

56K Fax Modem

Conexant RCV56 HSF

User's Guide

FCC Requirements

This equipment complies with Part 68 of the FCC Rules. On the bottom of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. IF REQUESTED. THIS INFORMATION MUST BE GIVEN TO THE TELEPHONE COMPANY.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have these entire devices ring when your telephone number is called in most. But not all areas the sum of the REN' s of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line. As determined by the REN. You should contact your local telephone company to determine the maximum REN of the area you are calling from. If your telephone equipment causes harm to the telephone network. The Telephone Company may discontinue your service temporarily. If possible, they will notify you in advance. But if the advanced notice is failed, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may change in its facilities, equipment, operations or procedures that could affect the proper functions of your equipment. If this occurs, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact the following address and phone number for information on obtaining service or repairs. The Telephone Company may ask you to disconnect this equipment from the network until the problem is solved or until that the equipment is not detected malfunctioning. This equipment may not be used on coin service provided by the Telephone Company. Connection to party lines is subject to state Tariffs.

Federal Communications Commission Radio Frequency Interference Statement.

Note: This equipment has been tested and found to comply with the limitation for a class B digital device pursuant to Part 15 of the FCC Rules. These restrictions are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determine by tuning the equipment off and on, the user is

suggested to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance 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.

Notices:

- (1) The changes or modifications not expressly approved by the party responsible for compliance could void the user' s authority to operate the equipment.
- (2) Shielded interface cables and AC power cord if any must be used in order to comply with the emission limits.

Notices to Australian users:

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 in a DTE (computer) which does not require a tool to open the cover (lid) will render the permit void.

Disconnect the telephone line before opening the cover (lid) of the DTE (computer). Do not connect the customer equipment to the telephone line while the cover (lid) of the DTE (computer) is open.

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| <p>WARNING ONLY CONNECT EQUIPMENT WITH A TELECOMMUNICATIONS COMPLIANCE LABEL</p> |
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| <p>WARNING FOR SAFETY REASONS, ONLY CONNECT EQUIPMENT WITH A TELECOMMUNICATIO COMPLIANCE LABEL. THIS INCLUDES CUSTOMER EQUIPMENT PREVIOUSLY LABELLED PERMITTED OR CERTIFIED.</p> |
|--|

Modems connected to the Australian telecommunications network must be marked in accordance with the Labeling Notice. This modem has been specifically configured to ensure compliance with the ACA Standards. Do not adjust your modem or software outside the values indicated as below. To do so would result in your modem being operated in a non-compliant manner.

Modem Commands:

| <u>Command</u> | <u>Default</u> | <u>Permissible Range</u> |
|-------------------|-----------------|--------------------------|
| ATA | - | Do not use |
| ATB | B0 | Do not set to B1 |
| AT&G | &G0 | &G2 |
| AT&P | &P0 | &P1 |
| ATSn | see table below | |
| <u>S register</u> | <u>Default</u> | <u>Permissible Range</u> |
| s6 | 2 | 2 to 6 |

Call Attempts/Retries:

Applications software shall be configured so that no more than 3 attempts are made to establish a connection to a given number (Note: if the modem can detect service tones, up to 10 attempts can be made). If the call sequence is unsuccessful, there shall be a delay of at least 30 minutes before attempting to call the number again.

Failure to set the modem and any application software used with the modem, to the values shown as above will result in the modem being operated in a non-compliant manner.

Consequently, this would be in violation of the Labeling Notice for this equipment, and the Telecommunications ACT 1997 prescribes penalties for the connection of non-compliant equipment.

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Chapter 1 Introduction

1.1 Introduction

Thank you for selecting the internal modems of HSF series. HSF series use the most advanced chip sets made by Conexant (originate from Rockwell), which can support the software modem functions, increase CPU usage and reduce the price of modems. The main purpose of HSF series is to assist your computer to connect to others and the Internet through the phone line. Meanwhile, HSF series can also support fax and voice. By using HSF series, you can use your PC not only as a facsimile machine but also to talk or transfer your incoming calls into the voice mailbox. We truly hope that our HSF series products can meet your need.

1.2 Packing

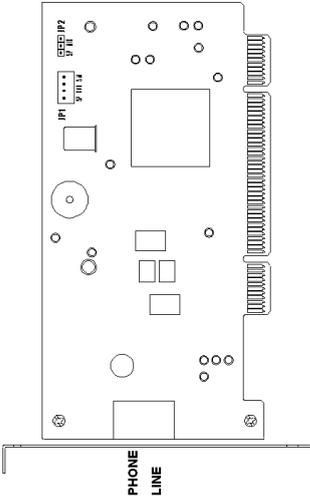
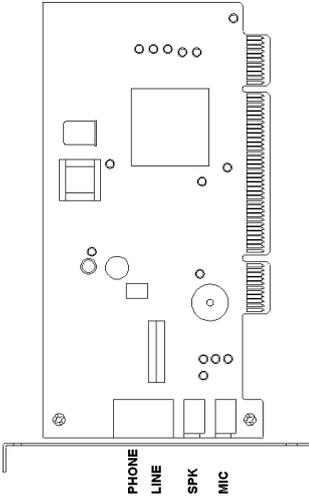
HSF series include the following accessories:

- Internal modem card
- User' s manual
- Application Software & Driver (CD-ROM)
- Phone Cord

Chapter 2 Specifications

2.1 Specifications

| | |
|------------------------|--|
| Line data rate | 56000,54000,52000,50000,48000,46000,44000,42000,40000,38000,36000,34000,33600,31200,28800,26400,24000,19200,16800,14400,12000,9600,7200,4800,2400,1200, 600, 300 |
| Modem protocol | ITU-T V.90/K56flex/ITU-T V.34bis/V.34/V.32bis/V.32/V.22bis/V.22/V.21/V.23 Bell 212A/103,V.80, V8/V.8bis |
| Chip Set | Rockwell RCV56HSF |
| Interface | PCI BUS |
| Fax Compatibility | 14.4k bps Send/Receiver G3 compatible |
| Error Correction | MNP2-4, V.42 |
| Data Compression | MNP 5,V.42bis |
| Max.DTE data rate | 115200bps |
| PnP | Built-in |
| Modem operation | Dial up |
| Speaker phone | Full duplex speaker phone |
| Audio Monitoring | Mini-speaker and Programming Volume control |
| Line interface | RJ-11.Line/Phone |
| Software Compatibility | AT command set Compatible |
| System Requirement | Pentium CPU 233 MMX, 16M RAM+, L2 cache256K |
| System compatibility | OS Win95/98/ME/NT4.0/2000/XP |



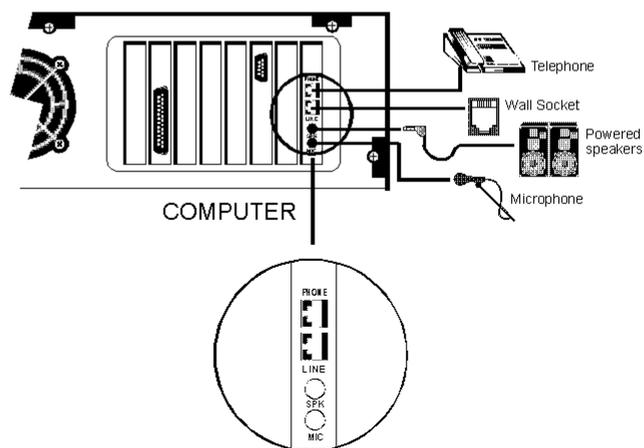
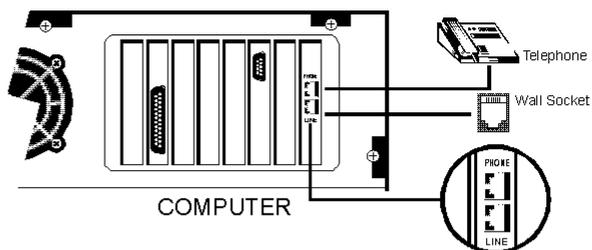
Chapter 3 Hardware Installation

3.1 Installing the Modem Card in Your Computer

1. Remove the computer' s case.
2. Insert the modem card into a spare PCI expansion slot.
3. Close the case.

3.2 Connecting the Modem to the telephone line

1. Unplug the telephone from the wall socket, then plug the telephone into the socket on the back of the modem marked PHONE.
2. Plug the telephone cord supplied into the socket on the back of the modem marked LINE.
3. Plug the other end of the cord into the wall socket.



Chapter 4 Software Installation

Power on your computer and modem and then start Windows 95/98/ME/NT/2000. Windows 95/98/ME/2000 will detect the modem automatically.

4.1 Windows 95 B (OSR2)

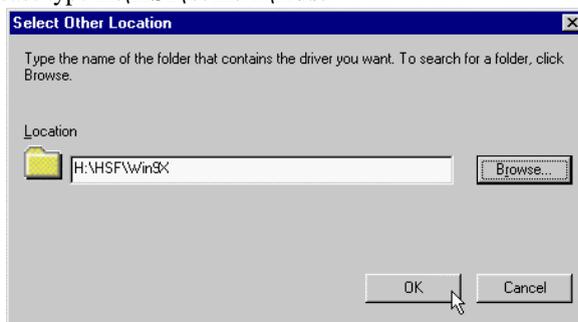
1. You will see the message of **PCI Communication Device** shown on the screen. However, it may vary with the type of the Mother board. Please insert the driver CD supplied and click **Next**.



2. Click **Other Locations..** to search for the correct driver and location.



3. Select the location of **H:\HSF\Win9X** and click **OK**. If your country is Australia, please type **H:\HSF\Win9X\Aus**.



4. Windows 95 will find the driver shown as below, then click **Finish**.



5. Click **OK**.



6. Use the **Browse** to find the location of the modem driver (**H:\HSF\Win9X**), or you can type it by yourself, then click **OK**. If your country is Australia, please type **H:\HSF\Win9X\AUS**.



4.2 Windows 98

1. The message of **PCI Communication Device** will appear, however, it may vary with the type of your Mother board. Please insert the driver CD supplied and then click **Next**.



2. Select **Search for the best driver for your device [Recommended]** and click **Next**.



3. Select **Specify a location** and use the **Browse** to find the driver or type the path (**H:\HSF\Win9X**) directly and then click **OK**. If your country is Australia, please type **H:\HSF\Win9X\Aus**.



4. Windows will automatically search for the modem driver and then click **Next**.



5. Click **Finish**.



4.3 Windows ME

1. The message of **PCI Communication Device** will appear, however, it may vary with the type of your Mother board. Then select **Specify the location of the driver**[Advanced] and click **Next**.



2. Select **Search for the best driver for your device. [Recommended]** then select **Specify a location:** and type **G:\HSF\WinME** (G is the letter of your CD-ROM drive) or use **Browse** to find the driver. Then click **Next** to continue.



3. Windows will automatically search for the modem driver and then click **Next**.



4. Click **Finish** to continue install wave device driver.



5. Windows has find the wave device, then select **Specify the location of the driver[Advanced]** and click **Next**.



6. Select **Search for the best driver for your device. [Recommended]** then select **Specify a location:** and type **G:\HSF\WinME** or use **Browse** to find the driver. Then click **Next** to continue.



7. Select **The updated software [Recommended]**. then click **Next**.



8. Click **Next** to start search wave device driver.



9. Click **Finish** to end this procedure.



4.4 Windows NT 4.0

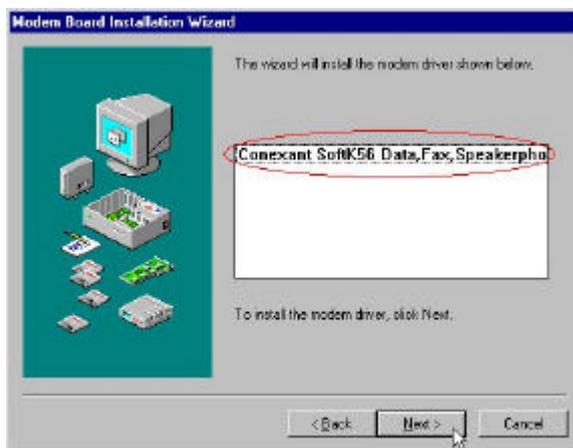
1. Please insert the driver CD supplied. Then click **Start \ Run** on the desktop and use **Browse** to open the file of **H:\HSF\WinNT\Setup.exe** (H is the letter of CD-ROM drive). If your country is Australia, please type **H:\HSF\WinNT \Aus\Setup.exe**.



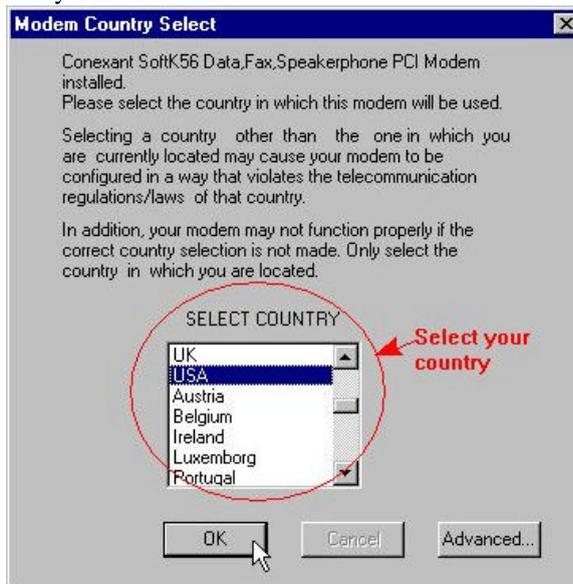
2. Click **Next**.



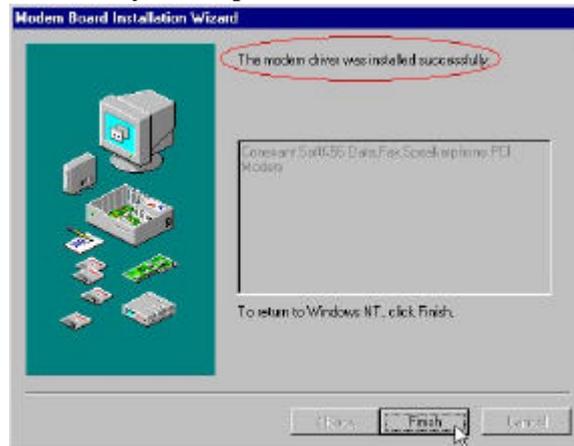
3. Click **Next**.



4. Select your country then click **OK**.



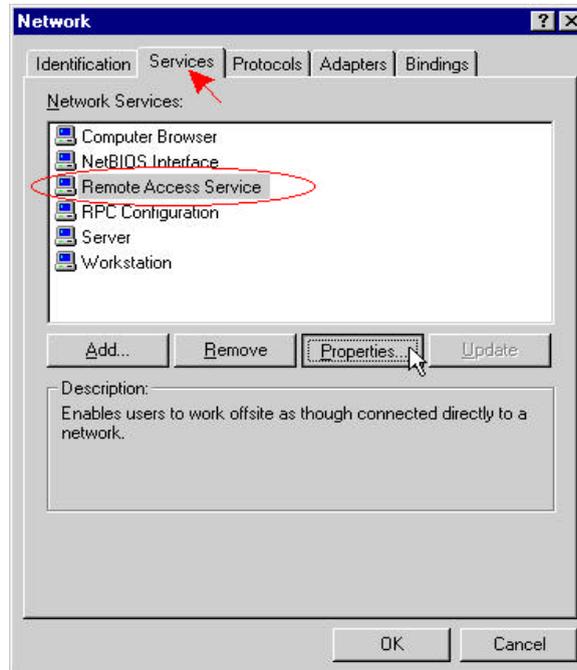
5. The modem driver was installed successfully will appear, then click **Finish**.
Note: You must restart your computer to enable the modem driver.



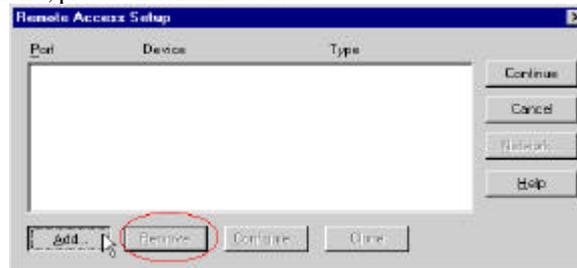
6. If you want to use Dial-Up Networking, please do as following. After restarting your computer, click **Start \ Settings \ Control Panel** on the desktop and double-click on the **Network** icon.



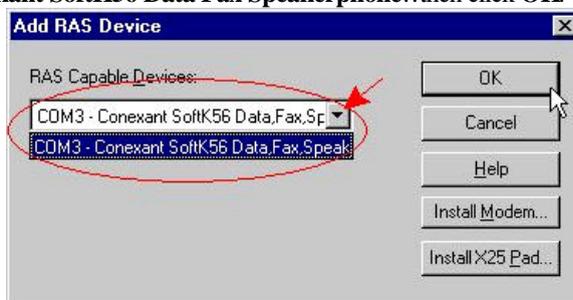
7. Click on the **Services** tab and select **Remote Access Service**, then click **Properties**.



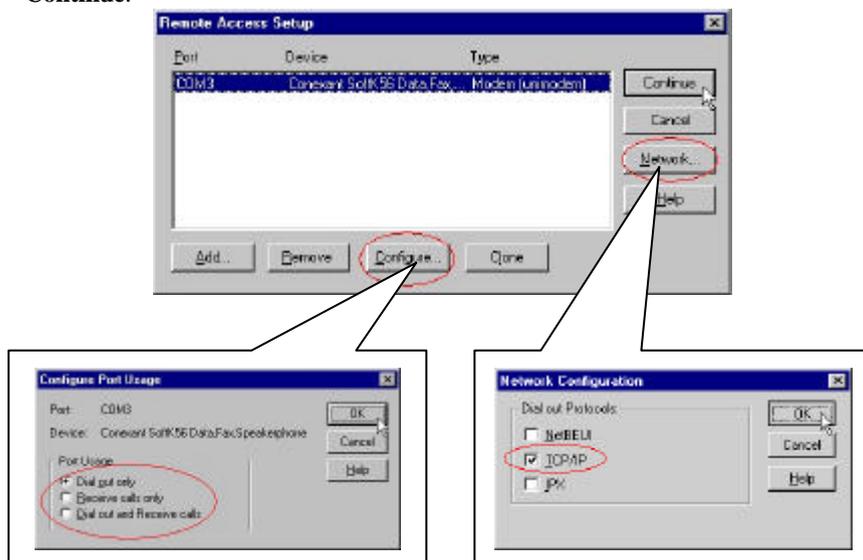
8. Click on the **Add** button to add the Conexant SoftK56 modem. If there is any modem in the list, please click **Remove** first.



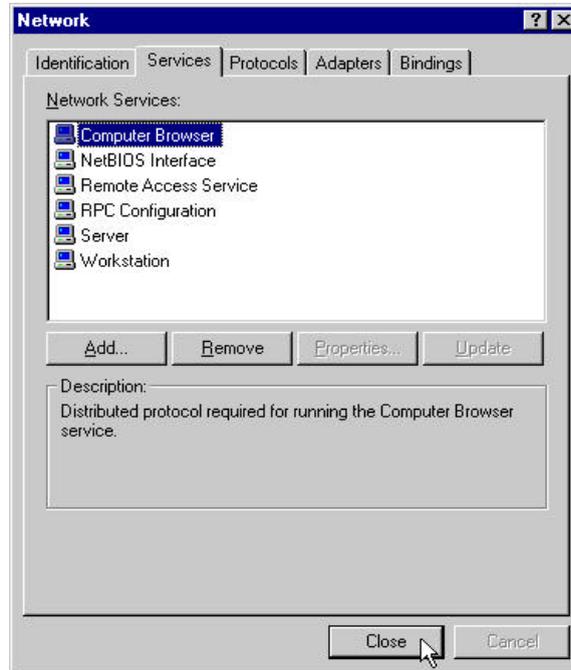
9. Select **Conexant SoftK56 Data Fax Speakerphone**.. then click **OK**.



10. Check **Configure (Dial out only)** and **Network (TCP/IP)**, then click **Continue**.



11. Click **Close**.



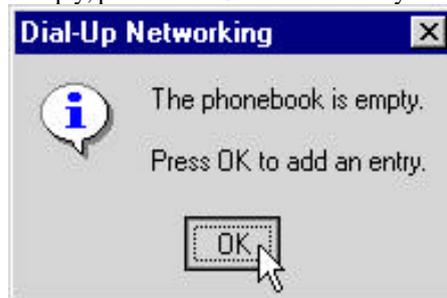
12. Click **Yes** to restart your computer.



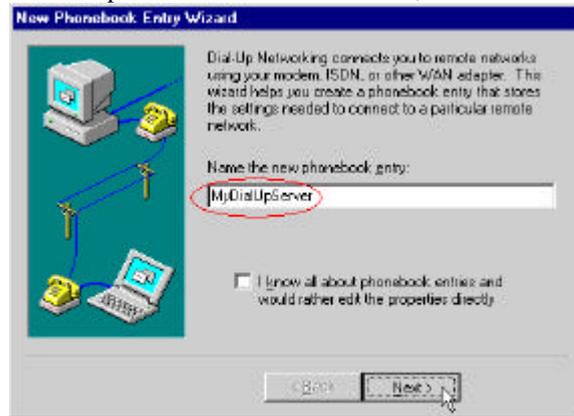
13. After restarting your computer, please double-click on the **My computer** icon on the desktop and double-click on the **Dial-Up Networking** icon.



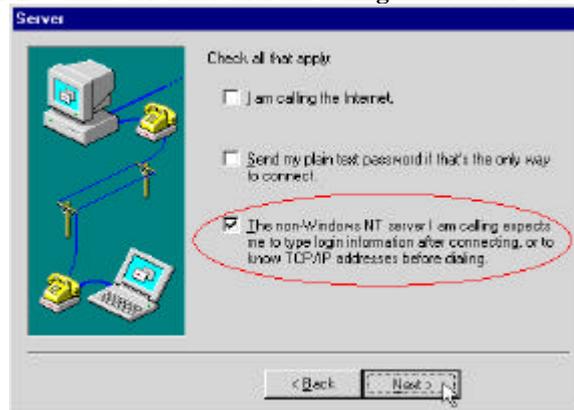
14. If your phonebook is empty, please click **OK** to add an entry.



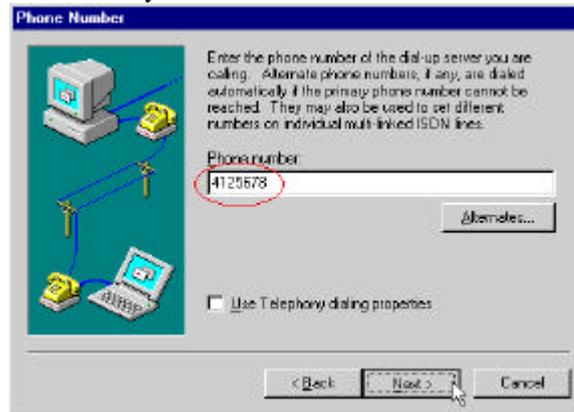
15. You may use the name provided or enter a different one, then click **Next**.



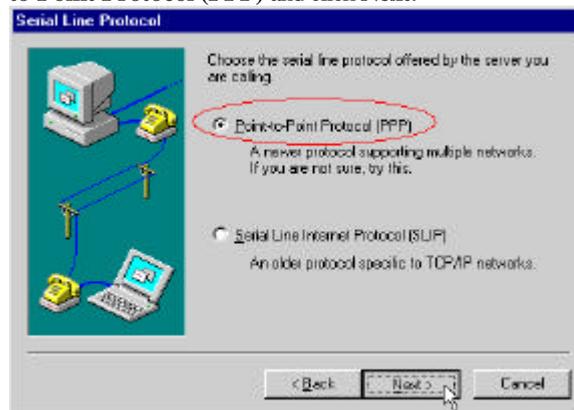
16. Select **The non-Windows NT server I am calling . . .** then click **Next**.



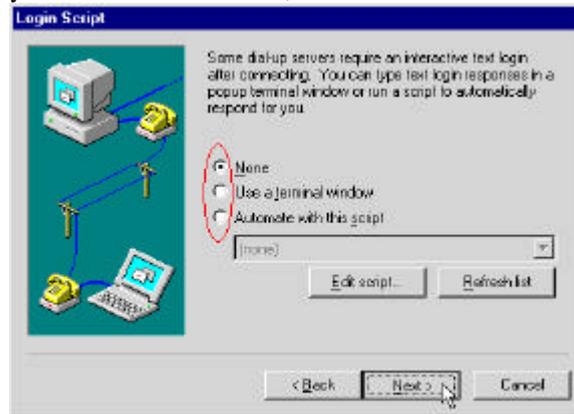
17. Enter the phone number of your local ISP and click **Next**.



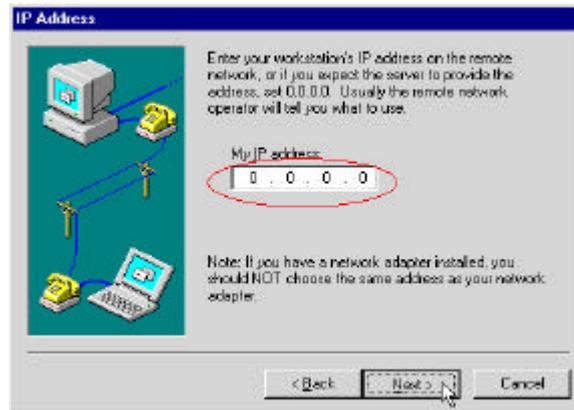
18. Select **Point-to-Point Protocol (PPP)** and click **Next**.



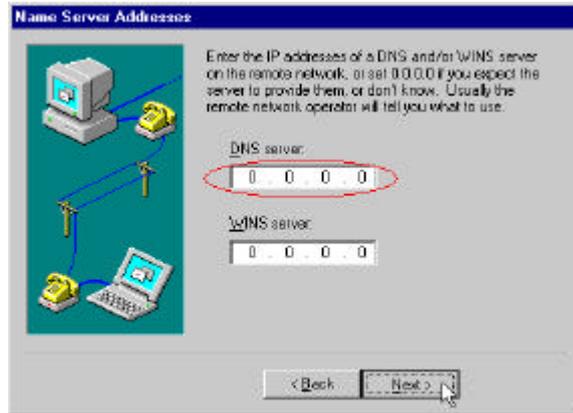
19. Consult with your local ISP for the choice, then click **Next**.



20. Enter your IP address if you have a fixed one or leave the value: **0.0.0.0**, then click **Next**.



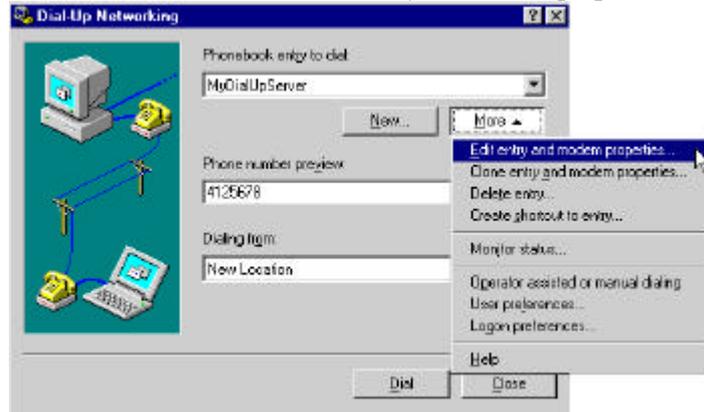
21. Enter the **IP addresses** of a **DNS** and/or **WINS** server or set **0.0.0.0** if you are not sure. Then click **Next**.



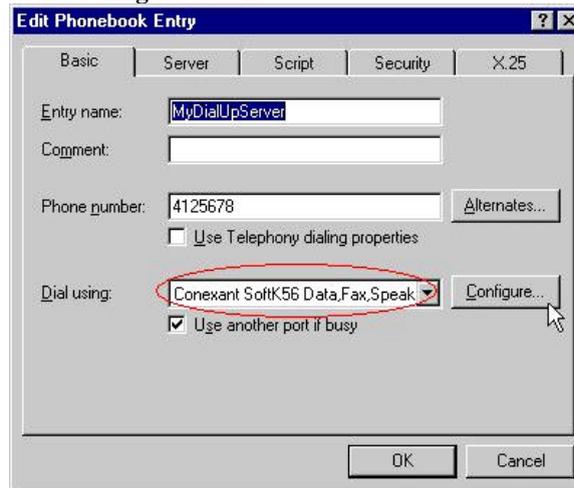
22. Click **Finish**.



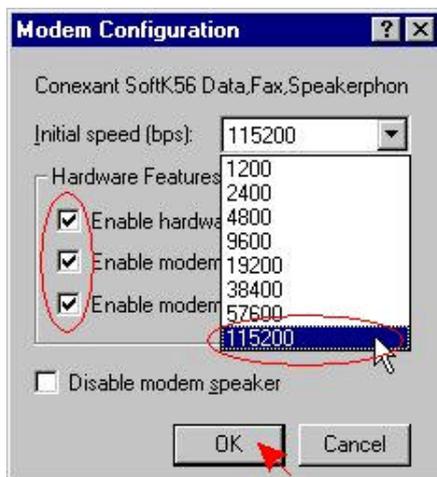
23. Click on the **More** buttons and select **Edit entry and modem properties...**



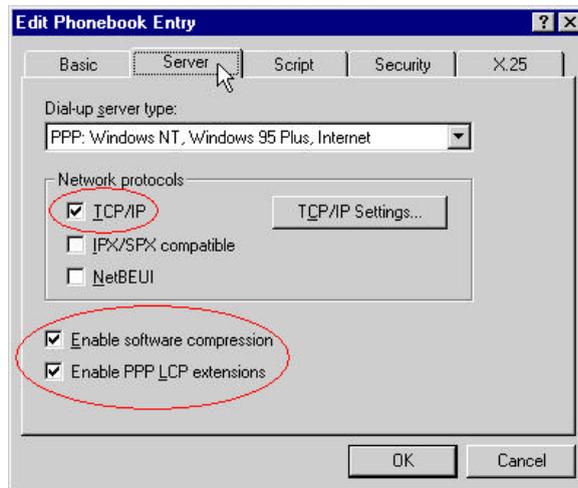
24. Select **Conexant SoftK56 Data, Fax, Speakerphone Modem** from **Dial** using list and click on the **Configure** button.



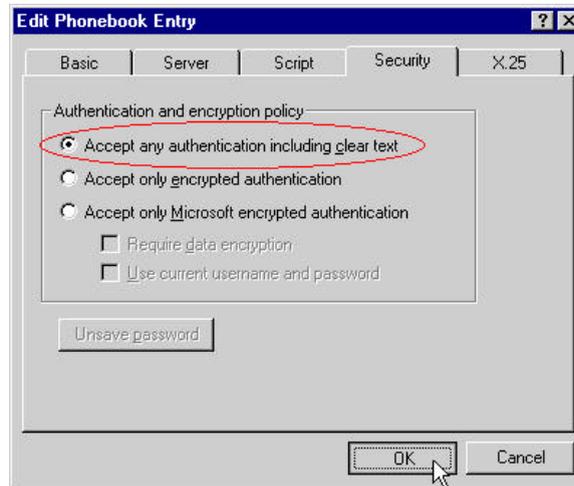
25. Enable all the **Hardware Features** and select **115200** from **Initial speed** list, then click **OK**.



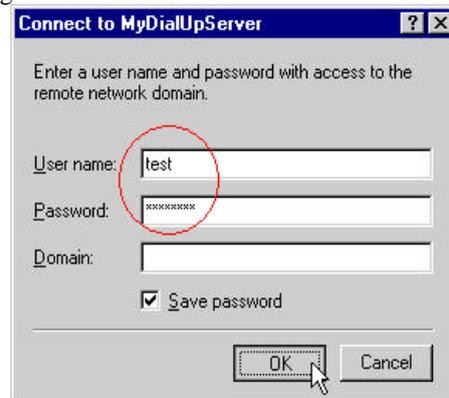
26. Click on the **Server** tab and enable three options of **TCP/IP**, **Enable software compression** and **Enable PPP LCP extensions**.



27. Click on the **Security** tab and enable the option of **Accept any authentication including clear text**, then click **OK**.



28. Enter **User name** and **Password**, then click **OK**. The modem will access to your local ISP and get a connection.



4.5 Windows 2000

1. Windows will detect the modem automatic; please insert the driver CD supplied and clicks **Next**.



2. Select **Search for a suitable driver for my device [recommended]**, then click **Next**.



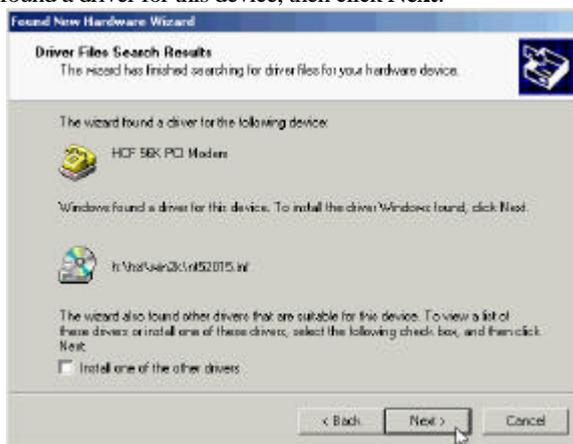
3. Select **Specify a location**, then click **Next**.



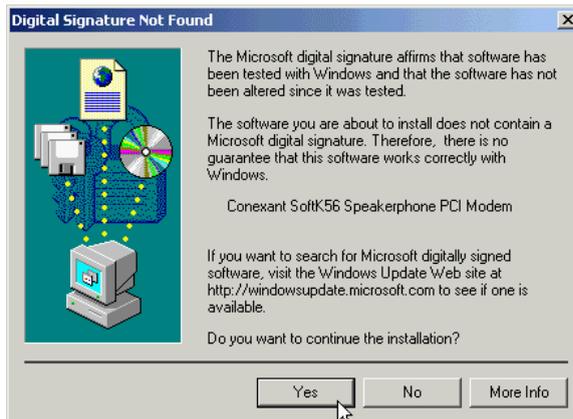
4. Please type **H:\HSF\Win2K** or use **Browse..** to find the driver directly, then click **OK** (H is the letter of CD-ROM drive). If your country is Australia, please type **H:\HSF\Win2K\Aus**.



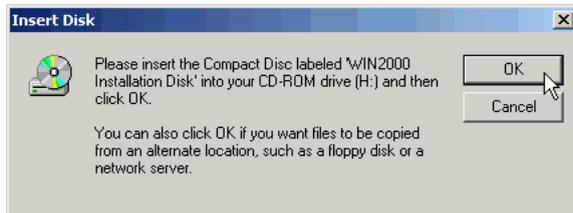
- Windows will find a driver for this device, then click **Next**.



- Click **Yes** to continue.



- Click **OK** to continue.



8. Please type **H:\HSF\Win2K** again, then click **OK**.

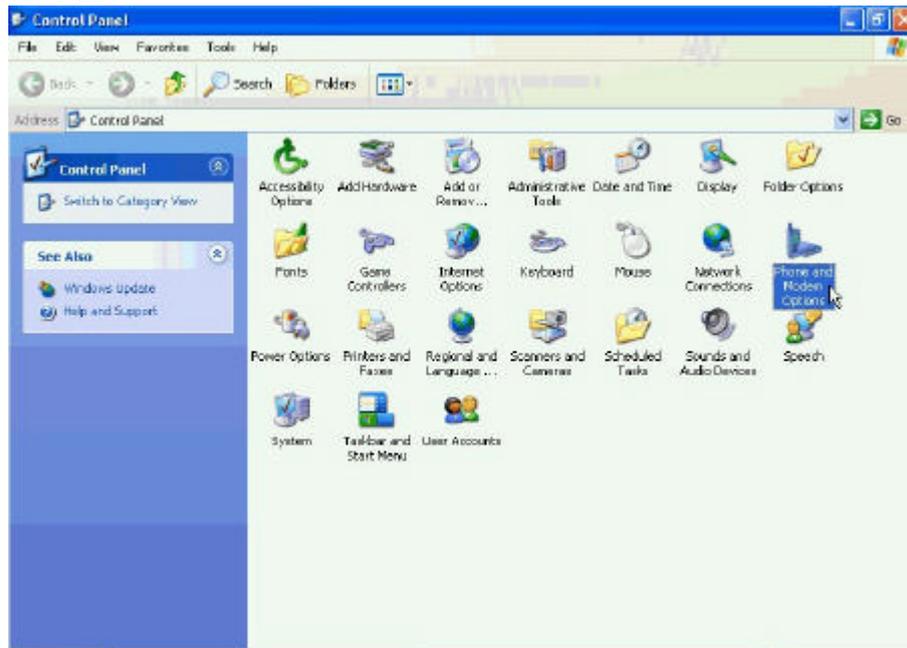


9. Click **Finish** to end this procedure.



4.6 Windows XP

1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Phone and Modem Options** icon.



2. Click **Modems** tab , then click **Properties** icon.



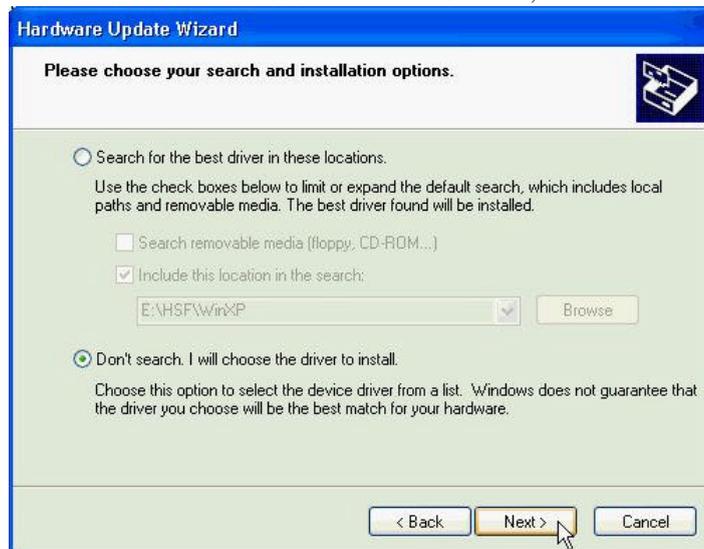
3. Click **Driver** tab and select the modem. Then double-click on the **Update driver** icon.



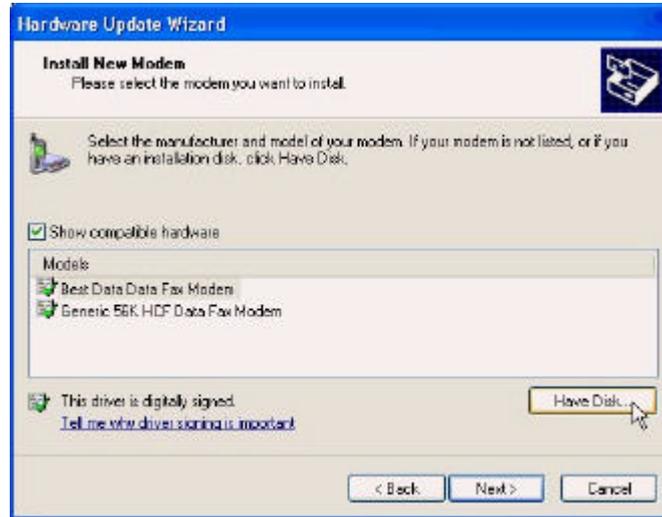
4. Select **Install from a list or specific location[Advanced]**, then click **Next** icon.



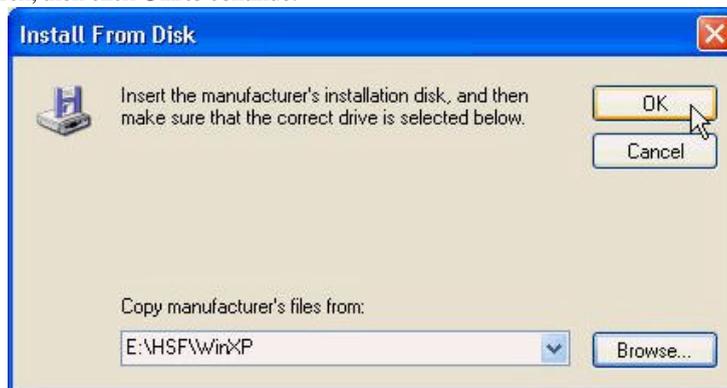
5. Select **Don' t search. I will choose the driver to install;** then click **Next** icon.



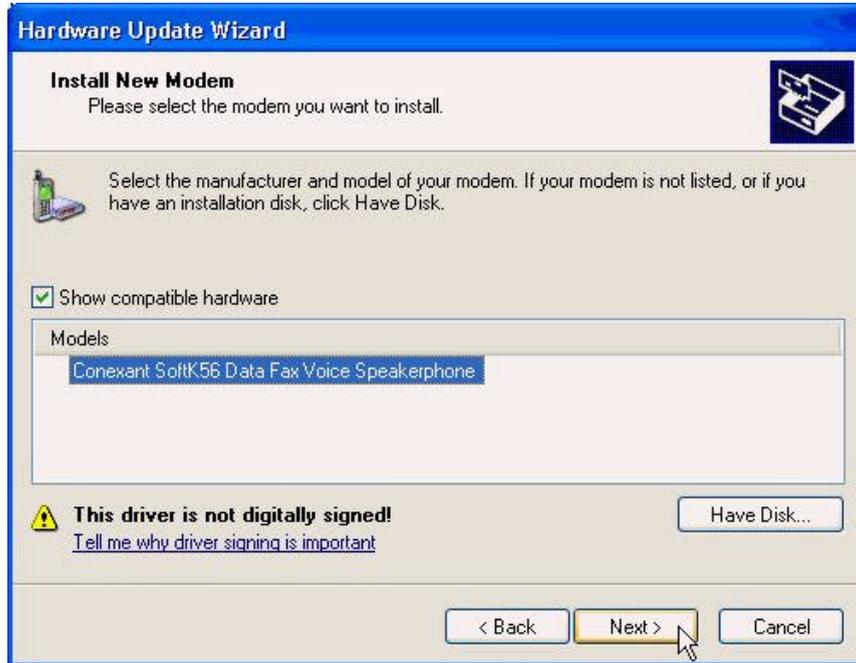
6. Click **Have Disk** icon.



7. Type in **E:\HSF\WinXP** (E is the letter of CD-ROM drive) or use **Browse...to** search, then click **OK** to continue.



- Windows has found the driver for the **Conexant Softk56 Data Fax Voice Speakerphone** , click **Next** to start the installation.



- Click **Continue Anyway** icon.



10. Click **Finish**.



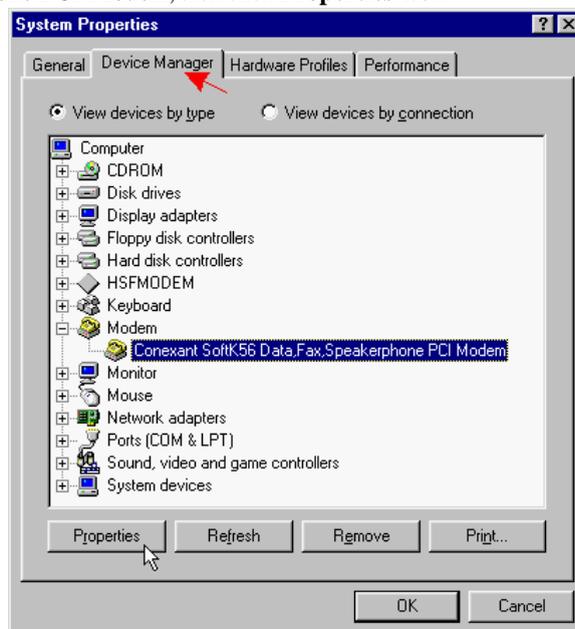
Chapter 5 Select Modem Country

5.1 Windows 95/98

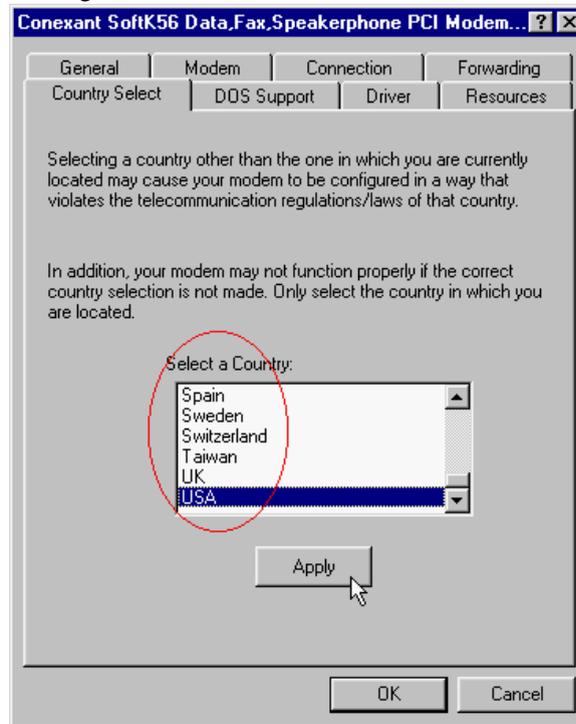
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click **System** icon.



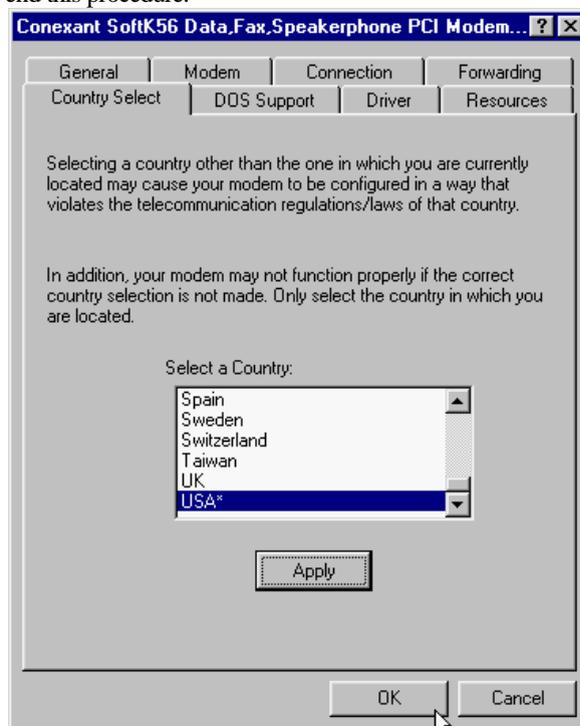
2. Click **Device Manager** tab and select **Conexant SoftK56 Data, Fax, Speakerphone PCI Modem**, then click **Properties** icon.



3. Click **Country Select** tab and select your country form the list then click **Apply** to confirm this setting.

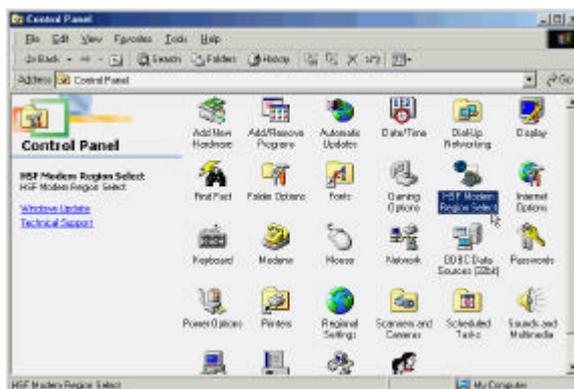


4. Click **OK** to end this procedure.

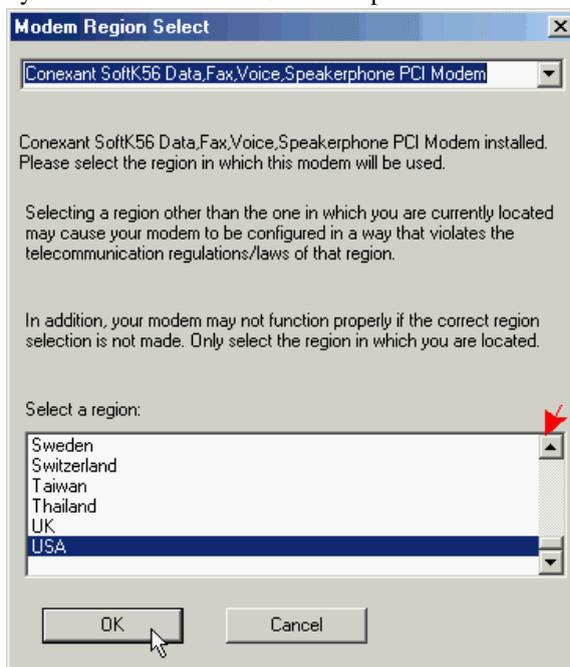


5.2 Windows ME

1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **HSF Modem Region Select** icon.

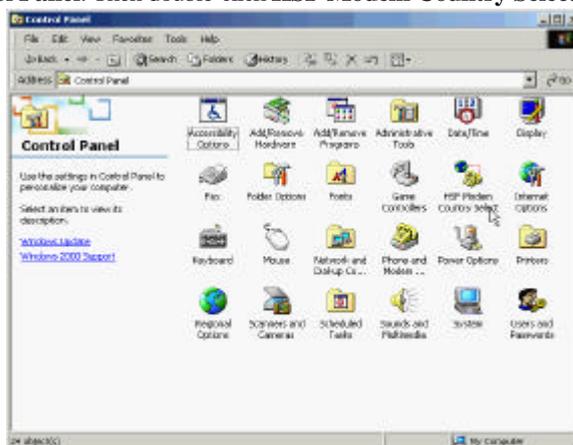


2. Select a country from the list then click **OK** to end procedure.

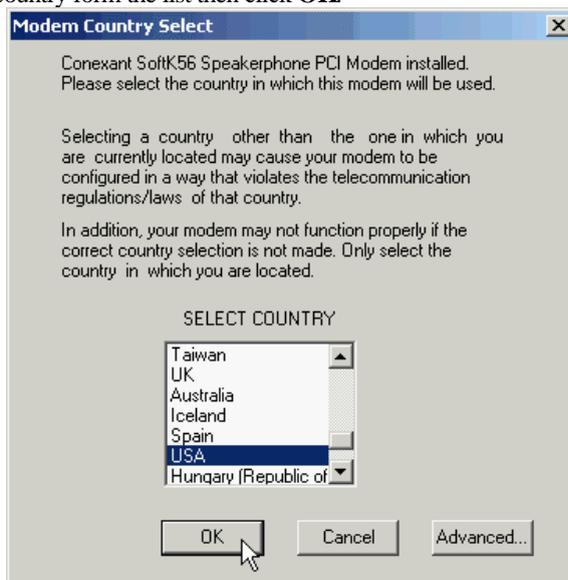


5.3 Windows 2000

1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click **HSF Modem Country Select** icon.

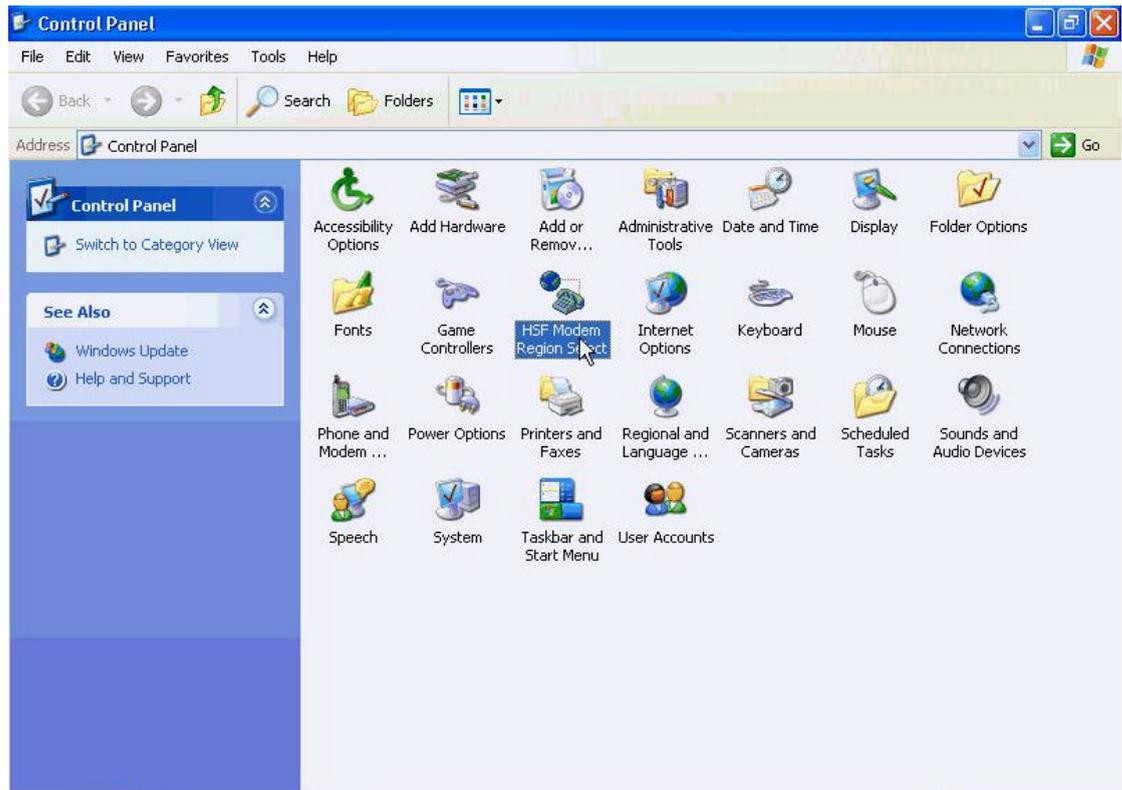


2. Select your country form the list then click **OK**.



5.4 Windows XP

1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click **HSF Modem Region Select** icon.



2. Select your country form a list and click **OK**.



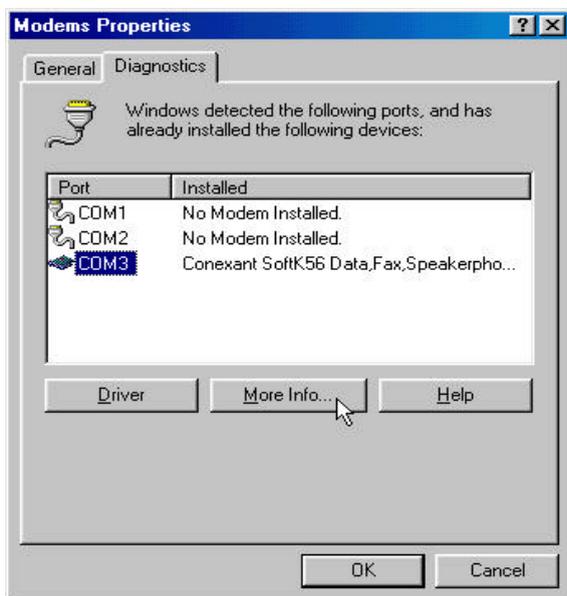
Chapter 6 Diagnostics

6.1 Windows 95/98/ME

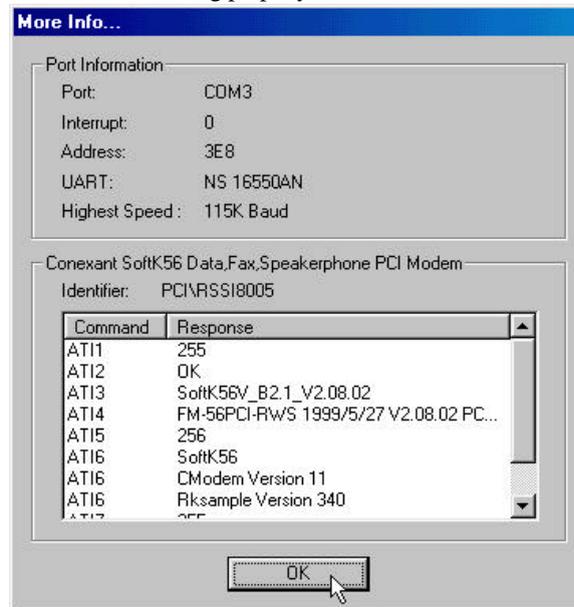
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Modems** icon.



2. To test the modem by clicking on the **Diagnostics**. Select the **COM** port for **Conexant SoftK56 Data, Fax, Speakpho...** and click on the **More Info...** button.



3. If your modem is responding to AT commands and functioning correctly, it means that your modem is working properly. Click **OK**.

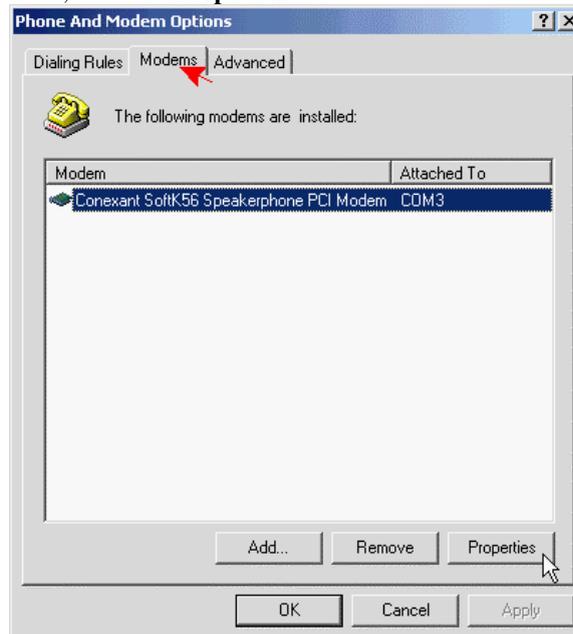


6.2 Windows 2000

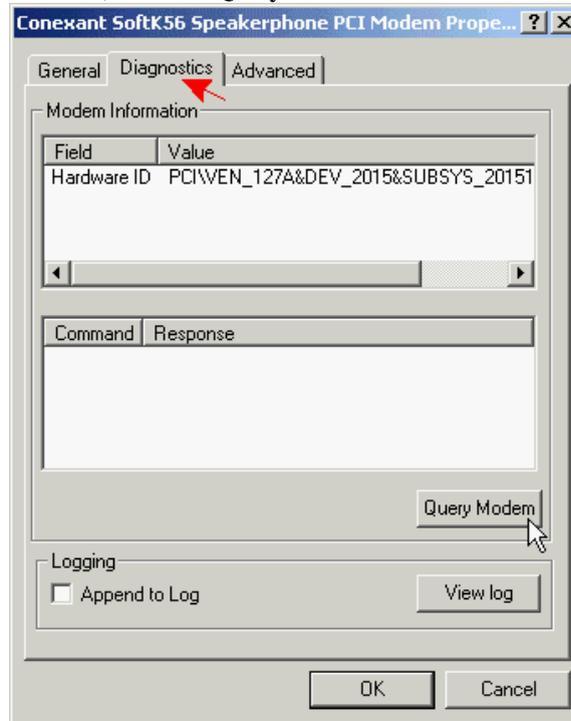
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Phone and Modem Options** icon.



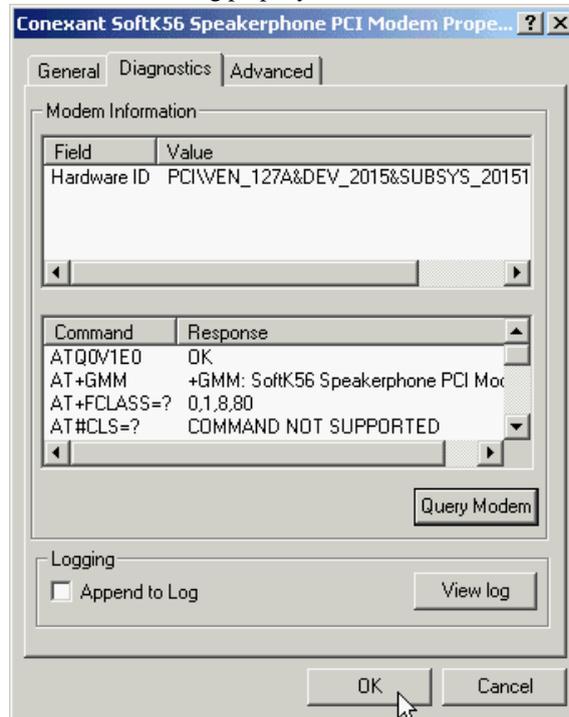
2. Click **Modems** tab, then click **Properties**.



3. Click **Diagnostics** tab, then click **Query Modem**.

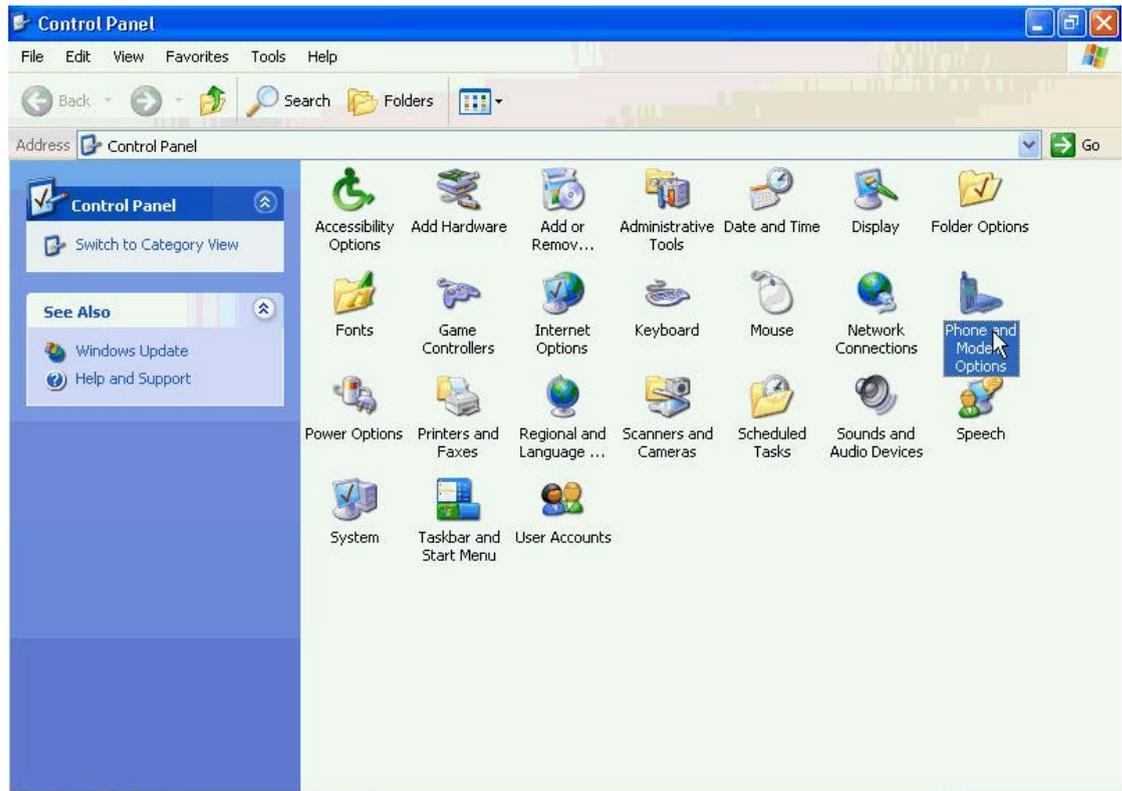


4. If your modem is responding to AT commands and functioning correctly, it means that your modem is working properly. Click **OK**.



6.3 Windows XP

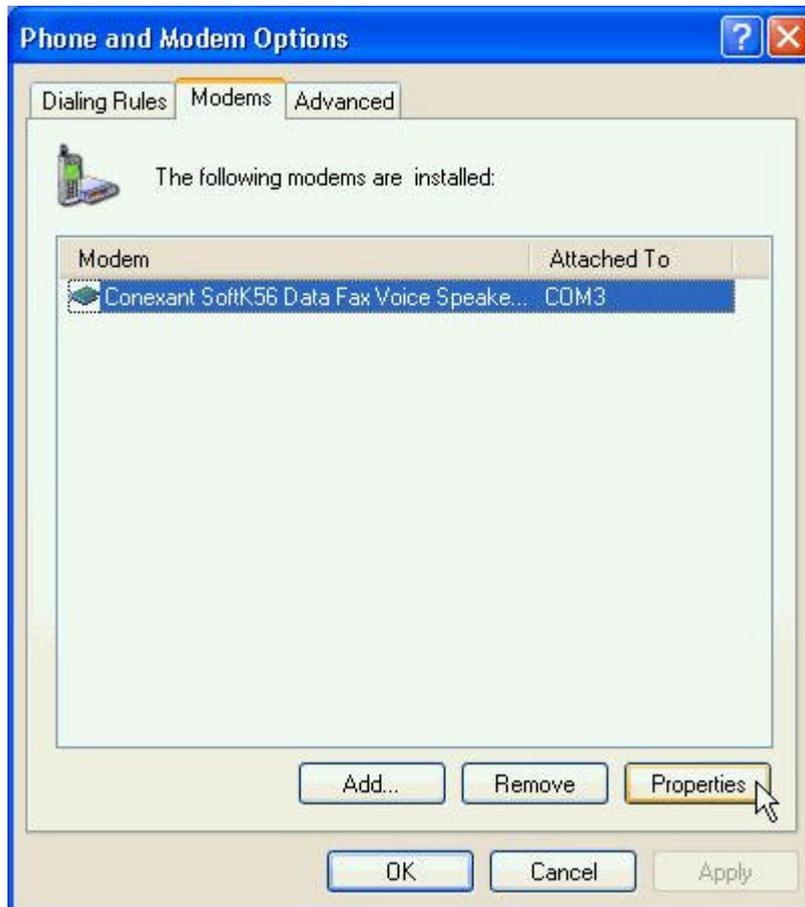
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Phone and Modem options** icon.



2. Then click on the **Modem** icon



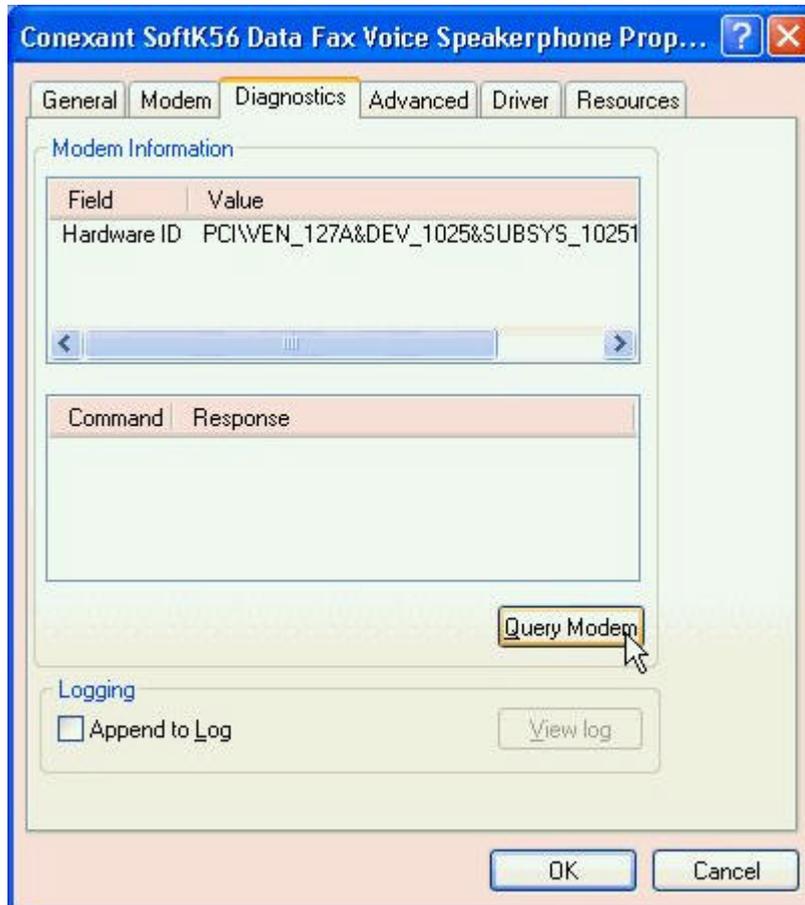
3. Then click on the **Properties** icon



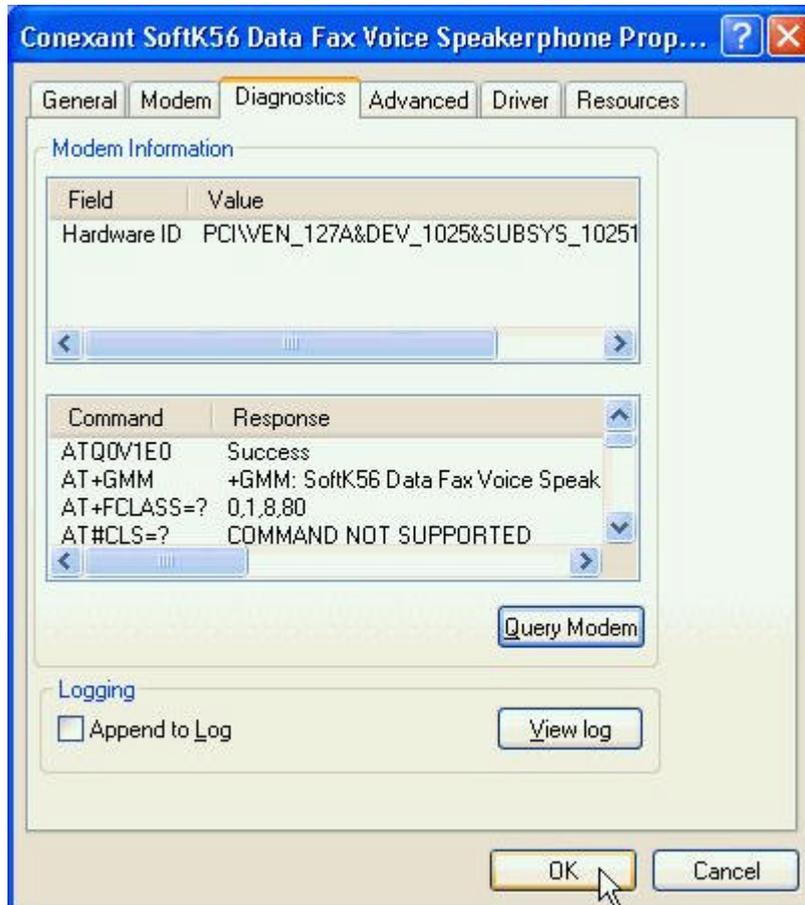
4. Then click on the **Diagnostics** icon



5. Then click on the **Query Modem** icon



6. Then click **OK** icon.



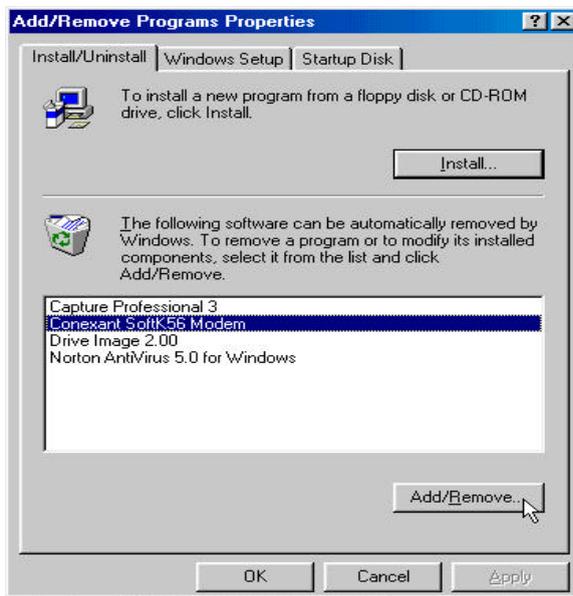
Chapter 7 Uninstalling Procedure

7.1 Windows 95/98

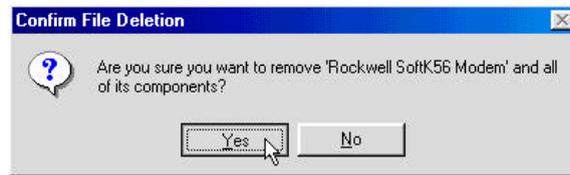
1. Open the **Control Panel** window and double-click the icon of **Add/Remove Programs**.



2. Select **Conexant SoftK56 Modem** from the list and then click the **Add/Remove** button.



3. Click **Yes** to remove the modem.

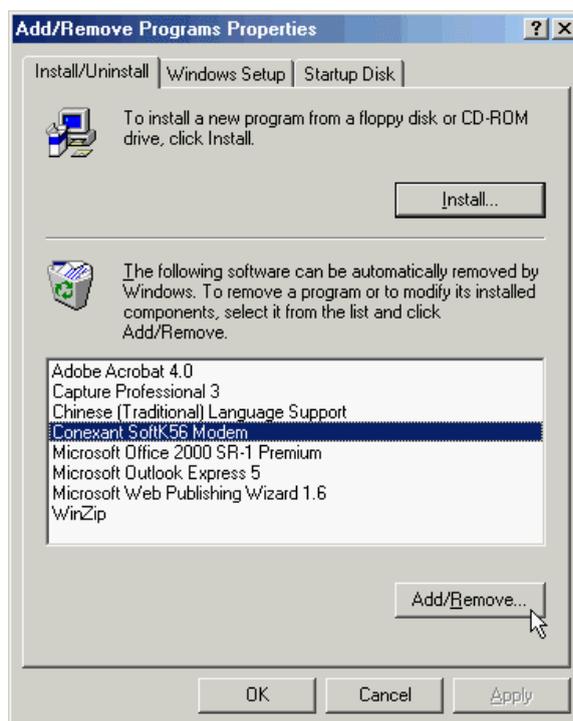


7.2 Windows ME

1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click the icon of **Add/Remove Programs**.



2. Select **Conexant SoftK56 Modem** from the list and then click the **Add/Remove** button.



3. Click **Yes** to remove the modem.



4. Click **OK** to continue.

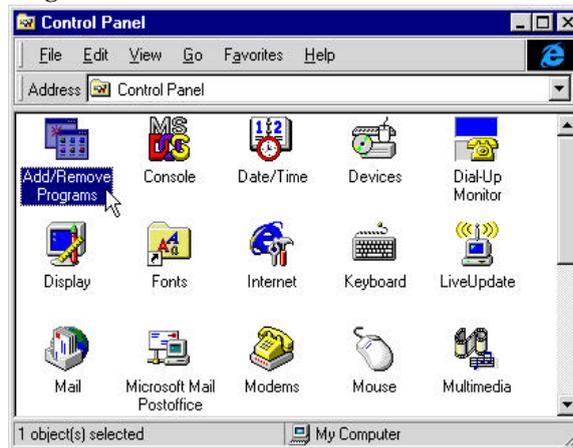


5. Click **Yes** to end this procedure.

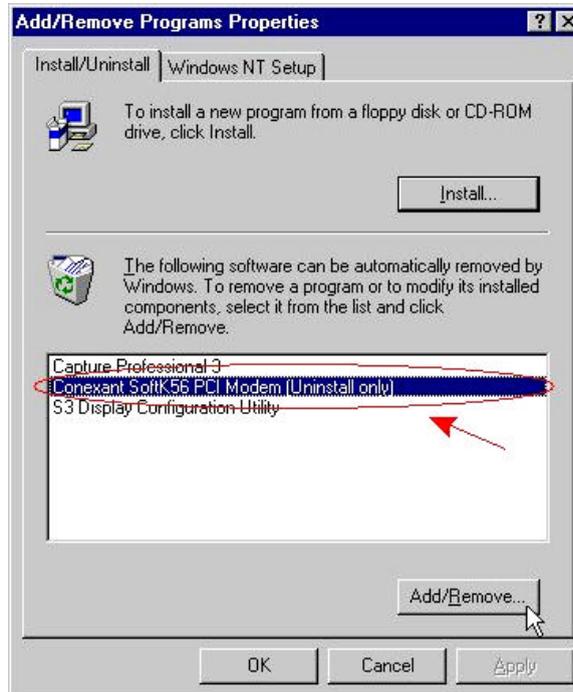


7.3 Windows NT 4.0

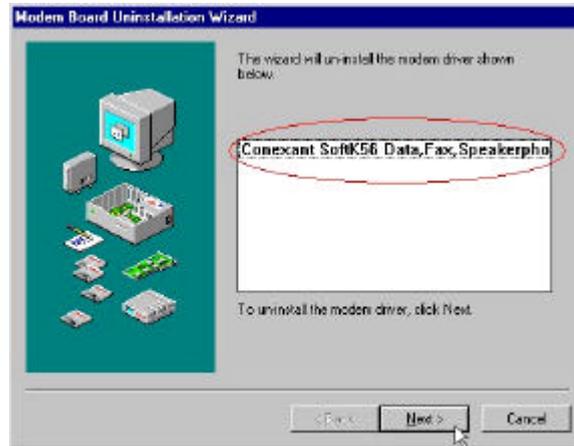
1. Click **Start \ Settings \ Control Panel** on the desktop and double-click on the **Add/Remove Programs** icon.



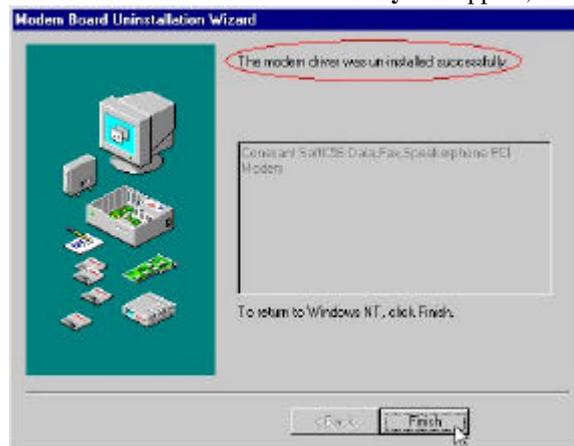
2. Select **Conexant SoftK56 PCI Modem (Uninstall only)** from the list and then click the **Add/Remove** button.



3. Click **Next**.



4. **The modem driver was uninstalled successfully** will appear, then click **Finish**.



5. Click **Yes** to restart your computer.

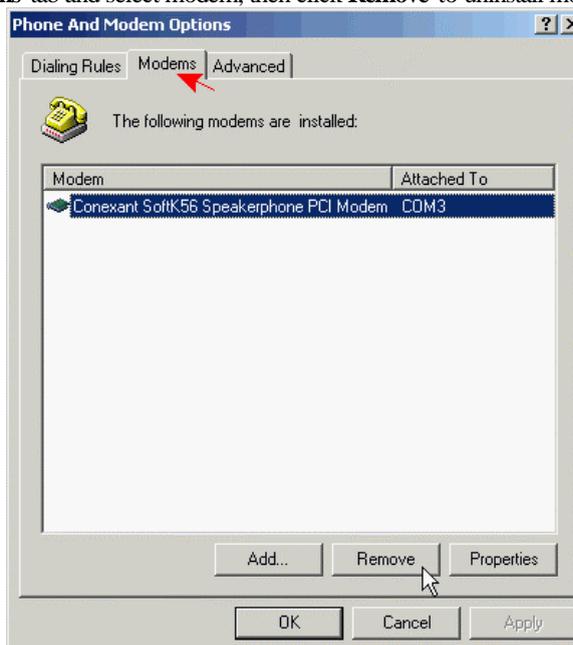


7.4 Windows 2000

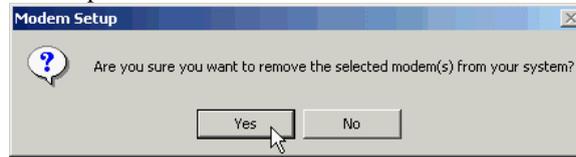
1. Click **Start \ Settings \ Control Panel** on the desktop and double-click on the **Phone and Modem Options** icon.



2. Click **Modems** tab and select modem, then click **Remove** to uninstall modem.

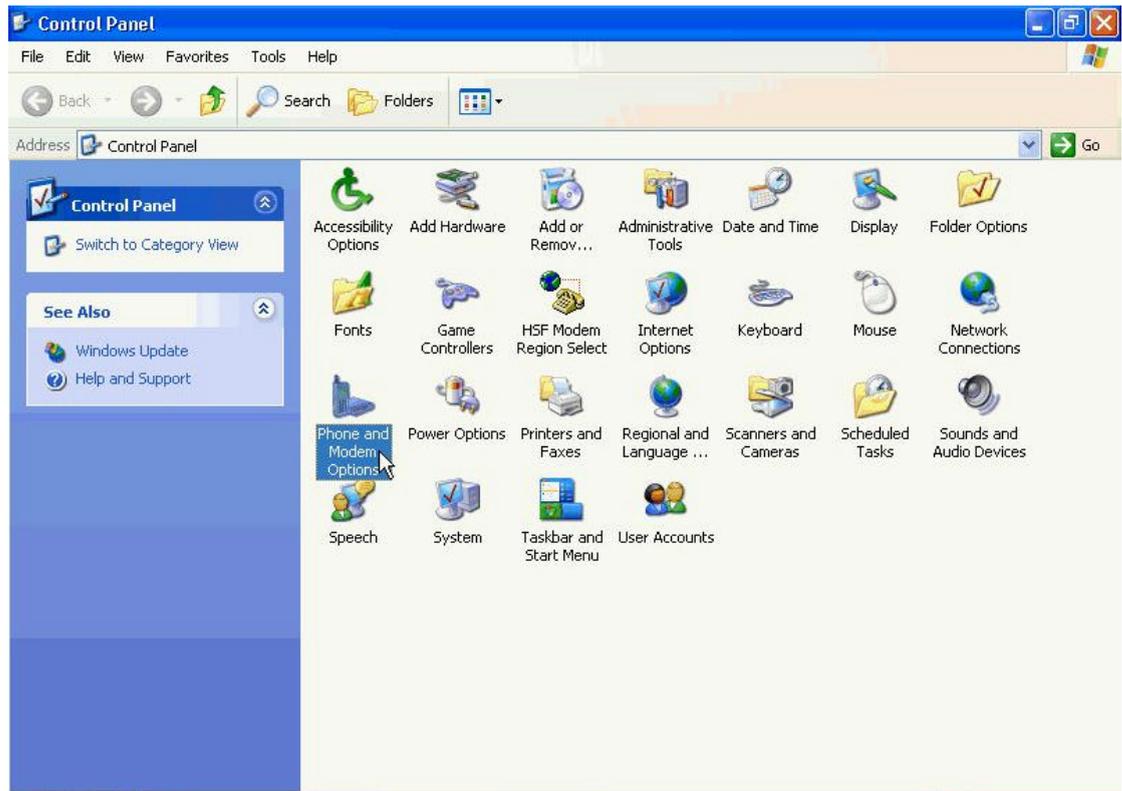


3. Click **Yes** to end this procedure.

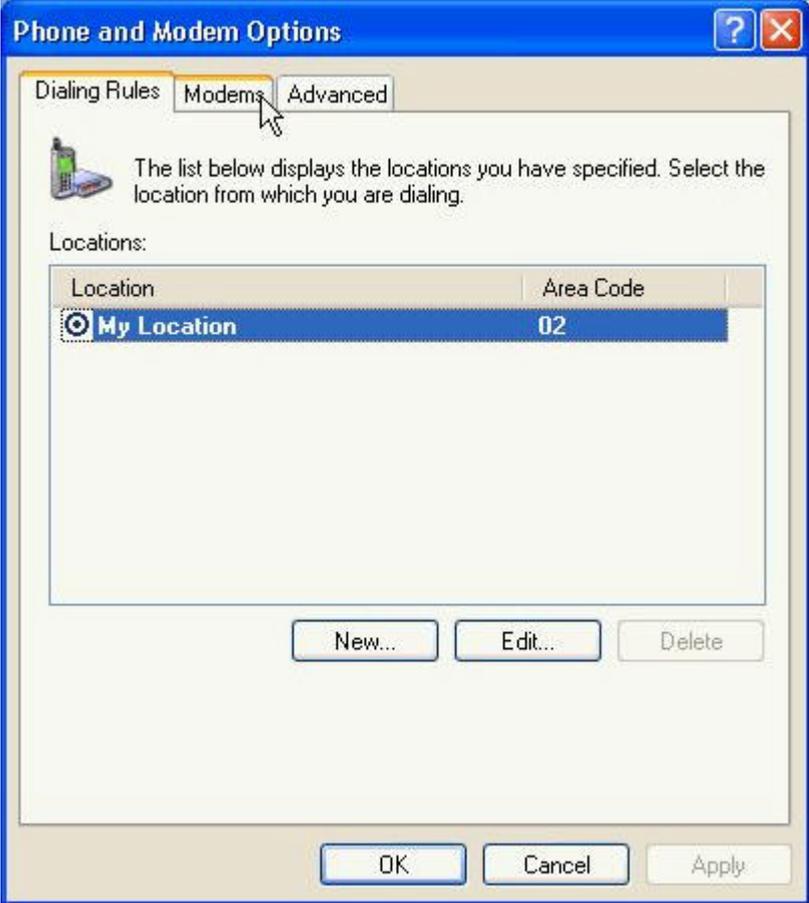


7.5 Windows XP

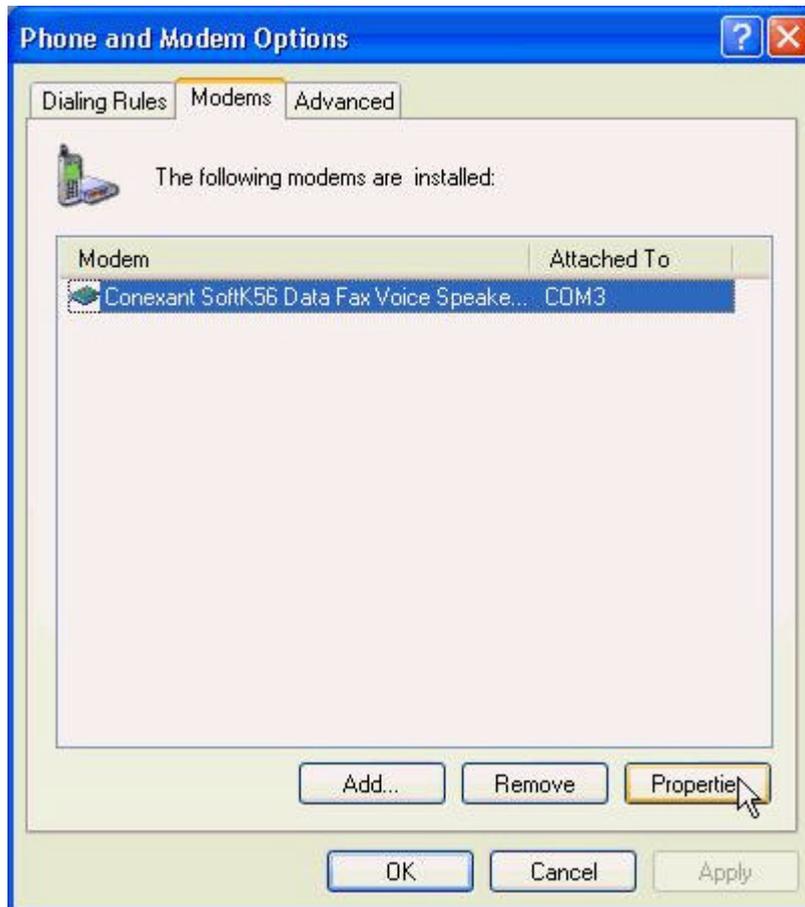
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Phone and Modem options** icon.



2. Then click on the **Modems** icon.



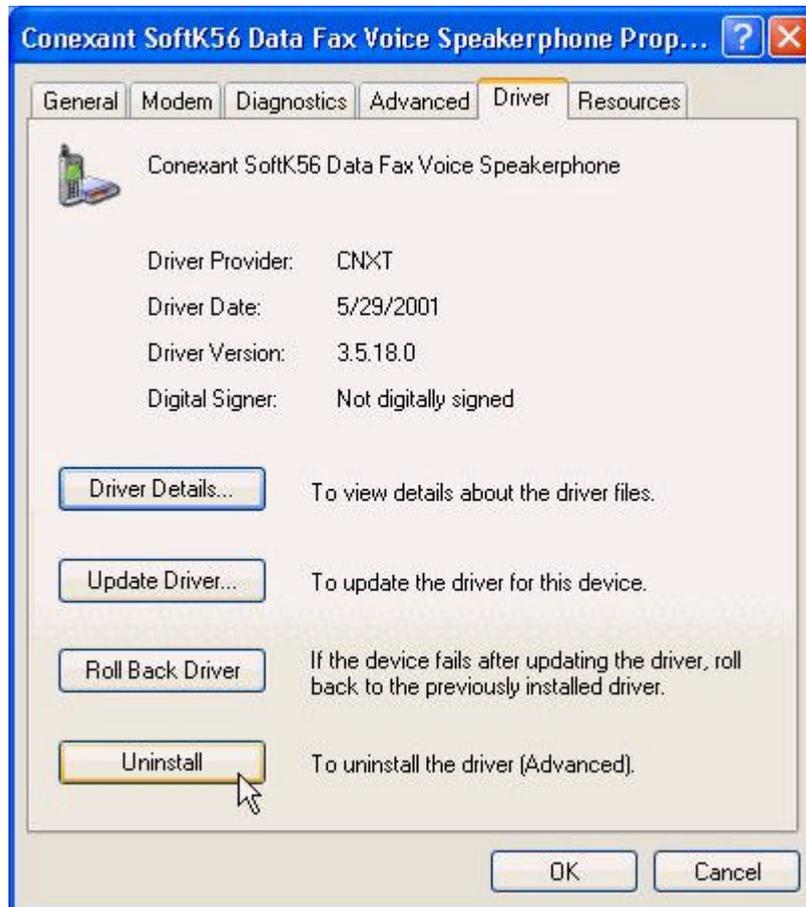
3. Then click on the **Properties** icon.



4. Then click on the **Driver** icon.



5. Then click on the **Uninstall** icon.



6. Then click **OK** icon.



7. Then click **OK** icon.

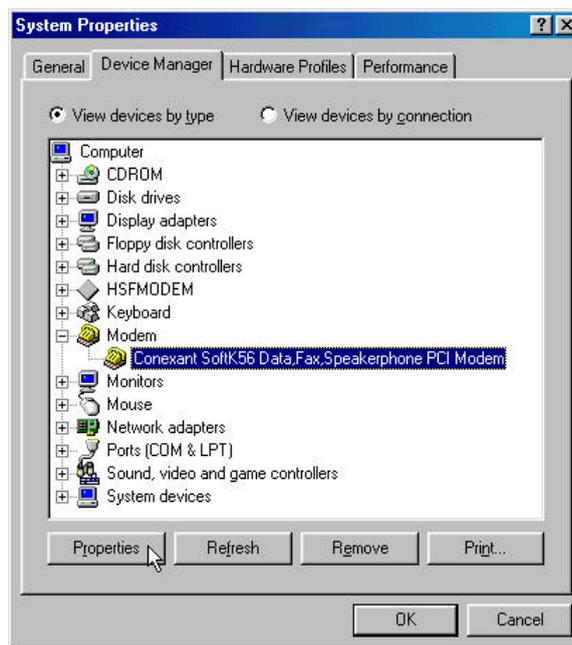


Chapter 8 Troubleshooting

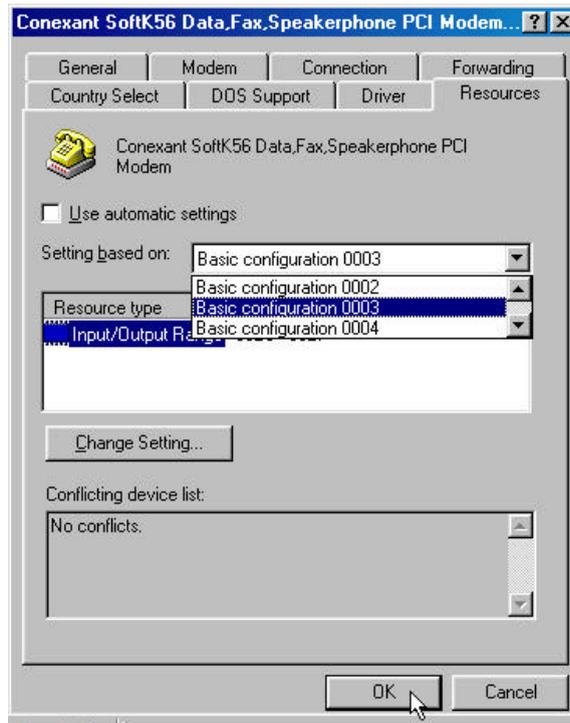
If you failed to install your modem in Windows 95/98/ME

Make sure that the COM port and IRQ have been set correctly, and it does not conflict with any other board installed in your computer.

- Please go to **Start \ Settings \ Control Panel**. Double click the **System** icon. Select **Device Manager** and double click the **Modem** icon. Select **Rockwell SoftK56 Data Fax Speakerphone PCI Modem** and click on the **Properties** button.



- Click on the **Resources** tab, then **disable** the setting of Use **automatic settings**. Continue changing setting from the list of Setting **based on** until **No conflicts** showing up, and then click **OK!**



If the Modem could not execute AT commands

- The setting of COM port of your software or DTE perhaps is incorrect. For example, the default setting of your application is COM 1, but your modem has been configured as other COM port (such as COM 2).
- Be sure that you are sending commands at an acceptable baud rate at 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600 or 115200bps.
- Make sure you are using an acceptable character format, for example: 8 data bits, no parity, one stop bit.
- Send **AT&F** to modem, it will recall original factory default setting. Then, try to execute AT commands again.

If the Modem could not dial-out

- Make sure that your phone cable is properly connected to LINE jack.
- The default dialing type is Tone-dialing. If your line is set on Pulse-dialing, please change the command from T to P in your dial command line.

If the Modem could not answer an incoming call

- Check your phone cable makes sure that it connected properly to the LINE jack.

- Make sure that your phone line is connected to your PHONE jack of the modem interface.
- The telephone you are using to connect will ring if you try to call from another phone line.
- Configured the modem to an Auto-answer modem.
- Send AT S0=n to modem where n is the number of incoming rings and check light AA is on.

If no connection was shown after modem was dialed out

- Remote modem might not set to answer mode, if you do not hear a high-pitch tone when you make a call.
- Perhaps you get a poor-quality or noisy telephone lines, wait to try another call.

If there was an Data error when making the connection

- Make sure that your software data format is matched to remote side (for example: 8,N, 1).
- Make sure the modem flow control method is matched to communication application.
- Try to connect later, maybe you get a poor-quality or noisy telephone lines.

Fax and voice problems

- Be sure that the Data Communication is installed and performed properly; otherwise, check the previous procedures carefully and follow the Fax/Voice manual step by step.