

FCC/MELLON

SEP 11 1998

EUT:MODEM CARD

FCC ID:H52PT-3515

Puretek Industrial Co., LTD.

USER'S MANUAL





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**Voice**

- Voice/Audio mode
- Full-Duplex speakerphone

**System Requirements**

- Windows™ 95, Windows™ 98, Windows™ NT 4.0
- 150MHz **MMX** CPU or higher
- 16MB RAM

**Note**

Please make sure your CPU is running at 150MHz (minimum) and at the same time supports MMX.

**Package Checklist**

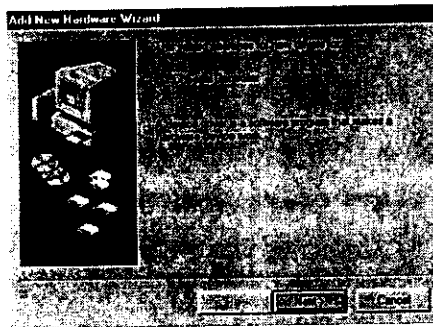
The package contains the following items:

- One fax modem
- One piece of phone cable
- One CD
- The fax modem user's manual

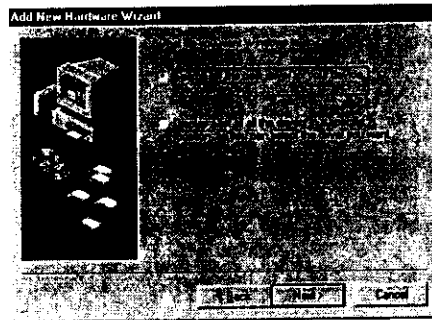
If any of these items are missing or damaged, please contact your dealer or sales representative for assistance.

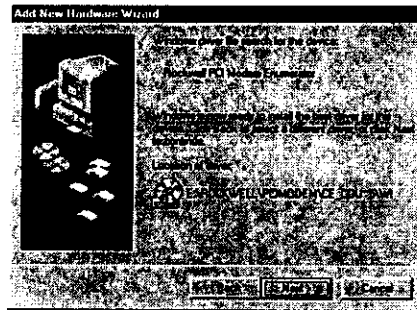
## Installation Procedures for Windows™ 98

1. Once you have completed the hardware installation, power on your computer. When running Win 98, your system will detect a new device and the following message will appear. Click Next.

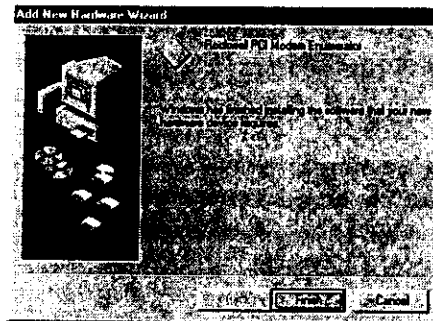


2. Select the Search for the best driver for your device (Recommended) option, then click Next.





5. The installation has been completed. Click Finish.



### Communication Software Installation

To install the communication software, refer to the manual contained on the provided CD.

S-Register can be selected by using the **ATS<sub>n</sub>** command.

**D<sub>n</sub>**

0-9

P

T

W

^

**Dial**

DTMF digits 0 to 9

Pulse (rotary) dial

Tone dial

Wait for second dial tone (X3 or higher);  
linked to S6 register.

Toggles calling tone enable/disable.

**E<sub>n</sub>**

E0

**E1****Command Echo**

Disable command echo

Enable command echo

**H<sub>n</sub>**

H0

H1

**Disconnect (Hang-up)**

Hang up (goes on-hook)

Go off-hook

**I<sub>n</sub>**

I0

I1

I2

I3

I4

I6

**Identification**

Report product code

Report "OK"

Report "OK" or "ERROR"

Report firmware revision

Report OEM defined identifier string

Report modem data pump model and internal  
code revision**M<sub>n</sub>**

M0

**M1**

M2

M3

**Speaker Control**

Speaker is always off

Speaker ON until CONNECT

Speaker is always on.

Speaker off during dialing and receiving carrier  
and turn speaker on during answering.**O<sub>n</sub>**

O0

O1

**Return to On-Line Data Mode**

Go on-line

Go on-line and retrain

The format is:

**AT+MS=<carrier>,<automode>,<min\_rate>,<max\_rate>,<min\_rx\_rate>,<max\_rx\_rate>**

Carrier	Modulation	Data Rates (bps)
V21	V.21	300
V22	V.22	1200
V22B	V.22bis	2400, 1200
V23C	V.23	1200
V32	V.32	9600, 4800
V32B	V.32bis	14400, 1200, 9600, 7200, 4800
V34	V.34	33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800, 14400, 12000, 9600, 7200, 4800, 2400
<b>V90</b>	V.90	56000, 54667, 53333, 52000, 50667, 49333, 48000, 46667, 45333, 42667, 41333, 40000, 38667, 37333, 36000, 34667, 33333, 32000, 30667, 29333, 28000

## S-Register Definitions

- S0      Number of Rings to Auto-Answer**  
The number of rings the modem waits for before it auto answers.  
Range:      0-255 (rings)  
Default:      0
- S6      Wait Time before Blind Dialing**  
The time to pause after off-hook before blind dialing.  
Range:      2-255 (U.S.)  
Default:      2 (Country dependent)
- S7      Waiting Time before Carrier Detect**  
The time to wait for a carrier from the remote modem before hanging up.  
Range:      1-255  
Default:      50 (seconds)
- S8      Pause Time For Dial Delay**  
The time to pause for the pause dial modifier, "Comma".  
Range:      0-255  
Default:      2 (seconds)
- S9      Carrier Detect Response Time**  
The time a signal is detected and qualified as a carrier. This timing lets your modem ignore spurious signals that are the same frequency as the carrier. Higher S9 values reduce the chance of a carrier being detected.  
Range:      1-255  
Default:      6 (0.6 second)
- S10      Lost Carrier To Hang Up Delay**  
The time the modem waits before hanging up for carrier loss.



**S11**

Range: 1-255  
Default: 14 (1.4 seconds)

DTMF Tone Duration  
The time for DTMF tone dialing and the time  
between the tone spacing.  
Range: 50-255  
Default: 95 (0.95 second, Country  
dependent)

K56flex	K56flex	56000, 54000, 52000, 50000, 48000, 46000, 44000, 42000, 40000, 38000, 36000, 34000, 32000
B103	Bell 103	300
B212	Bell 212	1200

<automode>	Option Selected
0	Automode disabled
1	Automode enabled

For example:

AT+MS=K56FLEX,1,300,56000,0,0

Where: K56FLEX : select K56FLEX  
 1 : automode enable  
 300 : min\_rate data speed  
 300 bps  
 56000 : max\_rate data speed  
 56000 bps

If you want to select V.34 28800 bps only,  
 please insure AT+MS=34,0,28800,28800

**P**            **Set Pulse Dial** (for phone line that does not support touch-tone dialing)

**Sr=n**        **Set register *r* to *n***

**Sn?**         **Display contents of S-Register *n***

**Vn**           **Result Code Form**

V0            Numeric codes

V1            Verbal codes

**Zn**           **Soft Reset and Restore Profile**

Z0            Restore stored profile 0 after warm reset.

Z1            Restore stored profile 1 after warm reset.

**&Cn**         **Control Carrier Detect (CD) signal**

&C0          CD override

&C1          Normal CD operations

**&Dn**         **DTR Option**

&D0          Ignore an on-to-off transition of DTR.

&D1          Switch to on-line command mode without disconnection.

&D2          Normal DTR operations.

&D3          Modem re-initialized. &Y determines which profile is loaded.

**&Fn**         **Load Factory Configuration (Profile)**

&F0          Restore factory configuration 0

&F1          Restore factory configuration 1

**&Wn**         **Store Current Configuration**

&W0          Store the current configuration as profile 0.

&W1          Store the current configuration as profile 1.

**+MS**         **Select Modulation**

This command selects the modulation, optionally enables or disables automode, and optionally specifies the lowest and highest connection rates using one to four

## Commands

Most people use the communication software programs to tell modems what to do. Therefore, you may not use the commands in this chapter. However, if you prefer to communicate with your modem directly, you can type the commands described below.

This chapter describes how to work in the terminal mode.

**Note** The CD bundled in your fax modem package contains details on AT commands (file path: X:\ROCKWELL\PCIMODEM\AT\_COMMAND.PDF).

## Typing Commands

- Use the BACKSPACE key to delete typing errors.
- Every command (except **A/** and **+++**) must begin with the **AT** or **at** prefix and be entered by pressing the <Enter> key. For example, to execute the **V** command, you would type **ATV** and press the <Enter> key.
- When you see an **n**, replace the **n** with one of the letter or numeric options listed for that command. For example, for the **En** command, you might type **ATE1**.
- All defaults are based on the **&F** Hardware Flow Control template load in **NVRAM** when the modem is shipped.

## AT Commands

- |             |  |
|-------------|--|
| <b>A/</b>   | Re-executes the last issued command. Used mainly to redial.                                  |
| <b>A</b>    | Go off-hook and attempt to answer a call.  |
| <b>ATS?</b> | <b>Read Selected S-Register.</b> This command reads and displays the selected S-Register. An |

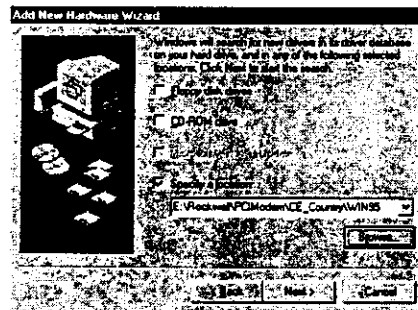
3. Place the CD containing driver for Win 9X into your CD ROM drive. Specify the location of the modem driver, e.g., E:\ROCKWELL\PCIMODEM\CE\_COUNTRY\WIN95 (select the appropriate country). Click Next.

**Note** CE\_COUNTRY stands for all the countries included in Pan-European Approval, i.e., Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Switzerland, Holland, Sweden and UK.

**Note** If the country you require is not listed, please select "OTHER" (i.e. E:\ROCKWELL\PCIMODEM\OTHER\WIN95).

**Note** Please note that the driver for Windows™ 95 and Windows™ 98 is contained under the \WIN95 directory.

The driver for Windows™ NT 4.0 could be located under the \WINNT40 directory



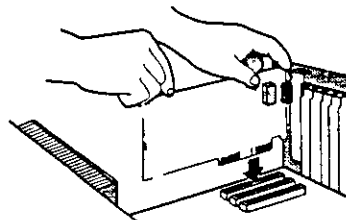
4. Windows will locate your driver. Click Next.

## Installations

This chapter describes how to install and power on you fax modem.

### Hardware Installation

1. Make sure that your computer is switched off. Unplug the power cord from the wall socket. Also turn off all other peripherals you may have attached to your computer.
2. Select a free PCI slot. Remove the cover from the slot. Keep the screw. You will be using it in the next step.
3. Carefully slide the internal modem into the chosen slot. Press firmly on the top of the modem to seat it. Fasten the modem to your system with the screw you removed in the previous step. Replace the computer's cover.



4. Plug one end of the phone cable into the Line jack on your fax modem. The other end of the phone cable should be connected directly to the phone outlet.
5. If you desire, you could connect your phone to the modem's Phone jack.
6. Turn on your computer.

## Introduction

The Voice/Fax/Data PCI Modem connects your computer to Internet, all kinds of BBS, and other fax modems. This manual describes the features, installation procedures and AT commands.



**Phone:** Phone jack.  
**Line:** Telephone line jack.  
**MIC:** Microphone jack.  
**SPK:** Speaker (for Stereo only) jack

## Features

This modem supports the following communication standards. ITU-T is known as CCITT.

### Data

- ITU-T V.90 and Rockwell K56flex
- ITU-T V.34, V.32bis, V.32, V.22bis, V.21, V.23
- Bell 103 & 212A
- V.42bis & MNP 5 (Data compression)
- V.42 & MNP2-4 (Error correction)
- V.80 (H.324 video conferencing interface)

### Fax

- V.17(14400bps FAX)
- V.29(9600bps FAX)
- V.27ter(4800bps FAX)

## FEDERAL COMMUNICATIONS COMMISSION

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

### NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.