PCMCIA Fax Modem 56K

User Manual

FCC REGULATORY STATEMENTS

FCC Part 68 Registration

This device complies with FCC Part 68 rules, and the use of this device is subject to the following restrictions:

The FCC has established rules which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.

If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.

The telephone company may make changes in it's facilities, equipment, operation and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the situation with the FCC.

If the telephone company requests information on what equipment is connected to their lines, inform them of:

- a. The telephone number to which this unit is connected.
- b. The Ringer Equivalence Number (REN).
- c. The USOC jack required.
- d. The FCC Registration number.

Items (b) and (d) are indicated on the label. The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the REN's of all the devices on any one line should not exceed 5.0. If too many devices are attached, they may not ring properly.

FCC Part 15 Registration

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interface, and
- This device must accept any interface received including interface that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy,

and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- (1) Reorient or relocate the receiving antenna.
- (2) Increase the distance between the equipment and receiver.
- (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- (4) Consult an experienced radio/TV technician for help.

CTR 21 pan-European Certification

This equipment has been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problems, you should contact your equipment supplier in the first instance.

This device is designed to work with the notified networks in all EC member states. Nevertheless, some of the network services in invidual countries might not be supported, but they will not affect the normal data and fax applications. For example, the metering charge service in Germany. Besides you may encounter difficulty of using PULSE dialing function in some of the countries, such as Nordic countries. This kind of network compatibility is dependent on the physical and software settings of this device. If the users are desired to use this device on those networks, they should contact the vendor or supplier first.

INTRODUCTION

This PCMCIA Fax Modem 56K is a credit-card-size Type II PC card that complies with the PCMCIA 2.1 standards.

The PCMCIA Fax Modem 56K is Bell, ITU-T (formerly CCITT) compliant and Hayes AT command compatible, so that it can be used worldwide with today's popular communication software programs. You will be able to send and receive faxes to/from any Group 3 compatible fax machine. Using standard phone lines, the data communication functions of the modem will enable you to successfully hook up to the Internet, transmit E-mail, send and receive information and communicate with other PCs, Bulletin Board Services (BBS) or computer networks such as Compuserve

Specifications

Data:

K56flex, V.90, V.34bis, V.34, V.32bis, V.32, V.22bis, V.22, and V.21, Bell 212A and Bell 103

Fax:

V.17, V.29, V.27ter, and V.21 channel 2 Group 3 send and receive facsimile

Error Correction:

V.42 and MNP 2-4

Data Compression:

V.42bis and MNP 5

Communication software compatible commands:

Hayes compatible enhanced "AT" command set

Fax Service Class 1 commands **Built-in DTE interface**:

DTE speed up to 115,200 bps 16C550 UART interface

System Requirements

- A notebook or desktop computer with PCMCIA type II or III slot.
- A telephone line with RJ-11 jack.
- A CD-ROM drive.
- Windows 95/98/2000/Millennium or Windows NT pre-installed.

HARDWARE INSTALLATION

- 1. Locate the PCMCIA slot of your system.
- Align the PCMCIA FAX MODEM 56K PC Card toward the PCMCIA slot. Push evenly and steadily until it is seated.



- 3. Connect the other end of the PC Card cable to the telephone line outlet.
- 4. You are now ready to continue the software installation.

CAUTION

To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

1. For Windows NT does not support "Hot Insert/Remove", be sure to complete the hardware installation as described above before you start Windows NT and software installation.

SOFTWARE INSTALLATION

Installation for Windows 95

 As soon as the PCMCIA Fax Modem 56K PC is inserted into the PCMCIA slot, Windows automatically detects the new hardware device and prompts the following message.



 Insert the device driver compact disc into your CD-ROM drive. When the following dialog box appears, click the **Other Locations** button.

Update Device Driver W	/izard
	Windows found the following updated driver for this device: Standard PCMCIA Card Modem
	If you want to use this driver, click Finish. If this is not the correct driver and you want to search for a different driver manually, click Other Locations. Location of Driver
*	Other Locations
	< <u>B</u> ack Finish Cancel

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 Type the CD-ROM drive letter followed by driver\win95. Or you may click the Browse button to select the driver\win95 folder in your CD-ROM drive. Click OK.

Select Other Location	×
Type the name of the folder that contains the driver y Browse.	ou want. To search for a folder, click
Location	Biowse
	OK Cancel

4. When the following figure appears, click **Finish.** The Installation program will continue.

Update Device Driver Wizard				
	Windows found the following updated driver for this device: PCMCIA Fax Modem 56K If you want to use this driver, click Finish. If this is not the correct driver and you want to search for a different driver manually, click Other Locations.			
~	Other Locations			
	< <u>B</u> ack Finish Cancel			

5. When the following figure appears, click **OK** to continue.

Insert Di	isk 🔀
8	The disk labeled 'PCMCIA Fax Modem 56K Installation Disk' is now required.
	This disk is provided by your computer manufacturer.
	Click OK to continue.

6. Repeat Step 3 as described above.

Copying	Files	×
-	The file "Itcom.vxd" on PCMCIA Fax Modem 56K Installation Disk could not be found.	OK
_	Insert PCMCIA Fax Modem 56K Installation Disk into the drive selected below, and click	Cancel
	UK.	<u>S</u> kip File
	Copy files from:	<u>D</u> etails
	f:\driver\win95	Browse

7. Follow the on-screen instruction to continue.

	This wizard will complete the installation of:	
	Wave Device for Voice Modem	
	by searching your local drives, network, and Internet locations for the most current driver.	
	If you have a disk or CD-ROM that came with this device, insert it now.	
	It is recommended that you let Windows search for an updated driver. To do this, click Next to continue.	
\diamond		
	< Back Next > Cancel	

8. When finished, press **Finish** to complete the installation. *Remember to restart Windows 95 to activate the new device.*

Update Device Driver Wizard		
	Windows found the following updated driver for this device: Voice Modem Serial Wave Device If you want to use this driver, click Finish. If this is not the correct driver and you want to search for a different driver manually, click Other Locations. Location of Driver	
~	Other Locations	
	< <u>B</u> ack Finish Cancel	

Installation for Windows 98

 As soon as the PCMCIA Fax Modem 56K PC is inserted into the PCMCIA slot, Windows automatically detects the new hardware device and the following message will be prompted.



2. Insert the device driver compact disc into your CD-ROM drive. When the following dialog box appears, click **Next**.



 Select Specify a location when the following figure appears. Enter the CD-ROM drive letter followed by driver\win98. Click Next. Or you may click the Browse button to select the driver\win98 folder in your CD-ROM drive.

Add New Haldwale wiz	raiu	
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.	
	Eloppy disk drives	
	CD-ROM drive	
8 😵	Microsoft Windows Update	
<u></u>	F:\driver\win98	
	Втомас	
	(Dark Nauk) Canad	
	< Back Next> Lancei	



4. When the following figure appears, click **Finish.** The Installation program will continue.



5. Follow the on-screen instruction to proceed.



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Add New Hardware Wize	ard
	What do you want Windows to do? Search for the best driver for your device. Display a list of all the drivers in a specific location, so you can select the driver you want.
	< Back Next > Cancel





6. The installation program will proceed automatically. Click **Finish** to complete the installation.



Installation for Windows 2000

If you want to use the Microsoft built-in driver, make sure to execute **d:\Driver\Win2000\PAR.exe**. Or perform the following procedures to update the latest driver.

- 1. Once the PCMCIA Fax Modem 56K PC Card is plugged into your PCMCIA slot, Windows will prompt you a standard PCMCIA Card Modem has been installed and ask you if you want to restart your computer. Select No.
- Double-click the small icon at the right bottom on your screen as illustrated below. If the icon does not appear at all, go to My Computer→ Control Panel→ System→Hardware→Device Manager. Select Modems and skip to Step 4.

		Windows 2000 I Evaluation co	Professiona ov. Build 219
		(E)(F	3:30 PM
Click Proj	oerties.		
Select the Windows computer.	t Hardware : device you want to unplu notifies you that it is safe t	ig or eject, and then cli o do so unplug the dev	? ck Stop. Whe rice from your
Unplug or Ejec Select the Windows computer. Hardware devices:	t Hardware device you want to unplu notifies you that it is safe t	ig or eject, and then cli o do so unplug the dev	ck Stop. Whe
Select the Windows computer. Hardware devices: Standard PCM	t Hardware device you want to unplu notifies you that it is safe to ICIA Card Modern Card Modern at PCCard SI	ig or eject, and then cli o do so unplug the dev ot 1 Properties	2 ck Stop. Whe ice from your
Select the Windows computer. Hardware devices: Standard PCMCIA	t Hardware e device you want to unplu notifies you that it is safe to ICIA Card Modem Card Modem at PCCard SI	ig or eject, and then cli o do so unplug the dev ot 1 <u>Properties</u>	Ck Stop. When ice from your Stop
Select the Windows computer. Hardware devices: Standard PCMCIA Standard PCMCIA	t Hardware e device you want to unplu notifies you that it is safe to ICIA Card Modern Card Modern at PCCard SI	ig or eject, and then cli o do so unplug the dev ot 1 <u>Properties</u>	2 ck Stop. Where rice from your

4. Select the **Driver** tab. Click the **Update Driver...**button.



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- 7. Click Have Disk when the Update Device Driver Wizard dialog appears.
- Load the CD that contains the device driver has into your CD drive. Click Browse and direct the proper file location with the disk drive followed by Driver/Win2000/LTW2KG.



Select LTW2KG, and click Open. Follow the on-screen instructions to proceed.

Locate File					? ×
Look jn:	🔄 WIN2000		- 🔶 🖻) 💣 🎫	
History Desktop My Documents	5 LTW2KG				
My Computer					
Mu Natuark P	File <u>n</u> ame:	LTW2KG.INF		•	<u>O</u> pen
my Network F	Files of type:	Setup Information (*.inf)		7	Cancel

10. When the following figure appears, click Next.

Upgrade Device Driver Wizard					
Install New Modem					
Select the manufacturer and model of your modern. If your modern is not listed, or if you have an installation disk, click Have Disk.					
Models:					
PDMCIA Fax Modem 56K					
Have Disk					
<u> < B</u> ack <u>N</u> ext > Cancel					
Upgrade Device Driver Wizard					
Start Device Driver Installation The device driver will be installed with the default settings.					
The wizard is readu to install the driver for the following hardware device:					
PCMCIA Fax Modem 56K					
Windows will use default settings to install the software for this hardware device. To install the software for your new hardware, click Next.					
< Back Next> Cancel					

11. When Windows prompt you to continue the installation. Select **Yes**.



12. Remember to restart your computer to activate this new device.

Installation for Windows Millennium

If you want to use the Microsoft built-in driver, make sure to execute **d:\Driver\WinME\PAR.exe**. Or perform the following procedures to update the latest driver.

1. Once the PCMCIA Fax Modem 56K PC Card is plugged into the PCMCIA slot of your system, Windows will automatically detect the Lucent Win Modem.

2. To update WDM Communication Device driver, right-click My Computer→Properties→Device Manager.



3. Click WDM Modem Enumerator to expand.

System Properties	? ×
General Device Manager Hardware Profiles Performance	
	1
• View devices by type C View devices by connection	
🗉 🖃 Disk drives	
庄 💭 Display adapters	
🗄 🚭 Floppy disk controllers	
😟 🚭 Hard disk controllers	
🗄 🍪 Keyboard	
🕀 🍪 Modem	
🕀 💭 Monitors	
🕀 🕤 Mouse	
Wetwork adapters	
PCMCIA socket	
🕀 – 🌌 Ports (COM & LPT)	
🗈 🎇 Sound, video and game controllers	
🕀 🛄 System devices	
🕀 🕰 Universal Serial Bus controllers	
E- 🏟 WDM Modem Enumerator	
WDM Communication Device	-
Properties Refresh Remove Prig	yt
ОК	Cancel

 Load the device driver into the CD-ROM drive of your system. Click Properties→Driver→Update Driver.

WDM Communica	ation Device Properties	<u>?</u> ×
General Driver	Resources	1
WDM	Communication Device	
Driver Provider:	Microsoft Corporation	
Digital Signer:	Microsoft Consumer Windows Publ	isher
To view details Driver File Detai Update Driver.	about the driver files loaded for this de Is. To update the driver files for this de	vice, click svice, click
	Driver File Details	e Driver
	OK	Cancel

5. Select Specify the location of the driver (Advanced) and click Next.



6. Select **Display a list of all the drivers...**and click **Next**.



 Click the Have Disk...button. Click Browse to select the CD-ROM drive where you put the device driver. (for example: D:\) Enter the CD-ROM driver letter followed by Driver\WinME.

Update	Device Driver Wizard			
K	Select the manufacturer ar disk that contains the upda driver, click Finish.	nd model of your ha ated driver, click H	ardware device. I ave Disk. To inst	f you have a all the updated
Models:	Communication Device (6-4	-2000)		
€ Sho © Sho	w <u>c</u> ompatible hardware. w <u>a</u> ll hardware.	< Back	Next >	Have Disk

8. Click Next.

Update	Device Driver Wizard			
ø	Select the manufacturer a disk that contains the upd driver, click Finish.	nd model of your h ated driver, click H	ardware device. Iave Disk. To ins	If you have a tall the updated
Mo <u>d</u> els: PCMC	A Fax Modem 56K WDM M	odem Enumerator	[
⊂ Sho ⊙ Sho	w <u>c</u> ompatible hardware. w <u>a</u> ll hardware.			<u>H</u> ave Disk
		< <u>B</u> ack	Next >	Cancel

9. Click Next to proceed.



10. Click **OK** to finish the installation.

PCMCIA Fax Modem 56K WDM Modem Enumerator Pr ? 🗙
General Driver Resources PCMCIA Fax Modem 56K WDM M
PCMCIA Fax Modern 56K WDM Modern Enumerator
Device type: WDM Modern Enumerator
Manufacturer: PC_CARD
Hardware version: Not available
Device status
This device is working properly.
Device usage
OK Cancel

11. Go back to step 2. Click Modem to expand.

System Properties	? ×
General Device Manager Hardware Profiles Performance	
View devices by type View devices by connection	
B Disk drives Disk drives Disk drives Disk drives Floppy disk controllers Disk drives Hard disk controllers Disk drives Modem Disk drives Modem Montos Mouse Mouse Mouse Mouse PONCIA socket Poncia Social	•
Properties Refresh Rgmove Prigt.	
Close	Sancel

 Load the device driver into the CD-ROM drive of your system. Click Properties→Driver→Update Driver.

Lucent Win Modem Properties	×
General Modem Connection Driver	
Lucent Win Modem	
Driver Provider: LT	L
Driver Date: 06/04/2000	L
Digital Signer: Microsoft Consumer Windows Publisher	L
	L
To view details about the driver files based for this device, click Driver File Details. To update the driver files for this device, click Update Driver.	
Driver File Details	
OK Cancel	1

13. Select Specify the location of the driver (Advanced) and click Next.

Update Device Driver Wi	zard
	This wizard searches for updated drivers for: Lucent Win Modem Windows can search for and install an updated driver to replace the ournently being used by your hardware. Or, you can specify the location of another driver. What would you like to do? Automatic search for a better driver (Recommended) C [specify the location of the driver (Advanced]
	< Back Next > Cancel

14. Select **Display a list of all the drivers...**and click **Next.**



15. Click the **Have Disk...**button. Click **Browse** to select the CD-ROM drive where you put the device driver. (for example: D:\) Enter the CD-ROM driver letter followed by Driver\WinME.

Update I	Device Driver Wizard	
	Select the manufacturer a disk that contains the upo driver, click Finish.	nd model of your hardware device. If you have a lated driver, click Have Disk. To install the updated
Mo <u>d</u> els:		
Lucent	Win Modern Version 5.76 (6-4-2000)
⊙ Sho ⊖ Sho	w <u>c</u> ompatible hardware. w <u>a</u> ll hardware.	Have Disk
		< <u>B</u> ack Next> Cancel

16. Click Next.

Update I	Device Driver Wizard			
	Select the manufacturer an disk that contains the upda driver, click Finish.	d model of you ited driver, click	hardware device. I Have Disk. To inst	f you have a all the updated
Modeļs				
PCMCI	A Fax Modem 56K			
C Sho	w <u>c</u> ompatible hardware.			Have Disk
Show	w <u>a</u> ll hardware.			
			[]	
		< <u>B</u> ack	Next >	L'ancel

17. Click Next to proceed.



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



 To verify if the PCMCIA Fax Modem 56K exists in your system, go to Device Manager. PCMCIA Fax Modem 56K and PCMCIA Fax Modem 56K WDM Modem Enumerator should be found. If not, contact your dealer for technical support.

System Prop	erties		? ×
General D	evice Manager Hardware	e Profiles Performance	
View of the second s	levices by type C \	view devices by <u>c</u> onnection	n
	isplay adapters loppy disk controllers and disk controllers and disk controllers of disk of disk of disk of disk etwork adapters ctMCIA socket onts (CDM & LPT) ound, video and game co vistem devices niversal Serial Bus control OM Modem Emumerator	SK ntrollers Ilers SK W/DM Modern Enumerati	or V
Proper	ties Re <u>f</u> resh	Remove F	Pri <u>in</u> t
		Close	Cancel

Installation for Windows NT

- 1. Before you start Windows NT, make sure the PCMCIA Fax Modem 56K PC Card has been properly inserted into the free PCMCIA slot of your computer.
- 2. Load the device driver compact disk in the CD-ROM drive.
- 3. Start Windows NT.
- 4. Go to My Computer.
- 5. Click the CD-ROM drive. Click the driver\winnt folder. Or you may click the

Browse button to select the CD-ROM drive and the **driver**\winnt folder.

6. Double-click **setup.exe**. The installation program will proceed automatically.

Note: If Softex or Card Wizard was already installed in your system, Windows will appear message for PC Card malfunctioning. Ignore this message and install the WinNT driver. Remember to reboot after the installation.

CHECKING COUNTRY/REGION

Please perform the following steps to check the country/region setting of the modem before you use the Internal Fax Modem 56K. For best performance, make sure that the Country/region is set to the country that you are using the modem in, eg. **United States of America.**

Windows 95/98/98SE/Millennium

1. Go to

Start→Settings→Control Panel→Modems.

2. When the **Modems Properties** dialog box appears, click the **Dialing Properties** button.

Modems Properties ? 🗙
General Diagnostics
The following moderns are set up on this computer:
Lucent Win Modem
Add Rgmove Ptoperties Dialing preferences
Dialing from: New Location
Click Dialing Properties to modify how your calls are dialed.
OK Cancel

3. When the following dialog box appears, specify the country/region that you are in and click **OK**.

Dialing Properties ? 🗙
My Locations
I am dialing from: New Location Mew Remove
I am in this country/region: Area <u>c</u> ode: United States of America 💽 3 Area Code Rules
When dialing from here
To access an outside line: For local calls, dial
For long distance calls, dial
To disable call waiting, diat
Dial using:
For long distance calls, use this calling card: None (Direct Dial)
OK Cancel Apply

Windows 2000

1. Go to

Start→Settings→Control Panel→Modems.

2. When the **Phone And Modem Options** dialog box appears, click the **Edit** button.

Phone And Modem Options	<u>? ×</u>
Dialing Rules Modems Advanced	
The list below displays the loc location from which you are di	ations you have specified. Select the aling.
Location	Area Code
New Location	3
New	Edit Delete
OK	Cancel Apply

3. When the following dialog box appears, specify the country/region that you are in and click **OK**.

Edit Location	? X
General Area Code Rules Calling Card	
Location name: New Location	
Specify the location from which you will be dialing.	
Country/region: Area	a <u>c</u> ode:
United States of America	
Dialing rules: When dialing from this location, use the following rules: To access an outside line for local calls, dial: To access an outside line for long-glistance calls, dial: To access an outside line for long-glistance calls, dial: To access an outside line for long-glistance calls, dial: To disable call waiting, dial: Dial using: Image: C Pulse	×
OK Cancel	Apply

Windows NT4.0

1. Go to

Start→Settings→Control Panel→Modems.

2. When the **Modems Properties** dialog box appears, click the **Dialing Properties** button.

Modems Properties ? 🗙
General
The following moderns are set up on this computer:
Modem Attached To
Lucent Win Modem COM3
Add <u>Bernove</u> <u>Properties</u>
Dialing from: New Location
Use Dialing Properties to modify how your calls are dialed.
Close Cancel

3. When the following dialog box appears, specify the country/region that you are in and click **OK**.

Dialing Properties ? 🗙
My Locations
I am glaing from: New Location Where I am: The area gode is: I am in: United States of America
How I dial from this location: To access an gutside line, first diat for local, for long distance. Dial ysing Calling Card: None (Direct Dial) Change This location has call waiting. To disable it, diat. Image: This location has call waiting. To disable it, diat. The phone system at this location uses: Image: Control calling. Image: Control calling. Image: Control calling.
OK Cancel Apply

Setup Diagnostics (for Windows 95/98)

You can perform the following steps to check if your PCMCIA FAX MODEM 56K is well installed.

- 1. Go to the Start menu. Point to Settings. Click Control Panel. Double-click Modems.
- 2. When the **Modems Properties** dialog box appears, select the **Diagnostics** tab.

Modems Properties
General Diagnostics
The following modems are set up on this computer:
CIA Fax Modem 56K
Add Remove Properties
Dialing preferences
Dialing from: New Location
Click Dialing Properties to modify how your calls are dialed.
Dialing Properties
OK. Cancel

3. Select the COM port whichever is installed **PCMCIA Fax Modem 56K** and click **OK**.



- If the screen does not at all include the PCMCIA Fax Modem 56K, stop the diagnostics procedures, and skip to the following section titled "Uninstall".
- 5. For Windows 95/98, if the information shown below can be found on the screen, it means the modem is well installed. Click **OK** to exit.

Port: COM3				
Interrupt: 9				
Address:	3E8			
Highest Speed : 115K Baud				
	and a second			
Identifier:	No hardware ID for this modem			
Identifier: Command	No hardware ID for this modem Response			
Identifier: Command ATI1	No hardware ID for this modem Response E49E			
Identifier: Command ATI1 ATI2	No hardware ID for this modem Response E49E OK			
Identifier: Command ATI1 ATI2 ATI3	No hardware ID for this modem Response E49E DK. LT V.90 Data+Fax Modem Version 5.57			
Identifier: Command ATI1 ATI2 ATI3 ATI3 ATI4	No hardware ID for this modern Response 649E 0K 0D dat+Fax Modern Version 5.57 70 70			
Command ATI1 ATI2 ATI3 ATI3 ATI4 ATI5	No hardware ID for this modem Response			
Identifier: Command ATI1 ATI2 ATI3 ATI3 ATI4 ATI5 ATI6	No hardware ID for this modem Response E49E CK UK LT V.90 Data+Fax Modem Version 5.57 70 5.57,F,13 UK			
Identifier: ATI1 ATI2 ATI3 ATI4 ATI5 ATI6 ATI7	No hardware ID for this modem			
Identifier: Command ATI1 ATI2 ATI3 ATI4 ATI5 ATI6 ATI7 AT+FCLA	No hardware ID for this modem			

UNINSTALL (FOR WIINDOWS 95/98)

If for some reason, you have to uninstall the driver of PCMCIA Fax Modem 56K after installation, perform the following steps.

- 1. Go to My Computer.
- 2. Select the CD-ROM drive whichever contains the PCMCIA Fax Modem 56K device driver.
- 3. Choose and double-click the *win95, win98* or *winnt* folder depending on the system you are working on.
- 4. Click *Ltremove.exe*. The PCMCIA Fax/Modem 56K device driver will automatically removed.

APPLICATIONS

To use the PCMCIA Fax/Modem 56K for data communication, for example, to send/receive faxes or to get onto the Internet, you may use any application software that you are familiar with. Or you may also choose to use the bundled application software that comes with the PCMCIA Fax/Modem 56K. The following are examples for sending faxes and going to the Internet.

Using BitWare to Send a Fax

- 1. Be sure BitWare has been successfully installed in your system.
- Go to the Cheyenne BitWare program. Doubleclick the Cheyenne BitWare icon. When the opening screen appears, click the Setup icon.



3. Select **Modem** when the **Setup** dialog box appears.



4. When the Modem Setup dialog box appears, press Auto Detect and click OK to continue. The

BitWare Fax Driver is then successfully installed. Click **Close** to finish the setup.

5. Print the file you want to fax to file and set the printer to BitWare Fax Driver as shown below.



Internet Access

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- 1. Go to My Computer.
- 2. Select Dial-Up Networking.
- 3. Double-click **Make a New Connection**, a dialogue box appears for you to name the new connection and select the device. Name the new connection appropriately and click **Next**.

☑ Dial Long Distance

Dial Inte<u>r</u>national Code Use Cred<u>i</u>t Card

Delete Fax after Send

Fine Mo<u>d</u>e Transmission

09/02/99 18:07:06

Fax Info...

Setup...

Attachments...

Help

Schedule.

Make New Connection	×
	Lype a name for the computer you are dialing: My Connection 2 Select a device: Image: PCMCIA Fax Modem 56K Image: Loningure
	< Back Next > Cancel

- Enter the area code and phone number of your Internet Service Provider (ISP). Follow the onscreen instruction to proceed.
- When finished, from the Dial-Up Networking window right-click your newly created connection. Select Properties. On the Server Types tab, enter the proper selections as shown below and click OK to finish the settings.

My Connection 🛛 📪 🗙		
General Server Types Scripting Multilink		
Type of Dial-Up <u>S</u> erver:		
PPP: Internet, Windows NT Server, Windows 98		
Advanced options:		
☑ Log on to network		
Enable software compression		
Require encrypted password		
Require data encryption		
<u>Record a log file for this connection</u>		
Allowed network protocols:		
□ <u>N</u> etBEUI		
IPX/SPX Compatible		
ICP/IP ICP/IP Settings)		
OK Cancel		

6. You are now ready to connect to the Internet.

TROUBLE SHOOTING

This chapter provides information on the most commom problems, the possible causes, and the solutions.

The modem does not respond to AT commands.

- Conflict of COMx: port setting with another device.
- Change the COMx: port of the PCMCIA Fax Modem 56K to a free port. Be sure to update your software COMx: port setting as well.

The modem does not execute the command line.

- Make sure you are typing 'AT' at the beginning of command line.
- Make sure the modem is not in Data Mode. type +++ if necessary.
- Make sure your software is set to the same COMx: port as the modem is.

The modem does not give a response after an AT command was executed.

- The echo and/or responses may be turned off by the ATE0Q1 commands.
- Use AT&V to check that.
- Use ATE1Q0 then Enter to change them back.
- Make sure the modem is in Command Mode rather than in Data Mode when you type the AT command.

The modem gives an 'ERROR' response after an AT command was executed.

- Make sure you did not type an invalid command.
- Make sure your command line is 40 characters or less in length.

The modem goes off-hook and disables the telephone line.

The modem may be set to auto-answer mode when it rings.

• Type ATS0=0, then Enter at the command line to disable the auto-answer mode.

The modem does not auto-answer the phone.

- Make sure the software is configured to auto-answer the phone.
- Type ATS0=n then press Enter. The n stands for the number of rings the modem will answer on.

The software does not control the modem properly or can not detect the modem.

- Make sure the software has been set up correctly. Check the initialization and dial strings.
- Some TSRs (programs that stay in memory after they are loaded) may conflict with the communications software.
- Restart your computer without loading any TSRs.

The characters on the screen are doubled.

- Both the modem and the software have the echo feature turned on at the same time.
- Turn off the software echo feature off.
- The remote modem is echoing your typed characters.
- Type ATE1 then Enter at the command line. Then turn off the software echo feature.

No text appears on the screen when in data mode.

- The remote modem is not echoing your typed characters.
- Type ATE0 then press Enter at the command line. Then turn the software echo feature on.
- Your software may not be set to use Full Duplex or the remote modem may not be set to use Full Duplex either.
- C:The remote modem may be waiting for you to type a command before it will reply with text.

No text appears on the screen when in command mode.

 If you can't see the characters you are typing, then type ATE1 then press Enter.

The modem does not dial a phone number after you execute the AT dial command.

- If you are using touch tone dialing on a phone line that requires pulses, then it may not work.
- Use ATDT in place of ATDP.

When your communications software tells the modem to dial, it does not.

- Make sure the software dialing prefix is ATDT.
- Make sure the software and modem are set to the same COMx: port.
- The modem may not have hung up the phone line since the last call.
- Change to command mode and type ATH then press Enter.

When dialing another modem, you receive a 'CONNECT' response, but nothing else.

 The remote modem may be waiting for you to type a command. Or try to press Enter for logging on to the remote site.

The modem speaker does not make any sound when you're connecting to another modem.

- The software may have the speaker disabled.
- Change the setting in your software or use the ATMn command to turn the speaker on.

The modem disconnects (looses the connection) in the middle of use.

- The remote modem may have locked up.
- The telephone switch may have disconnected your call.
- Your software may have turned off the DTR signal.

The modem does not connect with another modem.

 There may be a problem with the remote modem if you do not hear the high pitched tone from the remote modem.

Occasionally, the modem gives a burst of errors.

- The telephone line may be noisy or bad.
- Hang up the call and try to connect again for getting a better telephone line.
- If there are other telephones on the same line that your modem is using, someone may have picked up a telephone on that extension.
- Your telephone line may have the call waiting feature.
- Try adding '*70,' to your ATDT dialing command line. If it doesn't help, ask your telephone company how to disable it temporarily.

The modem gets errors in transmitted data randomly.

- Try to use V.42 or MNP1-4 if possible.
- Connect the modems at a slower baud rate.

After you download a file, it was not stored on your disk drive.

- If both modems are using MNP or V.42 protocol, then the flow control may not be enabled.
- Configure your software to use RTS/CTS flow control. That will cause your computer to pause long enough for the file to be stored to disk.

The text on the screen is not legible.

- Your software settings may not match the settings on the remote site.
- Make sure your data bits, stop bits, and parity settings match the settings that the other computer is using. The two most common settings are: 8 data bits, None parity, and 1 stop bit (8,N,1) or 7 data bits, Even parity, and 1 stop bit (7,E,1).
- If the telephone line is very noisy, you may see corrupted data on your screen.

Due to poor telephone line conditions, the modem may have fallen back to a slower communication speed. You may need to change the baud rate setting in your software to match this slower speed. To return the modem to the higher speed, disconnect the link and re-establish again.

When using V.42bis or MNP5, some features are disabled.

- You may be using a non-streaming protocol, like Xmodem or Ymodem to transfer files. Those are fine unless you are using V.42bis or MNP5
- When using V.42bis or MNP5, you should use a streaming transfer protocol like Ymodem-G or Zmodem.
- Configure your software to use hardware flow control (RTS/CTS ON).

When the modem is connecting to another modem, it reports a higher connect baud rate that it is really using.

- The modem defaults to report the modem-to-computer baud rate when it responds with CONNECT.
- Go to command mode with your communication program (like Telix) and type ATW2, then press Enter. This tells the modem to report the modem-to-modem baud rate instead.

APPENDIX A: AT COMMAND

Basic AT Command Set

Command	Options	Function & Description
A/		Re-execute the last command string
<any key=""></any>		Terminate the current connection attempt
		when entered in handshaking state
All the follow	ing commands	require an "AT" prefix
А		Go off-hook and attempt to establish a
		connection without waiting for a ring
Bn		Line modulation options
	B0	Select V.22 mode for 1200 bps connection
	B1 *	Select Bell 212A for 1200 bps connection
	B2	Select V.23 1200 bps for receiving, 75 bps
		for transmitting in originate mode; 75 bps
		for receiving and 1200 bps for transmitting
		in answer mode
	B3	Select V.23 75 bps for receiving, 1200 bps
		for transmitting in originate mode; 1200
		bps for receiving and 75 bps for
		transmitting in answer mode
	B15	Select V.21 for 300 bps connection
	B16	Select Bell 103 for 300 bps connection
Dn		Dial command, beginning the dialing
		sequence. The string "n" (telephone
		number and modifiers) listed as follows is
		entered after the "D" command
	L	Re-dial last number. Should be the first
		character following ATD, ignored
		otherwise
	Р	Pulse dial.
	R	Reverse dial. Originate call in answer mode
		(go on-line in answer mode)
	S=n	Dial the phone number stored in NVRAM
		at location "n" (n=0, 1, 2, 3)
	Т	DTMF tone dial.
	W	Wait for second dial tone. The modem
		waits for the second dial tone before
		processing the dial string
	,	Pause. Cause the modem to pause for a
		time before processing the next character in
		the dial string (specified by S8 register)
	!	Hook Flash (for call transfer). Cause the
		modem to go on-hook for 0.5 second then
		return to off-hook
Dn	L P R S=n T W	Dial command, beginning the dialing sequence. The string "n" (telephone number and modifiers) listed as follows is entered after the "D" command Re-dial last number. Should be the first character following ATD, ignored otherwise Pulse dial. Reverse dial. Originate call in answer mode (go on-line in answer mode) Dial the phone number stored in NVRAM at location "n" (n=0, 1, 2, 3) DTMF tone dial. Wait for second dial tone. The modem waits for the second dial tone before processing the dial string Pause. Cause the modem to pause for a time before processing the next character in the dial string (specified by S8 register) Hook Flash (for call transfer). Cause the modem to go on-hook for 0.5 second then return to off-hook

	@	Wait for 5 seconds of silence after dialing number
		Return to command state after dialing a
	,	number without disconnecting the call
En		AT command echo options
	E0	Echo disabled
	E1 *	Echo enabled
Hn		Switch-hook control
	H0 *	Modem goes on-hook
	H1	Modem goes off-hook
Mn		Speaker control
	M0	Speaker always off
	M1 *	Speaker on until carrier present
	M2	Speaker always on
	M3	Speaker off during dialing and on until
		carrier present
Nn		Select negotiate handshake
	N0	When originating or answering, handshake
		only at the communication rate specified by
		S37 register and "ATBn" and no fallback
	N1 *	When originating or answering, start
		handshaking only at the communication
		standard specified by S37 register and
		"ATBn" During handshake, fallback to a
		lower speed may occur.
On		Go on-line
	00	Return modem to a previously established
		state (return to data mode).
	01	Begin a retrain sequence, then return to on-
		line state.
	03	Issue a rate re-negotiation, then return to
D		on-line state.
P		Enable pulse dialing
Qn	00 *	Result code display options
	Q0 *	Result code enabled
	QI	Result code disabled
1		Enable tone dialing
Vn	1/0	Result code form
	VO	Display result code in numeric form (see
	X71 ±	also the result code options table)
W/	V1 *	Display result code in verbose (text) form
wn	WO	Select extended result code options
	WÜ	Disable protocol result code reports DTE speed.
		(see also the "Pecult Code Options Table")
	W/1	(See also the Result code Options Table")
	W I	CONNECT result code reports DTE speed.

		Enable protocol result codes.
	W2 *	CONNECT result code reports DCE speed.
		Enable protocol result codes.
Xn		Select result codes/call progress options
	X0	Display CONNECT or "1" for all speeds.
		Ignore dial tone and busy tone detection.
	X1	Display connect message and the modem's
		data rate, and an indication of the modem's
		error correction and data compression.
		Ignore dial tone and busy tone detection.
	X2	Display connect message and the modem's
		data rate, and an indication of the modem's
		error correction and data compression.
		Check dial tone before proceeding dialing,
		ignore busy tone detection.
	X3	Display connect message and the modem's
		data rate, and an indication of the modem's
		error correction and data compression.
		Ignore dial tone before proceeding dialing,
		check busy tone after making dialing.
	X4 *	Display connect message and the modem's
		data rate, and an indication of the modem's
		error correction and data compression.
		Check dial tone and busy tone.
	X5	Same as X4.
	X6	Same as X4.
	X7	Display CONNECT or "1" for all speeds.
		Check dial tone and busy tone.
Zn		Recall stored profile
	ZO	Reset and recall user profile 0. Either Z0 or
		Z1 restores the same single profile.
* M	anufaaturar dat	ault

Manufacturer default

Extended "AT&" (Ampersand) Command Set

Command	Options	Function & Description			
&Cn		Data carrier detect option			
	&C0	State of carrier from remote modem is ignored. DCD circuit is always on			
	&C1 *	DCD turns on when the remote modem's carrier signal is detected, and off when the carrier signal is not detected.			
&Dn		Data Terminal Ready (DTR) option.			
	&D0	DTR ignored			
	&D1	Go to command mode on on-to-off DTR transition			
	&D2 *	Hang up and go to command mode on on-			

		to-off DTR transition. Auto-answer is disabled if DTR is low		
	&D3	Hang up and reset from user profile 0 on the on-to-off DTR transition		
&F		Recall factory default setting as active		
&Gn		V 22bis guard tone option		
a con	&G0 *	No guard tone		
	&G1	550 Hz guard tone		
	&G2	1800 Hz guard tone		
&Kn		Set local flow control		
	&K0	Disable flow control		
	&K3 *	Enable bi-directional hardware flow control (CTS/RTS)		
	&K4	Enable bi-directional software flow control (XON/XOFF)		
&Pn		Pulse dialing make/break ratio selection		
	&P0	Make=39%, Break=61%, international		
		version (Default)		
		Make=33%, Break=67% for use in 20 pps,		
		Japanese version		
	&P1	Make=33%, Break=67%, international		
		version		
		Make=33%, Break=67% for use in 10 pps,		
&On		Async communications mode ontions		
aqu	&00	Async mode, buffered (same as "AT\N0")		
	&O5 *	Error control mode buffered (same as		
		"AT\N3")		
	&Q8	MNP error control mode. If an MNP error		
		control protocol is not established, the		
		modem will fallback according to the		
		current setting in S36 register.		
	&Q9	V.42 or MNP error control mode. If neither		
		error control protocol is established, the		
		current setting in S36 register		
&Sn		Data Set Ready (DSR) option		
	&S0 *	DSR always on		
	&S1	DSR on during handshake and on-line, off		
		in test mode or idle mode		
&Tn		Self-test commands		
	&T0	Terminate any test in progress		
	&T1	Local analog loopback test		
	&T3	Local digital loopback (LDL) test		
	&T6	Remote digital loopback test, in normal		
	l	mode		
		46		

&V		View active file and stored phone numbers		
&W		Store active configuration into the modem's		
		INVKAM		
&Zn=x		Store telephone number		
		n=0 to 3		
		x= <string> see also the dial modifier</string>		
		in "ATDn" command		
		The max. number of digits per string is 40.		
* M	anufacturer de	fault		

Manufacturer default

Extended "AT\" (Back Slash) Command Set

Command	Options	Function & Description		
∖Jn		Constant DTE speed option		
	\J0 *	DCE and DTE rates are independent		
	\J1	Force the DTE interface speed to the DCE		
		connection rate (line speed) after on-line		
\Nn		Error control mode options		
	\N0	Buffered mode, no error control (flow		
		control is allowed).		
	\N1	Direct mode, no error control (no flow		
		control is allowed).		
	\N2	MNP reliable mode. If MNP 2-4 error		
		control establishment fails, the modem		
	13.78.1	disconnects.		
	\N3 *	V.42, MNP or buffer mode. The modem		
		attempts to connect in V.42 mode. If this		
		MND mode. If this fails the modern		
		connects in buffer mode		
	\NI4	V 42 or disconnect. The modem attempts		
		to connect in V 42 mode. If this fails, the		
		call will be disconnected.		
\Qn		Local flow control options		
	\Q0	Disable flow control (same as "AT&K0")		
	\Q1	XON/XOFF software flow control (same		
		as "AT&K4")		
	\Q3 *	RTS/CTS hardware flow control (same as		
		"AT&K3")		
\Tn		Set inactive timer (for buffer mode only)		
	n=0 *	Disable inactive timer		
	n=1 - 255	Enable inactive timer. Length in minutes		
\Vn		Protocol result codes		
	\V0	Disable protocol result code appended to		
		DCE speed		
	\V1 *	Enable protocol result code appended to		

			DCE speed
	c	1 (

Manufacturer default

Extended "AT%" (Percent) Command Set

Command	Options	Function & Description
%B		View numbers in blacklist. If blacklisting is in effect, this command displays the numbers for which the last call attempted in the past two hours failed. The ERROR result code appears in the countries that do not require blacklisting.
%Cn		Data compression control
	%C0	No data compression
	%C1 *	V.42bis/MNP 5 data compression enabled.
* M	amufaatuman da	fault

Manufacturer default

Extended "AT-" (Dash) Command Set

Command	Options	Function & Description
-Cn		Data calling tone options
	-C0 *	Disable data calling tone
	-C1	Enable data calling tone (the freq. is 1,300 Hz with a cadence of 0.5 sec. ON and 2 sec. OFF)
-V90= <n></n>	command to enable/disable .90 and change downstream rate	
	-V90=0	disable V.90
	-V90=1	enable V.90 Auto Rate (default value)
	-V90=X	controls the downstream rate
	-V90?	Shows the current value
	-V90=?	Shows the range [0-21]

Manufacturer default

Possible Values of V.90

"AT-V90=X"	Downstream Rate
0	V.90 disabled
1	Auto Rate (default)
2	28000 kbit/s
3	29333 kbit/s
4	30666 kbit/s
5	32000 kbit/s
6	33333 kbit/s
7	34666 kbit/s

8	36000 kbit/s
0	27222 kbit/s
9	57555 KUIUS
10	38666 kbit/s
11	40000 kbit/s
12	41333 kbit/s
13	42666 kbit/s
14	44000 kbit/s
15	45333 kbit/s
16	46666 kbit/s
17	48000 kbit/s
18	49333 kbit/s
19	50666 kbit/s
20	52000 kbit/s
21	53333 kbit/s

APPENDIX B: S-REGISTERS

S-Registers, "ATSn=x"

Regist er	Dec.	Function & Description	Default
S0=	0 - 255	Set the number of the rings required before the modem automatically answers a call. Set "S0=0" to disable auto- answer mode	000
S1=	0 - 255	Count the incoming rings and store the value to this register. The value of this register is incremented with each ring. If no rings occur over an 8 sec. interval, this register is cleared. User can read but should not change this value	000
S2=	0 - 255	S2 holds the decimal value of the ASCII character used as the escape character. The default value (043) corresponds to an ASCII character "+". A value of 128 to 255 disables the escape process, i.e., no escape character will be recognized	043
S3=	0 - 127	Hold the decimal value of the Carriage Return <cr> character used as the command line and result code terminator. Pertain to asynchronous operation only</cr>	013
S4=	0 - 127	Hold the decimal value of the character recognized as a line feed. The line feed control character is output after the carriage return control character if verbose result code are used.	010
S5=	0 - 32, 127	Hold the decimal value of the character recognized as a backspace. The modern will not recognize the backspace character if this register is set to a value greater than 32	008
<u>S6=</u>	2 - 65	Set the length of time, in seconds, that the modem must wait (minimum 2 seconds even if the value is less than 2) after going off-hook before dialing the first digit of the telephone number For international version	003
S7=		Set the time, in seconds, that the modem must wait before hanging up because carrier is not detected	

	1 - 255	For international version	050
	35 - 59	For Japanese version	050
S8=	0 - 65	Set the time, in seconds, that the modem	002
		must pause when the , dial modifier is	
S10-	1 255	Set the length of time in tenths of a	020
510-	1 - 255	second that the modern waits before	020
		hanging up after a loss of carrier	
S11=	50 - 150	DTMF duration and inter digit delay	144
5.1	20 120	Set the duration and spacing in mini-	
		seconds, in DTMF touch tine dialing	
S12=	0 - 255	Define the maximum period, in 2-	050
		hundredths of a second, allowed	
		between consecutive asynchronous	
		escape character "+" (plus) for the	
		escape sequence to be considered valid	
S28=	0 - 255	V.34 modulation en-/disabler	001
		0: disabled	
~~~	0 00	1-255: enabled	
S30=	0 - 90	Inactivity timer. Set the length of time,	000
		in minutes, that the modem counts when	
		there is no data flow in or out the DIE	
		when the counter reaches the preset	
		when the counter reaches the preset value. Set $S_{30} = 0$ to disable the	
		inactivity timer	
		For buffer mode only.	
S37=		For buffer mode only. Desired DCE speed (line speed)	000
S37=	0	For buffer mode only. Desired DCE speed (line speed) Maximum modem speed	000
S37=	0 2	For buffer mode only. Desired DCE speed (line speed) Maximum modem speed Attempt 1200/75 bps connection	000
S37=	0 2 3	For buffer mode only. Desired DCE speed (line speed) Maximum modem speed Attempt 1200/75 bps connection Attempt to a 300 bps connection	000
S37=	0 2 3 5	For buffer mode only. Desired DCE speed (line speed) Maximum modem speed Attempt 1200/75 bps connection Attempt to a 300 bps connection Attempt to a 1200 bps connection	000
S37=	0 2 3 5 6	For buffer mode only. Desired DCE speed (line speed) Maximum modem speed Attempt 1200/75 bps connection Attempt to a 300 bps connection Attempt to a 1200 bps connection Attempt to a 2400 bps connection	000
<u>\$37=</u>	0 2 3 5 6 7	For buffer mode only. Desired DCE speed (line speed) Maximum modem speed Attempt 1200/75 bps connection Attempt to a 300 bps connection Attempt to a 1200 bps connection Attempt to a 2400 bps connection Attempt to a 4800 bps connection	000
<u>\$37=</u>	0 2 3 5 6 7 8	The second secon	
<u>\$37</u> =	0 2 3 5 6 7 8 9	The second secon	
S37=	0 2 3 5 6 7 8 9 10	The second secon	
<u>837</u> =	0 2 3 5 6 7 8 9 10 11	The second secon	
<u>837=</u>	0 2 3 5 6 7 8 9 10 11 12	The second secon	
<u>837</u> =	0 2 3 5 6 7 7 8 9 10 11 12 13	Attempt to a 1200 bps connection         Attempt to a 2400 bps connection         Attempt to a 7200 bps connection         Attempt to a 9600 bps connection         Attempt to a 12000 bps connection         Attempt to a 14400 bps connection	
S37=	0 2 3 5 6 7 8 9 10 11 12 13 14	Attempt to a 1200 bps connection         Attempt to a 2400 bps connection         Attempt to a 7200 bps connection         Attempt to a 12000 bps connection         Attempt to a 14400 bps connection         Attempt to a 12000 bps connection         Attempt to a 21600 bps connection	
S37=	0 2 3 5 6 7 8 9 10 11 12 13 14 15	Attempt 1200/75 bps connection         Attempt 1200/75 bps connection         Attempt 1200/75 bps connection         Attempt to a 300 bps connection         Attempt to a 1200 bps connection         Attempt to a 2400 bps connection         Attempt to a 2400 bps connection         Attempt to a 2400 bps connection         Attempt to a 1200 bps connection         Attempt to a 1200 bps connection         Attempt to a 12000 bps connection         Attempt to a 12000 bps connection         Attempt to a 16800 bps connection         Attempt to a 16800 bps connection         Attempt to a 12000 bps connection         Attempt to a 12000 bps connection         Attempt to a 24000 bps connection         Attempt to a 24000 bps connection         Attempt to a 24000 bps connection	
S37=	0 2 3 5 6 7 8 9 10 11 12 13 14 15 16	Intervention         Torbuffer mode only.         Desired DCE speed (line speed)         Maximum modem speed         Attempt 1200/75 bps connection         Attempt to a 300 bps connection         Attempt to a 1200 bps connection         Attempt to a 2400 bps connection         Attempt to a 2400 bps connection         Attempt to a 2400 bps connection         Attempt to a 1200 bps connection         Attempt to a 12000 bps connection         Attempt to a 12000 bps connection         Attempt to a 14400 bps connection         Attempt to a 12000 bps connection         Attempt to a 12000 bps connection         Attempt to a 24000 bps connection	
S37=	0 2 3 5 6 7 8 9 10 11 12 13 14 15 16 17	Intervention         Torbuffer mode only.         Desired DCE speed (line speed)         Maximum modem speed         Attempt 1200/75 bps connection         Attempt to a 300 bps connection         Attempt to a 1200 bps connection         Attempt to a 2400 bps connection         Attempt to a 2400 bps connection         Attempt to a 4800 bps connection         Attempt to a 200 bps connection         Attempt to a 12000 bps connection         Attempt to a 12000 bps connection         Attempt to a 16800 bps connection         Attempt to a 12000 bps connection         Attempt to a 16800 bps connection         Attempt to a 21600 bps connection         Attempt to a 24000 bps connection         Attempt to a 26400 bps connection         Attempt to a 28800 bps connection	
S37=	0 2 3 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Intervent         For buffer mode only.         Desired DCE speed (line speed)         Maximum modem speed         Attempt 1200/75 bps connection         Attempt to a 300 bps connection         Attempt to a 1200 bps connection         Attempt to a 2400 bps connection         Attempt to a 2400 bps connection         Attempt to a 4800 bps connection         Attempt to a 4000 bps connection         Attempt to a 1200 bps connection         Attempt to a 12000 bps connection         Attempt to a 12000 bps connection         Attempt to a 16800 bps connection         Attempt to a 16800 bps connection         Attempt to a 26400 bps connection         Attempt to a 21600 bps connection         Attempt to a 21600 bps connection         Attempt to a 24600 bps connection         Attempt to a 28800 bps connection         Attempt to a 31200 bps connection	
S37=	0 2 3 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	The second secon	

		max. 56K downstream speed that the	
		modem attempts to connect	
	0	56K disabled	
	1	56K enabled, auto-speed selection, max.	
		modem speed	
	2	32000 bps	
	3	34000 bps	
	4	36000 bps	
	5	38000 bps	
	6	40000 bps	
	7	42000 bps	
	8	44000 bps	
	9	46000 bps	
	10	48000 bps	
	11	50000 bps	
	12	52000 bps	
	13	54000 bps	
	14	56000 bps	
S48=	7 128	LAPM error control and feature	
	,,	negotiation.	
		S48=7 Negotiation enabled	
		S48=128 Negotiation disabled. Force	
		immediate fallback options	
		specified in S36	
		S36=0 or 2, and S48=7	
		LAPM or hang up	
		S36=0 or 2 and S48= 128	
		Don't use	
		S36=1 or 3, and S48=7	
		LAPM or async	
		S36=1 or 3, and S48=128	
		Async $S^{2}(-4, -\pi) = 1 S^{4}S^{-7}$	
		530=4 of 0, and $548=7$	
		$S_{36=4}$ or 6 and $S_{48=128}$	
		MNP or hang up	
		$S_{36=5 \text{ or } 7}$ and $S_{48=7}$	
		LAPM. MNP or async	
		S36=5 or 7, and S48=128	
		MNP or hang up	
S91=	6 - 15	Transmitting power level adjustment	010
		(Japanese version only)	
		Range: -6 dBm to -15 dBm	
		Default: -15 dBm	