

Model AP Broadband Modem

User Guide – Draft Version 3



June 29, 2001

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Table of Contents

<u>Introduction</u>	6
<u>Technical Support</u>	6
<u>Chapter 1 – Safety and Care Instructions</u>	8
<u>Safety Guidelines for Power Connection</u>	8
<u>Safety Guidelines for the [IPWireless] Broadband Modem</u>	8
<u>Exposure to Radio Frequency Signals</u>	9
<u>RF Safety Information</u>	9
<u>FCC Radio Frequency Interference Statement</u>	9
<u>Electronic Emission Notice</u>	9
<u>Care and Cleaning Guidelines</u>	9
<u>Chapter 2 - Getting Started</u>	11
<u>Required Equipment</u>	11
<u>Package Contents</u>	11
<u>Computer Interface Cable</u>	11
<u>AC Power Adapter</u>	11
<u>Installation CD</u>	11
<u>Quick Start Guide</u>	11
<u>Other Informational Material</u>	11
<u>Key Areas on Your [IPWireless] Broadband Modem</u>	13
<u>Chapter 3 – Installation and Registration</u>	15
<u>Support the [IPWireless] Broadband Modem Using the Stand</u>	15
<u>Connect the AC Power Adapter</u>	15
<u>Find the Best Radio Signal</u>	16
<u>Install the [IPWireless] PC Software</u>	17
<u>Copying the Modem Driver Files</u>	21
<u>USB Cable Connection</u>	21
<u>RS-232 Serial Cable Connection</u>	22
<u>Connect the RS-232 Serial Cable</u>	24
<u>Perform Registration</u>	24

<u>Chapter 3 – Connect to the Internet</u>	26
<u>Establish Connection to the Internet</u>	27
<u>Appendix A – Troubleshooting Tips</u>	28
<u>Troubleshooting Tips</u>	28
<u>THE POWER BUTTON IS ON BUT THE DISPLAY DOES NOT ILLUMINATE</u>	28
<u>NO SIGNAL RING INDICATORS ARE ILLUMINATED ON THE [IPWIRELESS] BROADBAND MODEM DISPLAY</u>	28
<u>ONLY ONE OR TWO SIGNAL STRENGTH RINGS ARE ILLUMINATED</u>	29
<u>THE [IPWIRELESS] BROADBAND MODEM DISCONNECTS UNEXPECTEDLY</u>	29
<u>THE [IPWIRELESS] BROADBAND MODEM SPEED IS NOT FAST ENOUGH</u>	29
<u>There are several conditions that can result in slower access speed that are not related to your [IPWireless] Broadband Modem’s performance:</u>	29
<u>REGISTRATION FAILS BECAUSE THE PC DOES NOT ACCEPT “COOKIES”</u>	30
<u>THE BROWSER DID NOT GO DIRECTLY TO THE REGISTRATION SCREEN</u>	30
<u>THE CONNECT AND DISCONNECT BUTTONS ARE NOT HIGHLIGHTED ON THE STATUS MONITOR SCREEN BUT A RADIO SIGNAL IS PRESENT</u>	30
<u>Error Messages</u>	30
<u>INVALID PASSWORD</u>	30
<u>NO ANSWER</u>	30
<u>[IPWIRELESS] BROADBAND MODEM NOT RESPONDING</u>	30
<u>Appendix B – Battery Information</u>	32
<u>Internal Battery</u>	32
<u>Battery Safety Guidelines</u>	32
<u>Appendix C – Frequently Asked Questions</u>	33
<u>Appendix D – [Technical Specifications]</u>	35
<u>Regulatory Information</u>	37

Introduction

Congratulations on your selection of the [IPWireless] Broadband Modem. Your [IPWireless] Broadband Modem is designed to give you exceptional performance combined with easy installation and operation. Please read all safety and care instructions in Chapter 1 before installing your [IPWireless] Broadband Modem for the first time.

The [IPWireless] Broadband Modem is a portable, wireless, cellular device that provides high-speed access to the Internet and offers high-bandwidth data downloads, uploads, and web browsing when connected to networks authorized for use with the [IPWireless] Broadband Modem.

The design of the [IPWireless] Broadband Modem is based on the standards of the latest third generation cellular communication technology, commonly known as 3G technology. The [IPWireless] Broadband Modem doesn't require an outdoor antenna, telephone jack, or additional home or office wiring. What's more, the [IPWireless] Broadband Modem connects to the Internet through radio access -- you will never encounter dial-up busy signals or need to install an extra line to access the Internet and use the telephone at the same time.

The speed at which your [IPWireless] Broadband Modem will perform is dependent upon the radio signal quality available and the [IPWireless] service level that you select. Information on how to determine and boost the signal quality is located in Chapter 3. Of course, your [IPWireless] Broadband Modem can only connect to systems authorized for use with [IPWireless] equipment. Service is not available in all areas; consult your Internet Service Provider (ISP) for details.

The [IPWireless] Broadband Modem is USB (Universal Serial Bus) compatible. USB is a "plug and play" interface between a computer and an add-on device, such as a modem or printer, eliminating the need to add an adapter card. The USB also provides a trickle charge to the internal battery of the [IPWireless] Broadband Modem.

Technical Support

This User Guide provides you with step-by-step instructions on how to install and use your [IPWireless] Broadband modem. However, if you need assistance, contact [IPWireless] Technical Support in any of the following ways:

Telephone:	Customer Service: [1-800-xxx-xxxx] Technical Support: [1-800-xxx-xxxx]
Email:	[techsupport@ipwireless.com]
Fax:	[xxx- xxx-xxxx]

Mail:

**[IPWireless]
Technical Support**

Chapter 1 – Safety and Care Instructions

Before using your [IPWireless] Broadband Modem for the first time, please read and follow all warnings, safety, care, cleaning, and operating instructions on the [IPWireless] Broadband Modem label and in this guide. These guidelines will help protect your [IPWireless] Broadband Modem from potential damage and ensure your personal safety.

Safety Guidelines for Power Connection

- o Danger - Do not place or use the [IPWireless] Broadband Modem near any body of water such as a bathtub. Accidental immersion can result in electric shock.
- o Danger - Never alter the AC adapter or plug. If the plug will not fit into the electrical outlet without force, contact a qualified electrician to install a proper outlet.
- o Connect the AC adapter to 120V or 240V electrical outlets only.
- o To reduce the risk of damage, always remove each end of the power cable by pulling the plug rather than the cable.
- o Do not allow anything to rest on the power cable.
- o Do not position the power cable in any area where people will step on it.
- o Do not use the [IPWireless] Broadband Modem if the power cable becomes frayed or damaged in any way. Call [IPWireless] Customer Service Support at [1- 800-xxx-xxxx].
- o Do not overload the power outlet. Power overloads are often caused by too many electrical devices connected by extension cords and can result in electric shock or fire.
- o See Appendix B for important safety information about the internal battery.

Safety Guidelines for the [IPWireless] Broadband Modem

- o Do not attempt to disassemble the [IPWireless] Broadband Modem; doing so may expose you to unsafe conditions. The [IPWireless] Broadband Modem does not contain consumer serviceable components. Service should be performed by the [IPWireless] Service Center only. Contact [IPWireless] Customer Service to find the nearest [IPWireless] Service Center.
- o Position the [IPWireless] Broadband Modem so that it is protected from falling objects.
- o Do not allow liquids to spill on or into the [IPWireless] Broadband Modem.
- o Do not expose the [IPWireless] Broadband Modem to extreme hot (over 131° F) or cold (under 14° F) temperatures.
- o Do not leave the [IPWireless] Broadband Modem in a motor vehicle parked in direct sunlight for more than fifteen minutes.
- o Do not expose the [IPWireless] Broadband Modem to open flames.
- o Do not alter the antenna or substitute any other antenna. Doing so may be unsafe.
- o Switch your [IPWireless] Broadband Modem off when near medical equipment, fuel, chemicals, a potentially explosive atmosphere such as a gasoline station, or when in an area in which blasting is in progress. Also, switch it off when on an aircraft. Follow any other rules, regulations, or posted notices that apply to the use of electronic or radio equipment.

- o Before using the [IPWireless] Broadband Modem near a pacemaker or similar device, consult a physician or the device manufacturer for more information. In any event, do not use the [IPWireless] Broadband Modem within 6" (20 cm) of a pacemaker or similar device.
- o Do not use the [IPWireless] Broadband Modem when you need to pay attention to other activities. For example, never use it while driving or while supervising or operating machinery.
- o The [IPWireless] Broadband Modem, like any other wireless communications device, cannot guarantee a connection in all circumstances. Do not rely on it for matters where a connection is essential.

Exposure to Radio Frequency Signals

RF Safety Information

To comply with FCC radio frequency exposure guidelines set forth in 47CFR1.1307 and 1.1310 a minimum separation distance of 20 cm (8 inches) is required between the Model AN modem and all persons.

FCC Radio Frequency Interference Statement

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 when the modem is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference in which case the user will be required to correct the interference at his own expense.

Electronic Emission Notice

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

1. This device may not cause harmful interference

Care and Cleaning Guidelines

- o Use a soft, clean cloth slightly moistened with water and wipe the outside surface of the [IPWireless] Broadband Modem only.
- o Do not use aerosol sprays, solvents, or abrasives when cleaning your [IPWireless] Broadband Modem. These items may scratch the surface or damage the interior components of the [IPWireless] Broadband Modem.
- o To avoid the risk of electric shock, always unplug the [IPWireless] Broadband Modem from the AC power outlet before cleaning it.
- o Avoid dropping, shaking or striking the [IPWireless] Broadband Modem. This may damage its components.

Chapter 2 - Getting Started

Required Equipment

To install and use your [IPWireless] Broadband Modem, you will need an IBM-compatible computer with the following configuration:

- Operating System: Windows 98, Windows 2000 or Windows ME
- CD-ROM drive
- USB port or RS-232 Serial port
- A minimum of 10 Mbytes of available disk space on your hard drive

Package Contents

In addition to this User Guide, the following items are included in the [IPWireless] Broadband Modem package:

Computer Interface Cable

A USB computer interface cable is included with your [IPWireless] Broadband Modem. Use this cable to connect the [IPWireless] Broadband Modem to your computer. If needed, refer to your computer manual for the location of a USB port. If your computer does not have a USB port, an optional RS-232 Serial cable can be purchased separately from your local electronics store. The serial cable maximum data rate is 230.4Kbps.

AC Power Adapter

The AC power adapter provides power to the [IPWireless] Broadband Modem. The power adapter plugs into a 120V or 240V AC power outlet. The pin end of the power cable plugs into the power jack located on the side of the [IPWireless] Broadband Modem. Do not use any power adapter other than the one provided with your [IPWireless] Broadband Modem.

Installation CD

The installation CD includes the [IPWireless] PC Software, a choice between two Internet browsers, Adobe Acrobat Reader, and an Adobe PDF version of this guide.

Quick Start Guide

The Quick Start Guide will aid you in setting up your [IPWireless] Broadband Modem quickly. You may want to include the Quick Start Guide when you pack your modem for portability.

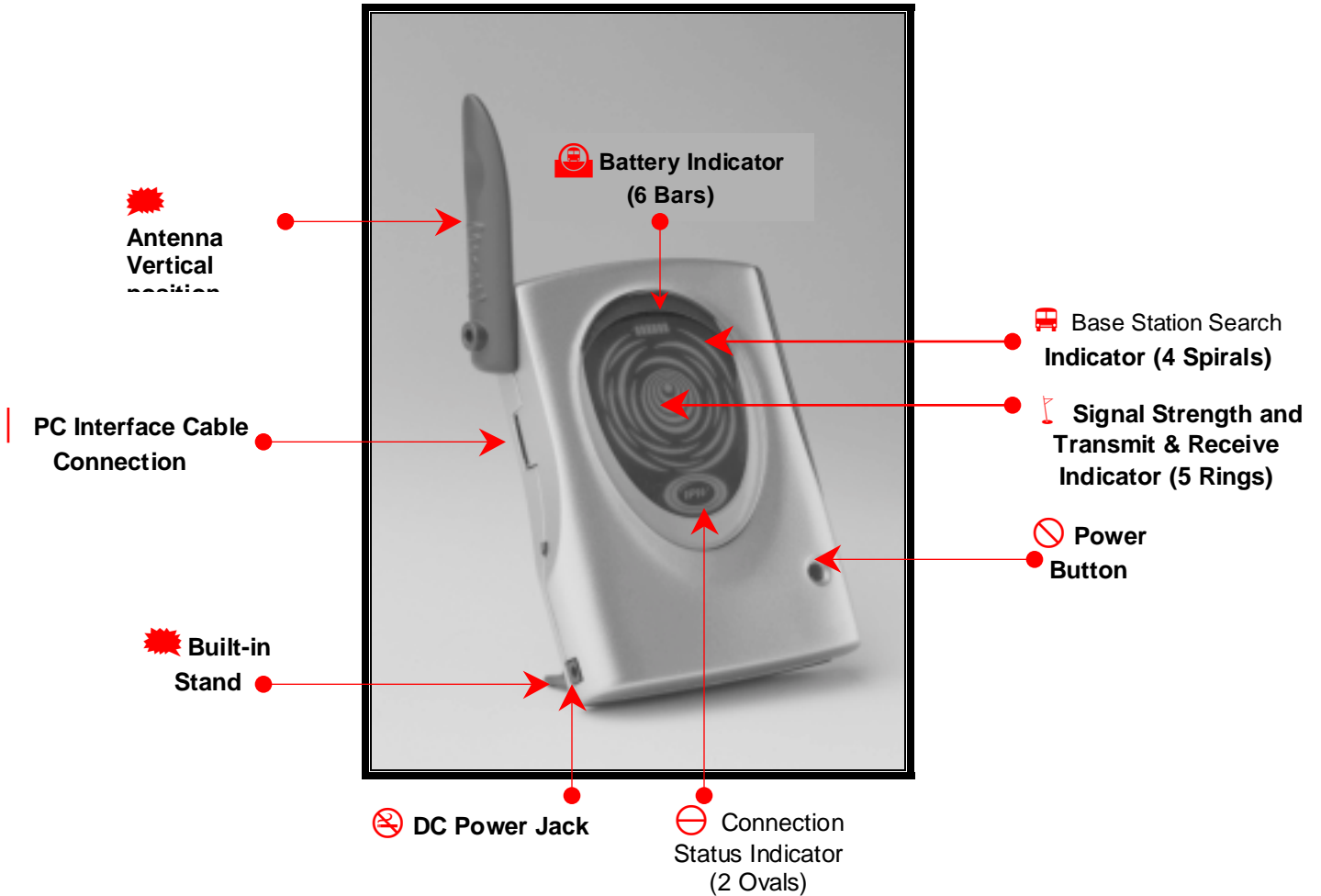
Other Informational Material

Your [IPWireless] Broadband Modem packaging may contain additional informational material pertaining to the use or care of the [IPWireless] Broadband Modem within your service area. Please review all such information carefully before using the [IPWireless] Broadband Modem.

Key Areas on Your [IPWireless] Broadband Modem

Figure 1 below identifies key areas on the [IPWireless] Broadband Modem. Please review this information before you begin the installation.

Figure 1



Battery Indicator (6 Bars)

The six battery bars at the top of the [IPWireless] Broadband Modem display indicate the charge level. When the battery is fully charged, all six bars will be fully illuminated. Each bar represents a sixth of the charge available. The bar indicating the highest charge is on the far right, and the bar indicating the lowest charge is on the far left. When the battery capacity drops below 10%, the battery indicator will flash.

Base Station Search Indicator (4 Spirals)

When the modem is searching for a base station, the four outside spirals on the outer center of the display will illuminate in a clockwise direction. Each spiral will illuminate for one second on and three seconds off during the base station search process.

Signal Strength and Transmit and Receive Indicator (5 Rings)

The five rings on the inner center of the display indicate the radio signal strength. When the center ring (or dot) is illuminated, you have the minimum signal strength required to transmit and receive data. Each subsequent ring indicates increasing signal strength. When all five rings are illuminated, you can transfer data at the maximum speed of the [IPWireless] Broadband Modem, or at the service level you select. The rings also show data transmit and receive activity. The rings will flicker when data is transferring.

Power Button

Press the power button for one second to turn the modem on. The inner oval of the Connection Status indicator (IPW logo) will illuminate when the unit is ON. The display will go into a power-saving dimmed mode after two minutes. The Connection Status indicator flashes at a low rate to show that it is still on.

Connection Status Indicator (2 Ovals)

The two oval rings with the IPW logo show the connection status. The inner oval will be illuminated when a base station has been located. The outer oval will illuminate when you are connected to the Internet.

DC Power Jack

The pin end of the power cable plugs into the DC power jack located on the side of the [IPWireless] Broadband Modem.

Built-in Stand

The built-in stand on the back of the unit supports the [IPWireless] Broadband Modem.

PC Interface Cable Connection

The 20-pin connector on the USB or RS-232 cable plugs into the PC port on the side of the modem.

Antenna

Raise the antenna to its vertical position to connect the PC Interface Cable. When the antenna is vertical, it receives signals equally in all directions. Place the antenna in the vertical position (as shown in Figure 1) when the [IPWireless] Broadband Modem is in use, and in the down position (adjacent to the body of the [IPWireless] Broadband Modem) when not in use. Do not force the antenna beyond its vertical position.

Chapter 3 – Installation and Registration

This chapter explains how to install the software, register your user information, and operate your [IPWireless] Broadband Modem. The instructions explain how to:

- o Support the [IPWireless] Broadband Modem using the built-in stand.
- o Plug the power cable into the [IPWireless] Broadband Modem and AC power outlet.
- o Connect the computer interface cable between the computer and the [IPWireless] Broadband Modem.
- o Position the [IPWireless] Broadband Modem in an area that provides the best radio signal.
- o Install the [IPWireless] PC Software from the CD.
- o Configure your [IPWireless] Broadband Modem on your PC.
- o Register your user information on the [IPWireless] web site.
- o Connect to the Internet.

Support the [IPWireless] Broadband Modem Using the Stand

On the lower back panel of the [IPWireless] Broadband Modem is a removable battery cover, which incorporates a stand that supports the [IPWireless] Broadband Modem. Complete the following steps to support the [IPWireless] Broadband Modem using the built-in stand:

1. Insert your index finger into the slot at the top of the battery cover.
2. Gently pull the stand toward you until it locks in position. See Figure 2 below.
3. Set the [IPWireless] Broadband Modem on a flat surface, such as a desk or windowsill, but avoid direct sunlight.

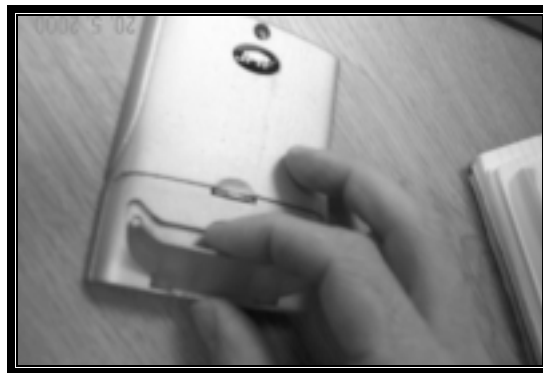


Figure 2

Connect the AC Power Adapter

1. Plug the pin end of the power cable into the DC power jack located on the side of the [IPWireless] Broadband Modem as shown in Figure 3 below.



Figure 3

Note: Before connecting your [IPWireless] Broadband Modem to a power source in the next step, you may want to consider using a power surge protector. A surge protector is designed to protect electronic devices from electrical surges and lightning strikes that may damage your computer or modem. If you don't have a surge protector, contact your local computer or electronics retailer for further details.

2. Plug the AC power adapter into a 120V or 240V AC power outlet.

Find the Best Radio Signal

1. Place the [IPWireless] Broadband Modem near your computer and press the power button for one second to turn it on.
2. Your [IPWireless] Broadband Modem will perform a short self-test that will last for approximately five seconds. The [IPWireless] Broadband Modem will search for the best radio signal and then display the signal strength on the inner center of the modem display.
3. When the self-test is complete, the power and battery indicators on the display will illuminate. If these indicators flash on and off, there may be a problem with the [IPWireless] Broadband Modem. Call [IPWireless] Technical Support. **Note:** The display will dim after two minutes to conserve battery life -- this is normal. A momentary press of the power button will restore the brightness of the display.
4. The [IPWireless] Broadband Modem will 'search' for a base station, in a manner similar to a cellular phone. When the modem is searching, the four outside spirals in the center of the display will illuminate in a clockwise direction. Each spiral will illuminate for one second on and three seconds off during the base station search process.

5. Observe the five signal indicators (rings) on the inner center of the [IPWireless] Broadband Modem display to help you determine when the [IPWireless] Broadband Modem has located a radio signal. Adjust the position of the [IPWireless] Broadband Modem until the center ring is illuminated. This is similar to moving an FM radio to receive the best sound quality. When the center ring (or dot) is illuminated, you have the minimum signal strength required to transmit and receive data. Each subsequent ring indicates increasing signal strength. When all five rings are illuminated, you can transfer data at the maximum speed of the [IPWireless] Broadband Modem, or at the service level you selected. See Figure 4 below.

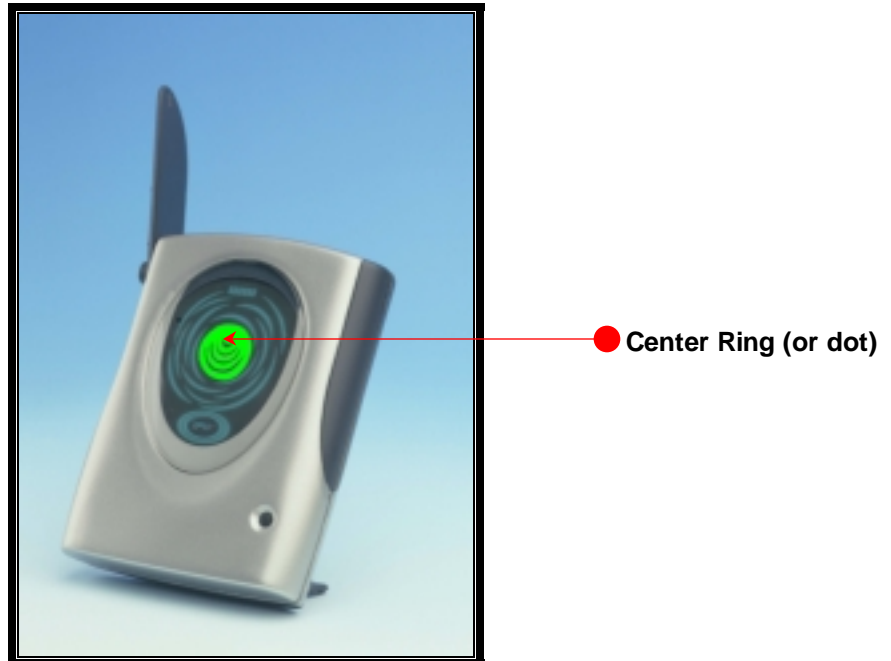


Figure 4

3. Continue to adjust the position of the [IPWireless] Broadband Modem to achieve the strongest radio signal possible from your location. **Tip:** Placing the [IPWireless] Broadband Modem near a window can boost the signal strength.
4. If only one or two signal strength indicators illuminate, refer to the troubleshooting section in Appendix A.
5. You are now ready to install the [IPWireless] PC Software. **Note:** Install the [IPWireless] PC Software before connecting the Computer Interface Cable.

Install the [IPWireless] PC Software

The CD contains the applications listed below:

- o [IPWireless] PC Software
- o Adobe Acrobat Reader
- o Microsoft Internet Explorer 5

- o Netscape Navigator 4.75 **Note:** You are not entitled to receive any support, warranty, or documentation associated with Netscape Navigator 4.75 from Netscape unless you have paid for such support, warranty, or documentation. You may purchase such support from Netscape by accessing the following web site: <http://help.netscape.com>

Note: You can make selections on some of the installation screens. For example, if your computer is not already installed with Internet browser software or you have an older version of the browser software, you can choose from either Microsoft Internet Explorer 5 or Netscape Navigator 4.75 during the installation.

Some of the documents included on the CD are in Adobe Acrobat PDF (Portable Document Format). Viewing and printing these documents requires that you have Adobe Acrobat Reader installed on your computer. Adobe Acrobat Reader will install automatically during the CD **Typical** installation.

Once the software is installed, your computer will have the following entries listed in the file location you selected on your hard drive.

- o [IPWireless] Software
- o Connect To The Internet
- o [IPWireless] Driver Installation Help
- o [IPWireless] Help System
- o [IPWireless] Home Web page
- o [IPWireless] Registration Web page
- o Quick Start Guide

Please be sure that you have a minimum of 10 Mbytes of available disk space on your hard drive before you begin the installation. The [IPWireless] PC Software employs an InstallShield Wizard that will guide you through the installation process. This User Guide describes each screen briefly and depicts the actual screens when you can make a choice of applications to install.

1. Close all programs that may be running on your PC and then insert the CD into the CD-ROM drive on your computer. The Windows operating system should detect the CD and start the installation program. If the installation program does not start automatically, open Windows Explorer or My Computer and select your CD drive to view the contents of the CD. Double-click the '**Setup.exe**' program to begin the installation. The InstallShield Wizard will now guide you through the installation screens described on the following pages. Follow the on-screen prompts to complete the installation.
2. If your computer has a video player installed, a short video will play for about 15 seconds.
3. Following the video, the IPWireless PC Software Welcome screen will display.
4. **Welcome to the InstallShield Wizard for [IPWireless] PC Software** - The InstallShield Wizard will prompt you through each step of the installation process. Click '**Next**' on each screen to continue.

5. **Select the Software to Install** - If you do not have Internet browser software installed on your computer or you wish to upgrade to the version provided with the [IPWireless] PC software, select either Microsoft Internet Explorer 5 or Netscape Navigator 4.75 on the installation screen shown below. Otherwise, select **Existing Internet browser**. **Note:** When you choose to install either of the browser applications, you will be prompted to restart your computer. After the restart, you will need to start the [IPWireless] PC Software installation again; open Windows Explorer or My Computer and select your CD drive to view the contents of the CD. Double-click the '**Setup.exe**' program to begin the installation. When you reach the screen below (Figure 5), click on **Existing Internet browser**.

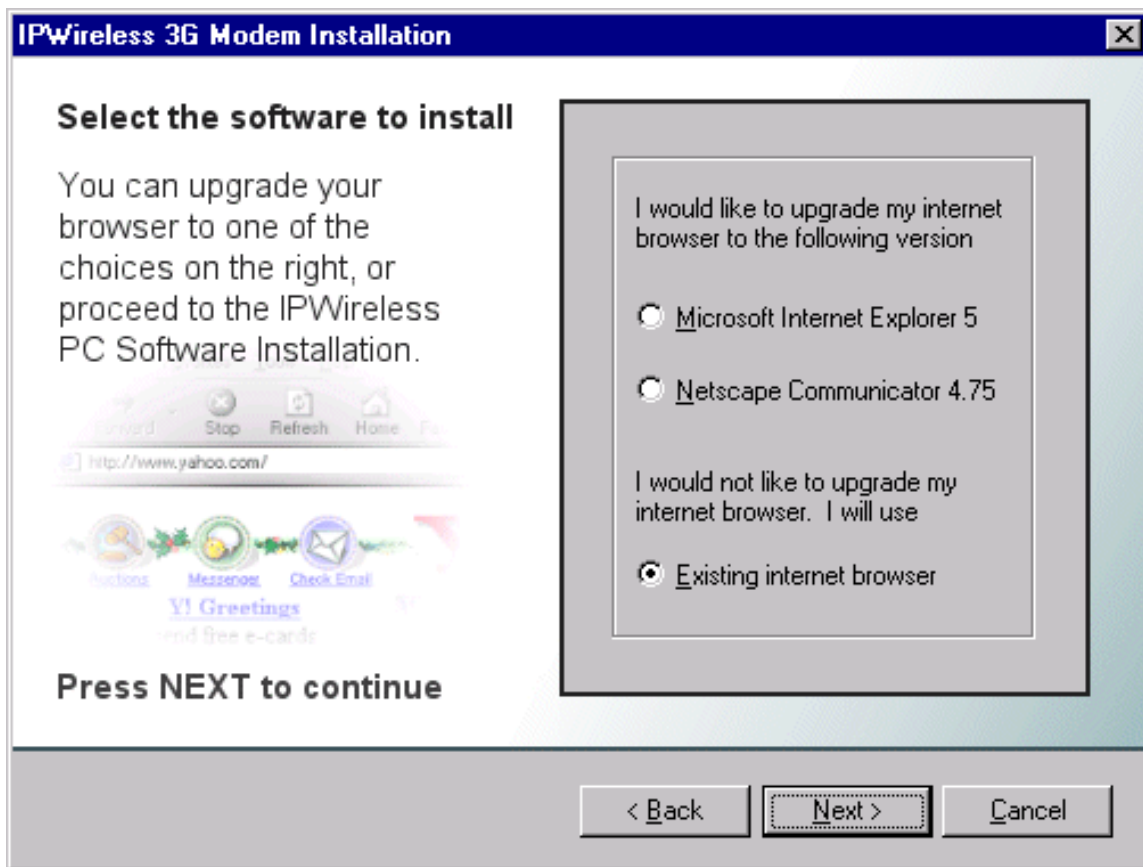


Figure 5

6. **License Agreement** - The use of the [IPWireless] Broadband Modem is subject to acceptance of the License Agreement. Scroll through the display window to read the entire agreement. The installation of the [IPWireless] PC Software will proceed only if you accept the License Agreement. If you want a printed version of the License Agreement, use the Print function on your browser before you click the '**Accept**' button. Click '**Accept**' to continue.
7. **Choose Destination Location** - Unless you choose a different drive, files from the CD will install in the following location on your hard drive: C:\Program Files\[IPWireless] Inc.\[IPWireless] PC Software. Click on the '**Browse**' button to choose a different location on your hard drive.
8. **Setup Type** - The particular files that will install are based upon the **Setup Type** that you select. See Figure 6 below.
 - o **Typical** – This is the default and recommended Setup Type and includes the maximum level of software installation; PC software, help files, documentation, and all other applications.
 - o **Custom** – This is the middle level of software installation. It includes everything you need to use the [IPWireless] Broadband Modem, but does not include Adobe Acrobat Reader. Choose this Setup Type if you have disk space limitations.
 - o **Compact** – This is the minimum level of software installation necessary to operate the [IPWireless] Broadband Modem. It does not include any other applications such as browser software and help files. Choose this Setup Type only if you have very limited disk space and are certain that you do not need any other applications.

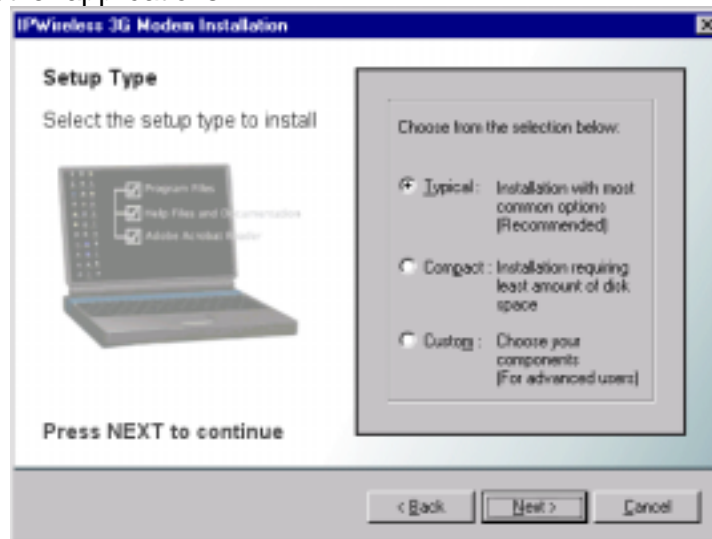


Figure 6

9. **Select a Program Folder** - The [IPWireless] PC Software and the other items you selected will install on your computer in the program folder you selected previously. A shortcut icon labeled **Connect to the Internet** also installs on your desktop for quick access to the Internet. **Note:** If you subsequently delete, move, or rename the original file, the shortcut will no longer work.

10. **Start Copying Files** - The options that you selected during the installation will display before any files are copied from the installation CD. To confirm the information click '**Next**'.
11. **Copying Files** - All installation options have now been made and the InstallShield Wizard will copy the necessary files to your computer.
12. **Completing the Installation** - The software has now been copied to your PC. The installation will proceed with [IPWireless] Broadband Modem detection, configuration, and user registration. Click '**Next**' to view the '**Readme.txt**'. Click the Windows close icon (x) in the upper right corner of the screen to close the '**Readme.txt**' and continue with the next step to copy the modem driver files.

Copying the Modem Driver Files

The installation will now copy the necessary modem driver files to your computer, so that your PC will detect the [IPWireless] Broadband Modem when you install the computer interface cable. A number of information boxes will display, indicating the progress of the modem driver installation. The final information box will prompt you to connect the computer interface cable to the [IPWireless] Broadband Modem and your computer.

USB Cable Connection

If you are connecting via a USB cable, your computer operating system should detect that new hardware has been added and automatically plug and play the modem device. The plug and play function adds the [IPWireless] Broadband Modem to your PC and may take approximately 1 minute to complete. During this time, a number of plug and play messages will display confirming that new hardware has been found and that the software for the [IPWireless] Broadband Modem is being detected. After the plug and play is finished, click the '**OK**' button and connect the USB Cable.

1. Plug the 20-pin connector on the USB cable into the PC port on the side of the modem as shown in Figure 7 below.
2. Connect the other end of the USB cable into a USB port on your computer. If needed, refer to your computer manual for the location of the USB port.

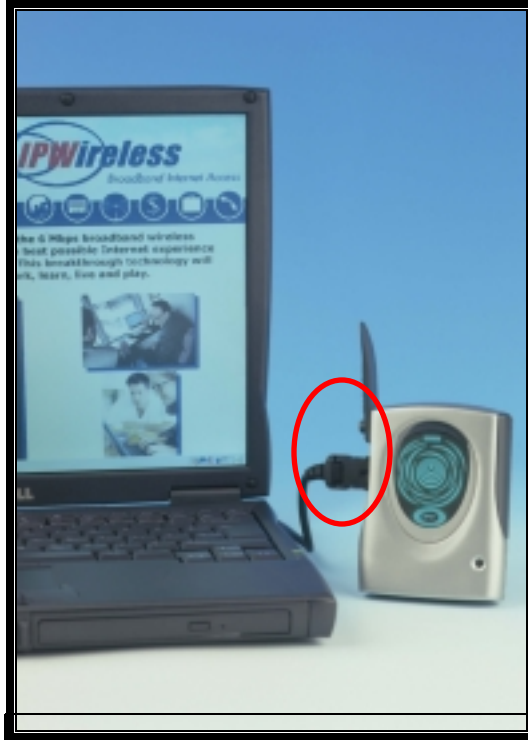


Figure 7

RS-232 Serial Cable Connection

If you are connecting via an RS-232 Serial Cable, you will add a **New Modem Entry** and associate it with the serial cable PC COM port. All necessary PC driver files are provided on the CD.

1. From the Windows taskbar, click **Start > Settings > Control Panel**.
2. Double-click on the **Modems** icon.
3. The Windows **Modems Properties** screen will display. See Figure 8 below.

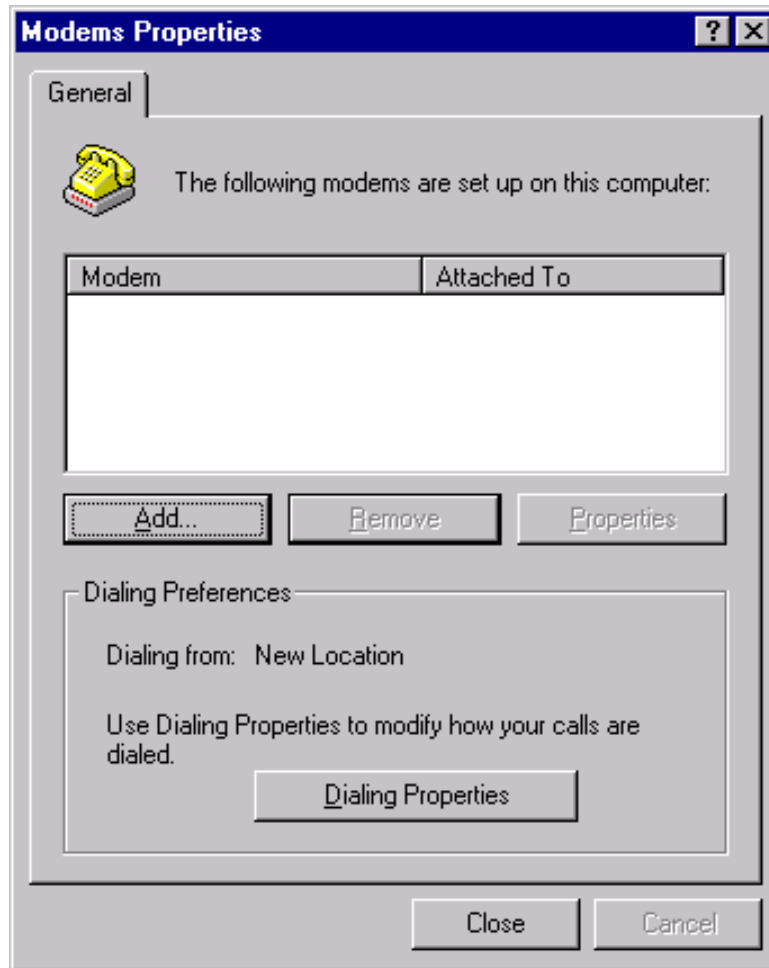


Figure 8

4. Click on the **Add** button to add the [IPWireless] Broadband Modem.
5. The **Configure the Modem** screen will display and guide you through the process. See Figure 9 below. For more information, click on '**View the Driver Installation Help**'.
6. After you have finished configuring the modem, connect the RS-232 cable as described in the next step.



Figure 9

Connect the RS-232 Serial Cable

1. Plug the 20-pin connector on the serial cable into the PC port located on the side of the modem as shown in Figure 7.
2. Connect the other end of the serial cable into an RS-232 serial port on your computer. If needed, refer to your computer manual for the location of a serial port.

Perform Registration

You are now ready to register your user information. **Please note:** You can complete the registration process at a later time; however User Registration is not optional. You must register in order to create a username and password, register your account and payment information, and receive software and modem upgrades.

Note: In order for the registration process to complete successfully, your browser application must accept 'cookies'. If you have disabled cookies, enable them before registration. If you wish, you may disable receipt of cookies after registration. See Frequently Asked Questions (FAQs) in Appendix C for instructions on how to set cookie preferences on your browser.

1. **To Continue with Registration Now** - Make sure that there is a check mark to the left of **Connect to [IPWireless] Now** and then click '**Next**'.
2. The Internet browser that you selected previously will launch and display the **New Customer Registration** web page on the [IPWireless] Registration web site. **Note:** If a connection cannot be made, the [IPWireless] PC Software will timeout and display a message indicating that the connection failed. If this happens, see the Troubleshooting Tips in Appendix A.
3. **New Customer Registration** - The [IPWireless] PC Software will connect to the [IPWireless] Registration web page and prompt you to create a new account.

4. To create a new account, click **Register Now** and proceed to the **Contact Detail** registration page.
5. Enter the information requested: The fields with the red asterisks (*) are mandatory. If you omit a mandatory field, the screen will return with the required fields highlighted. When you have finished entering your personal data, click **Continue** to display the **Terms of Service** web page. To complete your registration, you must agree to the Terms of Service. If you want a printed version of the terms, use the Print function on your browser before you click the **'I Agree'** button. The **Registration: Select Username & Password** web page will appear.
6. **Registration: Select Username & Password** - Select your **Service Level**. Click the down arrow on the service level field to make your choice. Information about Service Levels can be found on the [IPWireless] web site: www.ipwireless.com
7. Type in a **User Name** and **Password** for your account.
 - o The **User Name** must contain from six to twenty characters in any combination of numbers, letters, and the underscore mark, and is case sensitive.
 - o The **Password** must contain from six to twenty characters in any combination of numbers, letters, and the underscore mark, and is case sensitive. One of the password characters must be non-alphabetic (a number or the underscore mark).
 - o When you finish, click **Continue** to display the **Payment Details** web page.
8. Enter your credit card number, expiration date, and your name as printed on your credit card. [**Note:** If the user is not required to enter payment information, this text will change to reflect that.]
9. **Registration: Confirm Details** - Verify that the information you provided on the two previous pages is correct. When you finish, click **Continue** to display the **Registration Success** web page.
10. The registration process is now complete. You should either print the web page showing your user name and password or record the information for later use.
11. Close your browser software to return to the CD installation window, which should have remained active behind the browser window. Click the Windows close icon (x) in the upper right corner of the screen to close the browser software.
12. Click **Finish** to exit the installation program.
13. You are now ready to connect to the Internet. The final process is described in Chapter 3.

Chapter 3 – Connect to the Internet

The [IPWireless] PC Software is used in conjunction with your [IPWireless] Broadband Modem to access and connect to the ISP network and the Internet. Once the software is running you can connect to the Internet or download software upgrades for your [IPWireless] Broadband Modem and [IPWireless] PC Software from the [IPWireless] web site.

1. Go to your desktop and double click on the icon labeled '**Connect to the Internet**' to start the [IPWireless] PC Software.
2. The **[IPWireless] Broadband Modem Status Monitor** screen will appear. See Figure 10 below. This screen shows three tabs that display associated screens when you click on them:

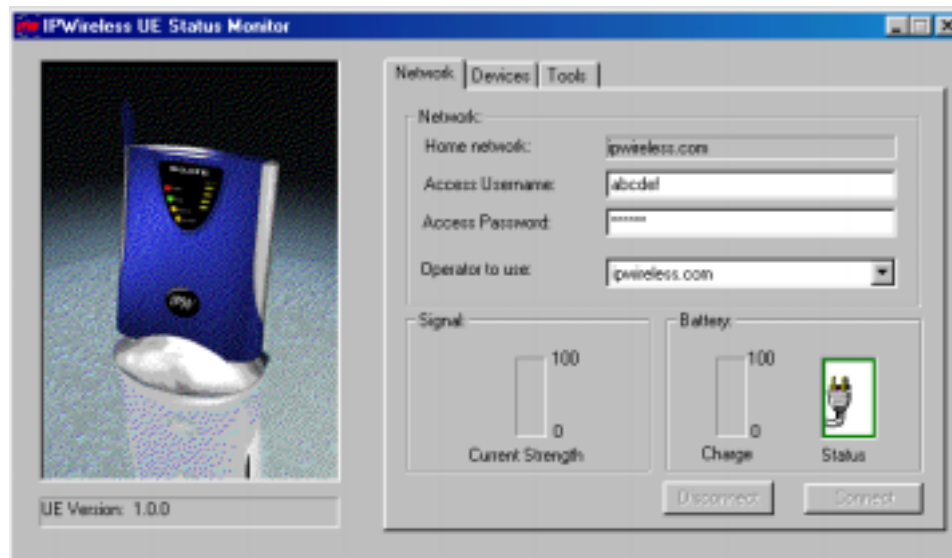


Figure 10

- o **Network Tab** - The Network screen shown in Figure 10 displays three main group boxes labeled **Network**, **Signal**, and **Battery**. Two buttons labeled **Connect** and **Disconnect** are located on the bottom right side of the screen.
 - **Network:** The **Network** group box shows the information you provided during the registration process. [The list box labeled "Operator to use" provides a list of other operators you can select if the ISP's network is not available. **Note:** The use of this field in under revision with the 3.1 release targeted for the end of August 2001]
 - **Signal:** The **Signal** group box shows the level of the radio signal strength currently achieved by the [IPWireless] Broadband Modem. Zero indicates poor signal strength while 100 indicates a strong signal.

- **Battery:** The [IPWireless] Broadband Modem comes with an internal battery. Zero indicates no battery power while 100 indicates a fully charged battery. See Appendix B for more information on the battery.
- **Connect:** Click the **Connect** button to connect to the ISP network and the Internet.
- **Disconnect:** You can either click on the **Disconnect** button or the Windows close icon (x) in the upper right corner of your browser to end your Internet session.
- o **Devices Tab:** Click on this tab and use the **Select Device** list box to choose an alternate modem to connect to the Internet when you are out of the coverage area. Your computer must be installed with either an external phone line modem or an onboard modem card to use this feature.
- o **Tools Tab:** [IPWireless] may periodically upgrade both the PC Software and the [IPWireless] Broadband Modem to provide you with additional features and new technology. Click on the **Tools** tab to download upgrades to the [IPWireless] PC software and/or the [IPWireless] Broadband Modem. See Frequently Asked Questions (FAQs) in Appendix C for more information on upgrades.

Establish Connection to the Internet

You must establish connection before launching your browser or your PC will use any existing modem that might be installed on your computer instead of the [IPWireless] Broadband Modem. **[Note:** This process is under revision and will be simplified with the 3.1 release targeted for the end of August 2001]

1. From the **Network** tab, click on the **Connect** button.
2. The **Select IPW Phonebook Entry** screen will appear.
3. Highlight [ipwireless] in the **Connect to** box.
4. Your user name should appear in the **Username** box.
5. Type in your password. Click on the **Save Password** check box if you do not wish to enter your password each time you connect to the Internet.
6. Click the **Dial** button.
7. The dialog box above the **Dial** button will show text that indicates the progress of the connection. When the connection to the ISP has been established, the **Phonebook Entry** screen will close and the Network screen will be displayed. Notice that the **Disconnect** button is now highlighted.
8. Go to your desktop and double-click on your Internet browser icon to connect to the Internet. You can configure your browser to set any web page as your home page. To set your browser home page, see the FAQs in Appendix C.
9. The next time you want to access the Internet, double-click on the **[IPW] Connect to the Internet** icon on your desktop, which will start the [IPWireless] Broadband Modem Dialer and display the **Network** screen. Click **Connect>Dial**. Wait for connection and then double-click on your Internet browser icon.

Appendix A – Troubleshooting Tips

Troubleshooting Tips

Please review these troubleshooting tips if you experience trouble with software installation, user registration, finding a radio signal, or connecting to the Internet. You may achieve a faster resolution to your trouble if you first consult and follow the tips before calling [IPWireless] Technical Support.

Warning: Do not attempt to repair the [IPWireless] Broadband Modem yourself. Any damage you may cause to the [IPWireless] Broadband Modem may create an unsafe condition.

If your trouble is not listed in this section, call [IPWireless] Technical Support at [1- 800 - xxx-xxxx]. The technical support representative will ask for your name, your location, your phone number, the serial number located on the back of the [IPWireless] Broadband Modem, and any error messages that may have displayed. You may need to provide your username and password if the problem is related to your service or your account rather than the [IPWireless] Broadband Modem and its associated software.

Remember, your PC operating system must be compatible with the [IPWireless] supported operating systems: Windows 98, Windows 2000, and Windows ME.

THE POWER BUTTON IS ON BUT THE DISPLAY DOES NOT ILLUMINATE

1. If you are connected with the AC Adapter, check to see if you are using a switched outlet. You may need to simply flip the switch. (If you are using the modem away from an AC power source, you could have a dead battery.)
2. Plug the [IPWireless] Broadband Modem into another outlet to check the power.
3. Check for loose ends on the power cable. If the display still does not illuminate, your [IPWireless] Broadband Modem may have been damaged. Contact [IPWireless] Technical Support for assistance.

NO SIGNAL RING INDICATORS ARE ILLUMINATED ON THE [IPWIRELESS] BROADBAND MODEM DISPLAY

1. Following power up, allow about thirty seconds for the [IPWireless] Broadband Modem to communicate with a local base station, at which point there should be some indication of signal strength.

2. If this is the first time you have tried to use the [IPWireless] Broadband Modem and you do not see any signal strength rings illuminated, try repositioning the modem to see if the center ring (or dot) signal strength indicator appears. Remember, your [IPWireless] Broadband Modem is similar to an FM radio that often receives a better sound quality when you move it. If you still can't find a signal, try moving the modem near a window. The [IPWireless] Broadband Modem is fully functional when the center ring signal strength indicator is illuminated. If all the above fails, you may not be within the coverage area of the service network. Call [IPWireless] Customer Service for more information about the coverage area.
3. If you have used the [IPWireless] Broadband Modem successfully at least once, and you have changed your location, you may not be within the coverage area of the service network. Call [IPWireless] Technical Support to determine the coverage area.

ONLY ONE OR TWO SIGNAL STRENGTH RINGS ARE ILLUMINATED

1. Although you have sufficient signal strength to connect to the Internet, your modem may not be optimally positioned to receive the best signal strength and achieve the best data transfer rates. Try moving the position of the modem to maximize the number of illuminated rings.
2. You may also achieve a stronger signal if you place the modem near a window, but avoid direct sunlight.
3. If you cannot achieve more than three rings wherever you place the modem, call [IPWireless] Technical Support.

THE [IPWIRELESS] BROADBAND MODEM DISCONNECTS UNEXPECTEDLY

- o Check for loose connections on both ends of the computer interface cable and the power cable. If all connections are secure, you may have had a bad connection. Try connecting to the Internet again. If your subsequent connection attempts fail, call [IPWireless] Technical Support.

THE [IPWIRELESS] BROADBAND MODEM SPEED IS NOT FAST ENOUGH

There are several conditions that can result in slower access speed that are not related to your [IPWireless] Broadband Modem's performance:

- o The access speed is related to the radio signal strength. If the signal strength indicated on the modem display shows less than all five rings illuminated, you may have reduced access speed due to a condition such as a marginal coverage area.
- o You may have subscribed to a Service Level that limits the data rate. You can increase your Service Level on the registration web page or call [IPWireless] Customer Service.
- o You may be accessing a slow web site. A web site can cause a traffic jam on the Internet's backbone because many people converge on it at once or that site's server does not have the capacity to handle its traffic. In these cases, it does not matter what speed your modem can achieve. **Tip:** Surf these sites when Internet traffic is low. Heaviest traffic is usually on weekends and

- evenings. You can also configure your browser so it won't display graphics, animations, sound, video or other multimedia content.
- o If you do not think that any of the above conditions are causing the problem, call [IPWireless] Technical Support.

REGISTRATION FAILS BECAUSE THE PC DOES NOT ACCEPT “COOKIES”

When you register with the ISP, you provide a username and password that the [IPWireless] network uses to identify you when you connect. For your convenience, these attributes are stored within the PC so that you do not need to enter them manually. The registration server sends a small file, called a cookie, to your PC. The cookie contains the username and password information. In order for the registration process to complete successfully, you must configure your browser application to accept cookies. Once registration has completed, you may disable receipt of cookies, if desired. See the FAQs in Appendix C for instructions on how to set cookie preferences on your browser.

THE BROWSER DID NOT GO DIRECTLY TO THE REGISTRATION SCREEN

Type **registration.ipwireless.net** in the browser address window and then press enter on your keyboard. If you get an error message similar to the “page cannot be displayed”, there might be maintenance occurring on the web site. Call [IPWireless] Technical Support or try again later.

THE CONNECT AND DISCONNECT BUTTONS ARE NOT HIGHLIGHTED ON THE STATUS MONITOR SCREEN BUT A RADIO SIGNAL IS PRESENT

Call [IPWireless] Technical Support.

Error Messages

INVALID PASSWORD

1. This error message means that the network no longer recognizes your username and/or password.
2. Check that your username and password were entered correctly.
3. The ISP's server does not allow more than one simultaneous connection to the network with the same username and password. Do not share your username and password with other [IPWireless] Broadband Modem users.
4. If you cannot correct the problem, call [IPWireless] Technical Support.

NO ANSWER

On rare occasions, the server will not receive the message advising it that the previous session has ended. There is a timeout of a few minutes before the server will accept a subsequent connection. If you recently had a successful connection, wait a few minutes before trying again.

[IPWIRELESS] BROADBAND MODEM NOT RESPONDING

1. Check that the computer interface cable is securely connected to the PC and modem.

2. Check that the modem power button is on.
3. If the [IPWireless] Broadband Modem still does not respond, try restarting the PC and then restart the [IPWireless] PC Software application. Occasionally, the PC COM port that the [IPWireless] PC Software and the [IPWireless] Broadband Modem are using can become “locked up” and cannot be freed until the PC is restarted.
4. If the status bar still reports “[IPWireless] Broadband Modem not Responding”, contact [IPWireless] Technical Support for assistance.

Appendix B – Battery Information

Internal Battery

Your [IPWireless] Broadband Modem has an internal lithium ion battery that charges automatically from the USB connection or the AC Adapter. The six battery bars at the top of the [IPWireless] Broadband Modem display indicate the charge level. When the battery is fully charged, all six bars will be fully illuminated. Each bar represents a sixth of the charge available. The bar indicating the highest charge is on the far right, and the bar indicating the lowest charge is on the far left. When the battery capacity drops below 10%, the battery bar will flash.

The internal battery will allow you to operate the [IPWireless] Broadband Modem with your laptop without connection to an AC power source. The internal battery life depends upon your usage of the [IPWireless] Broadband Modem. For example, video conferencing will consume battery life faster than web browsing. The [IPWireless] Broadband Modem display dims after 2 minutes of power ON to conserve battery life.

Battery Safety Guidelines

When the internal battery no longer holds a charge, do not attempt to replace the battery yourself. Contact [IPWireless] Technical Support for a replacement. Use batteries authorized by [IPWireless] only; replacing or recharging the battery may be unsafe. Use the battery only for its intended purpose. Never dispose of batteries in a fire or incinerator, or in municipal waste. Batteries must be disposed of or recycled properly. Never use a battery that is damaged or worn out.

Tip: To conserve internal battery life, remember the following:

- o When you are mobile and not using the modem, turn it off.
- o Avoid exposing the modem to extreme hot or cold temperatures such as leaving it in a hot car for more than fifteen minutes.

Appendix C – Frequently Asked Questions

Q. HOW DO I CHANGE MY PASSWORD?

A. Call [IPWireless] Customer Service.

Q. HOW DO I CHANGE MY ADDRESS AND PHONE NUMBER?

A. Call [IPWireless] Customer Service.

Q. WHERE CAN I FIND A COVERAGE MAP?

A. Call [IPWireless] Customer Service.

Q. HOW DO I CHANGE MY SERVICE LEVEL?

A. Call [IPWireless] Customer Service.

Q. HOW DO I REBOOT THE [IPWIRELESS] BROADBAND MODEM (WHEN THE POWER BUTTON DOES NOT RESPOND)?

A. Call [IPWireless] Technical Support.

Q. HOW DO I CONTACT TECHNICAL SUPPORT?

A. Call 1-800-XXX-XXXX.

Q. HOW DO I SET COOKIE PREFERENCES ON MY BROWSER?

A. Using Netscape Navigator:

Go to the browser drop-down **Edit** menu and select **Preferences**. Click on the **Advanced** heading. Go to the **Cookies** box and click on **Accept all cookies**. After successful registration, you may return to **Edit>Preferences>Advanced** and click on **Disable cookies**.

A. Using Microsoft Internet Explorer:

Go to the browser drop-down **Tools** menu and select **Internet Options**. Click on the **Security** tab. Click on the **Custom Level** button. Scroll down to the **Cookies** heading. Click on **Enable** to accept all cookies. After successful registration, you may return to **Tools>Security>Custom Level** and click on **Disable**.

Q. HOW DO I SET MY HOME PAGE?

A. Using Microsoft Internet Explorer:

Go to the browser drop-down **Tools** menu and select **Internet Options**. Select the **General** tab. Click **Use Current** in the **Home Page** area if you are currently viewing the Web page you want as your home page. If you are not viewing the web page you want to use, type in the URL (Universal Resource Locator -- the web address) of the web page you want to use as your home page. Click **OK**.

A. Using Netscape Navigator:

Click on the **Options** menu and select **General Preferences**. Select the **Appearance** tab. In the **Startup** box, type in the address of the web page you want to use as your home page. Click **OK**.

Q. HOW WILL I KNOW WHEN TO UPGRADE MY PC SOFTWARE?

A. [RELEASE 3.1 THE USER WILL ACCESS A WEB SITE AND SELECT THE APPROPRIATE FILES TO DOWNLOAD. INFORMATION REGARDING PC SOFTWARE UPGRADE ALERTS WILL BE PROVIDED AT THAT TIME.]

Q. HOW DO I PERFORM AN [IPWIRELESS] PC SOFTWARE UPGRADE?

A. [RELEASE 3.1 - THE USER WILL ACCESS A WEB SITE AND SELECT THE APPROPRIATE FILES TO DOWNLOAD.]

Q. HOW WILL I KNOW WHEN TO UPGRADE MY [IPWIRELESS] BROADBAND MODEM?

A. [RELEASE 3.1 THE USER WILL ACCESS A WEB SITE AND SELECT THE APPROPRIATE FILES TO DOWNLOAD. INFORMATION REGARDING MODEM UPGRADE ALERTS WILL BE PROVIDED AT THAT TIME.]

Q. HOW DO I PERFORM A [IPWIRELESS] BROADBAND MODEM UPGRADE?

A. [RELEASE 3.1 - THE USER WILL ACCESS A WEB SITE AND SELECT THE APPROPRIATE FILES TO DOWNLOAD.]

Q. ARE ANY MODEM ACCESSORIES AVAILABLE?

A. ACCESS THE [IPWIRELESS] WEB SITE AT WWW.IPWIRELESS.COM TO VIEW AVAILABLE ACCESSORIES.

Q. HOW DO I INSTALL MY MODEM ON A DIFFERENT COMPUTER?

A. IF YOU HAVE ALREADY INSTALLED YOUR MODEM ON ONE PC AND WISH TO USE IT ON A SECOND PC OR LAPTOP, INSERT THE INSTALLATION CD INTO THE SECOND PC AND RUN THE INSTALLATION SOFTWARE. YOU WILL AUTOMATICALLY CONNECT TO THE REGISTRATION WEB PAGES. SELECT 'SUPPORT SERVICES'. YOU MAY MODIFY YOUR SETTINGS HERE, IF NEEDED. IF YOU LEAVE ALL FIELDS UNCHANGED AND CLICK 'APPLY', THE USERNAME/PASSWORD COOKIE WILL ACCESS YOUR SECOND PC AND THE DIALER WILL AUTOMATICALLY CONFIGURE THE MODEM.

Q. WHEN SHOULD I DE-INSTALL THE MODEM AND/OR PC SOFTWARE?

A. YOU SHOULD DE-INSTALL THE MODEM AND PC SOFTWARE ONLY WHEN YOU WISH TO DISCONTINUE SERVICE.

Appendix D – [Technical Specifications]

Physical

Height (antenna down)	150 mm (5.91 inches)
Width.....	130 mm (5.122 inches)
Depth	30 mm (1.182 inches)
Weight.....	250 grams (8.825 ounces)

Indicators

Signal (5 rings).....	
Power.....	
Online	
Battery.....	
Transmit	
Receive	

Power

AC Power Adapter:

Current	2.20A
AC input voltage	100V-240V
DC output voltage	5.0V
Cable.....	2m length (6.56 ft.)

Environmental

Temperature:

Normal.....+15°C to +35°C (59°F to 95°F)

Extreme (short periods) -10°C to +55°C (14°F to 131°F)

Storage -20°C to +65°C (-4°F to 149°F)

Relative humidity:

Operating 25% to 75%

Extreme 25% to 75%

Maximum vibration:

Operating 5 Hz to 20Hz: 0.96 m2/s3 at 5 to 20 Hz

Extreme 20 Hz to 500 Hz: 0.96 m2/s3 at 20 Hz,
..... thereafter -3dB/Octave

Integral Antenna

Frequency of operation..... 2.5 to 2.69 GHz

Impedance:..... 50 ohms nominal

Omni-directional gain:.....2dBi

Polarization: vertical

Input return loss:-10dB nominal across band

Maximum power:.....22dBm

VSWR:1.7

Size:

Length: 65 mm (2.56 inches)

Width: 20 mm (.81 inches)

Depth: 5 mm (.198 inches)

www.[ipwireless].com

San Bruno, CA, USA

Part No. [IPW-0029] [June 2001]

Regulatory Information

Your [IPWireless] Broadband Modem may cause TV or radio interference (e.g., when using the modem in close proximity to a TV or radio receiver). The FCC/Industry Canada can require you to stop using the modem if such interference cannot be eliminated. If the modem does cause interference with other radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reposition the modem's receiving antenna.
- Reposition the TV or radio's receiving antenna.
- Relocate the modem with respect to the TV or radio receiver.
- Move the modem away from the TV or radio receiver.
- Plug the modem into a different outlet so that the modem and the TV or radio receiver are on different branch circuits.

If necessary, consult an experienced radio/television technician for additional suggestions. You may also find the *FCC Interference Handbook*, 1986, to be helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00450-7, or on the World Wide Web at <http://www.fcc.gov/Bureaus/Compliance/WWW/tvibook.html>.

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