



Modem Installation Guide

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Introduction

Your new modem will allow you to quickly communicate with most modem-equipped computers in the world. You can transfer files to your office or home or connect to an Internet Service Provider (ISP) or online service such as CompuServe or America Online.

We designed this manual to make connecting your modem as easy as possible. The communications software, included in your modem package, provides menus to use your modem once it is installed.

Important Note on Modem Throughput

Your Hayes 56K modem is capable of download speeds of 56Kbps when connected to an ISP or remote access server supporting V.90 or K56flex. Still, like other modem speeds, actual modem throughput (the actual speed of data transfer) is dependent on analog telephone line conditions, which vary considerably. Many users of 56K modems will experience throughput in the range of 42-56Kbps under normal conditions—again, depending on phone quality.

Please do not interpret throughput speeds of less than 56Kbps as a modem problem, because it is most likely a function of telephone line conditions and Internet traffic.

Connecting your modem may be your first introduction to COM ports and IRQs. If you are connecting your modem to a Macintosh-based computer or a PC using Windows 95 or 98, your computer handles COM ports and IRQs for you. However, with other computers or software, you must select a COM port and IRQ yourself. COM port and IRQ settings are discussed later in this guide.

Before You Get Started...

Please read the Regulatory & Warranty Information.

What You Need

To install and operate the modem, you will need the following items. **They are included in your modem package.**

Communications software provides menus that allow you to set up and use your modem to connect to other computers and go online.

- **Telephone Cable**

Your modem is designed to operate over a standard telephone line through its telephone cable connection. Do not connect the modem to a party line or coin-operated telephone line.

External Modems Also Need....

- Serial Cable

Ask your computer store dealer for a shielded, straight-through modem cable to connect the modem to your computer. The cable requires either a 25-pin male D-type connector or a 9-pin male D-type connector on one end of the cable. Look at the back of the modem to determine which of these connectors is a match.

The computer end of the cable should also be either a 9-pin or a 25-pin female connector on the other end, depending on your computer. Check the back of your computer to determine which cable you need.

Note: Do not purchase a null modem, crossover, or eliminator cable. Although these cables connect to your serial port, they are designed to connect a PC to a PC, not to a modem. Your computer dealer should be able to help you select an appropriate cable.

Note: A cable is included with Macintosh modems because all Macintosh-based computers use a standard cable.

Voice Modems May Require...

- Stereo-to-stereo cable

If your computer already has speakers connected to a sound card, you can connect your voice modem and the sound card to use the same speakers. Refer to "Connecting A Voice Modem to a Sound Card," later in this guide for more information. You can purchase a stereo-to-stereo cable at an electronics or computer store.

- Microphone

We recommend an electret microphone you can plug into the MIC connector at the back of the modem for use with internal voice modems. You can purchase a microphone at an electronics or computer store.

Installing an Internal Plug-n-Play Modem

The options for installing a Plug-n-Play modem are:

- Installing a Plug-n-Play modem *without* Windows 95/98
- Installing a Plug-n-Play modem *with* Windows 95/98
- Changing the COM Port (Windows 95/98)
- Using DOS Applications with Windows 95/98

Because all systems do not support Plug-n-Play devices, Hayes products include utilities to configure the modem in non Plug-n-Play environments. The following pages explain how to install your Plug-n-Play modem with Windows 95/98 and without Windows 95/98.

When installing your new modem, follow the directions below, and refer to your *Windows User's Guide*.

Note: *Windows 95/98 users that want to use the modem with DOS applications, such as interactive games, need to also read the section, "Using DOS Applications with Windows 95/98."*

Installing a Plug-n-Play Modem *without* Windows 95/98

Plug-n-Play modems are designed to be configured for a COM port by the Windows 95/98 hardware detection program. However, your Plug-n-Play modem can still be used under Unix, Windows NT 4.0, Windows 3.11, Windows 3.x, or DOS. There are three ways that a Plug-n-Play modem can be configured for use in a non-Plug-n-Play environment:

- **Jumper Settings** – Changing the jumper setting overrides the Plug-n-Play capability of the modem. To do so, you need to remove the jumper from the Plug-n-Play jumper block and place it over one of the manual jumpers. Please refer to *“Possible Jumper Settings”* on page 14 for details on how to configure your modem using jumper settings.
- **Plug-n-Play BIOS** - Some computers are designed with a Plug-n-Play BIOS. A Plug-n-Play BIOS also configures your Plug-n-Play modem for you. With Plug-n-Play BIOS, no additional software, such as Plug-n-Play manager, is usually required to support Plug-n-Play. **Do not load SETCOM16.**
- **SETCOM16** - If you do not have Plug-n-Play manager or Plug-n-Play BIOS, you need to use the INSTALL.EXE program provided on the Driver and Utilities diskette or CD included with your modem to load SETCOM16.

Using SETCOM16

Installing the Modem Using SETCOM16:

The following steps outline modem installation using the INSTALL.EXE program to configure the modem.

1. Before you open your computer to install the modem, unplug it from the power outlet.
2. Select an empty slot and remove the slot cover plate.
3. Hold the modem by the top and gently slide it into the slot.
4. When you turn on your system, start at the **DOS** prompt, insert the Driver and Utilities diskette or CD. Get the A: or D: prompt. Type **INSTALL.EXE**. This will install the SETCOM16 program to the hard drive.
5. Follow the screen instructions to configure your modem for COM ports 1-4.

Note: *If you need to change the configuration of the modem later, you will need to type: C:\SETCOMM\SETCOM16.EXE. See below for more detailed information.*

Changing the modem configuration using SETCOM16:

Step 1: From the SETCOMM directory on your hard drive, (usually C:\SETCOMM) type: **SETCOM16**. Press **Enter**.

Step 2: Follow the instructions above to change the configuration. The AUTOEXEC.BAT file updates automatically.

Note: *If your DOS-based programs are not communicating properly with the modem, make sure the SETCOM16 utility is configuring the*

modem for an IRQ setting supported by your DOS software. Refer to your DOS software manual for the proper IRQ settings supported by the software.

To complete your modem installation, refer to *Connecting the Phone Cable*.

Installing a Plug-n-Play Modem *with Windows 95/98*

If you are using Windows 95/98, follow the steps below to install a Plug-n-Play modem.

1. Before you open your computer to install the modem, unplug it from the power outlet.
2. Select an empty slot and remove the slot cover plate.
3. Hold the modem by the top and gently slide it into the slot.
4. When you turn on your machine and start Windows 95/98, the **New Hardware Found** window will display. To install your new hardware, select **Driver** from the provided diskette or CD. Press **OK**. The **Install from Disk** window will display.
5. Insert the Driver and Utilities CD or diskette, type D: or A:, and press **OK**. Select your modem name and version. Press **OK**. Windows 95/98 will install the necessary .INF files onto your hard drive.

Note: *Make sure you select the same modem speed and type as appears on the modem packaging.*

Windows 95/98 configures your new Plug-n-Play modem automatically. This eliminates the need for you to set COM ports with jumpers. However, because Windows 95/98 recognizes more than four COM ports and some software only recognizes four, you may want to change the Windows 95/98 automatic selection. Also, in some instances, Windows may mistakenly assign the COM port to a resource that conflicts with another device. Refer to *Changing Resources in Windows 95/98* for more detailed information.

Changing Resources in Windows 95/98

In most cases, Windows 95/98 will set up your modem to work properly. Unfortunately, Plug-n-Play does not *always* work correctly; when this occurs, you can usually trace it to a few common problems.

One problem is your computer has insufficient resources available to install your modem.

Often the modem gets mistakenly assigned to an I/O range or IRQ already in use by another device. To change the resources that your modem is using, do the following:

1. Click on the **Start** button. Select **Settings** and choose **Control Panel**.
2. Double-click on the **System** icon and select **Device Manager**. Select the **Modem** tab and highlight the modem to reconfigure. Press **Properties**. All the modem properties will be displayed.
3. Select **Resources**.
4. If the conflicting device list shows a conflict, you need to change the resources currently assigned to it. If no conflicts show up, then the problem lies elsewhere.
5. To change the resources, deselect the **Use Automatic Settings** indicator box. Try scrolling through the different basic configurations until you find one that doesn't report any conflicts. If you can't find a basic configuration that does not report a conflict, you'll need to manually assign the resources.

6. To manually assign the resources, select the last Basic configuration available (typically Basic configuration 0006).

7. If the I/O range reports a conflict double, click on **Input/Output Range**. The **Edit Input/Output Range** dialog box will appear. Select one of the following values that does not report a conflict:

Value	COM Port
03F8-03FF	COM 1
02F8-02FF	COM 2
03E8-03EF	COM 3
02E8-02EF	COM 4

8. Press **OK** to accept the value.

9. If the Interrupt Request is reporting a conflict, double-click on **Interrupt Request**. The **Edit Interrupt Request** dialog box should appear.

10. Scroll through the interrupts until you find one that doesn't report a conflict.

11. Press **OK** to accept the value. Then Press **OK** to close the window. A warning window will display to verify that you want to create a forced configuration. Press **Yes**.

Note: *If you find you don't have enough resources available, you may need to disable a COM port. See the "Disabling a COM (Serial) Port" section on page 19.*

Installing a Non-Plug-n-Play Internal Modem

The steps for installing an internal modem are:

- Configuring the modem
- Disconnecting the computer
- Installing the modem
- Connecting the phone cable
- Setting up your communications software.

Each of these steps is explained in the following pages. Before you begin check your equipment to make sure that you have everything that you need:

- computer
- modem
- software
- necessary cable(s)
- power outlet
- phone outlet.

Understanding COM Ports and IRQ Settings

To successfully install your modem, you need to select a COM port and IRQ setting that your computer's operating system is not using.

COM Ports

A COM port is a serial setting built into your computer's motherboard. DOS version 3.3 and higher supports four COM ports. Windows 95/98 and OS/2 support eight COM ports. COM ports use IRQ lines to access your computer's processor.

IRQ Settings

An IRQ setting describes an interrupt line that is allocated to a peripheral device, such as a modem, printer, or sound card. The address allows the device to interrupt your computer's processor for attention so that it can perform another function or activity.

Here are some common default COM port and IRQ settings for your reference.









COM Port	Address	Default IRQ
1	3f8	4
2	2f8	3
3	3e8	4
4	2e8	3

Possible Jumper Settings

To determine the manual settings for your modem, follow the instructions below, depending on what your modem looks like. Every modem has a cylindrical on-board speaker (also known as a squawker) located on it.

If your modem's on-board speaker is located on the **bottom righthand corner** (next to the bracket), you need to remove the jumper from the JP2 jumper and place it on JP1 for both the COM port and the IRQ settings.

The example below illustrates specific jumper positions for both the COM port and the IRQ. At the bottom is a sample of how your jumper setting may appear after setting both the COM port and the IRQ.

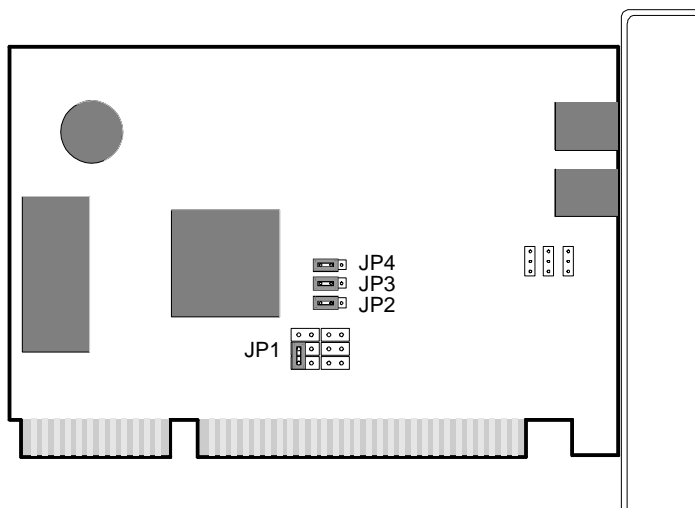
To Select a COM Port:		To Select an IRQ:	
COM 1 03f8-03ff		IRQ 2	
COM 2 02f8-02ff		IRQ 3	
COM 3 03e8-03ef		IRQ 4	
COM 4 02e8-02ef		IRQ 5	

Example of Com 3-IRQ5



If your modem board resembles the one below, with the cylindrical onboard speaker located in the **upper lefthand corner**, the locations of jumper blocks JP1, JP2, JP3, and JP4 should appear the way they do below.

Jumper Locations



The jumper diagram above shows the default factory settings for your fax modem. The jumper JP2 is set for Plug-n-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-n-Play (default)

To disable the board's Plug-n-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.

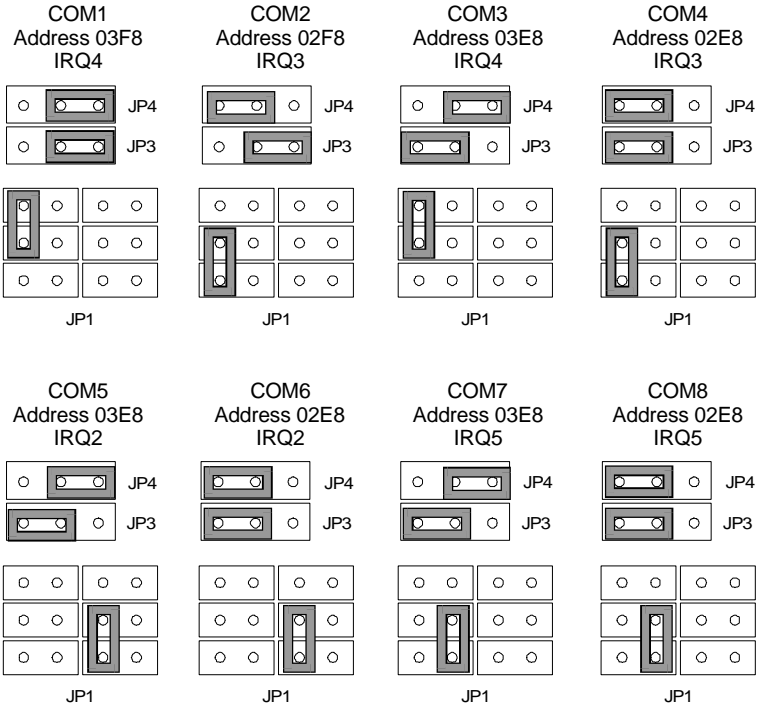
Plug-n-Play Disabled

JP2

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

Jumper Settings

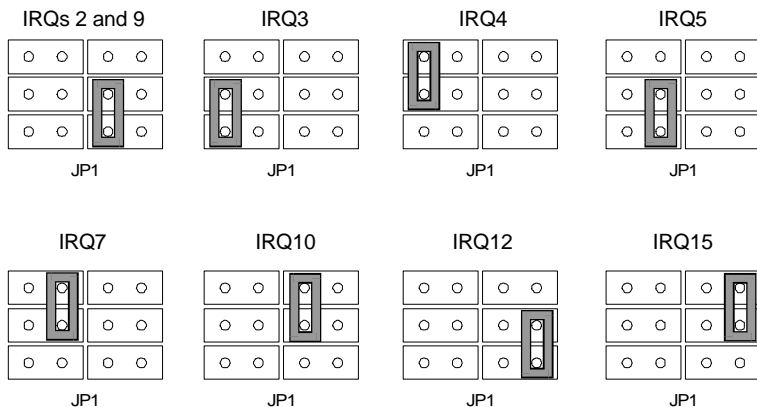


If you set your modem to one of the settings (COM1 to COM8) as shown above, you can proceed to *Installing Your Fax Modem*.

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.

Disabling a COM (Serial) Port

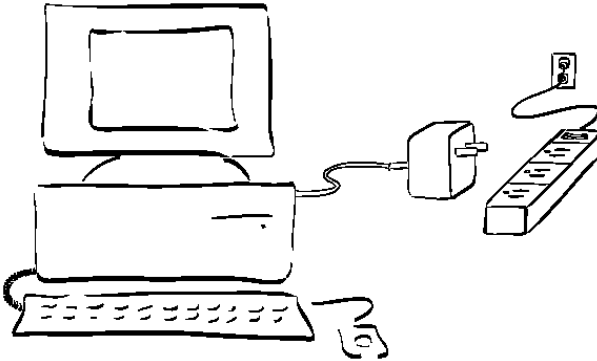
You can disable your COM ports three different ways:

Through the CMOS Most of today's newer computer systems allow you to disable your COM port in the CMOS. Refer to your computer manual for this procedure.

Through the mother-
board
jumper If your COM port is built into your motherboard, then move a motherboard jumper to disable the COM port. Refer to your computer manual for this procedure.

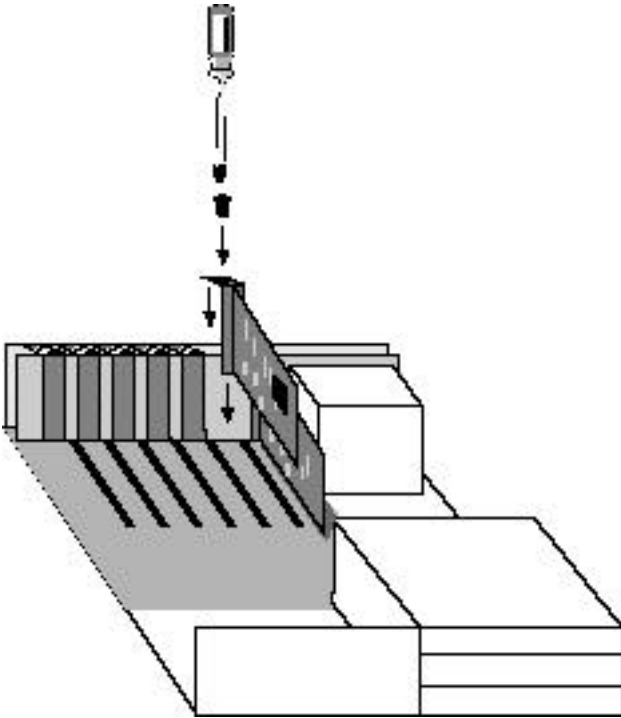
Through the
jumper on
the I/O Card If the COM port is not located directly on your motherboard, but is on a serial expansion card, then refer to either your serial card manual or the computer manual for this procedure.

Disconnecting the Computer



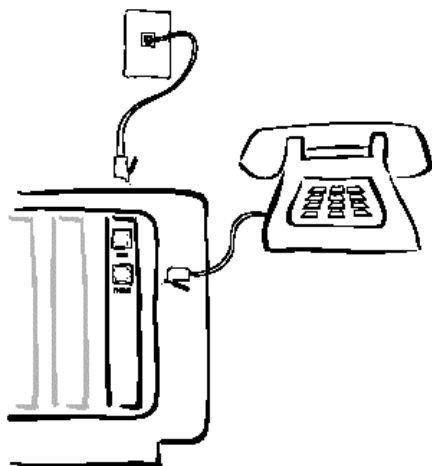
1. Before you open your computer to install the modem, unplug it from the power outlet.

Installing the Modem



1. Select an empty slot and remove the slot cover plate.
2. Hold the modem by the top and gently slide it into the slot.

Connecting the Phone Cable



LINE

connector.

2. Plug the other end into the telephone wall jack.

3. If you want to use a telephone on the same line as the modem, plug one end of the telephone cable into your phone and plug the other end into the **PHONE** connector on the modem.

Setting Up Your Communications Software

Please refer to your communications software manual for specific details about your software.

For Windows users: Start the communications software and open the screen, which allows for the modem configuration. Select the COM port that the modem is configured for.

- or -

For DOS users: Start the communications software and open the screen, which allows for the modem configuration. Select the COM port and IRQ that the modem is configured for.

Using DOS Applications with Windows 95/98

With Windows 95/98, when you first try to run a DOS application that requires your internal modem (such as some interactive games), your computer may have trouble locating it. When you are using Windows 95/98 applications, the computer locates the modem automatically. DOS applications need to be told your modem's address.

You can enter a DOS mode three different ways with Windows 95/98. Because the directions vary, please read the steps carefully.

- Shutting down to DOS
- Opening a DOS window
- Using F4 or F8 to open DOS.

Shutting Down to DOS

You can shut down Windows 95/98 and start DOS to run DOS applications.

1. From the **Start** icon, choose **Shutdown**. Select **Restart Computer in MS-DOS Mode**.
2. After restarting, get the A prompt (or B if you are using the B drive.) Insert the **Driver and Utilities** diskette or CD and type **INSTALL**. This loads the SETCOM16 program.
3. The SETCOM16 EXE program will suggest an address for the modem. Use the tab to select **OK** or select **Manual** to change the address.
4. SETCOM16 EXE will ask if you want to update the Windows SYSTEM.INI file. Use the tab key to select **None**.

***Note:** Because you are running Windows 95/98, you only want to update the AUTOEXEC.BAT file. Selecting None will do this automatically.*

5. When you return to DOS, type **C:\AUTOEXEC.BAT**. Scroll through the text for a line that looks *like* the following **example**:

C:\SETCOMM\SETCOM16.EXE 3E8 5.

6. Copy the line, including the I/O address and IRQ after the .EXE.
7. Type **Win** at the C:\ prompt to return to Windows 95/98.
8. From the **Start** icon, select **Programs**, then **Accessories**. Choose **Notepad**.

9. Type the SETCOM16 line from the AUTOEXEC.BAT file into this window.
10. From the **File** menu, select **Save As....** Save the file in your **Windows** directory as **DOSSTART.BAT**.

Opening a DOS Window

From Windows 95/98, you can open a DOS window to run DOS applications. First, you need to make sure the modem address is accessible by a DOS application. DOS applications can usually only access standard COM ports COM 1, 2, 3, and 4. Follow the steps below to check your modem settings in Win 95/98 to confirm that your modem is configured for an address accessible by your DOS application.

1. From the **Start** icon, select **Control Panel**. Double-click on the **System** icon.
2. Select **Device Manager**. Choose the **Modem** tab, and highlight the modem you want to use. Press **Properties**.
3. Select the **Resources** tab to see the input/output range and setting display for the modem.
4. Use the displayed information to configure your DOS application.

Note: *Because some DOS applications do not support the higher addresses that Windows 95/98 supports, you may need to “move” the modem to a different address. Refer to “Changing the COM Port (Windows 95/98)” to change the address of the modem.*

Using F4 or F8 to Open DOS

When you installed Windows 95/98 initially on your machine, if you chose to keep your old DOS version, you can press F4 when your computer is loading Windows 95/98 to stop and return to DOS. Otherwise, you can press F8 when the "Loading Windows 95/98" window appears.

1. At the DOS C:\ prompt, get the A:\ prompt (or B is you are using the B drive.) Insert the **Driver and Utilities** diskette or CD and type **INSTALL**. This loads the SETCOM16 program.
2. The SETCOM16 program will suggest an address for the modem. Use the tab to select **OK** or select **Manual** to change the address.
3. SETCOM16 will ask if you want to update the Windows SYSTEM.INI file. Use the tab key to select **None**.

Note: *Because you are running Windows 95/98, you only want to update the AUTOEXEC.BAT file. Selecting **None** will do this automatically.*

Installing an External Modem

The steps for installing an external modem are:

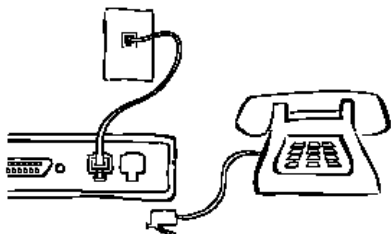
- Connecting to a phone outlet
- Connecting to a power outlet
- Connecting to a PC or Macintosh
- Checking the connections
- Setting up your communications software
- Installing an external modem with Windows 95/98.

Each of these steps is explained in the following pages. Before you begin, check your equipment to make sure that you have everything that you need:

- computer
- modem
- power cable
- phone cable
- communications software
- power outlet
- phone outlet.

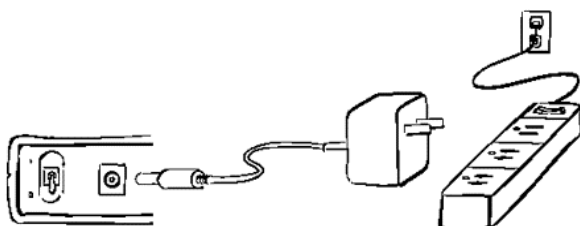
Also, you will need to purchase a serial cable for your modem (unless you are connecting your modem to a Macintosh).

Connecting to a Phone Outlet



1. Plug one end of the telephone cable into the modem's **LINE** connector.
2. Plug the other end into the telephone wall jack.
3. If you want to use a telephone on the same line as the modem, plug one end of the telephone cable into your phone and plug the other end into the **PHONE** connector on the modem.

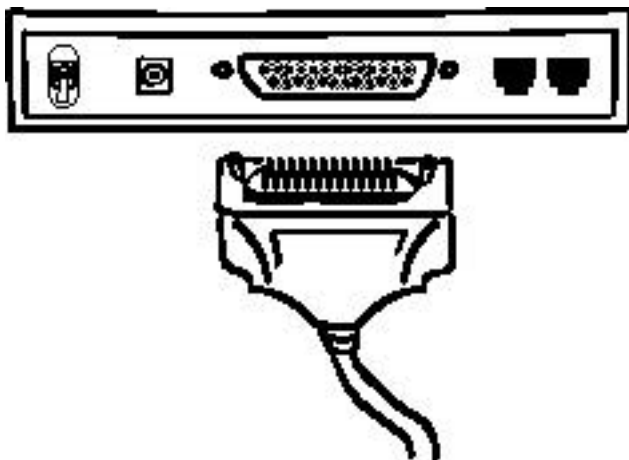
Connecting to a Power Outlet



1. Plug the power cable into the 9.0V~AC connector.
2. Plug the power supply into a wall outlet. Plugging the power supply into a power strip is recommended.

Note: Some type of surge protection (like that found in common power strips) is recommended.

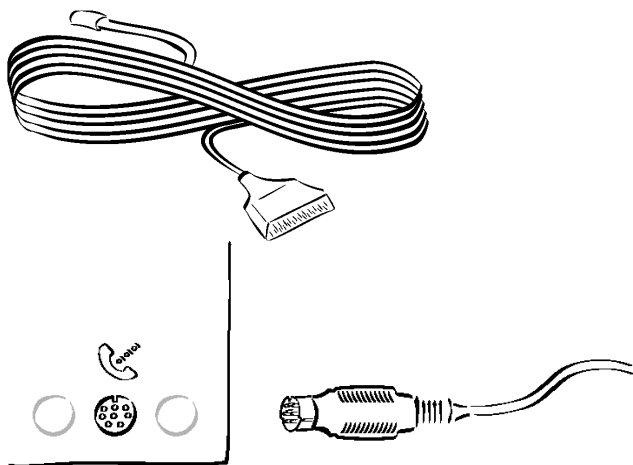
Connecting to a PC



1. Turn the modem and computer off.
2. Plug the male end of the modem cable into the female connector marked **DTE INTERFACE** on the modem's rear panel and tighten the screws.
3. Plug the other end of the cable into the serial port on the back of your computer.

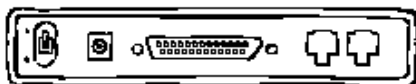
Note: The port on the back of your computer that the modem plugs into is a COM port. You need to be sure that the communications software you will be using knows the COM port "number" (e.g., COM1, COM2, COM3, etc.) where the modem is located.

Connecting to a Macintosh



1. Turn the modem and computer off.
2. Plug the serial end of the Mac-to-modem cable, included with your modem, into the female connector marked **DTE INTERFACE** on the modem's rear panel and tighten the screws.
3. Plug the round end of the cable into the port marked with a telephone on the back of your Macintosh.

Checking the Connections



1. Raise the switch on the left to turn the modem on.
2. Check the modem's front panel lights (LEDs). If none of the lights come on, refer to the *"Troubleshooting"* section of this booklet.

Sample LED



LED	Meaning
HS	High-speed (4,800 and above)
AA	Auto-answer
CD	Carrier detect
OH	Off hook
RD	Receive data
SD	Send data
TR	Terminal ready
MR	Modem ready
VO	Voice
RI	Ring Indicator

Setting Up Your Communications Software

Please refer to your communications software manual for specific details about your software.

For Windows users: Start the communications software and open the menu that contains the modem configuration. Select the COM port that the modem is configured for.

- or -

For DOS users: Start the communications software and open the menu that contains the modem configuration. Select the COM port and IRQ that the modem is configured for.

- or -

For Mac users: Start the communications software and open the menu that contains the modem configuration. Select the phone/modem port with the specific common software use.

Installing an External Modem with Windows 95/98

Windows 95/98 recognizes new hardware differently than earlier Windows versions. When installing your new non Plug-n-Play or external modem with Windows 95/98, follow the directions below.

1. Turn off your computer and install the modem as described previously in this manual.
2. Insert the Driver and Utilities diskette or CD that contains the **.INF** file for your modem. Press **Have Disk**.
3. Verify the disk drive and press **OK**. Select your modem from the list and press **Next**.
4. Select the COM port the modem is connected to, and press **Next**. Windows 95/98 has completed installation. Press **Finish**.

***Note:** Make sure you select the same modem speed and type as appears on the packaging.*

If Windows Does Not Recognize Your External Modem

First go to **Start|Settings|Control Panel|System|Device Manager**, and hit **Refresh** several times. If that doesn't work, follow these steps:

1. Turn on your system and start Windows 95/98. Click the **Start** icon. Select **Settings** and choose **Control Panel**.
2. Double-click on the **Install New Hardware** icon. The **Add New Hardware Wizard** will open. Follow the instructions, and press **Next**. Select the **No** indicator box to select your own hardware. Press **Next** to select the type of hardware you are installing.

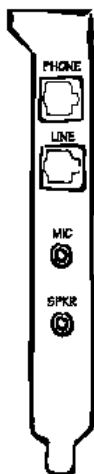
3. Select **Modem** and press **Next**. Windows 95/98 will ask you if it should detect the modem. Select the indicator box to pick your modem from a list.

Connecting Voice Modems

The Hayes OPTIMA[™]voice modem and the Hayes ACCURA[™]voice modem each have different voice capabilities. When you install a voice modem, you can connect external audio devices into the modem to enhance the voice performance, or use a telephone handset.

With ACCURA Speakerphone modems, you can plug an amplifier input device or amplified speakers into the **SPKR** connector.

With OPTIMA Business modems, you can plug headphones or amplified speakers (8 ohms or greater) into the **SPEAKER** connector on the side of external models.



(Internal model shown)

Connecting a Microphone

We recommend an electret microphone you can plug into the **MIC** connector at the back of the modem for use with internal ACCURA Speakerphone modems. If you want to change the microphone setting, refer to *"Changing the Microphone with ACCURA Internal Speakerphone Modems."*

With external ACCURA Speakerphone modems, you can record your voice using the handset of your telephone.

With OPTIMA Business modems, you can plug a self-powered electret microphone into the **MICROPHONE** connector on the side of the external models.

For best results, with the least amount of feedback, microphones should be mounted to the top, front center of your monitor.

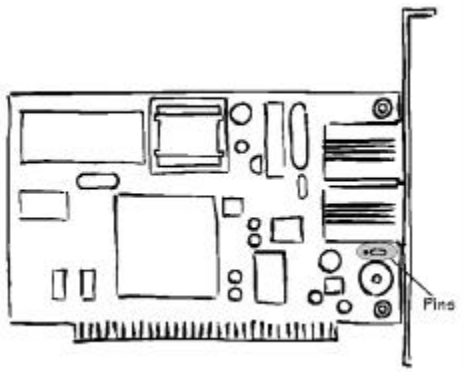
Note: *If you have a sound card with an internal ACCURA Speakerphone modem, the microphone must be plugged into the modem, not the sound card, for the speakerphone to work.*

Changing the Microphone with ACCURA Internal Speakerphone and Message Modems

We recommend that you use an electret microphone with your internal ACCURA Speakerphone modem. You can also connect a dynamic microphone (>600 ohms), a self-powered electret microphone, or a Plantronics (6K) microphone into your modem's **MIC** jack.

We also recommend that you use an electret microphone with your internal ACCURA Message modem. However, if you want to connect a dynamic microphone (>600 ohms), a self-powered electret microphone, or a Plantronics (6K) microphone into this modem's **MIC** jack, you will need to adjust a jumper on your modem. Follow these steps:

1. Locate the three pins beside the speaker, near the mounting bracket. The jumper is currently on pins 2 and 3 for an electret microphone, as shown in the illustration.
2. For a dynamic or self-powered electret microphone, move the jumper onto pin 1 **ONLY**. (This is the pin farthest away from the bracket.)
3. For a Plantronics (6K) microphone, move the jumper onto pins 1 and 2. (These are the two pins farthest away from the bracket.)



(Illustration shows jumper on pins 2 and 3.)

Note: *If you have a sound card with an internal ACCURA Speakerphone or Message modem, the microphone must be plugged into the modem, not the sound card, for the speakerphone to work.*

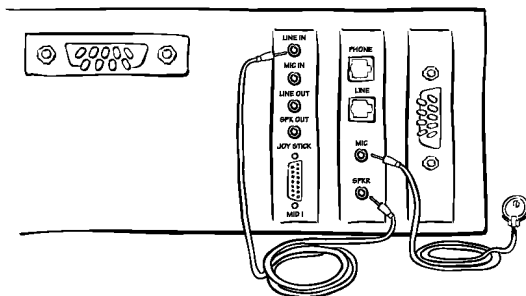
Connecting a Voice Modem to a Sound Card

If your computer already has speakers attached to a sound card, you can connect an internal voice modem and the sound card to use the same speakers.

With OPTIMA Business modems and ACCURA external models, you can set the modem and sound card to use the same speakers through software.

For internal speakerphone modems:

1. Using an 8 inch stereo-to-stereo cable, plug one end into the **SPK** connector in the back of the modem.
2. Plug the other end of the stereo-to-stereo cable into the **LINE IN** connector on the back of the sound card.



(Internal ACCURA Speakerphone modem shown)

Troubleshooting

COM Port Problems

This section lists some of the most common troubleshooting issues.

When you install an internal modem, you must assign the modem a unique COM port setting, or with Windows 95/98, you sometimes must change the COM port automatically selected with Plug-n-Play modems. If your modem is set to use a COM port that is being used by another device, you may experience COM port or IRQ conflicts.

Symptoms of COM Port or IRQ Conflict:

- The communications software cannot find the modem.
- Your computer locks up when accessing the modem.
- The modem doesn't respond to AT commands.
- The modem works in some software applications, but not in others.
- The modem used to work, but doesn't anymore.
- The serial mouse doesn't function properly.

Resolving COM Port or Interrupt Conflicts:

COM port or IRQ conflicts can be resolved by selecting a unique COM port setting for the modem. If you are a Windows 95 or 98 user, please refer to *“Changing Resources in Windows 95/98”* on page 10. If you are a Windows 3.x user, there are several steps you can follow to prevent COM port conflicts:

1. Identify Serial Ports already being used by your computer. Most computers using Windows will have a utility to diagnose COM ports.

Turn your computer off. Remove your modem, and reboot your system. Exit Windows 3.1, or 3.11.

Type MSD E at the C: prompt. The COM Ports field identifies how many COM ports your computer has. Type C to identify your port address. Refer to the following table to identify COM ports.

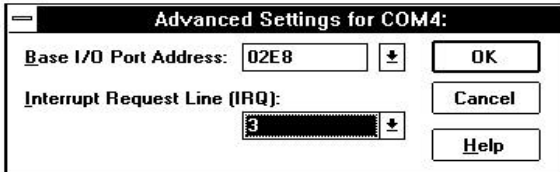
COM Port	Interrupt	Base I/O
COM1	IRQ4	03F8
COM2	IRQ3	02F8
COM3	IRQ4	03E8
COM4	IRQ3	02E8

2. If you are using Windows, COM port settings can be found in the Control Panel. Any changes you make in the Control Panel must match the jumper settings of the modem and apply to all Windows communications programs.

For Plug-n-Play modems with Windows 3.1 or 3.11, use SETCOMM.EXE, or SETCOM16.EXE to set the COM Port.

Once you have selected a configuration in the Control Panel, you may select the COM port in the communications software without having to change the IRQ setting because the Control Panel will change both automatically.

Selecting a COM port from the Windows Control Panel Menu:



Example:

Selecting COM4 from the Windows 3.1 Control Menu:

1. Open Microsoft Windows.
2. Select Main and then Control Panel.
3. Select Ports.
4. Select the COM4 icon.
5. Select Settings.
6. Select Advanced.
7. Change the base I/O Port address from default to 02E8.
8. Change the IRQ setting from default to 3.
9. Select **OK** and Restart Windows now.

Selecting a COM port in your Communications Software Program:

After you have configured the COM port and IRQ setting in the Control Panel, you must select the same COM port in your communications software.

Example:

Selecting COM4 in a Communications Software Program:

1. Open your communications software.
2. Locate the COM port settings.
3. Select COM4 or whichever COM port you selected in the Windows Control Panel.
4. Quit your communications software program.

General Troubleshooting

If you cannot connect an external modem to your computer...

Make sure that you are using a modem-to-computer cable. If you are not sure, contact the store where you bought the modem and verify that you have the right cable.

If the modem lights are not lit...

If the modem lights are not lit, plug the modem into another outlet to check the power. If this problem occurs with a previously working modem, your modem may have been damaged by a power surge over the electrical or telephone lines.

If the RD and/or SD lights come on or are flashing...

When you're not online, your modem cable may be damaged. Turn the modem off, disconnect the modem cable, and turn the modem back on. If the RD or SD light is still on, you should contact Customer Service.

If the CD or OH light remains on...

If the CD or OH lights remain on after you have disconnected your OPTIMA Business modem, contact Customer Service. If you cannot communicate with the modem, make sure that you have properly installed your communication software.

If the modem will not connect over the line to another modem...

Check your modem and telephone connections, then try dialing the number on your phone. If you hear a high-pitched whistle, then another modem is answering the call. If the connections are secure and the number is correct, the modems may be having trouble negotiating.

Try a lower speed. Change this in your communications software.

If the modem will not answer an incoming call...

Auto-answer may not be enabled. Refer to your software instructions to enable auto-answer.

If the modem disconnects unexpectedly...

Try dialing the number again. Also, check for loose connections between the modem and computer or between the modem and telephone. If the connections seem secure, you may have had a bad connection. Try again. Also, you may want to disable Call Waiting.

Regulatory & Warranty Information

FCC Part 15 Emissions Statement

This modem 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.

FCC Part 68 Telecommunications Statement

The Federal Communications Commission (FCC) has established rules which permit this device to be directly connected to the telephone network. This device is registered with the Federal Communications Commission (FCC) for direct connection to the telephone line using a standardized RJ-11C telephone jack. This device complies with the Part 15, Subpart B, and Part 68 requirements of the FCC rules.

The telephone company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of the device, the telephone company is required to give adequate notice of the changes.

If the telephone company requests information on what equipment is connected to the line, inform them of:

1. The telephone number that this unit is connected to
2. The ringer equivalence number
3. The USOC jack required [RJ-11C]
4. The FCC Registration Number.

Items (2) and (4) are indicated on the label on the bottom case of the modem. The ringer equivalence number is used to determine how many devices can be connected to your telephone

line. In most cases, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

If this device should malfunction, it may also cause harm to the telephone network; should this occur, this device should be disconnected from the network until the source of the problem can be determined and repair has been made. If a device which harms the network is not removed, the telephone company may temporarily disconnect service.

In the event of equipment malfunction, all repairs should be performed at an authorized repair facility. It is the responsibility of users requiring service to report the need for service to such a facility. Service facilities are listed on the product's warranty flyer.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via telephone fax machine 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 sent, the identification of the business, entity, or individual sending the message, and the telephone number of the sending machine. In order to program this information into your fax machine, refer to your faxmodem software documentation for information on enabling fax branding.

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.

European Regulations

External Modems & Internal Modem Cards

WARNING: Users should be aware that, if their software automatically generates repeat call attempts, they must ensure that no more than 15 repeated call attempts are made to the same number and that there is at least 5 seconds between each attempt. Failure to observe this requirement would be in contravention of the approval for connection to the PSTN.

Line and Phone Ports

The circuits on the port on the rear of the modem marked LINE and PHONE are TNV circuits. Compliance with EN41003 is only maintained if they are connected to ports on other equipment which contain only TNV circuits as defined in EN41003 clause 4.2.

Speaker & Microphone Port (FDSP modems)

The circuits on the port on the rear of the modem marked SPK and MIC are SELV circuits. Compliance with EN60950 is only maintained if it is connected to ports on other equipment which only contain SELV circuits as defined in EN60950 clause 2.3.

Disconnect Devices

Before opening the case for servicing the modem should be disconnected from the mains supply and the telephone network. To this end, the mains and telephone socket outlets should be installed near the modem and should be easily accessible.

External Modems

Power Module Requirements

This modem is intended to be used with the power supply module provided with this unit. Use of any other power supply module will invalidate any approval given to this modem if as a result it ceases to comply with EN60950. Please contact the manufacturer for details of approved power supply modules.

DTE port

The circuits on the port on the rear of the modem marked DTE are SELV circuits. Compliance with EN60950 is only maintained if it is connected to ports on other equipment which only contain SELV circuits as defined in EN60950 clause 2.3.

Internal Modem Cards

This modem requires power supply voltages of -5V DC, +5V DC and +12V DC. The modem is intended for use with a computer expansion connector supplying -5V @ 20mA, +5V @ 300mA and +12V @ 35mA.

WARNING: The user must make sure that their host equipment is capable of supplying the additional power required by this card and any other cards that may be connected at the same time. It is the users' responsibility to further ensure that the power supply in their host equipment meets the requirements for SELV equipment.

WARNING: The modem card must be installed in the host in such a manner that with the exception of the connections to the host, the clearances and creepages specified in the table below are maintained between the modem card and any other assembly or option cards. The distances in brackets apply where the local environment within the host is subject to either conductive pollution or dry non-conductive pollution that may become conductive when wet due to condensation.

Clearance (mm)	Creepage (mm)	Voltage used or generated by host or other cards.
2.0	2.4 (3.4)	Up to 50 Vrms or DC
2.6	3.0 (4.8)	Up to 125 Vrms or DC
4.0	6.4 (10.0)	Up to 300 Vrms or DC
		Above 300 Vrms or DC

Advice from a competent telecommunications engineer MUST be obtained before installing the modem card near to (or installing) an option card that uses or generates voltages in this range.

Failure to maintain these distances will invalidate the approval. If in doubt, seek advice from a competent telecommunications engineer before installing the modem or other option cards.

ALWAYS switch off the power to the host and disconnect it from the mains supply before attempting to install or remove a modem card.

WARNING: This modem card must only be used in a host that has a screw down lid or cover. This modem has an analogue telecommunications interface that is intended to be connected to telecommunication network voltage (TNV) circuits which may carry dangerous voltages. All telephone cords must remain disconnected from the modem until it has been installed within a host which provides the necessary protection of the user.

ALWAYS disconnect telephone cords from the modem prior to any subsequent opening of the host.

Sweden

External Modems & Internal Modem Cards

Users in Sweden should be aware that Loop Disconnect (Pulse) Dialling as implemented on these products must NOT be used in Sweden.

Australia

External Modems & Internal Modem Cards

Modems connected to the Australian telecommunications network must have a valid AUSTEL permit. This modem has been specifically configured to ensure compliance with AUSTEL Standards.

Modem Commands:

Command	Default	Permissible Range
ATB	B0	Do not set for Bell mode
AT&G	&G2	&G0
AT&P	&P1	&P1 only
S Register	Default	Permissible Range
S0	0	0, 2 to 255
S6	2	2 - 5
S11	95	70 - 255
S45	10	10 - 15
S89	10	10 - 15

AUSTEL Technical Standard 002 Sections 5.3.6.4/5 prescribes how outgoing calls must be made to avoid contravention of the Telecommunications Act of 1991. Users should be aware that if their software automatically generates repeat call attempts, they must ensure that no more than 3 repeated call attempts are made to the same number and that there is at least 2 seconds between each call attempt. If the call sequence is unsuccessful, there shall be a delay of at least 30 minutes before attempting to call that number again. Failure to observe this requirement would be in contravention of the approval for connection to the PSTN.

NOTE - This modem has been set up with a factory default of ATX4. This setting enables the detection of service tones (such as "busy").

Failure to set the modem or any application software used with the modem to the values shown above will result in the modem being operated in a non-compliant manner. Consequently, there would be no permit in force for this modem and the Telecommunications Act of 1991 prescribes a penalty of \$12,000 for the connection of non permitted equipment.

Internal Modem Cards

This modem requires power supply voltages of -5V DC, +5V DC and +12V DC. The modem is intended for use with a computer expansion connector supplying -5V @ 20mA, +5V @ 300mA and +12V @ 35mA.

WARNING: The user must make sure that their host equipment is capable of supplying the additional power required by this card and any other cards that may be connected at the same time.

The modem card must only be used in a data terminal equipment (DTE) e.g., computer, that has a screw down cover/lid. As unsafe voltages (TNV) exist on the modem card, disconnect the modem card from the telephone line while the cover (lid) of the DTE (computer) is removed.

Installation of the modem card into a DTE (computer) which does not require a tool to open the cover (lid) will render the permit void.

Ensure that the modem card is installed in the host in such a manner that with the exception of the connections to the host there is a minimum of 2mm air gap between the modem card and other components in the DTE.

New Zealand

External Modems & Internal Modem Cards

The grant of a Telepermit for a device in no way indicates Telecom acceptance of responsibility for the correct operation of that device under all operating conditions. This equipment shall not be used in any manner which could constitute a nuisance to other Telecom customers.

Some parameters required for compliance with Telecom's PTC specifications are dependent upon the equipment within which this modem is installed. The equipment shall be set to operate within the following limits for compliance with Telecom specifications.

When the user manually initiates a call via equipment to which the modem card is installed, the equipment shall operate as follows:

Not more than five call attempts shall be made to the same number within a one hour period.

There shall be at least 60 seconds between call attempts.

Not more than a total of ten call attempts shall be made to the same number for any single manual call initiation.

Automatic calls to different numbers shall not be less than five seconds apart.

The user must immediately disconnect this modem should it become physically damaged and arrange for either its disposal or repair.

Only Telepermitted equipment may be connected to the telephone port.

The correct setting for use with this modem in New Zealand are:

ATB0	(CCITT operation)
AT&G2	(1800Hz guard tone)
AT&P1	(Pulse dialling make/break ratio of 33:67)
ATS0=0	(Auto-answer is disabled)
ATS11=65	(DTMF on/off duration = 65ms)
ATX2	(Dialtone detect but not USA call progress detect)

When used in auto-answer mode, the S0 register must be set to a value between 2 and 5. This ensures that a calling party to your modem will hear at least one burst of ringing before the modem answers, This

1. Confirms that the call has been correctly switched through the network.
2. Allows time for Caller Display information to be transmitted.

This device is NOT intended for connection in parallel with any other devices. The operation of this equipment on the same line as telephones or equipment with audible warning devices or automatic ring detectors may give rise to bell tinkle or other noises which may cause false tripping of the modems ring detection circuit. The user should NOT report such occurrences as faults.

WARNING: New Zealand "Reverse dialling" standard is NOT implemented on this modem. The preferred method of dialling is to use DTMF tones - call initiation is faster and more reliable than pulse dialling. If for some reason you must use pulse dialling, your communications program must be set up to record numbers using the following translation table:

Number to be dialled: 0 1 2 3 4 5 6 7 8 9

Number to program into computer: 0 9 8 7 6 5 4 3 2 1

NOTE: - DTMF digits are entered and dialed in the normal manner.

This modem does not fully meet Telecom's impedance requirements. Performance limitations may occur when used in conjunction with some parts of the network. Telecom will accept no responsibility for any difficulties that may arise from such situations.

The transmit level from this modem is set at a fixed level. Because of this, there may be circumstances where the performance of this modem will be less than optimal. Before reporting such occurrences as faults, check the line with a standard Telepermitted telephone and do NOT report it immediately as a fault.

WARNING: It is recommended that this modem be disconnected from the telephone line during electrical storms.

When disconnecting this equipment, always disconnect the Telecom line before removing the power. When reconnecting, connect the power first, then the Telecom line.

NOTE: Failure to meet any of the above requirements may negate the users rights under the Telecom terms of service.

Limited Warranty—North America

(This Limited Warranty applies to Products sold within the borders of the United States of America and Canada.)

Who is Covered by This Warranty? This limited warranty ("Warranty") is extended by Zoom Telephonics, Inc. ("Zoom") only to the original end user purchaser of the accompanying HAYES HARDWARE PRODUCT ("Hardware") and/or HAYES SOFTWARE PRODUCT ("Program") (separately and together, "Product").

What Does This Warranty NOT Cover? Zoom does not warrant or guarantee you uninterrupted service, the correction of any error or elimination of any "bug". You are solely responsible for any failure of the Product which results from accident, abuse, misapplication, alteration of the Product, or use of the Product outside of the borders of the country or countries shown on the Product package. Zoom assumes no liability for any events arising out of the use of any technical information accompanying the Product. THIS WARRANTY APPLIES TO THE PRODUCT ONLY AND DOES NOT COVER ANY OTHER SOFTWARE OR HARDWARE WHICH MAY BE INCLUDED WITH YOUR PURCHASE OF THE PRODUCT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ANY SOFTWARE OTHER THAN THE PROGRAM IS PROVIDED "AS IS" AND WITHOUT WARRANTY OF ANY KIND. INCIDENTAL AND CONSEQUENTIAL DAMAGES CAUSED BY MALFUNCTION, DEFAULT, OR OTHERWISE WITH RESPECT TO BREACH OF THIS WARRANTY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY ARE NOT THE RESPONSIBILITY OF ZOOM AND ARE HEREBY EXCLUDED BOTH FOR PROPERTY AND, TO THE EXTENT NOT UNCONSCIONABLE, FOR PERSONAL INJURY DAMAGE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This Warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

What is the Period of Coverage? The period of coverage for the enclosed Hardware and/or Program is set forth in the Warranty Period section of this Guide. If this section indicates that Zoom offers an Extended Protection Plan ("Plan") for the enclosed Hardware and/or Program and you select the Plan, the period of coverage for the Hardware and/or Program would be the total of the original Warranty Period and the Plan period. ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE SHALL TERMINATE AUTOMATICALLY UPON THE EXPIRATION OF THE PERIOD OF COVERAGE. Some states do

not allow limitations on how long the implied warranty lasts, so the above limitation may not apply to you.

What Will Zoom Do to Correct Problems? In the event of a malfunction attributable directly to Defects, Zoom will, at its option, repair the Product, to whatever extent Zoom deems necessary to restore the Product to proper working condition, or replace the Product with a new or functionally equivalent product of equal value, or refund an amount equal to the lesser of (1) the purchase price paid for the Product or (2) the then effective Zoom Estimated Retail Price for the Product. THE REMEDY DESCRIBED ABOVE IS THE EXCLUSIVE REMEDY EXTENDED TO YOU BY ZOOM FOR ANY DEFAULT, MALFUNCTION, OR FAILURE OF THE PRODUCT TO CONFORM WITH THIS WARRANTY OR OTHERWISE FOR BREACH OF THIS WARRANTY OR ANY OTHER WARRANTY, WHETHER EXPRESSED OR IMPLIED.

How Do You Obtain Warranty Service? To obtain warranty service, you must either call the appropriate Customer Service number or write to Customer Service at the appropriate address. You must return the Product, along with the return authorization number given to you by Customer Service and proof of date of purchase, or after expiration of the Warranty period, Zoom will, at its option, repair the Product and charge you for parts and labor or replace the Product and charge you the then effective Estimated Retail Price for the Product, unless Zoom has discontinued the manufacture or distribution of such products because of technical obsolescence.

North America Limited Warranty Period

Your modem includes a two (2) year limited warranty. Free extension to the limited performance warranty is available for a total of 5 years with product registration within 90 days of purchase.

Hayes software includes a ninety (90) day limited warranty.

Limited Guarantee — English/International

(This Guarantee applies to Products sold outside of the borders of North America.)

Who is Covered by this Guarantee? This limited guarantee ("Guarantee") is extended by Zoom Telephonics, Inc. ("Zoom") only to the original end user purchaser of the accompanying HAYES HARDWARE PRODUCT ("Hardware") and/or HAYES SOFTWARE PRODUCT ("Program") (separately and together, "Product") who purchased the Product from an authorized Zoom reseller.

What Does this Guarantee NOT Cover? Zoom does not warrant or guarantee you uninterrupted service, the correction of any error, or elimination of any "bug". You are solely responsible for any failure of the Product which results from accident, abuse, misapplication, or alteration of the Product, or, if the Product is designated for use only in a specified country or countries, use of the Product outside of the borders of the country or countries shown on the Product package. Zoom assumes no liability for any events arising out of the use of any technical information accompanying the Product. THIS GUARANTEE APPLIES TO THE PRODUCT ONLY AND DOES NOT COVER ANY OTHER SOFTWARE OR HARDWARE WHICH MAY BE INCLUDED WITH YOUR PURCHASE OF THE PRODUCT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ANY SOFTWARE OTHER THAN THE PROGRAM IS PROVIDED "AS IS" AND WITHOUT GUARANTEE OR CONDITION OF ANY KIND. Apart from the obligations, guarantees, limitations and commitments of Zoom specifically set forth in this Guarantee, Zoom expressly excludes and disclaims all other obligations, guarantees, liabilities, commitments, and similar undertakings expressed or implied, statutory or otherwise, as to the condition, quality, durability performance, merchantability and fitness for a particular use or purpose of the Product. TO THE EXTENT PERMITTED BY LAW, INCIDENTAL AND CONSEQUENTIAL DAMAGES CAUSED BY MALFUNCTION, DEFAULT OR OTHERWISE WITH RESPECT TO BREACH OF THIS GUARANTEE OR ANY OTHER EXPRESS OR IMPLIED GUARANTEE, WARRANTY OR CONDITION ARE NOT THE RESPONSIBILITY OF ZOOM AND ARE HEREBY EXCLUDED BOTH

FOR PROPERTY DAMAGES AND FOR PERSONAL INJURY DAMAGES, EXCEPT AS CAUSED BY THE GROSS NEGLIGENCE OR FRAUD OF ZOOM.

What is the Period of Coverage? The period of coverage for the enclosed Hardware and/or Program is set forth in the Guarantee Period section of this Guide. If this section indicates that Zoom offers an Extended Protection Plan ("Plan") for the enclosed Hardware and/or Program and you select the Plan, the period of coverage for the Hardware and/or Program would be the total of the original Guarantee Period and the Plan period. There shall be no Guarantee after the expiration of the period of coverage.

What Will Zoom Do to Correct Problems? In the event of a malfunction attributable directly to Defects, Zoom will, at its option, repair the Product to whatever extent Zoom deems necessary to restore the Product to proper operating condition, or replace the Product with a new or functionally equivalent product of equal value, or refund an amount equal to the lesser of (1) the purchase price paid for the Product, or (2) the then effective Zoom Estimated Retail Price for the Product. THE REMEDY DESCRIBED ABOVE IS THE EXCLUSIVE REMEDY EXTENDED TO YOU BY ZOOM FOR ANY DEFAULT, MALFUNCTION, OR FAILURE OF THE PRODUCT TO CONFORM WITH THIS GUARANTEE, OR OTHERWISE FOR THE BREACH OF THIS GUARANTEE OR ANY OTHER GUARANTEE, WARRANTY OR CONDITION, WHETHER EXPRESSED OR IMPLIED.

How Do You Obtain Guarantee Service? To obtain Guarantee service, you must either call the appropriate Customer Service number or write to Customer Service at the appropriate address listed at the end of this section. You must return the Product, along with the return authorization number given to you by Customer Service and proof of date of purchase, or after expiration of the Guarantee period, Zoom will, at its option, repair the Product and charge you for parts and labor or replace the Product and charge you the then effective Estimated Retail Price for the Product, unless Zoom has discontinued the manufacture or distribution of such products because of technical obsolescence.

To the extent that any of the terms and condition of the English version of this Guarantee conflict with any of the terms and conditions of any translation thereof, the terms and conditions of the English version will prevail.

Guarantee Period

Hayes products sold outside of the borders of the United States of America or Canada include a two (2) year limited guarantee. An optional extended protection plan is also available in some countries, consisting of a free extension to the limited performance guarantee for a total of 5 years with product registration within 90 days of purchase.

Hayes software includes a ninety (90) day limited guarantee.

Customer Support and Warranty/Guarantee Service Information

To obtain Warranty/Guarantee Service, call or write to the appropriate Zoom Customer Service location for a return authorization number, and then return the product to that location along with (a) the return authorization number, (b) proof of date of purchase, and (c) your mailing address and telephone number, postage prepaid.

Please note that if the product is returned without proof of purchase or after the expiration of the warranty/guarantee coverage period, Zoom will, at its option, repair or replace the product and charge you the then effective Zoom price for out of warranty/guarantee service of the product, unless Zoom has discontinued the manufacture or distribution of the product because of technical obsolescence.

Información sobre el Servicio de Garantía

Regulatory & Warranty Information

Para obtener el Servicio de Garantía, llame o escriba a la sucursal de Servicio al Usuario en Zoom para que le devuelvan un número de autorización y después devuelva el producto al mismo punto junto con (a) la devolución del número de autorización, (b) el comprobante de la fecha de compra y (c) el número de teléfono y la dirección a la que debe remitirse, porte pagado. Tenga en cuenta que si se devuelve el producto sin el comprobante de compra o una vez haya expirado el período cubierto por la garantía, Zoom podrá reparar o cambiar el producto y cobrarle el precio regular para el servicio fuera de garantía del producto, a menos que Zoom no haya suspendido la fabricación o distribución del producto debido a la caída en desuso del mismo.

Informations service garantie

Pour obtenir un service de garantie, appelez ou écrivez au Point de service client Zoom approprié pour recevoir un numéro d'autorisation de renvoi, puis renvoyez le produit à ce même endroit avec a) le numéro d'autorisation de renvoi, b) une preuve de la date d'achat et c) votre adresse postale et votre numéro de téléphone, par lettre affranchie. Veuillez noter que si le produit nous est renvoyé sans preuve d'achat ou après la date d'expiration de la période de garantie, Zoom pourra à sa discrétion réparer ou remplacer le produit puis vous facturer le prix alors en vigueur chez Zoom pour l'entretien du produit hors-garantie, à moins que Zoom n'ait cessé la fabrication ou la distribution du produit en raison de son obsolescence technique.

Hinweis zum Garantieservice

Bevor das Garantieservice in Anspruch genommen werden kann, muß zuerst telefonisch oder schriftlich eine Berechtigungsnummer von der unten genannten Zoom-Kundendienststelle angefordert werden. Das fehlerhafte Produkt ist dann samt (a) Berechtigungsnummer, (b) datiertem Kaufnachweis und (c) Ihrer Postanschrift, einschließlich Telefonnummer, sowie Rückporto an die untenstehende Adresse einzusenden. Bei Einsendung ohne Beleg des Kaufdatums oder Ablauf der Garantiezeit wird Zoom das Produkt nach eigenem Ermessen entweder reparieren oder ersetzen und die üblichen Kosten für nicht unter die Garantie fallende Serviceleistungen in Rechnung stellen, sofern Fertigung oder Vertrieb des Produkts wegen technischer Überalterung nicht eingestellt wurde.

Informazioni per l'Assistenza in Garanzia

Per ottenere l'Assistenza in Garanzia, chiamate o scrivete all'appropriata sede di Assistenza Clienti Zoom che fornirà un numero di autorizzazione alla restituzione, e successivamente spedite il prodotto alla suddetta sede indicando: (a) numero di autorizzazione alla restituzione, (b) prova della data di acquisto e (c) il vostro indirizzo postale e numero di telefono, tramite posta prepagata. Si noti che se il prodotto viene restituito senza prova di acquisto o dopo la scadenza del periodo di copertura dalla garanzia, Zoom, a propria scelta, riparerà o sostituirà il prodotto e vi addebiterà il prezzo effettivo per la manutenzione fuori garanzia del prodotto, a meno che la fabbricazione o la distribuzione del prodotto stesso non sia stata cessata da Zoom a causa di obsolescenza tecnica.

Statement of Copyright Restriction

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