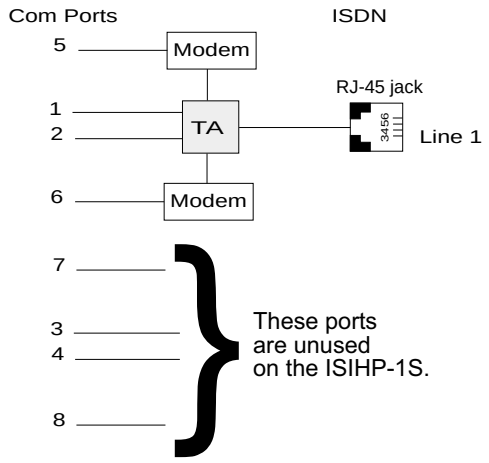
Product Update for ISIHP-1S
Intelligent Serial Interface Server Card

Introduction

The ISIHP-1S Intelligent Serial Interface card is a revised version of the ISIHP-2S card that has been altered to accept *one* ISDN Basic Rate Interface line rather than *two*. As such, the ISIHP-1S accommodates four ports, two analog modem ports and two terminal adapter ports, and allows two of these ports to operate simultaneously. (The ISIHP-2S accommodates eight ports, with four operating simultaneously.)

The differences between the "1S" and "2S" ISIHP cards and the resulting installation differences are summarized below. This Product Update describes the differences in detail and includes installation procedures specific to the ISIHP-1S. This Product Update is to be used in conjunction with the User Guide and Quick Start Guide that apply to the entire ISIHP product family (models 2S, 2U, 4S, 4U, and 4SD).

ISIHP -- Differences between "1S" and "2S" versions, especially COM port assignments



When installing ISIHP-1S software:

(a) treat ISIHP-1S as an 8-port card;
(b) assign first 2 ports as terminal adapters (TAs);
(c) skip two port numbers;
(d) assign next 2 ports as analog modems.

(e) Other devices can use port numbers that were skipped by the ISIHP-1S.

Contents:

Shipping Contents

- ISIHP-1S card
- RJ-45 ISDN cord
- ISIHP Driver Disk set (*ISIHP-1S uses same driver as "2S" model*)
- ISDN TA Configuration Wizard disk
- Quick Start Guide
- User Guide on CD-ROM
- Product Update (this document)

Computer Requirements

- Pentium-based PC or compatible with PCI bus architecture
- Microsoft Windows 95, Windows 98, Windows NT version 4.0, Windows 2000, SCO Open Server version 5.0, Novell NetWare, or Linux
- At least one floppy drive
- 800 blocks of hard disk space for UNIX, 100K bytes for Windows NT, 34K bytes for Windows 95, 50K bytes for Novell

Hardware Installation Procedure

See *ISIHP-2S/2U/4S/4U/4SD Quick Start Guide* or *User Guide*.

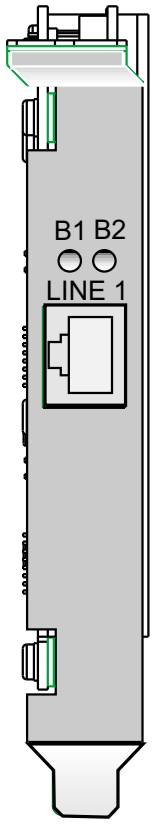
Safety Warnings

- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jacks are specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Avoid using a telephone (other than cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of that leak.
- Ports that are connected to other apparatus are defined as SELV.
  To ensure conformity to EN 41003, ensure that these ports are connected only to the same type on the other apparatus.

LED Indicators

The LED indicators for the ISIHP-1S are shown and described below.

ISIHP-1S LED Indicators



B1 LED Indicator

- When lit, indicates active or voice connection on B-channel 1.

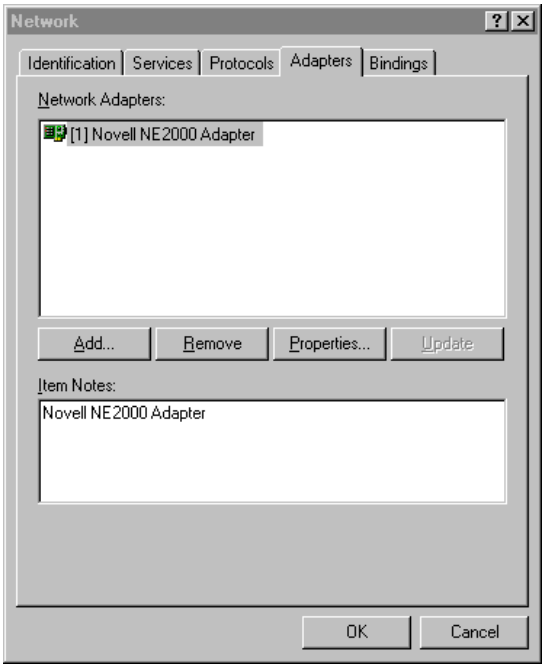
B2 LED Indicator

- When lit, indicates active or voice connection on B-channel 2.

Installing the ISIHP Driver in Windows NT 3.51/4.0

The following procedure describes how to install the ISIHP-1S card in a computer that uses Microsoft Windows NT 3.51 or 4.0 for Remote Access Service (RAS) or other communications/fax server type applications. These procedures refer to both 3.51 and 4.0.

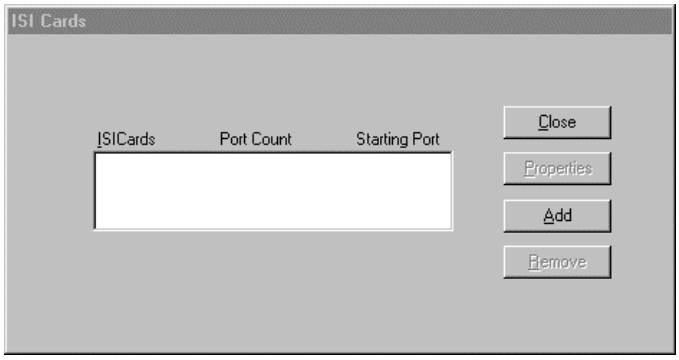
1. Install the ISIHP-1S in an available PCI slot (see "Hardware Installation Procedure" in ISIHP-2S/2U/4S/4U/4SD *Quick Start Guide* or *User Guide*).
2. Turn on the computer.
3. Click **Start**, **Settings**, **Control Panel**, and then double-click **Network**. In the **Network** dialog box, click the **Adapters** tab. Then click **Add**.



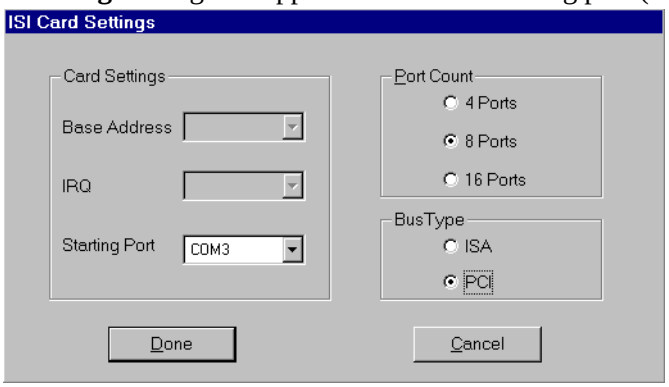
4. The **Select Network Adapter** dialog box appears. Click **Have Disk**.
5. The **Insert Disk** dialog box appears. Insert the *MultiModem ISI Driver for Windows NT* diskette and click **OK**.
6. The **Select OEM Option** dialog box appears. Click **OK**.

   A transient dialog box will appear while the setup program is loaded from the diskette to the PC hard drive.

7. The **ISI Cards** dialog box appears. Click **Add**.



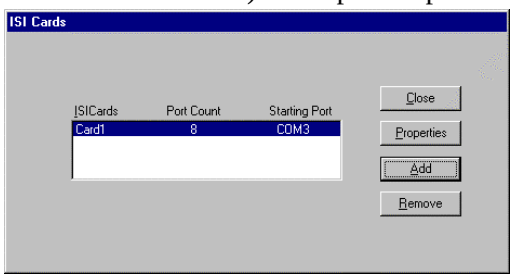
8. Then the **ISI Card Settings** dialog box appears. Select the starting port (usually port 3).



   Under "Port Count," select **8 Ports**. (Even though the ISIHP-1S has only 4 ports, during installation it appears to have 8 ports numbered in succession. This occurs because the "1S" uses the same driver software as the "2S" model. However, four of the port numbers actually remain unused by the ISIHP-1S. Consequently, these port numbers can be used later for other devices in the computer.)

   Under "Bus Type," select **PCI**. Then click **Done**.

9. The **ISI Cards** dialog box appears again showing the port assignment. Click **Add** to add additional cards (if you have additional cards) and repeat step 8.



   After the last ISIHP card has been added, click **Close**.

10. The file copies and **Multi-Tech ISIHP Adapter** appears in the **Network Adapters** box. Click **Close**.

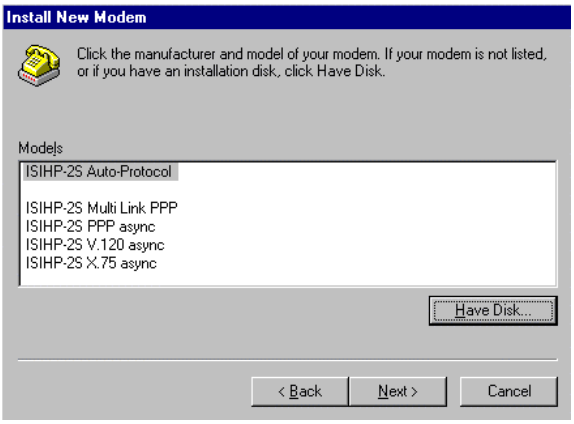
11. When prompted to reboot your computer, click **Yes**.

    The ISIHP-1S is now installed in Windows NT.

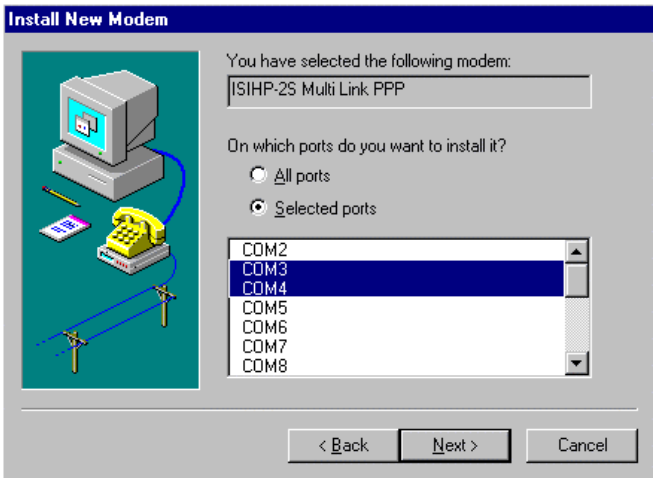
Installing TAs & Modems to COM Ports in Windows NT

To install terminal adapters in Windows NT:

1. In the **Control Panel**, double-click the **Modems** icon.
2. The **Modem Properties** dialog box appears. Click **Add**.
3. The **Install New Modem** dialog box appears. Check the box marked **Don't detect my modem; I will select it from a list** and click **Next**.
4. The **Install New Modem** dialog box appears. Click **Have Disk**.
5. The **Install From Disk** dialog box appears. Click **OK** (diskette should still be in drive).
6. The **Install New Modem** dialog box appears. From the **Models** list, select an ISDN protocol (Auto-Protocol, ML-PPP, PPP, V.120, or X.75, depending on your application). For the purposes of this question, the ISIHP-1S should be treated like the ISIHP-2S model. (See description of protocols in the *Introduction* chapter of the *ISIHP 2S/2U/4S/4U/4SD User Guide*.) Then click **Next**.



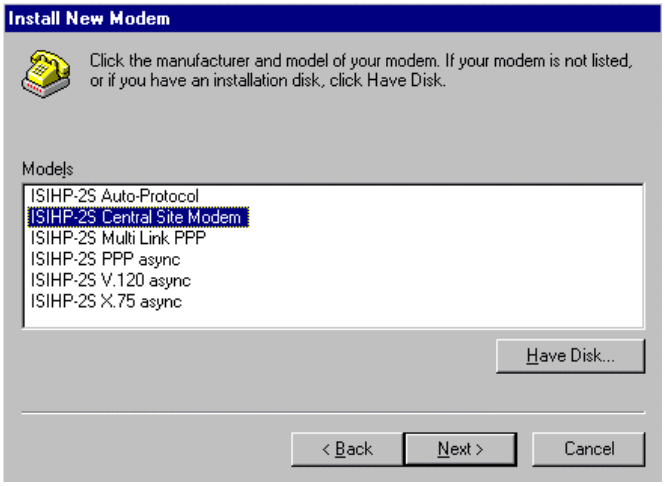
7. The **Install New Modem** dialog box appears. Any ports that existed prior to installing the ISIHP appear first in the list of available COM ports. Select the first two available ports. (In the example below, since COM1 and COM2 were already taken, COM3 and COM4 were the first port assignments.) Click **Next**. Terminal adapters will now be installed to the two selected ports.



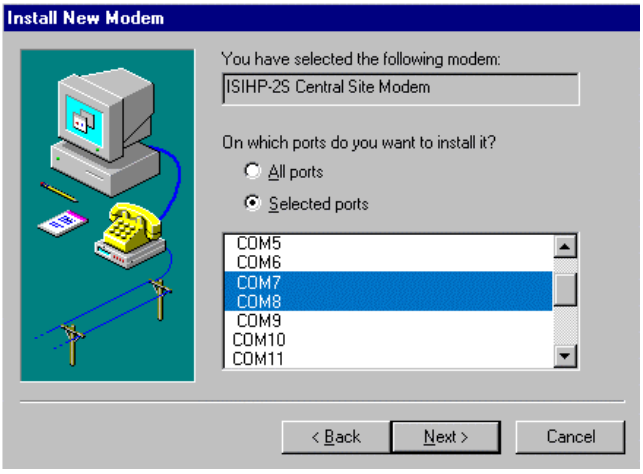
8. After the terminal adapters install, click **Finish** to return to the **General** tab to view COM port assignments (and make changes if necessary). Now you are ready to install the modems.

To install modems in Windows NT:

1. In the **General** tab, click **Add**.
2. The **Install New Modem** dialog box appears. Check the box marked **Don't detect my modem; I will select it from a list.** Then click **Next**.
3. The **Install New Modem** dialog box appears. From the **Models** list, select **Central Site Modems** for the *modems*. Then click **Next**.

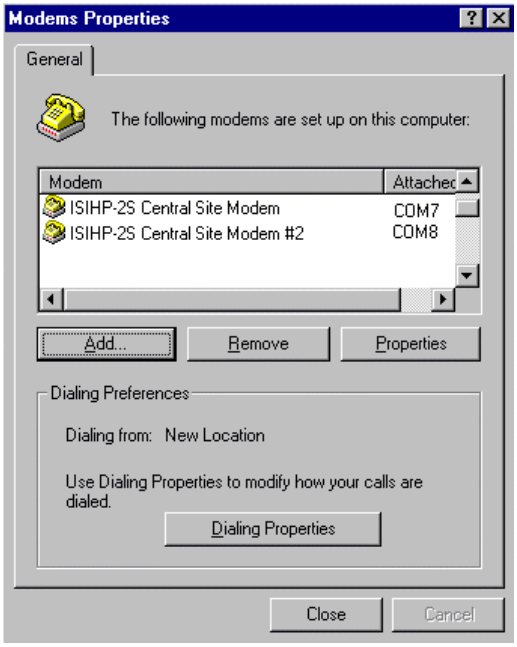


4. Recall the port numbers used for terminal adapters in the procedure above. Skip two port numbers beyond those ports and then assign modems to the next two port numbers after that. Click **Next**. The modems install to the selected COM ports.

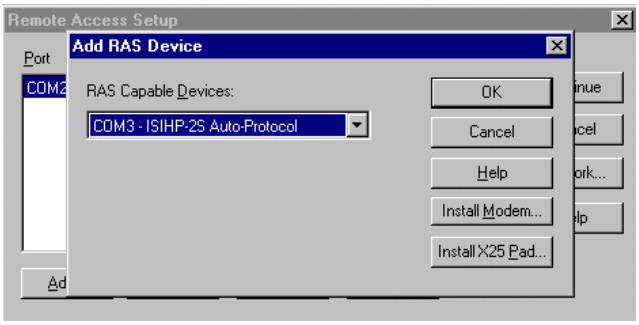


5. After the modems install to the ports, click **Finish** to return to the **General** tab.

6. To view COM port assignments and make necessary changes, use the **Modem Properties** dialog box.

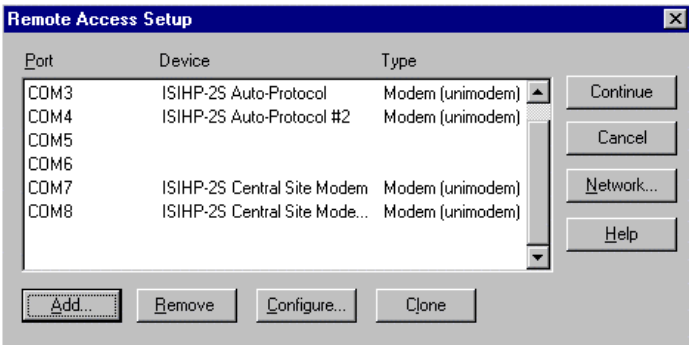


7. Close the **Modems Properties** dialog box. You will be asked if you want to configure dial-up networking. Click **Yes**.
8. The **Remote Access Setup** dialog box appears. Click **Add**.
9. Each COM port appears in a separate **Add RAS Device** dialog box. To add the highlighted device, click **OK**.



10. The **Remote Access Setup** dialog box displays again. Repeat steps 7 through 9 until all devices are added.

11. When all devices have been added, click **Continue**.



12. After the bindings have been reviewed and stored, you will be asked to reboot. Click **Yes**.
    After rebooting, the **ISI Cards** icon appears in the **Control Panel.**

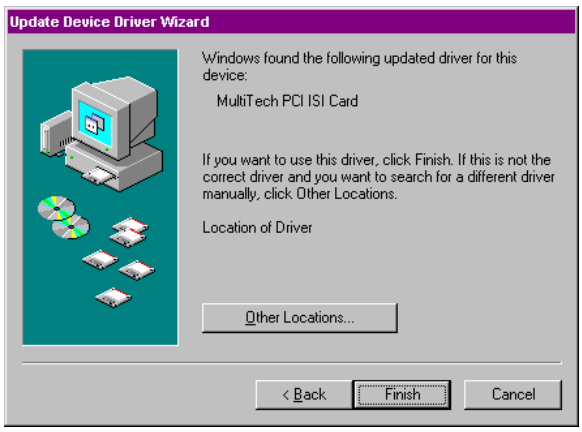
You are now ready to configure the terminal adapter. See the section,"Configuring the Terminal Adapter," on page 49 in the ISIHP-2S/2U/4S/4U/4SD manual.

Installing the ISIHP in Windows 95 and Windows 98

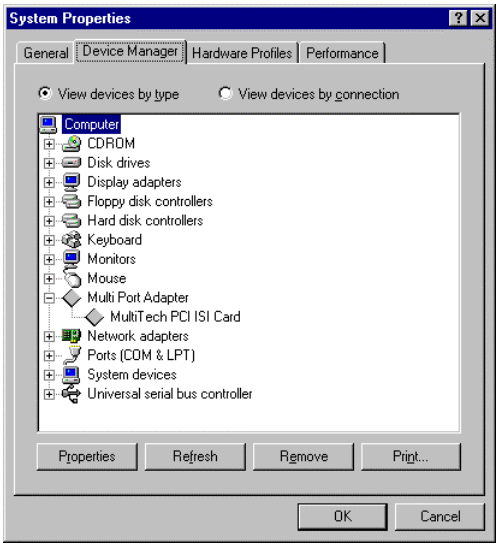
This section describes how to install the ISIHP-1S in a computer that uses Microsoft Windows 95 or Windows 98 for Remote Access Service (RAS) or other communications/fax server type applications.

Windows 95 Driver Installation

1. After installing the ISIHP-1S in an available PCI slot, turn on the computer.
2. Windows 95 automatically detects the ISIHP card. A dialog box appears saying that Windows has found the new hardware and is locating the software for it.
3. The **Update Device Driver** dialog box appears. Insert the ISIHP Windows 95 driver diskette and click **Next**.
4. Windows 95 automatically searches for the unknown device and locates the MultiTech ISI Port. Because the ISIHP-1S is treated the same as the "2S" model during installation, Windows 95 will allocate eight ports for the ISIHP-1S (even though the ISIHP-1S will use only four ports altogether). After the operating system goes through this process for every port added, click **Finish**.



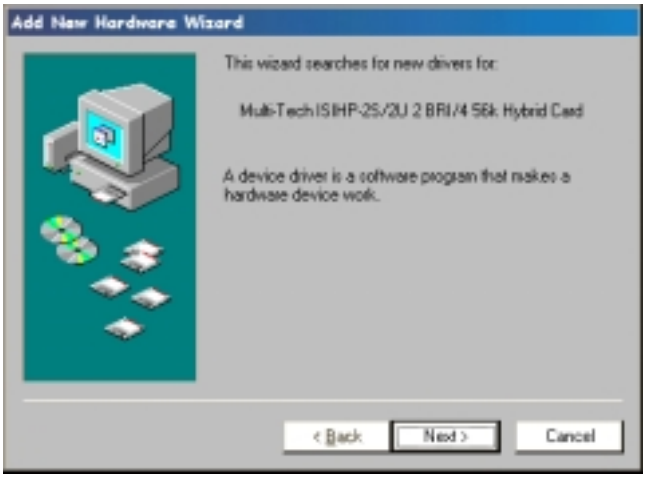
5. To view the COM ports, click **Control Panel** and double-click **System**. In the **System Properties** dialog box in **Device Manager**, the **MultiTech PCI ISI Card** appears under **Multi Port**. To view ports, click **Ports (COM & LPT)**. Click **OK** to close.



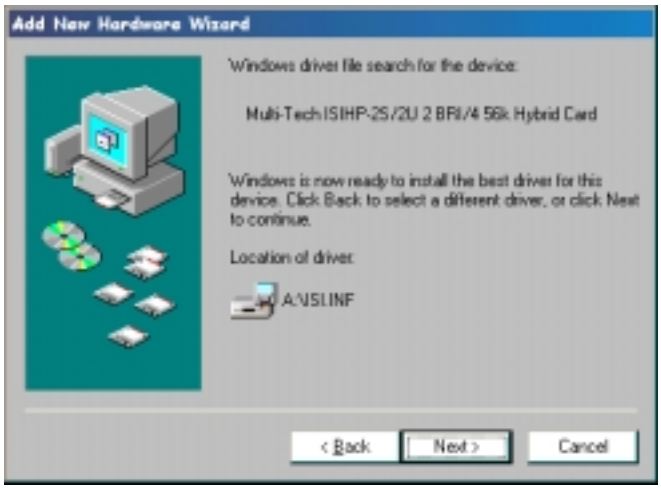
Note that eight ports have been designated even though the ISIHP-1S will use only 4 ports. (After installation of the ISIHP-1S is complete, these unused ports can be used for other purposes in your PC.)

Windows 98 Driver Installation

1. After installing the ISIHP card in an available PCI slot, turn on the computer.
2. Windows 98 automatically detects the ISIHP card. A dialog box appears saying that Windows has found the new hardware and is locating the software for it.
3. The **Add New Hardware Wizard** dialog box appears. (Even though the dialog box refers to the "2S" model, this is normal; the ISIHP-1S uses the same driver as the "2S" model.)



4. In the next Wizard dialog box, select **Search for the best driver for your device. (Recommended).** Then click **Next**.
5. In the next Wizard dialog box, make sure **Floppy disk drives** is checked. Insert the *MultiModem ISI Driver for Windows 95/98* diskette. Then click **Next** and the system locates the file.
6. When this Wizard dialog box appears, click **Next**. (Even though the dialog box refers to the "2S" model, this is normal; the ISIHP-1S uses the same driver as the "2S" model.)



7. Windows then installs the device driver for the ISIHP-1S card and brings up a new dialog box when complete. Click **Finish**.

   Windows 98 will now detect and create COM ports. Because the ISIHP-1S is treated the same as the "2S" model during installation, Windows 98 will allocate eight ports for the ISIHP-1S (even though the ISIHP-1S will use only four ports altogether).

8. After the COM parts have been created, you must re-boot your PC (remove the diskette from the floppy drive before re-booting).
9. To view the COM ports, click **Control Panel** and double-click **System**. The **System Properties** dialog box appears.

   The **MultiTech PCI ISI Card** is located under **Multi Port Adapter**. Click **Ports (COM & LPT)** to view the ports. Click **OK** to close.

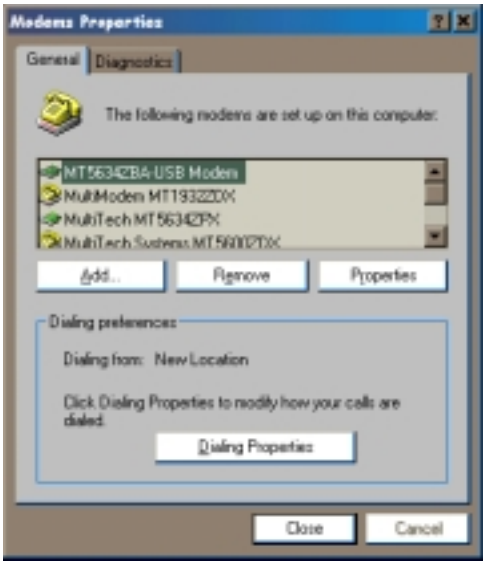
   Note that eight ports have been designated even though the ISIHP-1S will use only 4 ports. (After installation of the ISIHP-1S is complete, these unused ports can be used for other purposes in your PC.)

Installing TAs & Modems to COM Ports in Windows 95 /98

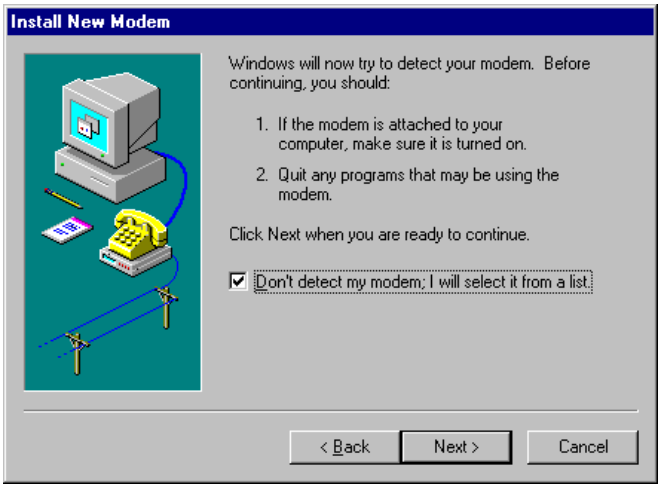
To install terminal adapters:

1. Click **Start**, **Settings**, **Control Panel**, and then double-click the **Modems** icon.
2. If no modems are currently installed, the **Install New Modem** dialog box appears. Check the box marked **Don't detect my modem; I will select it from a list.** Then click **Next**.

   If other modems have been installed, the **Modems Properties** dialog box will appear.

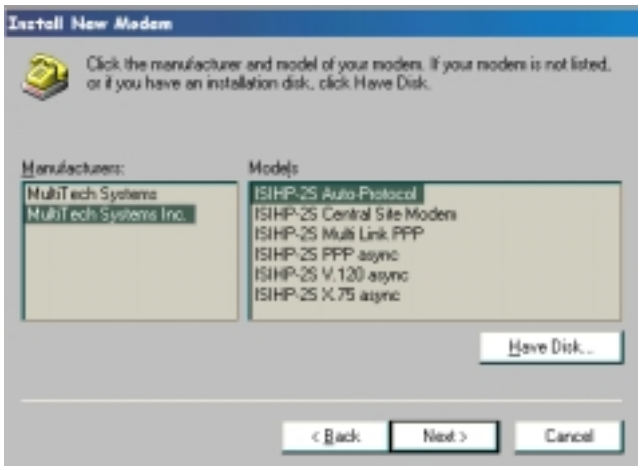


Click **Add** and the **Install New Modem** dialog box will appear. Check the box marked **Don't detect my modem; I will select it from a list.** Then click **Next**.

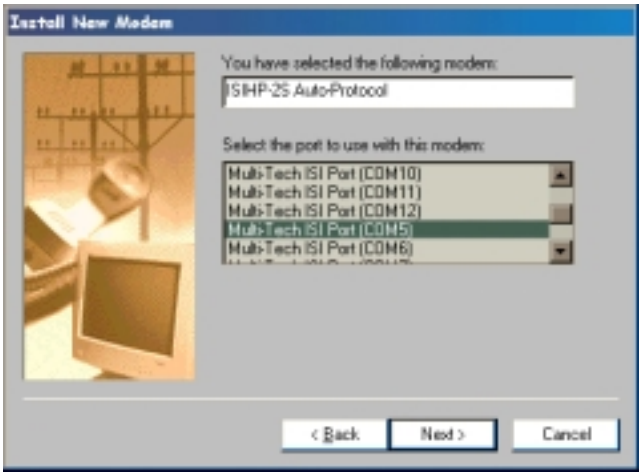


3. The **Install New Modem** dialog box appears. Insert diskette containing the MultiTech driver for Windows 95/98 and click **Have Disk**.
4. The **Install From Disk** dialog box appears. Click **OK**.

5. The **Install New Modem** dialog box appears. Select a protocol that is appropriate to your application from the **Models** list (the listed protocols will refer to the "2S" model; this is normal because the ISIHP-1S uses the same driver as the "2S" model). Then click **Next**.



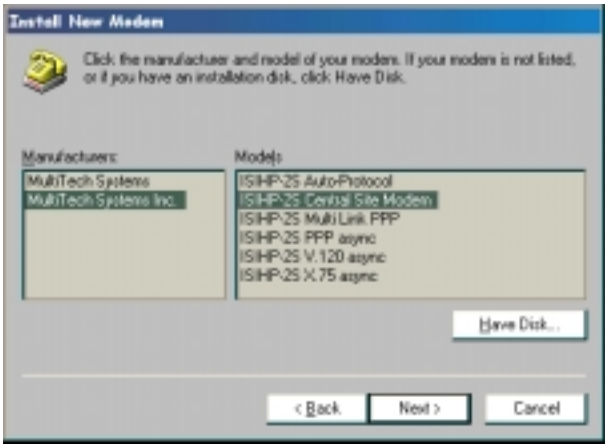
6. The **Install New Modem** dialog box appears. Select the starting port for the ISIHP-1S terminal adapters (default is COM5). Any ports that had been installed before installing the ISIHP-1S card are generally numbered lower than the ports of the ISIHP-1S card. Click **Next**.



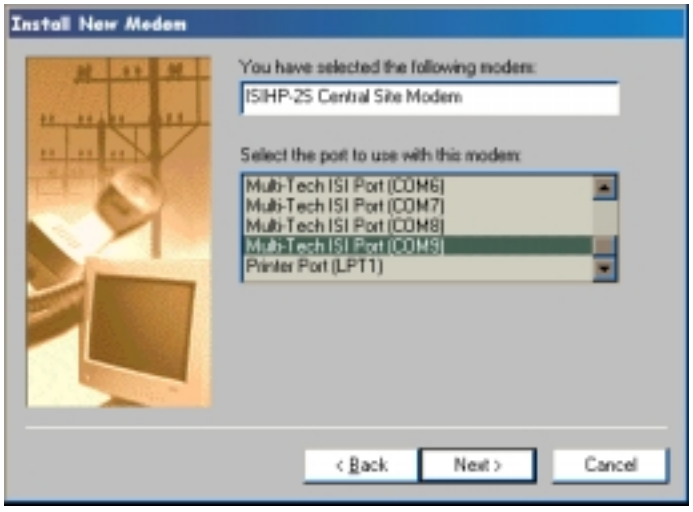
7. Windows will install the first terminal adapter. Click **Next**.
8. After the terminal adapter installs, click **Finish** to return to the **General** tab to view COM port assignments (and make changes if necessary).
9. Click **Add** and repeat installation steps 2–8 to install the second terminal adapter to the second port of the ISIHP-1S. After the two terminal adapters have been installed, you are ready to install the modems.

To install modems (Windows 95/98)

1. Go to **Start | Settings | Control Panel | Modems**. Under the **General** tab, click **Add**.
2. The **Install New Modem** dialog box appears. Check the box marked **Don't detect my modem; I will select it from a list.** Then click **Next**.
3. The **Install New Modem** dialog box appears. Insert the MultiTech driver diskette for Windows 95/98. Then click **Have Disk**.
4. The **Install from Disk** dialog box appears. Click **OK**.
5. The **Install New Modem** dialog box appears. From the **Models** list, select **Central Site Modems** for the *modems*. Then click **Next**.



6. The **Install New Modem** dialog box appears. Recall the port numbers used for terminal adapters in the procedure above. Skip two port numbers beyond those ports and then assign modems to the next two port numbers after that. Then click **Next**. The modems will be installed to the selected COM ports.



7. After the modem installs to the port, click **Finish.**
8. Return to the **General** tab to view COM port assignments (and make changes if necessary).
9. Click **Add** and repeat installation steps 2–8 to install a modem to the second analog port of the ISIHP-1S.

   Now you are ready to configure the terminal adapters (see page 49 of ISIHP-2S/2U/4S/4U/4SD User Guide).

Installing the ISIHP-1S under Netware

When the driver is installed, it will allocate 8 consecutive ports to the ISIHP-1S. Upon inspection, the Netware OS will initialize the first pair of ports (terminal adapters), label the second pair of ports "broken," initialize the third pair of ports (modems), and label the fourth pair "broken." After installation of the ISIHP-1S card is complete, the "broken" ports can be allocated to a different purpose. See the ISIHP-2S/2U/4S/4U//4SD *User Guide* for general instructions on ISIHP installation under Netware.

Installing the ISIHP-1S under SCO Open Server 5

In the MultiTech Installation Script, specify 8 pseudo-devices for the ISIHP-1S card. Only four of these pseudo devices will actually be used (the first pair, ttyl1A and ttyllB will be used as terminal adapters; the third pair, ttyl1E and ttyl1F, will be used as modems). The remaining four ports (the second pair and the fourth pair) are not used and can be allocated to a different purpose after the ISIHP-1S installation is complete.

You must initialize each of the four active ports separately using the **enable** command. See the ISIHP-2S/2U/4S/4U//4SD *User Guide* for general instructions on ISIHP installation under SCO Open Server 5.

Installing the ISIHP-1S under Linux

To view busy I/O address space on your system, enter:

cat /proc/ioports

Device files corresponding to ports on the ISIHP cards are created in the **/dev** folder. Use **ttyMxy** for normal ports and **cumxy** for corresponding callout ports. Normal ports (**ttyM**) are configured for dial-in connections. Callout ports (**cum**) are used for dial-out connections.

In these expressions (**ttyMxy** and **cumxy**), the letter **x** is the card number (1–4), and **y** is the port designator (a, b, c, …). The ISIHP-1S is treated as an eight-port card with only four ports in use.

As an example, consider an ISIHP-1S that is the first expansion serial card in the computer. Ports ttyM1a and ttyM1b are terminal adapter ports; ports ttyM1e and ttyM1f are modem ports. Ports ttyM1c, ttyM1d, ttyM1g, and ttyM1h are unused and can be allocated to a different purpose after the ISIHP-1S installation is complete.

See the ISIHP-2S/2U/4S/4U//4SD *User Guide* for general instructions on ISIHP installation under Linux.