

EXHIBIT C

User Manual

Section 1

1.0 Introduction

This document provides reference information for the evaluation testing of an internal modem based on *Host Signal Processing Data/Fax/Voice Modem Technology*. The HSP Modem™ evaluation card eliminates the redundant hardware parts found in most modems today. These include the data pump, a controller, an additional UART and external memory as required in a conventional approach. In addition, the complete HSP solution allows an internal modem to be upgraded with enhancements and features through software upgrades rather than a chip change or board swap.

1.1 System Requirements

- Pentium 166 MHz + (200 MHz MMX Pentium required for V.80/videophone)
- AMD K6 200 MHz +
- Cyrix 6x86MX PR200 +
- 16MB RAM
- Windows 95(Includes OSR1/OSR2), NT4.0

1.2 Features

DATA

Supported Communication Standards

*K56Flex, V.90 upgradable, V.34, V.32bis, V.32, V.22bis, v.22, V.21, V.23, Bell212A, Bell 103

Data Compression

V.42bis

MNP 5

Error Correction

V.42 LAPM

MNP 2,3,4

FAX

Supported Protocols

V.8bis, V.80, V.17, V.29, V.27ter, V.21
Channel 2

EIA Class 1

General Features

Auto Fallback
AT Commands
ISA/PCI Bus interface
Data/Fax/Voice/Speakerphone (requires full
duplex sound card
Signal Quality Monitoring and Auto Retrain

Low power consumption
Caller ID
Auto Selection of COM Port and IRQ settings
High throughput Virtual UART, DTE rate up
to 115,200

Operating System Compatibility

Windows 95 OSR1/OSR2
Windows NT 4.0

Windows 98

K56Flex is a registered trademark of Rockwell and Lucent
Technologies.

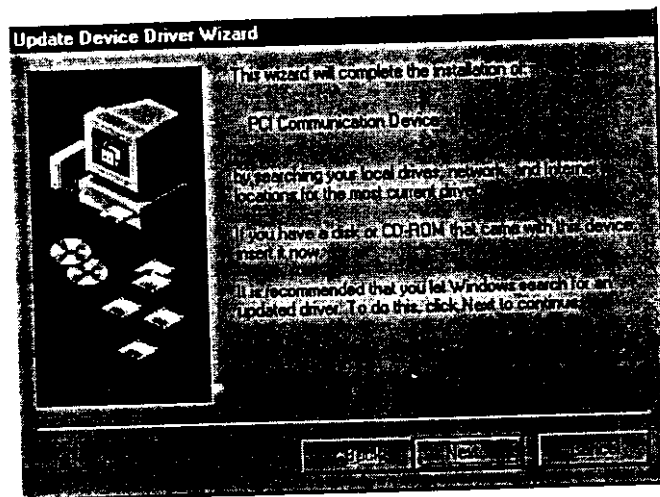
Windows is a registered trademark of Microsoft Corp.

2.2 HSP PCI Modem™ Setup using Windows 95 OEM Service Release 2

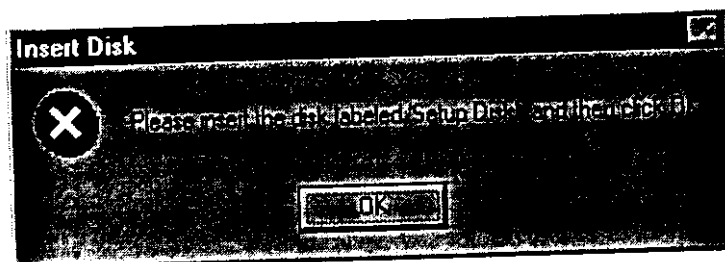
The HSP Modem™ driver will automatically handle all variations of CPU types. This eliminates the problem of poor performance that results from installing the incorrect driver. The driver will take advantage of the MMX enhancements if available.

1. If another HSP Modem™ driver was previously installed, be sure to remove the software by following the appropriate Uninstallation Procedure provided in the prior manual.

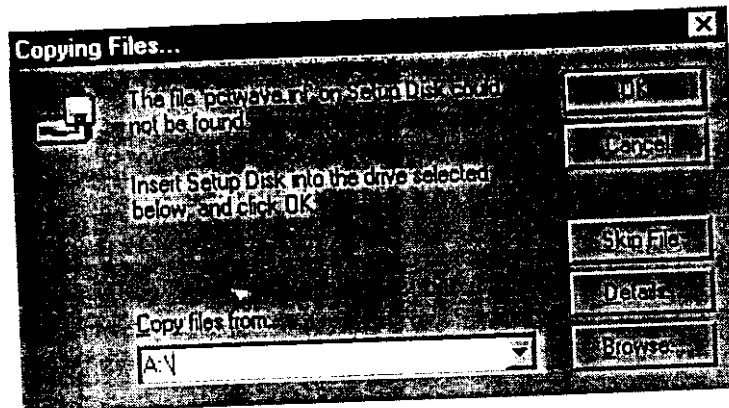
When the computer is turned off, plug the HSP Modem™ PCI card into an empty PCI slot. After the system is turned on, it will automatically detect the PCI card. The installation program will begin with the screen shown below. At this point, insert the HSP Modem™ driver disk in the floppy disk drive and click "Next". Follow the "Wizard" installation instructions.



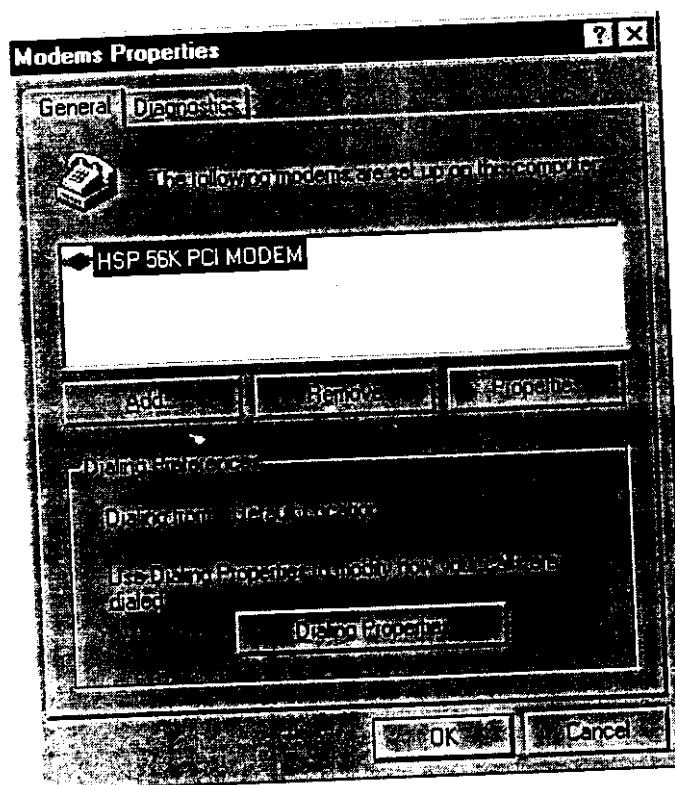
2. The installation program will request the "Setup" file. Click "OK".



3. Type "A:" in the prompted field and click "OK" to complete the installation.



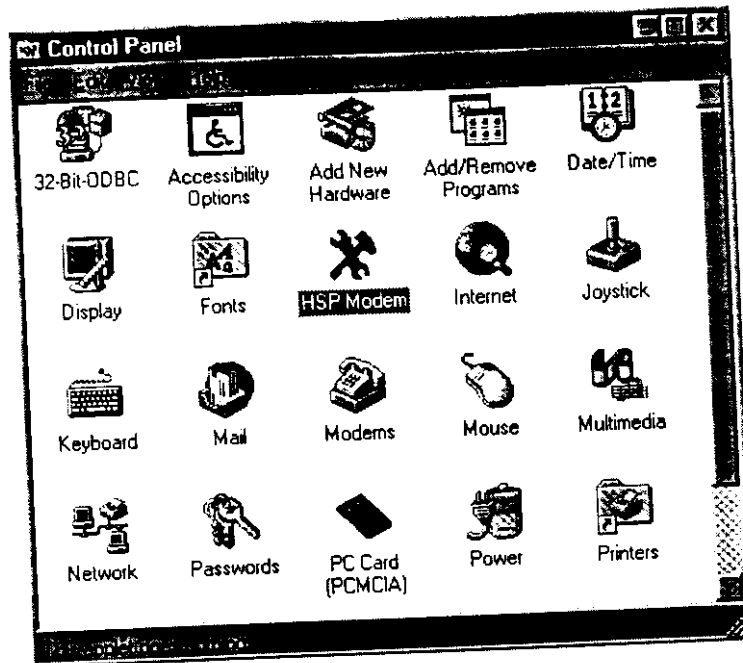
4. After the installation is complete, the following modem listing should be shown under "Modem Properties" in the "Control Panel".



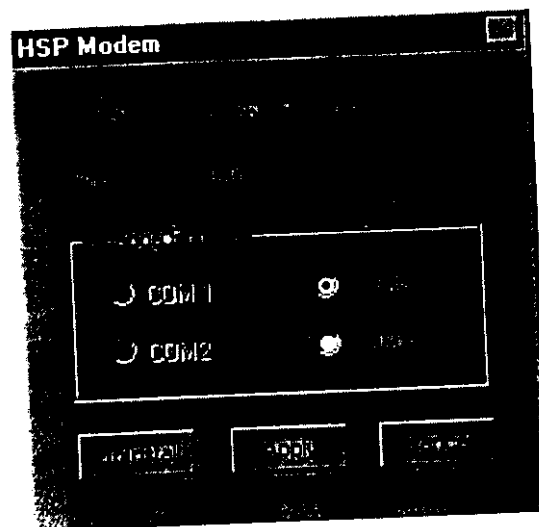
Communications Port Change:

The installation program will automatically attach the HSP Modem™ to Com Port 5 or higher. Since certain applications require Com Ports 1-4, the Com Port can be changed by following the procedure outlined below.

1. Click "HSP Modem" under "Control Panel".



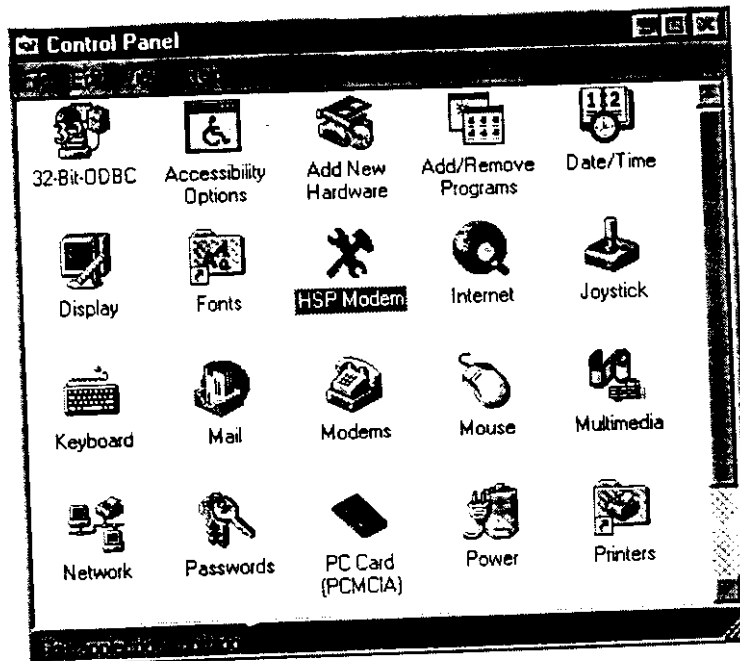
2. Choose the appropriate Com Port and click "Apply". This will complete the Com Port change.



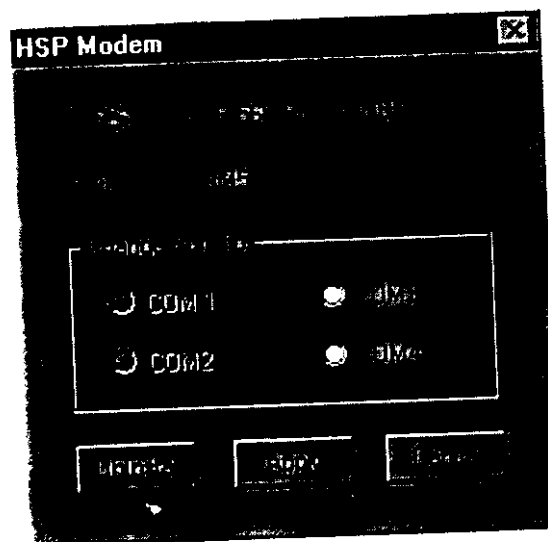
Uninstallation:

The HSP Modem™ can be uninstalled by using the following procedure.

1. Click "HSP Modem" under "Control Panel".



2. Click "Uninstall". The uninstallation program will automatically remove the HSP Modem™ from the system.

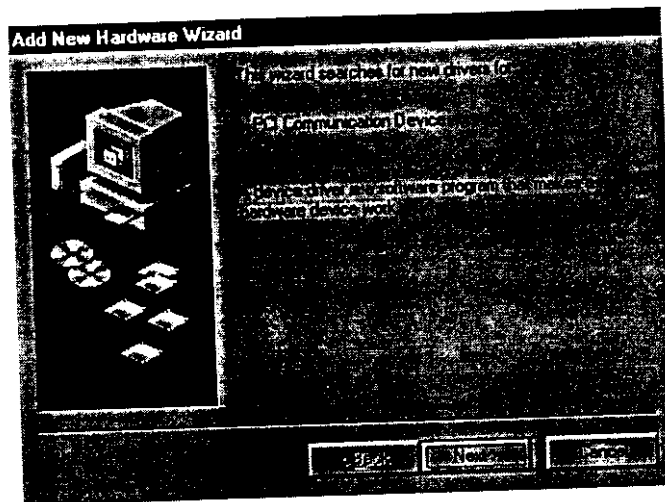


HSP PCI Modem™ Setup using Windows 98

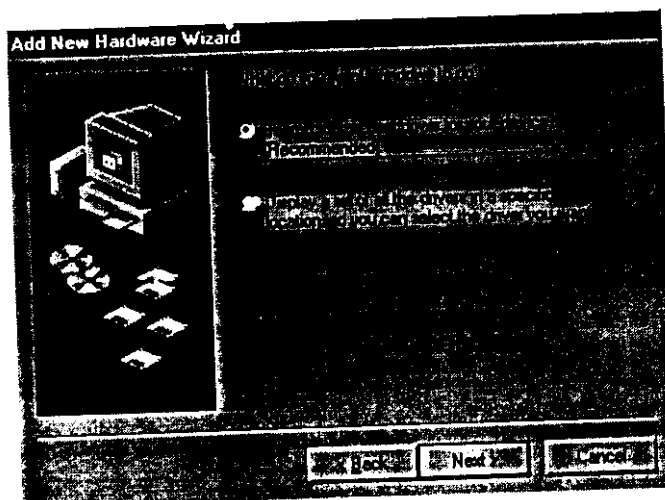
The HSP Modem™ will automatically handle all variations of CPU types. This eliminates the problem of poor performance that results from installing the incorrect driver. The driver will take advantage of the MMX enhancements if available.

1. If another HSP Modem™ driver was previously installed, be sure to remove the software by following the appropriate Uninstallation Procedure provided in the prior manual.

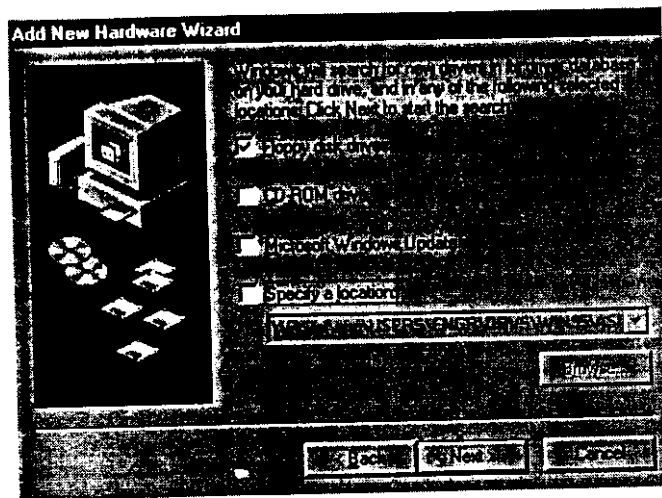
When the computer is turned off, plug the HSP PCI Modem™ into an empty PCI slot. When the system is turned on, it will automatically detect the PCI card. The installation program will begin with the screen shown below. At this point, insert the HSP Modem™ driver disk in the floppy disk drive and click "next".



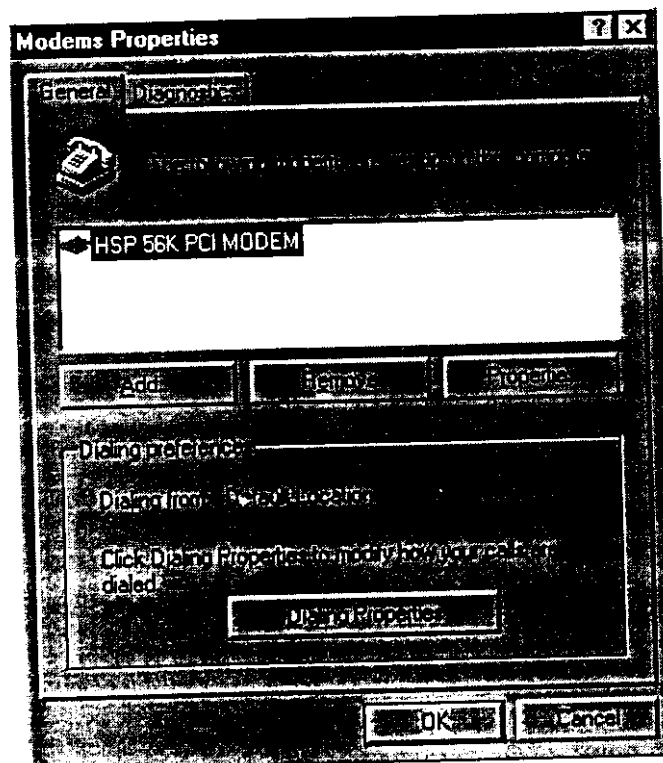
2. Windows will search for the driver. Choose the "recommended" option and click "next".



3. Choose "floppy disk drives" and click "Next". Continue to follow the "Add New Hardware Wizard" instructions to complete the installation process.



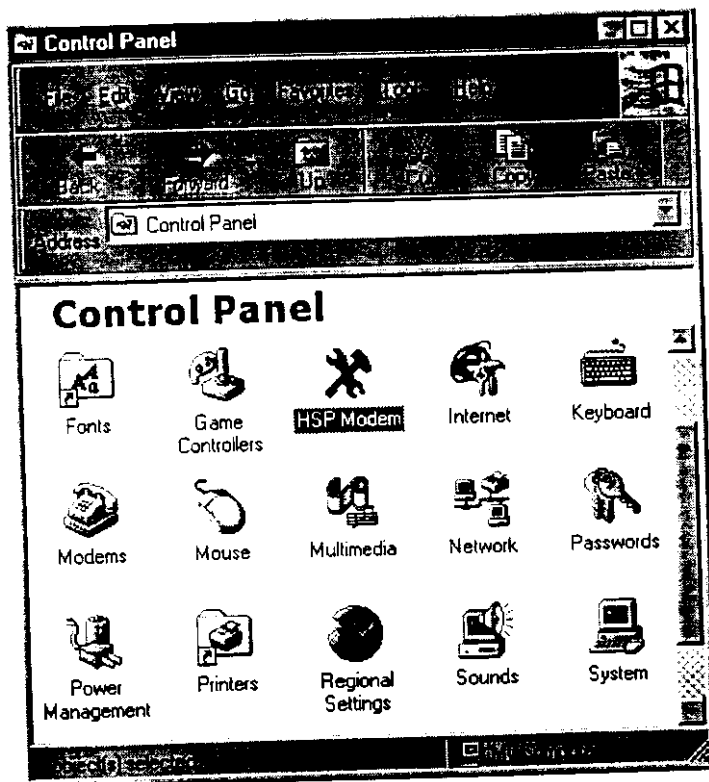
4. After the installation is complete, the following modem listing should be shown under "Modem Properties" in the "Control Panel".



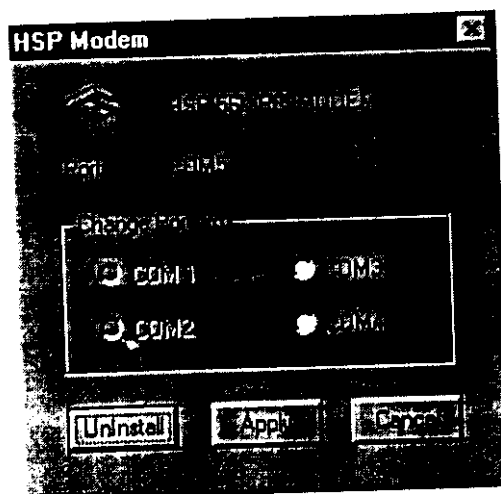
Communications Port Change:

The installation program will automatically add the HSP Modem™ to Com Port 5. Since certain applications require Com Ports 1-4, the Com Port can be changed by following the procedure outlined below.

1. Click "HSP Modem" under "Control Panel".



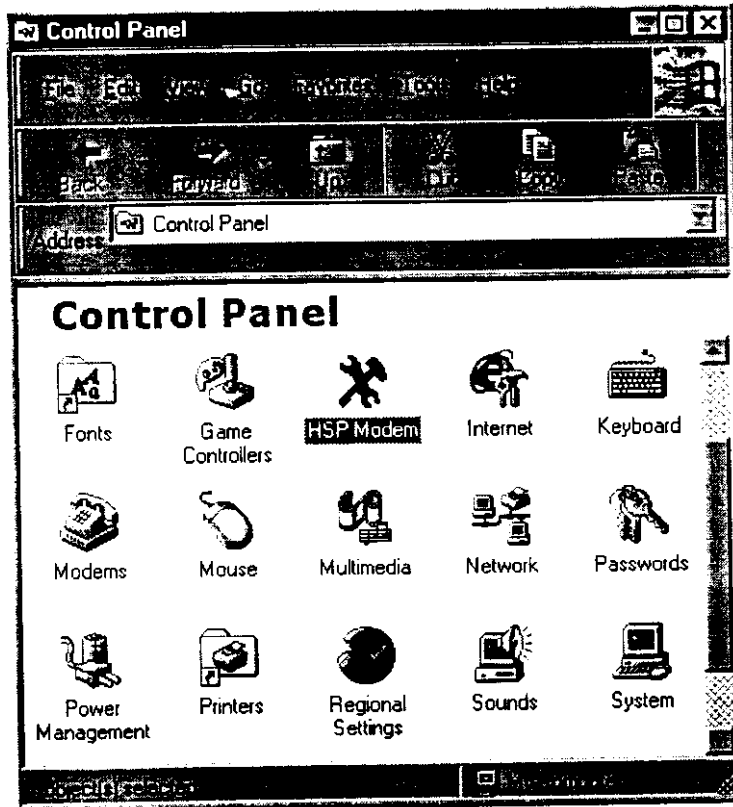
2. Choose the appropriate Com Port and click "Apply". This will complete the Com Port change.



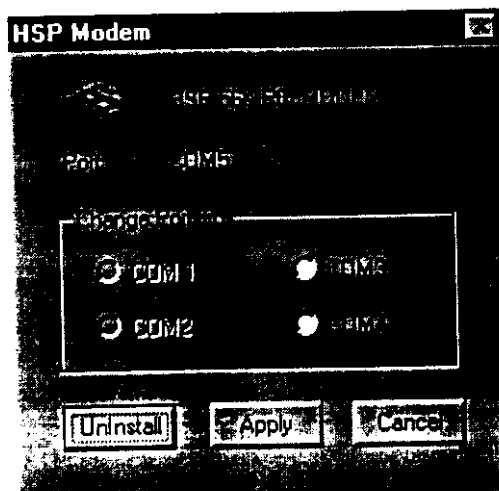
Uninstallation:

The HSP Modem™ can be uninstalled by using the following procedure.

1. Click "HSP Modem" under "Control Panel".



2. Click "Uninstall". The uninstallation program will automatically remove the HSP Modem™ from the system.



HSP PCI Modem™ Setup using Windows NT Workstation 4.0

Windows NT 4.0 cannot automatically detect the CPU type from different vendors; therefore, we have provided different drivers for the appropriate CPU type. Be sure to use the correct driver for your CPU type. If you are unsure of the CPU type, contact your system vendor.

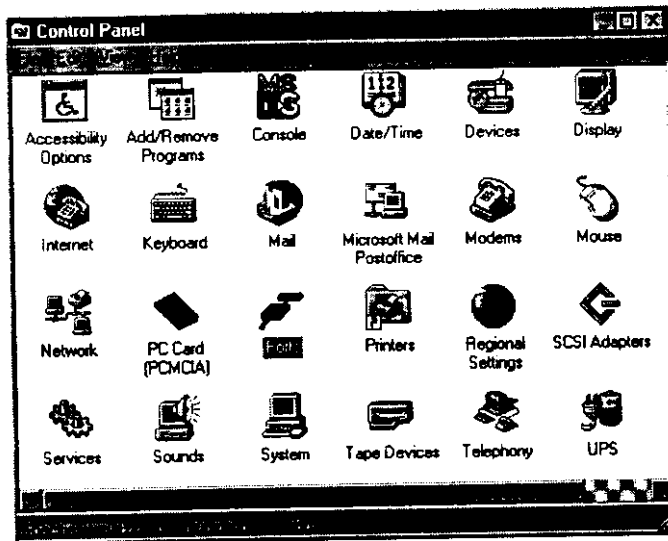
Note: There are two ways to install the PCI Modem under Windows NT 4.0. Both options are shown below.

Option 1:

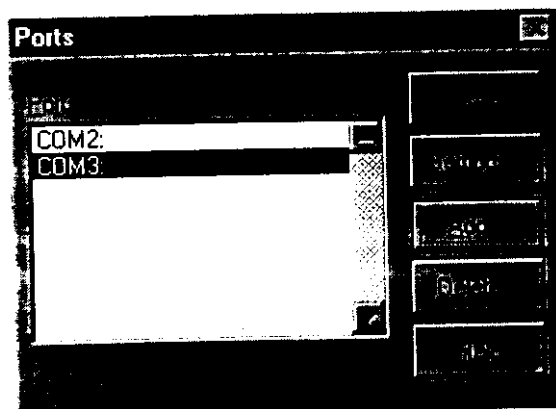
If another HSP Modem™ driver was previously installed, be sure to remove the software by following the appropriate Uninstallation Procedure provided in the prior manual.

When the computer is turned off, plug the HSP Modem™ PCI card into an empty PCI slot. After turning the system on, a new Com Port will need to be added.

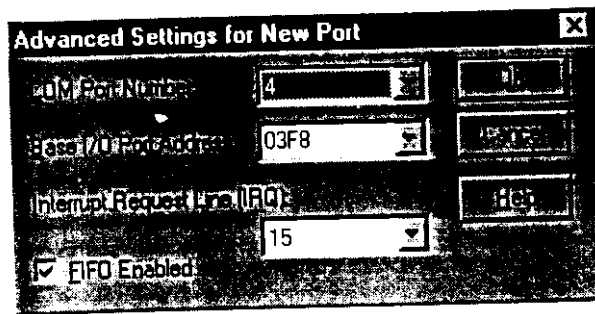
1. Under "Control Panel", click "Ports".



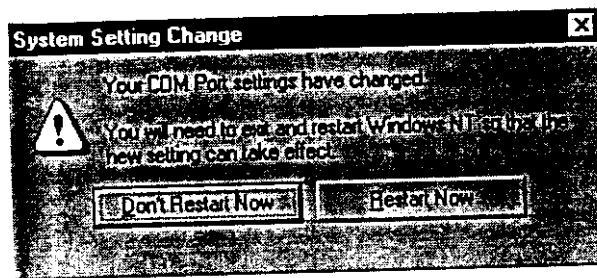
2. Click "Add" to install a new Communications Port.



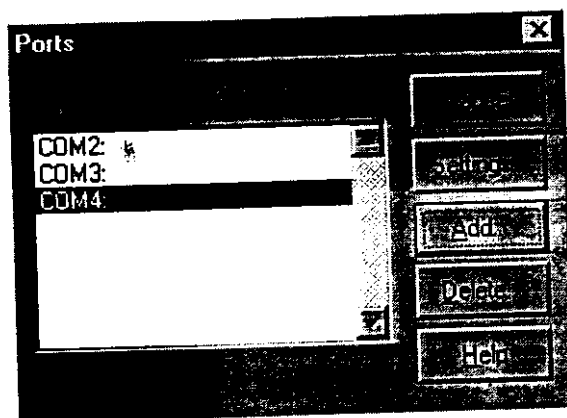
3. Click "OK" to finish installing a new Com Port.



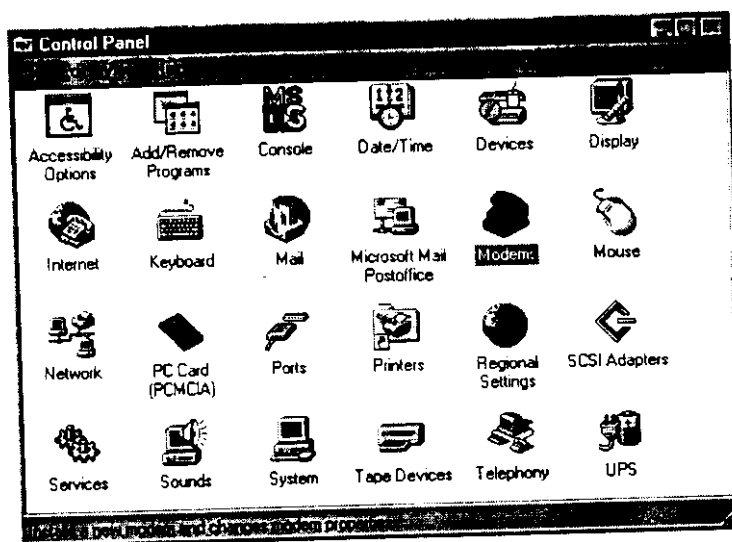
4. Click on "Restart Now". The system will be restarted after installing the modem.



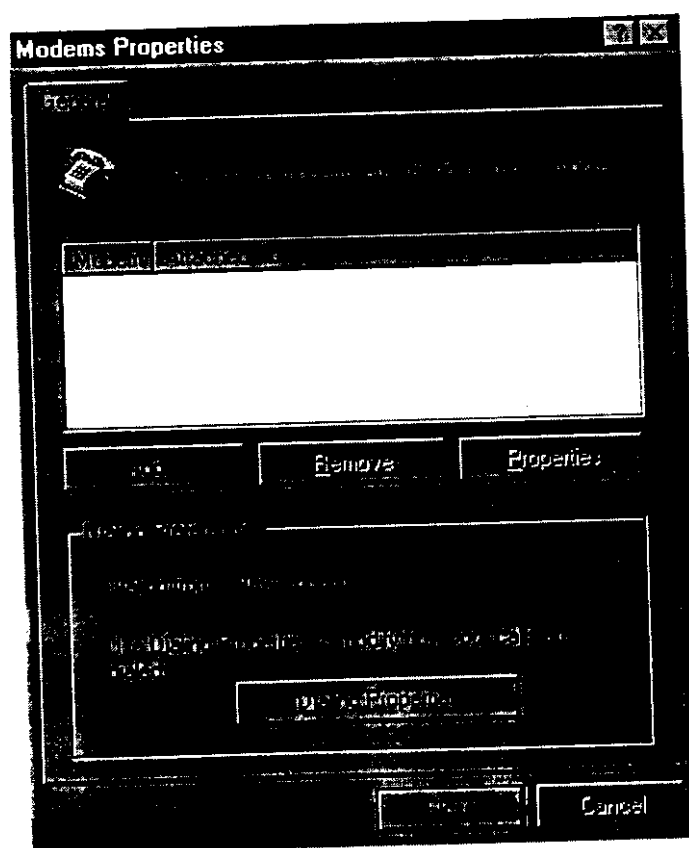
5. The new Communications Port should be shown. Click "Close" to continue.



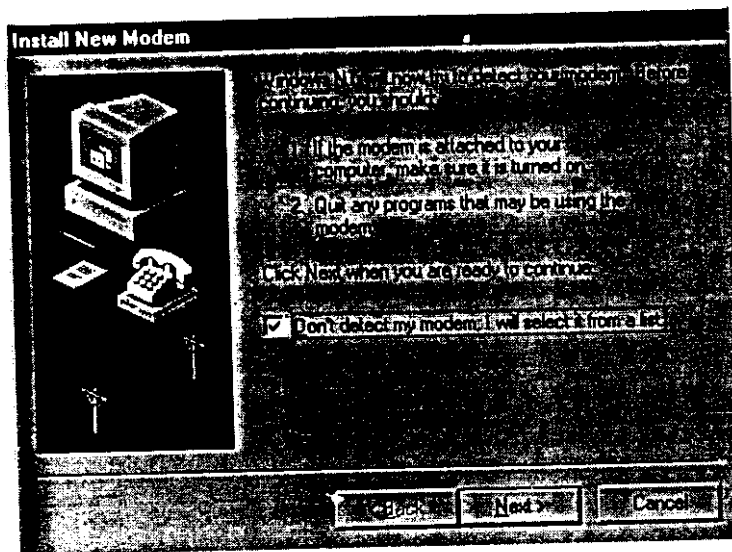
6. The modem can now be added. Under "Control Panel", click "Modems".



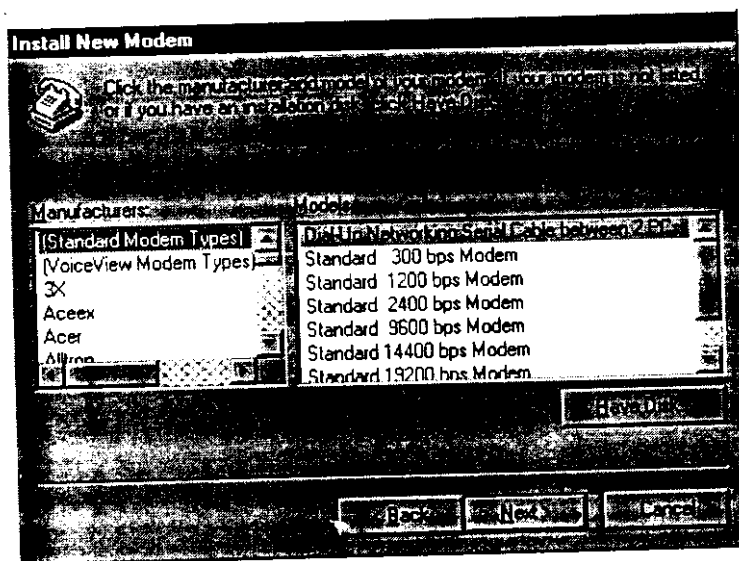
7. Click "Add" to start the installation program.



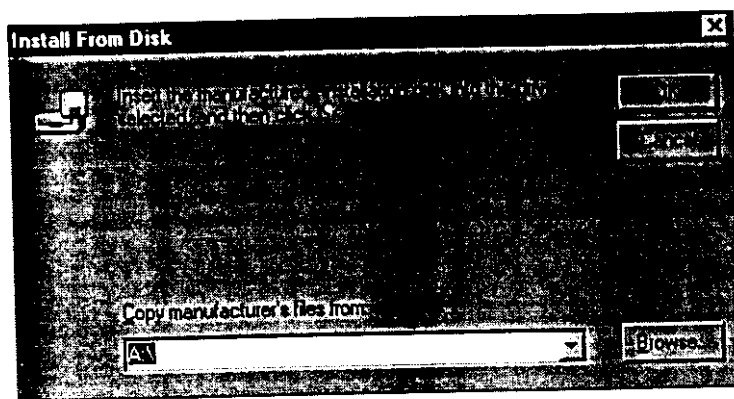
8. Select "detect my modem" and click "Next".



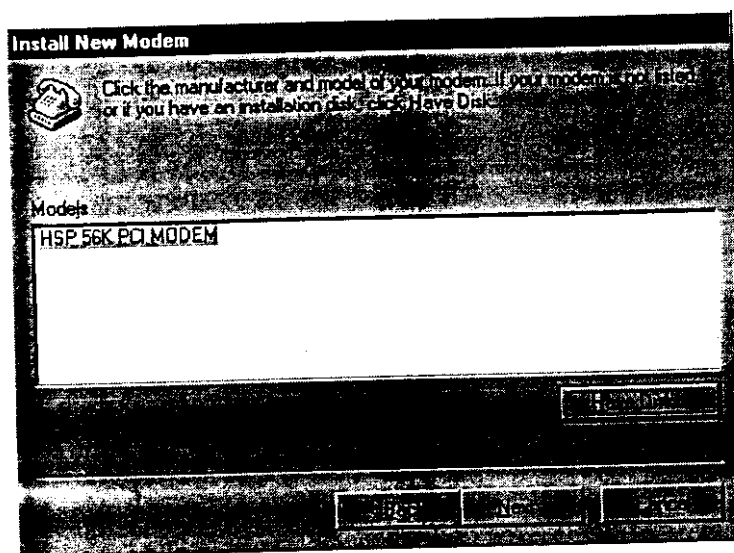
9. Make sure the driver disk is installed in the A: Drive and click "Have Disk".



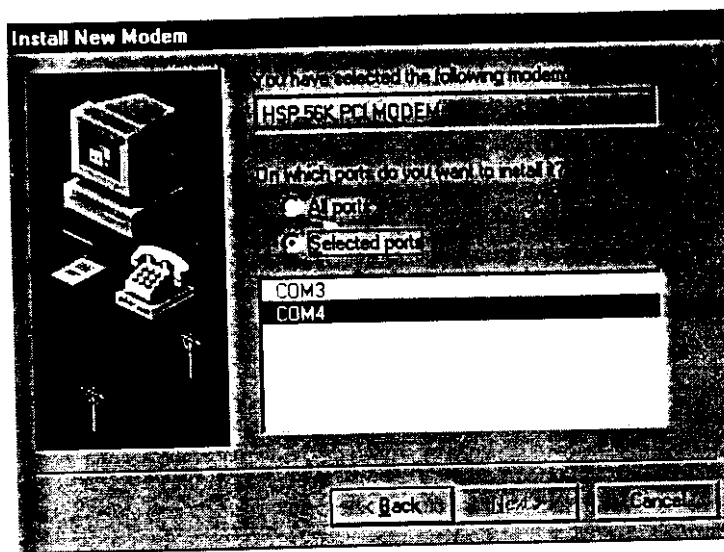
10. Click "OK" to continue the installation program.



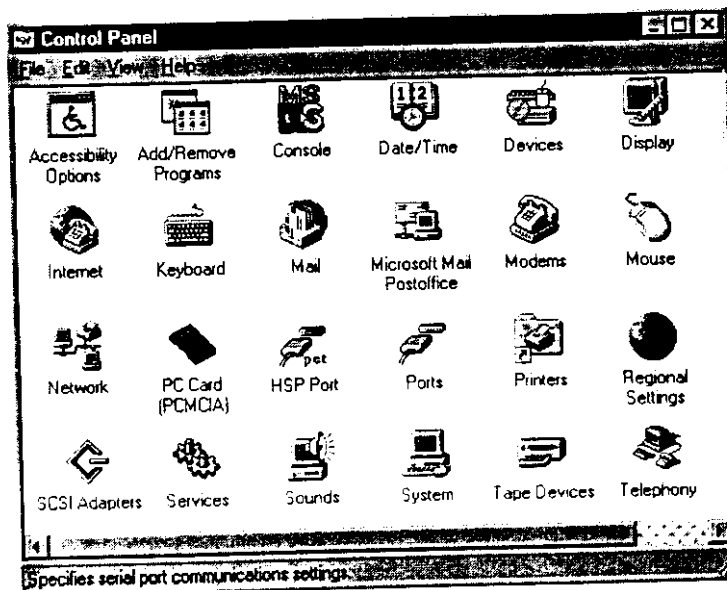
11. The following listing should be shown. Click "ext" to continue.



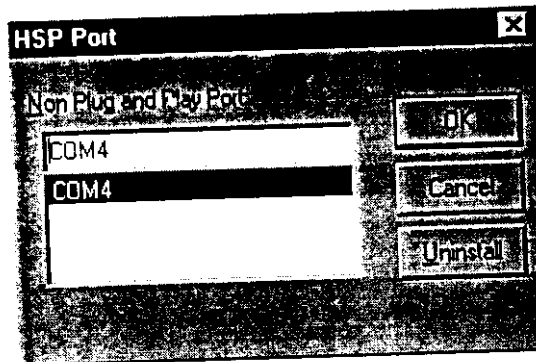
12. Select the Communications Port added for the HSP Modem™ and click **Next**.



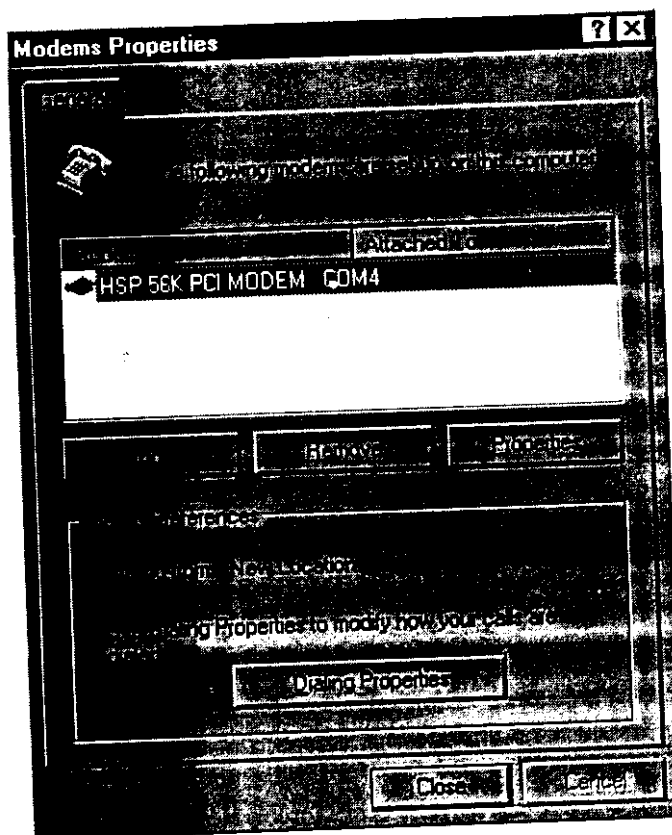
13. To complete the installation program, the new Communications Port needs to be confirmed. Under **Control Panel**, select **View** and **Refresh**. Click **SP Port**.



14. The new Com Port should be listed. Select the new Com Port and click **K**". Restart the system.

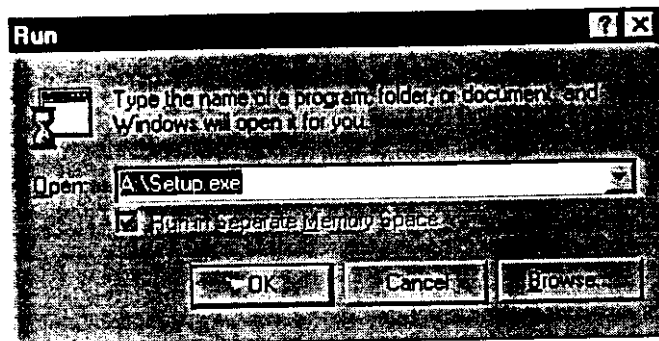


15. After restarting the system, the following modem should be listed under "Modem Properties" in the "Control Panel".

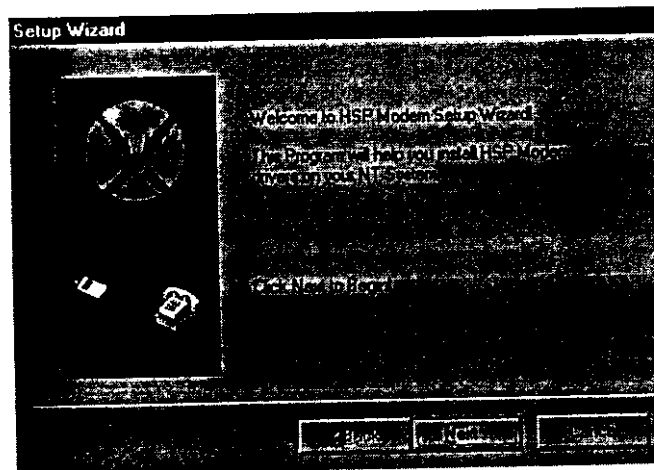


Option 2:

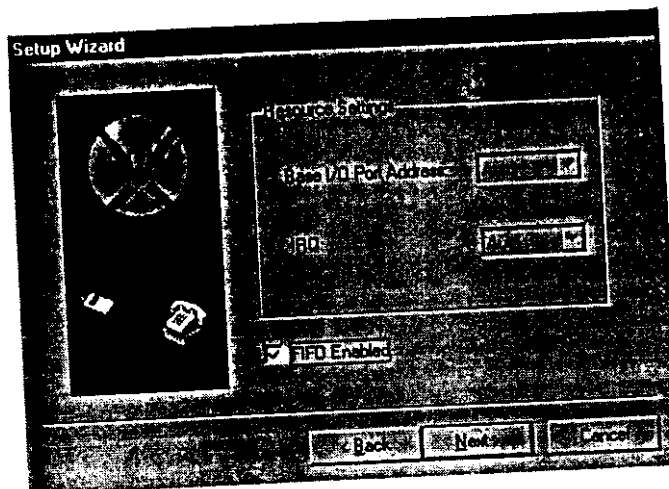
1. The second option to install the HSP Modem™ is done in "Run" under the "Start" menu. Type the path as shown below to start the installation and click "OK".



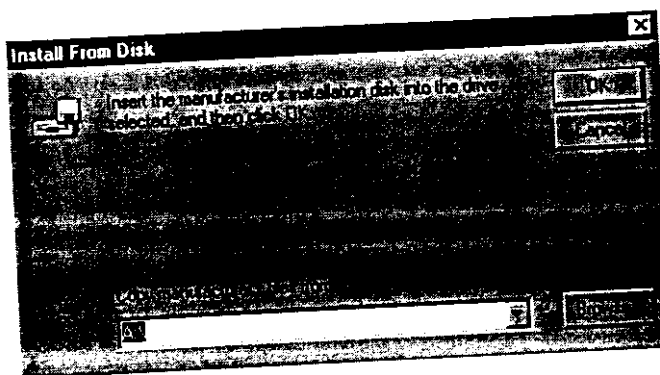
2. Click "Next" to continue the installation program.



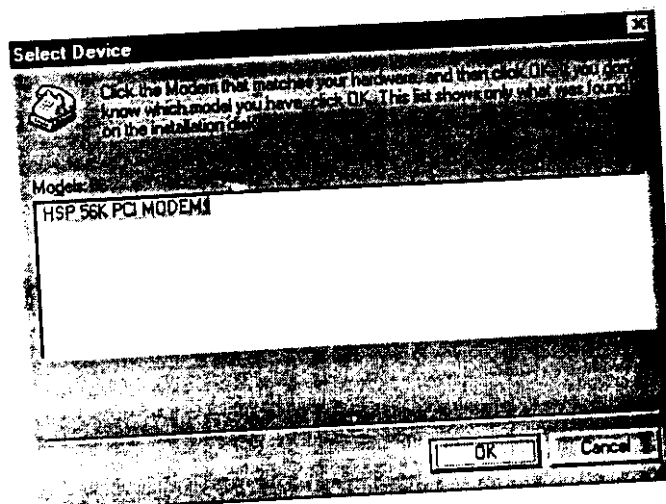
3. Click "Next" to continue.



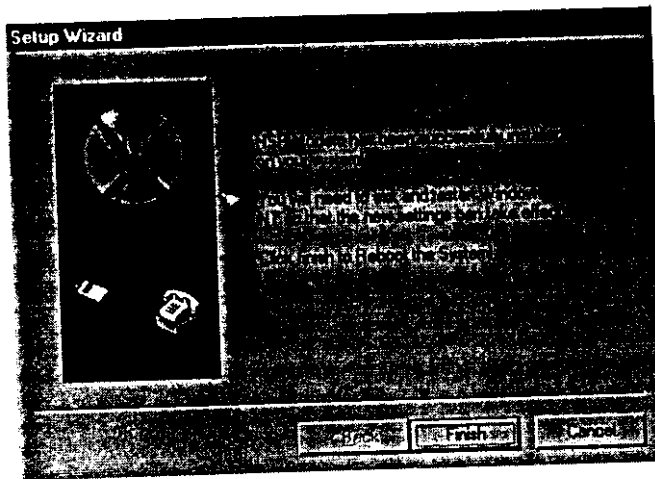
4. Install the driver disk in the A: Drive and click "Next".



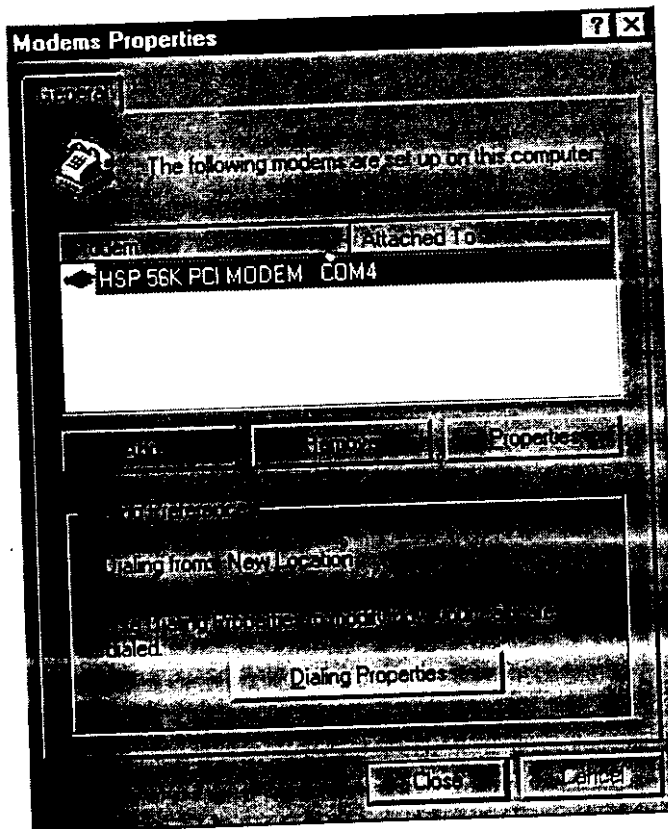
5. Select the HSP Modem™ and click "Next".



6. Click "Finish" and the system will automatically restart.



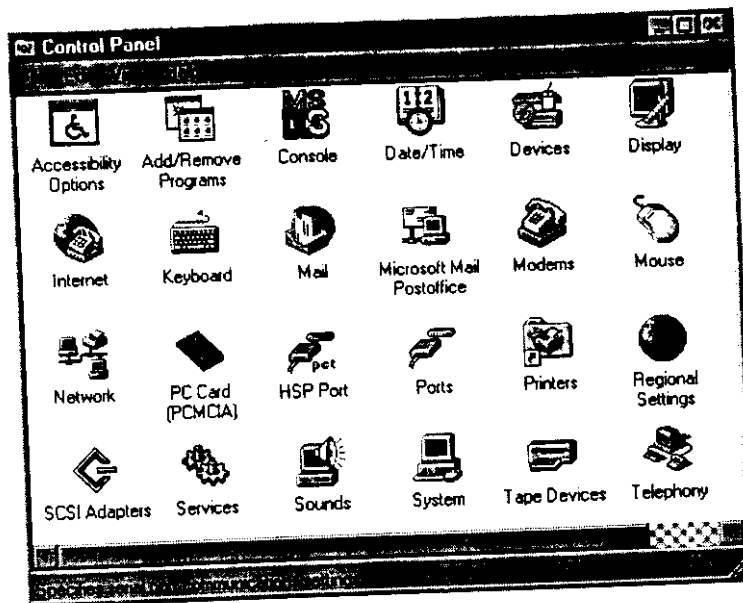
7. After restarting the system, the following modem should be listed under "Modem Properties" in the "Control Panel".



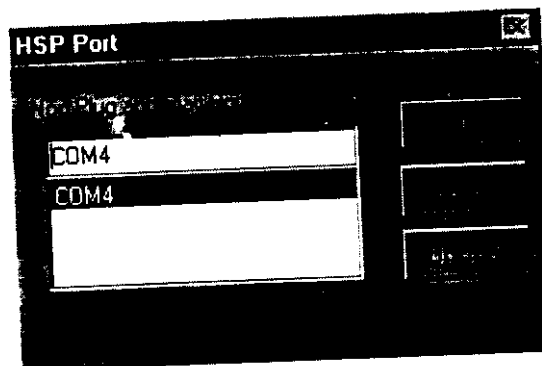
Uninstallation:

The HSP Modem™ can be uninstalled by using the following procedure.

1. Under "Control Panel", click "HSP Port".



2. Click "Uninstall". The uninstallation program will automatically remove the HSP Modem™ from the system.



2.3 Windows NT 4.0 with Service Pack 3

NT 4.0 PnP Modem Installation

Before installing the modem drivers, the PnP ISA Enabler driver for NT must to be installed. The driver library on the Windows NT 4.0 CD-ROM includes the PnP ISA Enabler driver, which handles the detection and installation of Plug and Play devices in Windows NT 4.0. Install the PnP ISA Enabler driver (PNPISA) according to the following steps.

Note: Although Windows NT includes PNPISA to detect Plug and Play devices, Plug and Play devices are not supported in Windows NT 4.0. Microsoft provides PNPISA as a "use at your own risk" tool.

1. Locate the "PNPISA.INF" file in the Drvlib\Pnpisa\x86 folder on the Windows NT 4.0 CD-ROM.
2. Use the right mouse button to click the "PNPISA.INF" file, and then click Install on the menu that appears.
3. Restart the computer.

After restarting the computer, you will receive a message that Windows NT has detected a Plug and Play device. If the Plug and Play modem is not detected, you may need to repeat this process to trigger the PnP detection. The following steps should work.

1. Turn off the computer and remove the modem.
2. Turn the computer on, and install PNPISA again.
3. Turn off the computer.
4. Plug the modem card back in.
5. Restart your computer and see if the modem is detected.

When the modem been detected, use following steps:

1. Install the new device from the modem driver disk.
2. When Windows NT finishes the modem setup, restart the computer.

Uninstall HSP Modem

1. Go to "Control Panel" and click "SP Port".
2. Click "Uninstall". The uninstallation program will automatically remove the HSP Modem™ from the system.

USER INFORMATION

INFORMATION TO THE USER

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: 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 energy 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.

This booklet is available from the US government Printing Office
*Washington, DC 20402, Stock NO. 004-000-00345-4.

CAUTION: Any changes of modifications not expressly approved by the grantee of this device could void the users authority to operate the equipment.