

# ***56K Fax Modem***

**Conexant HCF**

**User's Guide**

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## 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  
TELECOMMUNICATIO 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 internal modems of HCF series. From now, you are just adding a very important communication function to your PC. HCF series use the most advanced chip set made by Conexant (originate from Rockwell), which can support the controlless modem function, increase CPU usage and reduce the cost of purchasing modems. Same as other modems, the main purpose of this product is to assist your computer to connect to others or to the Internet through the phone line. Meanwhile, it can also support fax and voice. By using the product, you not only can use your PC as a facsimile machine but also can use your PC to talk or transfer your incoming calls into voice mailbox. Thanks for purchasing our products again. We truly hope that it can meet your satisfaction.

### 1.2 Packing

HCF series include the following accessories:

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

## Chapter 2 Specifications

### 2.1 Specifications

Line data rate	56000,54000,50000,48000,46000,44000,42000, 40000, 38000, 36000, 34000, 33600, 32000, 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 RCV56HCF
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	Build 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 166+, 16M RAM+, L2 cache256K
System compatibility	OS Windows 95/98/ME/NT4.0/2K

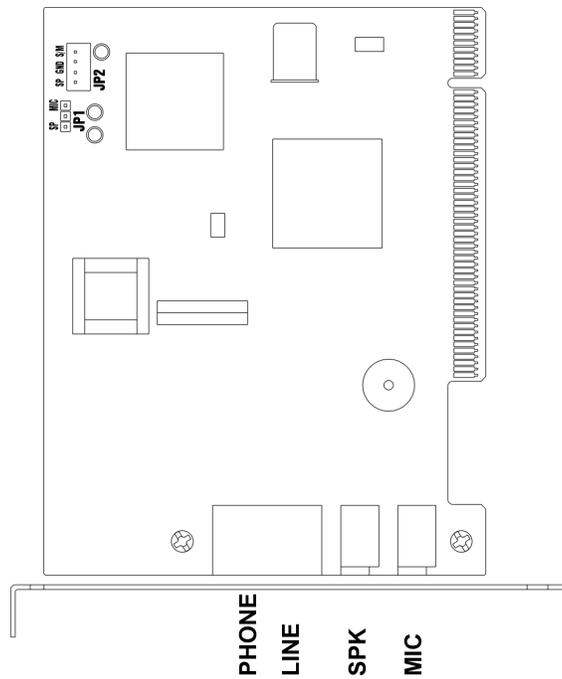
## Chapter 3 Hardware Installation

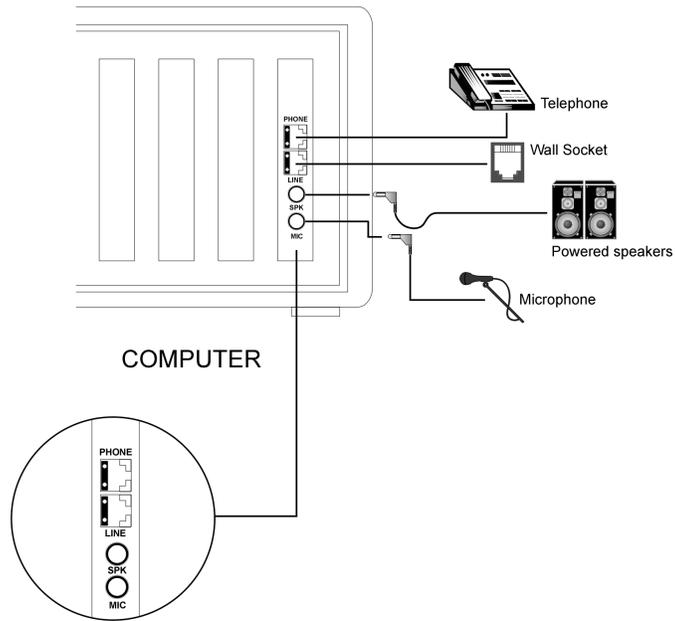
### 3.1 Installing the Modem Card in Your Computer

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.





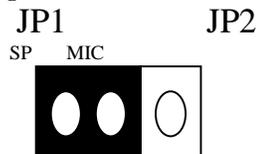
**Jumper setting (Optional)**

JP2: This is an Audio connector between sound card and modem card.

PIN	Definition
SP	Speaker L channel
GND	Ground
GND	Ground
SP/MIC	Speaker R or Microphone input

JP1 & JP2: Speaker or Microphone (SP/MIC)

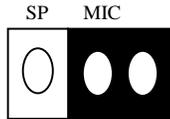
**Configuration A**



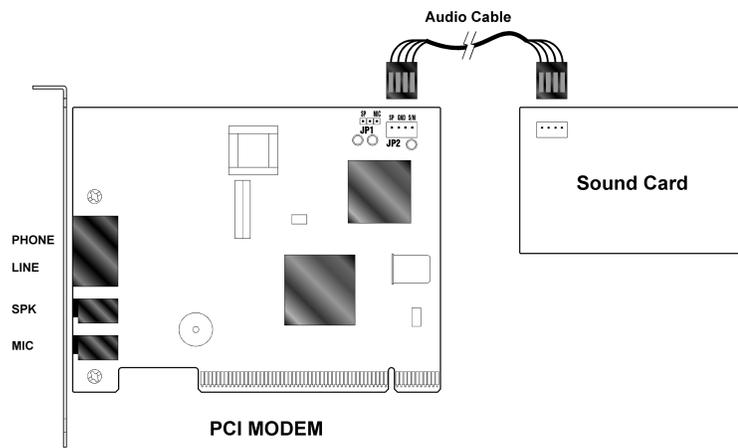
PIN	Definition
SP	Speaker L channel
GND	Ground
GND	Ground
SP	Speaker R channel

**Configuration B**

JP1 JP2



PIN	Definition
SP	Speaker L channel
GND	Ground
GND	Ground
MIC	Microphone input.



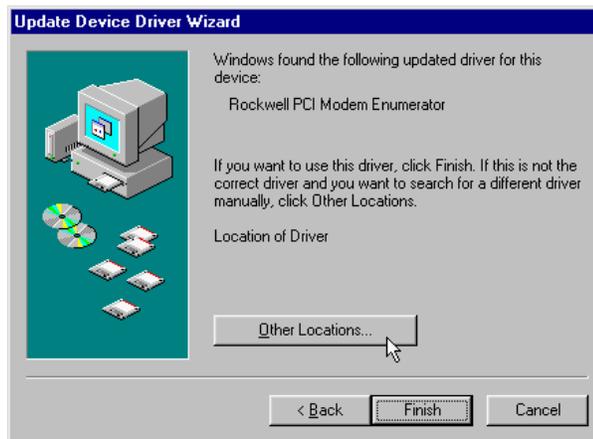
## Chapter 4 Software Installation

### 4.1 Windows 95 B (OSR2)

1. When you 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**.



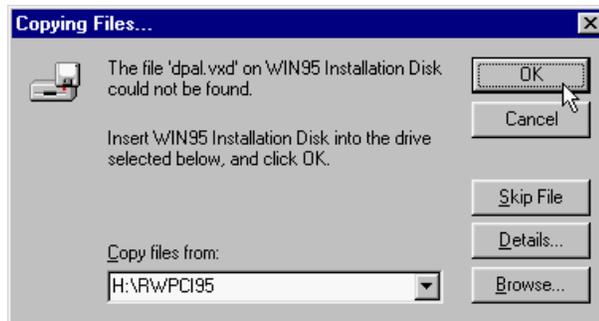
2. Click **Other Locations...** to search for the correct driver and location.



3. Click **OK** to continue.



4. Use the **Browse** or type in the driver location **H:\RWPC195**, then click **OK**. The Windows will install the modem driver automatically. (H is the drive letter of the CD-ROM drive)



## 4.2 Windows 98

1. The message of **PCI Communication Device** will appear, however, it may vary with the type of your Mother board. Then insert the driver CD supplied and 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:\Rwpci95** (H is the letter of the CD-ROM drive) directly and then click **Next**.



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



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

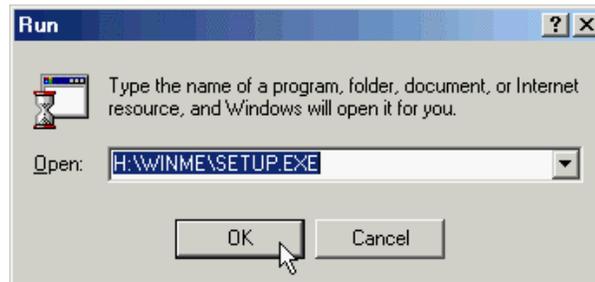


### 4.3 Windows ME

1. The message of **PCI Communication Device** will appear, however, it may vary with the type of your Mother board. Then click **Cancel** icon to stop the **Add New Hardware Wizard**. Then Windows ME will go on.



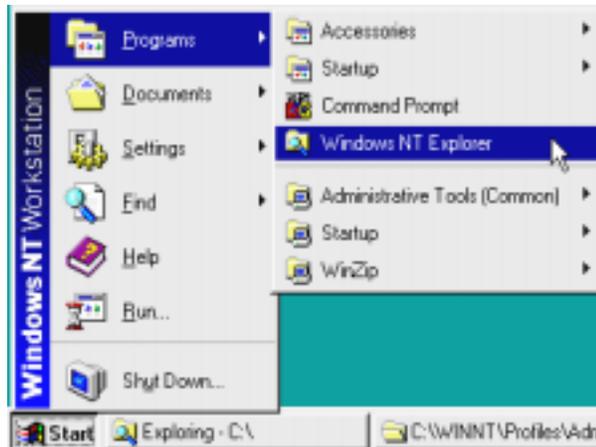
2. After Windows ME has running automatically, please move your cursor as following sequence **Start\Run** and type **H:\WinME\Setup.exe** (H is the letter of the CD-ROM drive) then click **OK**. Windows ME will install modem driver automatic.



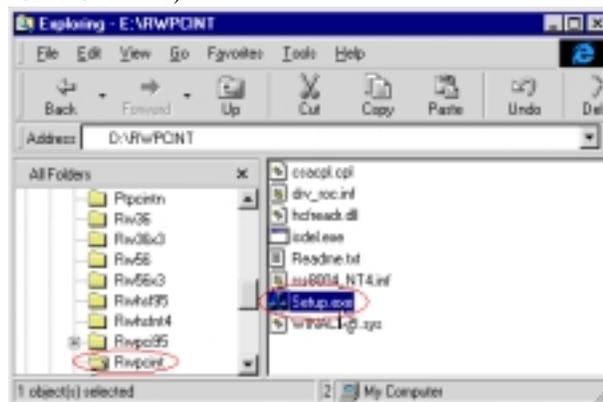
## 4.4 Windows NT 4.0

### 4.4.1 Install driver

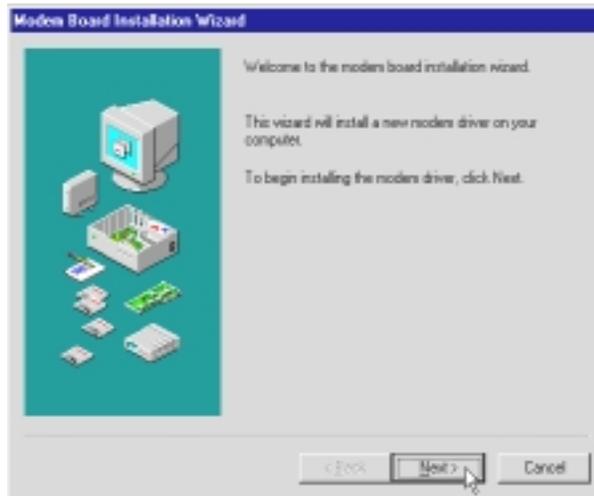
1. Please insert the CD-ROM supplied with the modem and go to **Start / Programs / Windows NT Explorer**.



2. Go to the directory **X:\RWPCINT** and run the file **Setup.exe**. (**X** is the drive letter of the CD-ROM drive)



3. Click **Next**.



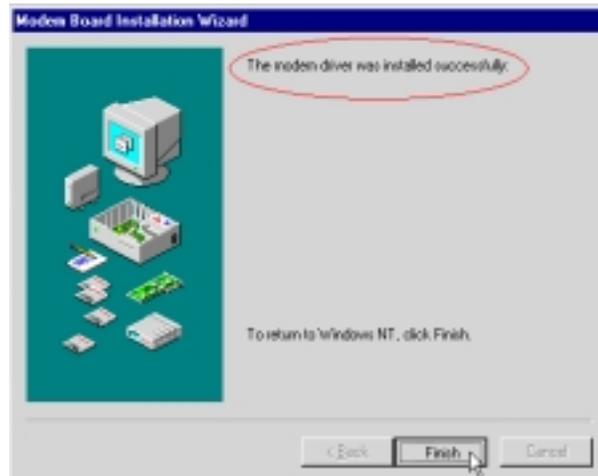
4. Windows NT will find the **Rockwell HCF 56K Data Fax PCI Modem** than Click **Next**.



5. Please highlight your country and click **OK**.



6. You will see **The modem driver was installed successfully**, then click **Finish**.



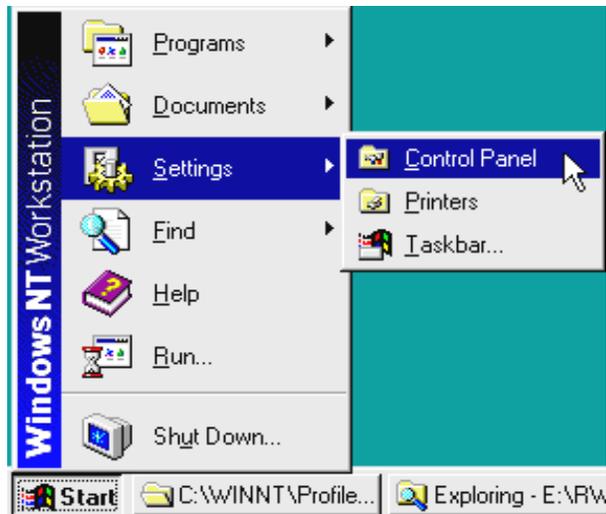
7. Press **OK** to reset your system.

**Note:** You must restart your computer before you enable the modem function.

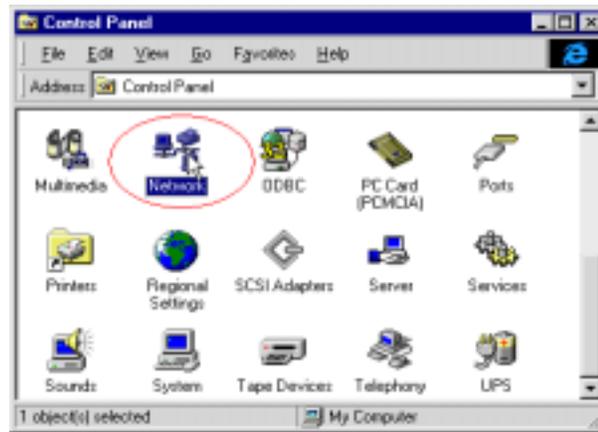


#### 4.4.2 Remote Access

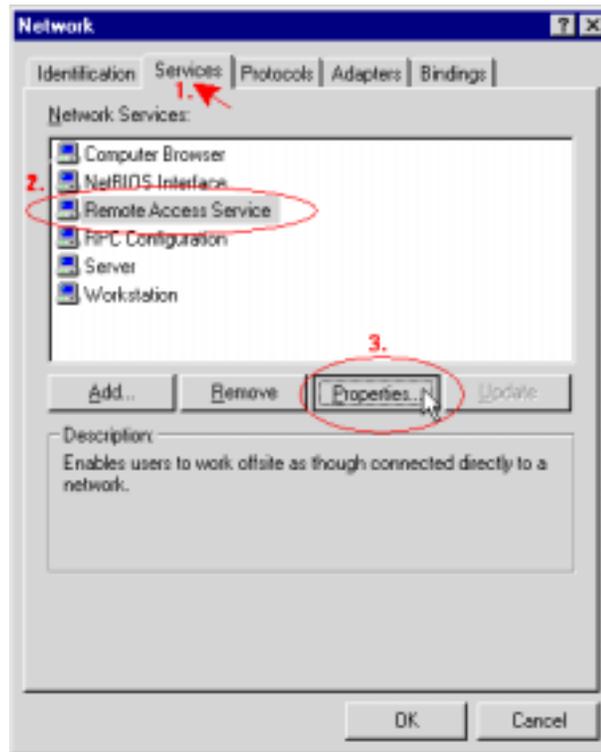
1. Please go to **Start / Settings / Control Panel**.



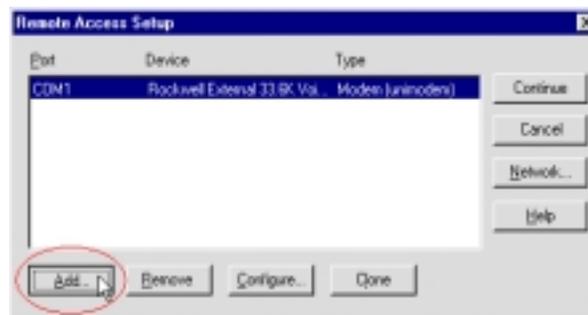
2. Double-click on the **Network** icon.



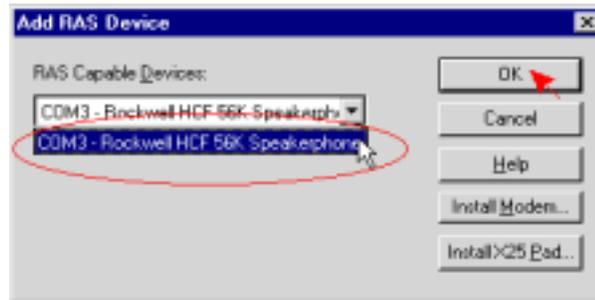
3. Please highlight the service: **Remote Access Service** and press the **Properties** button.



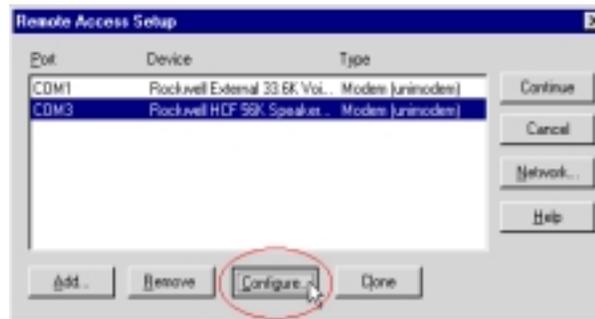
4. Click on the **Add** button to add your HCF 56k modem.



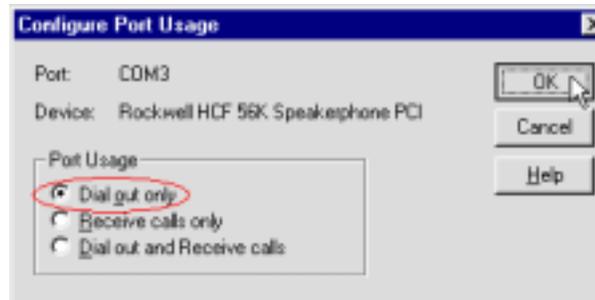
5. Click **OK**.



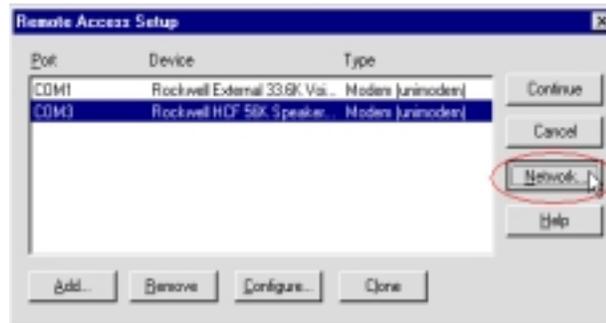
6. Press **Configure...**



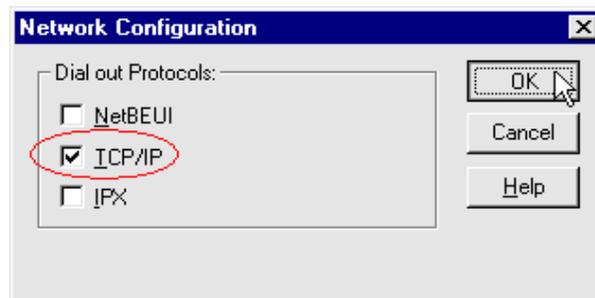
7. Select **Dial out only** and click **OK**.



8. Select **Rockwell HCF 56K Speaker...** and press **Network...**



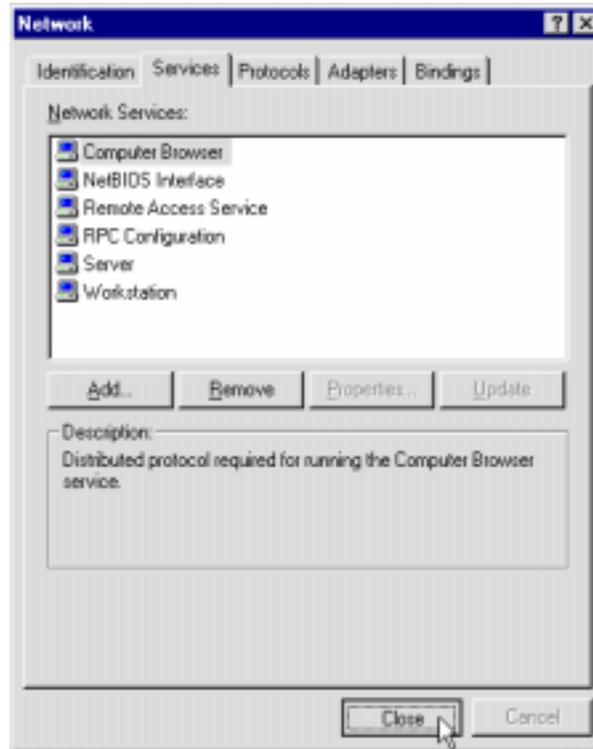
9. Mark **TCP/IP** option and click **OK**.



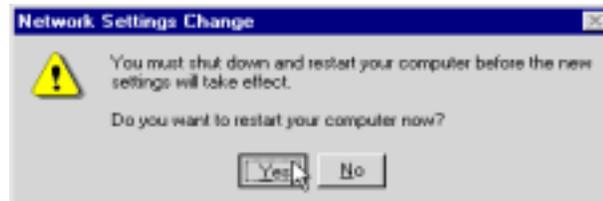
10. Press **Continue** button.



11. Click **Close**.



12. Please restart your computer to enable the Remote Access Service.

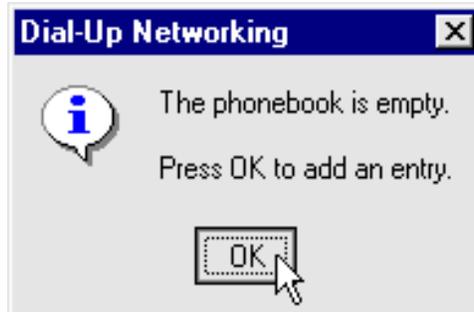


### 4.4.3 Dial-Up Networking

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



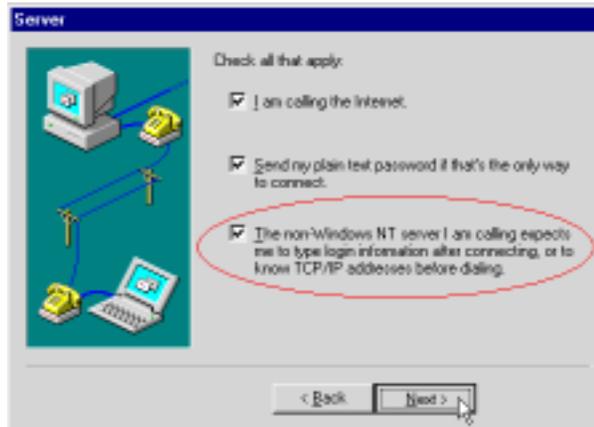
2. If your phonebook is empty, click **OK** to add an entry.



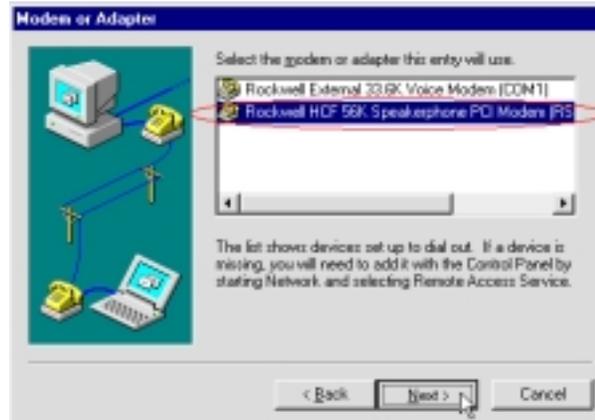
3. Type in any name you like and click **Next**.



4. Please mark the option at least: **The non-Windows NT server I am calling...**, then click **Next**.



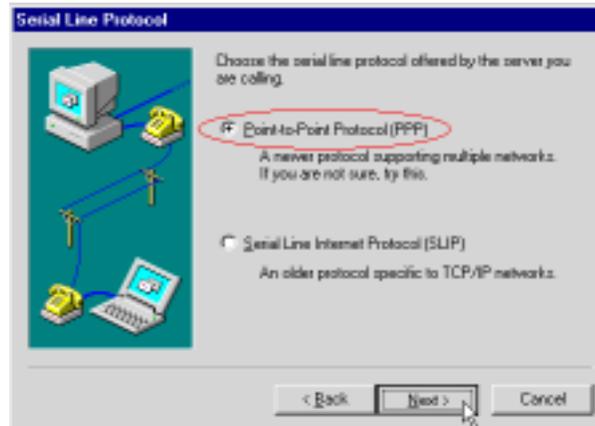
5. If you install two or more modems in your computer, please highlight the **Rockwell HCF 56K Speakerphone PCI Modem** and click **Next**.



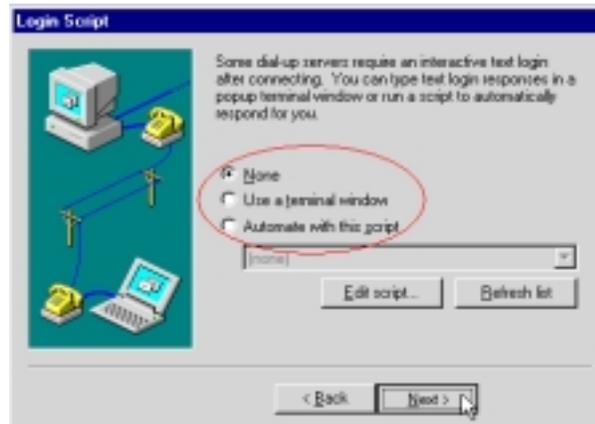
6. Type in the **Phone number** and click **Next**.



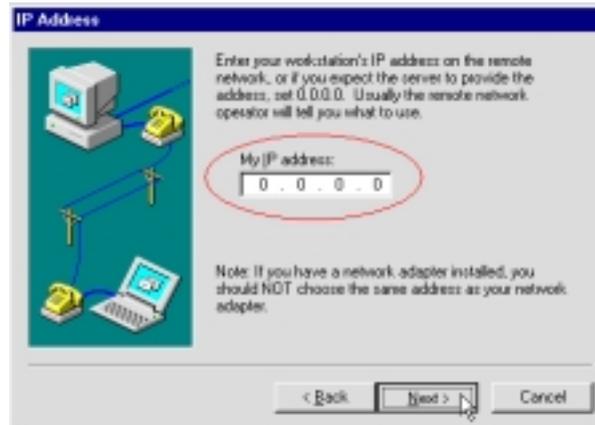
7. Mark the **Point-to-Point Protocol (PPP)** and click **Next**.



8. Depend your dial-up server to mark the login options and click **Next**.



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



10. Enter DNS server address if the ISP provider you a fixed one or leave the value: **0.0.0.0**, then click **Next**.



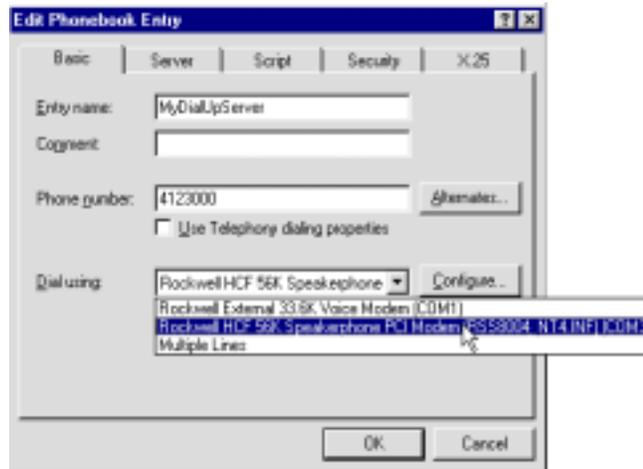
11. Click **Finish**.



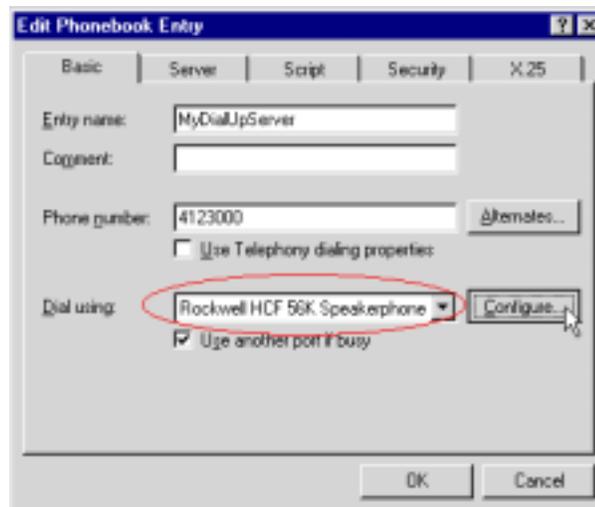
12. Click on **More** button and select **Edit entry and modem properties...**



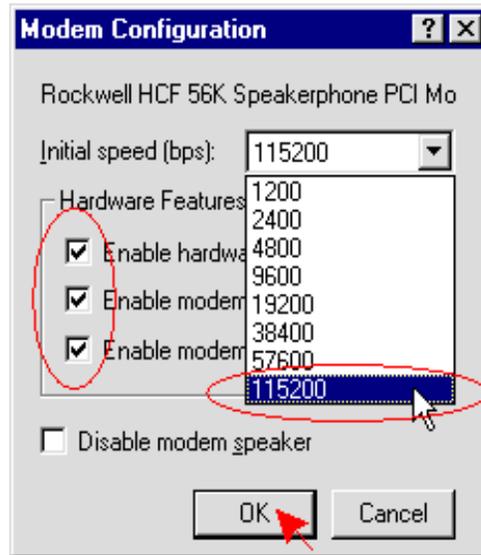
13. Make sure that the **Dial using: Rockwell HCF 56K Speakerphone PCI Modem** is selected and click on the **Configure** button.



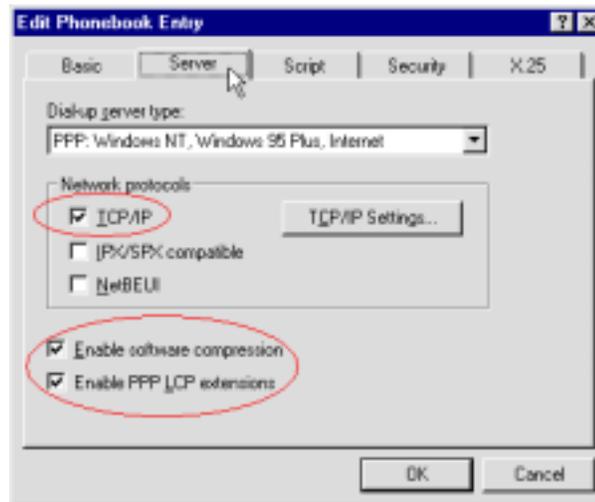
14. Click **Configure**.



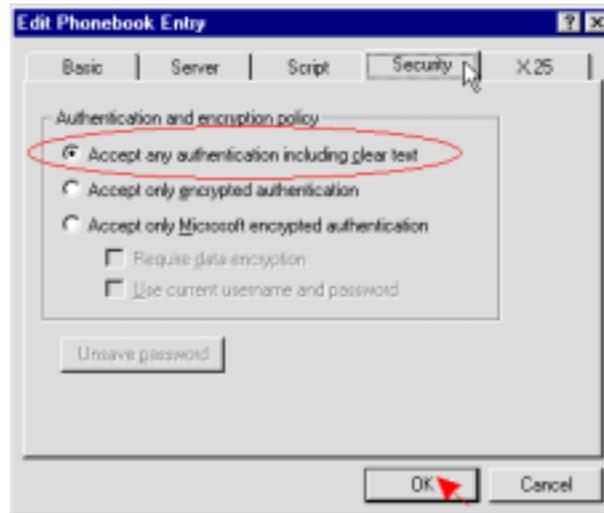
15. Mark all the **Hardware Features** and select **Initial speed: 115200**, then click **OK**.



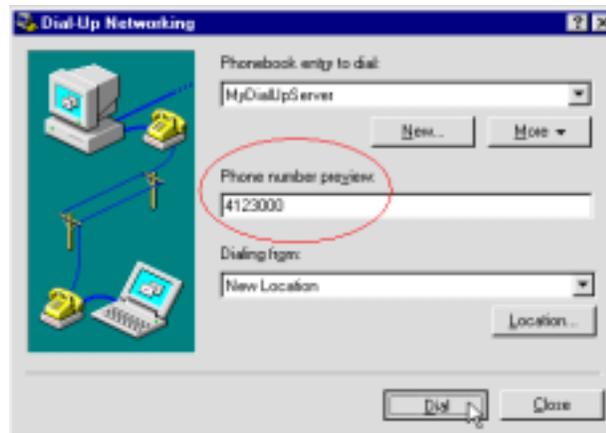
16. Click on the **Server** tab and mark three options: **TCP/IP**, **Enable software compression** and **Enable PPP LCP extensions**



17. Select the **Security** tab and click on **Accept any authentication including clear text**, then press **OK**.



18. Check your telephone number and Click **Dial**.



19. Key-in your **User name** and **Password** and click **OK**, then the modem will dial out to your ISP and get a connection.



## 4.5 Windows 2000

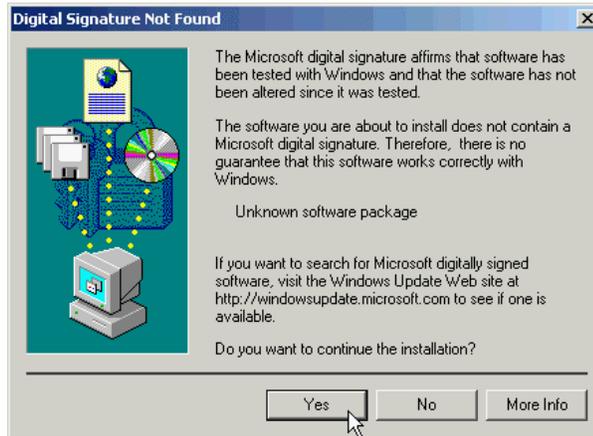
1. Windows will detect the new hardware automatically. Then click **Cancel** icon to stop the **Add New Hardware Wizard**. Then Windows 2000 will go on.



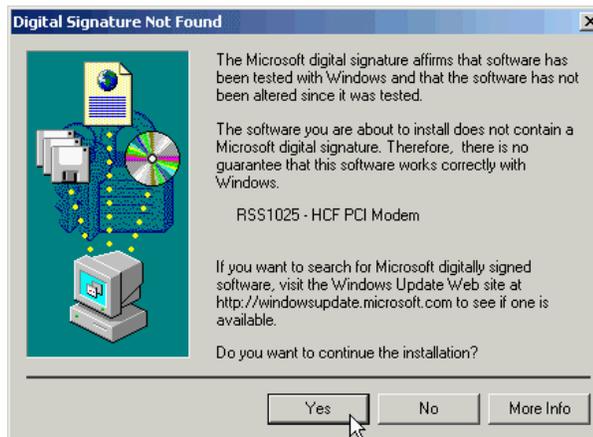
2. After Windows 2000 has running automatically, please move your cursor as following sequence **Start\Run** and type **H:\Win2K\Setup.exe** (H is the letter of the CD-ROM drive) then click **OK**. Windows 2000 will install modem driver automatically.



3. Click **Yes** to continue.



4. Click **Yes**, then Windows will install the driver automatically.



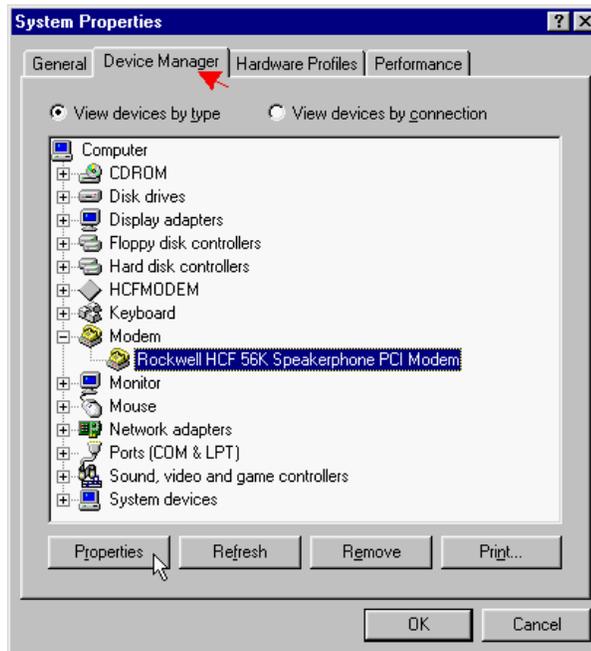
## Chapter 5 Select Modem Country

### 5.1 Windows 95/98

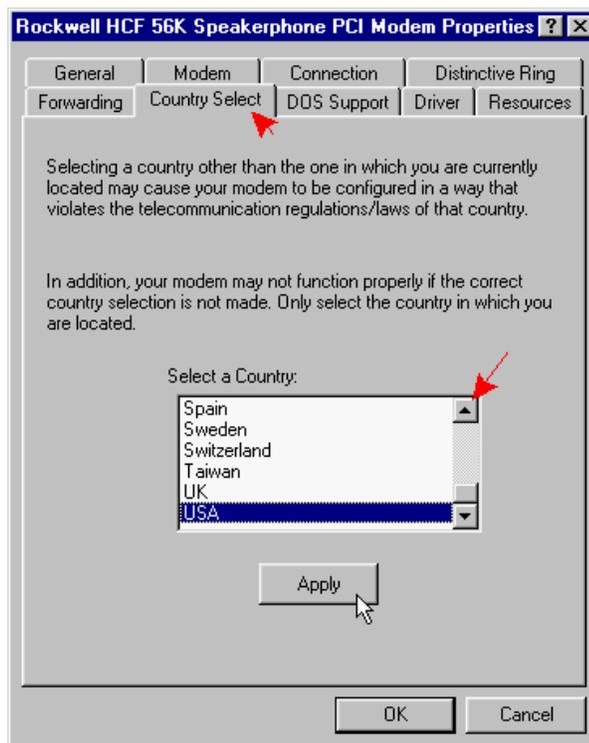
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **System** icon.



2. Click **Device Manager** tab, then select **Rockwell HCF 56K Speakerphone PCI Modem** and click **Properties**.



3. Click **Country Select** tab, and select a country from the list then click **Apply** to effect your selected. Click **OK** to end procedure.

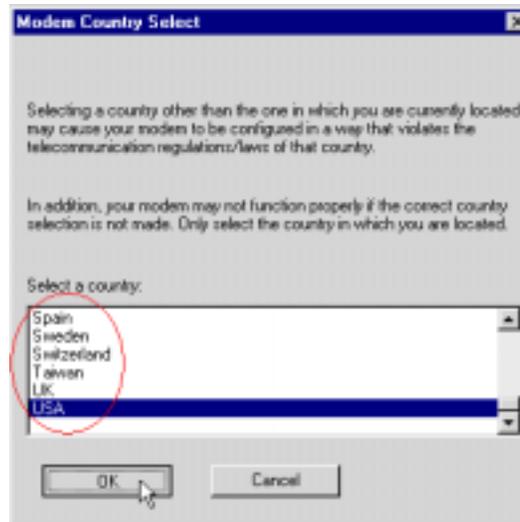


## 5.2 Windows NT4.0

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



2. Select your Country and click **OK**.



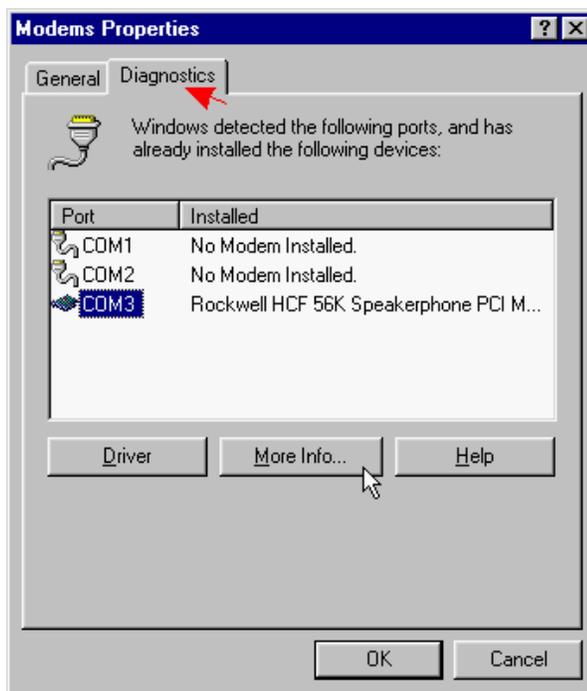
## Chapter 6 Diagnostics

### 6.1 Windows 95/98

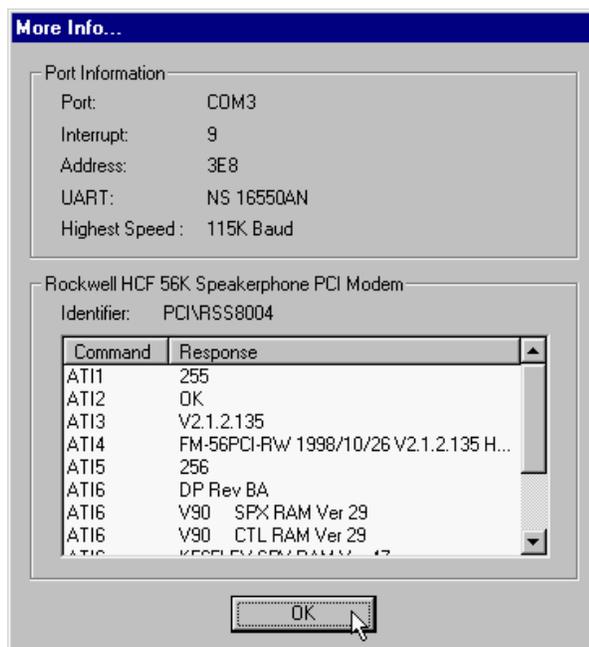
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Modems** icon.



2. To test the modem by clicking on the **Diagnostics**. Select the **COM port** for **Rockwell HCF 56K Speakerphone PCI Modem** 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**.

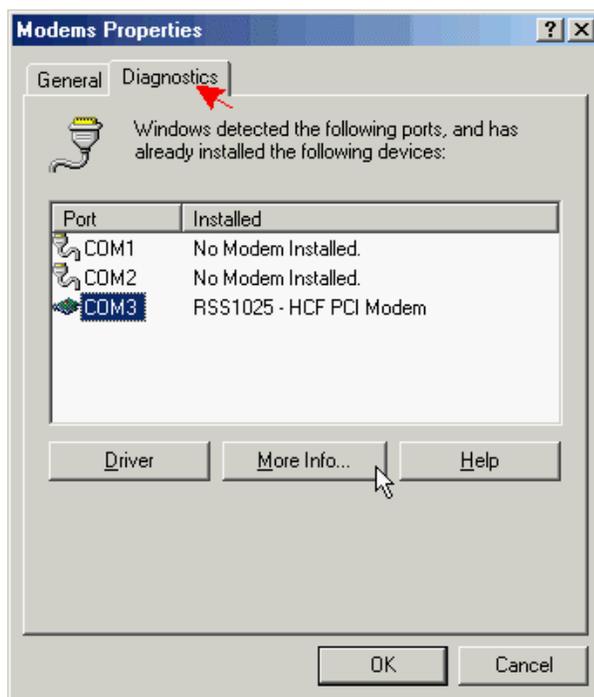


## 6.2 Windows ME

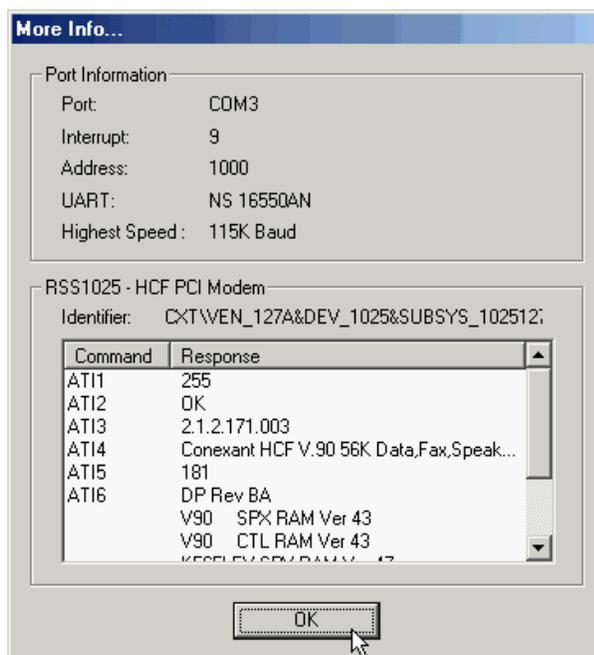
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Modems** icon.



- To test the modem by clicking on the **Diagnostics**. Select the **COM port** for **RSS1025 - HCF PCI Modem** and click on the **More Info...** button.

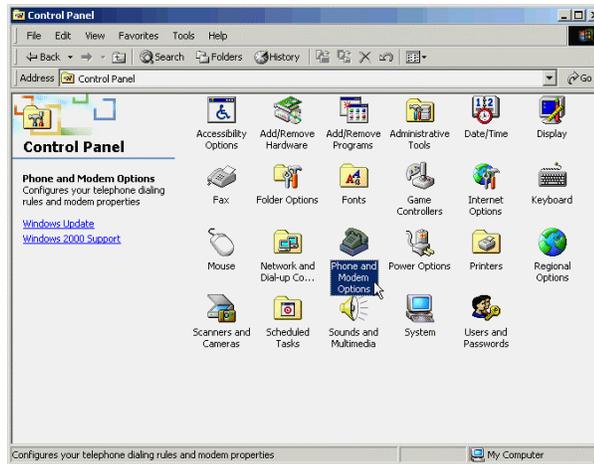


3. If your modem is responding to AT commands and functioning correctly, it means that your modem is working properly. Click **OK**.

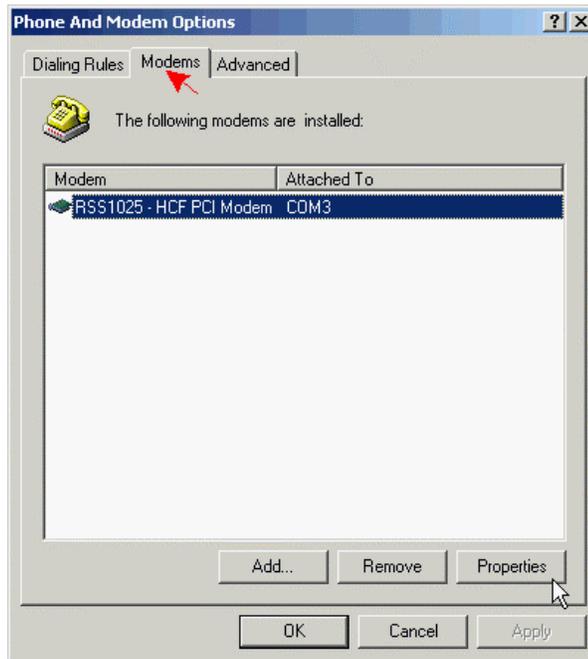


## 6.3 Windows 2000

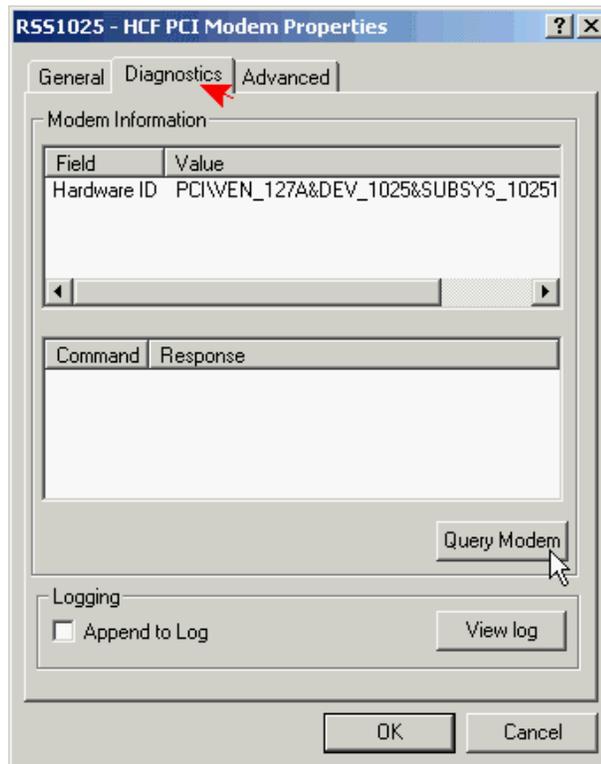
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Phone and Modem Options** icon.



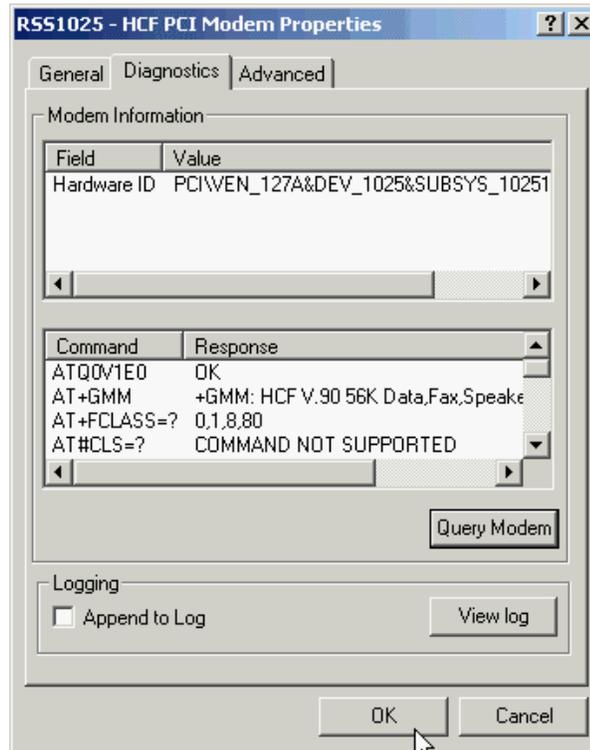
2. Click **Modems** tab and select **RSS1025 - HCF PCI Modem**, then click **Properties**.



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**.



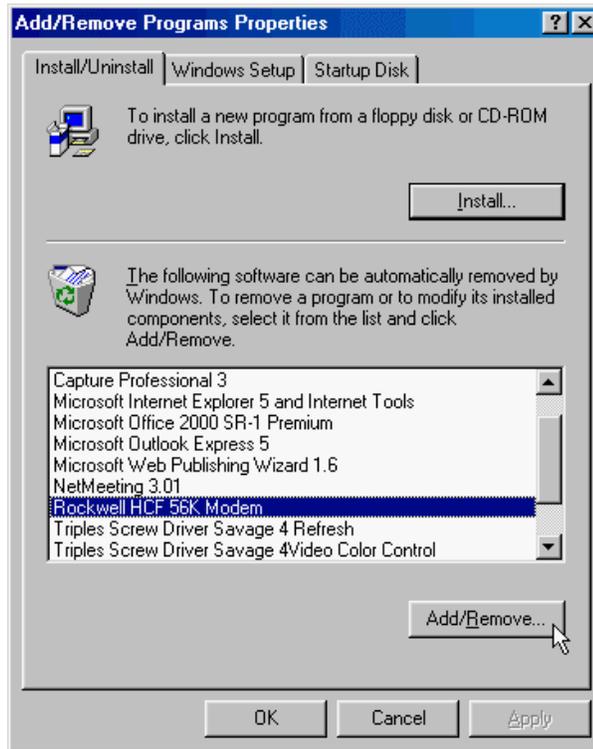
## Chapter 7 Uninstalling Procedure

### 7.1 Windows 95/98

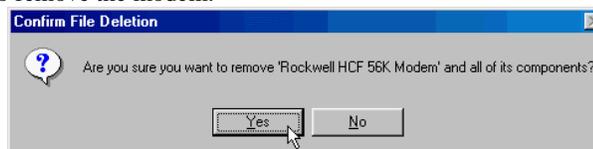
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click the icon of **Add/Remove Programs**.



2. Select **Rockwell HCF 56K Modem** from the list and then click the **Add/Remove** button.

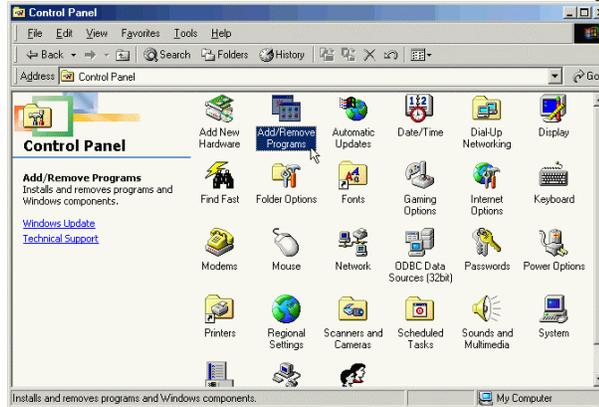


3. Click **Yes** to remove the modem.

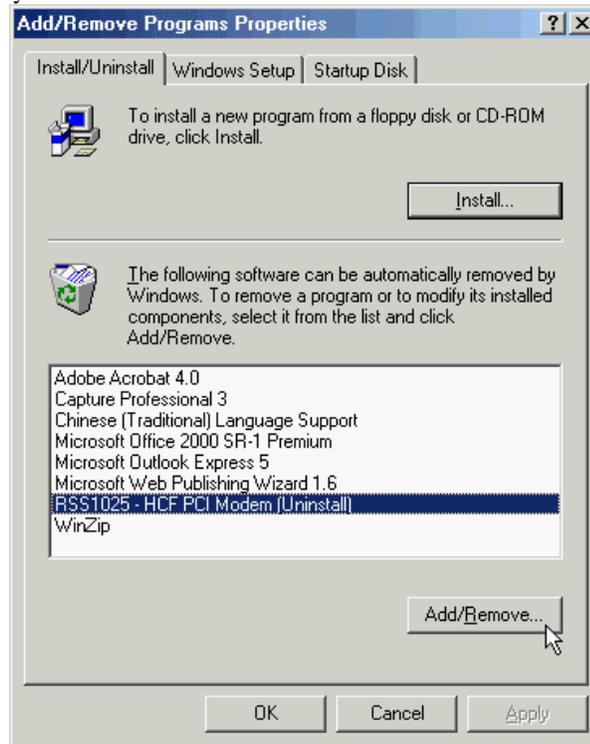


## 7.2 Windows ME

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

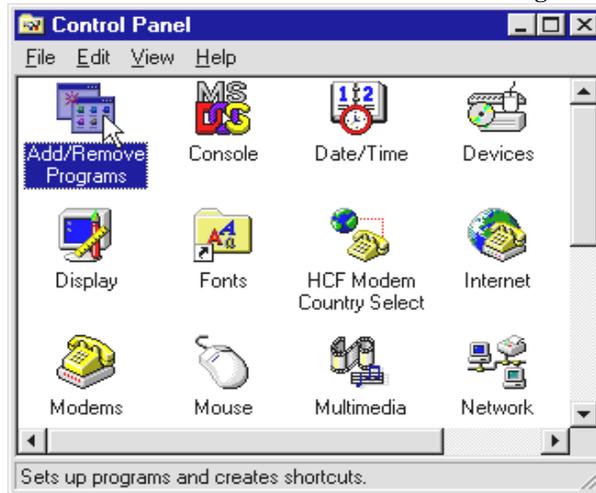


2. Select **RSS1025 – HCF PCI Modem [Uninstall]** from the list and then click the **Add/Remove** button. Then Windows remove the modem driver automatically.

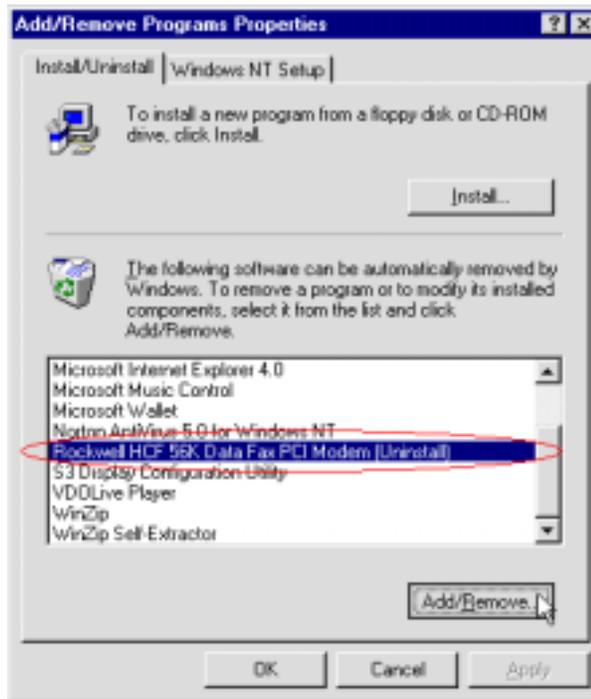


### 7.3 Windows NT 4.0

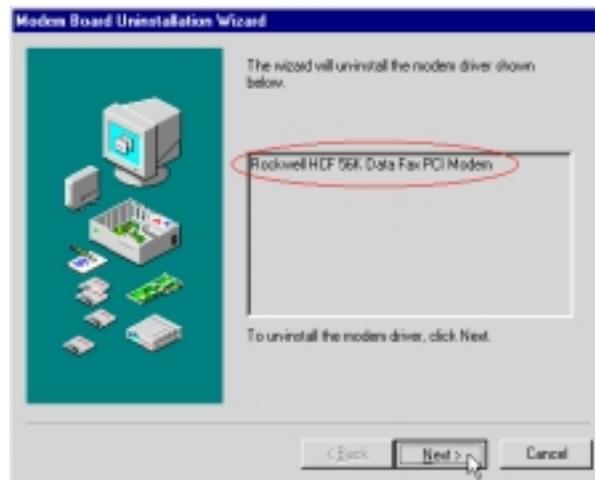
1. Move your cursor as following sequence **Start \ Settings \ Control Panel** and click **Control Panel**. Then double-click on the **Add/Remove Programs** button.



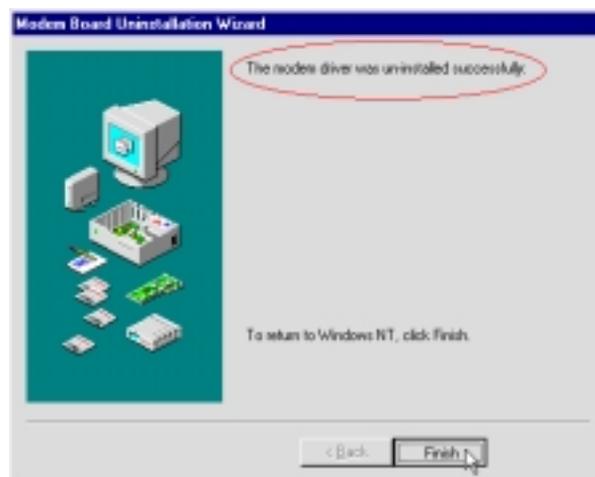
2. Please select **Rockwell HCF 56K Data Fax RTAD PCI Modem [Uninstall]** and click on the **Add/Remove** button.



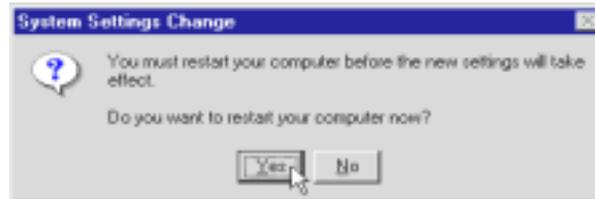
3. Click **Next**.



4. Click **Finish**.



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

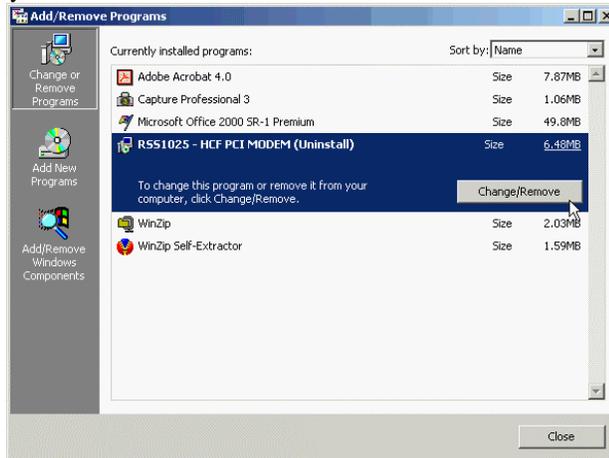


## 7.4 Windows 2000

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



2. Select **RSS1025 – HCF PCI Modem [Uninstall]** from the list and then click the **Add/Remove** button. Then Windows remove the modem driver automatically.

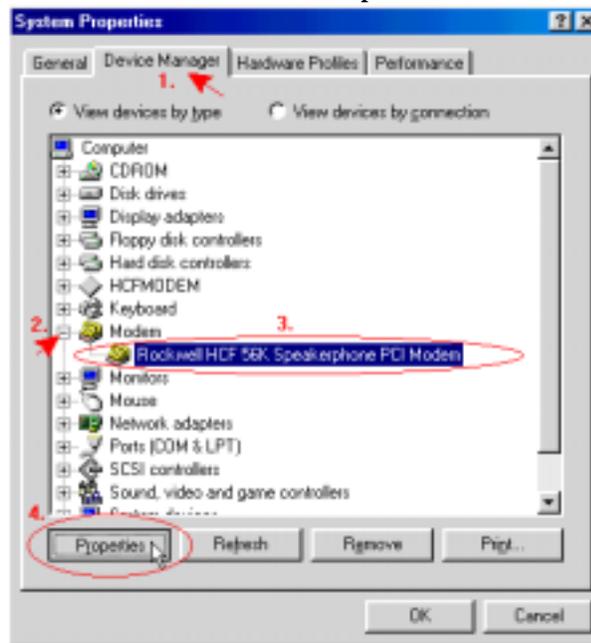


## Chapter 8 Troubleshooting

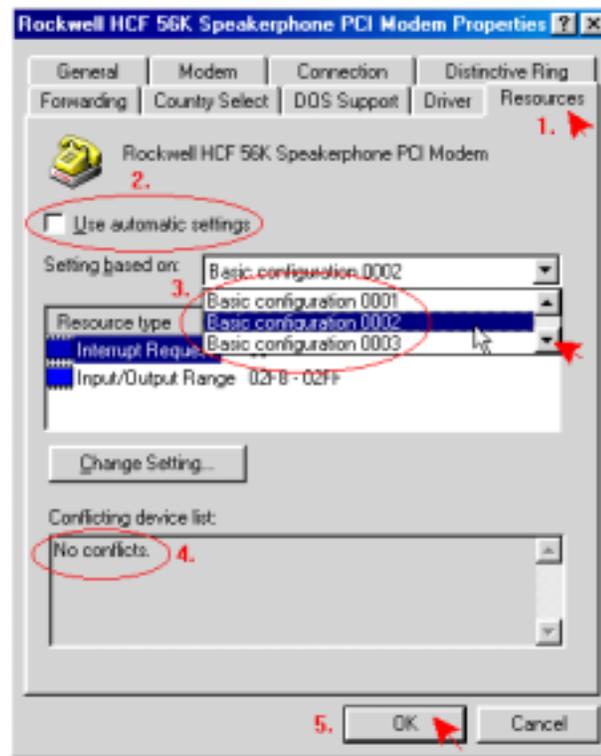
### If you are fails to install your modem in Windows 95/98/ME

Make sure the COM port and IRQ Setting are correctly, and it doesn't conflict with another board installed in your computer.

- Please go to **Start, Settings and Control Panel**. Double click on the **System** icon. Click **Device Manager** and double click on the **Modem** icon. Please select the Rockwell HCF Modem and click on the **Properties** button.



- Click on the **Resources** tab, then, **disable** the setting **Use automatic settings**. Change the setting of **Setting based on** from the list until **No conflicts** with other device is shown, and then click **OK**!



### Modem won't execute AT commands

- The COM port of your software or DTE perhaps set up incorrectly, for example, your software may be configured on COM 1, but your modem may be configured as another COM port (such as COM 2).
- Be sure you are sending commands at an acceptable baud rate, 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.
- Type AT&F [ENTER], reset original factory default and try executing AT commands again.

**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.