it with **AT** commands. A list of responses means that your new modem is properly connected.

You can also test your new faxmodem as follows:

- Use the **HyperTerminal** program. In **Accessories** open HyperTerminal. In the **Connection Description** dialog box click **Cancel**; then under **File** select **Properties**. In the **Connect using** list box select this modem and click **OK**. In the terminal screen type **AT**. An **OK** response means your modem is connected.

4 Installing the Software

Go to Chapter 4 (page 25) to install **COMMUNICATE! LITE**, a complete faxing and communications package that will help you get the most out of your new faxmodem. Also explore the other software offerings on the CD. The CD describes each program and offers easy point-and-click installation. You may install the programs you want now or at a later time.

That's it! Enjoy the use of your new faxmodem.

Key Steps—Windows 3.1, Windows 3.11, and DOS

1 Getting Started

- If you are replacing an existing internal modem, read **Appendix A** (page 45) to decide whether to keep or remove it.
- **Internal faxmodem only:** Go to Chapter 2 on page 13 to determine COM port and IRQ settings and set the jumpers.
- Shut down your computer.

2 Installing the Faxmodem

Go to Chapter 3 to install your external (page 18) or internal faxmodem (page 22).

3 Completing the Installation

You can test your new faxmodem as follows:

Use the **Windows Terminal** program. (Check your operating system's user's guide for setup instructions.) In terminal mode type **AT** and press **Enter**. An **OK** response means your modem is responding, and that the terminal program knows the COM port of the modem.

If your computer does not have Windows, test your new faxmodem with your DOS-based communications program.

4 Installing the Software

Go to Chapter 4 (page 25) to install **COMMUNICATE! LITE**, a complete faxing and communications package that will help you get the most out of your new faxmodem. Also explore the other software offerings on the CD. The CD describes each program and offers easy point-and-click installation. You may install the programs you want now or at a later time.

That's it! Enjoy the use of your new faxmodem.

Chapter 2: Setting an Internal Modem's COM Port and IRQ with Jumpers

This chapter is useful for installing an internal faxmodem in Windows NT 4.0, 3.1, 3.11, or DOS computers. If you have Windows 95 or 98, or if you are installing an external faxmodem, you can disregard this chapter. Otherwise go to the section for your operating system.

Windows NT 4.0

Determining the COM Port Setting

1 *If you are planning to remove a modem from your PC's ISA slot and replace it with this new modem:*

Check the existing modem's port configuration. Click **Start** and point to **Settings**. Click on **Control Panel** and when it appears double-click on the **Ports** icon. Click **Settings** and then **Advanced**. Write down the COM port settings in the **Important Information** table on page 56 of this manual.

Now uninstall the existing modem: Open the **Control Panel** and double-click the **Modems** icon. Select the modem to be removed and click **Remove**. Follow the screen prompts.

Go to step 3 below.

2 *If you are installing a first or additional modem and not replacing an existing one:*

First you must determine which IRQs are available:

- Click **Start**, point to **Programs**, click on **Administrative Tools**, and then on **Windows NT Diagnostics**.
- Click on the **Resources** tab and then on the **IRQ** button.
- Make a note of any of the following IRQ numbers that are *not* in the list: **3, 4, 5, 7, 9, 10, 12, 15**.

Now you need to add a port:

- Double-click on the **Ports** icon in the **Control Panel**. Click **Add**.
- Windows will list the next available COM port along with an associated I/O address and IRQ.
- Make sure the IRQ listed is available. If necessary, change the IRQ number to one of the available numbers you noted above.
- Look at the jumper settings diagrams on page 16. Find the I/O address that matches the COM port number in the dialog box. (Example: for COM Port 4, the address is 02E8.) Change the I/O address to this number if necessary.
- Click **OK**.

Write down the COM port settings in **Important Information** table on page 56 of this manual.

- 3** Using the information from step 1 or 2, set the jumpers on your internal faxmodem as described on page 14 in the **Setting the COM Port Jumpers** section.

Windows 3.1, 3.11, and DOS

Determining the COM Port Setting

If you are replacing an existing modem, remove the old one and check its jumpers or switches for the COM port setting (see your old modem's documentation on how to do this).

<p>Note: If the existing modem is part of the motherboard or is incorporated with your soundcard, you must consult your PC documentation or manufacturer for directions on how to disable it prior to installing your new faxmodem.</p>
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If you are not replacing an existing modem, or if you cannot determine the settings of the old modem, use the **ZPORTS** utility to suggest a COM port.

1. Insert the CD into your CD drive.
2. Exit Windows. From the **DOS** prompt, type **d:** and press **Enter**, where **d** is the letter of the CD drive you are using (typically **D:**).
3. Type **zports** and press **Enter**.

If your computer cannot access the CD drive from the **DOS** prompt:

- Restart Windows.
- In **File Manager**, double-click on the CD drive icon.
- Drag the **zports** program to the root directory of your hard drive (typically **C:**).
- Exit Windows.
- Type **C:\zports** and press **Enter**.

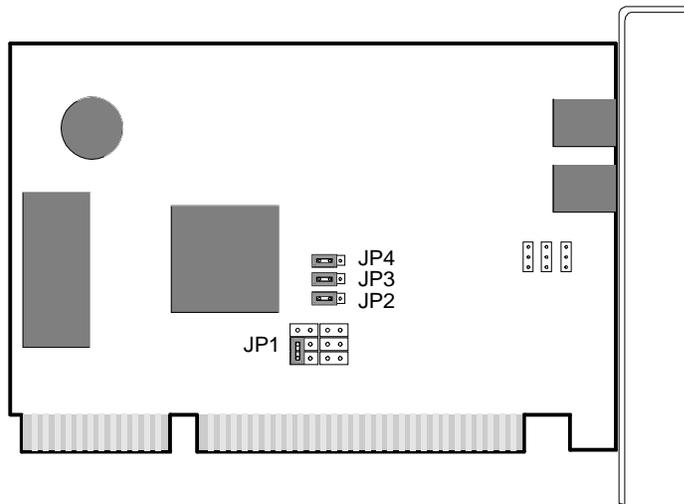
ZPORTS searches for free resources and reports them to you on the screen.

Write down the selected COM setting on Important Information table on page 56 of this manual. Then continue below.

Setting the COM Port Jumpers

The following illustration shows the locations of jumper blocks JP1, JP2, JP3, and JP4, referred to in the rest of this section.

Jumper Locations



The jumper diagram above shows the default factory settings for your faxmodem. The jumper JP2 is set for Plug and Play mode, which is used by Windows 95 and 98 computers.

Jumper	Function
JP1	Sets the IRQ
JP3, JP4	Set the port address
JP2	Selects either jumpered configuration or Plug and Play (default)

To disable the board's Plug and Play feature for Windows 3.1, 3.11, NT 4.0, and DOS installation, make sure the JP2 jumper is over the right and center pins.

Plug and Play Disabled

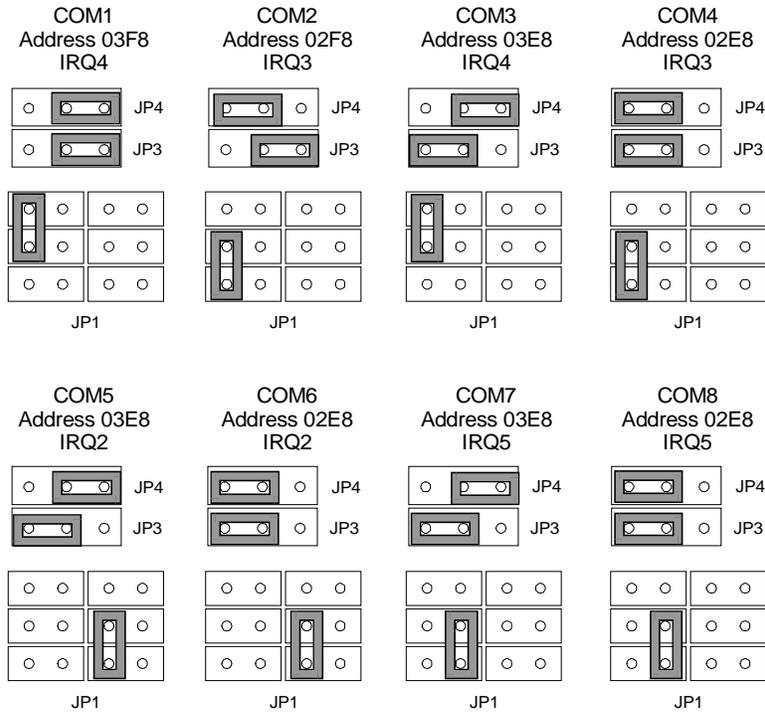


(The shaded area indicates jumper position.)

Use one of the jumper combinations as shown in the following diagram to set COM1 through COM8. The JP1 setting determines IRQ, and the JP3 and JP4 settings deter-

mine the address of the faxmodem. To set the appropriate COM port jumper combination, use the settings you determined earlier in this chapter. The faxmodem is pre-set at the factory for COM 4, IRQ 3.

Jumper Settings

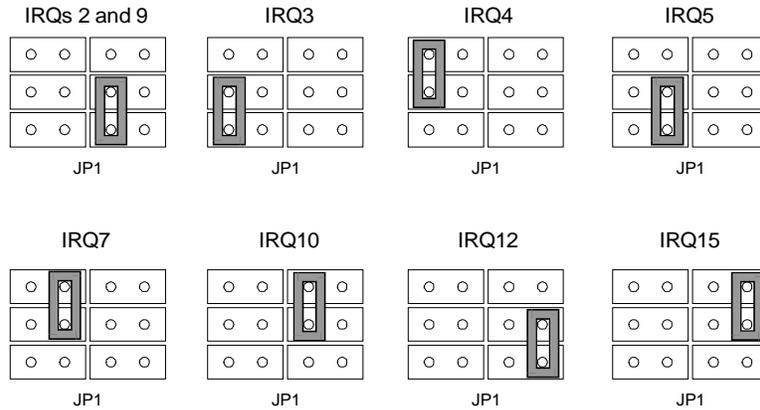


If you set your modem to one of the settings (COM1 to COM8) as shown above, you can proceed to Chapter 3 to install your faxmodem.

Additional IRQ Settings

The following table contains a summary of all the available IRQ settings. There is a small chance that you will need to use an IRQ other than 2, 3, 4, or 5 in systems that have many peripherals (such as a soundcard, CD-ROM, etc.).

IRQ Settings



Note: If you have chosen an IRQ of 5 or higher in Windows 3.1 or 3.11, you will need to set this IRQ in the Windows **Control Panel** as well. In the **Main** program group double-click on the **Ports** icon. Select the port (1, 2, 3, or 4) that you intend to use and click on **Settings | Advanced**.

In the dialog box that appears, you can change the IRQ to your desired setting. Click on **OK** twice and choose not to restart Windows at this time. Close the **Ports** dialog box.

Now proceed to Chapter 3, page 22, to install your faxmodem.

Chapter 3: Installing Your Faxmodem

- If you are installing an external faxmodem, continue below.
- If you are installing an internal faxmodem, continue with *Installing the Internal Faxmodem in Your Computer* on page 22.

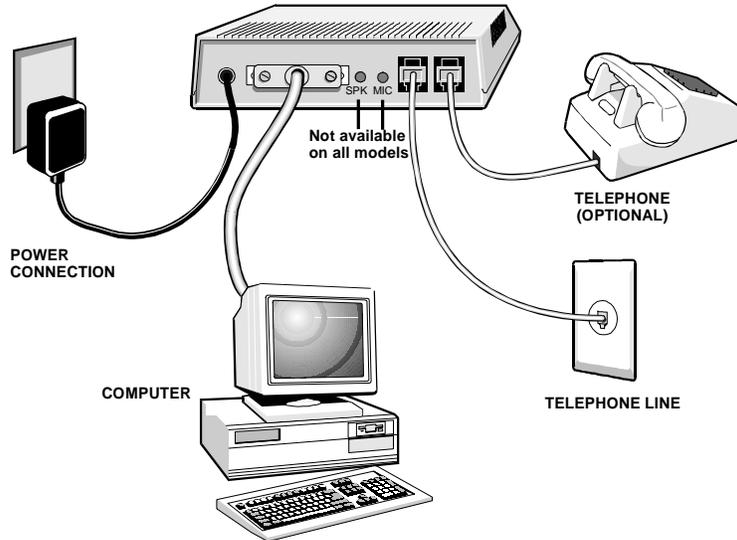
Connecting the External Faxmodem to Your Computer

- 1** Find the serial number of your faxmodem on the bottom of the case, just under the bar code. Write the number in the **Important Information** table on page 56 of this manual.
- 2** If you have not already done so, shut down and turn off the computer.
- 3** Connect the faxmodem-to-computer serial cable. Plug one end of the cable into the wide connector (DB-25 male) on the back of the faxmodem. Plug the other end into the serial port on the back of your computer. Tighten the screws at both ends of the cable.
- 4** Connect the telephone cord. Plug one end of the cord provided with the modem into the **PHONE LINE** jack on the back of the faxmodem. Plug the other end into the wall jack just as you would a standard telephone. You may also connect your regular telephone to the back of the faxmodem, in the jack labeled **PHONE**.

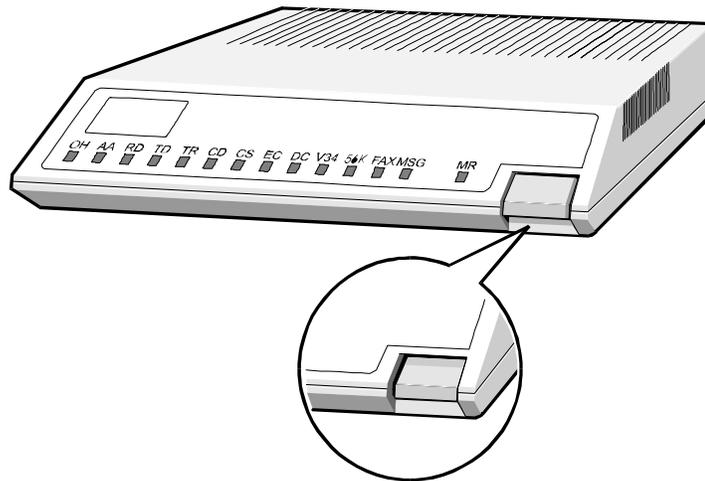
The faxmodem works with or without a telephone connected to it.
- 5** **Connect the power adapter.** Plug one end of the power adapter into the back of the faxmodem. Plug the other end into an electrical outlet.

<p>Note: Use only the power adapter that came with your faxmodem. Other power adapters may damage the faxmodem.</p>
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The following illustration shows a typical setup.



- 6** If your faxmodem came with a speaker or earphone and microphone, plug them into the jacks on the back of the faxmodem, as shown in the illustration.
- 7** Turn the faxmodem on by pushing in the power button on the front of the unit, as shown in the following illustration.



- 8** Turn the computer back on. The modem performs a brief self-test. Then the **MR** light should go on to show that the faxmodem is ready for use.

The faxmodem has a set of 14 indicator lights on the front. A chart telling you what the lights mean is on the following page. The chart is also reproduced in condensed form on the bottom of the faxmodem.

Now go back to Key Step 3 to complete the installation:

- **Windows 95 and 98:** page 7
- **Windows NT 4.0:** page 9
- **Windows 3.1, Windows 3.11, and DOS:** page 11

Summary of the Indicator Lights

Light	Description
OH (Off Hook)	Lights when the faxmodem is off hook.
AA (Auto-Answer)*	Lights when Auto-Answer is activated. Blinks on and off when detecting incoming ring.
RI (Ring Indicate)*	Blinks on and off when detecting incoming ring.
RD (Receive Data)	Light flashes when data is sent from the faxmodem to your computer or other serial device. At high speeds light may appear continuously on.
TD (Transmit Data)	Flashes whenever data or commands are transmitted from the serial port of your computer or other device to the faxmodem.
TR (Terminal Ready)	Lights when the computer is ready to send or receive data. Indicates the status of the DTR signal from the terminal or computer.
CD (Carrier Detect)	Lights when the Data Carrier Detect (DCD) signal from the faxmodem to the computer is on.
CS (Clear to Send)	Lights when the faxmodem can accept data from the computer. The light will turn off when the faxmodem is set for flow control (AT command &K3) and the faxmodem's data buffer is full, preventing data flow from the computer.
EC (Error Correction)	Lights when using V.42 or MNP 4 error correction.
DC (Data Compression)	Lights when using V.42bis or MNP 5 data compression.
14.4*	Lights when operating at speeds of 14.4 Kbps or higher.
V.34	Lights when operating in V.34 mode.
56K**	Lights when communicating in <i>K56flex</i> [™] or V.90 mode.
FAX	Lights when fax connection has been made to a remote faxmodem.
MSG	Used by some software products. May light when faxes or voice messages are waiting.
MR (Modem Ready)	Lights when the faxmodem is turned on. Flashes when the faxmodem is in self-test mode.

*This light is not on all models.

**This light is active on 56K products.

Installing the Internal Faxmodem in Your Computer



Do not handle any internal modem card when the phone line is plugged into it. The voltages present when the line is ringing are potentially harmful.

If you ever need to remove the card from your computer for any reason, simply remove the phone line from the internal card before handling it.

Electrostatic Discharge Protection



CAUTION

Static electricity can damage components on your faxmodem or inside your computer. Before removing the board from its anti-static bag, hold the bag with one hand and touch the computer's metal chassis to statically discharge yourself.

- 1** If you have not already done so, exit any running programs and shut down Windows. Then turn your computer off and unplug it. Don't plug it back in or turn it on until you complete the faxmodem hardware installation. Remember, your computer should be located near a phone jack.
- 2** Find the serial number of your new faxmodem on the metal bracket and write the number **Important Information** on page 56.
- 3** Take the cover off your computer. This usually involves removing four to six screws at the back of the computer case. If you are not familiar with the procedure, consult your computer's manual for instructions.
- 4** Unscrew and remove the metal cover plate on the rear of the computer that lines up with an available 16-bit slot (see the following illustration). Your faxmodem

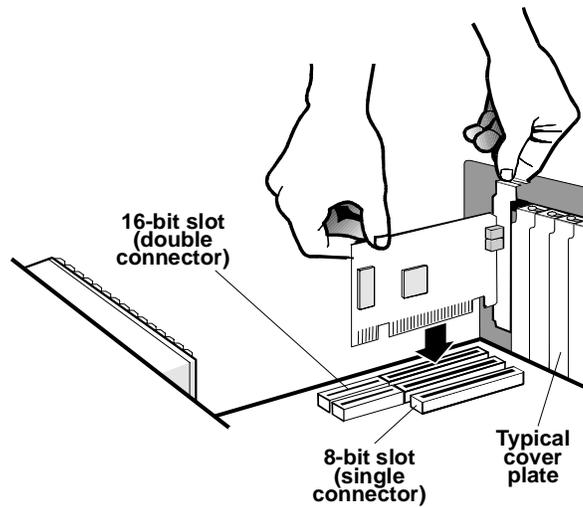
has two sections of gold connecting fingers, and a 16-bit slot has two sections that match the sections on the faxmodem.

If you are replacing an older modem that is in the slot (See **Appendix A** on page 45), now is a good time to remove it. (It may be in an 8-bit slot, which you should not use for your new faxmodem.) Look for a board with one or more phone jacks on it. To remove the old modem: unplug any cables connected to it. Unscrew the screw and lift the board from its slot. Put the screw in a safe place; you can use it to install your new faxmodem.

Note: Most of the boards inside your computer have tiny wires sticking out underneath. These wires can be sharp. Be careful not to cut your hands on them.

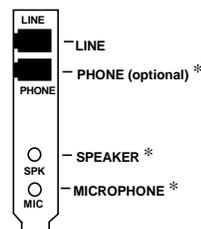
- 5** Plug your new faxmodem firmly into the 16-bit slot (see the following illustration). Be sure that the bracket is lined up properly; then screw the bracket into the computer using the screw you removed with the cover plate or the old modem. Be sure that the back end of the card (smaller gold finger area) is properly seated into the connector.

If you have a tower or mini-tower computer case with a vertical main board, you may want to gently lay the computer down on its side so you can push straight down on the faxmodem card to seat it firmly in its slot.



6 Replace the computer cover.

7 Connect the telephone cord. Plug one end of the phone cord into the jack marked **LINE**. Plug the other end into a phone jack (where you would normally connect a phone). Some models may include a phone jack for an optional telephone, or jacks for a microphone, speaker, or video camera. Now is a good time to plug in these options. The fax-modem works with or without a telephone connected to it.



*Not available on all models

8 Plug in your computer and turn it on.

Your hardware installation is finished.

Now go back to Key Step 3 to complete the installation:

- **Windows 95 and 98:** page 7
- **Windows NT 4.0:** page 9
- **Windows 3.1, 3.11, and DOS:** page 11

Chapter 4: Installing and Using **COMMUNICATE! LITE**

The CD-ROM disc that was provided with your faxmodem includes **COMMUNICATE! LITE**, by 01 Communique Laboratory, Inc. This is an integrated communications software package that can be installed in English or (for Windows 95, 98, or NT 4.0) in any of several other languages. It has an easy-to-use interface based on a familiar telephone image. **COMMUNICATE! LITE** can send, receive, and manage your faxes. It can store and speed-dial your frequently used phone numbers, and it can serve as an answering machine if your modem supports voice and your computer has a soundcard.

The full version of **COMMUNICATE!** has many more capabilities. We suggest that you visit the 01 Communique Web site at www.01com.com (the 0 is a zero) for information regarding product upgrades to this software.

The CD-ROM disc also includes other software that can be installed from an easy point-and click interface.

COMMUNICATE! LITE is also available on floppy diskettes, which you can order at a nominal cost directly from 01 Communique. To inquire about ordering software, you can reach 01 Communique in Canada at 905-795-2888 (phone), 905-795-0101 (fax), or 01com@01com.com (e-mail).

You can also download the English version of **COMMUNICATE! LITE** from the Web at the following address: www.modems.com/dl01 (the 0 is a zero).

Installing **COMMUNICATE! LITE**

You can install the communications software from the CD-ROM disc included in your package, using an easy point-and-click interface. Slight differences between Windows 95/98/NT 4.0 and Windows 3.1/3.11, are noted.

- 1** *For Windows 95, 98, or NT 4.0:* Follow the instructions on the CD-ROM label. On most computers the CD will start up automatically after a few seconds.

Wait for the main installation screen to appear.

Click on the **COMMUNICATE!** button to begin the installation.

On the **COMMUNICATE! LITE** Main Menu you will be offered a choice of languages. Choose the language you want to install.

For Windows 3.1 or 3.11: Insert the disc in your CD-ROM drive. In the Program Manager click on **File**, then **Run**. Click on **Browse** and navigate to the CD-ROM drive. Double-click on **01Comm** to open its subdirectory; then double-click on **Setup**. Press **Enter** to begin the installation. (There may be other subdirectories that offer language-specific versions.)

After a few seconds the **COMMUNICATE!** Installation screen will appear.
- 2** Click on the **Install** button.
- 3** The **Install Configuration** dialog box will be displayed. Enter your company name (if applicable), your name, telephone, and fax number. This information will appear on the header of each of your outgoing faxes.
- 4** If you want to start **COMMUNICATE! LITE** automatically whenever you start Windows, check the **Auto-load** checkbox. Choose this option if you want to have communications capabilities (for instance, for incoming faxes) available all the time when you are in Windows.
- 5** Click **OK** when you are ready to continue.
- 6** The path for the drive where the **COMMUNICATE! LITE** installation files are located should be displayed; if it is not correct, select the correct drive and click **OK**.

7 When **COMMUNICATE! LITE** has been successfully installed, you will be asked to restart Windows:

For Windows 95, 98, or Windows NT 4.0: Click on **Yes**.

For Windows 3.1 or 3.11: You will be asked to update the **CONFIG.SYS** file. Click on **Yes** to restart Windows.

8 After Windows restarts:

If **COMMUNICATE! LITE** loads automatically, you can start it by clicking its icon in the Windows 95, 98, or NT 4.0 taskbar, or by double-clicking its icon on the Windows 3.1 or 3.11 desktop.

If **COMMUNICATE! LITE** does not load automatically, start it by clicking on the **COMMUNICATE!** icon in the Windows 95, 98, or NT 4.0 **Start Menu** under **Programs**, or by double-clicking on the **COMMUNICATE!** icon in the Windows 3.1 or 3.11 Program Manager.

The program's main interface, which looks like a telephone console, will be displayed.

COMMUNICATE! LITE is now installed and ready to send and receive messages.

Running **COMMUNICATE! LITE**

COMMUNICATE! LITE comes with extensive on-line help to guide you through faxing, data calling, and many other features. The features supported by your faxmodem are listed on its box.

The main interface of **COMMUNICATE! LITE** looks like an integrated telephone and answering machine, with a handset on the left, a keypad in the middle, and a recorder on the right.

The handset and keypad can be used to dial outgoing calls on your regular phone if you have plugged one into the **PHONE** jack on your faxmodem.

The recorder can be used as an answering machine if your faxmodem and software include voice support, and as a sound recorder using your soundcard and a microphone.

There are also several other buttons, which activate various components of the program, including a text editor and a graphics editor.



Use the mouse to select the various functions. Pausing the mouse pointer over a button will cause a description of the button to appear in the top display panel and at the mouse pointer. The illustration above was created with the mouse pointer (not shown here) paused over the **View File** button. Notice that “Use graphic editor” appears in the panel at the top middle, and that “Graphic editor” appears in a light rectangle just below the **View File** button.

To learn more about how to use all the features of **COMMUNICATE! LITE**, click on the **Help** button to access the online documentation. A set of step-by-step instructions will be displayed. Select a feature and then launch that task by clicking the appropriate button on the **COMMUNICATE! LITE** panel.

You can also launch various tasks in the program by clicking with the secondary mouse button (usually the right button) anywhere on the background of the display. A pop-up menu will be displayed, from which you can access the features of **COMMUNICATE! LITE**.

Here are some things for you to try with your new fax-modem and **COMMUNICATE! LITE**:

- Compose a fax and send it to a friend or associate who has a fax machine or a faxmodem.

- Print from your word processor or other program, using **COMMUNICATE!** as your printer, to send your document as a fax.
- Have a friend or associate send you a fax.
- Record sound files using your soundcard and send them as e-mail attachments.
- If you have a telephone plugged into the **PHONE** jack on your modem, speed dial your favorite phone numbers by clicking the handset image. Click a number to dial and then lift your telephone handset to speak to the person you called.

Explore the other features of **COMMUNICATE! LITE**—the text editor and graphics editor for creating fax cover sheets; calls to bulletin boards; the contact manager; and so on.

Fax, Voice Mail, the Internet, and Power Saving Options

If you use your faxmodem for receiving faxes and voice mail, keep in mind the following:

Your computer must be running, and **COMMUNICATE! LITE** must be active.

If you want to connect to your online service or Internet Service Provider, you must exit **COMMUNICATE! LITE** first. While you are on line, you cannot receive calls or faxes.

Some computers have a power saving option that stops the hard drive from spinning after a period of inactivity. If a call (voice or fax) comes in, it may fail to connect while the hard drive restarts and activates **COMMUNICATE! LITE**. If this happens, you should deactivate the feature of your power saving option that stops the hard drive. See your computer's documentation for details.

Getting Help for **COMMUNICATE! LITE**

For help with **COMMUNICATE! LITE**, consult the extensive help file included with the program.

Chapter 5: Using the Faxmodem with Other Software

This chapter provides tips for setting up communications software, sending initialization strings containing **AT** commands to the faxmodem, using a video camera, and accessing the Internet.

Setting Up Communications Software

Software programs are designed as a simple, user-friendly interface that makes it easy to use the many features your faxmodem offers. First, however, the software must identify the modem and its special capabilities. Many software programs identify the product automatically and configure themselves for the correct operating settings. If you run into difficulty with configuration, it may be helpful to read the following section, **Tips for Selecting Setup Options**.

Tips for Selecting Setup Options

In setting up some older software programs, you may be asked to enter certain information. Most programs have default settings that are correct for use with this modem, and there is no need to change them. However you should be aware of the following items:

If you are asked to select the “modem type” from a menu, and you don’t see this modem listed by name on the menu (for instance, **Internal 56K LT Voice Faxmodem** or **External 56K LT Faxmodem**), select the most descriptive name such as **V.90 modem**, **56K modem**, **Hayes-compatible modem** (with or without a specific speed), or generic **Class 1 Modem**. The more generic the type you choose, the less likely that the software will let you use some of the faxmodem’s advanced features, but the modem will perform basic communications and fax functions.

- In the dialing directory, set all entries to the highest possible baud rate, if your software and serial port support these speeds. All communications between the computer and the modem take place at this higher speed, independent of the modem-to-modem speed.

The modem auto-negotiates the highest speed connection between itself and the other modem.

- If there is a section of your software called “Terminal Settings,” make sure that **Hardware Flow Control (RTS/CTS)** is **ON** (or **YES**). This is necessary in order for V.42bis file transfers to work.
- Set **auto baud detect** to **OFF** (or **NO**).
- If your fax software gives you the option of selecting **Class 1** or **Class 2** fax drivers, select **Class 2** if your modem supports it (see the technical section on the box). Class 2 may provide slightly faster faxing. Otherwise select **Class 1**.
- Finally, some programs ask **Send init if CD high?**, which you should set to **YES**. Otherwise, the modem may not receive the proper initialization string.

Initialization Strings

An initialization string is a group of **AT** command settings that are sent to the faxmodem as soon as you start up the software. (The “AT” stands for “attention.”) The software determines which commands should be included in the initialization string, based on the device you select during installation. The commands remain in effect throughout the communications session, unless the software sends other commands to override them.

The software uses other **AT** command strings for all commands sent to the modem. This is transparent to you—the software does this in the background without your having to be aware of it.

It is sometimes necessary, however, to add other **AT** commands to initialization strings. You can find a table of **AT** commands on the World Wide Web at www.modems.com. Click on **Reference** and then on **AT Command Sets**.

Here are two of the more useful commands:

- If your software suggests an initialization string for this modem, you should use it. If this modem is not listed by your software and no initialization string is suggested, use the following: **AT &F**.

- If your touch-tone telephone service includes Call Waiting that you can temporarily suspend by pressing ***70**, include **ATDT*70**, (including the comma) in the dial string.

Using AT Commands

If your software does not handle **AT** commands automatically, it should provide a place to enter **AT** commands in its setup menus.

However, in some cases you may need to enter **AT** commands directly to the faxmodem. You must do so from a data program's terminal mode.

Using Terminal Mode to Enter AT Commands

1. Start your data communications program.
2. Change to terminal mode (also called command, local, direct, or dumb mode).
Windows 95, 98, and NT 4.0 include a terminal application, **HyperTerminal**, which you may use if you do not have a communications program. (Check your operating system's user's guide for setup instructions for the terminal program.)
3. Type in the **AT** command you need and press **Enter**. You will see an **OK** response.

When you finish, you can return to the data communications program's standard user interface. See the software program's documentation if you need help.

Returning to the Factory Settings

To return to the factory default settings for the modem, in terminal mode, type **AT &F** and press **Enter**.

Using Audio Features

In addition to data and faxing capabilities, your faxmodem supports a full-featured single or multiple mailbox voice mail system. Through your software you can also set up fax-back, sometimes called fax-on-demand, and record and play back messages. The communications software

that comes with your faxmodem, **COMMUNICATE! LITE**, is capable of these features.

Using Video

Your faxmodem supports video applications through the V.80 standard protocol so that it can be used for high-quality modem-to-modem videoconferencing. The modem is compatible with H.324 point-to-point and H.323 Internet video conferencing standards. To send videos, you also need video capture capability, a camera, and video software.

To include sound with your videos, you also need a soundcard and a compatible microphone.

Accessing the Internet

To access the Internet and the World Wide Web, use an online service such as America Online (AOL) or CompuServe, or an Internet Service Provider (ISP). Online services provide installation software that makes signing up almost automatic. ISPs typically supply or suggest the browser software needed to access their service. They also provide additional instructions and software for setting up your account.

Your faxmodem may include online service and ISP offers, which provide you the opportunity to try the Internet and a range of other services.

Chapter 6: Solving Common Problems

Note: If your modem is not working, please read this chapter and the communications software documentation in Chapter 4 carefully.

For installation problems, see **Chapter 3: Installing Your Faxmodem** on page 18.

This chapter covers three categories: general troubleshooting, dial troubleshooting, and on-line troubleshooting. In addition, there is a section on **Problems with Plug and Play Setup in Windows 95 or 98**.

For help with this problem...	See page...
Your modem seems to install under Windows 95 or 98, but Windows cannot find it later.	35
You have two faxmodems installed and neither of them works.	35
The software cannot find the modem and the modem does not respond to AT commands.	35
The modem fails to execute an AT command line.	36
You encounter other communication problems.	36
The modem speaker volume is too high or too low.	37
The modem does not automatically dial a call when you send a Dial command line.	37
The modem can connect to some modems, but not to others.	38
The modem disconnects while communicating with a remote system.	39
The modem does not make a data connection.	40
You receive bursts of errors occasionally, but otherwise data quality is good.	40
Random errors occur in transmitted data.	40
Data appears garbled on the screen.	41
The modem works well when you are not using data compression, but the compression features are inoperative.	41
Problems with Plug and Play Setup in Windows 95 and 98	42

General Troubleshooting

Problem: **Your modem seems to install under Windows 95 or 98, but Windows cannot find it later.**

Solution: If your computer has a built-in modem on the motherboard, Windows may reinstall it the next time you start up. If you have installed your new faxmodem using the Plug and Play feature, you could also try uninstalling it and reinstalling it as a jumpered board. If that does not solve the problem, consult your computer's documentation or call your computer's manufacturer to get instructions on how to disable the built-in modem.

Problem: **You have two faxmodems installed and neither of them works.**

Solution: It is currently not possible to run two or more internal Plug and Play faxmodems in Windows 3.1 or 3.11. Switch one or both of them to jumpered configuration. One internal and one external will also work.

Problem: **The software cannot find the modem and the modem does not respond to AT commands. (The following comment applies to many other problems as well.)**

Solution: The most common error with modems is that the communications software is not configured for the same COM port as the modem. Check which COM port the modem is using. Make sure that the software's COM port setting matches the modem's COM port setting.

Another problem is that COM port resources may be in use by another device. Make sure that the COM port resources used by the modem are not being used by any other device, such as a soundcard.

Problem: **You type an AT command line in terminal mode or in a terminal application and press Enter, but your modem fails to execute the**

command line. Or there was no response after executing a command.

Solution: Be sure you type **AT** at the beginning of the command line.

Make sure the communications software is configured for the same COM port as your modem.

Be sure your modem is not in data mode when you type the command. Use the escape character sequence to switch to terminal mode. (The default escape sequence is to wait at least one second, type **+++**, and wait another second or more.)

If you typed a command but did not receive an **OK** response from your modem: The **E0** and **Q1** commands may be in effect, disabling echo and responses. Verify this with the **&V** command. To enable echo and responses type **AT E1 Q0** and press **Enter**.

Problem: **You encounter other communication problems with your modem.**

Solution: Check that your communications software has been set up properly. Recheck the initialization string and dial string specified in your software manual. Remember that commands in the initialization string are sent to the modem each time you start your software and override the settings stored in the modem's non-volatile memory.

Memory-resident (Terminate-and-Stay-Resident, or TSR) programs can cause a variety of problems for some programs. Try starting up your computer without them. You may find TSRs in your AUTOEXEC.BAT file or in WIN.INI. In AUTOEXEC.BAT, put **rem** ("remark") at the beginning of any line you want to keep from loading. In WIN.INI, put a semicolon (;) at the beginning of any line you want to keep from loading. Examples of TSRs include antivirus programs and screen savers.

Problem: The modem speaker volume is too low or too high.

Solution: Your modem has a small speaker on its board that gives you audible feedback of dial tones and remote connection signals (“handshaking”). This is not the same as the speaker(s) that you may have connected to your soundcard.

If the software allows you to control the volume of the on-board speaker, make sure the speaker is enabled and set to a comfortable volume.

If the software does not have speaker settings, add one of the **AT** commands listed below to the initialization string:

L1 for low volume

L2 for medium volume

L3 for highest volume

M0 to turn the speaker off completely

For example, if you want the volume low and the software uses the initialization string **AT &F**, change it to **AT &F L1**.

Dial Troubleshooting

Problem: The modem does not automatically dial a call when you send a Dial command.

Solution: Make sure the modem speaker is turned on in your software so that you can hear dialing sounds. Also make sure that the phone line is plugged in.

Make sure that you are dialing a valid phone number, including any required dial prefixes.

If you are using tone dialing on a line that requires pulse dialing, the line may not be able to accept tone-dialed calls. Select Pulse dialing in your software or make sure software dialing prefix is **ATDP** (for pulse dialing).

Make sure your communications software and modem are configured for the same COM port.

Make sure your modem has hung up from the previous call. Select **Hang Up** in your software; or type **ATH** in terminal mode.

On-line Troubleshooting

Problem: The modem can connect to some modems, but not to others.

Solution: If a remote modem does not respond because of the extended negotiation process, you may have to disable part or all of the negotiation process. In the following table, “protocol” means error correction and data compression. Note that the first two lines in the table are likely to be the most valuable.

Note 1: In the command strings shown in the table that follows, the character **0** is a zero, not the letter “O.”

To force the different communication speeds (speeds are maximums; actual speed depends on line conditions and other factors)	Type these commands and press Enter
Negotiate speed and protocol (default setting)	AT &F
Negotiate speed only, do not use protocol	AT IN0
To force protocol	AT IN3
Dualmode (V.90 or K56flex)—56000 bps	AT S109=1 (default)
K56flex only (disable V.90)—56000 bps	AT S109=0
V.90 only (disable K56flex)—56000 bps	AT S109=2
Disable V.90 and autorate on V.34—33600 bps	AT S38=0
V.34—33600 bps	AT S37=19
V.32bis—14400 bps	AT S37=11
V.32—9600 bps	AT S37=9
2400 bps	AT S37=6
1200 bps	AT S37=2

Note 2: Some software allows these commands to be added to the list of dial prefixes or the initialization string.

Note 3: When the protocol is forced, the modem will not attempt to connect at other protocols if it cannot connect at the forced protocol. It will try to connect at the fastest speed available within the forced protocol.

There are other configurations that can be forced as well. If you need to select a particular configuration, use the **AT** command strings shown below. You can always return to the modem's default configuration by typing **AT &F** and pressing the **Enter** key. Remember that if you do this, the modem will not have received the commands in your software's initialization string as it normally would. Using the **ATZ** command overcomes this problem if you have saved all of your setup parameters in nonvolatile memory. (To save setup parameters in nonvolatile memory in **AT** terminal mode: Type **AT**, followed by the parameter settings you choose, followed by **&W** and press **Enter**. For example, if you type **AT &C1 &D2 &W** and press **Enter**, the **&C1** and **&D2** parameter settings are stored in Profile 0. Refer to the Web page at www.modems.com for the complete set of **AT** commands.)

To force...	Type these commands and press Enter
MNP 5/MNP 4 operation	AT \N2
LAPM only	AT \N4
MNP 4 only	AT \N2 %C0
"Normal" operation (The faxmodem will communicate without any error correction or data compression, but will retain speed buffering and auto-speed negotiation. It should not be confused with the "standard" configuration.)	AT \N0
Auto-answer	AT S0=1

Problem: Your modem disconnects while communicating with a remote system.

Solution: The remote system has hung up. You need to reconnect.

The telephone line disrupted your call. If your telephone service includes Call Waiting, turn it off if possible before making modem calls. You

can usually temporarily disable Call Waiting on touch-tone lines by including *70, (the comma is part of the command) or selecting it as a prefix with the telephone numbers in the software's dialing directory. For non-touch-tone telephones, the equivalent command is 1170, (again, the comma is part of the command).

You cannot disable Call Waiting for incoming calls. If your modem often receives data calls and communications are frequently disrupted by Call Waiting, you should consider dropping the service or installing a separate phone line without Call Waiting.

Problem: Your modem does not make a connection.

Solution: If your modem places calls but never makes a connection, make sure you are dialing the right number. The remote modem may be turned off.

Problem: You receive bursts of errors occasionally, but otherwise data quality is good.

Solution: The connection may have been established on poor-quality or noisy telephone lines. Hang up and place the call again to try to obtain a better connection.

Someone may be picking up an extension connected to the line that your modem is using. If the modem is sharing a telephone line with other telephones, inform the other users when you will be making a data call.

Your telephone line may have a Call Waiting feature and a call is being received. See the Call Waiting discussion on page 39.

Problem: Random errors occur or data is missing in transmitted data.

Solution: Use the MNP or V.42 protocol if the remote modem supports one of these protocols. See the table on 39 for more information.

Select a lower baud rate in your communications software and place the call again.

If both modems are using the MNP or V.42 protocol, the only way this can occur is if your modem and communications software are not using the appropriate flow control. Configure your communications software for **RTS/CTS** (hardware) flow control. Your computer will now pause for the transmission to be stored.

Problem: Data appears garbled on the screen.

Solution: Your communications software character set-up (start bit, data bits, stop bits, and parity bit) does not match that of the remote system. Check your settings against those used by the remote system and make sure they match. Pay particular attention to the parity setting, as this is the most common difference among systems. You should normally use 8 data bits, NO parity, and 1 stop bit (**8, NONE, 1** or **8N1**). The second most common setting is 7 data bits, EVEN parity, and 1 stop bit (**7, EVEN, 1** or **7E1**).

Problem: Your modem doesn't seem to be compressing the data.

Solution: The compression features are on by default, but check the following:

Your software needs to use a streaming protocol, such as Ymodem-G or Zmodem. Xmodem and Ymodem are not adequate for compression.

Your software must be set up so that your modem is using hardware flow control (**RTS/CTS ON**).

To get maximum data throughput, you can use a computer-to-modem speed of 230,400 bps (if your COM port can support this speed); set this for each entry in the dialing directory.

Be aware that many files downloaded from online services have already been compressed. In general, your modem will not be able to further compress such files.

Problems with Plug and Play Setup in Windows 95 or 98

If your setup doesn't proceed properly, read and perform the following steps before calling Tech Support.

Using the Hardware Conflict Wizard

Windows 95 and 98, with the Plug and Play feature, is a major improvement over previous versions of Windows. But under some circumstances, Plug and Play may not resolve all installation problems.

For example, if you have a lot of optional hardware installed in your computer, you can still encounter a problem installing your modem. Conflicts may arise when you have a sound card installed, or a graphics tablet, a second printer, or a combination of these. The problem is insufficient COM port and interrupt (IRQ) resources.

The Windows Help system has an excellent tool (called a "wizard") for thoroughly diagnosing and solving many of your problems. To use this procedure, do the following:

1. Double-click the **My Computer** icon on your desktop.
2. The system displays the **My Computer** window.
3. Choose the **Help Topics** command in the **Help** menu.
4. Windows displays the **Windows Help** dialog box.
5. Select the **Contents** tab.
6. Click on **Troubleshooters** and then on the entry for hardware conflict.
7. Click the **Display** button.
8. Windows Help displays the Hardware Conflict Troubleshooter.
9. Follow the instructions for determining and resolving a hardware conflict.
10. This should solve your problem. If it does, your fax-modem hardware is installed. Remember to write down your COM port setting. Return to page 7 to complete the installation.
11. If you still have problems, it probably means that although you are running a version of Windows that

supports Plug and Play, you may have an older computer that is not completely compatible with this feature. Try the steps in the next section.

Changing the COM Settings in BIOS under Windows 95 or 98

This procedure is a little more difficult than the previous one, but with the help of your computer's documentation you should be able to clear up any remaining problems.

1. Close all running programs. Shut down your computer and restart it: Click **Start** and then **Shut Down**. Press the **Enter** key or click **Yes** to shut down your computer completely. Turn the power off, wait about 5 seconds, and turn the power back on.
2. As your computer goes through the startup process, it should display a key or key combination that you can use to enter the **BIOS Setup** program. (BIOS stands for Basic Input/Output System.) Enter the BIOS Setup program and disable COM2. Consult your computer's documentation if the procedure is not clear based on the on-screen prompts.
Note: Some computers may not use the BIOS settings to control the COM ports. Check your computer's documentation to see if you have to reset the computer's jumpers or switches instead.
3. Write down and save the new COM port setting and exit **Setup**.
4. The BIOS automatically reboots your computer.
5. In Windows 95 or 98, choose **Control Panel** from the **Settings** command in the **Start** menu.
6. Double-click the **System** icon.
7. Click the **Device Manager** tab.
Find the **Ports** (COM & LPT) device and click the +.
This expands the device list under **Ports**.
8. Select **Communications Port** (COM2). Click the **Remove** button in the **Device Manager** window.
This removes the device currently assigned to COM2.
9. When Windows displays the **Confirm Device Removal** warning, Click **OK**.
10. Double-click **Modem** in the **Device Manager** window.

11. Double-click the Faxmodem icon for your model.
12. Click the **Resources** tab.
13. Uncheck the **Use automatic settings** checkbox.
14. Scroll through the Basic configuration options until you find the one that displays the **Input/Output Range 02F8 - 02FF** and **Interrupt Request 03**. This is COM2. The **Conflicting device** list box should say **No conflicts**. If there are conflicts, call Tech Support.
15. If there are no conflicts, close the **Modem Properties** window, **System Properties** window, and **Control Panel** window by clicking **OK** for each.
16. Shut down your computer, turn off the power, and restart it. Going through this power cycle can be important. Merely restarting Windows may not allow the BIOS to register the changes properly.

If Windows finds your other serial port, it may try to assign the port to COM2, but won't be able to because your faxmodem is already using that system resource.

Appendix A: Removing an Existing Modem

If your computer does not already have a modem installed, or if you are replacing an external modem with another external modem, you do not need this section.

1 **If your computer has a modem, you may choose to keep it or to remove it.** We recommend that you remove your old modem unless you have a good reason to keep it. Removing your old modem assures that your computer will have space to install the new faxmodem and enough resources to run it without conflicts with other devices.

You may want to keep your old modem, however, if:

- You have two telephone lines and want to keep your fax program running on one line while you access the Internet on the other line.
- You anticipate being able to use “teaming” or “bonding” software to use two modems and two phone lines for faster Internet access.

If you decide to keep an old *internal* modem installed, you may want to determine whether your computer has sufficient resources, especially if you have other peripheral devices installed in your computer. Resources are discussed in **Appendix B** on page 47.

2 **If you are removing your old modem from a Windows 95, 98, or NT 4.0 computer:**

<p>Note: You can also use this procedure if you ever need to remove your new faxmodem.</p>

Before you remove your old modem, you must inform Windows that you are going to remove it before you physically do so. This may prevent internal conflicts in Windows as it allocates its resources to your new faxmodem.

Follow these steps to “remove” your old modem in Windows before you open the case of your computer.

- Click on **Start** and point to **Settings**. Click on **Control Panel**. When the Control Panel displays, double-click on the **Modems** icon.
- Now click on the **Remove** button. Click **OK** to confirm that you are removing the modem.

Windows has now been informed of your intention to remove the old modem.

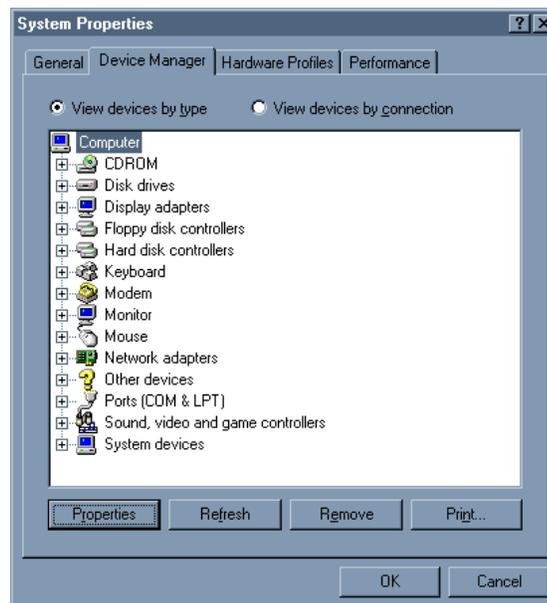
Appendix B: Determining Resources in Windows 95 or 98

Your computer must keep track of how its components communicate among themselves and with the outside world. These components include physical devices like the internal circuitry and the plugs and jacks on the back of the computer, plus certain memory addresses inside the machine. Collectively, these are known as resources.

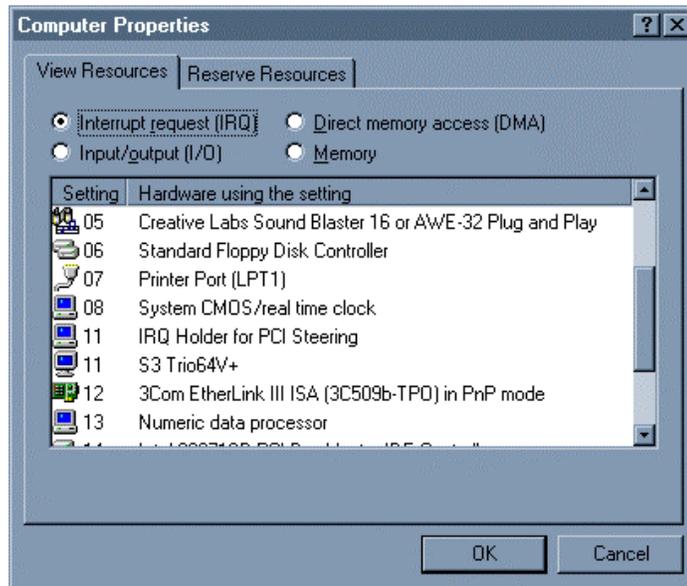
For modems, one important resource is the Interrupt Request, or IRQ.

If you want to keep your old faxmodem installed, and especially if you have other devices connected (external drives, a camera, a TV card, a high-end soundcard, for instance), you should check your computer's IRQs.

- 1 From the Windows desktop, click on **Start** and select **Settings**. Click on **Control Panel**. Double-click on the **System** icon. The **System Properties** dialog box will appear. Click on the **Device Manager** tab. The first entry, **Computer**, should be highlighted. Click on **Properties**.



- 2** The **Computer Properties** dialog box will be displayed. Click on **Interrupt request (IRQ)**. In the panel are listed the IRQs for all the devices currently being used by your computer. See the illustration.



Your modem must use one of the following IRQs: 3, 4, 5, 7, 9, 10, 11, or 12. If there are no IRQ numbers available in this group (that is, if all these numbers are in use), you will have to uninstall your old modem. Go to step 2 on page 45. If you have found one or more IRQ numbers, and you want to keep your old modem, go to the installation instructions on page 22.

Note that if you have communications software installed for use with your old modem, you will most likely want to reconfigure it to work with your new faxmodem.

Appendix C: Installing and Setting Up Your Faxmodem without a CD

If you do not have a CD drive in your computer, you can still install and set up your faxmodem without special drivers. If your modem requires drivers (Windows 95, 98, and NT 4.0), you can download the drivers via the Internet and install them to make sure your faxmodem will work optimally.

Please go to the section below for your computer's operating system.

Windows 95 or 98

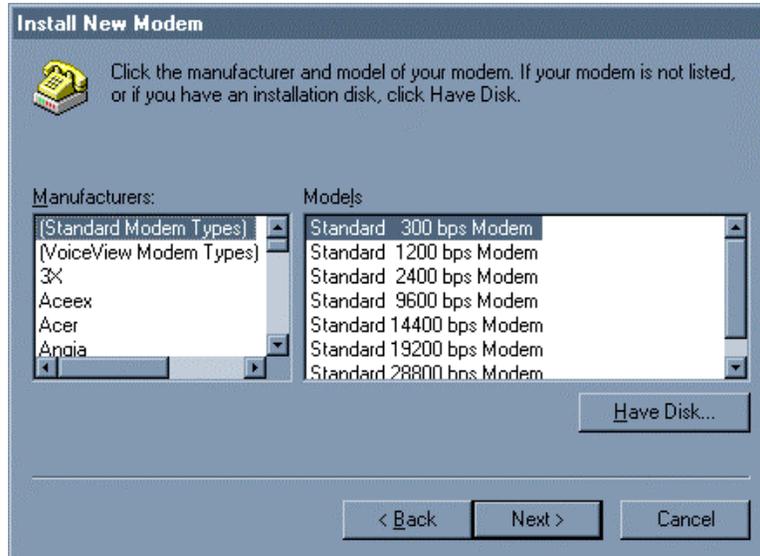
Follow the normal installation in the Key Steps beginning on page 7. Omit the driver installation from the CD in step 1.

When Windows restarts (step 3), you will see a dialog box like the following:



Check the box **Don't detect my modem...** and click **Next**.

You will then see the following:



Select **(Standard Modem Types)** on the Manufacturers panel. Select **Standard 56000 bps Modem** (or the description that most closely resembles your new faxmodem) on the Models panel. Click **Next** and keep following the prompts until your installation is complete.

Now return to the Key Steps on page 7 and continue with step 3 to determine your COM port and test your faxmodem.

Your new faxmodem should work well with this installation, except that your communications software may not report connection speeds accurately. If you have access to the Internet, you can download updated drivers especially for your faxmodem by visiting www.modems.com.

Windows NT 4.0

Follow the normal installation in the Key Steps beginning on page 9. Omit the driver installation from the CD in step 1. Continue to follow the steps, bypassing any instructions that involve the CD.

When you get to step 3, after you click on **Add**, follow the prompts to install your faxmodem as a standard modem.

Continue with step 3 to determine your COM port and test your faxmodem.

Your new faxmodem should work well with this installation, except that your communications software may not report connection speeds accurately. If you have access to the Internet, you can download updated drivers especially for your faxmodem by visiting www.modems.com.

Windows 3.1, Windows 3.11, or DOS

Follow the normal installation in the Key Steps beginning on page 11. For an external faxmodem, you do not need to do anything different.

For an internal faxmodem, you need to determine the COM port and IRQ settings so that you can set the jumpers according to the instructions in Chapter 2 (page 12). Following are some ways you can determine the jumper settings.

- If you are replacing an existing modem, you may be able to determine its COM port and IRQ assignments by inspecting the modem card itself and consulting the documentation that came with it. Sometimes the modem's settings—using jumpers or tiny switches—are printed right on the modem or on a label attached to it.
- Your new faxmodem is set at the factory for COM 4, IRQ 3. On many computers, this setting will not be in conflict with other devices. Simply move the jumper on JP2 to the right to disable Plug and Play. Install the modem and, without reinstalling the case, start the computer and try your communications program, online service, or Internet Service Provider. If the modem works, your installation is complete. If your modem doesn't work, try other COM port / IRQ combinations.
- You can exit Windows and run **MSD** from the DOS prompt. **MSD** is a diagnostics program provided by Microsoft to help users and technicians track down problems. It will report the status of any COM ports that are in use and indicate any that are not in use. Following are instructions for using **MSD**.

1. At the DOS prompt type **c:\windows\msd** and press **Enter**.
2. Select or type **P** for Ports.
3. There will be four columns listed in order for COM 1, 2, 3, and 4. Select the first port that is listed as **N/A**.
4. If the first available port COM Port **2**, use that COM port and IRQ **3**, setting the jumpers as instructed in Chapter 2. If the first available port is **3** or **4**, we suggest that you choose an available IRQ of **5** or higher.

Appendix D: Regulatory Information

FCC Part 68 Telecommunications Statement

This equipment complies with Part 68 of the FCC rules. The unit bears a label which contains the FCC registration number and Ringer Equivalence Number (REN). If requested, this information must be provided to the telephone company.

This equipment uses the following standard jack types for network connection: RJ11C

This equipment contains an FCC compliant modular jack. It is designed to be connected to the telephone network or premises wiring using compatible modular plugs and cabling which comply with the requirements of FCC Part 68 rules.

The Ringer Equivalence Number, or REN, is used to determine the number of devices which may be connected to the telephone line. An excessive REN may cause the equipment to not ring in response to an incoming call. In most areas, the sum of the RENs of all equipment on a line should not exceed five (5.0).

In the unlikely event that this equipment causes harm to the telephone network, the telephone company can temporarily disconnect your service. The telephone company will try to warn you in advance of any such disconnection, but if advance notice isn't practical, it may disconnect the service first and notify you as soon as possible afterwards. In the event such a disconnection is deemed necessary, you will be advised of your right to file a complaint with the FCC.

From time to time, the telephone company may make changes in its facilities, equipment, or operations which could affect the operation of this equipment. If this occurs, the telephone company is required to provide you with advance notice so you can make the modifications necessary to obtain uninterrupted service.

U.S. REPAIR CENTER INFORMATION:

Zoom Telephonics, Inc.
645 Summer Street
Boston, MA 02210
USA
Telephone Number: (617) 423 1072
Facsimile Number: (617) 542 8276

There are no user serviceable components within this equipment.

It shall be unlawful for any person within the United States to use a computer or other electronic device to send any message via a telephone facsimile unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of

the sending machine or of such business, other entity, or individual. The telephone number provided may not be a 900 number or any other number for which charges exceed local or long distance transmission charges. Telephone facsimile machines manufactured on and after December 20, 1992, must clearly mark such identifying information on each transmitted message. Facsimile modem boards manufactured on and after December 13, 1995, must comply with the requirements of this section.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. Contact your state public utility commission, public service commission, or corporation commission for more information.

FCC Part 15 Emissions Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Industry Canada CS03 Statement

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing the equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of concern. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. **Caution:** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

Industry Canada Emissions Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Important Information

In the event you need to call for technical support or customer service, you will need the information below.

We recommend that you take a few moments to fill in the following information for your future reference.

Faxmodem Model _____

(located on the box)

Serial Number _____

(located on the bracket or bottom of an internal modem and on the bottom of an external modem under the bar code)

COM Port _____

Date of Purchase _____

Store or Dealer _____

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