

# **IC<sup>+</sup> 56k External Data Fax Voice Modem**

**IP568x**

**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 determined 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.

WARNING  
ONLY CONNECT EQUIPMENT WITH A TELECOMMUNICATIONS  
COMPLIANCE LABEL

WARNING  
FOR SAFETY REASONS, ONLY CONNECT EQUIPMENT WITH A  
TELECOMMUNICATIONS COMPLIANCE LABEL. THIS INCLUDES  
CUSTOMER EQUIPMENT PREVIOUSLY LABELLED  
PERMITTED OR CERTIFIED.

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 IC<sup>+</sup> 56k External Data Fax Voice Modem with IC<sup>+</sup> chipset. This modem with IC<sup>+</sup> chipset is a hardware modem that uses the state-of-the-art single chip and Silicon DAA design. Besides, it has the advantages of high quality, high reliability, more compact and low cost. This modem with IC<sup>+</sup> chipset is compatible with current Windows 98, ME, NT 4.0, 2000,XP operation systems because of its independent OS. Moreover, it follows the V.90 standard, so you can surf the Internet at 56K speed, but it depends on the condition of the telephone line and the ISP you connected to. We truly hope that our series products with IC<sup>+</sup> chipset can meet your needs.

### 1.2 What's in the Package

- IC<sup>+</sup> 56k External Data Fax Voice Modem with IC+ Chipset
- CD-ROM (Comprises Application Software, Modem Drivers and User's Guide)
- Quick Guide for Installing Modem Drivers
- Phone Cord

## Chapter 2 Specifications

### Specifications:

Chipset (Internal type)	IC <sup>+</sup> IP568x
Line Connection	PSTN, 2 Wires
Data Transmission Rate	ITU-T V.90 56000/33600/28800/14400/9600/7200/4800/2400/ 1200/300 bps BELL 103 and BELL 212A
Fax Compatibility	Send/Receive G3 Fax, 14400/9600/4800 bps
Error Correction	MNP 2-4/V.42 LAPM
Data Compression	MNP 5/V.42 bis
Command Set	Enhanced AT Command, Fax Class 1
Communication Model	Asynchronous
DTE Speed (MAX)	115,200 bps
Transmit Level	-11(±1dBm)
Flow Control	XON/XOFF RTS/CTS
Dialing Mode	Touch Tone / Rotary Pulse (Countries depend)
Auto Dial & Auto Answer	YES
Noted Features	NVRAM Directory and Stored Profile, Speed Buffering, Auto Format/Speed sensing Auto Retrain
Telephone Interface	PSTN Line through RJ-11
Card Dimension	12.2mm*7.5mm*1.6mm
Applicable PTT Approval	Countries depend
Safety	FCC, CE

### Features

IC<sup>+</sup> single chip solution

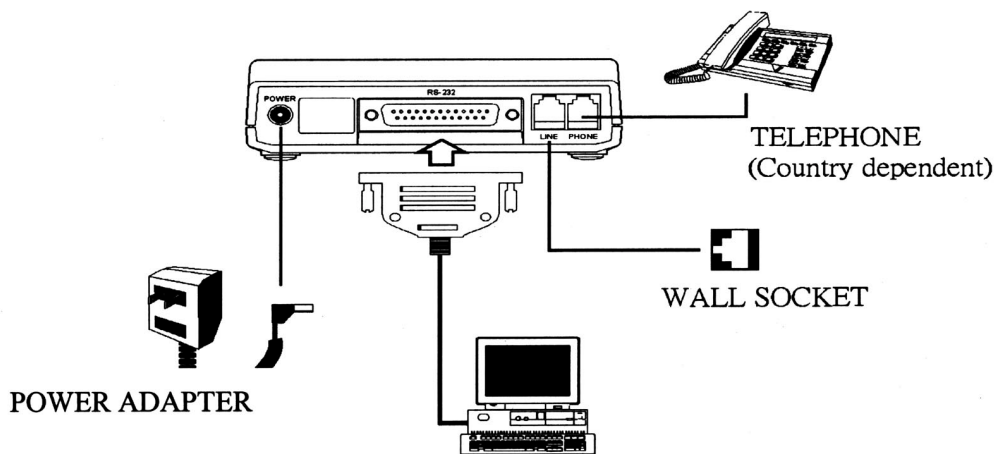
Surf the Internet at blazing 56K speed

Independent OS – Compatible with Windows 98/ME/NT4.0/2000/XP

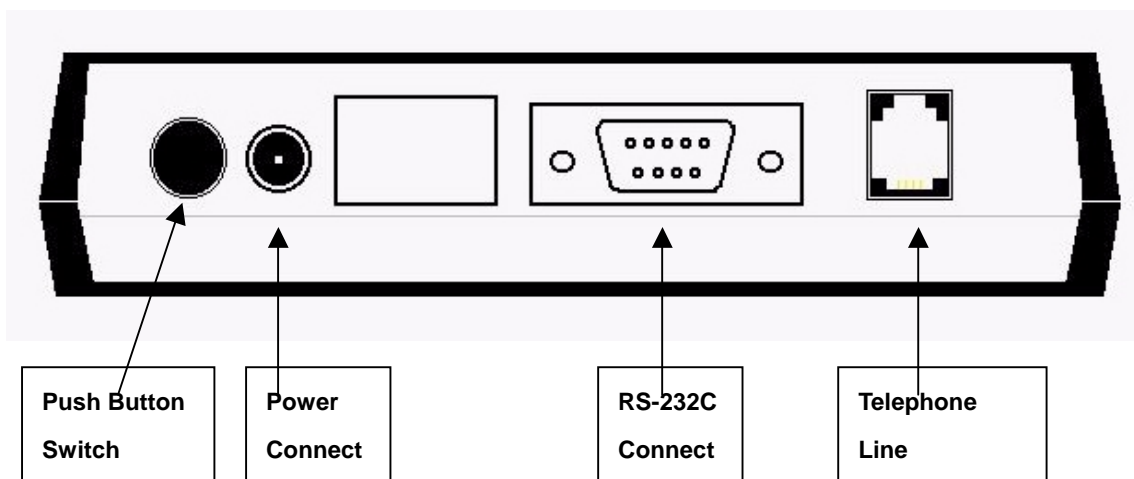
Fully software upgradeable

## Chapter 3 Hardware Installation

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.



External Modem Diagram

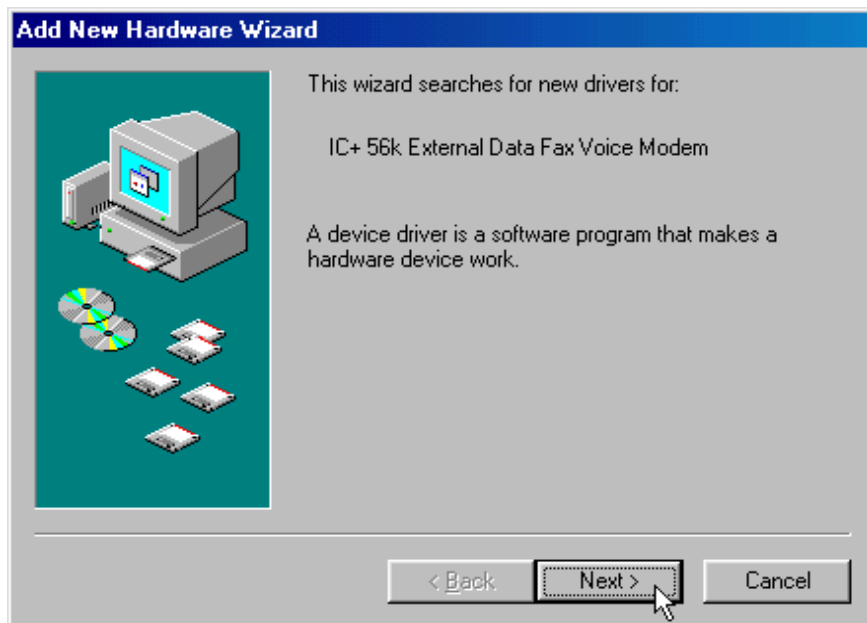


## Chapter 4 Software Installation

The following sections explain how to install the modem drivers under Windows 98/ME/NT4.0/2000/XP. Refer to the section, which best suites, your operating system.

### 4.1 Windows 98

1. Please insert the driver CD supplied when you see the message of **IC+56k External Data Fax Voice Modem**, then click **Next** to search for the driver.



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





3. Select "**Specify a location:**" and type the path: **F:\Driver** ( F is the letter of CD-ROM drive ) and click **Next** to continue.



4. Click **Next** to start the installation.



5. Click **Finish** to end this installation procedure.



6. When you see the message of **Wave Device for Voice Modem**, then click **Next** to search the driver.



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



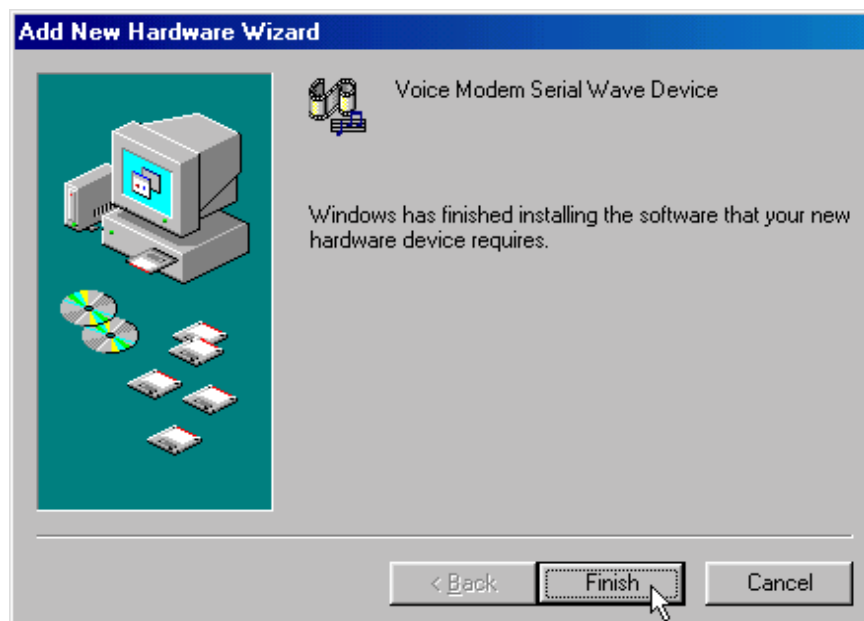
8. Select **"Specify a location:"** and type the path: **F:\Driver** ( F is the letter of CD-ROM drive ) and click **Next** to continue.



9. Click **Next** to start the installation.

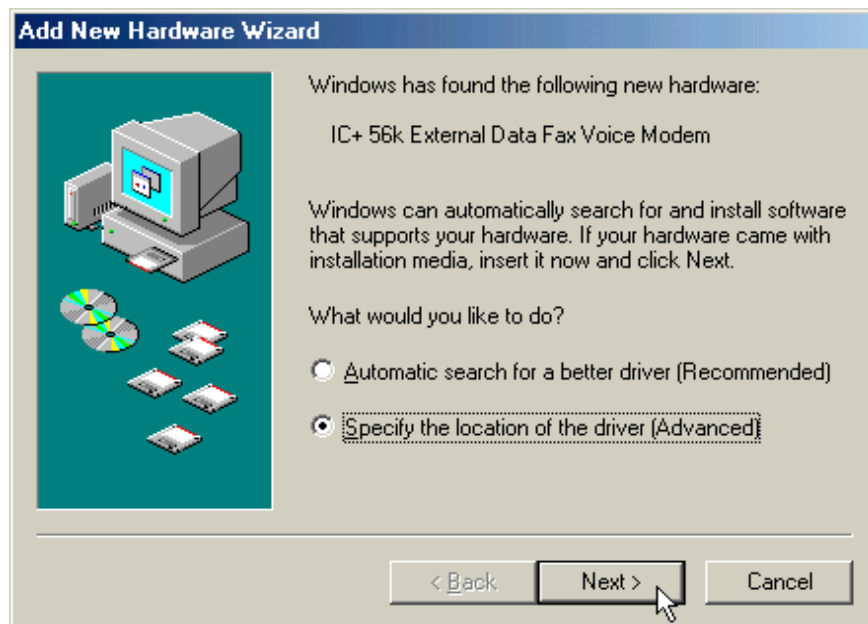


10. Click **Finish** to end this procedure.



## 4.2 Windows ME

1. Please insert the driver CD supplied when you see the message of **IC+56k External Data Fax Voice Modem** appearing, select **Specify the location of the driver [Advanced]** then click **Next** to search for the driver.



2. Select “**Search for the best driver for your device [Recommended]**”, then select **Specify a location** and type the path: **F:\Driver** ( F is the letter of CD-ROM drive ) and click **Next** to continue.



- Click **Next** to start the installation.



- Click **Finish** to end this installation procedure.



5. When you see the message of **Wave Device for Voice Modem**, select **Specify the location of the driver [Advanced]** then click **Next** to install the wave device.



6. Select “**Search for the best driver for your device [Recommended]**”, then select **Specify a location** and type the path: **F:\Driver** ( F is the letter of CD-ROM drive ) and click **Next** to continue.



7. Click **Next** to start the installation.



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



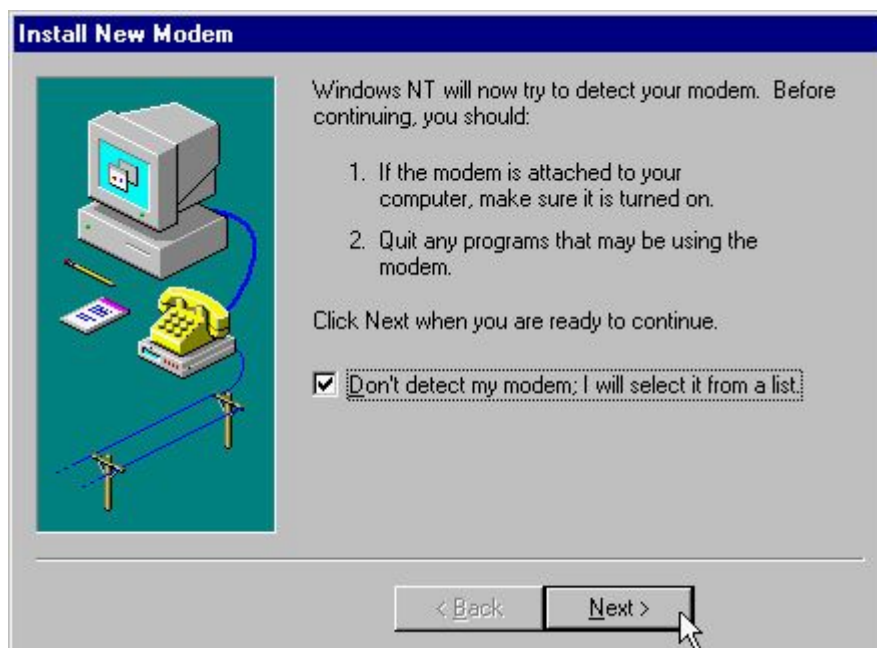


### 4.3 Windows NT4.0

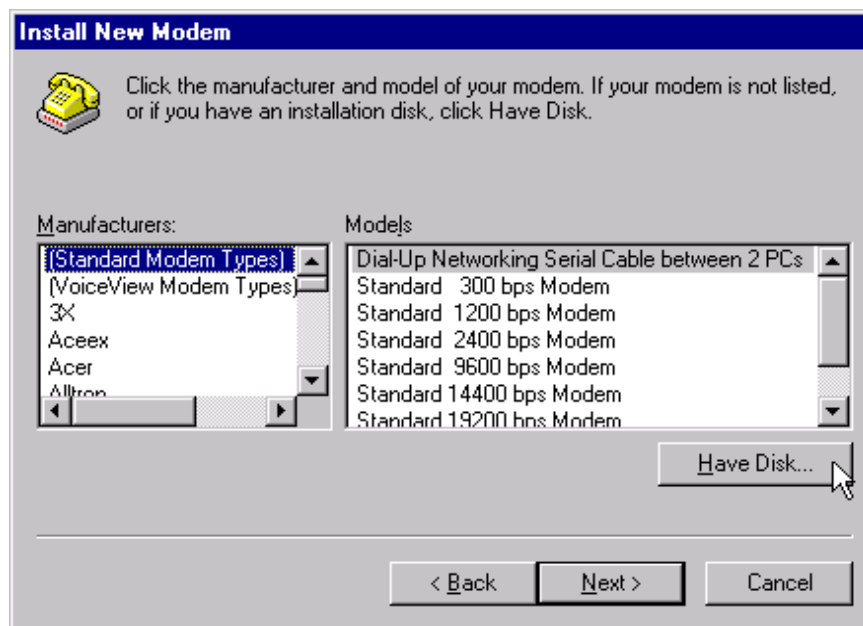
1. Move your cursor as following sequence **Start/Settings/Control Panel**, then double-click on **Modems** icon to install a new modem.



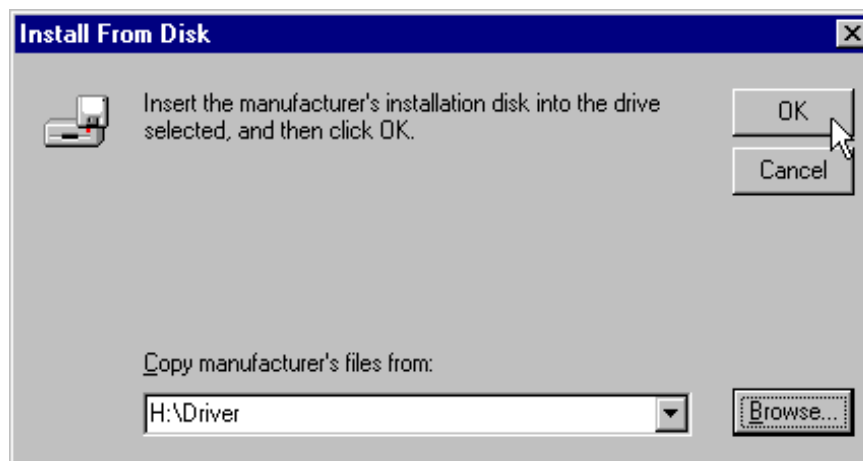
2. Select **Don't detect my modem; I will select it from a list**, then click **Next** to continue.



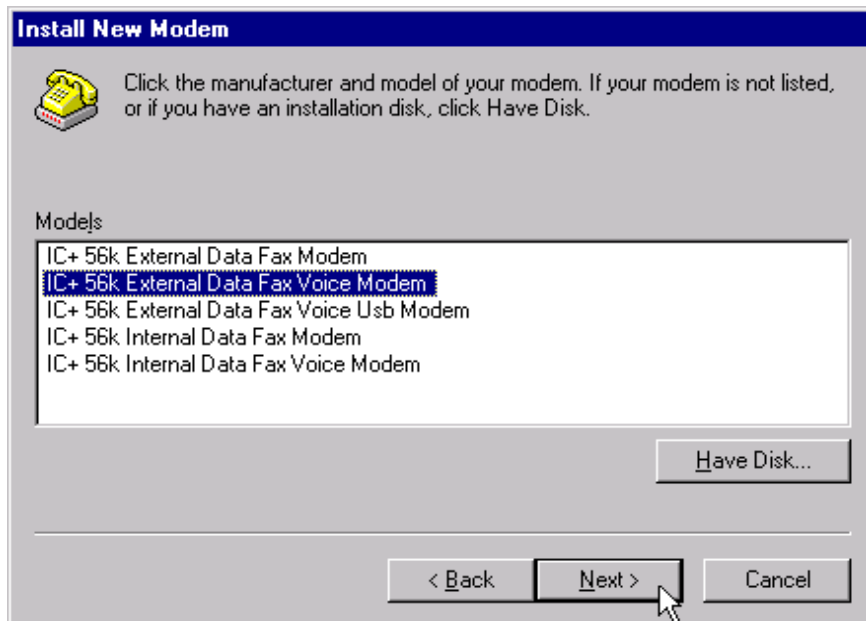
3. Click **Have Disk...** to install from the installation disk.



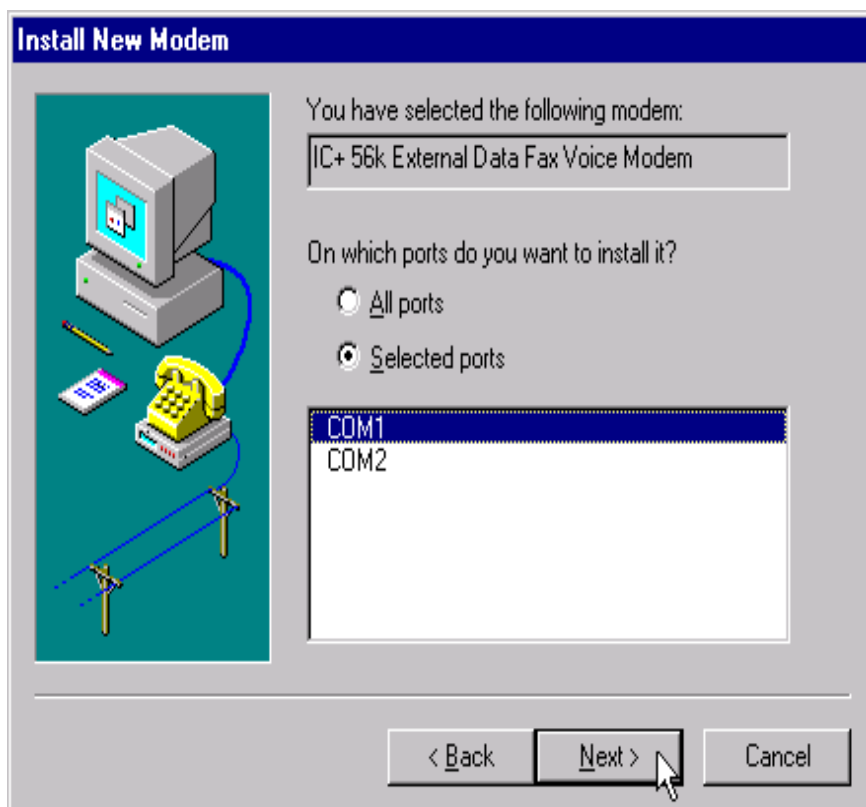
4. Select the location of **H:\Driver** (H is the letter of CD-ROM drive) and click **OK** to continue.



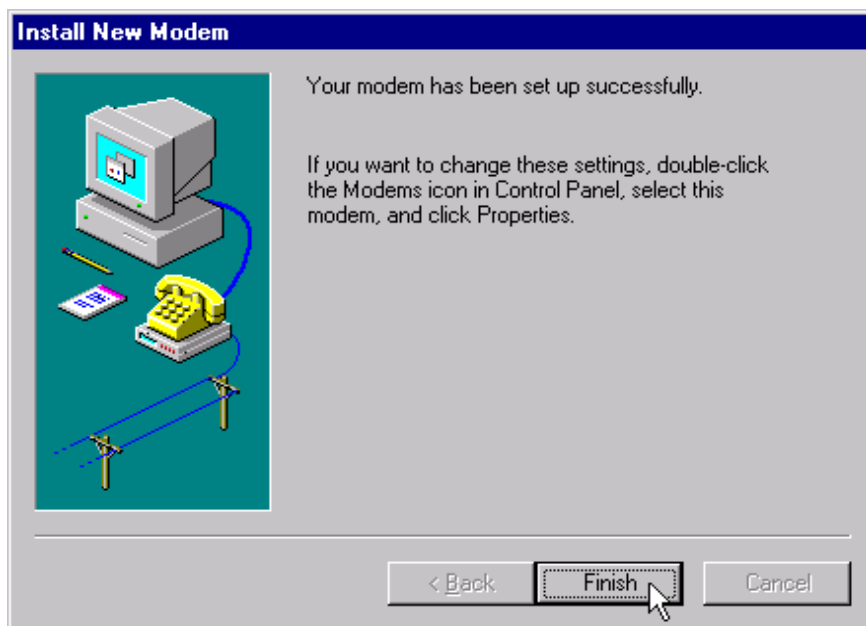
5. Select **IC+56k External Data Fax Voice Modem** from the list of Models, then click **Next** to continue.



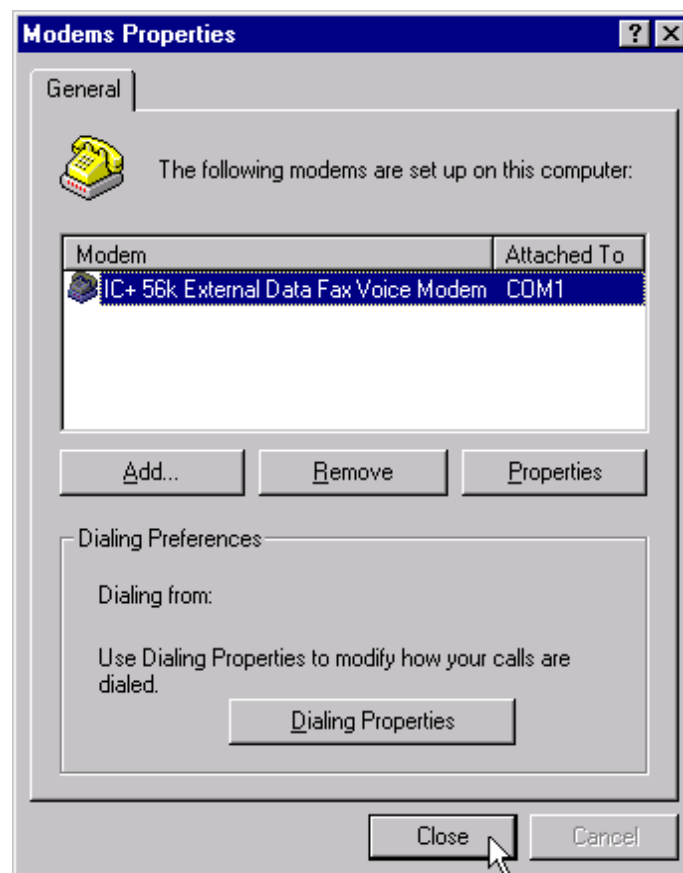
6. Select **Selected ports** and then **select COM port** that selected before. Click **Next** to start installing the selected modem.



7. Click **Finish** to complete the installation.



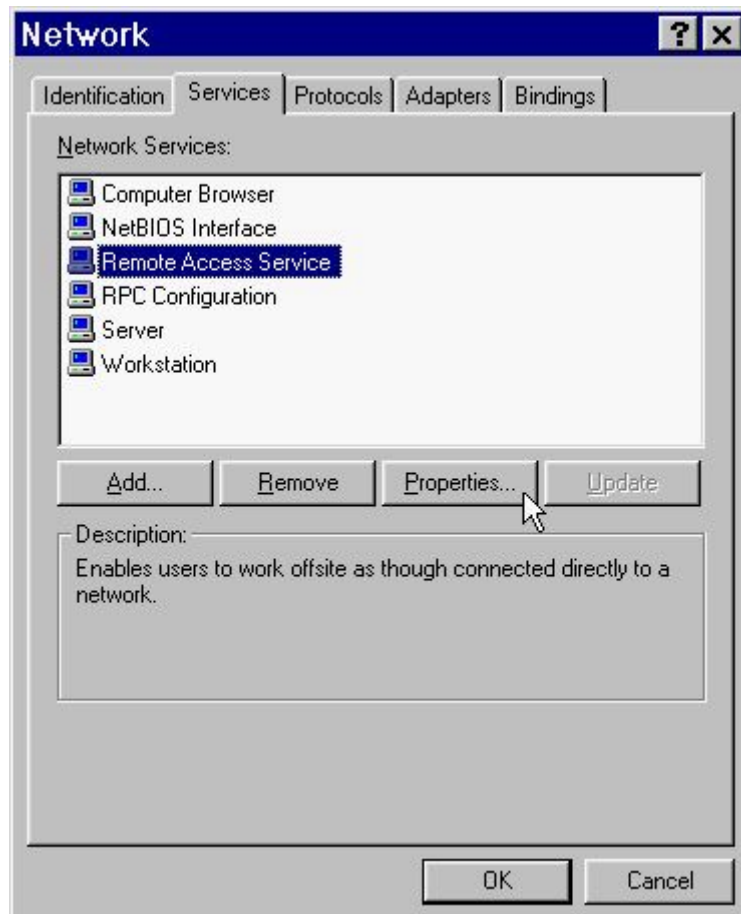
8. Click **Close** to end this procedure as you see the **IC+56k External Data Fax Voice Modem**.  
**NOTE:** If **Remote Access Service (RAS)** is installed on your computer, Windows NT will ask you to reconfigure Dial-Up Networking for the new Modem.



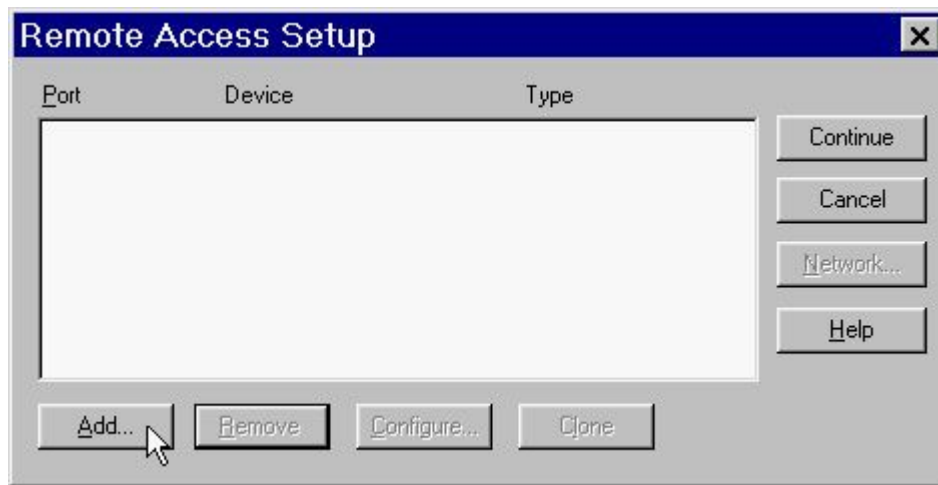
9. Move your cursor as following sequence **Start \ Settings \ Control Panel**. Then double-click on the **Network** icon to configure the **Dial-Up Networking**.



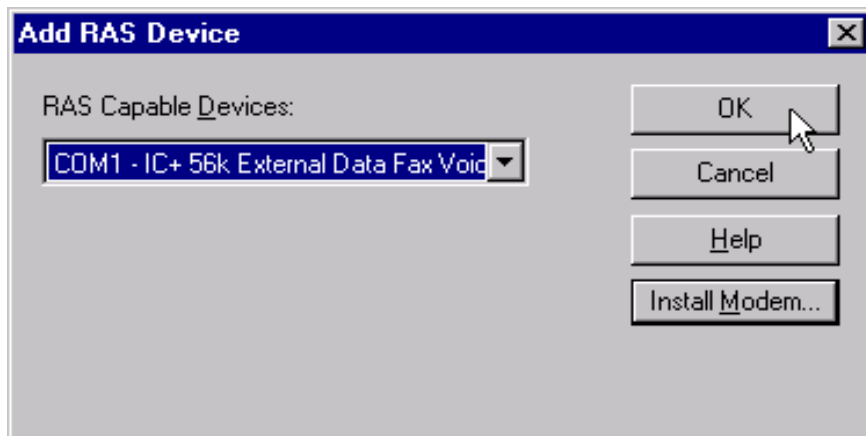
10. Click on the **Services** tab and select **Remote Access Service**, then click **Properties**. If you can't see **Remote Access Service** on the screen click **Add** to install **Remote Access Service**.



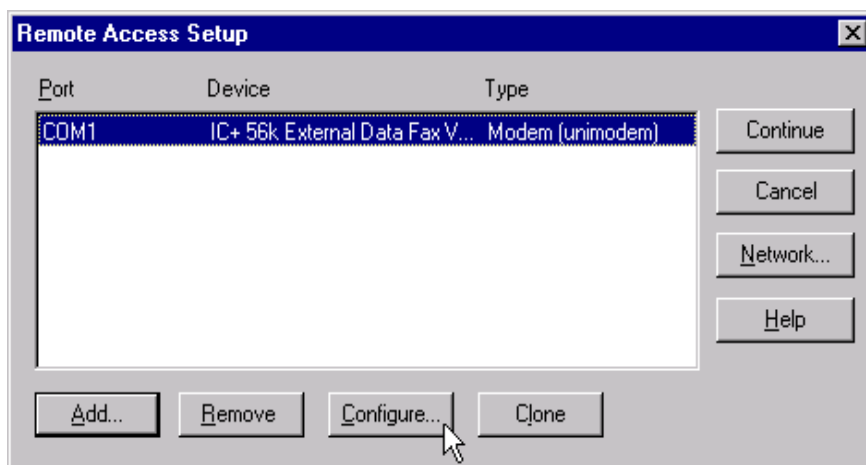
11. Click on the **Add** button to add modem. If there is any modem in the list, please click **Remove** first.



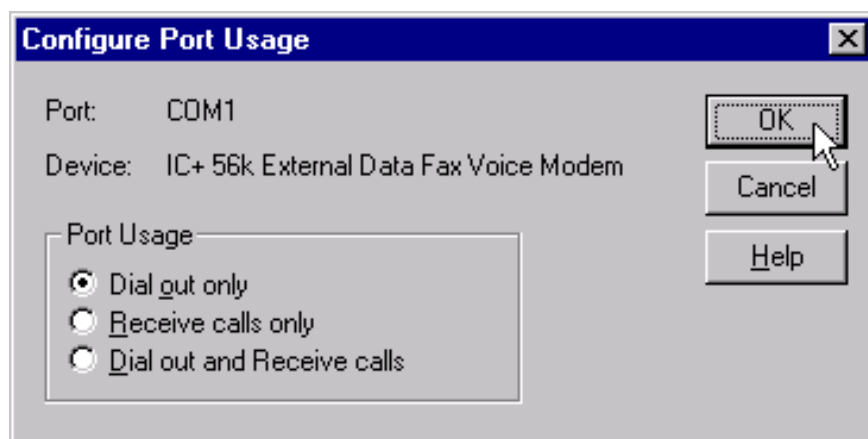
12. Select **IC+56k External Data Fax Voice Modem**, then click **OK** to confirm the settings.



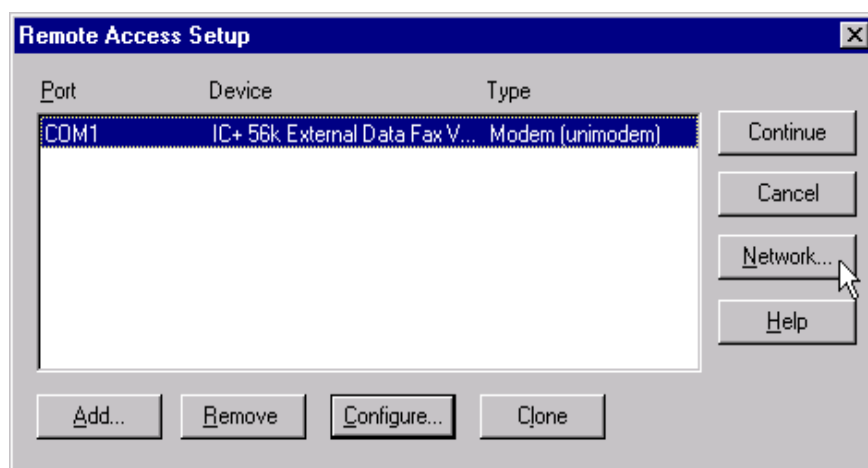
13. Click **Configure...** to configure port usage.



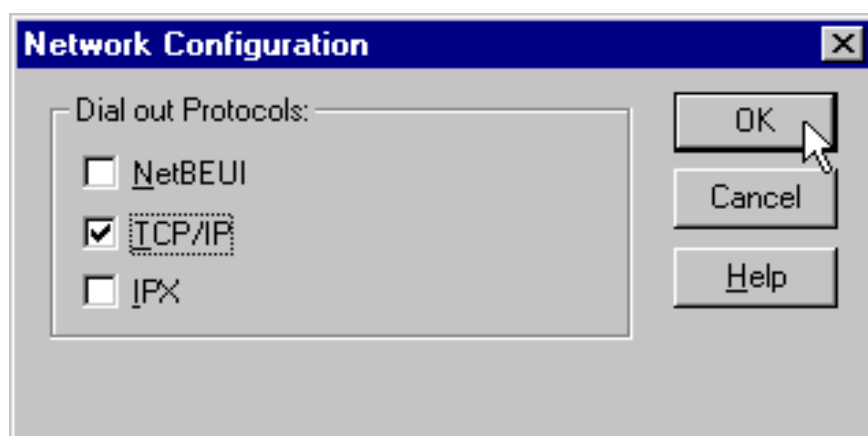
14. Select **Dial out only** for Port Usage and click **OK** to confirm the settings.



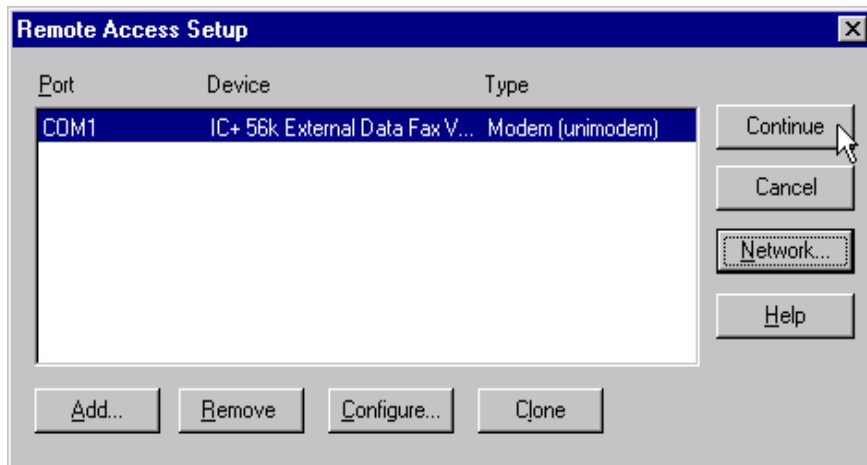
15. Click **Network...** to configure the network.



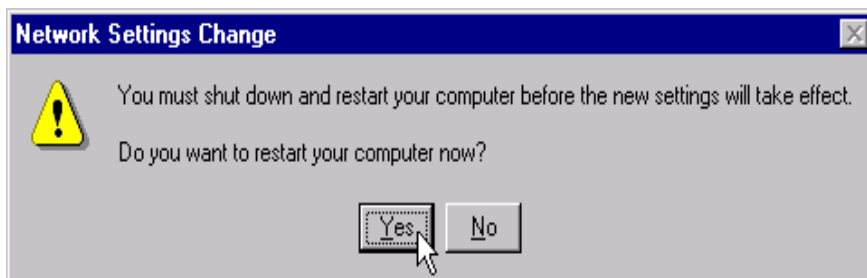
16. Select **TCP/IP** and click **OK** to confirm the settings.



17. Click **Continue** to complete the setup.



18. Click **Yes** restart Windows NT.

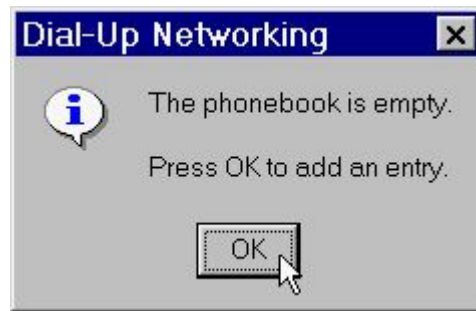


19. After restarting your computer, please double-click on the **My Computer** icon on the desktop and double-click on the **Dial-Up Networking** icon.

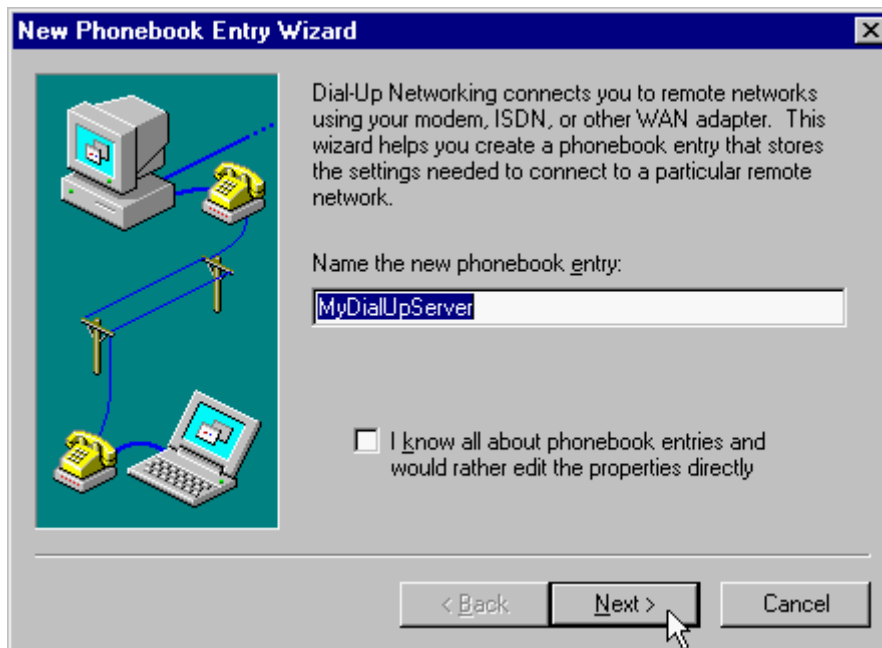




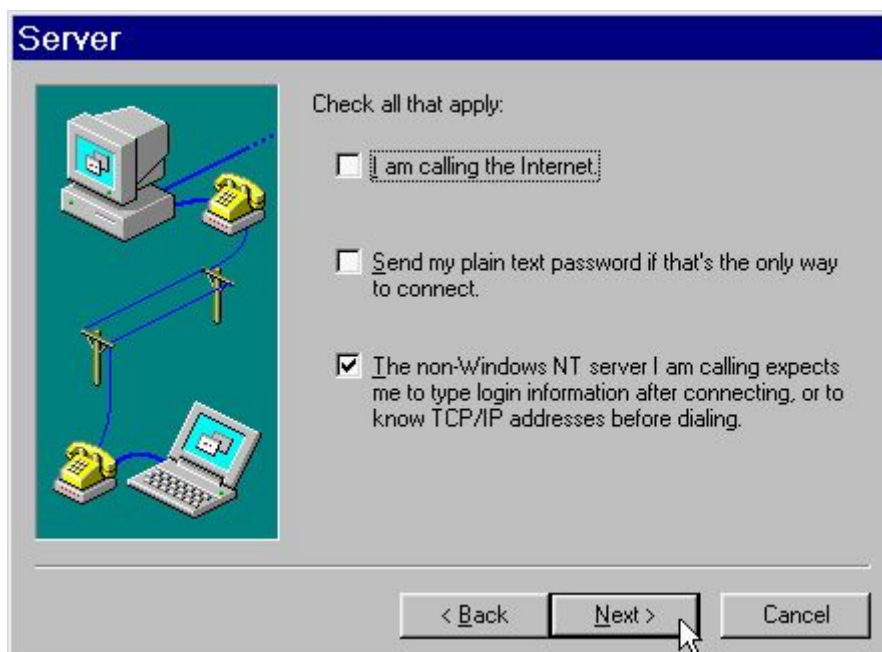
20. If your phonebook is empty, please click **OK** to add an entry.



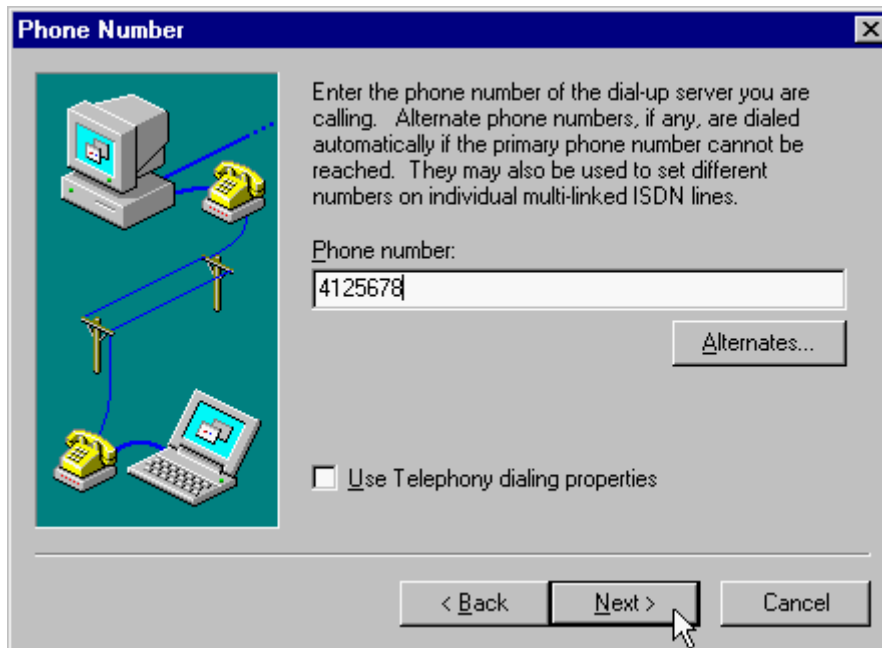
21. You may use the name provided or enter a different one, then click **Next**.



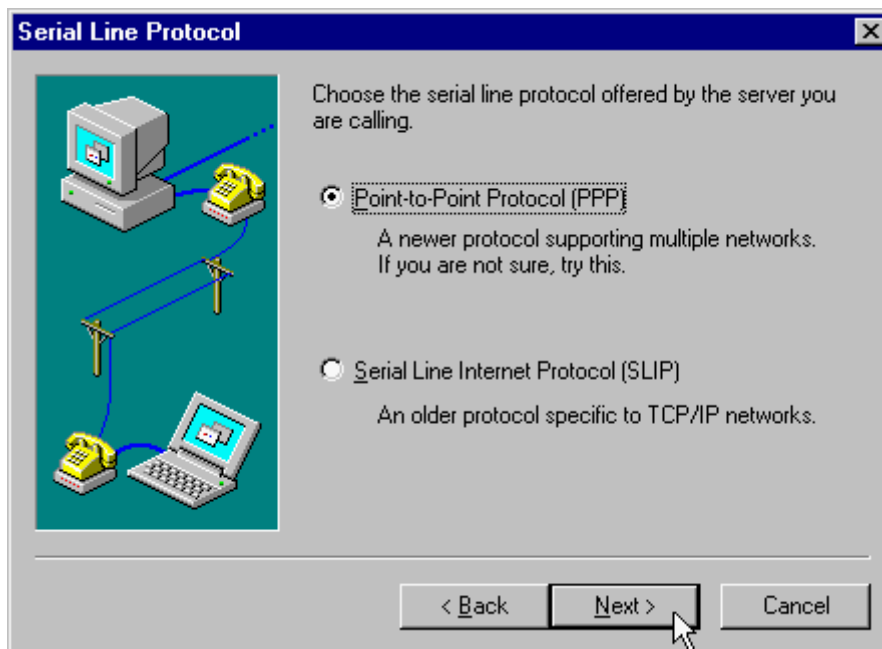
22. Select **The non-Windows NT server I am calling...** then click **Next**.



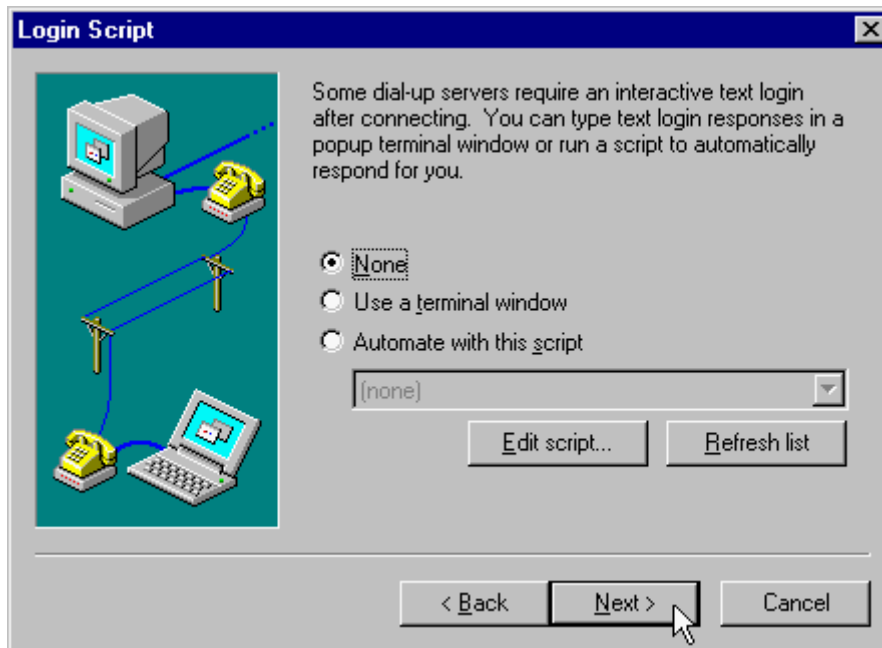
23. Enter the phone number of your local ISP and click **Next**.



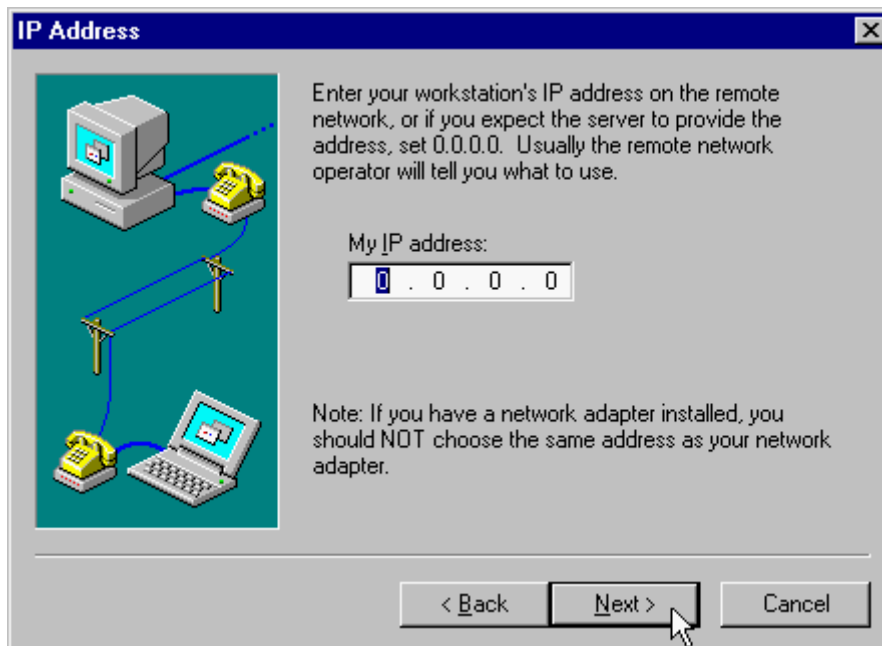
24. Select **Point-to-Point Protocol (PPP)** and click **Next**.



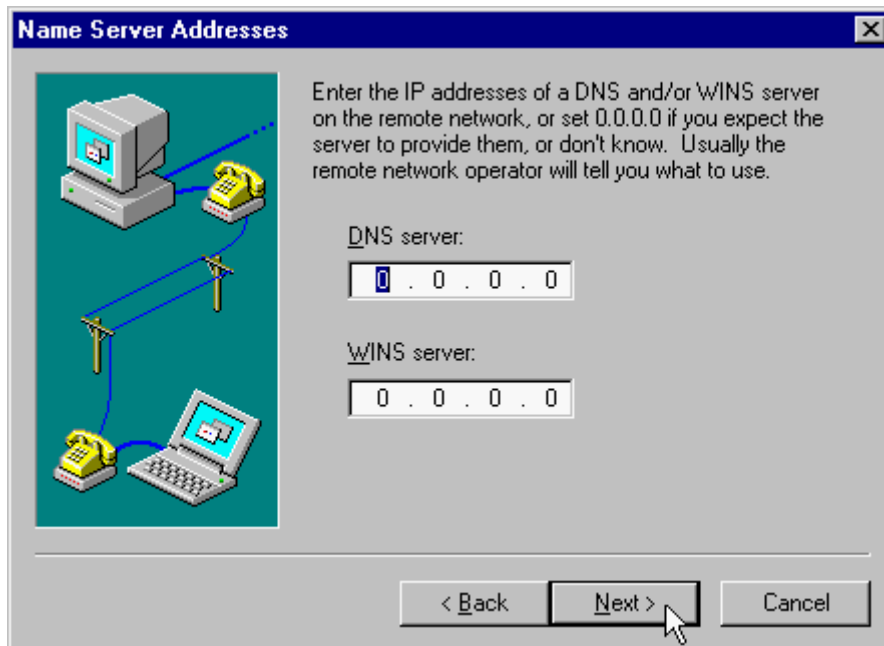
25. Consult with your local ISP for the choice and click **Next**.



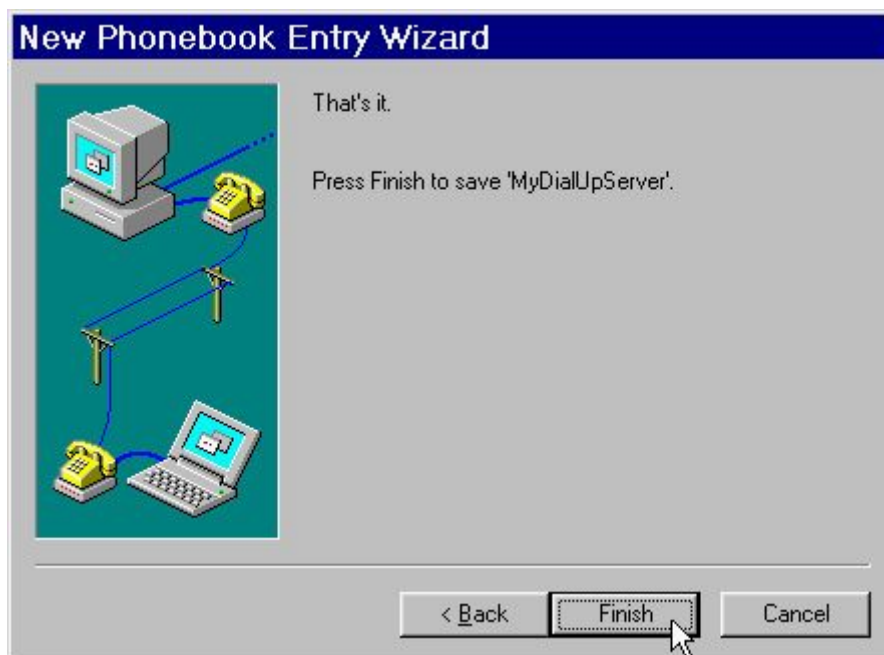
26. Enter your IP address if you have a fixed one or leave the value: **0.0.0.0**, then click **Next**.



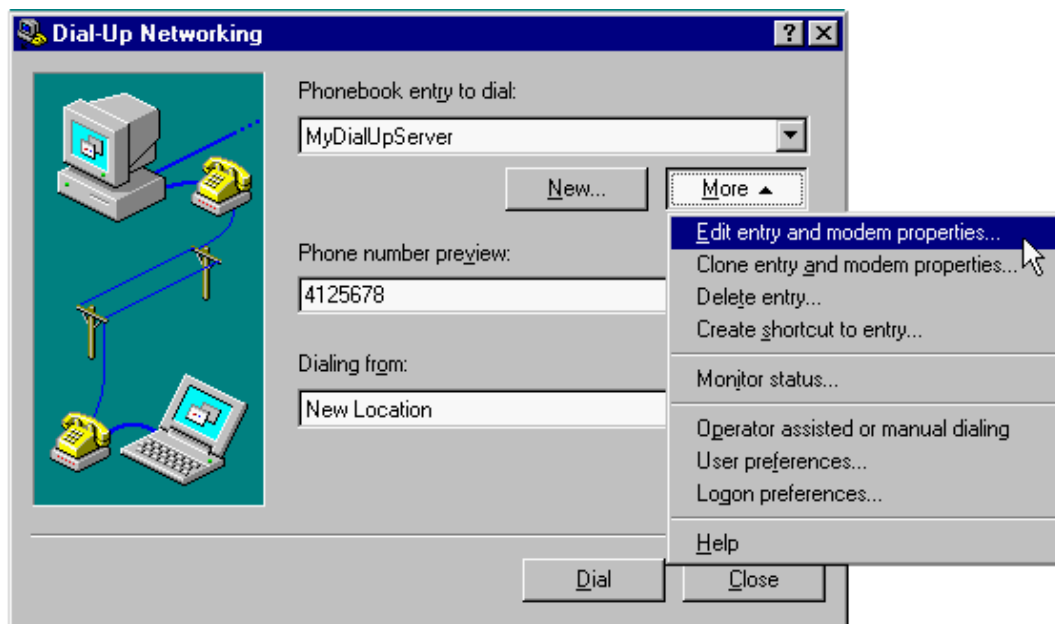
27. Enter the IP addresses of a **DNS** and/or **WINS** server for your local ISP or set **0.0.0.0** if you are not sure. Then click **Next**.



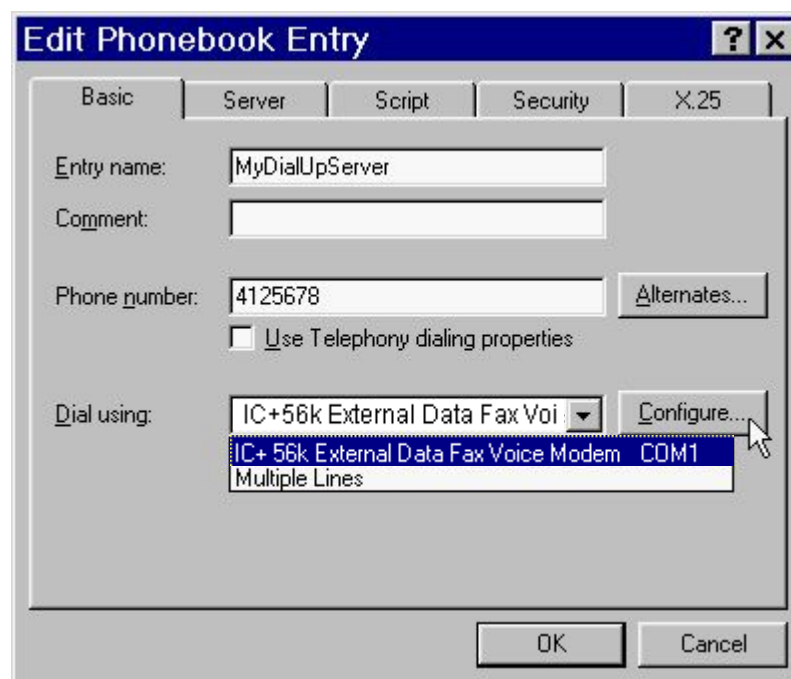
28. Click **Finish**.



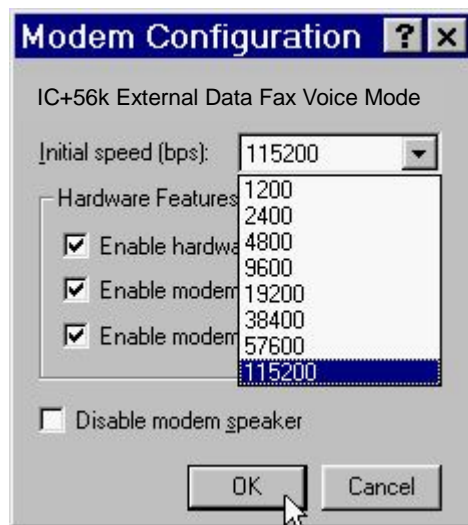
29. Click on the **More** buttons and select **Edit entry and modem properties**.



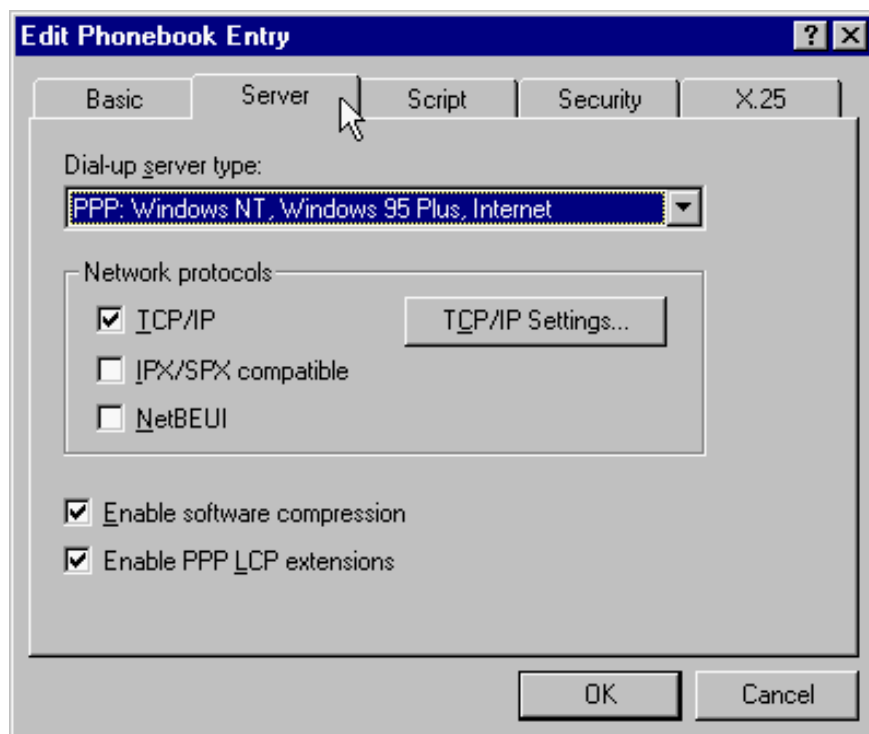
30. Select **IC+56k External Data Fax Voice Modem** from Dial using list and click on the **Configure** button.



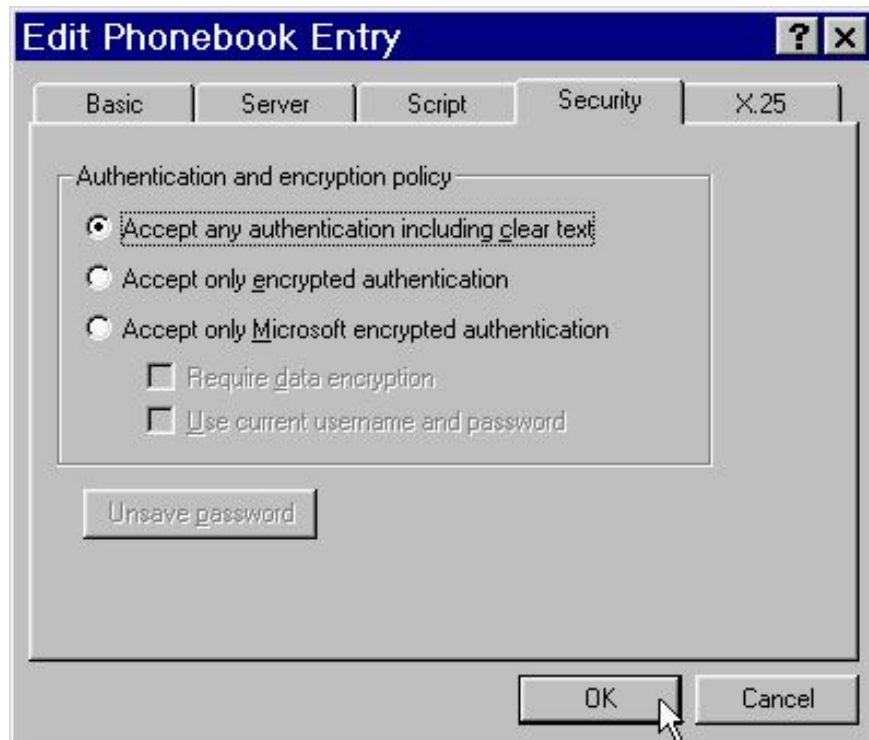
31. Enable all the **Hardware Features** and select **115200** from **Initial speed(bps)** list, then click **OK**.



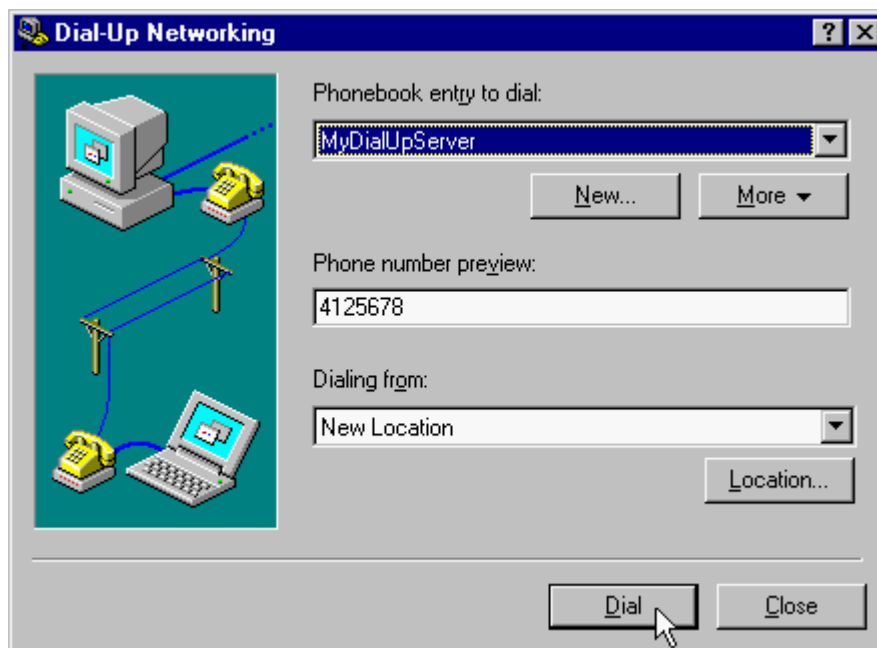
32. Click on the **Server** tab and enable three options of **TCP/IP**, **Enable software compression** and **Enable PPP LCP extensions**.



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



34. Click **Dial** to connect.



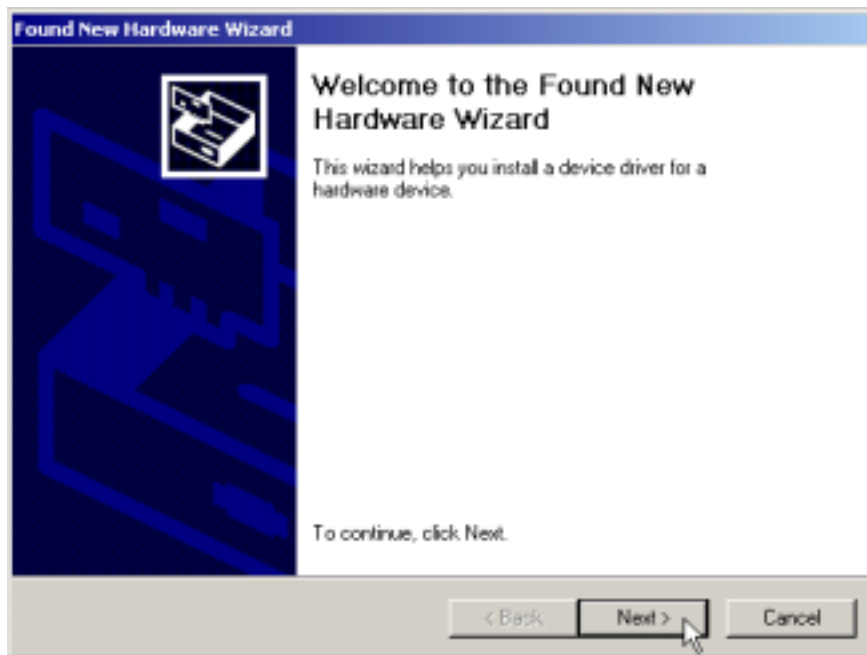
35. Enter **User name** and **Password** and click **OK**, and the modem will dial out to your ISP and get a connection.



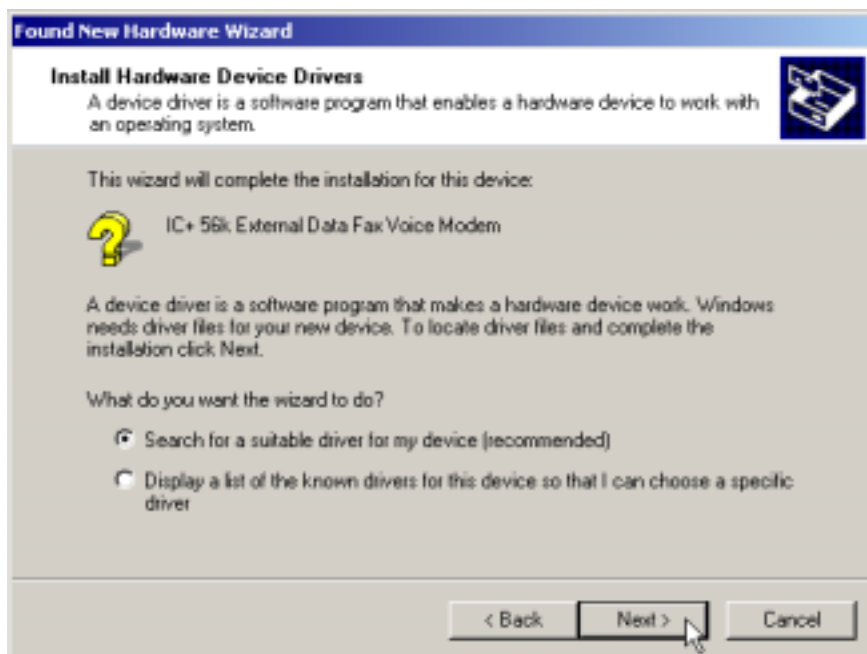


## 4.4 Windows 2000

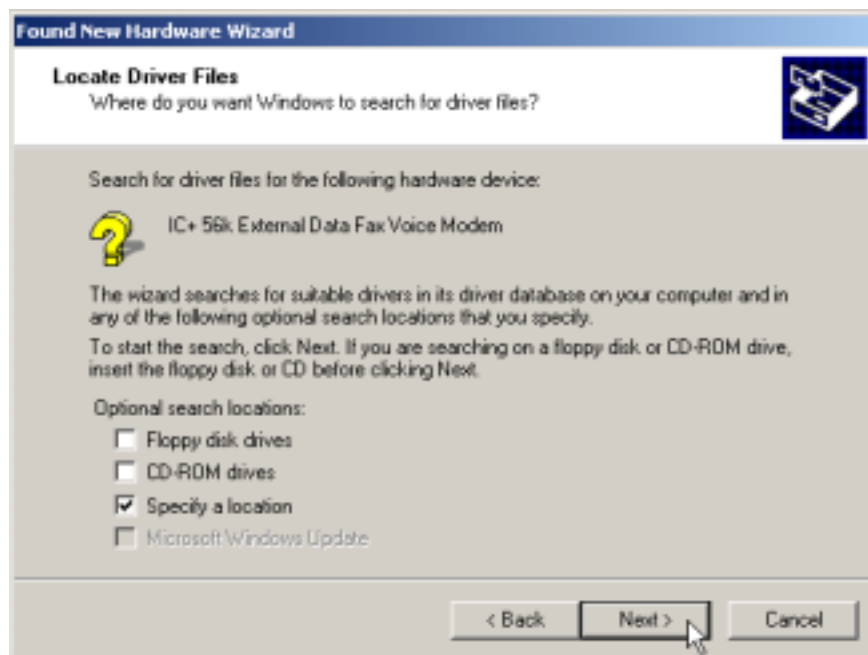
1. Windows will detect the modem automatic, please insert the driver CD supplied and click **Next**.



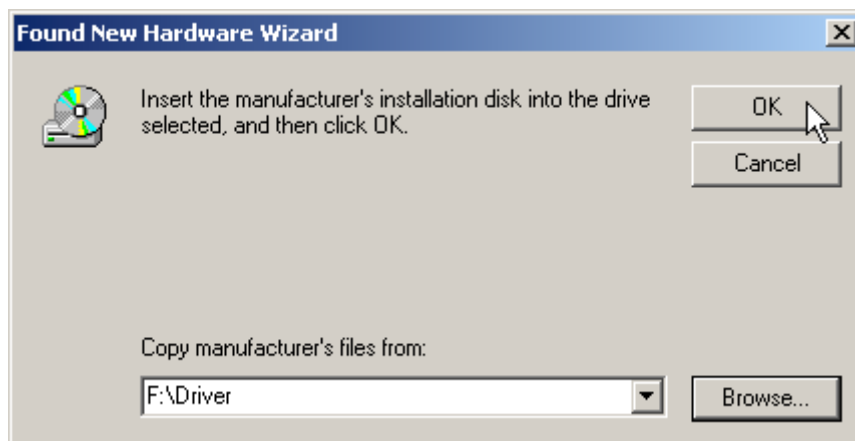
2. Select **“Search for a suitable driver for my device [recommended]”**, then click **Next** to continue.



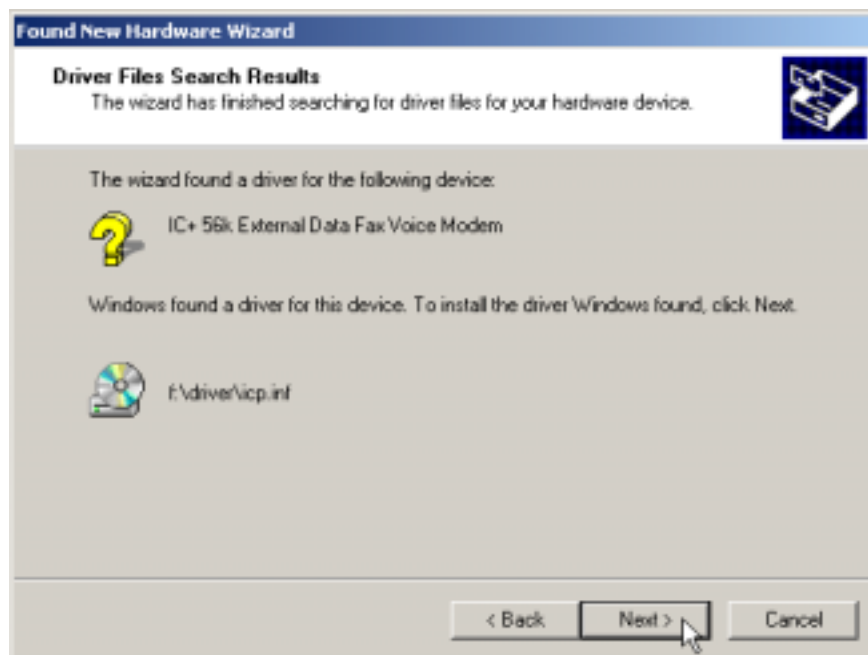
3. Select "**Specify a location**". Then click **Next**.



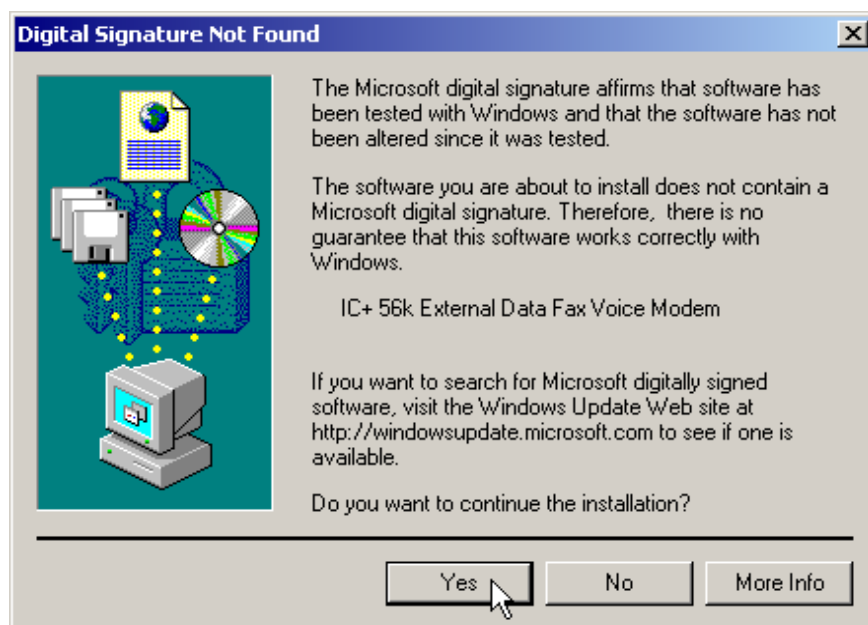
4. Please type the path: **F:\Driver** (F is the letter of your CD-ROM driver), then click **OK** to continue.



- Click **Next** to continue.



- Click **Yes** to continue.



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

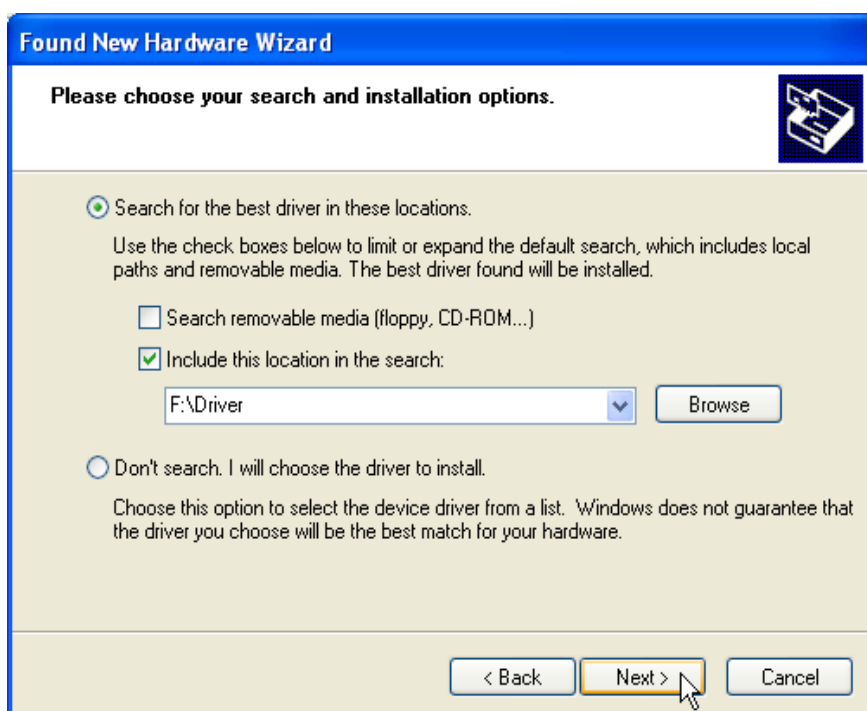


## 4.5 Windows XP

1. Please insert the driver CD supplied when you see the message of **IC+56k External Data Fax Voice Modem**, Select the **Install from a list or specific location [Advanced]** then click **Next** to search for the driver.



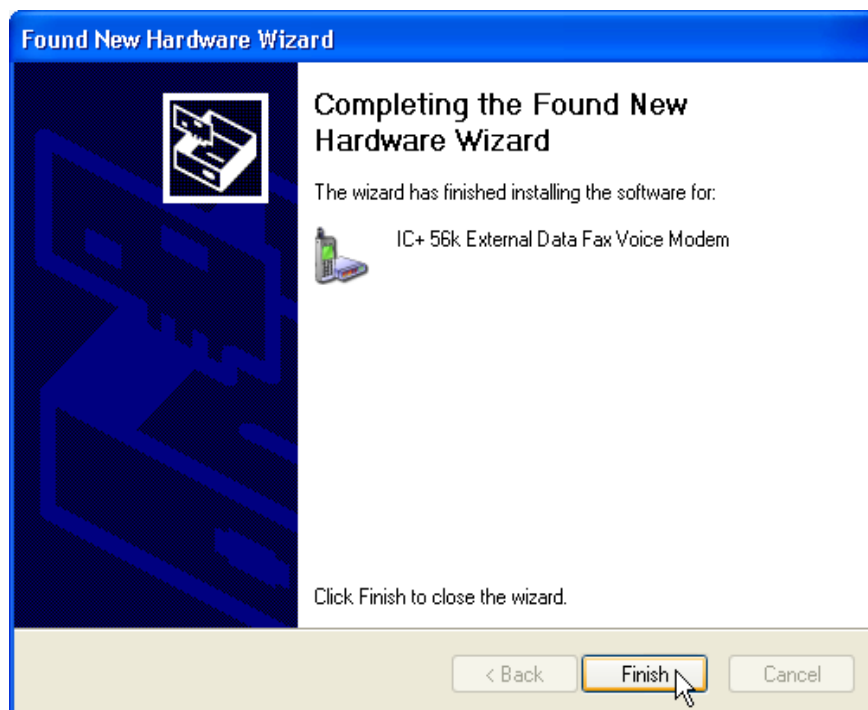
2. Select **Include this location in the search:** and type a path: **F:\Driver** (F is the letter of the CD-ROM drive), then click **Next** to continue.



- Click **Continue Anyway** to continue.



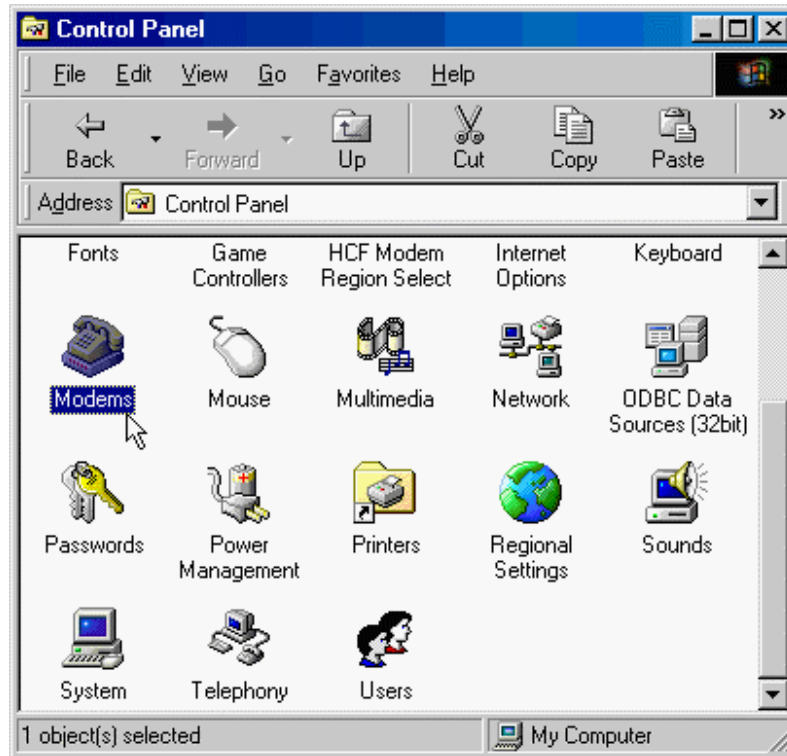
- Click **Finish** to end this procedure.



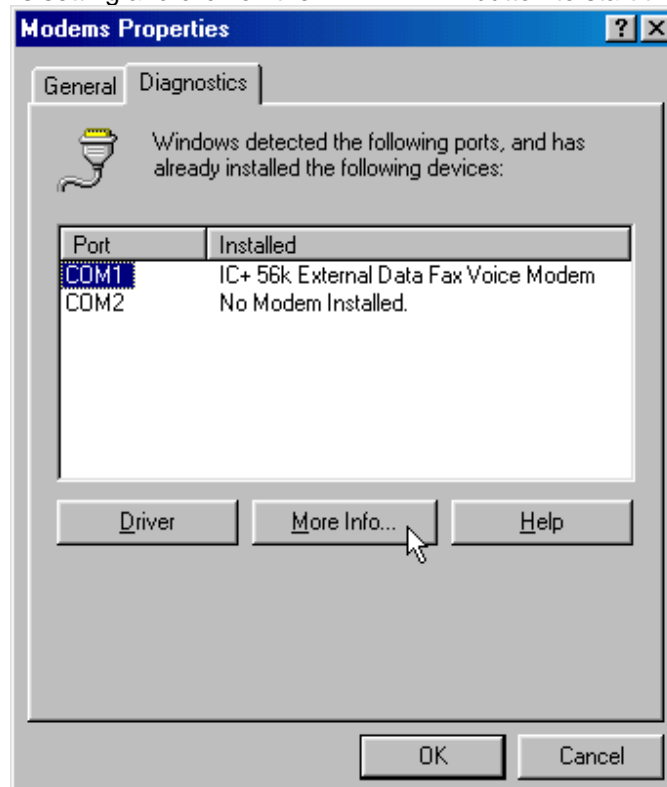
## Chapter 5 Diagnostics

### 5.1 Windows 98/ME

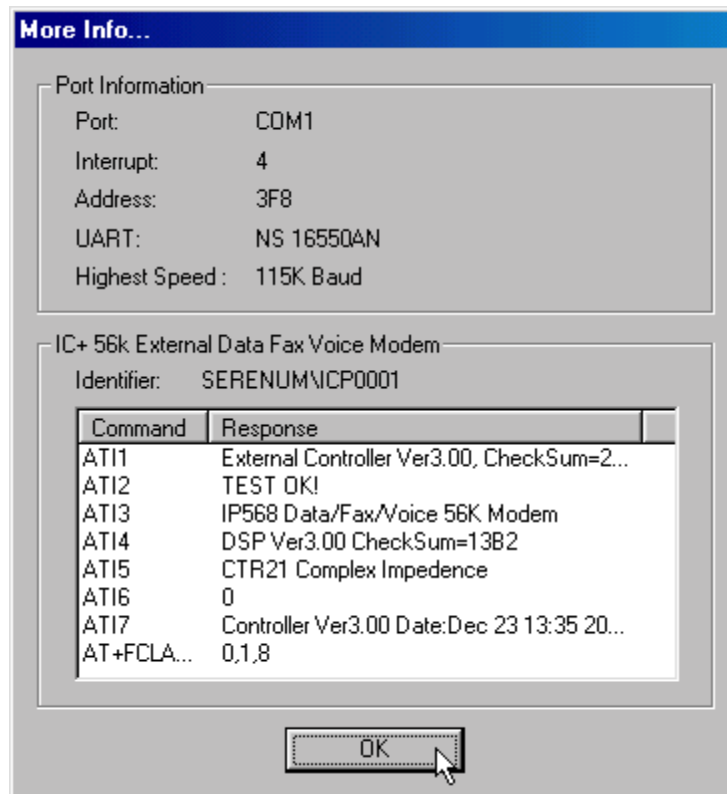
1. Move your cursor as following sequence **Start / Settings / Control Panel** and double-click on the **Modems** icon.



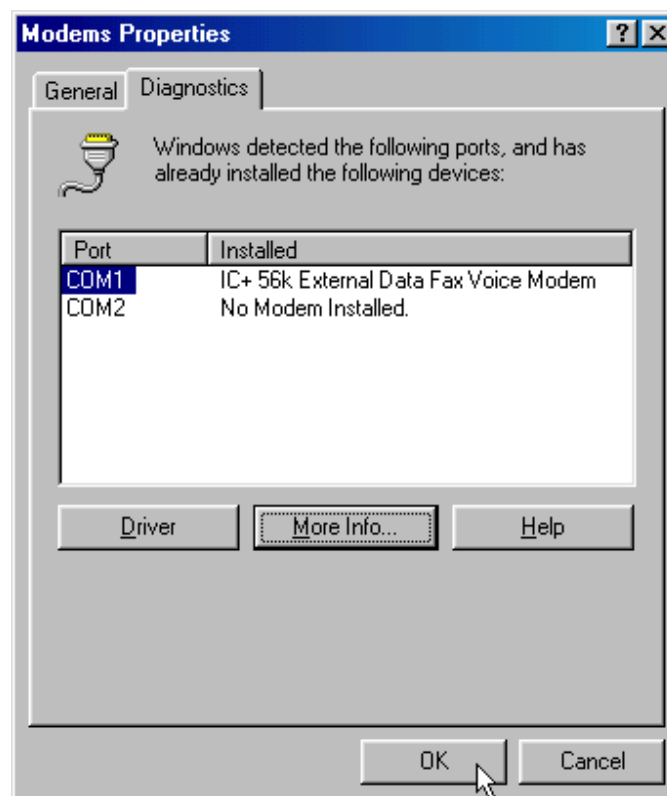
2. To test the modem by clicking on the **Diagnostics** tab. Then select the **COM Port** where Topic Modem is setting and click on the **More Info...** button to start the test.



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



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



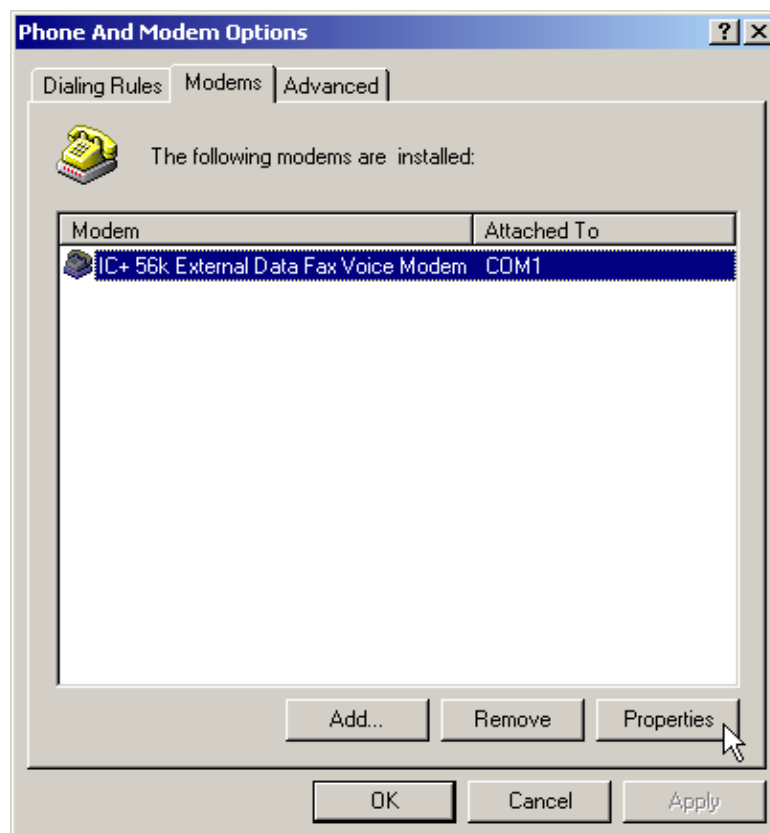


## 5.2 Windows 2000

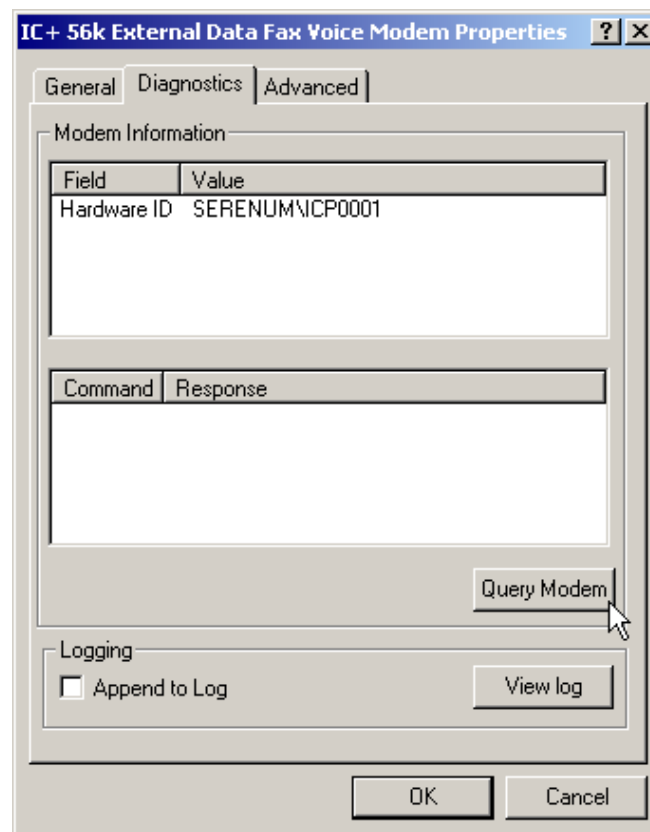
1. Move your cursor as following sequence **Start\Settings\Control Panel**. Then double-click on the **Phone and Modem Options** icon.



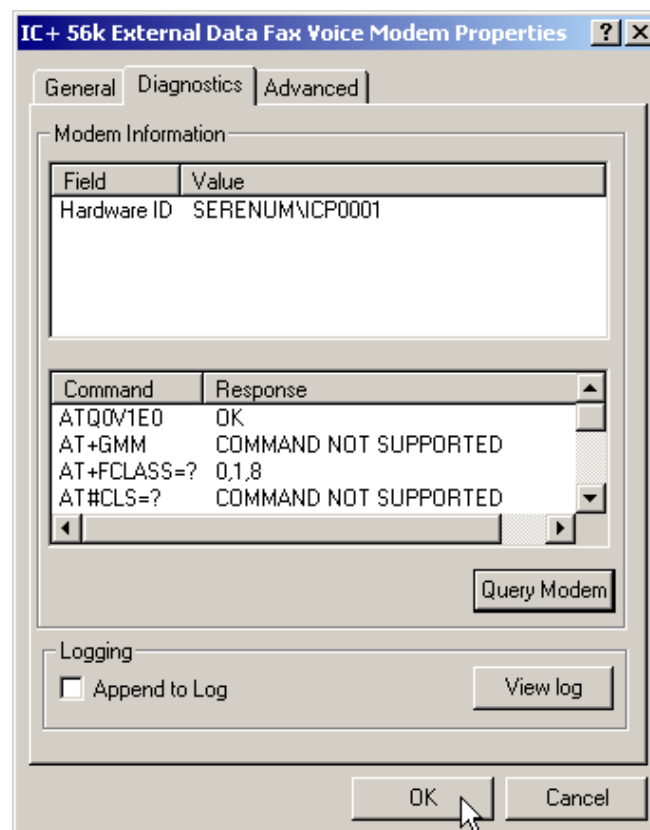
2. Click **Modems** tab, then select **IC+56k External Data Fax Voice Modem** and click **Properties**.



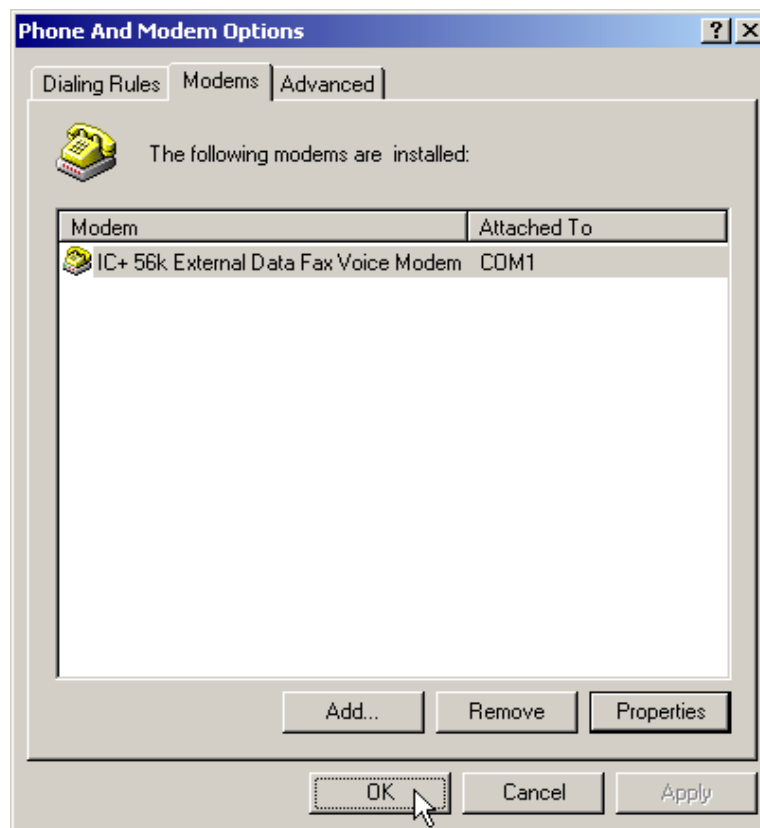
- Click **Diagnostics** tab, then click **Query Modem**.



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

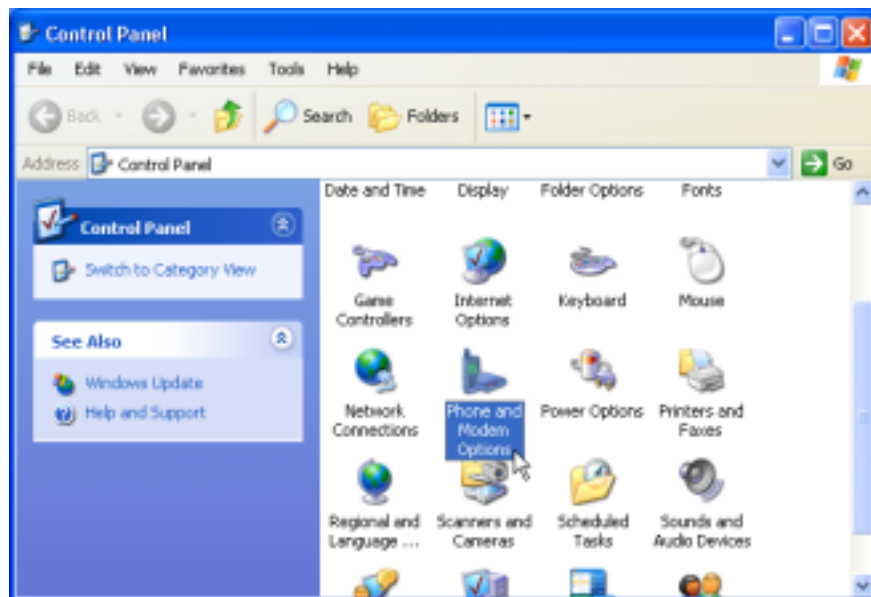


5. Click **OK** to end this procedure.

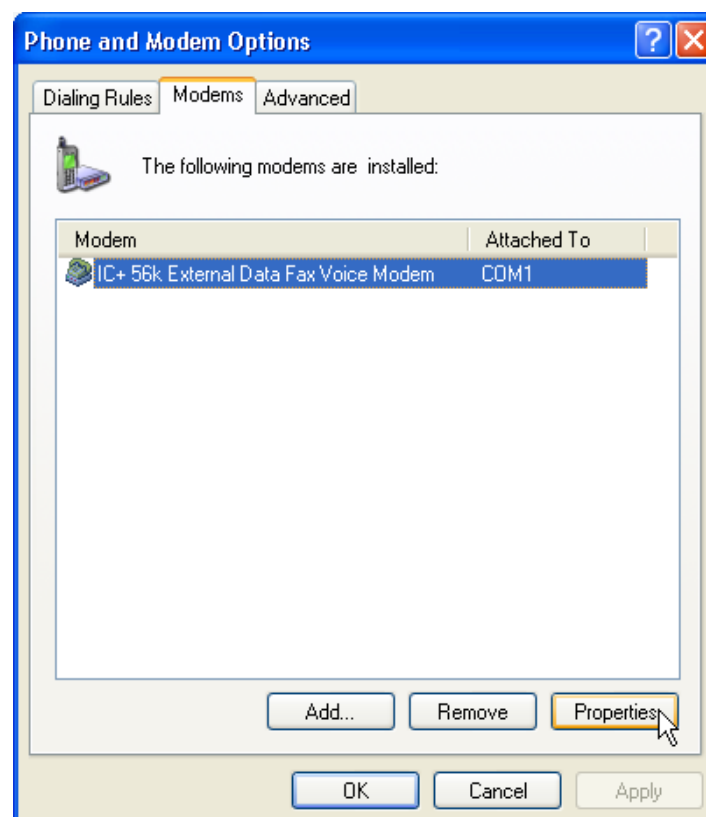


### 5.3 Windows XP

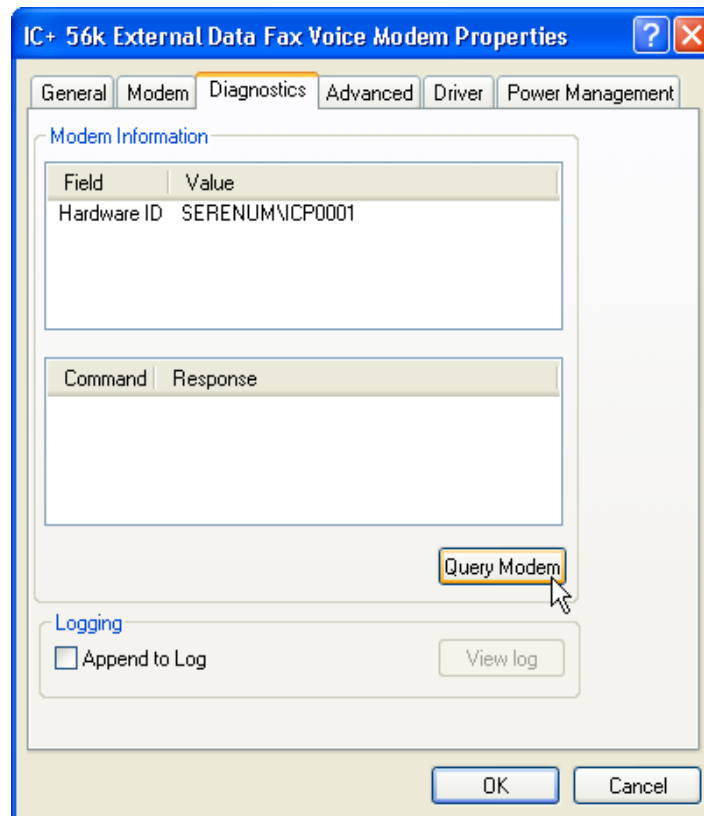
1. Move your cursor as following sequence **Start\Settings\Control Panel**. Then double-click on the **Phone and Modem Options** icon.



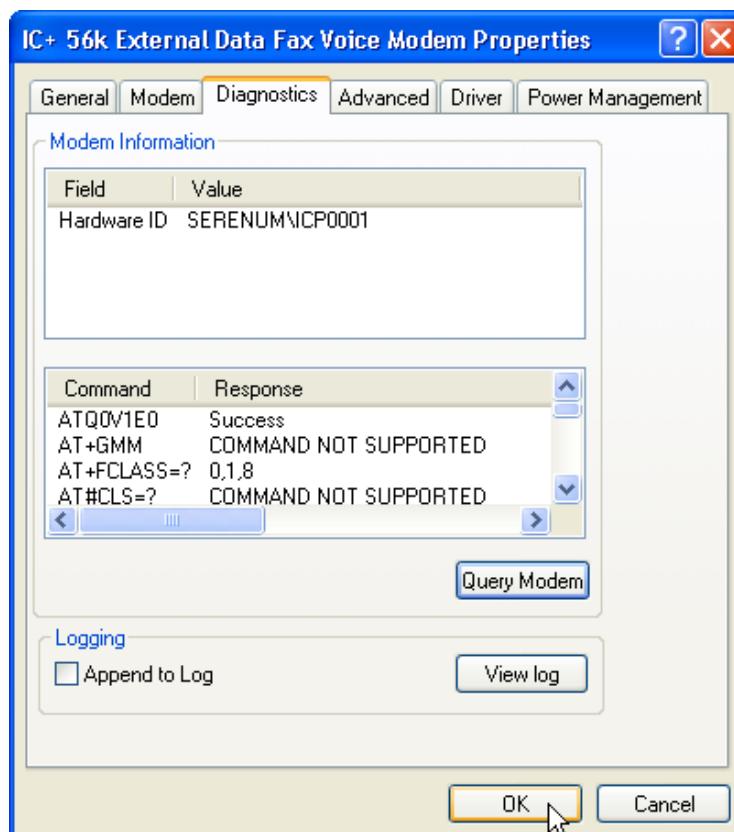
2. Click **Modems** tab, then select **IC+56k External Data Fax Voice Modem** and click **Properties**.



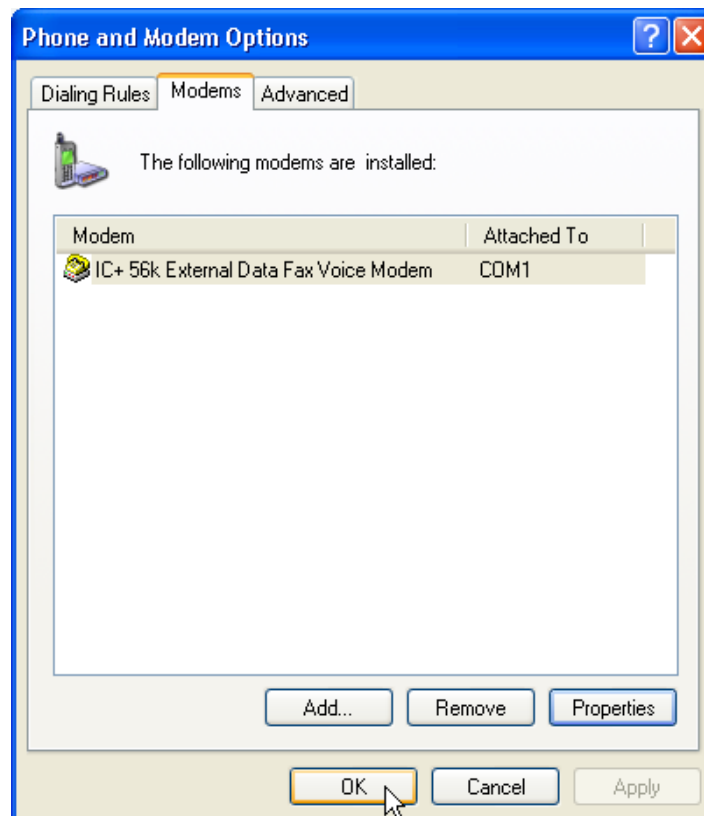
- Click **Diagnostics** tab, then click **Query Modem**.



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



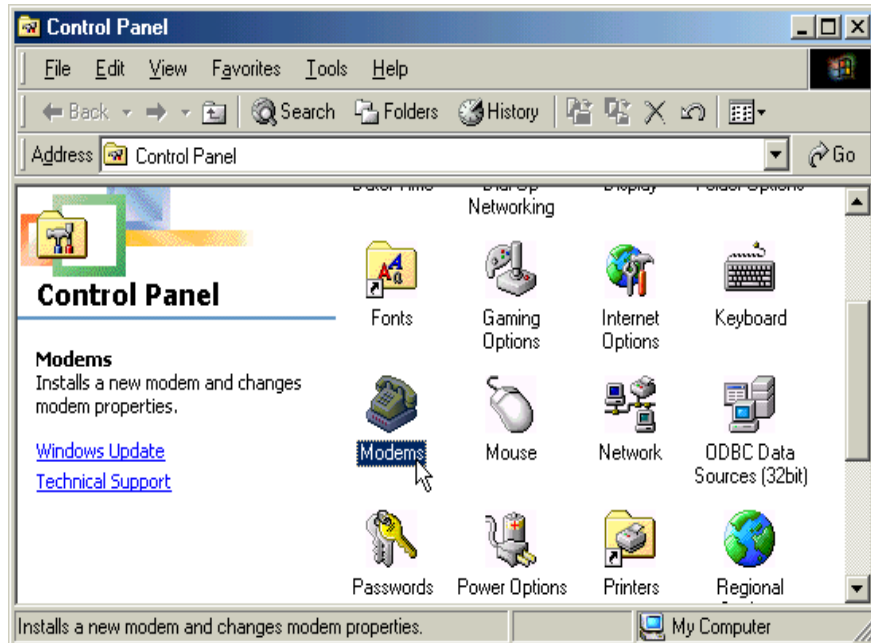
5. Click **OK** to end this procedure.



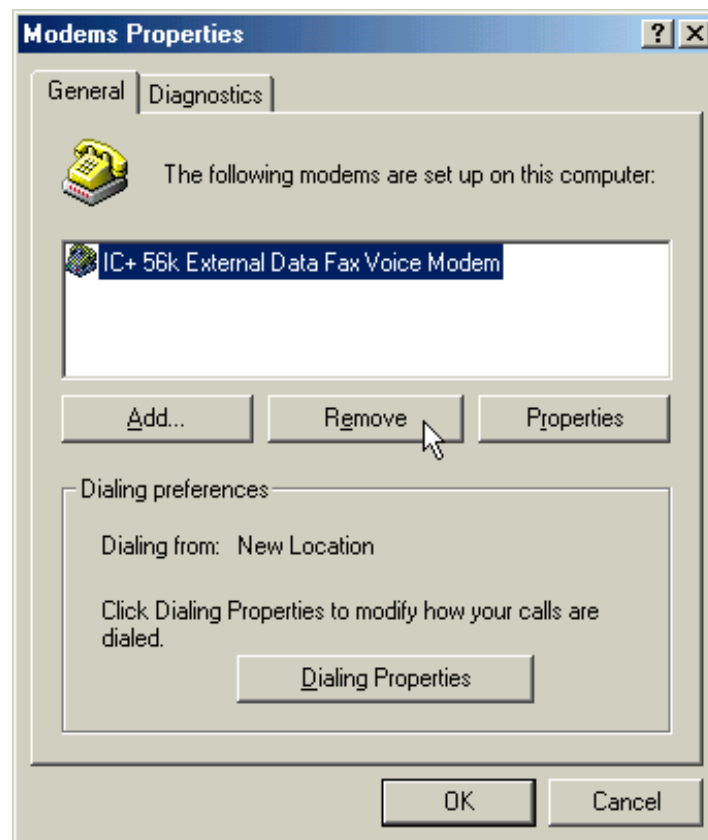
## Chapter 6 Uninstalling

### 6.1 Windows 98/ME

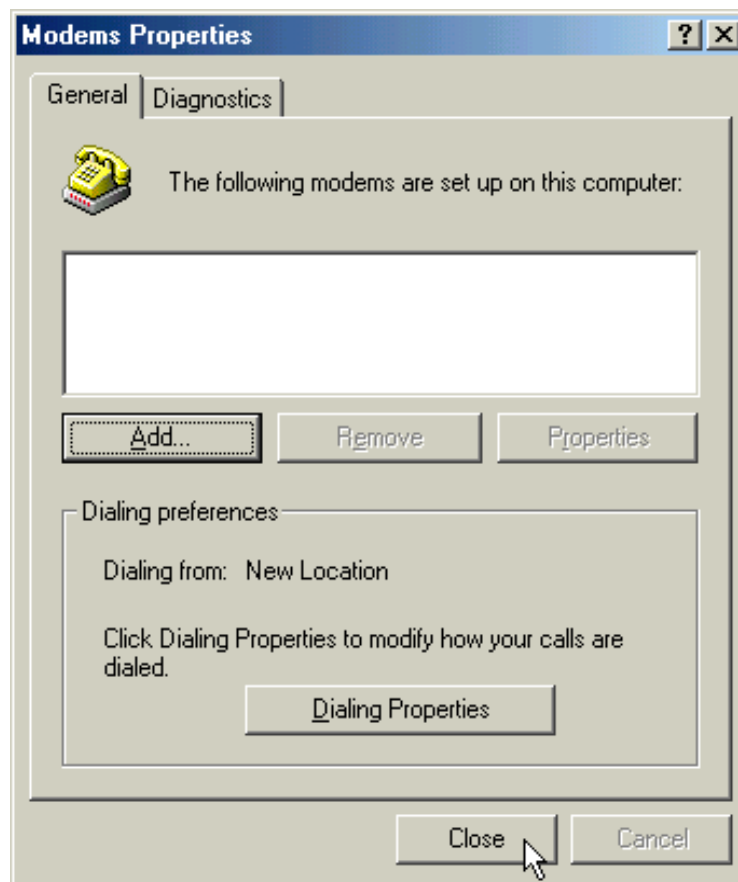
1. Move your cursor as following sequence **Start / Settings / Control Panel** and double-click on the **Modems** icon.



2. Select **IC+56k External Data Fax Voice Modem**, then click **Remove**.



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



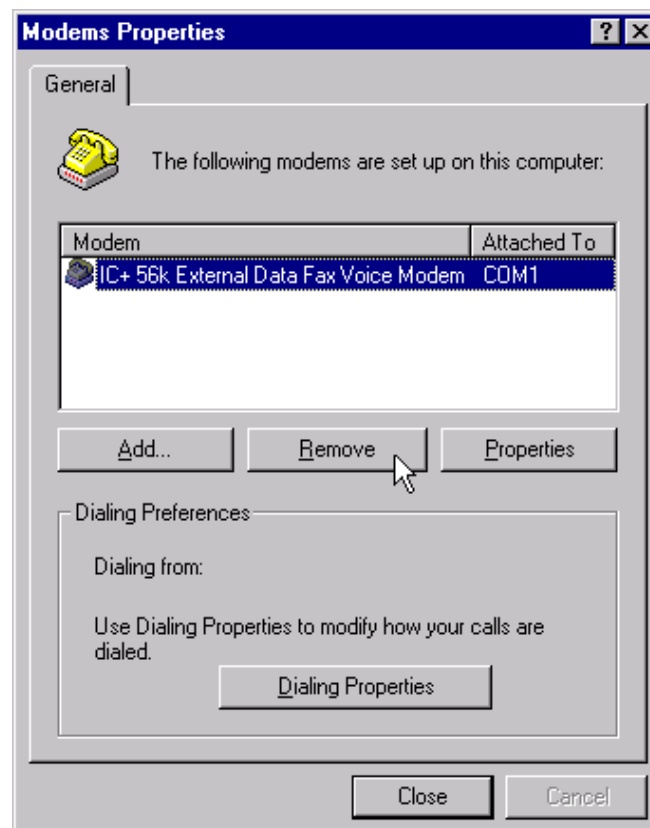


## 6.2 Windows NT 4.0

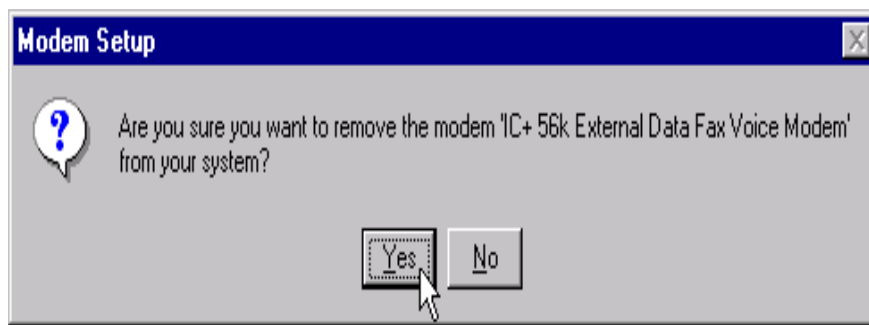
1. Move your cursor as following sequence **Start\Settings\Control Panel**, then double-click on **Modems** icon.



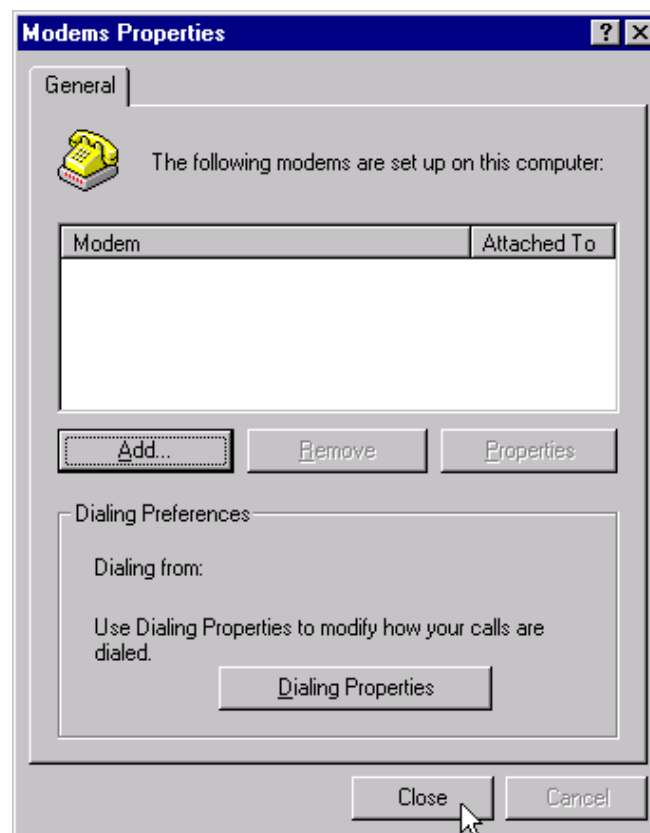
2. Select **IC+56k External Data Fax Voice Modem**, then click **Remove**.



- Click **Yes**.



- Click **Close** to end this procedure.

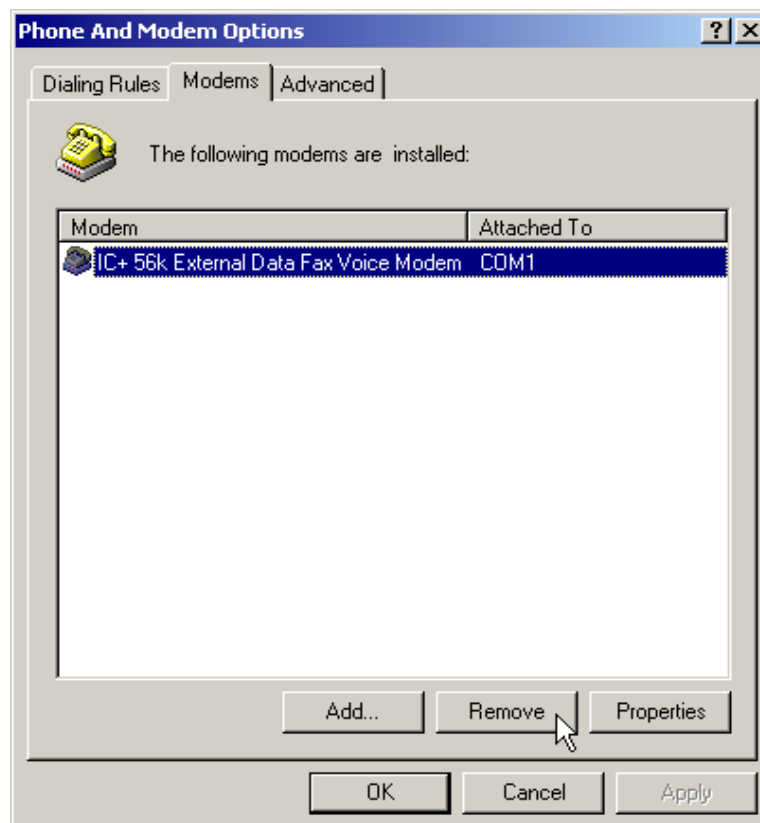


### 6.3 Windows 2000

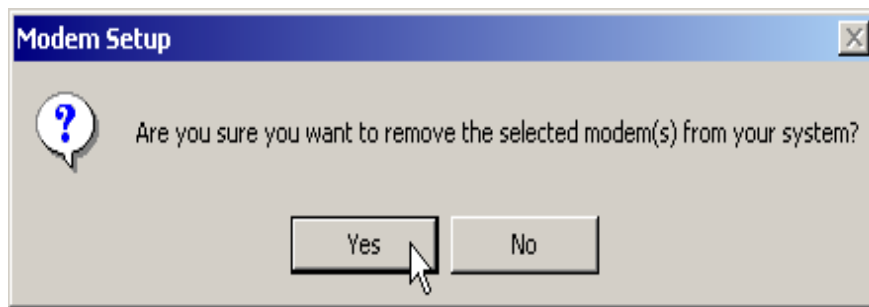
1. Move your cursor as following sequence **Start \ Settings \ Control Panel**. Then double-click on the **Phone and Modem Options** icon.



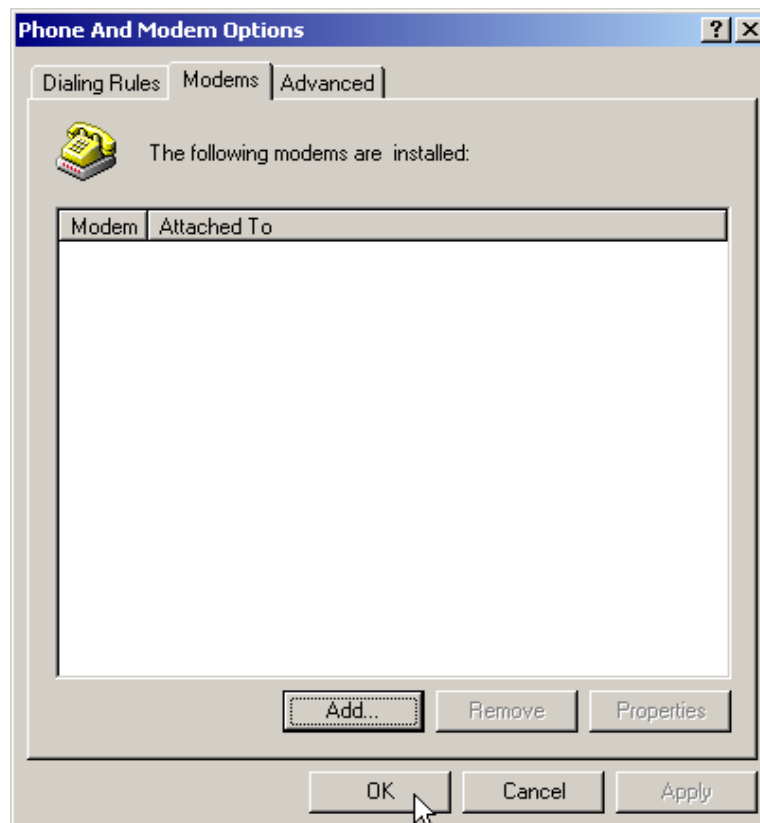
2. Click **Modems** and select **IC+56k External Data Fax Voice Modem**, then click **Remove**.



3. Click **Yes**.

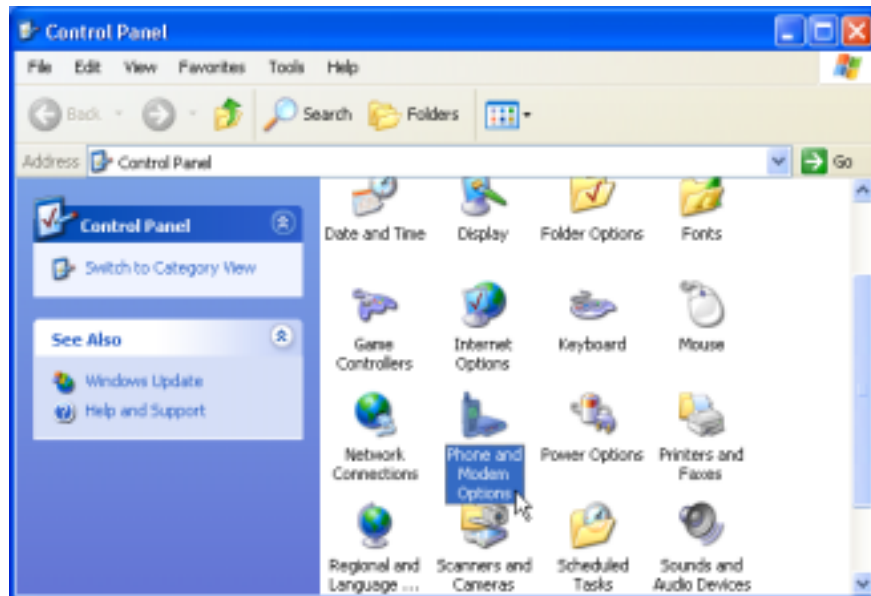


4. Click **OK** to end this procedure.

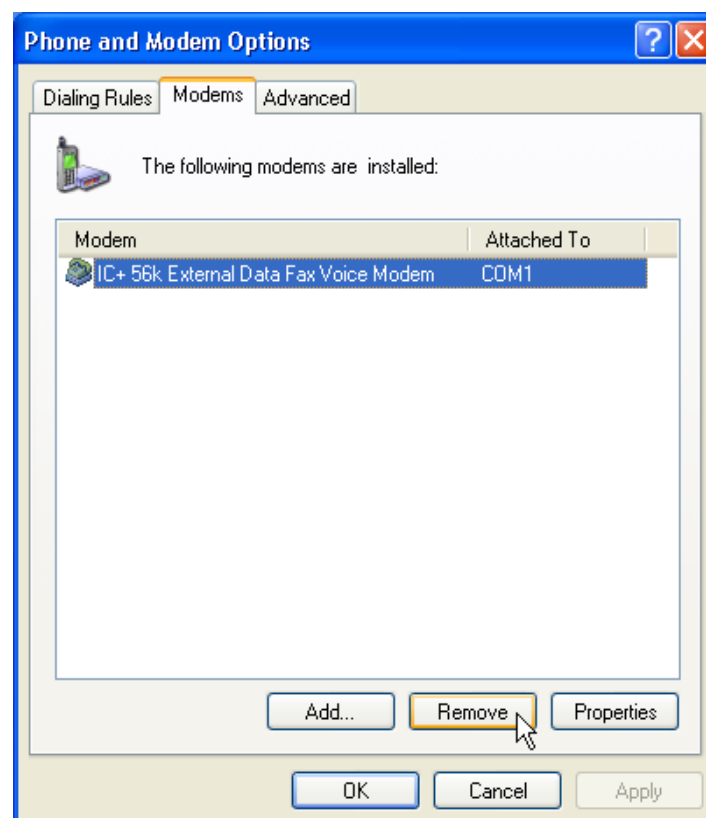


## 6.4 Windows XP

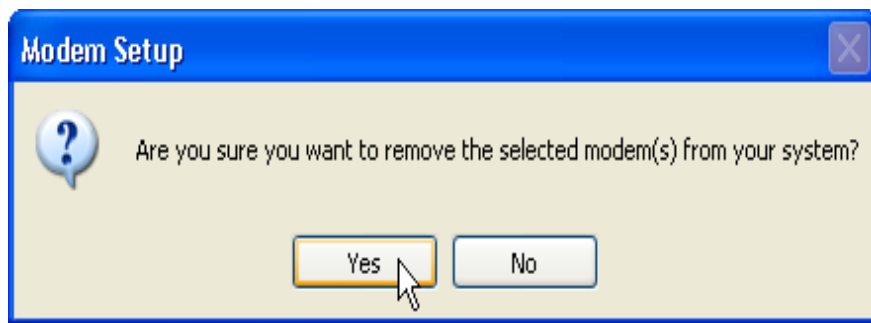
1. Move your cursor as following sequence **Start \ Settings \ Control Panel**. Click on the **Phone and Modem Options** icon.



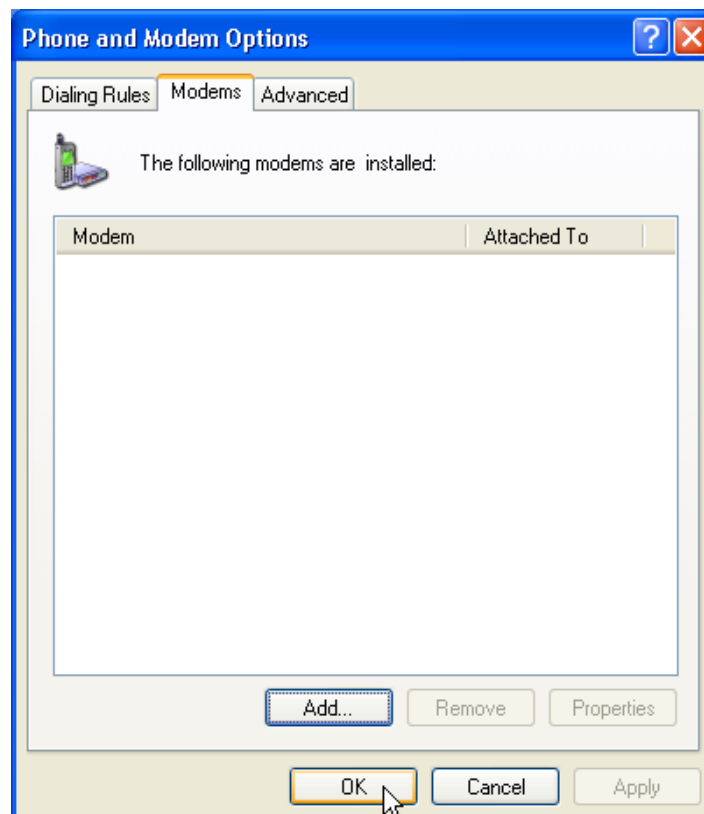
2. Click **Modems** and select **IC+56k External Data Fax Voice Modem**, then click **Remove**.



- Click **Yes**.



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



## Chapter 7 Troubleshooting

### Modem will not dial-out

- Check your phone cable connected properly into LINE jack.
- If you use the Tone-dialing on a line, but required the Pulse-dialing method, please change the command T to P in your dial command line.

### Modem will not answer an incoming call

- Check your phone cable connected properly into LINE jack.
- By connect a Telephone to the PHONE jack. The attached telephone will ring if you try calling from another telephone line.
- Configured the modem to Auto-answer modem.

### No connection after modem dial out

- Remote modem may be not setting to answer mode, if you aren't hearing a high-pitch tone when remote modem answering.
- Perhaps poor-quality or noise telephone lines try another call.

### Data error when modem connection

- Make sure your software data format is match to remote side (for example: 8,N, 1).
- Make sure the modem flow control method is matched to communication software.
- Try another call may be poor quality or noise telephone lines.

### Fax and voice problems

- Be sure the Data Communication is installed and worked properly, otherwise check the mentioned procedure carefully and consult the Fax/Voice manual step by step.