
User's Guide
for
56K USB
Faxmodems

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Introduction

A faxmodem equipped with a Universal Serial Bus, or USB, means convenience, ease of installation, and high performance.

You can install your USB modem quickly, without bothering with a separate power supply or having to worry about your computer's internal settings, as you might with other types of external or internal modems.

Your USB faxmodem supports both the V.90 ITU Standard and K56flex™, the most widely used pre-standard 56K technology. This way, your faxmodem automatically selects the fastest compatible connection speed. You'll find this feature particularly valuable if you frequently access different sites.

This **User's Guide** provides easy, step-by-step installation instructions for your new USB faxmodem.

What You Need to Use Your Faxmodem

Make sure that you have received the following items in addition to this manual:

- USB faxmodem
- Phone cord
- USB cable
- CD-ROM disc containing installation and communications software.

You also need the following:

- A telephone jack to plug the modem into, so the modem can dial out or receive calls.
- An available USB port on your computer.

System Requirements

- IBM PC-compatible Pentium® 133 or faster (or equivalent), with 16 megabytes of RAM equipped with either a USB port or a PCI USB adapter.
- Windows® 98 or 2000 operating system.

Chapter 1: Setting Up Your USB Faxmodem

Note: If you have a PC and are replacing an existing *internal* modem, turn to **Appendix A: Removing an Internal Modem (page 19)** to decide whether to keep or remove it.

Installing the Drivers

We have enhanced Windows' plug-and-play capability and streamlined the installation of your modem by including an InstallShield® software program. **For Windows 98 and 2000 computers, you must first run this program before you install your faxmodem.**

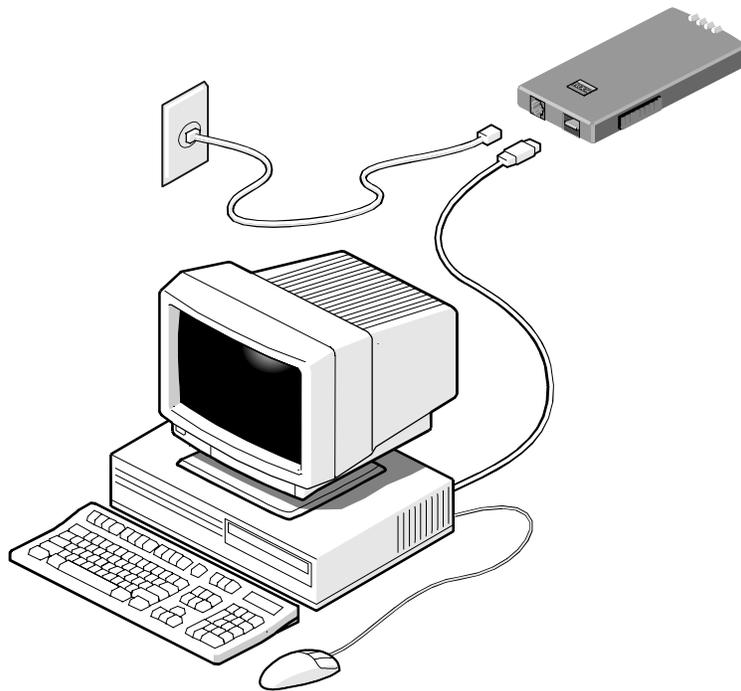
Put the faxmodem aside. Your computer should be turned on. Close any applications you have running. Then follow these steps.

- 1** Insert the CD-ROM disc that came with your faxmodem into your CD-ROM drive. The CD-ROM disc should auto-run after a few seconds and display an installation screen.

If the CD does not auto-run:
 - Click on **My Computer** on your desktop; then double-click on the icon for your CD-ROM drive.
 - If the installation program doesn't start up right away, double-click on **setup.exe**.
- 2** When the installation screen appears, click the **Install Drivers** button. The installation program will run and automatically copy driver files to your hard drive. Click **Finish**. Do not install any of the other software at this time.
- 3** Continue with the instructions for **Connecting the Faxmodem to Your Computer** below.

Connecting the 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 24** of this manual.
- 2** Shut down your computer. Connect the USB cable by plugging the cable's square end into the USB jack on the back of the faxmodem. Plug the other rectangular end into the USB connector on your computer. Turn your computer back on.
- 3** Connect the telephone cord. Plug one end of the cord into the Phone jack on the back of the faxmodem. Plug the other end into the wall jack just as you would a standard telephone. See the following illustration.



- 4** With the faxmodem plugged into your PC, your modem is automatically powered on. The faxmodem's power is supplied through the USB cable.



- 5** The **ON** light should go on to show that the faxmodem is ready for use.

Note: If the computer goes into power-save mode (also referred to as “going to sleep”), the modem’s **ON** light will go off. The light will go on automatically whenever the faxmodem is in use.

Summary of the Indicator Lights

Your USB faxmodem has a set of four indicator lights on the front. A chart explaining what the lights mean appears below.

Light	Description
ON	Lights when the faxmodem is turned on; is unlit when the computer is in power-save mode.
CD (Carrier Detect)	Lights when the Data Carrier Detect (DCD) signal from the faxmodem to the computer is on.
TR (Terminal Ready)	The computer (or terminal) is sending a “ready” signal to say that it is ready to provide data to the modem.
OH (Off Hook)	Lights when the faxmodem is off hook.

Completing the Installation

You should now verify the COM port setting of your modem and perform a brief test. Follow these steps:

Windows 98 Users:

- 1** Open **Control Panel** in Windows and double-click on the **Modems** icon.
- 2** Click on the entry for your new faxmodem and then click on the **Diagnostics** tab.
- 3** Highlight the port next to the entry for your new faxmodem and click on **More info**.

Clicking on **More info** also tests your faxmodem by querying it with AT commands. A list of responses means the modem is properly connected.

Windows 2000 Users:

- 1** Open **Start | Settings | Control Panel**. Double-click on **Phone and Modem Options**. Fill in the **Location Information** screen, click **OK**.
- 2** On the **Phone and Modem Options** screen, click on the **Modems** tab, then select the newly installed modem. Click on **Properties**. Set the **Maximum speed** to the highest speed available (most likely 115,200). This sets the speed at which the computer communicates with the faxmodem.
- 3** Select the **Diagnostics tab**. Click on **Query Modem**. Note the COM port in the **Important Information** table on the last page of this manual.
- 4** Click **OK**. Click **OK** again. Close the **Control Panel**.

Changing Your Country Setting

Our World Traveler™ country select software, also included on the CD, provides configuration information so that your modem automatically works with the telephone system in your country.

To change your country setting, follow these steps:

- 1** Click **Start | Programs**. Select **World Traveler** to launch the application.
- 2** A dialog box will display. Select the country of your choice from the drop-down list and click **Set**.

That's it! Your faxmodem is all ready to use. If you have problems with your faxmodem or if you require additional information, please consult this full-length User's Guide or the electronic version located on the CD.

Chapter 2: Using your Faxmodem

If you have installed the fax and communication software that came with your faxmodem, you probably do not need to read this chapter. The software sets itself up automatically and takes care of sending any necessary commands to the faxmodem.

You may, however, want to read this chapter if you want to learn some general facts about how software works with your faxmodem or if you intend to use your new faxmodem with other software.

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

Accessing the Internet

To access the Internet and the World Wide Web, use an online service such as America Online (AOL) or Compu-Serve, or an Internet Service Provider (ISP). The best place to start is with the accompanying CD, which includes Internet and online services for you to try.

Setting Up the Fax and Communications Software

Most software programs identify the modem automatically and configure themselves for the correct operating settings.

Note: If you want to continue using software that had been set up for a different modem, you may need to reinstall the software or change its settings to run with your new faxmodem. See the documentation or help files of your existing software.

If you run into difficulty configuring or reconfiguring your software, 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. Nevertheless, 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, **External V.90 56K USB Faxmodem**), select the most descriptive name such as **V.90 modem**, **56K modem**, or generic **Class 1 fax modem**.
- If you have a PC, in the dialing directory set all entries to the highest possible baud rate, if your software supports these speeds (do not go over 115,200). All communications between the computer and the modem take place at this higher speed, independent of the modem-to-modem speed.
- If your fax software gives you the option of selecting **Class 1** or **Class 2** fax drivers, select **Class 1**.

Initialization Strings

An initialization string is a group of AT command settings that the software sends to the faxmodem to initialize it. Your software determines which commands should be included in the initialization string, based on the modem you select during software installation.

Your software may send other AT commands to perform actions such as dialing a phone number or answering a call. 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 description 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 AT 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**. This command returns the modem to the default factory settings.
- If your phone service includes Call Waiting, an incoming call can disrupt your modem connection. Your telephone service may include Call Waiting that you can temporarily suspend by using your phone to dial a special code. You can include that code in the dial prefix option (followed by a comma, which inserts a brief pause to allow the phone company to respond). If your software does not have a dial prefix option, you need to insert the code for each phone number in the dialing directory. If you need to dial a special code number, such as 9, to get an outside line, put the number (followed by a comma) before the phone number.

Making the Most of the Fax Features

Your faxmodem includes software on the enclosed CD that enables you to send, receive, and schedule faxes. The software will also let you set up fax-back, sometimes called fax-on-demand, and issue fax broadcasts.

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

- Your computer must be running, and the communications software must be active.
- If you want to connect to your online service or ISP, you must exit the communication software 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 comes in, it may fail to connect while the hard drive restarts and activates the software. 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.

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 need a camera and video software. ZoomCam™ video camera devices available from Zoom Telephonics® add video recording and transmission capabilities to your computer and work well with your USB faxmodem.

Chapter 3: Troubleshooting

 CAUTION	Electrostatic Discharge (ESD) Statement The Controllerless USB unit may require resetting after a severe ESD event.
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Note: If your modem is not working, please read this chapter and **Chapter 2: Using your Faxmodem** on **page 11** carefully.

For installation problems, refer to **Chapter 1: Setting Up Your USB Faxmodem** on **page 6**.

This chapter covers three categories: general troubleshooting, dial troubleshooting, and on-line troubleshooting.

General Troubleshooting

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

Solution: The most common problem with modems is that the communications software is not configured for the same COM port as the modem or that the USB faxmodem is not selected under the software.

Check which COM port the modem is using and make sure that the software's COM port setting matches the modem's COM port setting. From the Windows Toolbar, under **Settings** | **Control Panel** | **Modems** | **Diagnostics**, click on the **COM Port** for your modem, then click on **More info**. If Windows displays the modem's ATI responses, the modem is working.

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 that you may have connected to your computer’s 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
M1 to turn the speaker back on

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: 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 by including a special code in the dial prefix (consult your phone company for details).

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.

Line conditions may have deteriorated. Reconnect.

Problem: Your online service or Internet connection seems slow, Web pages appear slowly, and file downloads seem to take too long.

Check your connection speed. Each time you dial in, your call may be routed over different lines. Logging off and redialing can sometimes give you a better connection. With V.90 or K56flex sites you should be able to obtain speeds between 42,000 and 52,000 bps.

If your ISP or online service provides more than one number, try another one. Some are faster than others.

Try different Web pages. Some very popular pages have a lot of traffic and may be slow, especially in the evening.

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.

Appendix A: Removing an Internal Modem

If your PC does not already have an internal modem installed, or if you are replacing an external modem, you do not need this section.

Note: Although you do not have to remove your internal modem, we strongly recommend that you do so. Removing your old modem frees up resources for other internal devices you may want to install in the future.

1 Before you take out the modem, you must inform Windows that you are going to remove it:

Follow these steps:

- Click on **Start | Settings | 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.

2 Remove the old modem as follows:

- Shut down and turn off the computer.
- Remove any cables connected to the modem.
- Open the case of the computer.
- Remove the screw that attaches the modem bracket to the computer.
- Pull the modem out of its slot.
- Replace the computer's case.

You may now return to Chapter 1: Setting Up Your USB Faxmodem on page 6 to continue with the installation.

Appendix B: Regulatory Information

FCC Part 68 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.

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 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.

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.

Declaration of Conformity

The manufacturer declares under sole responsibility that this equipment is compliant to Directive 1999/EC (R&TTE Directive) via the following:

<u>Directives</u>	<u>Standards</u>	<u>Test Reports Issued</u>
73/23/EEC-Low Voltage	EN 60950	electrical safety
89/336/EEC-EMC	EN 50082-1	EMC - immunity
89/336/EEC-EMC	EN 55022	EMC - emissions

The product is CE Marked.

Additional Test Information

This equipment has been tested to the requirements of TBR 21: January 1998 revision.

Important Information

We recommend that you take a few moments to fill in the following information for your future reference. In the event you need to call Technical Support or Customer Service, you will need the information below.

Faxmodem Model

(located on the box)

Serial Number

*(located on the bottom of the modem
under the bar code)*

COM Port

Store or Dealer

Date of Purchase
