

P1D

Wireless Broadband Modem



USER MANUAL



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Section 1 – Introduction

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

Safety Guidelines for Power Connection

Danger - Do not place or use the P1D Wireless Broadband Modem near any body of water. Accidental immersion can result in electric shock.

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.

Connect the AC adapter to 120V or 230V electrical outlets only.

To disconnect the unit from mains power, remove the AC adapter from the wall socket.

To reduce the risk of damage, always remove each end of the power cable by pulling the plug rather than the cable.

Do not allow anything to rest on the power cable.

Do not position the power cable in any area where people will step on it.

Do not use the P1D Modem if the power cable becomes frayed or damaged in any way.

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.

See Appendix B for important safety information about the internal battery.

Safety Guidelines for the P1D Wireless Broadband Modem

Do not attempt to disassemble the Wireless Broadband Modem; doing so may expose you to unsafe conditions. The Wireless Broadband Modem does not contain consumer serviceable components. Service should be performed by the Service Provider Service Center only. Contact Service Provider Customer Service to find the nearest Service Centre.

Position the Wireless Broadband Modem so that it is protected from falling objects.

Do not allow liquids to spill on or into the Wireless Broadband Modem.

Do not expose the Wireless Broadband Modem to extreme heat (over 131° F/+55°C) or cold (under 14° F/-10°C) temperatures.

Do not leave the Wireless Broadband Modem in a motor vehicle parked in direct sunlight for more than fifteen minutes.

Do not expose the P1D Modem to open flames.

Switch your P1D 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 before boarding an aircraft. Follow any other rules, regulations, or posted notices that apply to the use of electronic or radio equipment.

Before using the P1D Modem near a pacemaker or similar device, consult a physician or the device manufacturer for more information. In any event, do not use the P1D Modem within 8" (20 cm) of a pacemaker or similar device.

Do not use the P1D Modem when you need to pay attention to other activities. For example, never use it while driving or while supervising or operating machinery.

The P1D 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

The following information includes important safety guidelines regarding exposure to radio frequency (RF) signals and the use of electronic devices as determined by the Federal Communications Commission (FCC).

Your P1D modem is a low power radio transmitter and receiver. When it is ON, it receives and also sends out RF signals. The FCC has adopted RF exposure guidelines with safety levels for wireless cellular devices. The FCC guidelines are consistent with the safety standards previously set by the U.S. and international standards bodies: American National Standards Institute - ANSI C95.1 (1992); National Council on Radiation and Measurements - NCRP Report 86 (1986); International Commission on Non-Ionizing Radiation Protection - ICNIRP (1996). If you use the modem in accordance with these guidelines, the level of RF exposure will fall within the FCC guidelines and the standards previously identified.

To comply with the FCC RF exposure rules, the P1D modem has been evaluated against the Maximum Permissible Exposure (MPE) limits defined in Section 1.1310 of the FCC rules for the uncontrolled environment. During normal operation, the modem should be kept a minimum distance of 20cm (8 inches) away from the user and other persons to ensure compliance with the MPE limits.

Care and Cleaning Guidelines

Use a clean soft cloth, slightly moistened with water, and wipe the outside surface of the Modem only.

Do not use aerosol sprays, solvents, or abrasives when cleaning your P1D Modem. These items may scratch the surface or damage the interior components of the Modem.

To avoid the risk of damage, always switch off P1D Modem and unplug the AC power adapter from the wall power socket before cleaning them.

Avoid dropping, shaking or striking the P1D Modem. This may damage its components.

Never remove the battery or the SIM/USIM card (if fitted) whilst the P1D Wireless Broadband Modem is powered on, this may cause misoperation of the unit and damage to the SIM/USIM card

Pack Contents

The following items are included in the Wireless Broadband Modem package:

Quick Start Guide

A printed Quick-start guide to the P1D Wireless Broadband Modem, for those with experience of similar products.

Computer Interface Cable

A computer interface cable is included with P1D Modem.

The type of computer interface cable will either be USB or Ethernet.

Use the computer interface cable to connect the Modem to your computer. If needed, refer to your computer manual for the location of a USB or Ethernet port.

AC Power Adapter

The AC power adapter provides power to the P1D Modem. The power adapter plugs into a 120V or 230V AC power outlet. The pin end of the power cable plugs into the power jack located on the side of the Modem. Do not use any power adapter other than the one provided with your P1D Modem.

Installation CD

The installation CD includes all the necessary software needed to operate the P1D Modem. This includes operating system patches, TCP configuration files and this User Manual.

External Stand

The external stand is provided for desktop or wall-mount installation of the P1D Modem.

Other Informational Material

Your P1D Modem packaging may contain additional informational material pertaining for instance to the use of the Modem within your service area. Please review all such information carefully before using the P1D Modem.

Section 2 – Getting Started

Key Areas on Your Wireless Broadband Modem

Figure 1 below identifies key areas on the P1D Modem. Please review this information before you begin the installation.

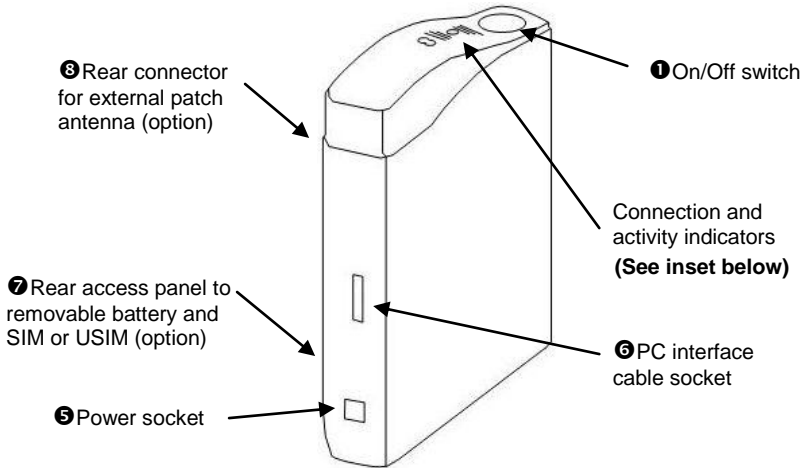


Figure 1 - Key areas on your P1D Wireless Broadband Modem

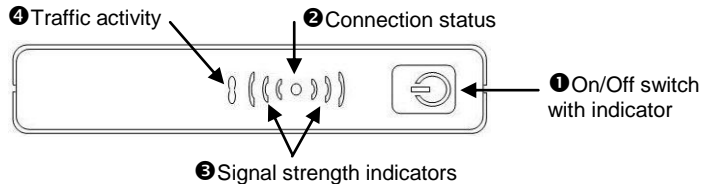


Figure 2 – Top panel on your P1D Wireless Broadband Modem

1 Power On/Off

Press the power button for one second to turn the modem on. The indicator is lit when the unit is on and the self-test completed successfully. If the indicator is flashing it means that the battery is less than 50% charged, this will revert a steady indication once the battery is charged to greater than 50%.

2 Connection Status Indicator

The single green LED shows the connection status. The green LED will be illuminated when you are connected to the data network. When you are present on the network but not connected, the indicator will flash.

③ Signal strength indicators

These two green indicators show signal level. They are off when there is no signal present. They will flash together when a signal is detected from the network during the connection stage of accessing the network. Once connected they will be steady.

④ Activity

This amber indicator is off when there is no traffic and flashing when there is data traffic passing through.

⑤ Power socket

The pin end of the power cable plugs into the DC power socket located on the side of the P1D Modem.

⑥ PC interface cable socket

The 20-pin connector on the USB or Ethernet cable plugs into the PC interface connector on the side of the P1D modem. The other end plugs into a USB or Ethernet connection as appropriate on your PC.

⑦ Rear access panel to battery and SIM/USIM

The panel at the rear may be removed to access the battery and the SIM/USIM socket. Before doing anything else, fit the SIM or USIM card if one was provided. Note that the gold contacts go face down. Then fit the battery ensuring that the battery contacts engage with the contacts on the P1D Modem. Refit the cover.

Stand/Mounting bracket (not shown)

The plastic stand/mounting bracket is supplied. This may act as a stand by placing it on a flat surface and slotting P1D Modem into it. Alternatively it may be used as a wall bracket, to use fix the bracket securely to the wall and slide the P1D modem into it from about half –way down its length.

⑧ Antenna socket

If it found that signal is poor and intermittent then you may benefit from the use of the optional external patch antenna. This antenna is purchased separately from your supplier and the cable provided with the antenna plugs into the socket on the rear of the P1D modem provided for this purpose. The P1D modem will automatically switch to using the new antenna.

Required Equipment

To install and use your Wireless Broadband Modem, you will need the following computer configuration:

- ▶ Computer:
 - Desktop or laptop PC
 - Pentium-class II processor or greater (300 MHz or higher recommended), or equivalents.

- ▶ Operating Systems Supported
 - Microsoft Windows 98 (SE),
 - Microsoft Windows ME,
 - Microsoft Windows 2000 (Administrative privileges required)
 - Microsoft Windows XP Home (Administrative privileges required)
 - Microsoft Windows XP Professional (Administrative privileges required)

- ▶ Memory
 - Minimum 64 megabytes (MB) of RAM (128 MB recommended)

- ▶ Connector
 - USB port, or
 - Ethernet port (LAN application only)

- ▶ Display:
 - VGA or Super VGA (recommended) monitor with the following settings:
 - Screen resolution set to at least 800 x 600

- ▶ Free disk space required:
 - 20 megabytes (MB) free in the target directory (minimum)
 - 40 megabytes (MB) for future software upgrades

- ▶ Internet Browsers:
 - Internet Explorer v5.0 or later
 - Netscape Communicator v4.73

Section 3 – Installation and Registration

This chapter explains how to install the hardware, software, register your user information, and operate your P1D Wireless Broadband Modem.

The instructions are split into the following sub-sections:

- Prepare the P1D Modem for use
- Find the Best Radio Signal
- Install the Computer Software
- Connect the Cable between the Modem and the Computer
- Perform On-line Registration

Prepare the P1D Modem for use

Unpack the unit and ensure all the parts are there (see section 2).

Remove the rear cover on the P1D modem and fit the small SIM/USIM card (if provided). First carefully break out the small section from the main credit-card sized body. The break-out section is known as a “small SIM card”, the type used by most mobile phones and by the P1D modem. Note, not all service providers will supply a SIM or USIM card. If one is not provided then it is likely that one is not needed in the particular network setup for your service provider. Do not fit any other SIM card if one is not provided as this will prevent the P1D Modem from working.



Fit the battery and replace the rear cover. Insert the P1D Modem in the stand in the stand provided, if used. Plug in the PC interface cable into the side of the P1D modem, do not plug the other end into your PC at this stage. Plug in power supply connector into the side of the Modem and then fit the power pack unit into an appropriate wall socket.

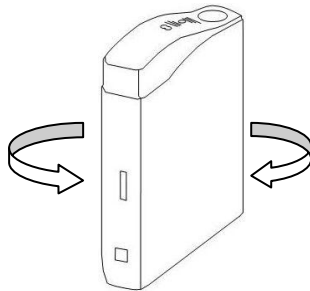
Note: *Before connecting your P1D Modem to a power source, you may want to consider using a power surge protector. A surge protector is designed to protect electronic devices from electrical surges and lightning strikes that may damage your computer or modem. If you do not have a surge protector and would like to use one, contact your local computer or electronics retailer for further details.*

Switch on the P1D Modem by pressing the On/Off switch on the top panel of the P1D for approximately 1 second. The On indicator will illuminate after the self test (see below). If the light is blinking this indicates your battery is charged to 50% or less of its capacity and is being charged. The indicator will stop change to a steady state when the charge level reached greater than 50%. Even when this happen the battery will continue to be charged to full capacity for as long as the power unit is plugged and switched.

Note that the P1D will operate from the battery alone for a period of time (see the specifications section later in this manual), but it is recommended that the Modem is powered from the supplied power unit whenever possible.

Find the best radio signal

1. When first powered on, your Wireless Broadband Modem will perform a short self-test that will last for approximately four seconds. The P1D Modem will automatically search for the best radio signal available. An adequate signal strength is shown by the indicators glowing constantly, if there is no signal then the indicators will be off. If there is a strong signal the indicators may be fully on. The integrated antenna is directional so in order to obtain a sufficiently strong signal it may be necessary to rotate the modem slowly in the horizontal plane in order to get sufficient signal to cause the signal strength indicators to go from flashing to steady state. (Placing the Modem next to a window can often result in an increased signal level). The stronger the signal the higher the maximum achievable data transfer rate.



Rotate the Modem until the strongest available signal is received, as shown by the top panel indicators.

(If you cannot obtain a useable signal, refer to the troubleshooting section in Appendix A.)

2. The Modem will 'search' for a base station, in a manner similar to a cellular phone. Whilst the modem is searching, the Connect indicator on the top panel will flash. When the Modem is connected the indicator will become steady.

You are now ready to install the Connection Software. **Note:** Install the Connection Software before connecting the Computer Interface Cable.

Install the software on your computer

The Connection Software uses an online wizard that will guide you through the installation process. You will be asked to make selections on some of the installation screens.

Please be sure that your computer meets the minimum requirements before you begin the installation.

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 wizard will now guide you through the installation screens described on the following pages. Follow the on-screen prompts to complete the installation.
2. **License Agreement Screen** - The use of the Wireless Broadband Modem is subject to acceptance of the License Agreement. Scroll through the display window to read the entire agreement. The installation of the Connection 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.
3. **Copying Files Screen** - All installation options have now been made and the InstallShield Wizard will copy the necessary files to your computer.
4. **Installing the Modem Driver Files.** The installation will now copy the necessary modem driver files to your computer, so that the PC will detect the Wireless Broadband Modem when you connect the computer interface cable. A number of information/warning boxes will be displayed, indicating the progress of the modem driver installation. The final information box will prompt you to connect the computer interface cable to the Wireless Broadband Modem and your computer.

Note: The Wireless Broadband Modem is supplied with third party software which is installed during the installation, see Appendix I for details. Removal of these products will stop Wireless Broadband Modem from working.

Connect the interface cable to your computer

There are two possible cable connections supported by the Wireless Broadband Modem, USB or Ethernet LAN.

▪ USB Cable Connection

When prompted to by the installation software, connect the supplied PC interface cable between the P1D Modem interface socket and a USB socket on your PC (refer to your computer manual to identify a suitable USB socket).

When the USB cable is connected at both ends and the P1D Modem has been powered as described in previous sections, then your computer operating system should detect that new hardware has been added and automatically load the appropriate driver software through the Microsoft Windows Plug and Play function. The plug and play function adds the Wireless Broadband Modem to your PC and may take approximately 1 minute to complete. During this time, a number of messages will display confirming that new hardware has been found and that the software for the Wireless Broadband Modem is being detected.

▪ Ethernet LAN Cable Connection

When prompted to by the installation software, connect the supplied PC interface cable between the P1D Modem interface socket and a network interface socket on your PC (refer to your computer manual to identify a suitable network interface socket).

Unlike USB, your computer operating system will not detect that new hardware has been added.

If the computer and the Modem experience problems communicating please ensure that the computer has configured the Ethernet Port into which the Modem is connected to be 10 Mbps Half Duplex. Refer to your computer manual or computer supplier on how to do this.

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 if a SIM or USIM card has been fitted then a username and password will not be required and the process will be slightly different. This manual assumes that no SIM/USIM card is fitted.)

The registration process takes place on-line using an internet browser that must already be installed on your computer. Typically, the browser might be Microsoft Internet Explorer or Netscape Navigator.

The only requirements are that you have a default browser installation, and that your browser is capable of accepting 'cookies'. If you have disabled cookies, you need to 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 checkbox is selected to the left of **Connect To The Internet** and then click '**Next >**'.
2. The Wireless Broadband Modem Dialler application will then automatically start. The application will communicate with the Wireless Broadband Modem and after a short delay (23-30 seconds) it will attempt to establish a wireless internet connection. The default Internet browser will be automatically launched and will automatically display your **Service Providers Customer Registration** web page.

Note: If a connection cannot be made, the Connection Software will timeout and display a message indicating that the connection failed. If this happens, see the Troubleshooting Tips in Appendix A.

3. To create a new account via your **Service Providers Customer Registration** web page follow the on-screen instructions.
4. When you have created a new account, close the Internet Browser session (Click the Windows close icon (x) in the upper right corner of the screen to close the browser software).
5. Upon closing the Internet Browser session, the Wireless Broadband Modem Dialler application will then automatically disconnect the wireless internet connection. The Wireless Broadband Modem Dialler application will then attempt to read the cookies returned from the Service Providers registration server to the PC. There will be a short delay of about 10 seconds, after which the Wireless Broadband Modem Dialler application will indicate if the registration has been successful before the application automatically closes.
6. Click **Finish** to exit the installation program.
7. You are now ready to connect to the Internet.

Once the registration has completed the Installation Wizard will finish. The software should now be installed with your computer having the following entries listed from the Start->Programs menu bar.



Microsoft Windows Operating System Patches

IP Wireless Broadband Modems can work at high data speeds, to achieve these rates may require a Windows Operating System patch to be applied. The installation software will determine if any operating system patch is needed and it is recommended that the Windows operating system patch is applied if required.

At the end of the Windows Operating System patch installation, a window will be displayed stating that the computer needs to be rebooted for the patch to take effect, select "No". You will reboot the PC at then end of the installation process.

Windows Internet Configuration Setting

Again, due to the high data speeds that the P1D Wireless Broadband Modem can work at, in order to achieve these rates will require that some TCP/IP settings are modified to take full advantage of this high rate.

These settings will only be used by the operating system the next time the computer is rebooted.

At the very end of the Connection Software installation it is advised that you reboot the computer so that the changes applied to the computer during the installation can take effect.

Section 4 – Connect to the Internet

The Connection Software is used in conjunction with your P1D Wireless Broadband Modem to connect to the Internet. This section describes how the Connection Software is used to initiate the connection, and also how it may be used to download software upgrades for your Modem and Connection Software from the Service Providers web site.

To start the Connection Software, go to your desktop and double click on the icon labeled **'Wireless Broadband Modem Dialler'**, as shown below, Fig 8.

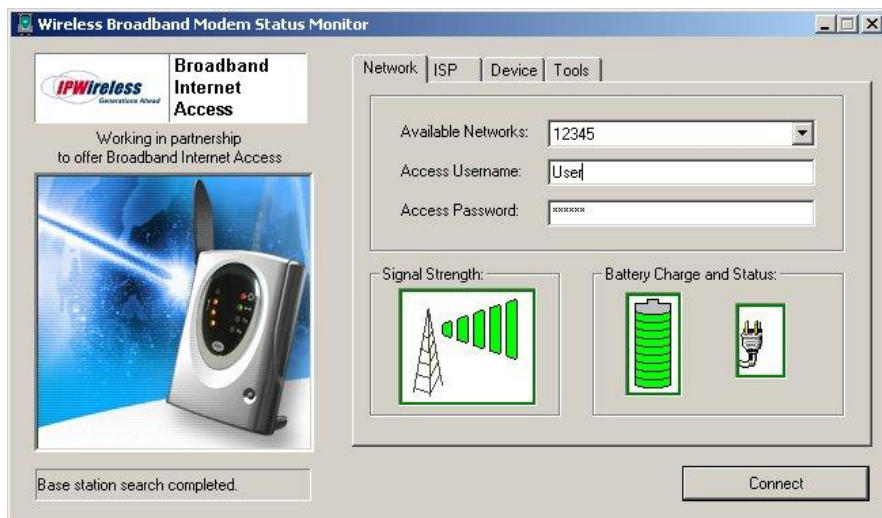


Figure 8 – Wireless Broadband Modem Dialler Application

The main screen has four tabs that display associated screens when you click on them. These tabs are described in more detail below. A single button is used to initiate (Connect) and terminate (Disconnect) the connection to the Internet. This button also indicates the state of the connection since if, for example, the connection is currently inactive, the button will be greyed out and the button text will indicate “Connect”. The button is available regardless of which tab is currently visible.

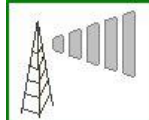
The other main feature of the main screen is the status bar, located below the modem picture. The status bar provides useful information concerning the status of the Internet connection, and other error or warning messages.

Network Tab - The Network tab shown in Figure 8 displays three main groups;

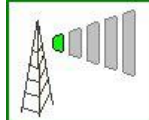
Access Network Parameters - The Connection Software only supports your service provider as the network operator. This is shown in the drop down list. The other two parameters shown are the user access name and access password. These parameters are set automatically during the registration procedure, and the user should have no need to modify them manually.

Signal Strength - shows the level of the radio signal strength currently achieved by the P1D Modem.

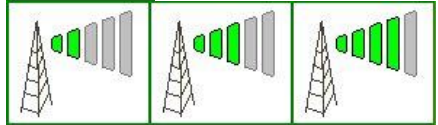
Unable to transmit or receive due to lack of signal.



Minimum signal strength required to transmit and receive data.



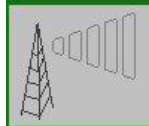
Increasing signal strength, allowing higher data transmit and receive data rates.



Maximum signal strength. Data will be transferred at the maximum rate of the P1D Modem.

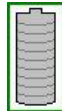


Unable to obtain signal from the Modem.

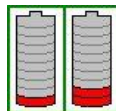


Battery Charge - **The P1D Modem comes with an internal battery.**

No charge. Wireless Broadband Modem will only work when powered by the external AC supply, which will also charge the battery.



Battery level is very low, and will soon require the use of the external AC power supply to continue operating.



Increasing levels of battery charge, which allow the P1D Modem to operate for increasing lengths of time, when battery operated.



Fully charged. The P1D Modem will operate the maximum possible time available from the battery.



Unable to obtain the charge level from the Modem.

Battery Status – the following icons are used as follows:-



mains powered and charging internal battery



modem currently powered by internal battery

ISP Tab – This tab shows the username and password information that is sent to your Internet Service Provider (ISP) during the connection procedure.

These details are established during the registration procedure, and the user should have no need to modify them manually. Note that this information is actually maintained by the Windows phonebook, and is extracted automatically by the Connection Software.

Devices Tab – This tab shows information for the currently connected Wireless modem.

This includes the physical communication port to which the modem is bound, the modem IMEI (international mobile equipment identity) number, the modem version string, and the modem initialization and reset strings.

Tools Tab - Upgrade may periodically provide upgrades for both the PC Software and the Wireless Broadband Modem software.

These upgrades will usually be a combination of bug fixes and additional features. Whilst connected, click on the “Download and Install Upgrade” button in order to download over the air the latest software upgrade. The download takes place by way of a File Transfer Protocol (FTP) link to the Service Providers web site. Once complete, the new image is then available on the PC hard disk, and may be transferred to the Wireless Broadband Modem by clicking on the “Upgrade UE” button (remember to Disconnect from the Internet before attempting the upgrade).

Establishing the Connection to the Internet

You should establish an Internet connection using the Connection Software before launching your browser (or any other Internet associated software such as FTP, telnet, etc).

Start the Connection Software and wait until the signal strength indicator on the **Network** tab indicates that there is sufficient signal strength for the connection. At this point, the button should be highlighted and have the text "**Connect**" displayed on button which may be clicked.

The user is automatically taken to the ISP tab so that the progress of the connection to the Internet may be observed. When the connection to the ISP has been established, the status bar should indicate that the session is active and the button is now highlighted but the text changes from "**Connect**" to "**Disconnect**". For convenience, the Connection Software is automatically minimized once the connection is established, but can be restored by clicking on the Wireless Broadband Modem icon on the tooltray.

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.

You may terminate the internet connection in many ways;

Right click the Wireless Broadband Modem icon on the tooltray, and select disconnect from the menu

Click the Wireless Broadband Modem icon on the tooltray to restore the main screen, then click the button when labeled "**Disconnect**".

Close the Wireless Broadband Modem application by clicking the X button in the top right corner of the window

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 your Service Provider for Technical Support.

Warning: Do not attempt any repair to the P1D Modem yourself. Any resulting damage to the Modem may create an unsafe condition.

If your trouble is not listed in this section, call your Service Provider for Technical Support. The technical support representative will ask for your name, your location, your phone number, the serial number located on the back of the P1D Modem underneath the battery cover, 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 Modem and its associated software.

- ▶ Remember, your PC operating system must be compatible with the supported operating systems: Windows 98 (Second Edition), Windows ME, Windows 2000 and Windows XP.

1. The Connection Software No longer Operates Correctly

Check that the third party software, listed in Appendix I, is installed and if not then install. Contact your Service Provider for Technical Support as needed.

2. The power indicator is on but the display does not illuminate

- a) If you are connected with the AC Adapter, check to see if you are using a switched wall socket. You may need to simply flip the switch. (If you are using the modem away from an AC power source, you could have a discharged battery.)
- b) Plug the Wireless Broadband Modem into another wall socket to check the power.
- c) Check for loose ends on the power cable. If the display still does not illuminate, your P1D Modem may have been damaged. Contact your Service Provider for Technical Support for assistance.

3. No signal indicators are illuminated on the Modem top panel

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

- b) If this is the first time you have tried to use the Modem and you do not see any signal strength LEDs illuminated, try repositioning the modem to see if the signal strength indicator illuminates. If you still cannot obtain a signal, try moving the modem near to a window. The Modem is receiving an adequate signal when the signal strength indicators are illuminated. If all the above fails, you may not be within the coverage area of the service network. Call your Service Providers Customer Service for more information about the coverage area.
- c) If you have used the Modem successfully at least once, and you have changed your location, you may not be within the coverage area of the service network. Call your Service Provider for Technical Support to determine the coverage area.

4. The signal strength indicators are flashing slowly

- a) 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 LEDs.
- b) You may also achieve a stronger signal if you place the modem near a window, but avoid direct sunlight.

5. The Modem indicators on the top panel are not showing the expected display information

The indicators can signal a number of error or warning conditions if the modem experiences a hardware fault, software upgrade or dialer attachment is required. Please refer to Appendix D for a detailed list of all possible display warning combinations.

6. The Modem disconnects unexpectedly

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 your Service Provider for Technical Support.

7. The Modem speed is not fast enough

There are several conditions that can result in slower access speed that are not related to your P1D Modem's performance:

The access speed is related to the radio signal strength. Ensure that you are receiving the best possible signal by moving the Modem and if possible locating it next to a window. The faster the signal quality indicators flash the better the signal. When they are lit continuously then you are receiving a strong signal that should enable maximum possible data speed.

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 your Service Providers Customer Service.

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.

If you do not think that any of the above conditions are causing the problem, call your Service Provider for Technical Support.

8. Connected Modem before installing the Connection Software

If you connect your P1D Wireless Broadband modem to your PC via USB before installing the USB driver software contained on the PC Software installation CD your modem drivers are likely to be missing preventing you from making a connect via your 3G modem.

To correct this it is necessary for the modem to be uninstalled from the system and the proper documented procedure be followed carefully to insure your 3G modem is correctly re-installed. The Wireless Broadband Modem **MUST** remain connected to you PC during the following removal process.

- Open "Device Manager" by clicking the right mouse button (left button if configured for a left handed user) on the "My Computer" icon and select "Properties".
 - Windows 98/ME users should select the "Device Manger" Tab located at the top of the "System Properties" Dialog window.
 - Windows 2000/XP users should select the "Hardware" Tab and select the "Device Manager".
- Locate the Wireless Broadband Modem on the list and "Uninstall/Remove" the device. Ensure the Wireless Broadband Modem has been removed from Device Manager.
- Unplug the PC to Modem interface cable from your PC the Wireless Broadband Modem from your PC.
- Under "Control Panel" open "Modem Options" if the Wireless Broadband Modem is shown as installed remove/uninstall all references to your Wireless Broadband Modem.

Removal is now complete and you **MUST** restart your computer before attempting to re-install the P1D Modem.

9. Driver Installation fails due to "digital signature not found"

Windows 2000 and Windows XP may be configured to "Block" or "Warn" you when an attempt is made to install a device driver that does not contain a valid digital signature. If configured to "Block" the installation operation will fail, if set to "Warn" you will be given the option to continue the installation by selecting "Yes" on the warning dialog window.

To avoid problems during the installation it is advisable to configure your system to ignore Digital Signatures during the installation of Wireless Broadband Modem software and device drivers. You can revert to your original configuration once the drivers are installed. To change your systems Digital Signature configurations follow these simple steps. Right click "My Computer" and select "Properties", under the "Hardware" tab within the "Device Manager" section select "Driver Signing". Within the "File Signature Verification" section you will notice the options "Ignore/Warn/Block" select "Ignore" and "Apply" change. Repeat the installation procedure as before.

10. Registration fails because the PC does not accept "Cookies"

When you register with the ISP, you provide a username and password that the wireless 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, however you should not delete them. See the FAQs in Appendix C for instructions on how to set cookie preferences on your browser.

11. The Browser did not go directly to the registration screen

Manually type the registration web page URL (check the Modem packaging or contact your Service Provider for this information) 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 your Service Provider for Technical Support or try again later.

12. The Connect / Disconnect button is not highlighted on the Status Monitor screen but a radio signal is present

On rare occasions, the "Wireless Broadband Modem Status Monitor" will lose contact with the Modem. The "Wireless Broadband Modem Status Monitor" should be shut down and restarted to clear the problem. If the problem persists the computer COM port that the Connection Software and the Wireless Broadband Modem are using may have become "locked up" and cannot be freed until the computer is shutdown (powered off) and restarted.

If there is still a problem after shutting down and restarting you computer, call your Service Provider for Technical Support.

13. Error Message "Invalid Password"

- a) This error message means that the network no longer recognizes your username and/or password.
- b) Check that your username and password were entered correctly.

- c) 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 Wireless Broadband Modem users.
- d) If you cannot correct the problem, call your Service Provider for Technical Support.

14. Error Message “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.

15. Wireless Broadband Modem Not Responding

- a) Check that the computer interface cable is securely connected to the PC and modem.
- b) Check that the modem power button is on.
- c) If the Modem still does not respond, try restarting the PC and then restart the Connection Software application. Occasionally, the PC COM port that the Connection Software and the Modem are using can become “locked up” and cannot be freed until the PC is restarted.
- d) If the status bar still reports “Wireless Broadband Modem not Responding”, contact your Service Provider for Technical Support for assistance.

Appendix B – Battery Information

Battery

Your Wireless Broadband Modem has a removable lithium ion battery that charges automatically from the USB connection or the AC Adapter. The green LED incorporated into the On/Off switch on the Modem top panel indicates the charge level; it will flash if the level is below 50% and be steady when the level is 50% or more.

The internal battery will allow you to operate the Wireless Broadband Modem with your laptop without connection to an AC power source or USB power source. The internal battery life depends upon your usage of the Wireless Broadband Modem. For example, video conferencing will consume battery life faster than web browsing.

Typically the battery will be useable for about 2 years or around 1000 charge/discharge cycles. It is advised that you obtain a replacement battery when your battery does not seem to hold its charge for more 50% of the time at new.

When the internal battery no longer holds adequate charge, a replacement battery may be obtained via your Service Provider.

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

When you are mobile and not using the modem, turn it off.

Avoid exposing the modem to extreme hot or cold temperatures such as leaving it in a hot car for more than fifteen minutes.

Battery Safety Guidelines

Only use batteries approved by IPWireless. 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.

Appendix C – Frequently Asked Questions

Q. WHERE CAN I FIND A COVERAGE MAP?

A. Contact your Service Provider.

Q. HOW DO I CHANGE MY SERVICE LEVEL?

A. Contact your Service Provider.

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

A. Press the button on the top of the modem for 2 seconds.

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. Your Service Provider can provide details about the web site to access. Information regarding PC Software upgrade alerts will be provided at that time.

Q. HOW DO I PERFORM A WIRELESS BROADBAND MODEM PC SOFTWARE UPGRADE?

A. Using the Wireless Broadband Modem Dialler, establish a connection to the internet. On the Wireless Broadband Modem Dialler change to the **Tools** tab, and press the button labeled "Download and Install Upgrade". This will automatically check to see if there is a newer version of software, and if one is available it will be automatically downloaded to the computer with the progress of the download being displayed using the sliding bar.

Q. HOW WILL I KNOW WHEN TO UPGRADE MY WIRELESS BROADBAND MODEM?

A. Using the Wireless Broadband Modem Dialler, establish a connection to the internet. On the Wireless Broadband Modem Dialler change to the **Tools** tab, and press the button labeled "Download and Install Upgrade". This will automatically check to see if there is a newer version of software and if one is available, it will be automatically downloaded to the computer.

Q. HOW DO I PERFORM A WIRELESS BROADBAND MODEM UPGRADE?

A. Having used the Wireless Broadband Modem Dialler to obtain any new software available for the upgrade of the Modem, disconnect the current internet connection. The button "Upgrade Modem" should now be highlighted. Pressing this Upgrade Modem button will start the download of the new software to Modem and the progress of the download will be displayed on the progress bar. This may take a number of minutes to complete.

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 – Modem Display Warnings

The Wireless Broadband Modem top panel contains 5 individual LEDs, as shown in Figure 9, used to indicate various activities on the modem, such as ON/OFF, current signal quality, data traffic activity and network connection status.

However if the modem experiences certain error conditions the display will be used to signal the condition back to the user.

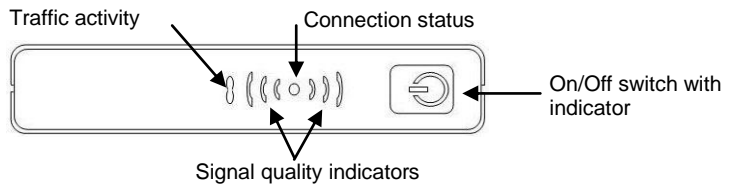


Figure 9

Figure 9 shows indicators location and function.

The indicators can signal warning or error scenarios as well as their normal functions and this section will aid the user in interpreting such a display combinations.

Power-On Self Test Failure

At power-on the Modem will carry out a number of tests to confirm the operational integrity of various onboard components. If the Traffic activity and right-hand (nearest to On/Off switch) signal quality indicator are lit together, this indicates a self-test failure.

In this event it is recommended that you switch off the modem and contact your Service Provider for Technical Support.

Software Upgrade Warning

If all the Modem indicators, in normal operation, flash on and off together then the network is informing the user that a Modem software upgrade is required.

Please refer to Appendix C for details on performing software upgrades.

Appendix E – [Technical Specifications]

Physical

Height.....	120mm
Width.....	84 mm
Depth.....	30 mm
Weight.....	250 grams

Indicators

Signal (2 green LEDs).....	
Power (1 green LED).....	
Online (1 green LED).....	
Transmit/Receive (1 amber LED).....	

Power

AC Power Adapter:

Current.....	1.0A
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 operation1.9 to 2.69 GHz in 4 versions
Impedance: 50 ohms nominal
Omni-directional gain: 2.5dBi
Polarization:vertical
Input return loss: -10dB nominal across band
Maximum power:..... 22dBm
VSWR:..... 1.7

Appendix F – [PPPoE Routers Tested]

The Wireless Broadband Modem has been tested on and found to be compatible with the following PPPoE hardware routers.

Supplier	Model
Linksys	BEFW11S4, BEFSR41, BEN2PS4
Netgear	RT311, RT314
Sonicwall	SOHO2
Cisco	800 series
Cisco	2621
SMC	7004ABR
Asante	FR3004

Appendix G – [PPPoE Clients Tested]

The Wireless Broadband Modem has been tested on and found to be compatible with the following PPPoE software clients.

Operating System	Product Name	Type
Windows 98	EnterNet	PPPoE
Windows 2000	EnterNet	PPPoE
Windows 2000	EnterNet	RASPPPoE
Windows XP	Internal Windows XP	PPPoE
Mac	Internal Mac	PPPoE
Windows 98, ME, 2000 & XP	RASPPPoE	RASPPPoE

Appendix H – Error Messages

The Connection Software displays error messages when a problem occurs.

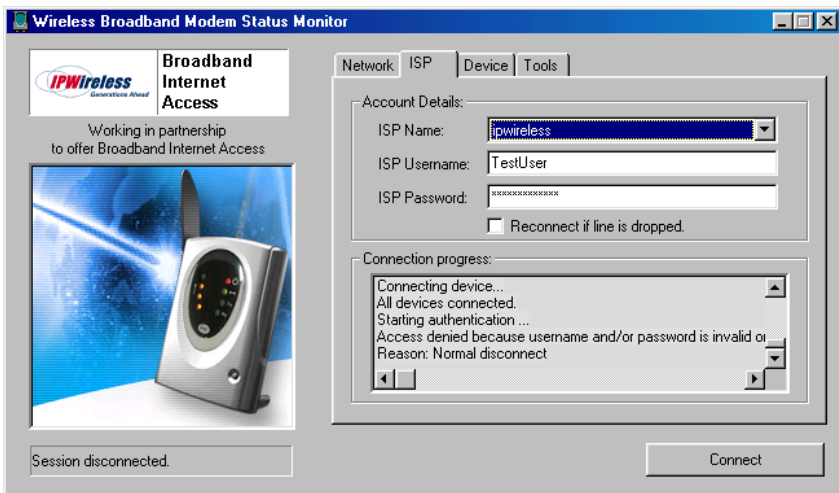
There are two main categories of error messages that can be displayed by the Connection Software

Microsoft Remote Access Service (RAS) Errors, and
Wireless Broadband Modem Extended Errors.

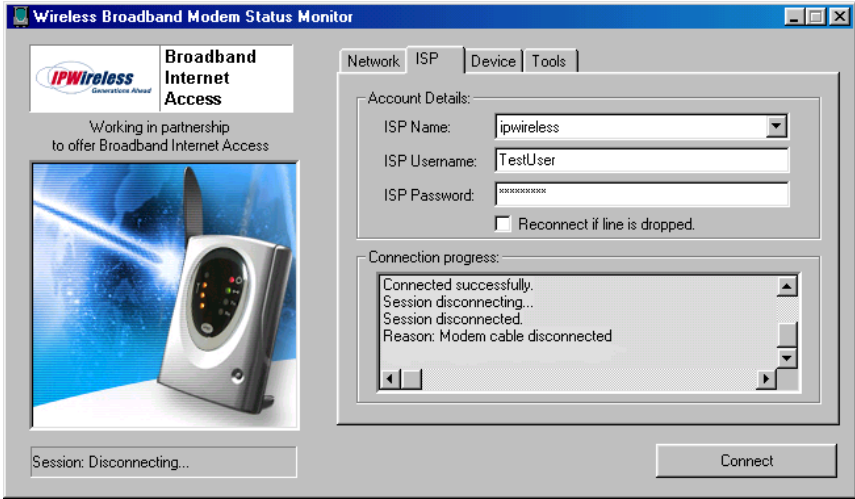
For both categories, the error message is always displayed within the Connection progress region on the ISP tab.

To differentiate between the two error categories, RAS errors are terminated with a “Reason: Normal disconnect” whilst the Wireless Broadband Modem Extended Error text is always displayed as “Reason: *extended error text*” where the *extended error text* is NOT “Normal disconnect”.

The following figure shows an example of the RAS error “Access denied because username and/or password is invalid on the domain”.



The following figure shows an example of the extended error “Modem cable disconnected”.



The following pages document these errors and where possible suggests what actions to take to correct the problem.

If you see an error message displayed that is not listed on the following section, please call your Service Provider for Technical Support

Microsoft Remote Access Service (RAS) Error Codes

The following is a list of known RAS Error Codes and associated error message. The RAS error text will be displayed if a RAS error occurs whilst attempting to either connect to the internet, whilst connected to the internet or when disconnecting from the internet.

Error Messages

600	An operation is pending.
601	The port handle is invalid.
602	The port is already open.
603	Caller's buffer is too small.
604	Wrong information specified.
605	Cannot set port information.
606	The port is not connected.
607	The event is invalid.
608	The device does not exist.
609	The device type does not exist.
610	The buffer is invalid.
611	The route is not available.
612	The route is not allocated.
613	Invalid compression specified.
614	Out of buffers.
615	The port was not found.
616	An asynchronous request is pending.
617	The port or device is already disconnecting.
618	The port is not open.
619	The port is disconnected.
620	There are no endpoints.
621	Cannot open the phone book file.
622	Cannot load the phone book file.
623	Cannot find the phone book entry.
624	Cannot write the phone book file.
625	Invalid information found in the phone book.
626	Cannot load a string.
627	Cannot find key.
628	The port was disconnected.
629	The port was disconnected by the remote machine.
630	The port was disconnected due to hardware failure.
631	The port was disconnected by the user.
632	The structure size is incorrect.
633	The port is already in use or is not configured for Remote Access dialout.
634	Cannot register your computer on the remote network.
635	Unknown error.
636	The wrong device is attached to the port.
637	The string could not be converted.
638	The request has timed out.
639	No asynchronous net available.
640	A NetBIOS error has occurred.
641	The server cannot allocate NetBIOS resources needed to support the client.
642	One of your NetBIOS names is already registered on the remote network.
643	A network adapter at the server failed.
644	You will not receive network message popups.

645 Internal authentication error.
646 The account is not permitted to log on at this time of day.
647 The account is disabled.
648 The password has expired.
649 The account does not have Remote Access permission.
650 The Remote Access server is not responding.
651 Your modem (or other connecting device) has reported an error.
652 Unrecognized response from the device.
653 A macro required by the device was not found in the device .INF file section.
654 A command or response in the device .INF file section refers to an undefined macro
655 The <message> macro was not found in the device .INF file section.
656 The <defaultoff> macro in the device .INF file section contains an undefined macro
657 The device .INF file could not be opened.
658 The device name in the device .INF or media .INI file is too long.
659 The media .INI file refers to an unknown device name.
660 The device .INF file contains no responses for the command.
661 The device .INF file is missing a command.
662 Attempted to set a macro not listed in device .INF file section.
663 The media .INI file refers to an unknown device type.
664 Cannot allocate memory.
665 The port is not configured for Remote Access.
666 Your modem (or other connecting device) is not functioning.
667 Cannot read the media .INI file.
668 The connection dropped.
669 The usage parameter in the media .INI file is invalid.
670 Cannot read the section name from the media .INI file.
671 Cannot read the device type from the media .INI file.
672 Cannot read the device name from the media .INI file.
673 Cannot read the usage from the media .INI file.
674 Cannot read the maximum connection BPS rate from the media .INI file.
675 Cannot read the maximum carrier BPS rate from the media .INI file.
676 The line is busy.
677 A person answered instead of a modem.
678 There is no answer.
679 Cannot detect carrier.
680 There is no dial tone.
681 General error reported by device.
682 ERROR WRITING SECTIONNAME
683 ERROR WRITING DEVICETYPE
684 ERROR WRITING DEVICENAME
685 ERROR WRITING MAXCONNECTBPS
686 ERROR WRITING MAXCARRIERBPS
687 ERROR WRITING USAGE
688 ERROR WRITING DEFAULTOFF
689 ERROR READING DEFAULTOFF
690 ERROR EMPTY INI FILE
691 Access denied because username and/or password is invalid on the domain.
692 Hardware failure in port or attached device.
693 ERROR NOT BINARY MACRO
694 ERROR DCB NOT FOUND
695 ERROR STATE MACHINES NOT STARTED
696 ERROR STATE MACHINES ALREADY STARTED
697 ERROR PARTIAL RESPONSE LOOPING
698 A response keyname in the device .INF file is not in the expected format.
699 The device response caused buffer overflow.
700 The expanded command in the device .INF file is too long.

- 701 The device moved to a BPS rate not supported by the COM driver.
- 702 Device response received when none expected.
- 703 ERROR INTERACTIVE MODE
- 704 ERROR BAD CALLBACK NUMBER
- 705 ERROR INVALID AUTH STATE
- 706 ERROR WRITING INITBPS
- 707 X.25 diagnostic indication.
- 708 The account has expired.
- 709 Error changing password on domain.
- 710 Serial overrun errors were detected while communicating with your modem.
- 711 RasMan initialization failure. Check the event log.
- 712 Bipler port is initializing. Wait a few seconds and redial.
- 713 No active ISDN lines are available.
- 714 Not enough ISDN channels are available to make the call.
- 715 Too many errors occurred because of poor phone line quality.
- 716 The Remote Access IP configuration is unusable.
- 717 No IP addresses are available in the static pool of Remote Access IP addresses.
- 718 PPP timeout.
- 719 PPP terminated by remote machine.
- 720 No PPP control protocols configured.
- 721 Remote PPP peer is not responding.
- 722 The PPP packet is invalid.
- 723 The phone number, including prefix and suffix, is too long.
- 724 The IPX protocol cannot dial-out on the port because the computer is an IPX router.
- 725 The IPX protocol cannot dial-in on the port because the IPX router is not installed..
- 726 The IPX protocol cannot be used for dial-out on more than one port at a time.
- 727 Cannot access TCPCFG.DLL.
- 728 Cannot find an IP adapter bound to Remote Access.
- 729 SLIP cannot be used unless the IP protocol is installed.
- 730 Computer registration is not complete.
- 731 The protocol is not configured.
- 732 The PPP negotiation is not converging.
- 733 The PPP control protocol for this network protocol is not available on the server.
- 734 The PPP link control protocol terminated..
- 735 The requested address was rejected by the server..
- 736 The remote computer terminated the control protocol.
- 737 Loopback detected..
- 738 The server did not assign an address.
- 739 The remote server cannot use the Windows NT encrypted password.
- 740 The TAPI devices configured for Remote Access failed to initialize or were not installed correctly.
- 741 The local computer does not support encryption.
- 742 The remote server does not support encryption.
- 743 The remote server requires encryption.
- 744 Cannot use the IPX net number assigned by the remote server. Check the event log.
- 752 A syntax error was encountered while processing a script

Wireless Broadband Modem Extended Errors

Error Message	Cause	Recovery Action
Normal disconnect	None.	This is normal and does not indicate any error.
Network busy – please try again later	The network is temporarily busy.	Session establishment should be attempted at a later time.
Network not available – please try again later	There is a temporary problem with the wireless network that is affecting all users.	<p>You will not be able to connect to the Internet until your service provider has repaired the system.</p> <p>Session establishment should be attempted at a later time.</p>
User rejected by the network	<p>The network is not able to verify who you are. This could be due to different problems based upon whether or not you have a SIM present:</p> <p>1) Without SIM present</p> <p>2) With SIM present</p>	<p>The recovery actions for the specific causes are as follows:</p> <p>1) The network does not recognize the access identifiers that you gave yourself when you registered. Contact your service provider's technical support for assistance.</p> <p>2) Contact your service provider's technical support for assistance.</p>
Service provider not supported	This is normally seen when attempting to establish an internet session and gain access to your ISP with an invalid ISP phone number.	<p>The ISP parameters are held in a phonebook. To verify that these values are correct, start up your internet browser (for Internet Explorer) and click on "Tools/Internet Options/Connections". You should see an entry called "ipwireless".</p> <p>To view the phonebook entry highlight the 'ipwireless' entry.</p> <p>Then click on the Settings button to view the ISP username and password.</p> <p>Also click on the "Properties" button and examine the phone number. This must be set to *99#.</p>

Error Message	Cause	Recovery Action
Service provider not available – please try again later	This indicates a temporary problem accessing your ISP	Session establishment should be attempted at a later time
Disconnected by network operator	The network operator has disconnected your internet session.	Session establishment should be re-attempted.
User not known to network	<p>This only affects modems that have a SIM card present.</p> <p>It indicates one of the following problems:</p> <p>1) The wrong SIM card is being used</p> <p>2) The SIM card is faulty</p>	<p>Check that the SIM card being used is the one provided by your service provider.</p> <p>If it is the correct SIM card contact your service provider's technical support for assistance.</p>
Modem barred from network	The modem has been barred from the network.	Contact your service provider's technical support for assistance.
Network not allowed	This indicates that the modem has tried to connect to a forbidden network.	Contact your service provider's technical support for assistance.
Network details rejected	There is a problem with the network.	<p>Session establishment should be re-attempted.</p> <p>If the problem persists contact your service provider's technical support for assistance.</p>

Error Message	Cause	Recovery Action
<p>Disconnected by service provider</p>	<p>This can occur for two reasons:</p> <ol style="list-style-type: none"> 1) This is normally seen when attempting to establish an internet session and gain access to your ISP with an invalid ID. 2) If this occurs after successfully establishing an internet session, then there is a temporary network problem. 	<p>The recovery actions for the specific causes are as follows</p> <ol style="list-style-type: none"> 1) The ISP parameters are held in a phonebook on the computer. To verify that these phonebook values are correct, start up your internet browser (for Internet Explorer) and click on "Tools/Internet Options/Connections". <p>You should see an entry called "ipwireless". To view the phonebook entry highlight the 'ipwireless' entry and then click on the Settings button to view the ISP username and password and modify if necessary.</p> <p>Also click on the "Properties" button and examine the phone number. This must be set to *99#</p> <ol style="list-style-type: none"> 2) Session establishment should be attempted at a later time. <p>If the problem persists contact your service provider's technical support for assistance.</p>
<p>Disconnected by modem</p>	<p>The modem has detected a problem with the wireless connection to the network and released the connection.</p>	<p>Wherever possible try to improve the modem's signal strength using the measures described earlier in the user guide.</p> <p>If the problem persists contact your service provider's technical support for assistance.</p>
<p>Disconnected by network</p>	<p>The network has detected a problem with the wireless connection to the modem and released the connection.</p>	<p>Wherever possible try to improve the modem's signal strength using the measures described earlier in the user guide.</p> <p>If the problem persists contact your service provider's technical support for assistance.</p>

Error Message	Cause	Recovery Action
<p>Loss of coverage – please improve modem signal</p>	<p>The modem can no longer communicate with the wireless network.</p> <p>This may be caused by one of the following:</p> <ol style="list-style-type: none"> 1) The modem has moved out of range of the wireless network 2) The wireless network may have developed a fault or may have been switched off 	<p>The modem will automatically try and regain radio coverage/synchronization with the wireless network.</p> <p>If the modem has moved out of the wireless network range it must be brought back into range.</p> <p>Once radio coverage/synchronization has been re-gained session establishment can be attempted.</p>
<p>SIM failure – please contact service provider</p>	<p>This only affects modems that have a SIM card present.</p> <p>The modem is having problems accessing the SIM card.</p>	<p>Perform the following steps:</p> <ol style="list-style-type: none"> a) Carefully remove the SIM card from the modem b) Clean the SIM card's gold contacts with a soft cloth c) Re-insert the SIM card into the modem ensuring that the SIM card holder is securely fastened d) Power cycle the modem using the front panel button e) Establish a session in the normal manner <p>If the problem persists contact your service provider's technical support for assistance.</p>
<p>Battery level too low</p>	<p>There is insufficient charge left in the internal battery.</p>	<p>Connect the DC power jack, wait a few seconds and then establish a session in the normal manner.</p>
<p>Modem cable disconnected</p>	<p>There is a problem with the connection between the PC and the modem.</p>	<p>Check the cable and connectors between the PC and the modem. Establish a session in the normal manner</p>

Appendix I – Third Party Software

During installation of the Wireless Broadband Modem the connection type between the computer and the Wireless Broadband Modem is chosen.

For the connection type chosen, the following drivers are installed and used.

USB connection driver:

MCCI – <http://www.mcci.com>

Ethernet connection drivers:

WinPCAP – <http://winpcap.polito.it>

RASPPPoE – <http://www.raspppoe.com>

Note:

If one of the drivers used by the Wireless Broadband Modem is removed, then the Wireless Broadband Modem will not operate correctly.

Regulatory Information

North America and Canada

Your Wireless 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 following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications not covered in this manual must be approved in writing by the Manufacturer. Changes or modifications made without written approval may void the user's authority to operate this equipment.

To comply with the FCC RF exposure rules, the UE P1D wireless broadband modem has been evaluated against the Maximum Permissible Exposure (MPE) limits defined in Section 1.1310 of the FCC rules for the uncontrolled environment. During normal operation, all persons should maintain a distance of at least 3.3cm from the antenna to ensure compliance with the MPE limits.

Europe

Statements of Conformity

English Hereby, IPWireless Inc, declares that this Wireless Broadband Modem Model: **XX** is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Deutsch Hiermit erklärt IPWireless Inc, dass sich dieses Wireless Broadband Modem Model: **XX** in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet".

The Wireless Broadband Modem will not transmit without suitable network coverage.

Caution: Only use IPWireless approved accessories with your Wireless Broadband Modem.