SeMax WIRELESS

CDM-820 User Guide

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Important Safety Instructions

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord indicated in this manual.

SAVE THESE INSTRUCTIONS

DEALER / SERVICE PROVIDER

COMPANY NAME: _____

CONTACT NAME: _____

ADDRESS: _____

_____

_____

PRODUCT

DATE OF PURCHASE: _____

MODEL NUMBER: _____

SERIAL NUMBER: _____

ATTACH SALES RECEIPT HERE

Introduction

Your new CDM-820 (CDMA/AMPS Dual-Band, Tri-Mode, CMOS data & voice modem) is designed to provide quality voice/data communications. Using the same technology as digital cellular telephones, your CDM-820, in conjunction with a cellular service provider, is a state of the art alternative to traditional wireline service.

Disclaimer and Limitation of Liability

SeMax Wireless, Inc. assumes no responsibility for any damage or loss resulting from the use of its products. SeMax Wireless assumes no responsibility for any loss or claims by third parties, which may arise through the use of its products. SeMax Wireless assumes no responsibility for any damage or loss caused by the deletion or loss of data as a result of malfunctions or repairs.

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Safety

The following is a guide to safe, environmentally sound and efficient use of the CDM-820.

Electronic Life Supporting Devices and Medical Devices

DANGER: The operation of any radio transmitting equipment, such as the CDM-820, may cause interference with medical devices. The signal you transmit can interfere with the operation of medical equipment used for treatment, communication, monitoring or analysis.

Before using the CDM-820 in conjunction with life supporting devices such as cardiac pacemakers, defibrillators, insulin diffusion pumps and related instruments, contact your physician.

DO NOT use the CDM-820 in locations bearing warning signs that caution against radio transmission, and always request permission before using the unit near medical equipment.

Electronic Devices

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against RF signals from your CDM-820. Some digital wireless phones may interfere with some types of hearing aids. In the event such interference occurs, you should consult your service provider.

Emergency Calls

The operation of your CDM-820 is dependent on radio signals, cellular and landline telecommunication networks. Therefore, the CDM-820 cannot guarantee a connection under all conditions - it is important that you never rely exclusively on any cellular product for emergency communications.

Electrical Shock

The CDM-820 uses internal voltages/currents that could pose possible electric shock hazards, which could result in bodily injury. For your safety, DO NOT attempt to open the CDM-820 for any purpose.

Precautions

Unplug the CDM-820 from the electrical outlet should one or more of the following occur:

- If the AC power supply, its cord or plug is damaged or frayed.
- If liquid has been spilled into the CDM-820, or it has been exposed to water or rain.
- If the CDM-820 has been subject to an extreme physical blow.
- If the CDM-820 does not operate normally according to these instructions, and the Troubleshooting Guide within this User Guide has not solved the problem.

- If the unit exhibits a distinct change in performance that is not documented in these instructions.

Under any of these conditions, DO NOT attempt to service the CDM-820 yourself, as this could result in risk of fire or personal injury.

FCC RF Exposure Information

WARNING! Read this information before using this device.

Your CDM-820 is a low power radio transmitter and receiver. When it is ON, it receives and also sends out Radio Frequency (RF) signals.

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

Your CDM-820 meets and/or exceeds the governments' standard for maximum permissible exposure to RF exposure of less than 1mw / cm^2.

CAUTION This device was tested with the significant source of emissions (antenna) kept 1.8 cm. from the body. Please maintain this distance to comply with FCC RF exposure requirements.

Always install the unit in a place that will ensure that no part of the body will be within 20 cm of the unit. Use an extension phone located in another room, or remotely install the unit in a closet or on the wall high enough to maintain 20 cm distance while the unit is in operation.

The CDM-820 was tested and found to be in compliance with the MPE levels required by the FCC and Industry Canada. The MPE value for this model is .65 mW / cm2. This test was done with the transmitter operating at its maximum power output. In normal operations the RF output is lower due to the control signal sent from the base station site.

Further information related to exposure to RF energy can be obtained at the FCC's website:www.fcc.gov/oet/rfsafety.

The long term characteristics or the possible physiological effects of radio frequency electromagnetic fields have NOT been investigated by U.L.

Radio Frequency Energy and Explosives

DO NOT store or operate the CDM-820 in the same area where flammable liquids, gases, or explosive materials are stored.

Frequencies from the CDM-820 can interfere with blasting operations. DO NOT operate the CDM-820 near areas where blasting operations are in progress or in areas posted “Turn off two-way radio”.

Ventilation Requirement

DO NOT place the unit on surfaces such as a bed, sofa, rug, or other similar surface, or place anything on the unit. DO NOT push any object through the slots and openings in the cabinet. The object may touch dangerous voltage points or cause damage to the CDM-820 which could result in risk of fire or electrical shock.

Antenna Safety

Use only the supplied or an approved replacement antenna (AX-702). Unauthorized antennas, modifications or attachments could damage the unit and may violate FCC Regulations and/or IC Standards.

DO NOT touch the antenna unnecessarily when the CDM-820 is in use. Contact with the antenna affects the call quality and may cause the unit to operate at a higher power level than otherwise needed.

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Getting Started

Make sure that the following items are enclosed in your original CDM-820 carton(s):

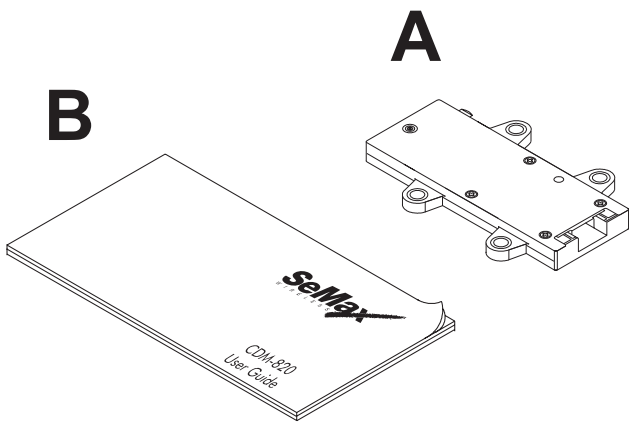
A. CDM-820 Unit

B. This User's Guide

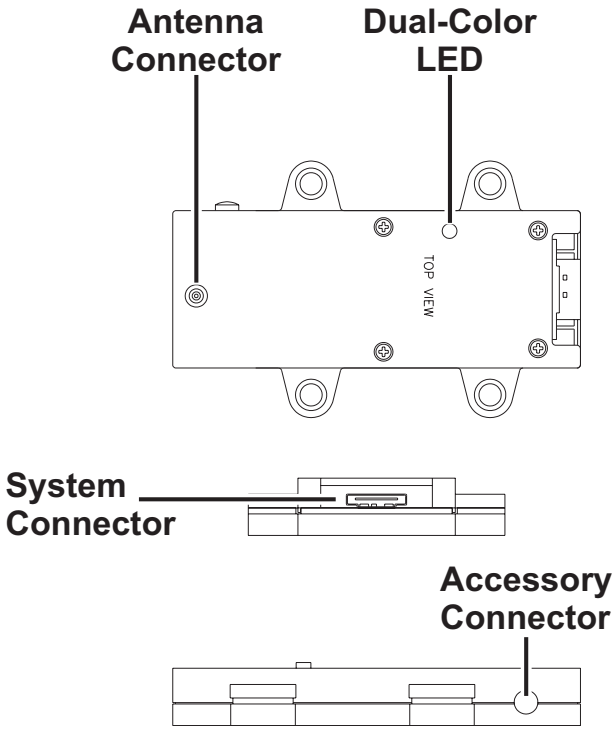
If any parts are missing, please contact your Dealer / Service Provider.

For convenience, please retain the CDM-820's original carton and packing material in case of a return or needed warranty work.

NOTE: Before installing or using your CDM-820, **please read all instructions in this guide**. If you have any questions concerning the installation or use of your CDM-820, contact the Dealer / Service Provider where you purchased your CDM-820.



Getting To Know Your CDM-820

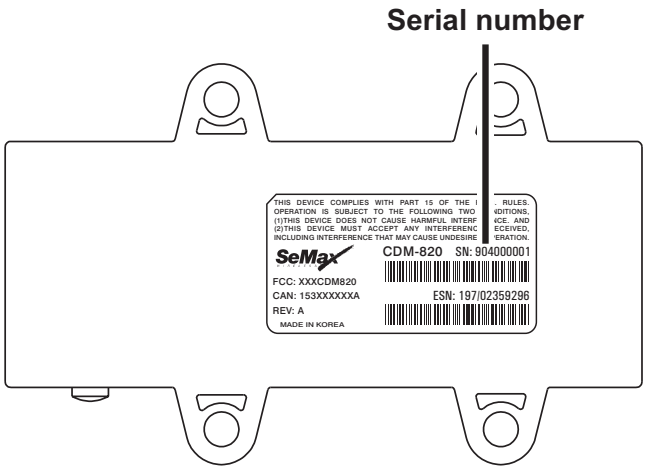


Serial Number

Should you need to contact your network operator or service provider with questions about your CDM-820, you will need to provide them with the serial number. This is located on a label on the bottom of the CDM-820 (see diagram at right). The ideal time to record the serial number is prior to installing the unit. Record the serial number in the front of this guide, and store this guide (along with your sales receipt) in a safe place for future reference.

Security

If your CDM-820 becomes lost or stolen, you must notify your network operator or service provider as soon as possible - they can block your CDM-820 from any unauthorized use. This is important as you may be liable for the cost of unauthorized calls until your CDM-820 is reported lost or stolen. The network operator or Service Provider will need the serial number of your CDM-820 in order to block it from unauthorized use.



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CDM-820 Installation and Connection

Where to Install the CDM-820

Before installing the CDM-820, you will need to determine a mounting location - either on a flat horizontal or vertical wall surface. You should consider the following in determining a suitable mounting location for your CDM-820:

- Place the CDM-820 in the highest location that is practical and convenient. Avoid placing the CDM-820 in a basement. Generally, the radio signal or received signal strength will be better near an exterior wall or window and on higher floors in a home or office.
- If you wish to place the CDM-820 on a flat horizontal surface, such as a desktop, table, stand, etc., make sure the surface is stable, so that the unit cannot fall and be damaged.
- Place the CDM-820 near an electrical outlet or where AC power is available.
- DO NOT place the CDM-820 near objects that generate a large amount of heat (radiators, space heaters, base-board heaters, portable heaters, ovens, fireplaces, etc.). Placement of the CDM-820 near these locations could possibly damage the exterior cabinet and effect the performance of the CDM-820.
- DO NOT place the CDM-820 near liquids, near sinks, kitchen counter tops or tables, bathtubs, swimming pools, wet basements, etc.
- DO NOT place the CDM-820 in direct sunlight, which can cause the exterior finish to fade, and possibly cause the CDM-820 to malfunction.
- DO NOT place the CDM-820 where the temperature will be below -15°C (+5°F) or above +50°C (+122°F).
- Temperatures beyond these ranges could damage the CDM-820.
- Placement of the CDM-820 near a television set is not recommended as the CDM-820 may cause interference.
- Use of cordless telephones with the CDM-820 is permissible. However, you may want to keep the cordless telephone base and handset away from the unit, as they may interfere with each other.
- Computers can occasionally cause interference with the CDM-820. If the sound quality of your unit degrades when switching on a computer, move the CDM-820 further away from the computer components. You may also want to plug in the AC power supply of the CDM-820 into an outlet that is different from the computer.

- Microwave ovens can occasionally generate interference with the CDM-820. If the sound quality of your CDM-820 degrades when switching on a microwave oven, move the unit further away from the oven. You may also want to connect the unit's AC power supply into an outlet different from the oven.

- DO NOT place the CDM-820 near radio transmitters (Citizen Band radios, amateur radio, etc.). You may also want to connect the CDM-820's AC power supply into another outlet that is different from the radio transmitter.

Wall Mount Installation

For the CDM-820 to be wall mounted, you must, verify that AC power is available. Insure that there is enough space to install the MMCX antenna. For this installation, you will need a small, Phillips™ head screwdriver.

1. Locate the 4 mounting holes on the CDM-820.

2. Align the mounting holes on the CDM-820 to those in the desired location on the wall. Using the provided screws, tighten the unit securely to the wall.

   CAUTION: Do not use screws other than those provided with your CDM-820. If you lose the provided screws, you may substitute four M6, self-tapping, Phillips™ head screws of 20mm length.

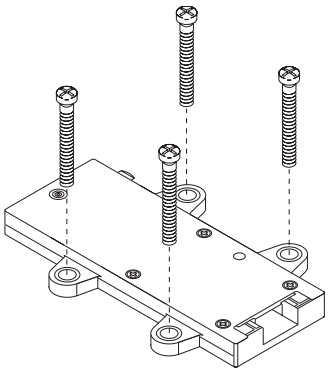

Figure 1. - Mounting

Connecting the CDM-820 to Your Device(s)

NOTE: You should have determined the mounting location for the CDM-820 and have installed the unit prior to connecting it to any devices.

1. Verify that the antenna provided with the CDM-820 is pointing up (vertically). If you are using an external antenna, attach the antenna to the CDM-820.

2. Route the AX-601 Data/System Cable from the 22 pin system connector on the CDM-820 to the Serial Communications port on the computer. (see Fig. 2)

WARNING: Verify that the AC voltage in your home or office matches the rated AC input voltage of the CDM-820 power supply.

WARNING: Use only the AC power supply that was provided with the CDM-820. Use of any other AC power supply could damage the CDM-820 and void your warranty.

WARNING: Do not overload your electrical wall outlet or electrical extension cords as this can result in the risk of fire or electrical shock.

NOTE: Do not allow anything to rest on cords attached to the CDM-820. Route the AC power supply cord so that it cannot be abused by people walking on it, pets chewing on it, etc.

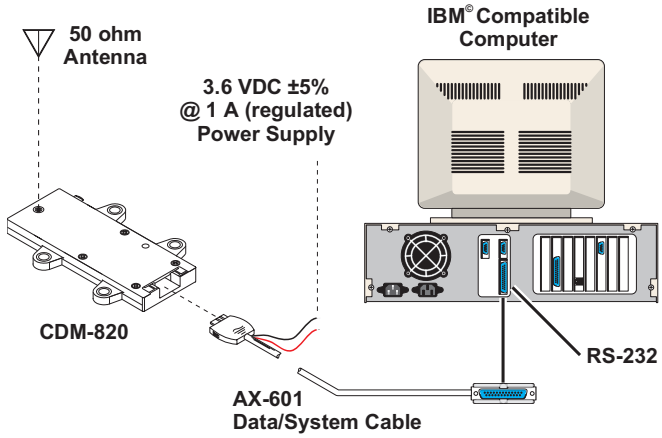

Figure 2. - Computer Connection

3. After installing the CDM-820, connect the AX-501 or AX-502 to the unit and place a call by pressing the control switch once. This will dial a pre-programmed number. If you hear a ring tone in the headset the CDM-820 is properly connected and has detected the local network service provider.

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CDM-820 Operation

LED Indicators

The CDM-820 has one dual color LED (Light Emitting Diode) to inform you of the status of your CDM-820 unit.

RED LED (POWER): This LED is an indicator of the power source being used by the CDM-820. It has two possible states:

Steady RED Light: AC power is being used to power the CDM-820 and the unit is active.

No RED Light: The CDM-820 is not receiving power from the AC power supply or the unit is in a “receive” mode and the GREEN LED is on.

GREEN LED (INCOMING CALL): This LED indicates when a call is being received. It has three possible states:

Steady GREEN Light: The unit is transmitting or receiving information.

Slow Blinking GREEN Light:
There is an active carrier signal. (2 Hz)

3 Burst Blinking GREEN Light:
The unit is receiving an incoming call. (5 Hz)

Making Calls

There are two methods to making calls using the CDM-820. The first method is to use the AX-501(Headset w/Boom Mic) or AX-502 (Ear/Mic w/Control Switch). The second method is to connect the CDM-820 to an IBM AT compatible PC and use the appropriate AT command set to place a call. (See Page 31 for the AT command set)

Receiving Calls

Receiving calls on the CDM-820 is identical to receiving calls with a standard wireline service. When the CDM-820 rings (3 Burst Blinking GREEN Light), push the control switch on the AX-501/AX-502 and speak into the micro-phone. When receiving a call when connected to a computer, use the appropriate AT command set protocol.

PC Modem Driver Configuration

Windows 95/98 configuration

1. From the Start menu, select Settings > Control Panel.
2. From Control Panel, double click MODEMS. (Fig. 3)
   If a modem is already installed in the PC then click the "ADD...." button.
3. From the "Install New Modem" window, choose "Don't detect my modem; I will select it from a list" and click NEXT. (Fig. 4)

Figure 3 - Control Panel Window

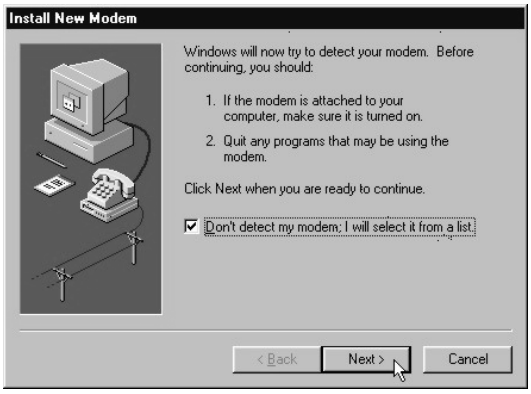

Figure 4 - Install New Modem Window

4. Select “(Standard Modem Types)” from the “Manufactures:” list. Choose “Standard 28800 bps Modem” from the “Models” list and click NEXT. (Fig.5)

5. Select the port to use with this modem. Click NEXT. Typically COM2 is used. (Fig. 6)

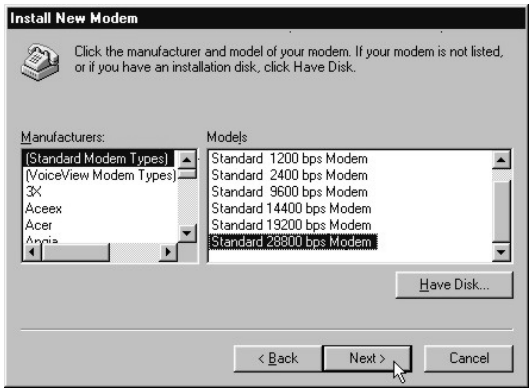

Figure 5 - Choose Modem Type

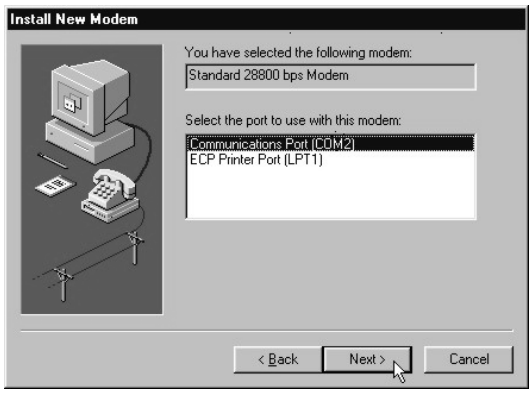

Figure 6 - Port Selection

6. Once the port has been selected Windows will install the modem. The installation screen will be displayed for approximately 25 seconds. (Fig.7)

7. After the installation is complete click on FINISH. (Fig. 8)

Figure 7 - Installation Message

Figure 8 - Completion Window

8. From the “Modems Properties” window select the “Standard 28800 bps Modem” that was installed. Click on PROPERTIES. (Fig. 9)

9. From “Maximum Speed” area, select “38400”. (Fig. 10)

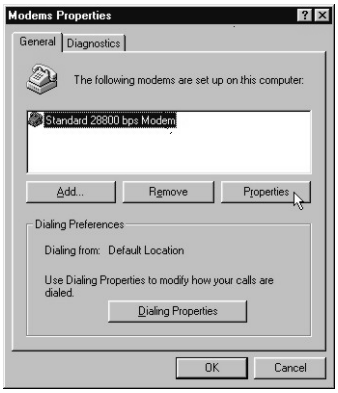

Figure 9 - Modems Properties

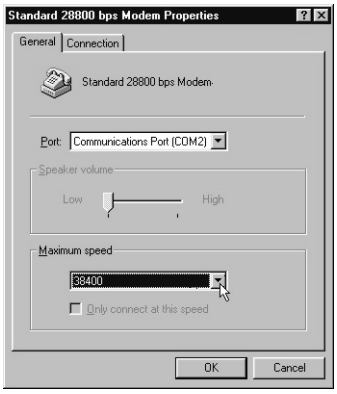

Figure 10 - Maximum Speed

10. From the “Standard 28800 bps Modem Properties” select the “Connection” tab, then click on ADVANCED. (Fig. 11)

11. From the “Advanced Configuration Settings” select “Software (XON / XOFF)”. Click OK. (Fig. 12)

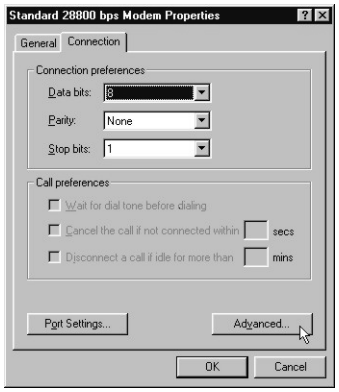

Figure 11 - Connection Properties

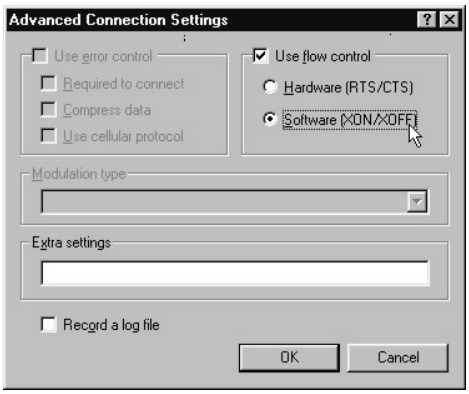

Figure 12 - Advanced Connection Settings

12. Double click on the “My Computer” icon located on the Windows Desktop. Double click on the “Dial-Up Networking” icon. (Fig. 13)

13. From the Dial-Up Networking window, double click on the “Make New Connection” icon. (Fig. 14)

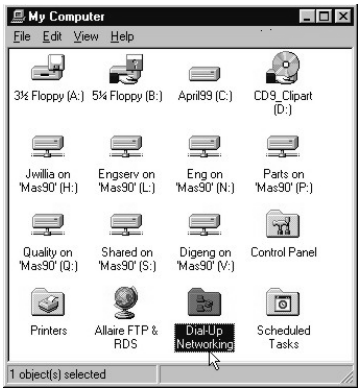

Figure 13 - Dial-Up Networking Icon

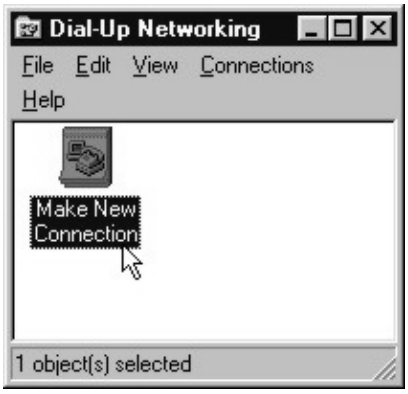

Figure 14 - Make Connection Icon

14. Type in a name for this new connection. Select a modem from the list and click NEXT. (Fig. 15)

15. Type in the Area Code, Phone Number, and Country code for the ISP you are using then click NEXT. (Fig. 16)

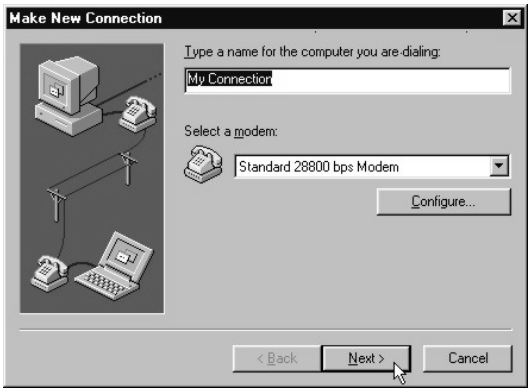

Figure 15 - Modem Selection

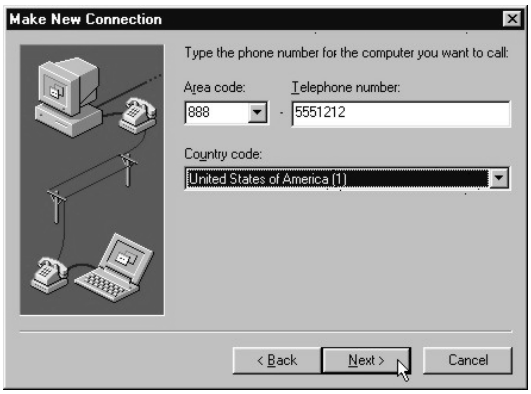

Figure 16 - Phone Number Entry

16. Click FINISH. (Fig. 18)
17. From the “Dial-Up Networking” window, right click on the connection that was just setup. (Fig. 17)
18. Select PROPERTIES.

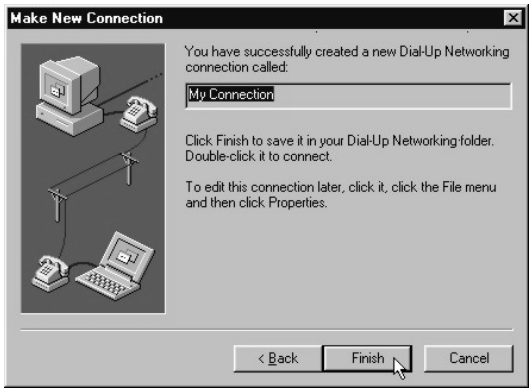

Figure 18 - Finish Window

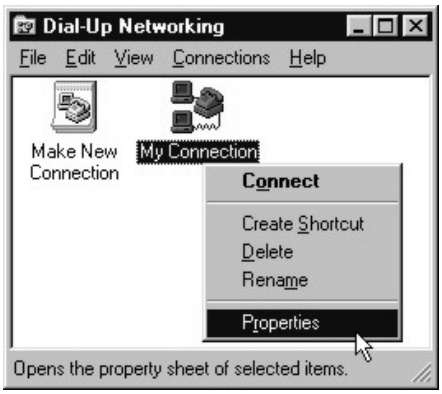

Figure 17 - Connection Properties

19. After selecting PROPERTIES, the “General” tab will be displayed. (Fig. 19)

20. Select the “Server Types” tab. (Fig. 19)

21. From the “Type of Dial-Up Server” drop down menu, Select “PPP:Windows95, Windows NT 3.5, Internet”.

22. In the “Advanced Options:” area check “Enable Software Compression”. Uncheck all other options.

23. In the “Allowed Network Protocols:” area check “TCP/IP”. Uncheck all other options. Click OK. (Fig. 20)

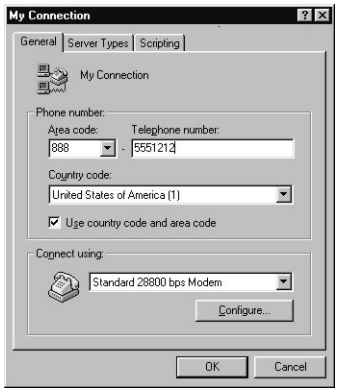

Figure 19 - General Tab

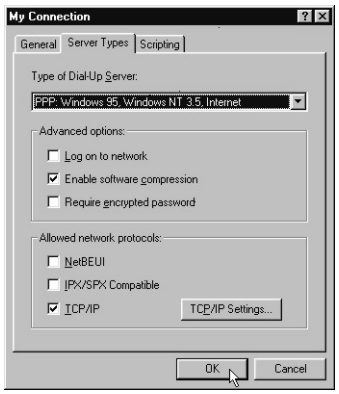

Figure 20 - Server Types Tab

24. From the “Dial-Up Networking” window, double click on the connection that was just setup.

25. From the “Connect To” window, type in the “User name” and “Password” for the ISP. (Fig. 21)

26. Click “Connect”.

PC Fax Program

1. In the Fax program on your PC, such as WinFax, setup the Answer Mode. Click on “Receive” and select “Automatic Receive”.

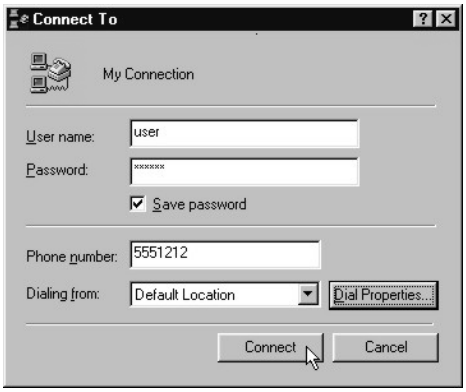

Figure 21 - Connect To Window

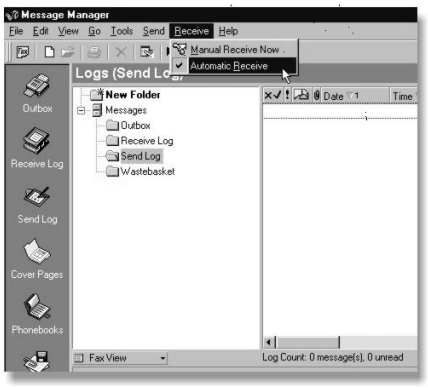

Figure 22 - WinFax Menu

Accessories

An ear mic w/control switch and external antenna kit may be ordered from your Dealer / Service Provider.

Cleaning the CDM-820

WARNING: Always disconnect the CDM-820's power supply for any cleaning.

Use a soft cloth dampened (not wet) and a mild soap/water solution for cleaning. DO NOT use any other chemicals on the CDM-820, such as dust sprays, cleaners, etc. These chemicals could damage the finish on the exterior of the unit. NEVER submerge the unit in water or any liquids. To remove dust from the CDM-820, a soft, dry cloth or feather duster may be used. After you have finished cleaning the unit, reconnect the CDM-820 power supply.

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Technical Specifications

General

Power: . . . . . Source: 3.6 VDC ±5% @ 1 A (regulated)

Serial Port: . . . . . CMOS Levels (3V)

Ear Mic Connector: . . . . . 2.5mm Jack

Interface Connector: . . . . . 22 Pin System Connector

FCC ID: . . . . . PENDING

CANADA ID: . . . . . PENDING

LED Indicators: . . . . . Power ON, RSSI, Transmit Data

Command Protocol: . . . . . AT Command Set

Modem: . . . . . IS-707A compatible, V.42, V.17, V.29, IS-95A/B (MDR verified on IS-95B networks) (optional enhanced AMPS modem available)

Vocoder: . . . . . 8 Kbps CELP, 13 Kbps QCELP, 8 Kbps EVRC

Complies with: . . . . . Part 2, 15 Class B and 22, CFAR-47, Subsection 22, JSTD-008 and IS-95, JSTD-018 and IS-98A, IS-707 and 99 data services

Physical Specifications

Size: 116 x 73 x 16 (mm)
4.5 x 2.9 x 0.6 (in)

Weight: 66 g (2.3 oz.)

Shock/Vibration: EIA/TIA-571

Environmental Specifications

Temperature: Operating: -30°C to +60°C
Storage: -40°C to +70°C

Operating Humidity: 0 - 95% (non-condensing)

RF Specifications

	800 MHz	1900 MHz
Air Interface Standards:	AMPS: ANSI/TIA/EIA-553 CDMA: TIA/EIA, IS-95A/B	J-STD-008
Emission Designators:	AMPS: 40KF8W/440KF1D CDMA: 1M25F9W	1M25F9W
Frequencies:	Tx: 824-849 MHz Rx: 869-894 MHz	Tx: 1850-1910 MHz Rx: 1930-1990 MHz
RF Power:	AMPS: 600mW (EIRP Nom.) CDMA: 200mW (EIRP Nom.)	200mW (EIRP Nom.)
Maximum Tx Power:	AMPS: +26.7dBm min. CDMA: +23dBm min.	+23dBm min.
Rx Sensitivity:	AMPS: >-116dBm @12dB Sinad CDMA: >-104dBm @ 0.5% FER	>-104dBm @ 0.5% FER
Frequency Stability:	>±2.5 ppm	>±2.5 ppm
Antenna Interface:	50 ohm MMCX	50 ohm MMCX

Accessories & Options

AX-501:	Headset w/Boom Mic & Control Switch
AX-602:	Data/System Cable
AX-702:	50 ohm Antenna MMCX
AX-502:	Ear/Mic with Control Switch
AX-802:	Wall Adaptor 3.6VDC @ 1A ±5% (regulated)
AX-901:	PC Based Programming Kit

FCC Notice

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 radiates radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television 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 this equipment.
- Reorient or relocate the receiving antenna of the device displaying the interference.
- Increase the separation between this equipment and the receiver.
- Connect this equipment into an AC outlet on a circuit different from that to which the device is connected.
- Contact your Dealer / Service Provider, or an experienced radio/TV technician for help.

Industry Canada Statement

This device was tested and found to be in compliance with applicable Industry Canada specifications.

Repairs to certified equipment should be made by an Authorized maintenance facility designated by the supplier. Any unauthorized repairs or alterations made by the user to this equipment voids the warranty and will cause the unit to be non-compliant with IC Standards.

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Command	A1	A2	
ATH	y	y	Hang up A1: response OK A2: Response OK-> NO CARRIER
ATA	y	y	Hook off
+CICB	y	n	Incomming Call Bearer
+VTD, +VTS	y	y	Duration n* 100ms and DTMF tones 0..9,A..D,*,#
+COPS	y	y	Operator selection
ATDL	y	n	Dial last used number, useful
+CSQ	y	y	Field strength
+CREG	y	y	Registration
S-Registers	y	y	A1/A2 SO:Rings to Auto-Answer Only A2-S2:Escape-Character Only A2-S3:Carriage Return-Character Only A2-S4:Line Feed-Character Only A2-S5:Backspace-Character Only A2-S12:Escape Code Guard Time no OK from A2 by AT+SO? (only Content)
+VGR, +VGT	y	y	Speaker and microphone gain A1-VGR/VGT 0..255 Values larger 255 are accepted A2 VGR 0..23 VGT 0..20
+SIDET	y	n	Side tone, A2-MMI implemented, but not as an AT command
+ECHO	y	n	Not working in A1, enough program space in A2 for echo cancellation?
+CGSN	y	y	Serial number
+CGMM	y	y	Model ID
+CGMR	y	y	Software revision
+CGMI	y	y	Manufacturer ID
+GCAP	y	y	capabilites
+CPAS	y	y	Phone activity status
+CPOF	y	n	

+CFUN	y	y	Phone functionality After CFUN=0 A1- Answer for AT-Commands AT -> OK ATZ -> OK AT+CPIN? -> +CPIN: READY (not OK) A2- Answer for AT-Commands AT -> OK ATZ -> +CME ERROR: 11SIM PIN (and OK) After CFUN=1 A1 not OK when Phone is ready A2 OK when Phone is ready
+CPIN	y	y	Pin code state
+CLCK	y	y	Phone lock A1: +CLCK? for request Modem or Network facilities A2: +CLCK= SC ,2 as Sample for request SIM-Card Parameter
+CPWD	y	y	Password change
+CPBS	y	y	Select Phonebook-Memory Storage
+CPBR	y	y	read from Phonebook A2 first Number in Phonebook will be not displayed
+CPBF	y	y	Find Phonebook Entries A1: ERROR when Entry not found
+CPBW	y	y	Write to Phonebook
+CAOC	y	y	Advice of charge
+CACM	y	n	Call meter
+CAMM	y	n	Call meter maximum
+CPUC	y	n	Price per unit and currency
+CSMS	y	y	Message service
+CPMS	y	y	Message store, Hopefully soon flash for not using SIM card for storage A2 Response 1 = READ Response 2 = WRITE Response 3 = Cell-Broadcast
+CMGF	y	y	Message format
+CSAS	y	y	Save SMS settings
+CRES	y	y	Restore SMS settings only

+CSDH	y	y	Show text mode parameters
+CSMP	y	y	Set text mode parameters
+CSCS	y	y	Character set used A1-only PCCP437 available A2-GSM, IRA, PCCP437 usable
+CNMI	y	y	Message indication A1-+CNMI: (0-3), (0-3), (0,2), (0,1), (0,1) A2-+CNMI: (0-3), (0-3), (0,2), (0,1), (0,1)
+CMGR	y	y	Message read
+CMGL	y	y	Message list A1 in Test-Mode: +CMGL=0..4 A2 in Text-Mode: +CMGL= REC UNREAD +CMGL= REC READ +CMGL= STO UNSENT +CMGL= STO SENT +CMGL= ALL
+CMGS	y	y	Message send
+CMGD	y	y	Message delete
+CSCA	y	y	Service center A1: +CSCA=1234567 or +CSCA= 1234567 A2: +CSCA= 1234567
+CSCB	y	y	Cell broadcast missing
+CCFC	y	y	Call forwarding
+CLCK	y	y	Call barring
+CCWA	y	y	Call waiting
+CLIR	y	n	Incoming call restriction
+CLIP	y	n	Incoming call presentation
+COLP	y	n	Outgoing call presentation
+CBST	y	y	Bearer service A1: +CBST: (0-8,65,66,68,70,71),(0),(0,1,100,101) A2: +CBST: (0-2,4,6-7,65-66,68,70-71),(0),(0-1)
+CR, +CRC	y	y	Call report

ATE	y	y	Serial link echo mode
ATQ	y	y	Serial link result code
+IPR	y	y	Serial link baud rate At: +IPR: (),(300,1200,2400,4800,9600,19200,38400,57600,115200) A2: +IPR: (),(300,600,1200,2400,4800,9600,14400,19200)
ATO	y	y	Back to online mode
ATV	y	y	Serial link response mode
+ICF	y	y	Serial link parameters A1: +ICF: (1-6),(0-4) A2: +ICF: (1,3-5),(0-1,4)
A/	y	n	Repeat last command
ATZ	y	y	Default configuration
+IFC	y	y	DTE-DCE local flow control A1: +IFC: (2),(2) only RTS/CTS A2: +IFC: (0,2),(0,2)
&C	y	y	DCD signal
&D	y	y	DTR signal
&S	y	n	DSR signal not for A2
&W	y	n	Save modem settings
+CRLP	y	y	Radio link parameters A1: +CRLP: (0-61),(0-61),(48-255),(6-255) A2: +CRLP: (0-61),(0-61),(39-255),(1-255)
+CMEE	y	y	Report last error
+CEER	y	y	Extended error messages A1: +CEER: Error 0 A2: +CEER: 31
+CKPD	n	y	Send Key s to MMI AT+CKPD= 0 is the same as press 1 on Keypad AT+CKPD= 9 is the same as press 9 on Keypad AT+CKPD= U is the same as press Arrow Up on Keypad AT+CKPD= D is the same as press Arrow Down on Keypad AT+CKPD= * is the same as press * on Keypad AT+CKPD= # is the same as press # on Keypad AT+CKPD= M is the same as press MENU on Keypad AT+CKPD= S is the same as press SEND on Keypad AT+CKPD= E is the same as press END on Keypad