Important Notice

Cell Data LTD. makes no representation or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose.

Further Cell Data™ reserves the right to revise this documentation and to make changes in the contents hereof without obligation of Cell Data to notify any person of such revision changes.

FCC RF EXPOSURE INFORMATION

WARNING!   Read this information before using your phone

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.

Operating Requirements

This device was tested in a notebook computer with the significant source of emissions (antenna) kept 2.0 cm. from the body. Please maintain a minimum of 2.0 cm separation distance between the user's body and the device to comply with FCC RF exposure requirements.

For more information about RF exposure, please visit the FCC website at www.fcc.gov

Table of Contents

Introducing the "CDMA wireless modem"

A fully integrated solution from GlobeWave

The CDMA wireless modem™ PC Card is a unique, state-of-the-art, fully integrated, single Type II PC Card module for sending and receiving data, fax and voice communications over the *Code Division multiple Access* (CDMA) and *Advanced Mobile Phone System* (AMPS) cellular networks as well as over conventional land-based phone network. The cellular phone and fax/modem are optimally matched and integrated into a single PC Card, which means there is **no need to connect the "CDMA wireless modem" to any external device, it is a cellular phone**. The result is an elimination of the compatibility problems, which usually arise with cable, connected cellular phone-to-modem combinations.

Your "CDMA wireless modem" is enabled to perform both cellular and land-based voice, data and fax communications using standard communication software packages. Mode selection is fully automatic. This manual contains important information about setting up, using, and caring for your "CDMA wireless modem" . It assumes that you are familiar with the computer (hardware and software) which will be used. Before using the product, you should read this manual carefully as it provides important information and setup tips.

Product Feature Summary:

- CDMA cellular phone system
- Analog AMPS cellular phone system (CSCD)
- Automatic mode switching between CDMA and AMPS (with definable preference)
- Data transfer rate 14400 bps [up to 64 Kbps (MDR) if supported by network] over cellular CDMA system
- Modem transfer rate up to 21600 bps over AMPS cellular system (V.34)
- Implements TX-CEL technology for improved cellular data transfer performance over AMPS system
- Modem transfer rate up to 56 Kbps over land-line (V.90)
- Carrier A or B capability (Extended range, 832 channels)
- Mobile Station Power Class III (0.6W transmit power)
- PCMCIA type II form factor (with 35 mm length extension)
- Error correction (LAP-M, MNP 2-4, MNP10) and data compression (V.42bis, MNP5)
- Modem FAX transfer rate up to 14400 Baud
- FAX protocol for CDMA cellular networks
- Landline (PSTN) capability
- Earphone for cellular voice communication
- Automatic operation mode switching by selecting connected accessories
- Extended Industry Standard AT command set compatible with most common application software

Important Safety Information

Traffic Safety

Do not use your computer and your CDMA wireless modem while driving a vehicle.
Remember road safety always comes first!

Operating Environment

Your cellular modem includes a cellular phone. Remember to follow any special regulations in force in any area and always switch off the modem whenever it is forbidden to use a cellular telephone, or when it may cause interference or danger.

Operation of any radio transmitting equipment, including your cellular modem, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device if you have any questions. Other electronic equipment may also be subject to interference.

Users are advised to switch off the cellular modem when at a refueling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots, chemical plants or where blasting operations are in progress.

Switch off your cellular modem when in an aircraft. The use of cellular modem, as any cellular phone, may be dangerous to the operation of the aircraft, disrupt the cellular network, and is illegal.

For additional information regarding FDA consumer update of mobile phones please refer to appendix A.

FCC/INDUSTRY CANADA NOTICE

Your cellular modem may cause TV or Radio interference. The FCC/Industry Canada can require you to stop using it if such interference cannot be eliminated.

This device complies with part 15 and 68 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

Getting Started - Setting Up the CDMA wireless modem™ PC Card

Your "CDMA wireless modem" is designed to be used with any laptop, notebook or hand-held computer equipped with a type II PC Card slot.

Requirements:

PCMCIA type II slot conforming to PCMCIA's Standard Version 2.1 or later.
Card and Socket Services compliant to version 2.0 or later
Windows 98/ME/2000/ NT For data/fax communication: an application, terminal or fax software such as HyperTerminal, ProComm, WinFax, etc.(not included)

What is in the package:

Your package should contain:

CDMA wireless modem™ PC Card
Antenna
Software CD with Install and Activation Utilities
Users Guide

Optional :

Miniature speaker/microphone - EarSet™
Land-based telephone connector with RJ-11 jack for Data Access Arrangement (DAA)
Phone extension cable

Installing the "CDMA wireless modem" Hardware and Drivers

Inserting the "CDMA wireless modem" :

1. Make sure you have Card and Socket Services installed and configured properly on your computer. See your computer's documentation for more information.
2. Hold the PC Card with the top label facing upward (see indication on the label) and the antenna pointing away from the computer.
3. Insert the PC Card into the PC Card (PCMCIA) slot of the computer until the card seats firmly.
   Attention: Do not force the "CDMA wireless modem" into the slot as it may damage the card or the device.

Installing the "CDMA wireless modem" Windows 98/ME Drivers

1. The first time you insert the card, the New Hardware Wizard window is opened (see figure below). Insert the DC Software into the CD/DVD Drive and click the "Next" button.
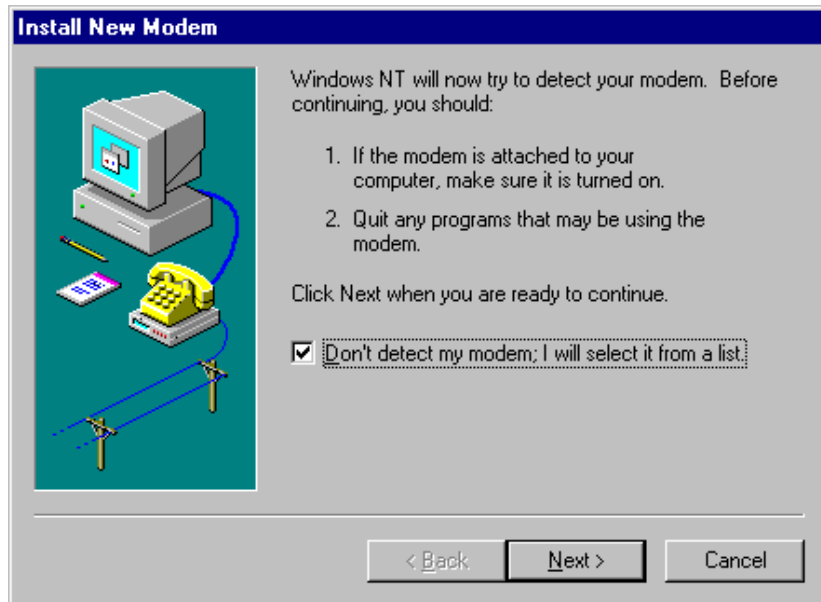
2. A window carrying the identification of the card "Standard PCMCIA Card Modem" appears. Press the "Finish" button.


Your "CDMA wireless modem" is now ready to work with your communication software. **However**, for cellular data operation, you must still **activate your PC Card** to work over the cellular network. See "Activating your "CDMA wireless modem" for Cellular Service" on page 22.

Installing Your "CDMA wireless modem" Windows NT Drivers

1. Insert the "CDMA wireless modem" into the computer's type II PC Card Slot.
2. Power On the computer.
3. Click the "Start" button on the task bar, select "Settings" from the pop-up menu and then select "Control Panel" from the new pop-up menu.
4. Double-click the "Modems" icon in the "control Panel" window. The "Install New Modem" window is displayed. If you have already a modem installed on your computer, click the "Add Modem" button.
5. The following window appears. Check the "Don't detect my modem; I will select it from a list" check box and press the "Next" button.

Install New Modem

Windows NT will now try to detect your modem. Before continuing, you should:

1. If the modem is attached to your computer, make sure it is turned on.

2. Quit any programs that may be using the modem.

Click Next when you are ready to continue.

☑ Don't detect my modem; I will select it from a list.

< Back   Next >   Cancel

6. The selection window is displayed. Press the "Have Disk…" button.
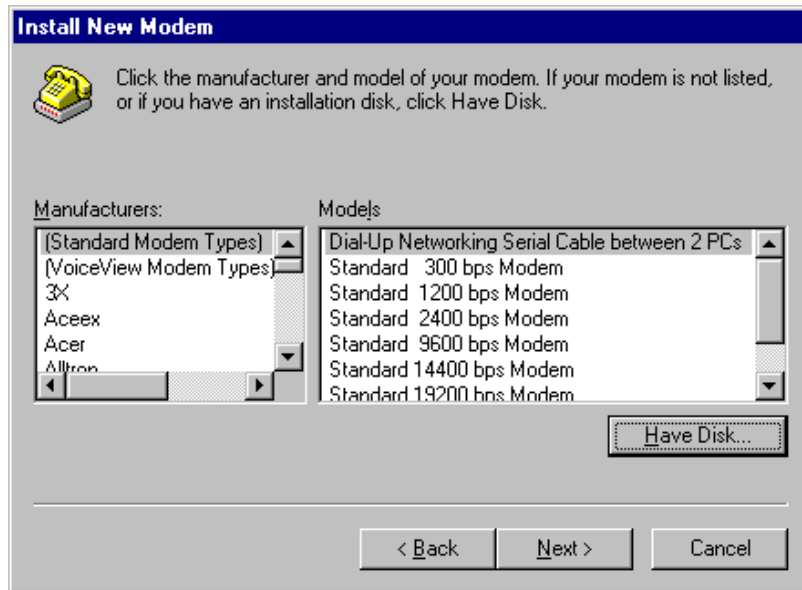
7. In the "Install From Disk" window, verify that X:\ (Where "X" is your CD/DVD drive) is displayed in the "Copy manufacturer's files from" box and press the "OK" button.
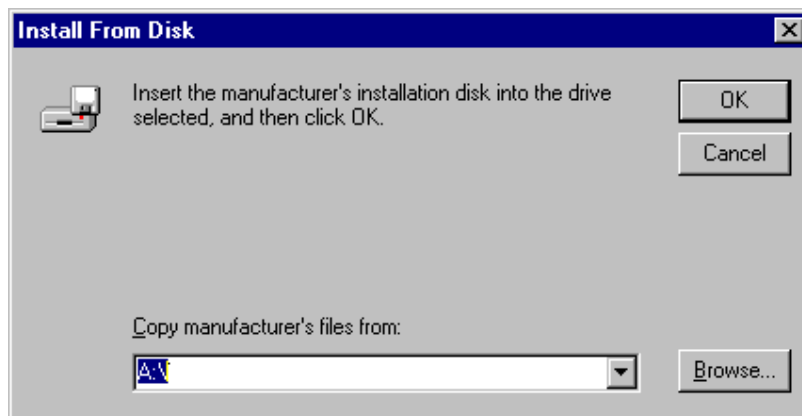
8. In the displayed window verify that "GlobeWave "CDMA wireless modem" Cellular modem" is selected under "Models" and click the "Next" button.
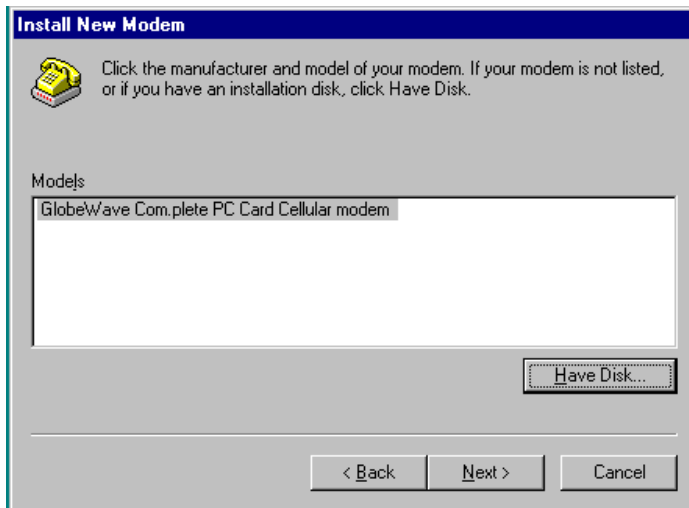
9. Select an available Communication Port in the following window and press the "Next" button. If no COM port is shown in the "Selected Ports" box, you have to install a communication port and reboot your computer (refer to your computer's user guide for this action).
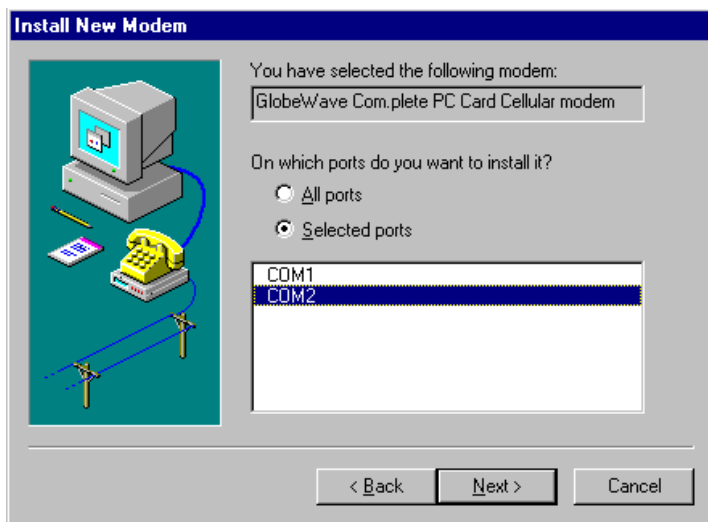
10. "Your modem has been set successfully" is displayed. Press the "Finish"
button and the system will finish the installation of your modem.
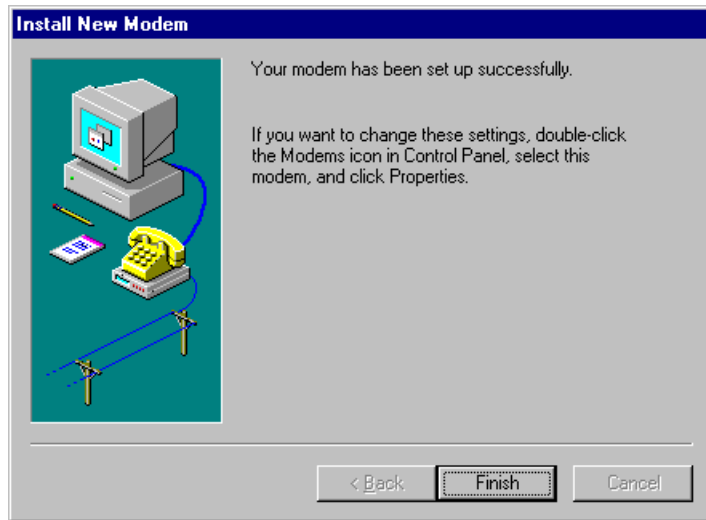
11. At the end of the installation the "Modem Properties" window will be displayed, indicating your modem and the COM port on which it is installed. Click "Close" to close the window.
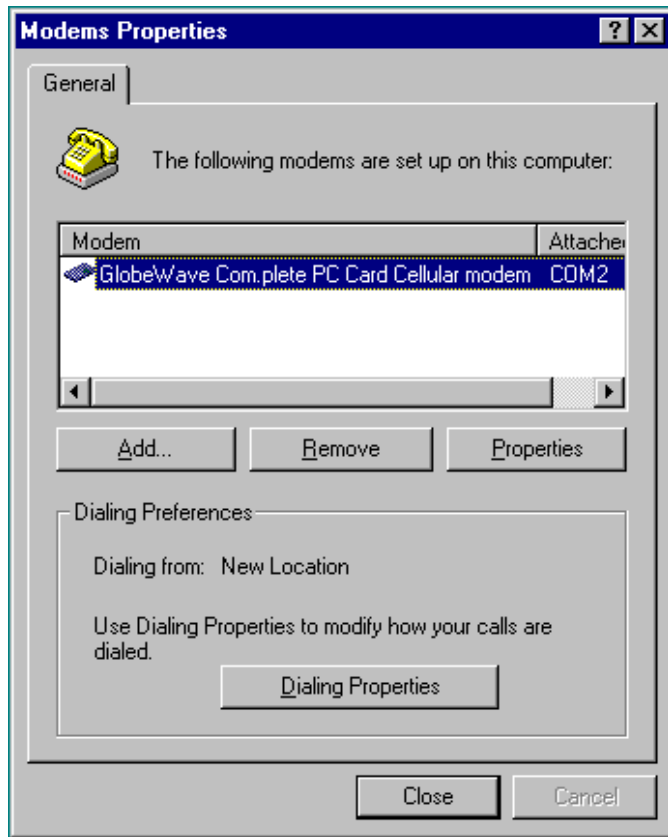
Your "CDMA wireless modem" is now ready to work with your communication software. **However**, for cellular data operation, you must still **activate your PC Card** to work over the cellular network. See "Activating your "CDMA wireless modem" for Cellular Service" on page 22.

Ejecting the "CDMA wireless modem" :

1. Make sure all software accessing the PC Card has been closed. This also includes software that has instructed the PC Card to switch to Auto Answer mode.
2. Press the PCMCIA eject button.
3. Remove the card when it is released.

Loading the "CDMA wireless modem" User Software:

Your "CDMA wireless modem" user's software includes:

Dialer Software - Used to dial cellular voice calls
Activation Software - Used to activate the card for cellular use
Status Software - Advanced cellular status software

Using Windows 98/ME and Windows NT:

1. Insert the disk labeled "Dialer 3 - Setup/User Software Disk 1 of 3 " into your floppy disk drive.
2. Click the "Start" button on the task bar, select "Settings" from the pop-up menu and then select "Control Panel" from the new pop-up menu.
3. Double click "Add/Remove Programs", and click the "Install" button
4. The "Install Program from Floppy Disk or CD-ROM" Window appears. Click the "Next" button
5. The "Run Installation Program" Window appears. Make sure that the "Command Line for Installation Program" shows "A:\Setup" and then click the "finish' button.
6. The "Dialer" setup screen will be displayed. Press the "Next" button to continue the installation.

7. "Choose Destination Location" window will be displayed. The software is installed by default to <c:\GlobeWave> directory. If you wish to install it into another directory, press the "Browse" button and select a different directory to install the software in. Press the "Next" button.
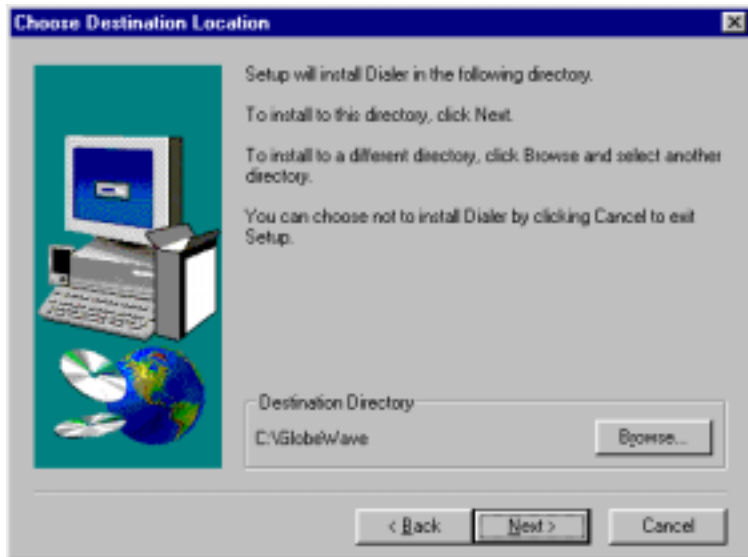
8. The "Setup Type" window will be displayed.
    Three types of setup are available:
    א.   Typical – installs the "Dialer" software and "Activate" utility.
    ב.   Compact – installs only the "Dialer" software.
    ג.   Custom – allows you to choose whether or not to install the "Activate"
          and "Status" utilities (the "Dialer" box should always be checked).
    Check the command box of the setup type you wish to carry out and then
    press the "Next" button.
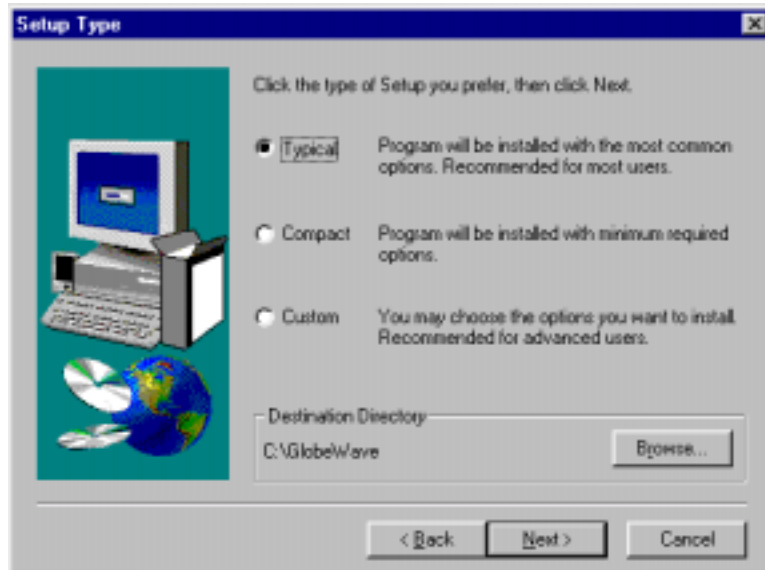
9. The "Start Copying Files" window is displayed. The "Current Settings"
    settings area shows the settings you selected. Press the "Next" button to
    continue the installation.
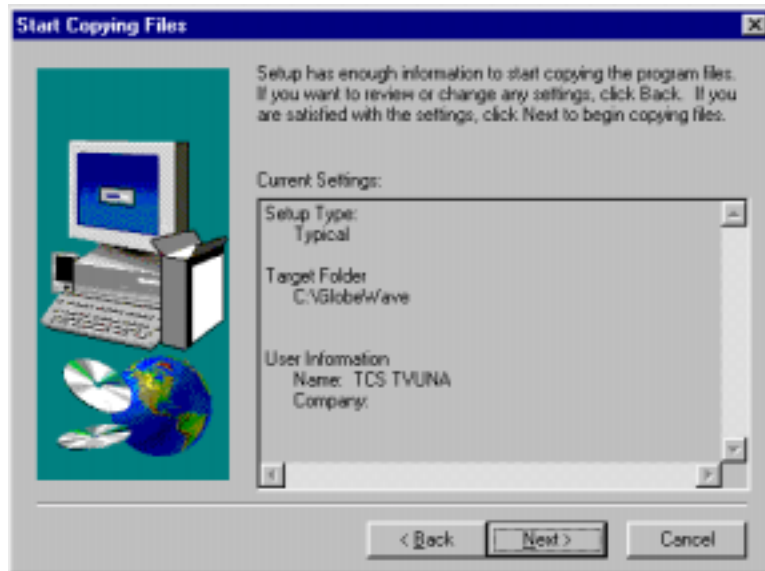
10. The Setup program starts copying files and installing the Dialer. Throughout
    the installation setup will prompt you to replace the diskette (see figure
    below). Replace the diskette as required (Disk 2 and Disk 3) and press the
    "OK" button.
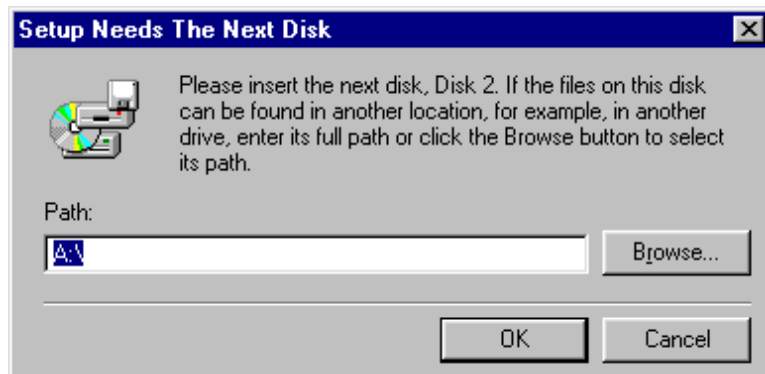
11. At the end of the installation the "Setup Complete" window is displayed.
Press the "Finish" button to complete the installation.
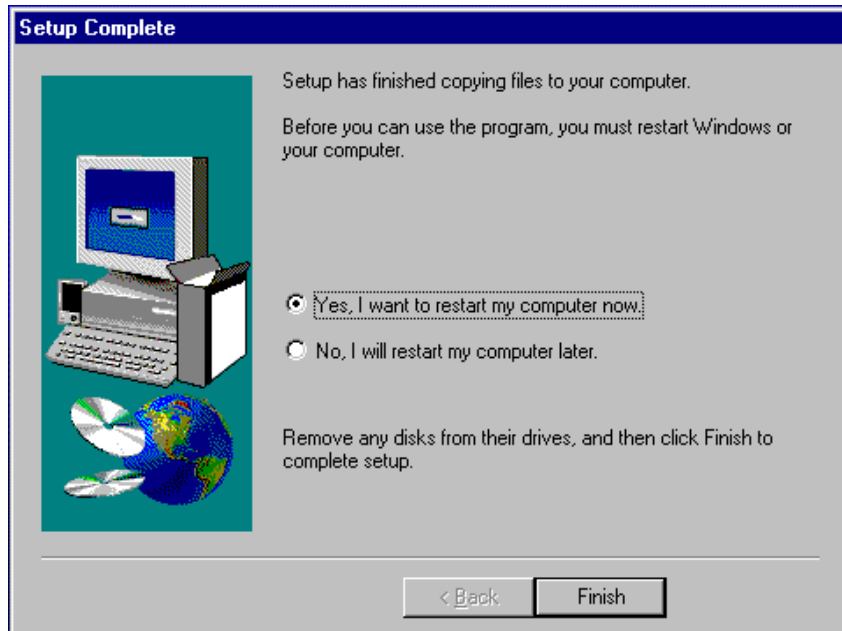
12. Your user software is now loaded and ready to use and the "Dialer" icon is
added to your "Programs" menu.

Running and Using Dialer

1. The "Dialer" window is used for dialing, answering an incoming call, retrieving information about the PC card and open the functional windows.
2. Click the "Start" button on the task bar, select "Programs" from the pop-up menu and then select "Dialer" from the new pop-up menu.
3. The "Dialer" application is opened as shown below:
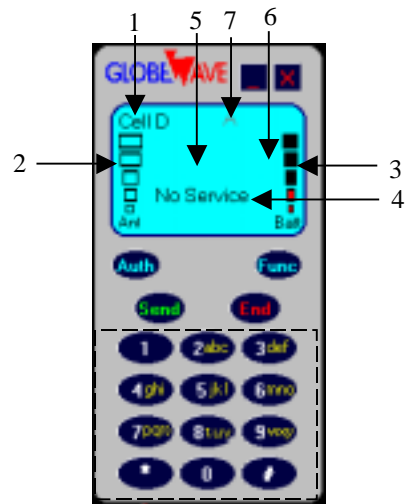
1) Mode label:
   Cell – cellular phone
   Line – line phone
   Cell D – cellular modem
   Line D – Line modem
2) Signal Strength display – displays the level of the received signal. Visible only in the cellular modes.
3) Power display – displays the computer's battery power.
4) Status label – shows the status of the PC card communication:
   GlobeWave – in landline mode when idle or in Cellular mode in service area
   No Service – when the cellular service is not available
   Incoming call – indicates an incoming call (together with a sound or beep)
   Number – when a number is dialed, it is displayed in this place
   Connected – when connection with the dialed number or the incoming call is established.
5) Dialing label – appears after the "Send" button is pressed and is displayed until connection is established.
6) Roaming label – this label is displayed in cellular modes, when the service is provided by other than the home carrier.
7) System label – indicates the current used system, A or B.
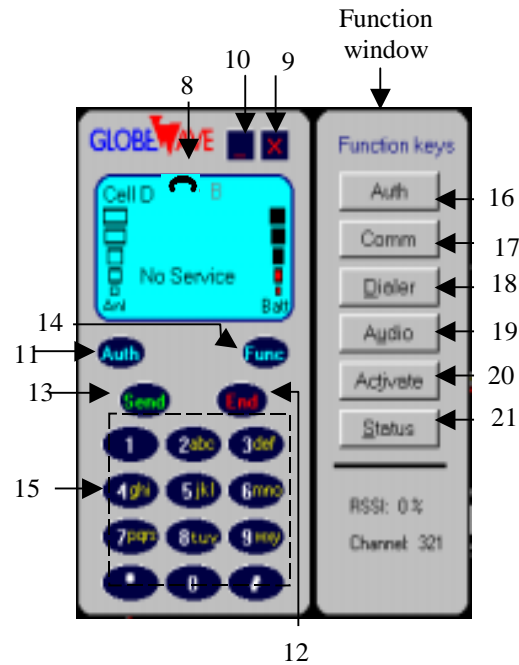
Function window

8) Connection symbol – appears when connection with the other party is established.
9) Close button – press to exit the dialer.
10) Minimize button – minimizes the "dialer" window and activates the task bar icons.
11) Send – press to dial a number or to answer an incoming call.
12) End button – press to hang up.
13) Auth/Clr – a two functions button:
   - Auth – used only in cellular modes to send the authentication code. After sending the code the button switches to Clr.
   - Clr – clears the last dialed number.
14) Func button – opens and closes the "functions" window.
15) Number keys – serve for dialing a number.

7. The functions windows is opened by pressing on the "Func" button:
   16) Auth – opens the authentication window.
   17) Comm – opens the communication window
   18) Dialer – opens the Dialer Setup window.
   19) Audio – Opens the audio window.
   20) Activate – opens the Activate window (only if the Activate utility was installed).
   21) Status – opens the Status window (only if the Status utility was installed).

Task Bar Icons

When the dialer is initialized, three icons appear on the task bar. As long as the "dialer" screen is active, these icons are inactive. Once the "Dialer" screen is minimized these icons become active.

Mode Icon

The right icon can have one of the following shapes:

 Cellular mode Icon

 Voice mode Icon - Switched automatically when EarSet plugged in

 Landline mode Icon

 Modem mode switched when DAA (RJ11 connector) plugged in

Clicking the icon with the left button of the mouse will restore the "Dialer" screen and inactivate the task bar icons.

Clicking the icon with the right button of the mouse will open a pop-up menu, which contains all the functions of the "Functions" menu.

The Signal Icon

The middle icon is the signal icon. When you point it with the mouse, a label indicating the received signal level percentage will appear.

Clicking the icon with the left button of the mouse will restore the "Dialer" screen and inactivate the task bar icons.

Clicking the icon with the right button of the mouse will open a pop-up menu, which contains all the functions of the "Functions" menu.

The Battery Icon

The left icon is the battery icon. When you point it with the mouse, a label indicating the battery voltage will appear.

Clicking the icon with the left button of the mouse will restore the "Dialer" screen and inactivate the task bar icons.

Clicking the icon with the right button of the mouse will open a pop-up menu, which contains all the functions of the "Functions" menu

Using the Dialer

Making a Call

1. Verify that the PC Card is in the desired mode.
2. Type in the number by pressing the number keys. To correct or change the number, use the "Clr" button.
3. Press the "Send" button or the "Enter" Key to dial the number.
4. To terminate the call and hang-up press the "End" button or the "ESC" key.

Answering an Incoming Call

1. Verify that the card is in the desired mode.
2. Press the "Send" button or the "Enter" Key.
3. To terminate the call and hang-up press the "End" button or the "ESC" key.

Setting the Communication Options

1. Press the "Func" button to open the "Functions" window.
2. Press the "Comm" button on the "functions" window. The "Communication" dialog box is opened (see the figure below)
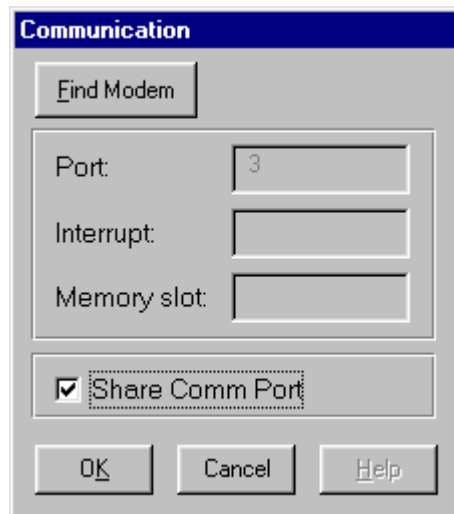
3. If the "Dialer" window is minimized, you can click the right button of the mouse on one of the icons on the task bar and select "Communication" from the pop-up menu.

4. Press the "Find Modem" button in order to scan the computer's ports and locate the "CDMA wireless modem" .
5. Check the "Share Comm Port" box to retrieve the PC card information when the "Dialer" window is minimized (the icons on the task bar are active).

Setting the Dialer Options

1. Press the "Func" button to open the "Functions" window.
2. Press the "Dialer" button on the "functions" window. The "Dialer Setup" dialog box is opened (see the figure below)
3. If the "Dialer" window is minimized, you can click the right button of the mouse on one of the icons on the task bar and select "Dialer" from the pop-up menu.
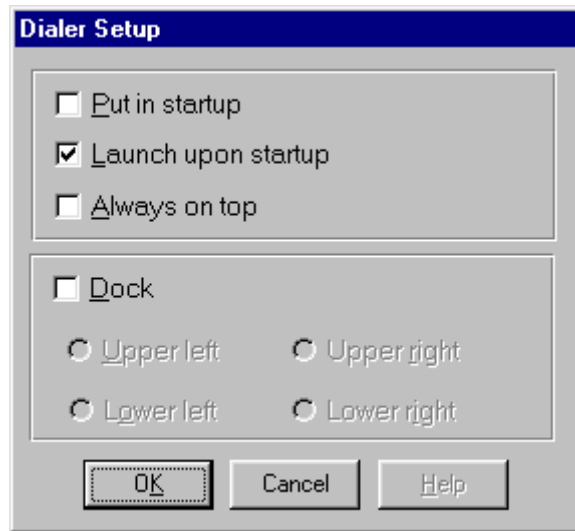
4. Check the "Put in startup" box to add the "dialer" to the startup menu. Uncheck the box to remove the "Dialer" from the startup menu.
When the "dialer" is added to the startup menu, it will start automatically whenever the Windows system is started.
5. Check the "Launch upon startup" box to open the "Dialer" window every time you start the software. Uncheck the box in order to display and activate the task bar icons when the software is initiated.
6. Check the "Always on top" box to force the "Dialer" window to be always displayed above any other active window.
7. Check the "Dock" box, in order to dock the "Dialer" window to one corner. The check boxes under the "Dock" box are illuminated and become active. Select the box of the corner you wish to dock the window into. Once you selected a corner and pressed the "OK" button, the "Dialer" window will be docked to the desired corner and you will not be able to drag it from there.
8. Press the "OK" button to confirm and activate your choices.

Setting the Audio Options

1. Press the "Func" button to open the "Functions" window.
2. Press the "Audio" button on the "functions" window. The "Audio Setting" dialog box is opened (see the figure below)
3. If the "Dialer" window is minimized, you can click the right button of the mouse on one of the icons on the task bar and select "Audio" from the pop-up menu.

4. To select a wav file that will be played when an incoming call is detected, check the "Activate modem audio" box. Type in the name of the wav file and its path in the box, or select a file using the "Browse…" button.
5. To select a wav file that will be played on low battery power or low signal strength warning, check the "Activate audio for warning" box. Type in the name of the wav file and its path in the box, or select a file using the "Browse…" button.
6. Press the "OK" button to confirm your choices and close the dialog box.

Important Operational Information

Auto-Mode Switching Capability:

Your "CDMA wireless modem" comes set-up to automatically detect the type of call you are placing. This is done to minimize or eliminate special hardware or software set-ups for your PC Card. Depending on the connections made to your PC Card, the card will switch automatically to one of four (4) different operational modes, Cellular Data, Land-Based Data, Cellular Voice or Land-Based Voice. The default modes are shown below:

AUTOMATIC MODE SWITCHING DEFAULTS

Accessories	Communications Mode	Mode number
Antenna Only	Cellular Data Mode	1
EarSet & Antenna	Cellular Voice Mode	3
EarSet & Landline DAA	Landline Voice Mode	2
Landline DAA only	Landline Data Mode	0

In addition to the automatic mode defaults, several software definable optional modes can be programmed into the PC Card. Please note that unless the defaults are changed, the PC Card will operate only in the modes shown above. Your "CDMA wireless modem" is equipped with several features designed to provide simple and reliable cellular data and voice connections. Specifically, the PC Card is equipped with a high performance ¼ wave cellular antenna, significant cellular error correction and enhancement firmware, radio shielding, power saving features and auto-mode selecting firmware. Unlike a standard cellular phone, the cellular radio in your PC Card has been designed specifically for a notebook or hand-held computing environment. In most cases, you will be in an environment where good to excellent cellular coverage exists and should have no problem sending and receiving cellular data. However, there are a few tips provided below which, if followed, will further improve your cellular data experience.

Cellular Reception:

Your card's antenna can be rotated and detached for removed positioning. Proper use and placement of your antenna can enhance your cellular performance and may be critical for sending and receiving cellular data in locations where you are either far away from the nearest cellular switch or have some bulky obstructions between you and the cellular switch. In all cases, we recommend the following usage guidelines for your cellular antenna.

1. In most cases your antenna should be used directly plugged or into the PC Card. You should always have the antenna pointing vertically towards the ceiling/sky.
2. If you are indoors and have trouble in cellular communications, you should locate the notebook or hand-held computer as close as possible to a window. Radio signals do go through walls, but some of the signal strength is lost, so it is always best to locate yourself near a window where signal degradation is minimized.
3. If you are not receiving enough signal strength from the cellular network to send or receive data, you may have some interference being generated from your computer. In this case, you should remove the antenna and attach it to the antenna extension cable, then plug the extension cable into your PC Card. Positioning the antenna away from noisy sources like computers can sometimes help improve your signal strength and therefore increase your data throughput.

Cellular Data Connections with Dial-Up Networking

You can make data connections only if the EarSet is **NOT** connected. If the EarSet is plug in to the modem, it will cause the PC Card to automatically be in a voice mode, not data, and the modem in the PC Card will not initialize.

Most communications software programs are set-up to be used with a modem connected to a land-based telephone line. Your "CDMA wireless modem" is equipped to work with both land-based and cellular-based connections for sending and receiving data and/or voice. While your PC Card is equipped with a variety of error correcting protocols used for sending cellular data, Windows 98 and most communications programs need to be modified to work optimally over the cellular network.
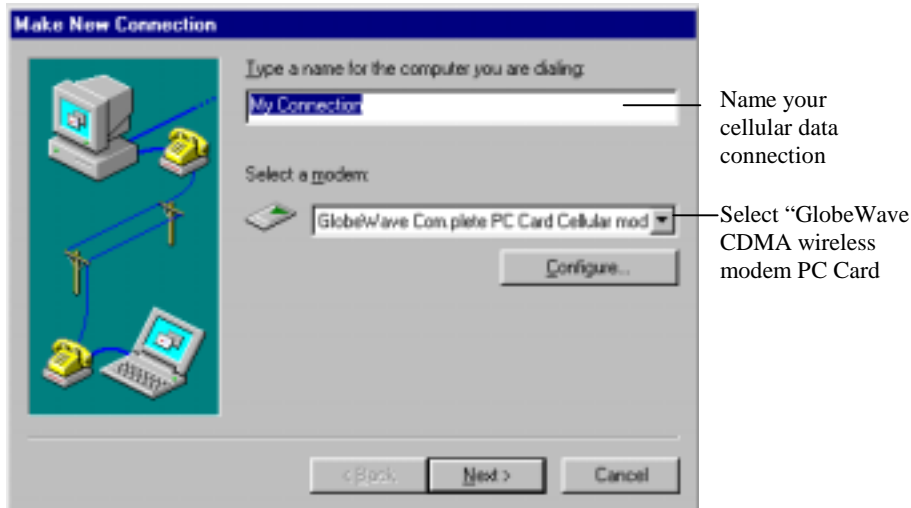
Most 32-bit Windows 98 communication programs use Windows "Dial-Up Networking" as the method to establish a data connection. This section will describe how best to set-up your connections for both land-based and cellular-based data.

Dial-Up Networking Windows 98 Screen

Setting Up Dial-Up Networking for Cellular Data Connections:

1. Double click the "Make New Connection" icon in the Dial-Up Networking window, a "Make New Connection" window will appear.
2. Enter a name for the cellular connection you wish to establish.
3. Select the ""CDMA wireless modem" Cellular modem" as your active

Make New Connection

Type a name for the computer you are dialing:

My Connection

Select a modem:

GlobeWave Complete PC Card Cellular mod ▼

Configure...

< Back   Next >   Cancel

Name your cellular data connection

Select "GlobeWave CDMA wireless modem PC Card

   modem.

4. If you have configured your "CDMA wireless modem" as outlined in the previous section, there is no need to select the "Configure" tab on the "Make New Connection" window. If you have not yet configured your "CDMA wireless modem" for cellular use, please select "Configure" and follow the instructions written above under "Installing the CDMA WIRELESS MODEM PC Card Hardware and Drivers" on page 6.
5. Select "Next" and follow the remaining instructions for "Dial-Up Networking."
6. You are now ready to connect your cellular data call using "Dial-Up Networking."

Sending Faxes with Your "CDMA wireless modem"

In addition to cellular and land-based voice and data, your "CDMA wireless modem" is equipped with cellular and land-based fax capabilities. This section explains how to use these capabilities. But first, the following tips will help you prevent encountering problems when using your PC Card to send faxes.

If possible, do not load more than 1 fax communications software program on your computer. Most fax communication programs use the same system files for operation and conflicts can occur if more than one program is loaded on your computer.

If you have more than one fax communications program on your computer, never run both programs at the same time. This will result in resource conflicts with your computer.

If you switch from one fax program to another, or if you are switching from one fax program to a separate data communications program, it may be necessary to release or unload the fax driver before running any other modem programs. Fax drivers like to keep hold of the COM port in your computer. You should consult your fax and data communications software for instructions on unloading the fax driver. However, most windows programs display the fax driver as a printer selection, so unloading the driver typically means purging the fax "Print" jobs from your computer. You should insert your PC Card prior to launching your communications software program. Some packages will not recognize the Card if it is inserted after being launched. If this happens, simply exit and re-launch your communications software program.

Sending a Cellular Fax Using your "CDMA wireless modem":

Sending a fax over the cellular network is conceptually the same as sending data, except that fax transmissions are sent using different protocols than data. Therefore, the set-up or configuration of your Card for faxing is the same as it is for sending cellular data (SEE **Configuring Your "CDMA wireless modem" "**), except that you need to chose a fax protocol or "Fax Class" to use for sending faxes. This setting usually takes place in your fax communications software under the setup drop down menu.

A "Fax Class" explains the way image reduction and re-enlargement is processed during fax transmissions. Fax Class 1 & 2 are typically available. Fax Class 1 use software instructions for image management during fax transmissions. Fax

Class 2 uses your hardware to accomplish the same task. The image or document will end up looking the same using either Fax Class.
Your "CDMA wireless modem" can send faxes using either Fax Class 1 or Fax Class 2. However, WE RECOMMEND USING FAX CLASS 2 for fax transmissions.

Cellular Voice Calls:

Your "CDMA wireless modem" is equipped with a small ear-phone jack located on the same side of the PC Card as the antenna. This jack can be used with an EarSet to place cellular voice phone calls in the same manner that you would place a cellular voice call with your standard cellular phone. It is important to note that the PC Card automatically selects the mode that it is in by the attachments that are connected to it.   If the EarSet is connected, the default mode of the PC Card will automatically switch to voice mode, not data, and the modem in the PC Card will not initialize.

Making a voice Call

Plug the EarSet into the ear-phone jack. Now your "CDMA wireless modem" becomes a regular cellular phone. You may use any dialer program to dial the phone number. The software package includes GlobeWave dialer (see "Running and Using Dialer" on page 19) that can be used for dialing voice calls. You can also setup other available dialer programs to work with your "CDMA wireless modem" (Consult software vendor documentation for specific setup instructions).

Using AT Commands to Dial

If you are using "AT Commands" to dial a phone number for a cellular voice call, you must do the following:

1. Plug the "CDMA wireless modem" into your notebook or hand-held computer WITHOUT the EarSet plugged into the card.
2. Launch your communication applications software.
3. Initialize the Card.
4. Enter the "Terminal" or "Command" mode in your communications program.

NOW, plug in the EarSet. Your "CDMA wireless modem" is ready to   use.

Limited One-Year Warranty

Your This warranty is extended by Globewave Inc. (the company) only to the original purchaser (consumer) for use only.

1. If the Globewave "CDMA wireless modem" (the product) fails under normal use and service due to an electronic component failure within one (1) year from the data of purchase, the company, at its option, will repair or replace the defective item with a new or factory rebuilt replacement.

2. In the event the company repairs or replace the product, the repaired or replaced product shall be warranted under the limited warranty for the remainder of the warranty period or for sixty (60) days, whichever is longer.

3. The consumer shall bear the cost of shipping and handling to and from the company.

What is covered?

1. The company is not responsible for the availability, coverage and range of the cellular system on which the product is to operate. It is the responsibility of the cellular carrier.

2. This warranty does not cover any failure of equipment not supplied by the company or failure of the product due to misuse including use in other than the normal and customary manner, neglect, accident or improper installation.

3. The company does not warrant in any way the installation, modification, maintenance or service performed by anyone other than the company itself.

4. This warranty does not cover product failure caused by the use of incompatible accessories.

There are no other express warranties, whether written or oral, other than this printed limited warranty. All implied warranties, including without limitation the implied warranties of merchantability or fitness for particular purpose, are limited to the duration of this limited warranty. In no event shall the company be liable for incidental or consequential damages of any nature whatsoever, including but not limited to loss profits or commercial loss, to the full extent those damages can be disclaimed by law.

APPENDIX A: FDA Consumer Update

**The U.S. Food and Drug Administration's Center for Devices and
Radiological Health Consumer Update
on Mobile Phones**

FDA has been receiving inquiries about the safety of mobile phones, including
cellular phones and PCS phones.
The following summarizes what is known--and what remains unknown--about
whether these products can pose a
hazard to health, and what can be done to minimize any potential risk. This
information may be used to respond
to questions.

Why the concern?

Mobile phones emit low levels of radiofrequency energy (i.e., radiofrequency
radiation) in the microwave range
while being used. They also emit very low levels of radiofrequency energy (RF),
considered non-significant,
when in the stand-by mode. It is well known that high levels of RF can produce
biological damage through
heating effects (this is how your microwave oven is able to cook food).
However, it is not known whether, to
what extent, or through what mechanism, lower levels of RF might cause adverse
health effects as well.
Although some research has been done to address these questions, no clear
picture of the biological effects of
this type of radiation has emerged to date. Thus, the available science does not
allow us to conclude that mobile
phones are absolutely safe, or that they are unsafe. However, the available
scientific evidence does not
demonstrate any adverse health effects associated with the use of mobile phones.

What kinds of phones are in question?

Questions have been raised about hand-held mobile phones, the kind that have a
built-in antenna that is
positioned close to the user's head during normal telephone conversation. These
types of mobile phones are of
concern because of the short distance between the phone's antenna--the primary
source of the RF--and the
person's head. The exposure to RF from mobile phones in which the antenna is
located at greater distances from

the user (on the outside of a car, for example) is drastically lower than that from hand-held phones, because a
person's RF exposure decreases rapidly with distance from the source. The safety of so-called "cordless phones,"
which have a base unit connected to the telephone wiring in a house and which operate at far lower power levels
and frequencies, has not been questioned.

How much evidence is there that hand-held mobile phones might be harmful?

Briefly, there is not enough evidence to know for sure, either way; however, research efforts are on-going. The
existing scientific evidence is conflicting and many of the studies that have been done to date have suffered from
flaws in their research methods. Animal experiments investigating the effects of RF exposures characteristic of
mobile phones have yielded conflicting results. A few animal studies, however, have suggested that low levels of
RF could accelerate the development of cancer in laboratory animals. In one study, mice genetically altered to
be predisposed to developing one type of cancer developed more than twice as many such cancers when they
were exposed to RF energy compared to controls. There is much uncertainty among scientists about whether
results obtained from animal studies apply to the use of mobile phones. First, it is uncertain how to apply the
results obtained in rats and mice to humans. Second, many of the studies that showed increased tumor
development used animals that had already been treated with cancer-causing chemicals, and other studies
exposed the animals to the RF virtually continuously--up to 22 hours per day.
For the past five years in the United States, the mobile phone industry has supported research into the safety of
mobile phones. This research has resulted in two findings in particular that merit additional study:
1.In a hospital-based, case-control study, researchers looked for an association between mobile phone use and
either glioma (a type of brain cancer) or acoustic neuroma (a benign tumor of the nerve sheath). No statistically