

# Wireless-G Broadband Router



User's Guide  
**CWR-800**

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# Chapter 1: Introduction

CNet Smart Wireless-G Router is the upcoming 54Mbps wireless networking standard that's almost five times faster than the widely deployed Wireless-B (802.11b) products found in homes, businesses, and public wireless hotspots around the country—but since they share the same 2.4GHz radio band, Wireless-G devices can also interoperate with existing 11Mbps Wireless-B equipment.

Since both standards are built in, you can protect your investment in existing 802.11b infrastructure, and migrate to the new screaming fast Wireless-G standard as your needs grow.

The CNet Smart Wireless-G Router is really three devices in one box. First, there's the Wireless Access Point, which lets you connect Wireless-G or Wireless-B devices to the network. There's also a built-in 4-port full-duplex 10/100 Switch to connect your wired-Ethernet devices. Connect four PCs directly, or daisy-chain out to more hubs and switches to create as big a network as you need. Finally, the Router function ties it all together and lets your whole network share a high-speed cable or DSL Internet connection.

## Features

- All-in-One Internet-Sharing Router, 4-port Switch, and versatile 802.11g Access Point/Bridge/Repeater
- Investment Protection: 5 times faster and interoperate with existing Wireless-B equipment seamlessly
- Enhanced Security Management Functions: Internet Access Policies with Time Schedules, Website Blocking, IP and MAC Address Filtering; Port Filtering; Wireless MAC Address Filtering; and NAT Technology
- Access Your Corporate Network Remotely through Virtual Private Networking (VPN)—Supports IPSec and PPTP Pass-Through
- Supports Dynamic Domain Name System (DDNS) Service, Static and Dynamic Routing (RIP1 and 2), DMZ Hosting
- Web-based Utility for Easy Configuration from Any Web Browser
- DHCP Server Capability to Assign IP Addresses Automatically
- All Ethernet Ports Support Auto-Crossover (MDI/MDI-X)—No Need for Crossover Cables
- Support SNMP V1 and V2c for efficient network management on large installation base

## The Router's Functions

Simply put, a router is a network device that connects two networks together. In this instance, the Router connects your Local Area Network (LAN), or the group of PCs in your home or office, to the Internet. The Router processes and regulates the data that travels between these two networks.

The Router's NAT feature protects your network of PCs so users on the public, Internet side cannot "see" your PCs. This is how your network remains private. The Router protects your network by inspecting every packet coming in through the Internet port before delivery to the appropriate PC on your network. The Router inspects Internet port services like the web server, ftp server, or other Internet applications, and, if allowed, it will forward the packet to the appropriate PC on the LAN side.

Remember that the Router's ports connect to two sides. The LAN ports connect to the LAN, and the Internet port connects to the Internet. The LAN and Internet ports transmit data at 10/100Mbps.

### IP Addresses

#### What's an IP Address?

IP stands for Internet Protocol. Every device on an IP-based network, including PCs, print servers, and routers, requires an IP address to identify its “location,” or address, on the network. This applies to both the Internet and LAN connections. There are two ways of assigning an IP address to your network devices. You can assign static IP addresses or use the Router to assign IP addresses dynamically.



**Note:** Since the Router is a device that connects two networks, it needs two IP addresses—one for the LAN, and one for the Internet. In this User Guide, you'll see references to the “Internet IP address” and the “LAN IP address.”

Since the Router uses NAT technology, the only IP address that can be seen from the Internet for your network is the Router's Internet IP address.

However, even this Internet IP address can be blocked, so that the Router and network seem invisible to the Internet—see the Block WAN Requests description under Filters in “Chapter 6: The Router's Web-based Utility.”

#### Static IP Addresses

A static IP address is a fixed IP address that you assign manually to a PC or other device on the network. Since a static IP address remains valid until you disable it, static IP addressing ensures that the device assigned it will always have that same IP address until you change it. Static IP addresses must be unique and are commonly used with network devices such as server PCs or print servers.

If you use the Router to share your cable or DSL Internet connection, contact your ISP to find out if they have assigned a static IP address to your account. If so, you will need that static IP address when configuring the Router. You can get that information from your ISP.

#### Dynamic IP Addresses

A dynamic IP address is automatically assigned to a device on the network, such as PCs and print servers. These IP addresses are called “dynamic” because they are only temporarily assigned to the PC or device. After a certain time period, they expire and may change. If a PC logs onto the network (or the Internet) and its dynamic IP address has expired, the DHCP server will automatically assign it a new dynamic IP address.

#### DHCP (Dynamic Host Configuration Protocol) Servers

PCs and other network devices using dynamic IP addressing are assigned a new IP address by a DHCP server. The PC or network device obtaining an IP address is called the DHCP client. DHCP frees you from having to assign IP addresses manually every time a new user is added to your network.

A DHCP server can either be a designated PC on the network or another network device, such as the Router. By default, the Router's DHCP Server function is enabled.

If you already have a DHCP server running on your network, you must disable one of the two DHCP servers. If you run more than one DHCP server on your network, you will experience network errors, such as conflicting IP addresses. To disable DHCP on the Router, see the DHCP section in “Chapter 6: The Router's Web-based Utility.”

**Router Setup Overview**

Note: You should always run the Setup CD-ROM to configure the Router for Internet access. If you wish to manually configure the Router, you may follow the instructions in the Quick Installation guide or this User Guide.

This User Guide covers the steps for setting up a network with the Router (see Figure 1-1). After going through “Chapter 2: Getting to Know the CNet Smart Wireless-G Router,” most users will only need to use the following chapters:

- Chapter 3: Connect the Router  
This chapter instructs you on how to connect a cable or DSL modem to the Router and connect your PC(s) to the Router.



- Chapter 4: Configure the PCs  
This chapter instructs you on how to configure your PCs to be DHCP clients, if you have previously set static IP addresses on your PCs.
- Chapter 5: Configure the Router's Basic Settings  
This chapter explains how to configure the Router using your web browser and the Router's web-based utility. You will configure the Router for Internet access using the settings provided by your ISP.

When you're finished with these basic steps, you will be ready to connect to the Internet. You can also modify the Router's settings further; for example, you can adjust security features and other settings to enable online gaming (see “Chapter 6: The Router's Web-based Utility”).

# Chapter 2: Getting to Know the CNet Wireless-G Router

## The Router's Back Panel



The Router's ports are located on the Router's back panel.

**Internet** The Internet port is where you connect your cable or DSL modem through an Ethernet network cable. Your modem connection will not work from any other port.

**Ports 1-4** These four LAN (Local Area Network) ports connect to network devices, such as PCs, print servers, and network attached storage (NAS). Each of the ports will auto-detect whether a straight-through or crossover cable is plugged into it, so there is no need for an uplink port. Any one of the four ports can serve as an uplink port to other network devices.

**Power** The Power port is where you will connect the power adapter.

### The Reset Button

The **Reset** button can be used in one of two ways:

1. Reboot the Router while keeping all of its settings.

If the Router is having problems connecting to the Internet, press the **Reset** button for just a moment with a paper clip or a pencil tip. This clears up any jammed connections, and is similar to pressing the **Reset** button on your PC to reboot it.

2. Restore the Router's factory defaults and clear all of its settings, including a new password or wireless settings.

If you are experiencing extreme problems with the Router and have tried all other troubleshooting measures, press the **Reset** Button and hold it down for 10 seconds.

The Router's LEDs display information about the Router's status.

**Power** Green. This LED lights up when the Router is powered on.

**WLAN** Green. When Wireless network is active.

### The LAN Indicators

**LAN** Green. The LAN LED serves two purposes. If the LED is continuously lit, the Router is successfully connected to a device through the corresponding port. If the LED is flickering, the Router is actively sending or receiving data over that port.

### The Internet Indicators

**WAN** Green. The WAN LED lights up when a successful connection is made between the Router and your cable or DSL modem (the Internet). The Link/Act LED flickers when the Router is sending or receiving data over the Internet port.

Proceed to “Chapter 3: Connect the Router.”

## Chapter 3: Connect the Router

### Overview

The Router's setup consists of more than simply plugging hardware together. You will have to configure your networked PCs to accept the IP addresses that the Router assigns them (if applicable), and you will also have to configure the Router with setting(s) provided by your Internet Service Provider (ISP).

The installation technician from your ISP should have left the setup information for your modem with you after installing your broadband connection. If not, you can call your ISP to request that data.

Once you have the setup information you need for your specific type of Internet connection, you can begin installation and setup of the Router.

If you want to use a PC with an Ethernet adapter to configure the Router, go to "Wired Connection to a PC." If you want to use a PC with a wireless adapter to configure the Router, go to "Wireless Connection to a PC and Boot-Up."

### Wired Connection to a PC

1. Before you begin, make sure that all of your network's hardware is powered off, including the Router, PCs, and cable or DSL modem.
2. Connect one end of an Ethernet network cable to one of the LAN ports (labeled 1-4) on the back of the Router, and the other end to an Ethernet port on a PC.



Repeat this step to connect more PCs, a switch, or other network devices to the Router.

3. Connect a different Ethernet network cable from your cable or DSL modem to the Internet port on the Router's rear panel. This is the only port that will work for your modem connection.





4. Power on the cable or DSL modem.
5. Connect the power adapter to the Router's Power port, and then plug the power adapter into a power outlet.



- The **Power** LED on the front panel will light up green as soon as the power adapter is connected properly.

6. Power on one of your PCs.

### Wireless Connection to a PC

If you want to use a wireless connection to access the Router, follow these instructions:

1. Before you begin, make sure that all of your network's hardware is powered off, including the Router, PCs, and cable or DSL modem.
2. Connect an Ethernet network cable from your cable or DSL modem to the Internet port on the Router's rear panel. This is the only port that will work for your modem connection.



3. Power on the cable or DSL modem.
4. Connect the power adapter to the Power port, and then plug the power adapter into a power outlet.
  - The **Power** LED on the front panel will light up green as soon as the power adapter is connected properly.
4. Power on one of the PCs on your wireless network(s).
5. For initial access to the Router through a wireless connection, make sure the PC's wireless adapter has its SSID set to CNET\_Wireless (the Router's default setting), and its WEP encryption is **disabled**. After you have accessed the Router, you can change the Router and this PC's adapter settings to match the your usual network settings.

**The Router's hardware installation is now complete. Go to "Chapter 4: Configure the PCs."**

# Chapter 4: Configure the PCs

## Overview

The instructions in this chapter will help you configure each of your computers to be able to communicate with the Router.

To do this, you need to configure your PC's network settings to obtain an IP (or TCP/IP) address automatically, so your PC can function as a DHCP client. Computers use IP addresses to communicate with the Router and each other across a network, such as the Internet

First, find out which Windows operating system your computer is running. You can find out by clicking the **Start** button. Read the side panel of the Start menu to find out which operating system your PC is running.

You may need to do this for each computer you are connecting to the Router.

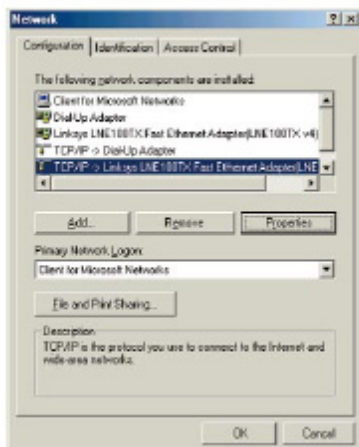
The next few pages tell you, step by step, how to configure your network settings based on the type of Windows operating system you are using. Make sure that an Ethernet or wireless adapter (also known as a network adapter) has been successfully installed in each PC you will configure. Once you've configured your computers, continue to "Chapter 5: Configure the Router's Basic Settings."



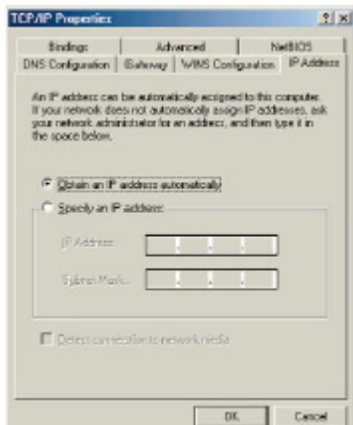
**Important:** By default Windows 98, 2000, Me, and XP has TCP/IP installed and set to obtain an IP address automatically.  
If your PC does not have TCP/IP installed, click **Start** and then **Help**. Search for the keyword **TCP/IP**. Then follow the instructions to install TCP/IP.

## Configuring Windows 98 and Millennium PCs

1. Click the **Start** button. Select **Settings** and click the **Control Panel** icon. Double-click the **Network** icon.
2. On the Configuration tab, select the **TCP/IP** line for the applicable Ethernet adapter. Do not choose a TCP/IP entry whose name mentions DUN, PPPoE, VPN, or AOL. If the word **TCP/IP** appears by itself, select that line. Click the **Properties** button.



- Click the **IP Address** tab. Select **Obtain an IP address automatically**.

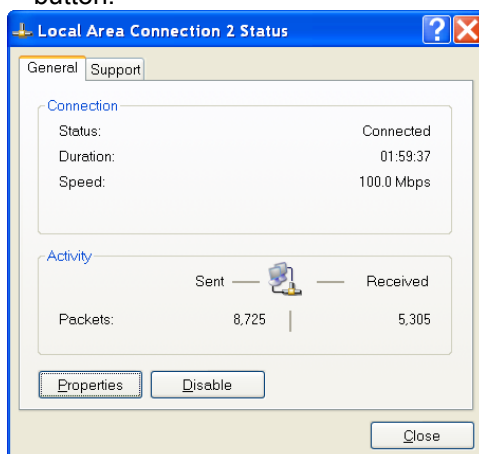


- Now click the **Gateway** tab, and verify that the *Installed Gateway* field is blank. Click the **OK** button.
- Click the **OK** button again. Windows may ask you for the original Windows installation disk or additional files. Check for the files at c:\windows\options\cabs, or insert your Windows CD-ROM into your CDROM drive and check the correct file location, e.g., D:\win98, D:\win9x, etc. (if "D" is the letter of your CD-ROM drive).
- Windows may ask you to restart your PC. Click the **Yes** button. If Windows does not ask you to restart, restart your computer anyway.

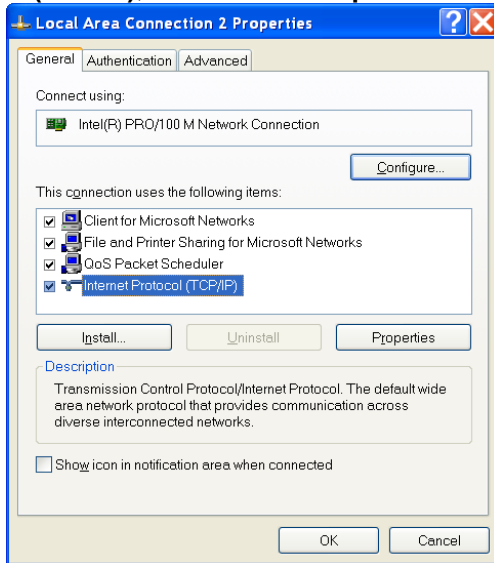
Go to “Chapter 5: Configure the Router’s Basic Settings.”

### Configuring Windows 2000 PCs

- Click the **Start** button. Select **Settings** and click the **Control Panel** icon. Double-click the **Network and Dial-up Connections** icon.
- Select the **Local Area Connection** icon for the applicable Ethernet adapter (usually it is the first Local Area Connection listed). Double-click the **Local Area Connection**. Click the **Properties** button.



3. Make sure the box next to *Internet Protocol (TCP/IP)* is checked. Highlight **Internet Protocol (TCP/IP)**, and click the **Properties** button.



4. Select **Obtain an IP address automatically**. Once the new window appears, click the **OK** button. Click the **OK** button again to complete the PC configuration.

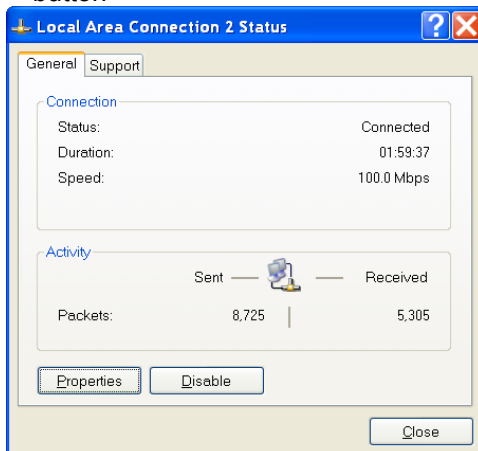
5. Restart your computer.

Go to “Chapter 5: Configure the Router’s Basic Settings.”

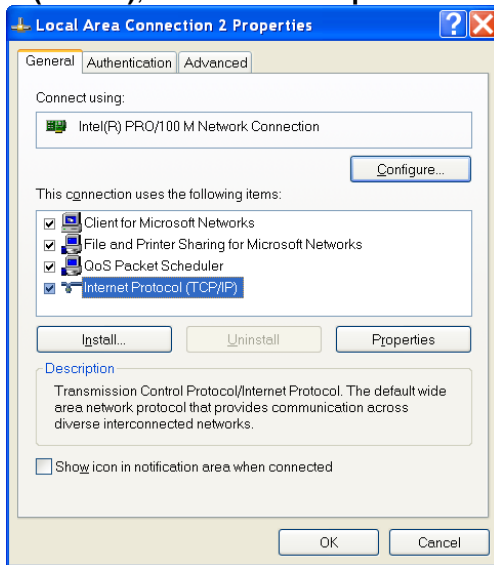
### Configuring Windows XP PCs

The following instructions assume you are running Windows XP with the default interface. If you are using the Classic interface (where the icons and menus look like previous Windows versions), please follow the instructions for Windows 2000.

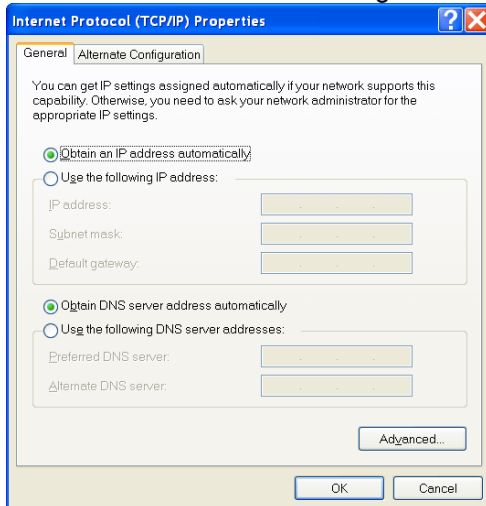
1. Click the **Start** button and then the **Control Panel** icon. Click the **Network and Internet Connections** icon. Then click the **Network Connections** icon.
2. Select the **Local Area Connection** icon for the applicable Ethernet adapter (usually it is the first Local Area Connection listed). Double-click the **Local Area Connection**. Click the **Properties** button



- Make sure the box next to Internet Protocol (TCP/IP) is checked. Highlight **Internet Protocol (TCP/IP)**, and click the **Properties** button.



- Select **Obtain an IP address automatically**. Once the new window appears, click the **OK** button. Click the **OK** button again to complete the PC configuration.



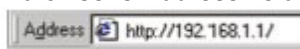
Go to “Chapter 5: Configure the Router’s Basic Settings.”

## Chapter 5: Configure the Router's Basic Settings

This chapter will show you how to configure the Router to function in your network and gain access to the Internet through your Internet Service Provider (ISP). Detailed description of the Router's web-based utility can be found in "Chapter 6: The Router's Web-based Utility."

The instructions from your ISP tell you how to set up your PC for Internet access. Because you are now using the Router to share Internet access among several computers, you will use the setup information to configure the Router instead of your PC. You only need to configure the Router once using the first computer you set up.

1. Open your web browser. Enter **http://192.168.1.1** (the Router's default IP address) in the web browser's Address field. Press the **Enter** key.



2. An Enter Network Password window, shown in Figure 5-2, will appear. (Windows XP users will see a similar screen.) Leave the User Name field empty, and enter **admin** in lowercase letters in the *Password* field (**admin** is the default password). Then, click the **OK** button.



- The web-based utility will appear with the Basic Settings tab selected. Select the time zone for your location.

**CWR 800 SMART WIRELESS-G ROUTER**

Basic Settings Security System Status Help Advanced Settings

**BASIC SETTINGS**

This section includes the basic settings for the Access Point. This section can help you efficiently customize the Ethernet and Wireless interface. **Remember to press Apply to finish your setting.**

Firmware Version: 1.6 (16/09/2003)

Time Zone: (GMT-08:00) Pacific Time (USA & Canada)

**INTERNET**

MAC Address: 00:90:4b:02:7c:f6

Host Name:

Domain Name:

MAC Cloning: Disable

MAC Address:  .  .  .  .  .

Connection Type: DHCP Auto Conf

**LAN**

MAC Address: 00:11:22:33:44:55

IP Address:  192 .  168 .  1 .  1

Subnet Mask:  255 .  255 .  255 .  0

**WIRELESS:**

MAC Address: 00:90:4C:44:07:E8

Channel: 11

Domain: FCC-US

SSID Broadcast: Enable

Mode: 11b+g

SSID: CNFT\_Wireless

Security:  Enable  Disable

- Based on the setup instructions from your ISP, you may need to provide the Host Name and Domain Name (usually cable ISPs require them). These fields allow you to provide a host name and domain name for the Router and are usually left blank.

The values for the Router's LAN IP Address and Subnet Mask are shown on the Basic Settings screen. The default values are 192.168.1.1 for the IP Address and 255.255.255.0 for the Subnet Mask.

- The Router supports four connection types: DHCP Auto Config (obtain an IP automatically), Static IP, PPPoE, and PPTP. These types are listed in the drop-down menu for the Configuration Type setting. Each Setup screen and available features will differ depending on what kind of connection type you select. Proceed to the instructions for the connection type you are using, and then continue to step 6.



### DHCP Auto Config

If you are connecting through DHCP or a dynamic IP address from your ISP, perform these steps:

A. Keep the default setting, **DHCP Auto Config**, as the Configuration Type.

The screenshot shows the 'BASIC SETTINGS' page for the CWR-800 router. The 'INTERNET' section is expanded, showing the 'Connection Type' set to 'Static IP Address'. The 'LAN' section is also visible.

Section	Field	Value	
Firmware Version:	Version	1.5 (25/09/2003)	
	Time Zone	(GMT-08:00) Pacific Time (USA & Canada)	
INTERNET:	MAC Address	00:90:4b:02:7c:f6	
	Host Name		
	Domain Name		
	MAC Cloning	Disable	
	Connection Type	Static IP Address	
	IP Address	61 . 218 . 100 . 20	
	Subnet Mask	255 . 255 . 255 . 248	
	Default Gateway	61 . 218 . 100 . 17	
	DNS(Required):	1:	168 . 95 . 192 . 1
		2:	0 . 0 . 0 . 0
3:		0 . 0 . 0 . 0	
LAN:	MAC Address	00:11:22:33:44:55	
	IP Address	192 . 168 . 1 . 1	
	Subnet Mask	255 . 255 . 255 . 0	
WIRELESS:	MAC Address	00:00:40:11:07:F0	

B. Click the **Apply** button to save the setting, or click the **Cancel** button to clear the setting and start over. When you are finished, proceed to step 6.

### Static IP Address

If you are connecting through a static or fixed IP address from your ISP, perform these steps:

A. Select **Static IP** as the Configuration Type.

B. Enter the **Internet IP Address**.

C. Enter the **Subnet Mask**.

D. Enter the **Default Gateway**.

E. Enter the **DNS** in the 1, 2, and/or 3 fields. You need to enter at least one DNS address.

**CWR 800 . SMART WIRELESS-G ROUTER**

Basic Settings | Security | System | Status | Help | Advanced Settings

**BASIC SETTINGS**

This section includes the basic settings for the Access Point. This section can help you efficiently customize the Ethernet and Wireless interface. **Remember to press Apply to finish your setting.**

Firmware Version: 1.6 (16/09/2003)

Time Zone: (GMT-08:00) Pacific Time (USA & Canada)

**INTERNET:**

MAC Address: 00:90:4b:02:7c:f6

Host Name:

Domain Name:

MAC Cloning: Disable

MAC Address:  .  .  .  .  .

Connection Type: Static IP Address

IP Address:   .   .   .

Subnet Mask:   .   .   .

Default Gateway:   .   .   .

DNS(Required):

1:   .   .   .

2:   .   .   .

3:   .   .   .

**LAN:**

MAC Address: 00:11:22:33:44:55

IP Address:   .   .   .

Subnet Mask:   .   .   .

**WIRELESS:**

MAC Address: 00:90:4C:14:07:58

F. Click the **Apply** button to save the settings, or click the **Cancel** button to clear the settings and start over. When you are finished, proceed to step 6.

### PPPoE

If your DSL provider says that you are connecting through PPPoE (you use a user name and password to access the Internet), perform these steps:

A. Select **PPPoE** as the Configuration Type.

B. Enter the **User Name**.

C. Enter the **Password**.

CWR800, SMART WIRELESS-G ROUTER: Setup - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://192.168.1.1/setup\_pppoe.asp

Time Zone: (GMT-08:00) Pacific Time (USA & Canada)

**INTERNET:**

MAC Address: 00:90:4b:02:7c:f6

Host Name:

Domain Name:

MAC Cloning: Disable

MAC Address:  .  .  .  .  .

Connection Type: PPPoE

User Name:

Password:

Connect on Demand: Max Idle Time 5 Min.

Keep Alive: Redial Period 30 Sec.

**LAN:**

MAC Address: 00:11:22:33:44:55

Done Internet

D. Click the **Apply** button to save the settings, or click the **Cancel** button to clear the settings and start over. When you are finished, proceed to step 6.

### PPTP

If you are using a PPTP connection, check with your ISP for the necessary setup information.

CWR800, SMART WIRELESS-G ROUTER: Setup - Microsoft Internet Explorer

Address: http://192.168.1.1/setup\_pptp.asp

**INTERNET:**

MAC Address: 00:90:4b:02:7c:f6

Host Name:

Domain Name:

MAC Cloning:

MAC Address:

Connection Type:

Internet IP Address:

Subnet Mask:

Default Gateway:

User Name:

Password:

Connect on Demand: Max Idle Time  Min.

Keep Alive: Redial Period  Sec.

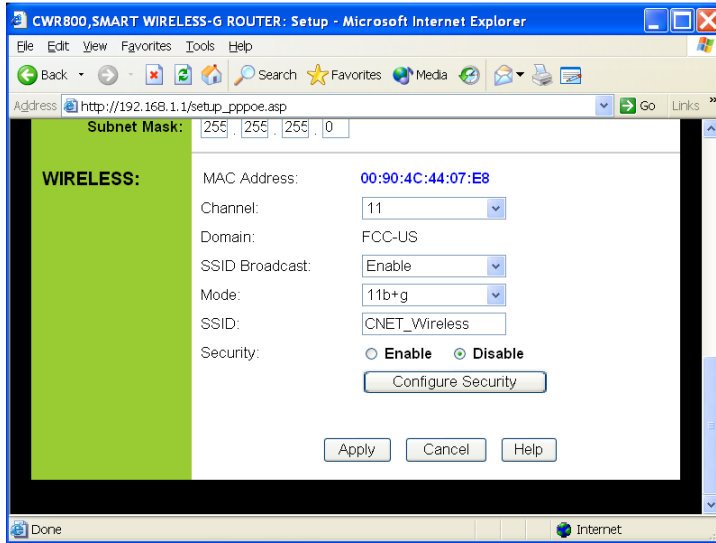
After you have entered your setup information, click the **Apply** button to save the settings, or click the **Cancel** button to clear the settings and start over. When you are finished, proceed to step 6.

6. To configure the Router for your wireless network(s), perform these steps:

A. If you have Wireless-G and Wireless-B devices in your network, then keep the default Mode setting, **11b+g**. If you have only Wireless-G devices, select **11g Only**. If you want to disable wireless networking, select **Disable**.

B. Customize the **SSID** and **Channel** settings as needed. For added security, you should change the default SSID (CNET\_Wireless) to a unique name. Then click the **Apply** button to save your changes. For more information, refer to "Chapter 6: The Router's Web-based Utility."

C. To enable Wireless encryption function (recommended), click the **Enable** button and click "Configure Security" button.



- D. Select security mode, click the **Apply** button to save your settings. For more information, refer to “Chapter 6: The Router’s Web-based Utility.”
7. If you haven’t already done so, click the **Apply** button to save your Setup settings. Close the web browser.
  8. Restart your computers so that they can obtain the Router’s new settings.

Test the setup by opening your web browser from any computer and entering <http://www.cnet.com.tw>.

If you need more details or advanced setting information, please refer to “Chapter 6: The Router’s Web-based Utility” or the CNet support website at <http://www.cnet.com.tw>.

Congratulations! You’ve successfully configured the Router. If you are unable to reach our website, you may want to review what you did in this section or refer to “Appendix A: Troubleshooting.”

**Proceed to “Chapter 6: The Router’s Web-based Utility” for more details and advanced settings information.**

# Chapter 6: The Router's Web-based Utility

## Overview

Use the Router's web-based utility to administer it. This chapter will describe each web page in the Utility and each page's key functions. The utility can be accessed via your web browser through use of a computer connected to the Router.

The "Basic settings", "Security", "System", "Status", and "Help" screens are available for basic setup. For advanced setup, click the **Advanced Settings** tab to access these screens: "Advanced Wireless", "Access Control", "Port Mapping", "Routing", "Dynamic DNS", and "SNMP".

## How to Access the Web-based Utility

To access the web-based utility, launch Internet Explorer or Netscape Navigator, and enter the Router's default IP address, **192.168.1.1**, in the Address field. Then press **Enter**.

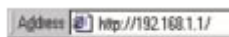


Figure 6-1

A password request page, shown in Figure 6-2 will pop up. (Windows XP users will see a similar screen.) Leave the User Name field blank, and enter **admin** (the default password) in the Password field. Then click the **OK** button.



To save your changes on any page, click the **Apply** button. To cancel any unsaved changes on any page, click the **Cancel** button. To get additional information about any screen's features, click the **Help** button.

## Setup

The Basic Settings screen is the first screen you see when you access the web-based utility. If you have already installed and set up the Router, you have already seen this screen and properly configured all of the screen's values.

**Firmware Version** This shows the version and date of the firmware you are using. Future versions of the Router's firmware will be posted and available for download on the CNet website at <http://www.cnet.com.tw>.

**Time Zone** Select the time zone for your location.

### Internet

**MAC Address** The MAC Address of the Internet interface is displayed here.

**Host Name and Domain Name** These fields allow you to supply a host and domain name for the Router. Some ISPs, usually cable ISPs, require these names as identification. You may have to check with your ISP to see if your broadband Internet service has been configured with a host and domain name. In most cases, leaving these fields blank will work.

**Configuration Type** The Router supports four connection types: DHCP Auto Config, Static IP, PPPoE, and PPTP. Each Setup screen and available features will differ depending on what kind of connection type you select.

**MAC Cloning** The Router's MAC address is a 12-digit code assigned to a unique piece of hardware for identification. Some ISPs require that you register the MAC address of your network card/adaptor, which was connected to your cable or DSL modem during installation. If your ISP requires MAC address registration, find your adapter's MAC address by following the instructions for your PC's operating system.

For Windows 98 and Millennium:

1. Click the **Start** button, and select **Run**.
2. Type **winiipcfg** in the field provided, and press the **OK** key.
3. Select the Ethernet adapter you are using.
4. Click **More Info**.
5. Write down your adapter's MAC address.

For Windows 2000 and XP:

1. Click the **Start** button, and select **Run**.
2. Type **cmd** in the field provided, and press the **OK** key.
3. At the command prompt, run **ipconfig /all**, and look at your adapter's physical address.
4. Write down your adapter's MAC address.

To clone your network adapter's MAC address onto the Router and avoid calling your ISP to change the registered MAC address, follow these instructions:

1. Select **Enable**.
2. Enter your adapter's MAC address in the *MAC Address* field.
3. Click the **Apply** button.

To disable MAC address cloning, keep the default setting, **Disable**

1. Select **Enable**.
2. Enter your adapter's MAC address in the *MAC Address* field.
3. To save your new settings, click the **Apply** button. To cancel your changes, click the **Cancel** button. To get more information about the features, click the **Help** button.

To disable MAC address cloning, keep the default setting, **Disable**.

### DHCP Auto Config

By default, the Router's Configuration Type is set to **DHCP Auto Config**, and it should be kept only if your ISP supports DHCP or you are connecting through a dynamic IP address.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

The screenshot shows the configuration interface for the CWR 800 Smart Wireless-G Router. The 'Basic Settings' tab is selected, and the 'BASIC SETTINGS' section is active. The interface includes a navigation menu with tabs for Basic Settings, Security, System, Status, Help, and Advanced Settings. The main content area contains the following settings:

- Firmware Version:** 1.5 (25/09/2003)
- Time Zone:** (GMT-08:00) Pacific Time (USA & Canada)
- INTERNET:**
  - MAC Address: 00:90:4b:02:7c:f6
  - Host Name: [ ]
  - Domain Name: [ ]
  - MAC Cloning: Disable
  - MAC Address: [00] . [00] . [00] . [00] . [00] . [00]
  - Connection Type: DHCP Auto Con
- LAN:**
  - MAC Address: 00:11:22:33:44:55
  - IP Address: 192 . 168 . 1 . 1
  - Subnet Mask: 255 . 255 . 255 . 0
- WIRELESS:**
  - MAC Address: 00:90:4C:44:07:E8
  - Channel: 11
  - Domain: FCC-US
  - SSID Broadcast: Enable
  - Mode: 11b+g
  - SSID: CNET\_Wireless
  - Security:  Enable  Disable

### Static IP Address

If you are required to use a permanent IP address to connect to the Internet, then select **Static IP**.

The screenshot shows the 'Basic Settings' page for the CWR 800 Smart Wireless-G Router. The 'INTERNET' section is active, showing the 'Static IP Address' configuration. The 'LAN' section is also visible below.

Section	Field	Value	
Firmware Version:	Version	1.6 (16/09/2003)	
	Time Zone	(GMT-08:00) Pacific Time (USA & Canada)	
INTERNET:	MAC Address	00:90:4b:02:7c:f6	
	Host Name	[Empty]	
	Domain Name	[Empty]	
	MAC Cloning	Disable	
	Connection Type	Static IP Address	
	IP Address	61 . 218 . 109 . 20	
	Subnet Mask	255 . 255 . 255 . 248	
	Default Gateway	61 . 218 . 109 . 17	
	DNS(Required):	1:	168 . 95 . 192 . 1
		2:	0 . 0 . 0 . 0
3:		0 . 0 . 0 . 0	
LAN:	MAC Address	00:11:22:33:44:55	
	IP Address	192 . 168 . 1 . 1	
	Subnet Mask	255 . 255 . 255 . 0	
WIRELESS:	MAC Address	00:90:4C:44:07:58	

**IP Address** This is the Router's IP address, when seen from the WAN, or the Internet. Your ISP will provide you with the IP Address you need to specify here.

**Subnet Mask** This is the Router's Subnet Mask, as seen by external users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

**Default Gateway** Your ISP will provide you with the Default Gateway Address, which is the ISP server's IP address.

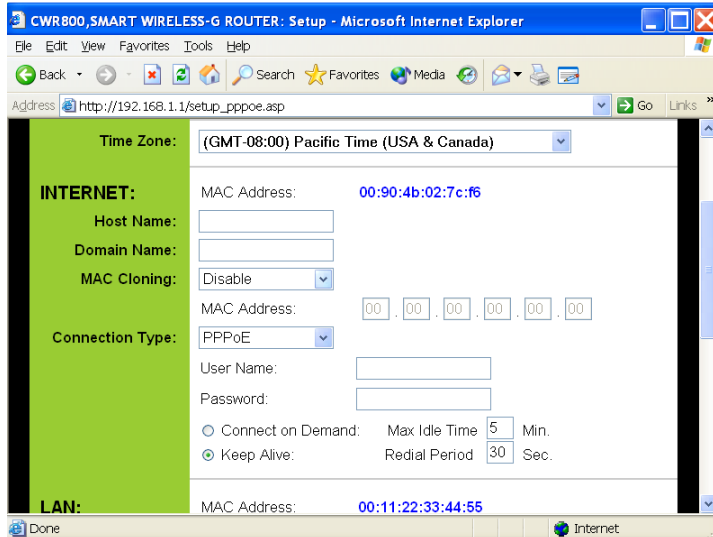
**DNS 1 (Required) and DNS 2-3 (Optional)** Your ISP will provide you with at least one DNS (Domain Name System) Server IP Address.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.



### PPPoE

Some DSL-based ISPs use PPPoE (Point-to-Point Protocol over Ethernet) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoE. If they do, you will have to enable PPPoE.



**User Name and Password** Enter the **User Name** and **Password** provided by your ISP.

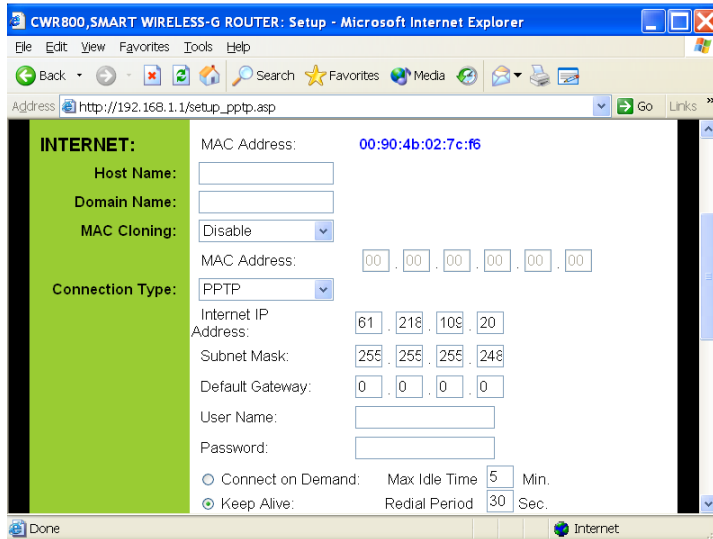
**Connect on Demand: Max Idle Time** You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically reestablish your connection as soon as you attempt to access the Internet again. If you wish to activate Connect on Demand, click the radio button. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, click the radio button next to **Keep Alive**. In the Redial Period field, you specify how often you want the Router to check the Internet connection. The default Redial Period is 30 seconds.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

**PPTP**

Point to Point Tunneling Protocol (PPTP) is a service



**Internet IP Address** This is the Router's IP address, when seen from the Internet. Your ISP will provide you with the IP Address you need to specify here.

**Subnet Mask** This is the Router's Subnet Mask, as seen by external users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

**Default Gateway** Your ISP will provide you with the Default Gateway Address.

**User Name and Password** Enter the **User Name** and **Password** provided by your ISP.

**Connect on Demand: Max Idle Time** You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically reestablish your connection as soon as you attempt to access the Internet again. If you wish to activate Connect on Demand, click the radio button. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, click the radio button next to **Keep Alive**. To use this option, click the radio button next to **Keep Alive**. In the Redial Period field, you specify how often you want the Router to check the Internet connection. The default Redial Period is 30 seconds.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

**LAN**

**MAC Address** The MAC Address of the LAN interface is displayed here.

**IP Address and LAN Subnet Mask** The values for the Router's IP Address and Subnet Mask are shown here. The default values are 192.168.1.1 for the IP Address and 255.255.255.0 for the Subnet Mask.



### Wireless

**MAC Address** The MAC Address of the wireless interface is displayed here.

**Channel** Select the appropriate channel from the list provided to correspond with your network settings, between 1 and 11 (in North America). All devices in your wireless network must use the same channel in order to function correctly.

**SSID Broadcast** When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the Router. To broadcast the Router's SSID, keep the default setting, **Enable**. If you do not want to broadcast the Router's SSID, then select **Disable**.

**Mode** If you have Wireless-G and Wireless-B devices in your network, then keep the default setting, **11b+g**. If you have only Wireless-G devices, select **11g Only**. If you want to disable wireless networking, select **Disable**.

**SSID** The SSID is the network name shared among all devices in a wireless network. The SSID must be identical for all devices in the wireless network. It is case-sensitive and must not exceed 32 alphanumeric characters, which may be any keyboard character. Make sure this setting is the same for all devices in your wireless network. For added security, CNet recommends that you change the default SSID (**CNET\_Wireless**) to a unique name of your choice.

**Security** CNet Smart Wireless-G Router provide 40/64/128 bit WEP (Wired Equivalent Privacy) and 256-bit WPA (Wi-Fi Protected Access). WEP and WPA are an encryption method used to protect your wireless data communications. WEP uses 40-bit or 64-bit or 128-bit keys to provide access control to your network and encryption security for every data transmission. WPA uses 256-bit keys to provide access control to your network and encryption security for every data transmission. To decode data transmissions, all devices- Wireless-G and Wireless-B-in a network must use an identical WEP or WPA key. Higher encryption levels offer higher levels of security, but due to the complexity of the encryption, they may decrease network performance.

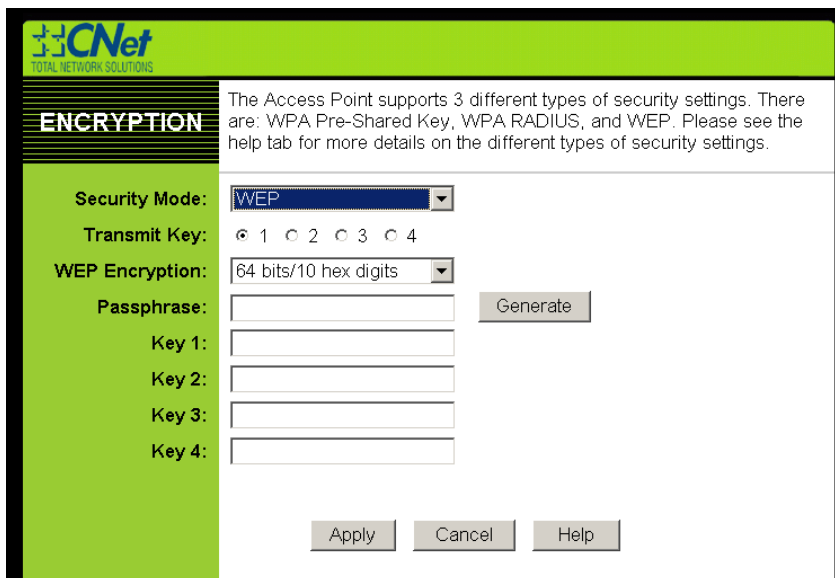
To Enable wireless encryption function, click the **Enable** radio button. Then click the **Config Security** button to configure the Security settings. To disable wireless encryption, keep the default setting, **Disable**.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

### Wireless Security

CNet Smart Wireless-G Router provides encryption types: (A) WEP (B) WPA

#### (A) WEP (Wired Equivalent Privacy)



**Transmit Key** Select which WEP key (1-4) will be used when the Router sends data. Make sure the receiving device is using the same key.

**WEP Encryption** Select the level of WEP encryption you wish to use, **64-bit 10 hex digits** or **128-bit 26 hex digits**. Higher encryption levels offer higher levels of security, but due to the complexity of the encryption, they may decrease network performance.

**Passphrase** Instead of manually entering WEP keys, you can enter a Passphrase. This Passphrase is used to generate one or more WEP keys. It is case-sensitive and should not be longer than 16 alphanumeric characters. (This Passphrase function is compatible with CNet wireless products only. If you want to communicate with non-CNet wireless products, enter the WEP key manually on the non-CNet wireless products.) After you enter the Passphrase, click the **Generate** button to create WEP keys.

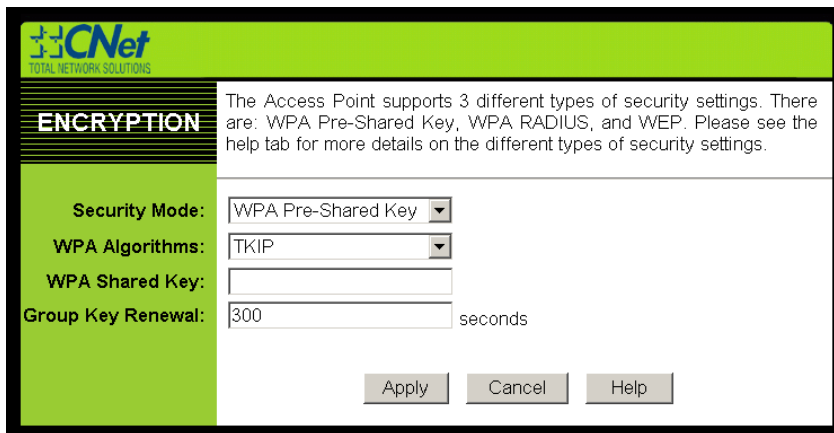
**Keys 1-4** WEP keys enable you to create an encryption scheme for wireless LAN transmissions. If you are not using a Passphrase, then manually enter a set of values. (Do not leave a key field blank, and do not enter all zeroes. These are not valid key values.)

If you are using 64-bit WEP encryption, then the key must be exactly 10 hexadecimal characters in length. If you are using 128-bit WEP encryption, then the key must be exactly 26 hexadecimal characters in length. Valid hexadecimal characters are "0"-"9" and "A"-"F".

Check all the values, and click the **Apply** button to save your WEP settings. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

### (B) WPA ( Wi-Fi Protected Access ) Setting WEP Pre-Shared Key

1. From the "Security Mode" drop-down menu, select "WPA Pre-Shared Key"
2. For "WPA Algorithms", Select "TKIP" (Temporal Key Integrity Protocol) or "AES" (Advanced Encryption Standard). This setting will have to be identical on the clients that you set up.
3. Enter your pre-shared key. This can be letters, numbers, or symbols. This same key must be used on all of the clients that you set up.
4. Click "Apply" to finish. You must now set all clients to match these settings.



The Access Point supports 3 different types of security settings. There are: WPA Pre-Shared Key, WPA RADIUS, and WEP. Please see the help tab for more details on the different types of security settings.

**Security Mode:** WPA Pre-Shared Key

**WPA Algorithms:** TKIP

**WPA Shared Key:**

**Group Key Renewal:** 300 seconds

Apply Cancel Help

### Setting WPA RADIUS

If your network uses a radius server to distribute keys to the clients, use this setting.

1. From the "Security Mode" drop-down menu, select "WPA RADIUS".
2. For "WPA Algorithms", Select "TKIP" (Temporal Key Integrity Protocol) or "AES" (Advanced Encryption Standard). This setting will have to be identical on the clients that you set up.
3. Enter the IP address of the radius server into the "Radius Server Address" fields
4. Enter Server Port into "RADIUS Server Port"
5. Enter the radius key into the "Radius Share Secret" field.
6. Enter the key renewal time into "Group Key Renewal" field. Default is 300 seconds.
7. Click "Apply" to finish. You must now set all clients to match these settings.

**ENCRYPTION**

The Access Point supports 3 different types of security settings. There are: WPA Pre-Shared Key, WPA RADIUS, and WEP. Please see the help tab for more details on the different types of security settings.

Security Mode:

WPA Algorithms:

RADIUS Server Address:  .  .  .

RADIUS Server Port:

RADIUS Shared Secret:

Group Key Renewal:  seconds

### Security

The Security screen allows you to change the Router's security settings. You should change the factory default password, which is **admin**, to your own as soon as possible. All users who try to access the Router's web-based utility or Setup Wizard will be prompted for the Router's password.

**SECURITY**

Be sure to change the default password for your Router in order to avoid any security risk. You can also enable the DMZ feature here for your network server.

Router Password:  (Enter New Password)  
 (Re-enter to Confirm)

VPN Pass-Through:  IPsec  L2TP  PPTP

Web Filters:  Proxy  Java  ActiveX  Cookies

DMZ:  DMZ Host IP Address:  .  .  .

Block WAN Request:

**Router Password** The new Password must not exceed 32 characters in length and must not include any spaces. Enter the new Password in the second field to confirm it.

**VPN Pass-Through** Virtual Private Networking (VPN) is typically used for work-related networking. For VPN tunnels, the Router supports IPsec Pass-Through, L2TP Pass-Through, and PPTP Pass-Through.

**IPsec** - Internet Protocol Security (IPsec) is a suite of protocols used to implement secure exchange of packets at the IP layer. To allow IPsec tunnels to pass through the Router, IPsec Pass-Through is enabled by default.

To disable IPsec Pass-Through, uncheck the box next to IPsec.

**L2TP** - Layer Two Tunneling Protocol is an extension of the Point-to-Point Tunneling Protocol



(PPTP) used by to enable the operation of a virtual private network (VPN) over the Internet.

**PPTP** - Point-to-Point Tunneling Protocol is the method used to enable VPN sessions to a Windows NT 4.0 or 2000 server. To allow PPTP tunnels to pass through the Router, PPTP Pass-Through is enabled by default. To disable PPTP Pass-Through, uncheck the box next to PPTP.

**Web Filters** Using the Web Filters feature, you may enable up to four specific filtering methods.

**Proxy** - Use of WAN proxy servers may compromise the Router's security. Denying Proxy will disable access to any WAN proxy servers. To enable proxy filtering, click the **Proxy** box.

**Java** - Java is a programming language for websites. If you deny Java, you run the risk of not having access to Internet sites created using this programming language. To enable Java filtering, click the **Java** box.

**ActiveX** - ActiveX is a programming language for websites. If you deny ActiveX, you run the risk of not having access to Internet sites created using this programming language. To enable ActiveX filtering, click the **ActiveX** box.

**Cookies** - A cookie is data stored on your PC and used by Internet sites when you interact with them. To enable cookie filtering, click the **Cookies** box.

**DMZ** The DMZ hosting feature allows one local user to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing. DMZ hosting forwards all the ports at the same time to one PC. The Port Forwarding feature is more secure because it only opens the ports you want to have opened, while DMZ hosting opens all the ports of one computer, exposing the computer so the Internet can see it.

Any PC whose port is being forwarded must have its DHCP client function disabled and should have a new static IP address assigned to it because its IP address may change when using the DHCP function.

1. To expose one PC, select **Enable**.
2. Enter the computer's IP address in the DMZ Host IP Address field.
3. Click the **Apply** button.

**Block WAN Request** By enabling the Block WAN Request feature, you can prevent your network from being "pinged," or detected, by other Internet users. The Block WAN Request feature also reinforces your network security by hiding your network ports. Both functions of the Block WAN Request feature make it more difficult for outside users to work their way into your network. This feature is enabled by default. Select **Disable** to disable this feature.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

### System

The System screen, lets you control a variety of the Router's general features, from restoring factory defaults to enabling its remote management capability.

**DHCP** Allows you to configure the settings for the Router's Dynamic Host Configuration Protocol



(DHCP) server function. The Router can be used as a DHCP server for your network. A DHCP server automatically assigns an IP address to each computer on your network.

If you choose to enable the Router's DHCP server option, you must configure all of your network PCs to connect to a DHCP server (the Router), and make sure there is no other DHCP server on your network.

**DHCP Server** DHCP is enabled by factory default. If you already have a DHCP server on your network, or you don't want a DHCP server, then click the **Disable** radio button (no other DHCP features will be available).

**Starting IP Address** Enter a value for the DHCP server to start with when issuing IP addresses. Because the Router's default IP address is **192.168.1.1**, the Starting IP Address must be 192.168.1.2 or greater, but smaller than 192.168.1.253. The default Starting IP Address is **192.168.1.100**.

**Maximum Number of DHCP Users** (Optional) Enter the maximum number of PCs that you want the DHCP server to assign IP addresses to. This number cannot be greater than 253. The default is **50**.

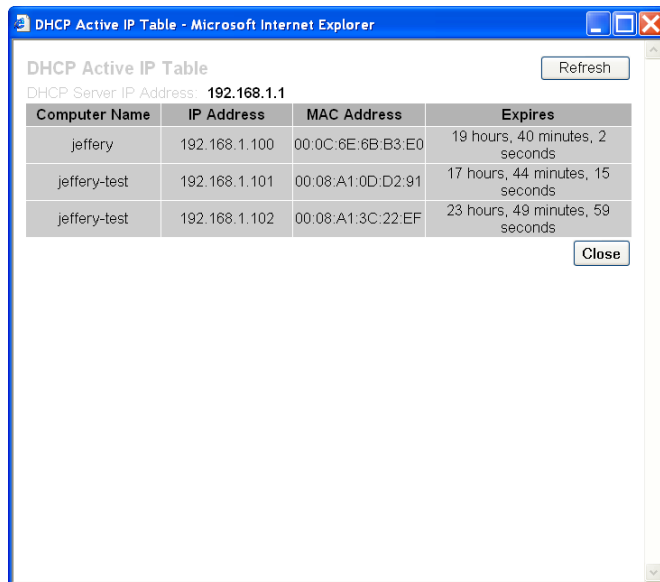
**Client Lease Time** The Client Lease Time is the amount of time a network user will be allowed connection to the Router with their current dynamic IP address. Enter the amount of time, in minutes, that the user will be "leased" this dynamic IP address. After the time is up, the user will be automatically assigned a new dynamic IP address. The default is **0** minutes, which means one day.

**Static DNS 1-3** The Domain Name System (DNS) is how the Internet translates domain or website names into Internet addresses or URLs. Your ISP will provide you with at least one DNS Server IP Address. If you wish to use another, type that IP Address in one of these fields. You can type up to three DNS Server IP Addresses here. The Router will use these for quicker access to functioning DNS servers.

**WINS** The Windows Internet Naming Service (WINS) manages each PC's interaction with the Internet. If you use a WINS server, enter that server's IP Address here. Otherwise, leave this blank.

**Currently Assigned: DHCP Clients Table** Click the **DHCP Clients Table** button to view the list of PCs that are given IP addresses by the Router. For each PC, the list shows the Client Hostname, IP Address, MAC Address, and the amount of DHCP client lease time left. Click the **Refresh** button to display the most current information.





DHCP Active IP Table - Microsoft Internet Explorer

DHCP Server IP Address: 192.168.1.1

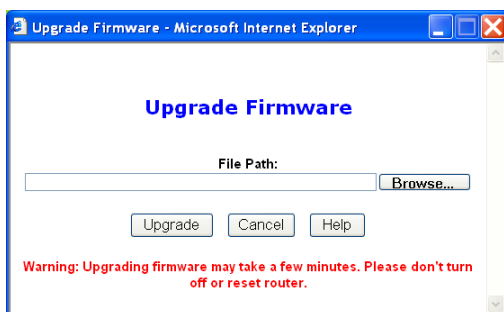
Computer Name	IP Address	MAC Address	Expires
jeffery	192.168.1.100	00:0C:6E:6B:B3:E0	19 hours, 40 minutes, 2 seconds
jeffery-test	192.168.1.101	00:08:A1:0D:D2:91	17 hours, 44 minutes, 15 seconds
jeffery-test	192.168.1.102	00:08:A1:3C:22:EF	23 hours, 49 minutes, 59 seconds

**Restore Factory Defaults** Click the **Yes** button to reset all configuration settings to their default values, and then click the **Apply** button. Any settings you have saved will be lost when the default settings are restored. This feature is disabled by default.

**Firmware Upgrade** New firmware versions are posted at [www.cnet.com.tw](http://www.cnet.com.tw) and can be downloaded for free. If the Router already works well, there's no need to download a newer firmware version, unless that version has a new feature that you want to use. (To learn about any new firmware with new features, visit <http://www.cnet.com.tw>)

To upgrade the Router's firmware:

1. Download the firmware upgrade file from [www.cnet.com.tw](http://www.cnet.com.tw) , and extract the file using a file archive utility such as WinZip.
2. Click the **Upgrade** button.
3. On the Upgrade Firmware screen click the Browse button to find the firmware upgrade file you extracted.



4. Double-click the firmware upgrade file you extracted.
5. Click the **Upgrade** button, and follow the on-screen instructions. **Remote Management** This feature allows you to manage your Router from a remote location, via the Internet. To disable this feature, keep the default setting,

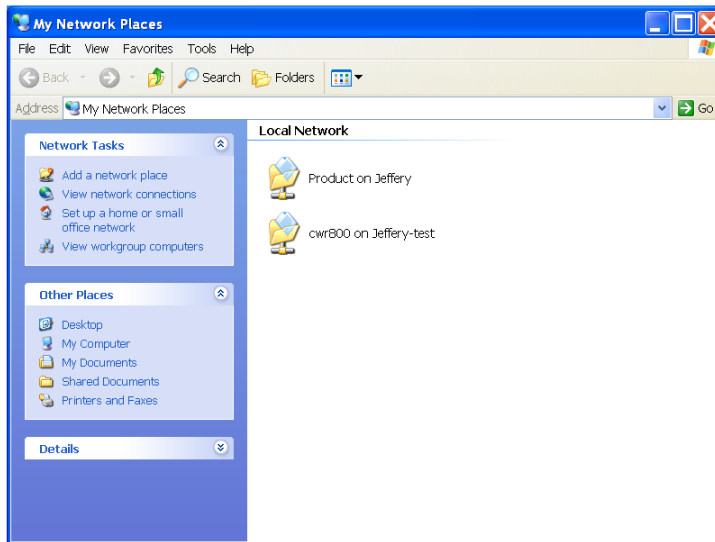


**Important:** When you are upgrading the firmware, do NOT turn off the Router, and do NOT press the Reset button.

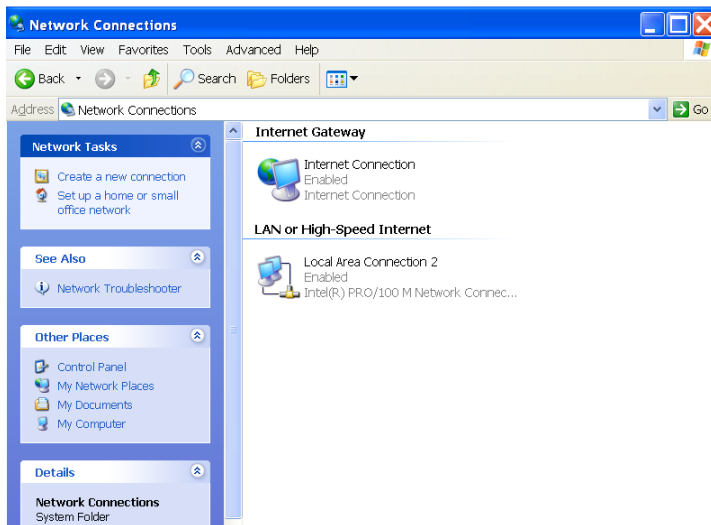
**UPnP** This Router support UPnP ( Universal Plug and Play). A Router Internet Connection icon should be visible on the Notification Area of any MS Windows XP machine on the LAN side.If you want to watch what application to use in this computer, select Enable to enable it.

For example You use MSN Message in your computer:

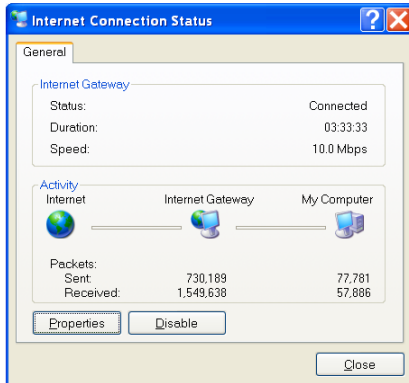
1. Double click " My Network Places"



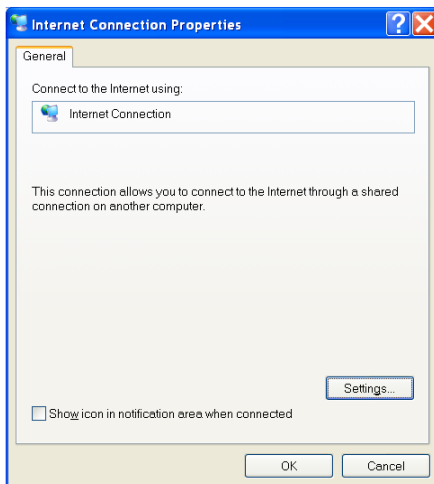
2. Click " View network connections". You will see the following page. The Internet Gateway is CNet Smart Wireless-G Router.



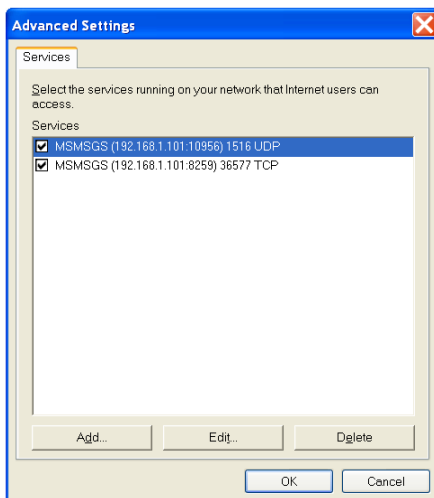
3. Double click " Internet Connection " icon, you will see the following page



4. Click "Properties". You will see the following page.



5. Click "Setting"



**Multicast Pass-Through** IP Multicasting occurs when a single data transmission is sent to multiple recipients at the same time. Using the Multicast Pass-Through feature, the Router allows IP multicast packets to be forwarded to the appropriate computers. Keep the default setting, **Enable**, to support the feature, or select **Disable** to disable it.

**Remote Management** This feature allows you to manage your Router from a remote location, via the Internet. To disable this feature, keep the default setting, **Disable**. To enable this feature, select **Enable**, and use the specified port (default is **8080**) on your PC to remotely manage the Router. You must also change the Router's default password to one of your own, if you haven't already. A unique password will increase security.

To remotely manage the Router, enter **http://xxx.xxx.xxx.xxx:8080** (the x's represent the Router's Internet IP address, and 8080 represents the specified port) in your web browser's *Address* field. You will be asked for the Router's password. After successfully entering the password, you will be able to access the Router's web-based utility.



**Note:** If the Remote Management feature is enabled, anyone who knows the Router's Internet IP address and password will be able to alter the Router's settings.

**MTU** MTU is the Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Keep the default setting, **Auto**, to have the Router select the best MTU for your Internet connection. To specify a MTU size, select **Manual**, and enter the value desired (default is **1400**). You should leave this value in the 1200 to 1500 range.

**Traffic Log** The Router can keep logs of all traffic for your Internet connection. To disable the Log function, keep the default setting, **Disable**. To monitor traffic between the network and the Internet, select **Enable**.

To keep a permanent record of activity logs as a file on your PC's hard drive, Logviewer software must be used. This software is downloadable from the website, [www.nobrand.com](http://www.nobrand.com). In the *Send Log to* field, enter the fixed IP address of the PC running the Logviewer software. The Router will send updated logs to that PC.

Temporary logs can be accessed by clicking either the **Incoming Access Log** or **Outgoing Access Log** button.

The Incoming Access Log gives you a log of all the incoming Internet traffic, displaying the Source IP address and Destination Port Number of the Router for each activity. Click the **Refresh** button to update the logs. Click the **Close** button to return to the System screen.

Source IP	Destination Port Number
140.137.9.221	2038
140.137.9.221	2056
163.13.127.80	2058
210.66.36.236	2093
210.66.36.236	2103
210.209.13.97	2147
210.209.13.97	2140
163.13.127.80	2287
163.13.127.80	2327

The Outgoing Access Log gives you a log of all outgoing Internet traffic. For each activity, it displays the LAN IP address, the Destination URL or IP address of the Internet site accessed, as well as the Service/Port Number used. Click the **Refresh** button to update the logs. Click the **Close** button to return to the System screen.

LAN IP	Destination URL/IP	Service/Port Number
192.168.1.100	65.54.226.247	443
192.168.1.100	207.46.68.27	80
192.168.1.100	64.4.12.200	7001
192.168.1.100	64.4.12.201	9
192.168.1.100	65.54.194.118	80
192.168.1.100	165.193.72.190	80
192.168.1.100	163.13.127.80	2002
192.168.1.100	163.13.127.80	1453
192.168.1.100	210.66.36.236	88
192.168.1.100	210.209.13.97	80
192.168.1.100	163.13.127.80	1503
192.168.1.100	163.13.127.80	1504
192.168.1.100	163.13.127.80	1505
192.168.1.100	192.72.53.7	110
192.168.1.100	140.130.175.184	80
192.168.1.100	210.59.230.130	80

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

Miscellaneous: When you click "System Reboot" button, the Router will reboot immediately

### Status



The Status screen displays the Router's current status and configuration. All information is read-only. It will update and display automatically every 10 seconds.

**Firmware Version** The version number of the firmware currently installed is displayed here.

**Current Time** The current date and time are displayed here.

**Host Name** The Host Name is the name of the Router. This entry is necessary for some ISPs.

**Domain Name** The Domain Name is the name of the Router's domain. This entry is necessary for some ISPs.

### LAN

**MAC Address** The MAC Address of the LAN interface is displayed here.

**IP Address and Subnet Mask** The current IP Address and Subnet Mask of the Router, as seen by users on your local area network (LAN), are displayed here.

**DHCP Server** The status of the Router's DHCP server function is displayed here.

### Wireless

**MAC Address** The MAC Address of the wireless interface is displayed here.

**Mode** The Mode of the wireless network is displayed here.

**SSID** The SSID of the wireless network is displayed here.

**Channel** The Channel of the wireless network is displayed here.

**Encryption Function** The status of the WEP encryption is displayed here.

### WAN

**MAC Address** The MAC Address of the Internet interface is displayed here.

**Configuration Type** The type of Internet connection is displayed here.

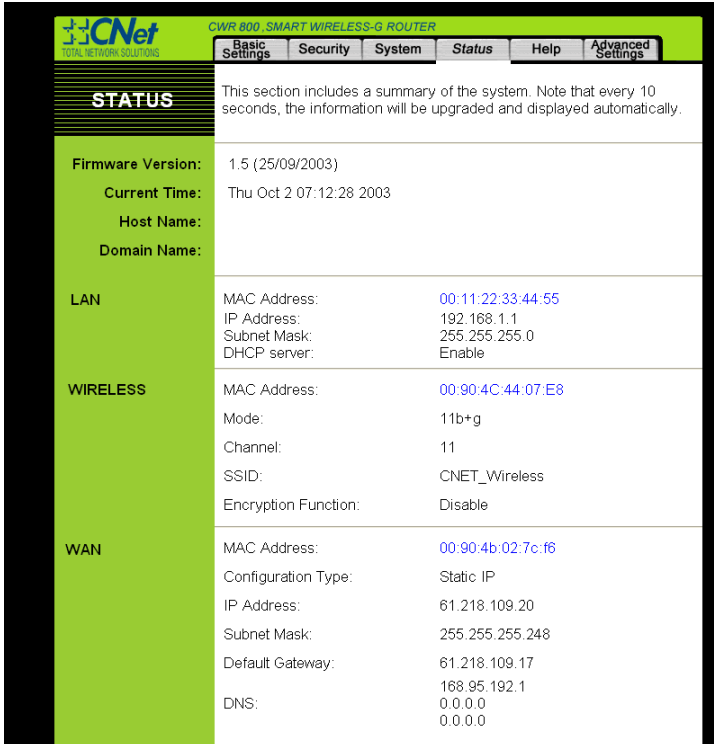
**IP Address, Subnet Mask, and Default Gateway** The Router's IP Address, Subnet Mask, and Default Gateway Address, as seen by external users on the Internet, are displayed here.

**DNS** The DNS (Domain Name System) IP Addresses currently used by the Router are shown here. Multiple DNS IP settings are common. In most cases, the first available DNS entry is used.

**WAN IP Release** Click the **WAN IP Release** button to delete the Router's current Internet IP address.

**WAN IP Renew** Click the **WAN IP Renew** button to get a new Internet IP address for the Router.

To update the Router's status information, click the **Refresh** button. To get more information about the features, click the **Help** button.



**CWR 800, SMART WIRELESS-G ROUTER**

Basic Settings | Security | System | Status | Help | Advanced Settings

**STATUS**

This section includes a summary of the system. Note that every 10 seconds, the information will be upgraded and displayed automatically.

**Firmware Version:** 1.5 (25/09/2003)  
**Current Time:** Thu Oct 2 07:12:28 2003  
**Host Name:**  
**Domain Name:**

**LAN**

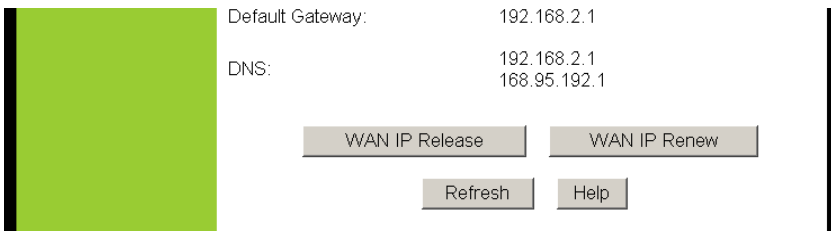
MAC Address: 00:11:22:33:44:55  
 IP Address: 192.168.1.1  
 Subnet Mask: 255.255.255.0  
 DHCP server: Enable

**WIRELESS**

MAC Address: 00:90:4C:44:07:E8  
 Mode: 11b+g  
 Channel: 11  
 SSID: CNET\_Wireless  
 Encryption Function: Disable

**WAN**

MAC Address: 00:90:4b:02:7c:f6  
 Configuration Type: Static IP  
 IP Address: 61.218.109.20  
 Subnet Mask: 255.255.255.248  
 Default Gateway: 61.218.109.17  
 DNS: 168.95.192.1  
 0.0.0.0  
 0.0.0.0



Default Gateway: 192.168.2.1

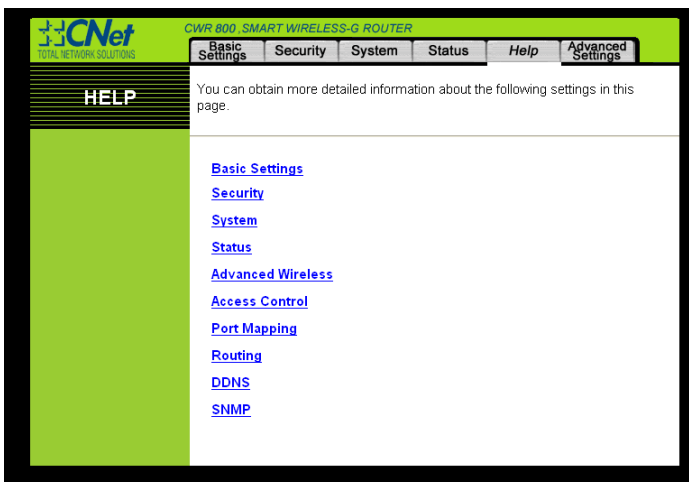
DNS: 192.168.2.1  
 168.95.192.1

WAN IP Release    WAN IP Renew

Refresh    Help

### Help

The Help screen offers links to all of the Router's technical support resources and the application that upgrades the Router's firmware. For additional information about each screen of the web-based utility, click the appropriate link on the left-hand side of the Help screen.



**CWR 800, SMART WIRELESS-G ROUTER**

Basic Settings | Security | System | Status | Help | Advanced Settings

**HELP**

You can obtain more detailed information about the following settings in this page.

- [Basic Settings](#)
- [Security](#)
- [System](#)
- [Status](#)
- [Advanced Wireless](#)
- [Access Control](#)
- [Port Mapping](#)
- [Routing](#)
- [DDNS](#)
- [SNMP](#)

### Advanced Tabs

The following instructions are for advanced users or users whose setup needs require special configuration. When you click the **Advanced Settings** tab, you will be able to set up these features. There are six additional tabs available.

**Advanced Wireless** - Allows you to customize data transmission and 802.1x settings for your wireless network(s).

**Access Control** - Enables you to set up filters that block specific internal users from Internet access.

**Port Forwarding** - Lets you set up public services on your network, such as an ftp server, mail server, or web server.

**Routing** - Enables you to configure the routing mode of the Router.

**Dynamic DNS** - Allows you to enable the Dynamic Domain Name System (DDNS) feature, so a fixed domain name can be assigned to a dynamic Internet IP address.

**SNMP**- Allows you to customize the Simple Network Management Protocol (SNMP) settings. SNMP is a popular network monitoring and management protocol.

If you need to access the basic configuration tabs, click the **Basic Settings** tab.

### Advanced Wireless

The **Advanced Wireless** screen, allows you to customize data transmission settings. In most cases, the advanced wireless settings on this screen should remain at their default values.

The screenshot shows the 'Advanced Wireless' configuration page for the CWR-800 SMART WIRELESS-G ROUTER. The page has a green sidebar with the 'ADVANCED WIRELESS' title. The main content area has a tabbed interface with 'Advanced Wireless' selected. A warning message states: 'The Advanced Wireless settings should be left at their default values. Please note that inappropriate configuration may cause poor network performance.' Below this, the 'Wireless Association Control' is set to 'Enable'. There are two radio buttons: 'Prevent PCs listed from accessing the wireless network.' (unselected) and 'Permit PCs listed to access the wireless network.' (selected). An 'Edit MAC Filter List' button is present. The 'Authentication Type' is set to 'Auto' (Default: Auto). The 'Transmit Rate' is set to 'Auto' (Default: Auto). The 'Beacon Interval' is set to '100' (Default: 100, Milliseconds, Range: 1 - 65535). The 'DTIM Interval' is set to '1' (Default: 3, Range: 1 - 255). The 'RTS Threshold' is set to '2347' (Default: 2346, Range: 0 - 2346). The 'Fragmentation Threshold' is set to '2346' (Default: 2346, Range: 256 - 2346). The 'Operating Mode' is set to 'Access Point'. There are four input fields for 'MAC Address(es)'. At the bottom, there are 'Apply', 'Cancel', and 'Help' buttons.

**Wireless Association Control** The feature allows you to control which wireless-equipped PCs may or may not communicate with the Router-depending on their MAC addresses. To disable the



feature, keep the default setting, **Disable**. To set up a filter, click **Enable**, and follow these instructions:

1. If you want to block specific wireless-equipped PCs from communicating with the Router, then keep the default setting, **Prevent PCs listed from accessing the wireless network**. If you want to allow specific wireless equipped PCs to communicate with the Router, then click the radio button next to **Permit only PCs listed to access the wireless network**.
2. Click the **Edit MAC Filter List** button. Enter the appropriate MAC addresses into the MAC fields. For each MAC field, the MAC address should be entered in this format xxxxxxxxxxxx (the x's represent the actual characters of the MAC address).

MAC Address Filter List  
Enter MAC Address in (xxxxxxxxxx) format

MAC Addresses 1~20

MAC 01:	00:00:00:00:00:00	MAC 11:	00:00:00:00:00:00
MAC 02:	00:00:00:00:00:00	MAC 12:	00:00:00:00:00:00
MAC 03:	00:00:00:00:00:00	MAC 13:	00:00:00:00:00:00
MAC 04:	00:00:00:00:00:00	MAC 14:	00:00:00:00:00:00
MAC 05:	00:00:00:00:00:00	MAC 15:	00:00:00:00:00:00
MAC 06:	00:00:00:00:00:00	MAC 16:	00:00:00:00:00:00
MAC 07:	00:00:00:00:00:00	MAC 17:	00:00:00:00:00:00
MAC 08:	00:00:00:00:00:00	MAC 18:	00:00:00:00:00:00
MAC 09:	00:00:00:00:00:00	MAC 19:	00:00:00:00:00:00
MAC 10:	00:00:00:00:00:00	MAC 20:	00:00:00:00:00:00

Apply Cancel Close

3. Click the **Apply** button to save your changes. Click the **Cancel** button to cancel your unsaved changes. Click the **Close** button to return to the Advanced Wireless screen without saving changes.
4. On the MAC Address Filter List screen, select the **MAC Address 1~20** or **MAC Address 21~40** to view a list of the wireless-equipped PCs.

**Authentication Type** The default is set to Auto, which allows either Open System or Shared Key authentication to be used. For Open System authentication, the sender and the recipient do NOT use a WEP key for authentication. For Shared Key authentication, the sender and recipient use a WEP key for authentication. If you want to use only Shared Key authentication, then select Shared Key.

**Transmission Rate** The default setting is Auto. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from a range of transmission speeds, or keep the default setting, Auto, to have the Router automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the Router and a wireless client.

**Beacon Interval** The default value is 100. Enter a value between 1 and 65,535 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the Router to synchronize the wireless network.

**DTIM Interval** The default value is 3. This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the Router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast messages.

**RTS Threshold** This value should remain at its default setting of 2347. The range is 0-2347 bytes. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. The Router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.

**Fragmentation Threshold** This value should remain at its default setting of 2346. The range is

256-2346 bytes. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting the Fragmentation Threshold too low may result in poor network performance. Only minor modifications of this value are recommended.

**Operation Mode** CNet Smart Wireless-G Router support three operation mode: Access Point/Bridge/Repeater. If you want to use Bridge and Repeater Mode, please fill the MAC Address in the MAC Address(es).

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

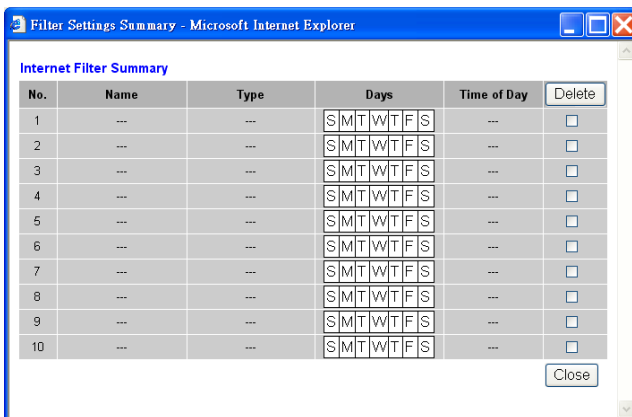
### Access Control

The Access Control tab, allows you to block or allow specific kinds of Internet usage. You can set up Internet Access Policies for specific PCs and set up filters by using network port numbers.

**Internet Access Policy Multiple Filters** can be saved as Internet Access Policies. When you wish to edit one, select the number of the Policy from the drop-down menu. The tab will change to reflect the settings of this Policy. If you wish to delete this Policy, click the **Delete** button.

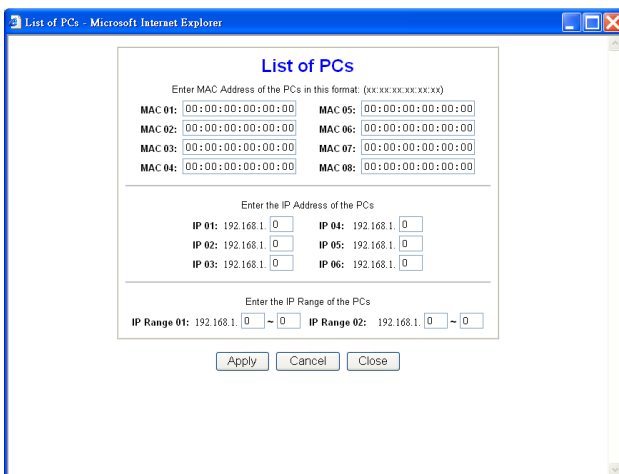
To see a summary of all Policies, click the **Summary** button.

The summaries are listed on this screen, with their name and settings. To delete any summary from this screen, check the empty box beneath **Delete** and then click the **Delete** button. To return to the Filters tab, click the **Close** button.

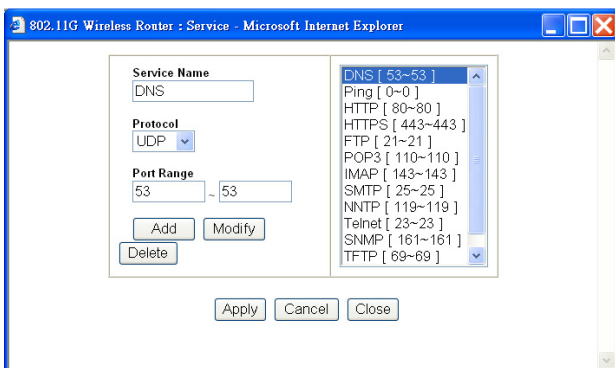


**Enter Policy Name** Policies are created from the fields presented here. To create a policy:

1. Enter a Policy Name in the field provided.
2. Click the **Edit List of PCs** button. This will open the List of PCs screen. From this screen, you can enter the IP address or MAC address of any PC to which this policy will apply. You can even enter ranges of PCs by IP address. Click the **Apply** button to save your settings, the **Cancel** button to undo any changes, and the **Close** button to return to the Filters tab.



3. Select if you wish to Disable or Enable Internet access for those PCs you listed on the List of PCs screen by clicking the radio button beside either option.
4. You can filter access to various services accessed over the Internet, such as FTP or Telnet, by selecting a service from the pull-down menus next to **Block Services**. If a service isn't listed, you can click the Add Service button to open the Service screen, and add a service to the list. You will need to enter a Service name, as well as the Protocol and Port Range used by the service.



5. By selecting the appropriate setting next to Days and Time, choose when Internet access will be filtered.

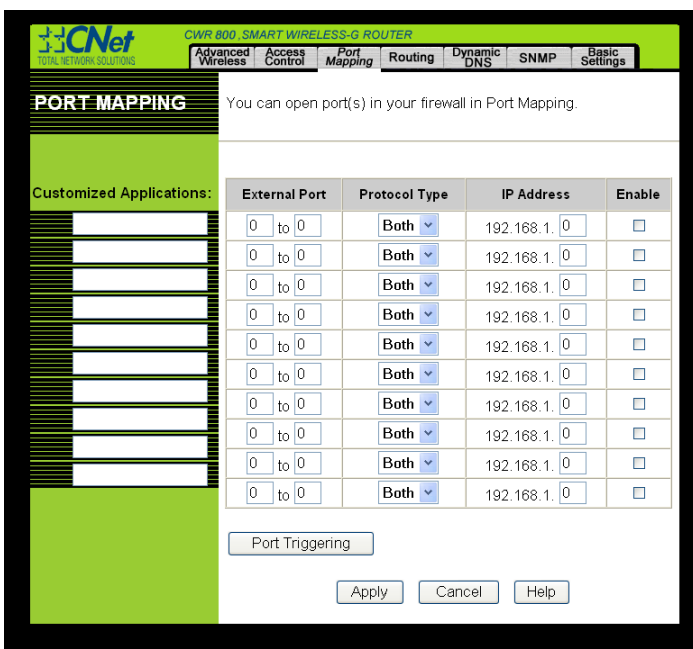
6. Lastly, click the **Apply** button to save and activate this policy.

Internet Access can also be filtered by URL Address, the address entered to access Internet sites, by entering the address in one of the **Website Blocking by URL Address** fields. If you do not know the URL Address, filtering can be done by Keyword by entering a keyword in one of the **Website Blocking by Keyword** fields.

To apply any of the settings you change on this page, click the **Apply** button. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

### Port Mapping

The Port Mapping screen, sets up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. Some Internet applications may not require any forwarding.)





**Note:** Any PC whose port is being forwarded should have its DHCP client function disabled and a new static IP address assigned to it because its IP address may change when using the DHCP function.

**Customized Applications** In the field provided, enter the name you wish to give each application.

**External Port** For each application, enter the number of the External Ports (the port numbers seen by users on the Internet) in the appropriate fields. (To find out the port range, check your application's documentation.) If there is only one External Port, enter its number in both External Port fields.

**Protocol Type** You can select the forward data transmissions that use the Both or TCP or UDP protocol in the drop-down menu.

**IP Address** For each application, enter the **IP Address** of the PC running the specific application.

**Enable** Click the **Enable** checkbox to enable port forwarding for the relevant application.

The following table shows the typical port forwarding settings for common Internet applications.

Application	External Port	TCP Protocol	UDP Protocol
FTP	21	√	
Telnet	23	√	
SMTP	25	√	
DNS	53		√
TFTP	69		√
Finger	79	√	
HTTP	80	√	
POP3	110	√	
NNTP	119	√	
SNMP	161		√

To apply any of the settings you change on this page, click the **Apply** button. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

**Port Triggering** Port Triggering is used for special Internet applications whose outgoing ports differ from the incoming ports. For this feature, the Router will watch outgoing data for specific port numbers. The Router will remember the IP address of the computer that sends a transmission requesting data, so that when the requested data returns through the Router, the data is pulled back to the proper computer by way of IP address and port mapping rules. Click the **Port Triggering** button to set up triggered ports, and follow these instructions:

1. Enter the Application Name of the trigger

	Application Name	Trigger Port Range	Incoming Port Range		
01:		0	~ 0	0	~ 0
02:		0	~ 0	0	~ 0
03:		0	~ 0	0	~ 0
04:		0	~ 0	0	~ 0
05:		0	~ 0	0	~ 0
06:		0	~ 0	0	~ 0
07:		0	~ 0	0	~ 0
08:		0	~ 0	0	~ 0
09:		0	~ 0	0	~ 0
10:		0	~ 0	0	~ 0

2. Enter the Outgoing Port Range used by the application. Check with the Internet application for the port number(s) needed.
3. Enter the Incoming Port Range used by the application. Check with the Internet application for the port number(s) needed.
4. Click the **Apply** button to save your changes. Click the **Cancel** button to cancel your unsaved changes. Click the **Close** button to return to the Port Forwarding screen.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

### Routing

On the *Routing* screen, you can set the routing mode of the Router. *Gateway* mode is recommended for most users.



**Note:** The *Routing* screen and available features will vary depending on which mode you select.

To set up routing:

1. Choose the correct working mode. Select **Gateway** if the Router is hosting your network's connection to the Internet (recommended for most users). Select **Router** if the Router exists on a network with other routers.



**Note:** If you have more than one router on your network, you should select **Router** for the working mode.

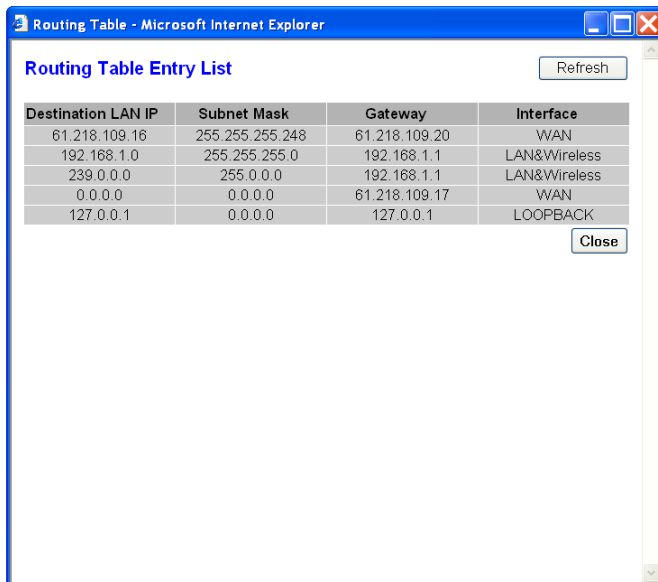
2. If you selected the Gateway mode, click the **Apply** button. If you selected the Router mode, proceed to step 3.
3. For Dynamic Routing, the default is **Disable**. The Dynamic Routing feature enables the Router to automatically adjust to physical changes in the network's layout and exchange routing tables with the other router(s). The Router determines the network packets' route based on the fewest number of hops between the source and the destination. Select **Enable** to enable the Dynamic Routing feature for data transmissions.
4. To set up a static route between the Router and another network, select a number from the Static Routing drop-down list. (A static route is a predetermined pathway that network information must travel to reach a specific host or network.)
5. Enter the following data:
  - **Enter Route Name** - Enter a name for the Route here, using a maximum of 25 alphanumeric characters.
  - **Destination LAN IP** - The Destination LAN IP is the address of the remote network or host to which you want to assign a static route.
  - **Subnet Mask** - The Subnet Mask determines which portion of a Destination LAN IP address is the network portion, and which portion is the host portion.
  - **Gateway** - This is the IP address of the gateway device that allows for contact between the Router and the remote network or host.
  - **Interface** - This interface tells you whether the Destination IP Address is on the **LAN & Wireless** (internal wired and wireless networks), the **WAN** (Internet), or **Loopback** (a dummy network in which one PC acts like a network-necessary for certain software programs).
6. To cancel your changes, click the **Cancel** button. To save your changes, click the **Apply** button. To get more information about the features, click the **Help** button.

To delete a static route entry:

1. From the *Static Routing* drop-down list, select the entry number of the static route.
2. Click the **Delete This Entry** button.
3. To cancel a deletion, click the **Cancel** button. To save a deletion, click the **Apply** button. To get more information about the features, click the **Help** button.

**Show Routing Table** Click the **Show Routing Table** button to view all of the valid dynamic and static route entries in use. The Destination LAN IP address, Subnet Mask, Gateway, and Interface information are displayed for each entry. Click the **Refresh** button to display the most up-to-date data.





Destination LAN IP	Subnet Mask	Gateway	Interface
61.218.109.16	255.255.255.248	61.218.109.20	WAN
192.168.1.0	255.255.255.0	192.168.1.1	LAN&Wireless
239.0.0.0	255.0.0.0	192.168.1.1	LAN&Wireless
0.0.0.0	0.0.0.0	61.218.109.17	WAN
127.0.0.1	0.0.0.0	127.0.0.1	LOOPBACK

### Dynamic DNS

The Router offers a Dynamic Domain Name System (DDNS) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server, or other server behind the Router. Before you can use this feature, you need to sign up for DDNS service at [www.dyndns.org](http://www.dyndns.org), or [www.TZO.com](http://www.TZO.com), DDNS service providers.



**DDNS Service** To enable DDNS Service, select **Enable** and follow these instructions:

1. Sign up for a DDNS service and write down your User Name, Password, and Host Name information.
2. On the *DDNS* screen, select **Enable**.
3. Complete the *User Name*, *Password*, and *Host Name* fields.
4. To save your new settings, click the **Apply** button. To cancel your changes, click the **Cancel** button.

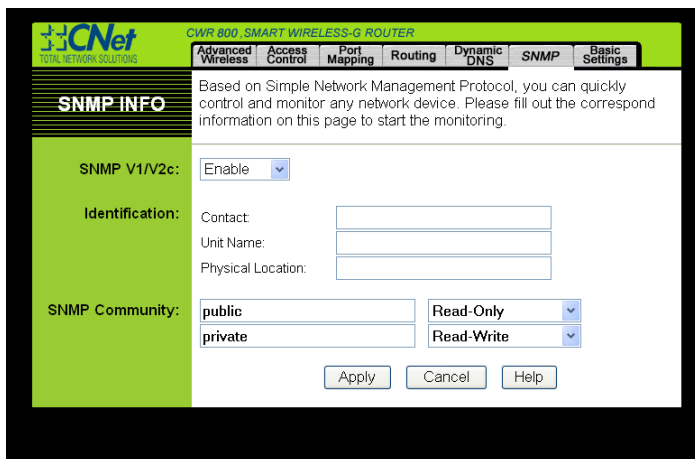
**Internet IP Address** The Router's current Internet IP Address is displayed here.

**Status** The status of the DDNS service connection is displayed here.

To save your changes on this page, click the **Apply** button. To cancel any unsaved changes on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

### SNMP

The SNMP tab, allows you to customize the Simple Network Management Protocol (SNMP) settings. SNMP is a popular network monitoring and management protocol.



The Identification settings let you designate the Contact, Device Name, and Location information for the Router. The SNMP Community settings allow names to be assigned to any SNMP communities that have been set up in the network. You can define two different SNMP communities, with the default names being Public and Private.

**SNMPv2.** To enable the SNMP support feature, select **Enable**.

**Identification.** In the *Contact* field, enter contact information for the Router. In the *Device Name* field, enter the name of the Router. In the *Location* field, specify the area or location where the Router resides.

**SNMP Community.** You may change the name from its default, Public. Enter a new name in the *Public* field. Then configure the community's access as either Read-Only or Read-Write. You may change the name from its default, Private. Enter a new name in the *Private* field. Then configure the community's access as either Read-Only or Read-Write.

When you've completed making any changes on this tab, click the **Apply** button to save those changes or **Cancel** to cancel your changes. For more information on this tab, you can click the **Help** button.



## Appendix A: Specifications

<b>Product Name</b>	Smart Wireless-G Router
<b>Model Name</b>	CWR 800
<b>Standards</b>	IEEE 802.3, IEEE 802.3u, IEEE 802.11b, IEEE 802.11g
<b>Channels</b>	10-13 (France, Jordan) 1-11 (U.S.) 1-13 (Elsewhere Worldwide) 1-13,14 (Japan)
<b>Ports</b>	Internet: One 10/100 RJ45 Port for Cable/DSL Modem LAN: Four 10/100 RJ-45 Switched Ports Power: One Power Port
<b>Cabling Type</b>	CAT 5 Ethernet Cabling or Better
<b>Data Rate</b>	Up to 54Mbps (Wireless) 10/100 Mbps (Ethernet)
<b>LED Indicators</b>	Power/Stat: Green Wireless LAN: Green WAN: Green LAN: Link/ Act Green
<b>Modulation</b>	802.11b: CCK, DQPSK, DBPSK 802.11g: OFDM
<b>Network Protocols</b>	TCP/IP, NetBEUI, IPX/SPX
<b>Operating Humidity</b>	10% to 85% Non-Condensing
<b>Operating Temp.</b>	0°C to 40°C
<b>Power</b>	External, 5V DC, 2.5A
<b>Storage Humidity</b>	5% to 90% Non-Condensing
<b>Storage Temp.</b>	-20°C to 70°C
<b>Transmit Power</b>	+20dBm
<b>Dimensions</b>	220 mm x 142.5 mm x 35 mm (8.66 x 5.61 x 1.38 inches)
<b>Certifications</b>	Safety: UL 1950, EN 60950; CSA 22.7 #950, IEC 60950 Emissions: EN 55022 Class B, EN 55024, FCC Part 15, Class B, ICES-003 Class B, VCCI Class B, CNS 13438 Class A Environmental: EN 60068 (IEC 68) UL Listed CSA certified

CNet declares that CWR-800 ( FCC ID: MXF-R921030G ) is limited in CH1~CH11 by specified firmware controlled in USA.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

### **IMPORTANT NOTE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.