Air Live®
Powered by OvisLink Corp.

IP-1000R v2

Broadband Router

User's Manual

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Table of Contents

1 Introduction

1.1 Overview

The IP-1000R v2 is a 4-port Ethernet Broadband Router. It enables users quickly and easily sharing a single high-speed Internet connection as well as sharing information and resources such as files and printers with a built-in 4-port 10/100 Switch.

This manual is designed to help you connect the IP-1000R v2 to a high-speed Internet connection and 4 wired-Ethernet PCs connect to a built-in 4-port 10/100 Switch.

1.2 Firmware Upgrade and Tech Support

If you encounter a technical issue that can not be resolved by information on this guide, we recommend that you visit our comprehensive website support at www.airlive.com. The tech support FAQ are frequently updated with latest information.

In addition, you might find new firmware that either increase software functions or provide bug fixes for IP-1000R v2. You can reach our on-line support center at the following link: http://www.airlive.com/support/support_2.jsp

Since 2009, AirLive has added the “Newsletter Instant Support System” on our website. AirLive Newsletter subscribers receives instant email notifications when there are new download or tech support FAQ updates for their subscribed airlive models. To become an AirLive newsletter member, please visit: http://www.airlive.com/member/member_3.jsp

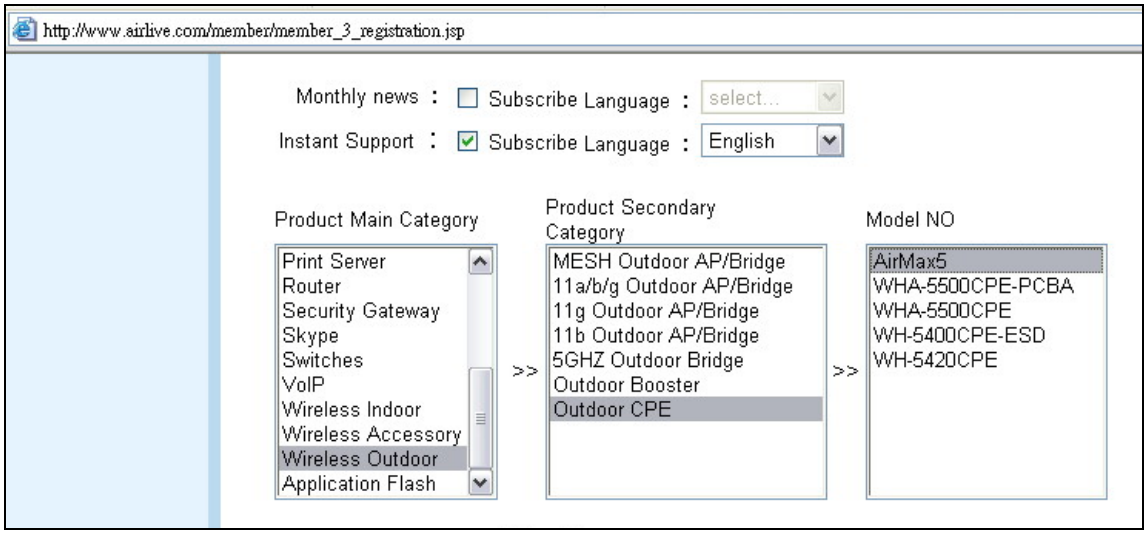


Figure: AirLive Newsletter Support System

1.3 Features

- High-speed data transfer rate
- Supports NAT (sharing one IP address with all LAN users)
- Supports PPPoE and PPTP protocol for Dial-Up ADSL
- Supports DHCP Server / Client
- Supports UPnP (Universal Plug and Play)
- Supports virtual server mapping
- Supports VPN PPTP and IPSec pass-through
- Supports packet filtering
- Simple Firewall protection
- Upgradeable firmware for future functions
- Easy setup via Web Browser

2 Installing the IP-1000R v2

2.1 Installation Requirements

- A computer with a wired network adapter properly installed
- Broadband Internet Connection
- Installed Cable or DSL Modem
- Web Brower: Internet Explorer (5.0 or higher)

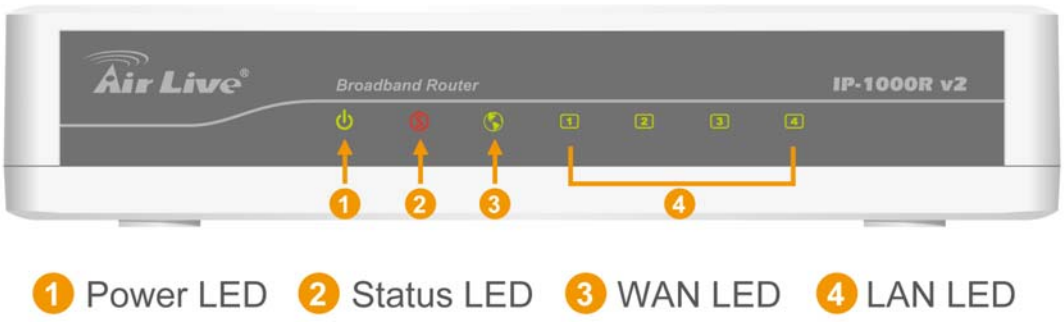
2.2 Package Content

The IP-1000R v2 package contains the following items:

- One IP-1000R v2 main unit
- One 5V 800mA DC power adapter
- User's Guide CD
- Quick Start Guide
- 1 x RJ-45 Ethernet Cable

2.3 Knowing your IP-1000R v2

Below are descriptions and diagrams of the product:



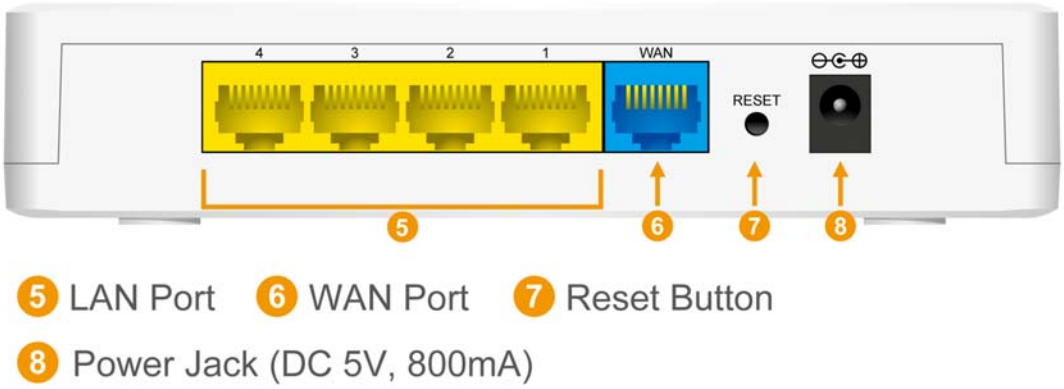
1 Power LED 2 Status LED 3 WAN LED 4 LAN LED

POWER
The LED lights up a solid green when the Router is powered on. Otherwise, it is off.

STATUS
The LED is flashing when the Router is successfully working. If the LED is either always on or off, the Router is not working properly.

WAN
The LED lights up a solid green when the WAN port is connected to a Cable/DSL Modem successfully. If the LED is flashing, the WAN port is sending or receiving data from the Cable/DSL modem.

LAN (Link/ACT)
The LED lights up a solid green when the port is connected to a 100Mbps Fast Ethernet device. If the LED is flashing, the port is sending or receiving data over the network.



WAN
One RJ-45 10/100Mbps Auto-MDIX WAN port for connecting to your Cable/DSL Modem

LAN (1-4)
Four RJ-45 10/100Mbps Auto-MDIX ports for connecting to Ethernet enabled computers.

RESET
Use a pin-shaped object to reset the Router to factory default settings. Resetting the Router will also reset the login password to the default.

Power
Connect one end of the included power adapter to the power port on the Router and the other end into a power outlet.

2.4 Hardware Connections

Connect the IP-1000R v2 Broadband Router
1. Connect one end of the included Ethernet cable to the WAN port on the IP-1000R v2 Broadband Router.

2. Connect the other end of the included Ethernet cable to the Ethernet port on the Cable or DSL modem.

3. Connect one end of another Ethernet cable to the Ethernet port on the computer and the other end of the Ethernet cable to any of the LAN ports on the Router. Since the IP-1000R

v2 Broadband Router has four LAN ports, you can connect up to four computers directly to the Router.

Check The Installation

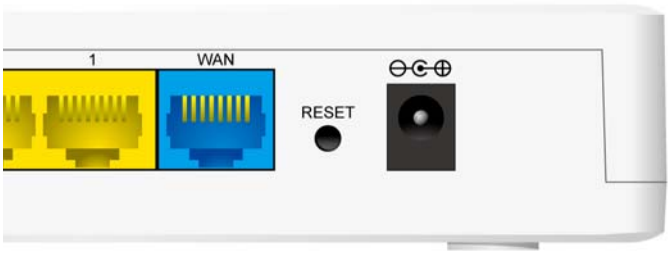
The LEDs on the IP-1000R v2 Broadband Router are clearly visible and the status of the traffic can be seen immediately:

1. Once the Router is connected to the Cable or DSL modem and the power is connected, the Power, System and WAN port LEDs on the IP-1000R v2 Broadband Router will light up.

2. If the LAN port is connected to the Ethernet port on the computer, the LAN port LED on the IP-1000R v2 Broadband Router will light up.

2.5 Restore Settings to Default

If you have forgotten your IP-1000R v2 IP address or password, you can restore your IP-1000R v2 to the default settings by pressing on the “reset button” for more than 5 seconds.



3 Configuring the IP-1000R v2

3.1 Important Information

The following information will help you to get start quickly. However, we recommend you to read through the entire manual before you start.

- The default IP address is: 192.168.1.1 Subnet Mask: 255.255.255.0
- The default user name is: admin
- The default password is: airlive

3.2 Prepare your PC

Accessing the Internet through the IP-1000R v2 Broadband Router, you have to properly configure the network settings of your computers to use the same IP subnet as the IP-1000R v2.

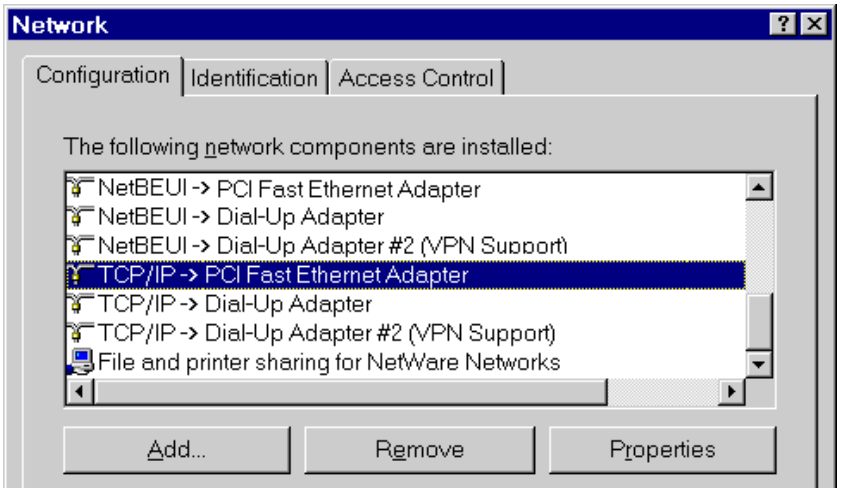
The default IP address of the IP-1000R v2 is **192.168.1.1**, and the default subnet mask is **255.255.255.0**. These addresses can be changed as needed, but the default values are used in this manual. If the network TCP/IP settings of your computer has not yet been configured, you can refer to Configuring PC Network TCP/IP Settings and configure it.

Note: Disable HTTP Proxy
In order to access and view the IP-1000R v2's configuration web pages, you need to verify that the "HTTP Proxy" feature of your web browser is disabled.

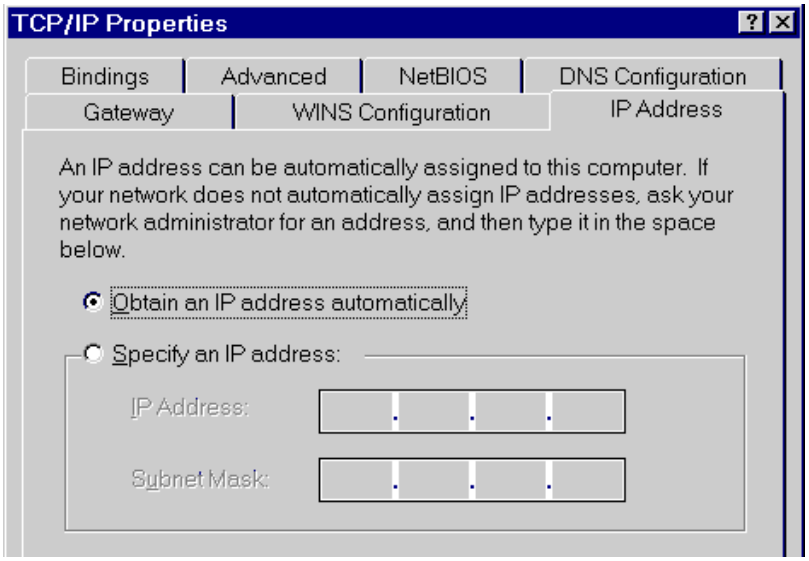
The network TCP/IP settings differ based on the computer's operating system (Win95/98/ME/NT/2000/XP/Vista); if you need information on how to configure a TCP/IP settings on a computer, refer to the following section.

3.2.1 Windows 95/98/ME

1. Select ***Control Panel - Network***. You should see a screen like the following:



2. Select the ***TCP/IP*** protocol for your network card.
3. Click on the ***Properties*** button. You should then see a screen like the following.



Ensure your TCP/IP settings are correct, as follows:

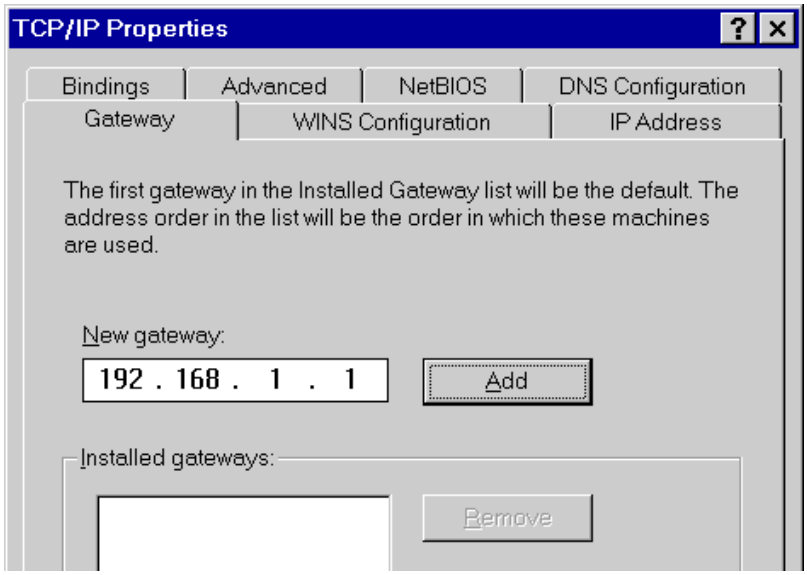
- **Using DHCP**

To use DHCP, select the radio button ***Obtain an IP Address automatically***. This is the default Windows setting, and it is recommended to use it. By default, the IP-1000R v2 will act as a DHCP Server.
Restart your PC to ensure it obtains an IP Address from the IP-1000R v2.

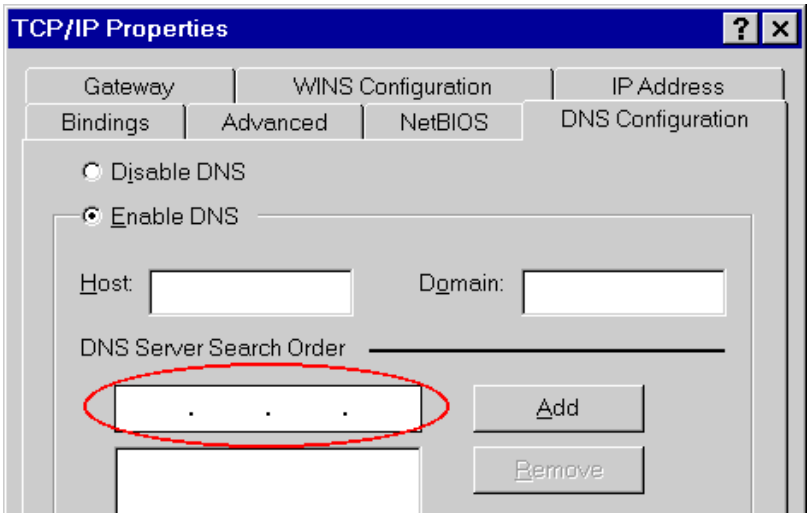
- **Using "Specify an IP Address"**

If your PC is already configured, check with your network administrator before making the following changes:

On the ***Gateway*** tab, enter the IP-1000R v2's IP address in the ***New Gateway*** field and click ***Add***, as shown below. Your LAN administrator can advise you of the IP Address they assigned to the IP-1000R v2.

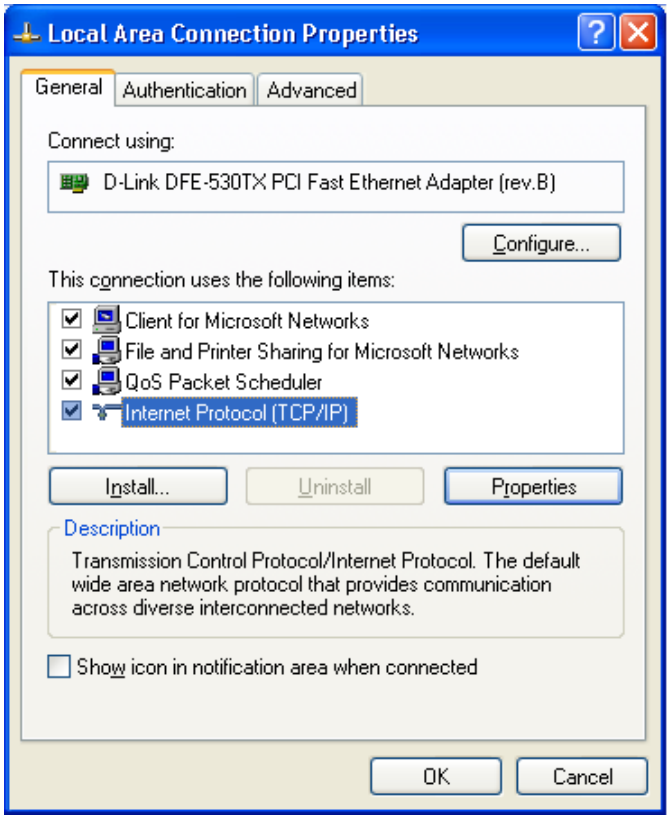


On the ***DNS Configuration*** tab, ensure ***Enable DNS*** is selected. If the ***DNS Server Search Order*** list is empty, enter the DNS address provided by your ISP in the fields beside the ***Add*** button, then click ***Add***.

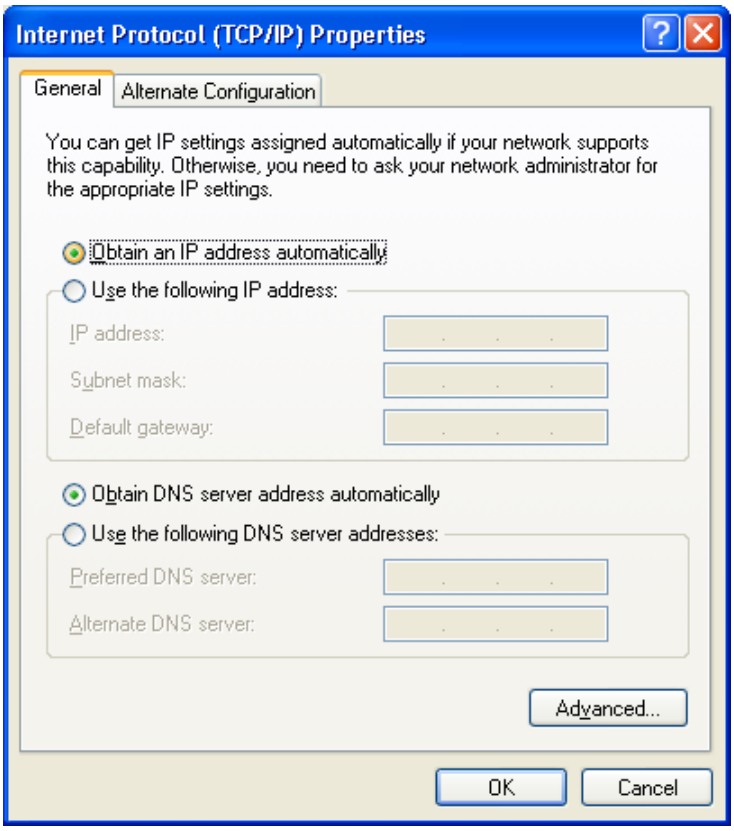


3.2.2 Windows XP/2000

1. Select Control Panel - Network Connection.
2. Right click the ***Local Area Connection*** and choose ***Properties***. You should see a screen like the following:



3. Select the ***TCP/IP*** protocol for your network card.
4. Click on the ***Properties*** button. You should then see a screen like the following.



5. Ensure your TCP/IP settings are correct.

■ **Using DHCP**

To use DHCP, select the radio button ***Obtain an IP Address automatically***. This is the default Windows setting, and it is recommended to use it. By default, the IP-1000R v2 will act as a DHCP Server.

■ **Using a fixed IP Address ("Use the following IP Address")**

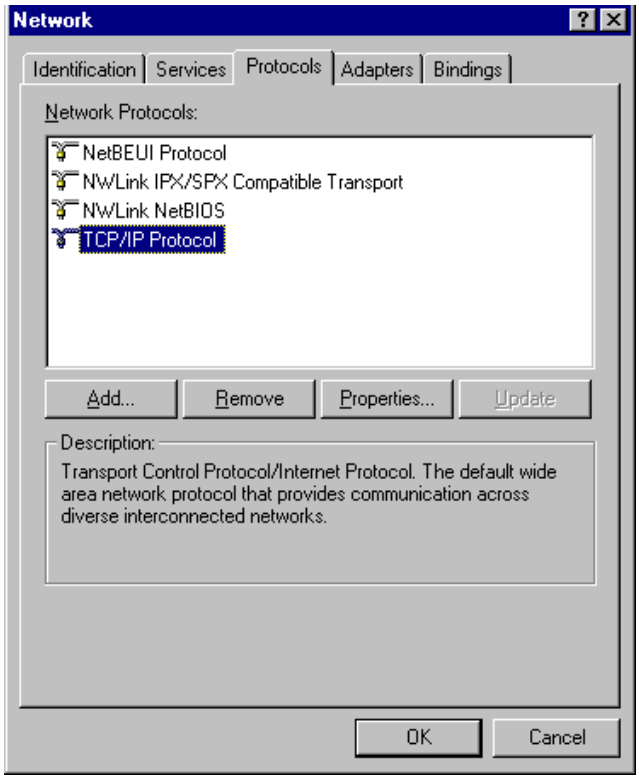
If your PC is already configured, check with your network administrator before making the following changes.

- In the ***Default Gateway*** field, enter the IP-1000R v2's IP address and click ***OK***. Your LAN administrator can advise you of the IP Address they assigned to the IP-1000R v2.

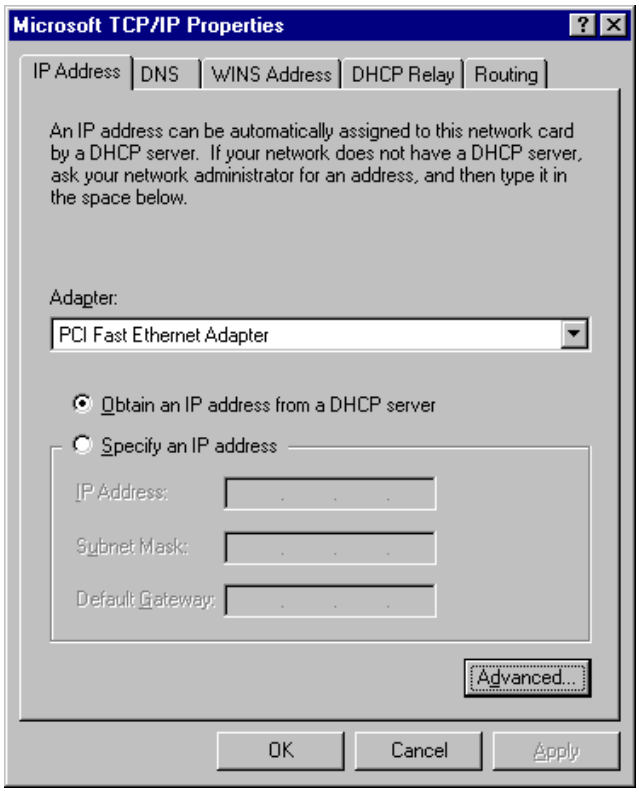
- If the ***DNS Server*** fields are empty, select ***Use the following DNS server addresses***, and enter the DNS address or addresses provided by your ISP, then click ***OK***.

3.2.3 Windows NT 4.0

1. Select ***Control Panel - Network***, and, on the ***Protocols*** tab, select the TCP/IP protocol, as shown below.



2. Click the ***Properties*** button to see a screen like the one below.



3. Select the network card for your LAN.
4. Select the appropriate radio button - ***Obtain an IP address from a DHCP Server*** or ***Specify an IP Address***, as explained below.

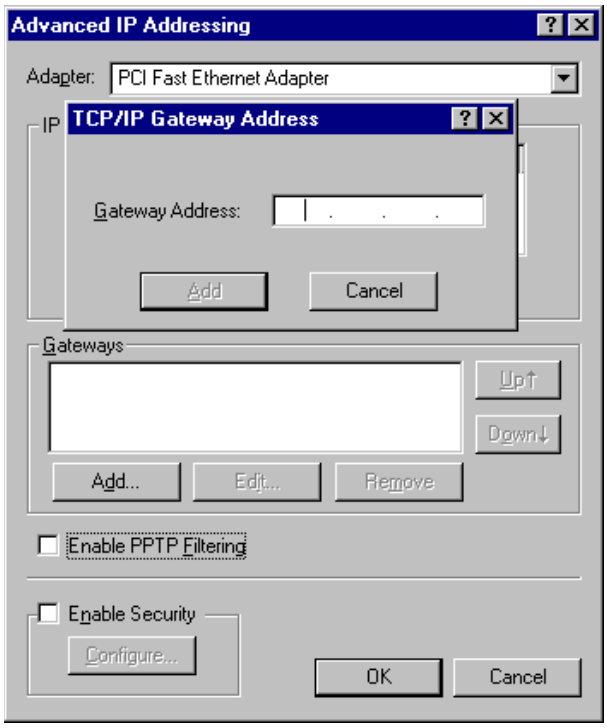
■ Obtain an IP address from a DHCP Server

This is the default Windows setting, and it is recommended to use it. By default, the IP-1000R v2 will act as a DHCP Server.
Restart your PC to ensure it obtains an IP Address from the IP-1000R v2.

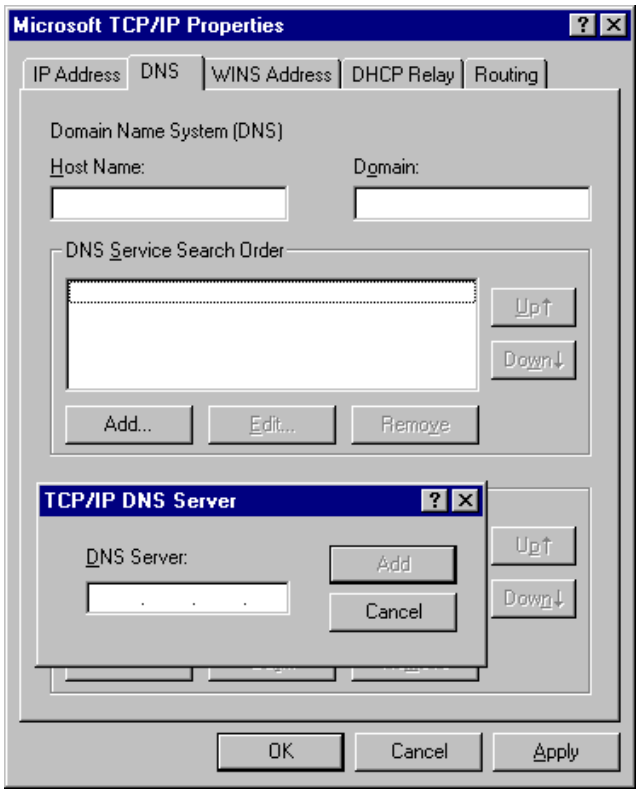
■ Specify an IP Address

If your PC is already configured, check with your network administrator before making the following changes.

5. The ***Default Gateway*** must be set to the IP address of the IP-1000R v2. To set this:
   - Click the ***Advanced*** button on the screen above.
   - On the following screen, click the ***Add*** button in the ***Gateways*** panel, and enter the IP-1000R v2's IP address, as shown in below.
   - If necessary, use the ***Up*** button to make the IP-1000R v2 the first entry in the ***Gateways*** list.



6. The DNS should be set to the address provided by your ISP, as follows:
   - Click the ***DNS*** tab.
   - On the DNS screen, shown below, click the ***Add*** button (under ***DNS Service Search Order***), and enter the DNS provided by your ISP.



3.2.4 Windows Vista

1. Click the "**Start"** button then right-click "**Network**" then click "**Properties**".

2. Under "**Tasks**" located on the left-hand side of the windows, click "**Manage network connections**".

3. Right-click "**Local Area Connection**" listed under "**LAN or High-Speed Internet**" then click "**Properties**".

4. Click "**Continue"** to open the "**Local Area Connection Properties"** windows.

5. Select "**Internet Protocol Version 4 (TCP/IPv4)",** then click "**Properties**" button.

6. Select "**Obtain an IP address automatically**" and "**Obtain DNS server address automatically"** in "**General**" tab.

7. Click "**OK**" button.

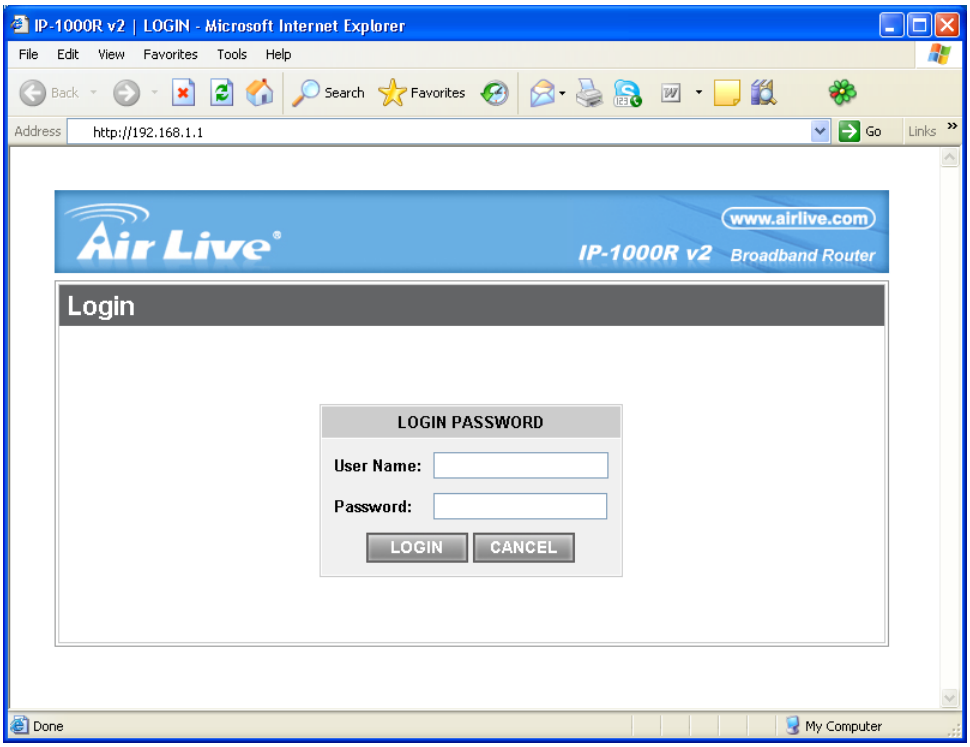
3.3 Management Interface

The IP-1000R v2 can be configured using the HTTP management interface:

- **Web Management (HTTP):** You can manage your IP-1000R 2 by simply typing its IP address in the web browser. We recommend using this interface for initial configurations. To begin, simply enter IP-1000R v2 IP address (default is 192.168.1.1) on the web browser. The default password is “airlive”.

If you are placing the RS-2500 behind router or firewall, you might need to open virtual server ports to RS-2500 on your firewall/router

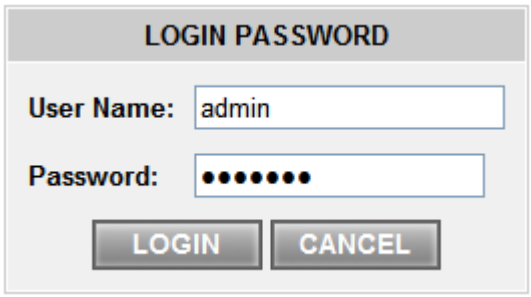
- **HTTP:** TCP Port 80



3.4 Startup and Login

Open your web browser and type in the IP address of the IP-1000R v2 into the Location (for Netscape) or Address (for IE) field and press "**Enter**". The default IP address of the IP-1000R v2 is **192.168.1.1.**

After the connection is established, a logon screen will pop up. To log in as an administrator, type in the user name "**admin**" and the password "**airlive**", then click the "**LOGIN"** button, the web-based management interface will appear.



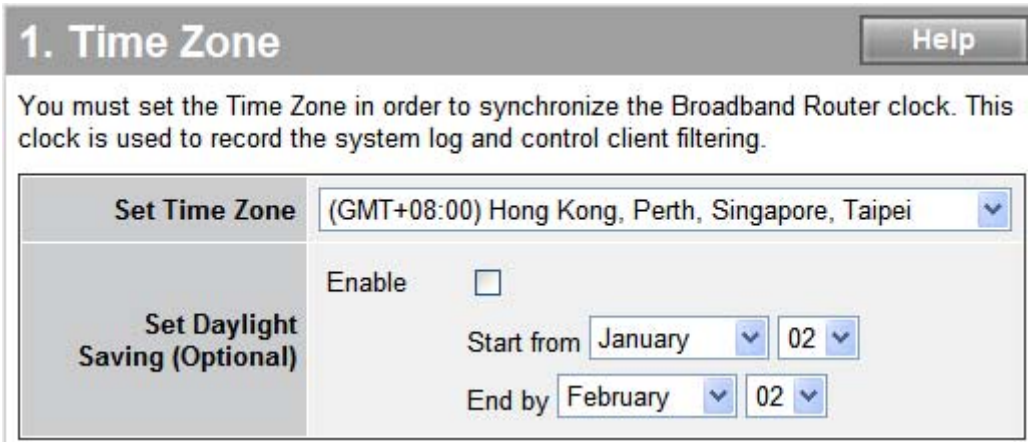
Two setup options appear: **Quick Setup** and **Advanced Setup**. It is recommended that you use **Quick Setup** if you are a beginner. It will lead you through the step-by-step configuration.

4 Quick Setup

On the main webpage, select "**Quick Setup**" to setup the **Time Zone** and the **WAN Type**.

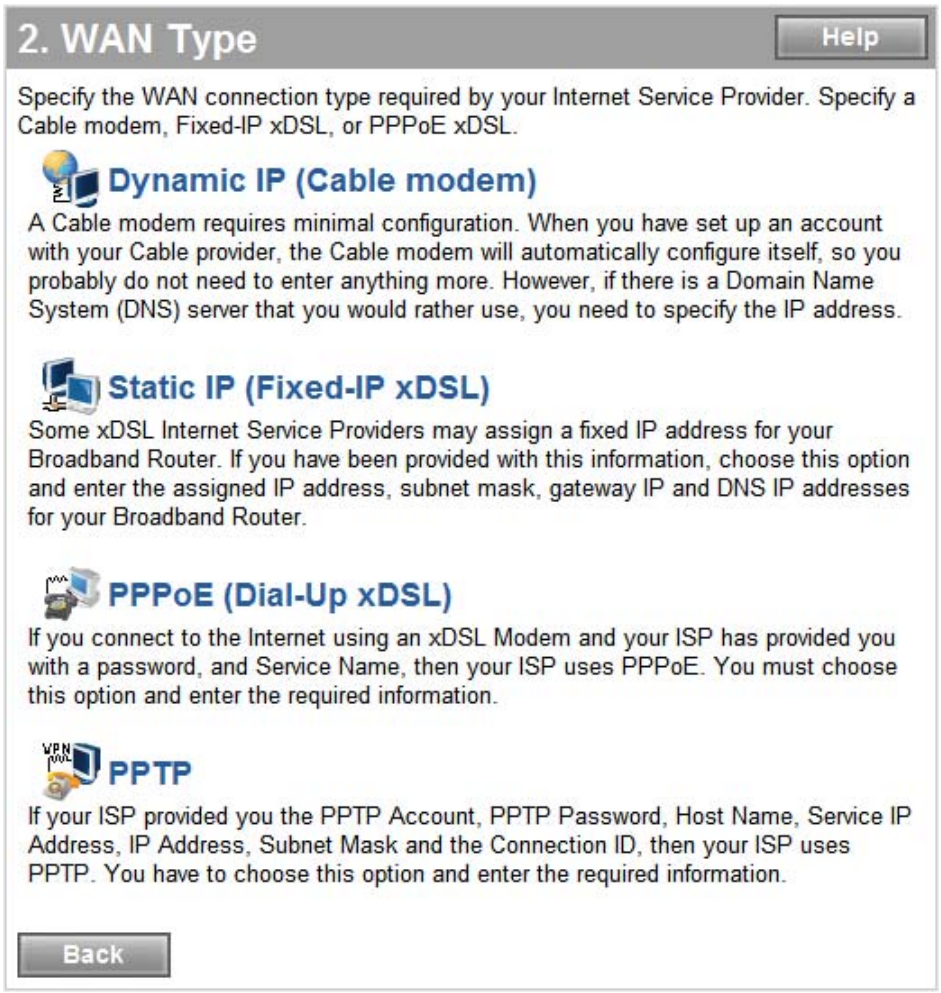
4.1 Time Zone

Select the appropriate time zone so your system clock can synchronize itself through the SNTP Server.



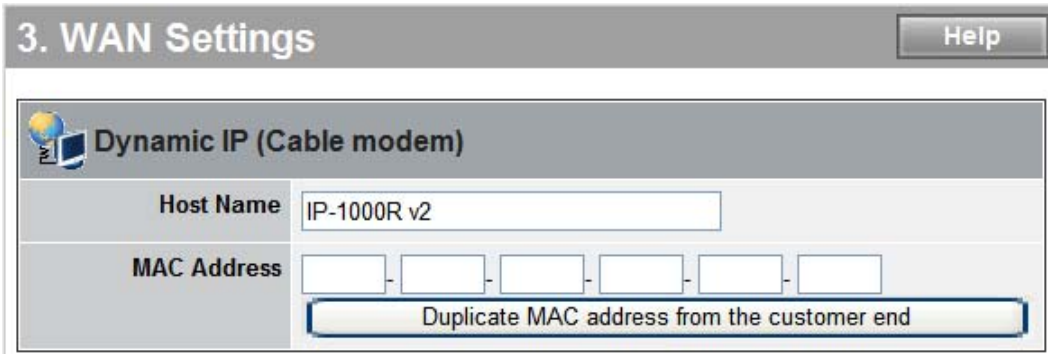
4.2 WAN Type

To select the WAN connection type, click **Dynamic IP (Cable Modem), Static IP (Fixed-IP), PPPoE (Dial-Up xDSL) or PPTP**.



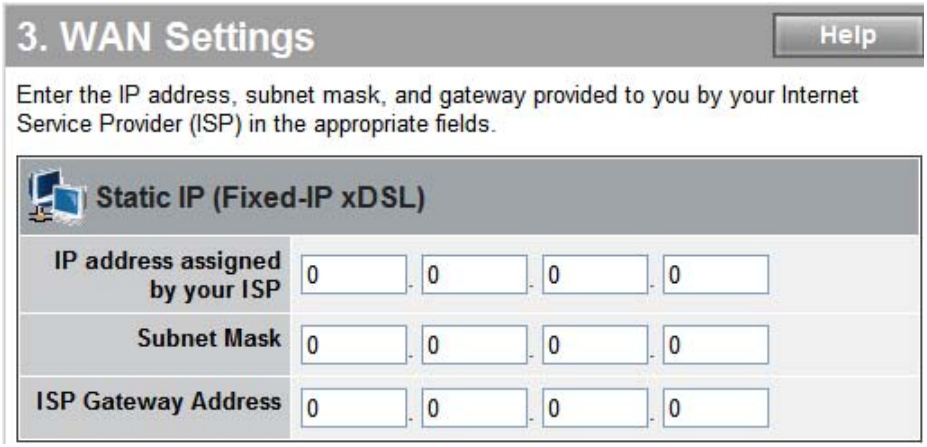
4.2.1 Dynamic IP (Cable Modem)

To connect to a Dynamic IP (Cable Modem) Broadband Internet connection with the IP-1000R v2 Broadband Router, check the Cable Modem with the related user's guide. The Cable Modem will automatically configure itself, and the IP-1000R v2 Broadband Router is configured to automatically assign IP addresses to each PC. If required by your ISP, input a host name and MAC address.



4.2.2 Static IP (Fixed-IP xDSL)

If your Internet Service Provider (ISP) has assigned you a fixed IP address, select this option. Enter the assigned IP address, subnet mask, and the gateway IP address for the IP-1000R v2 Broadband Router.

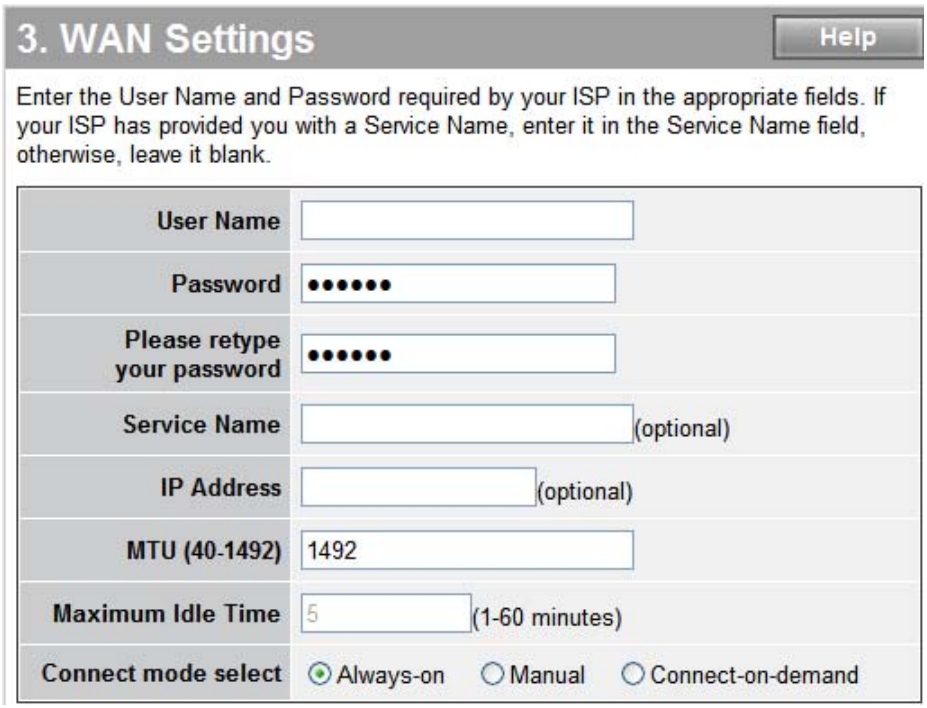


4.2.3 PPPoE (Dial-Up xDSL)

If your DSL Broadband Internet connection is PPPoE (Dial-Up xDSL), your ISP will provide a password and user name. Select this option, and enter the required information. If your ISP provides a Service Name, enter it in the Service Name field. Otherwise, leave it blank.

The Service Name and IP Address fields must be completed if provided by your ISP. If your ISP provides a Dynamic IP Address, you should skip these fields. The MTU feature specifies the maximum packet size permitted for network transmission. Enter the value desired; for most DSL Broadband Internet connection users, 1492 is recommended. By default, MTU is set at 1492. The Maximum Idle Time feature can control the Internet connection time if you want to reduce the connection fees charged by your ISP (default time=0, always connect).

Select Connect-on-demand for the Connect mode select feature to enable the IP-1000R v2 Broadband Router to connect to your ISP whenever an Internet connection is required.

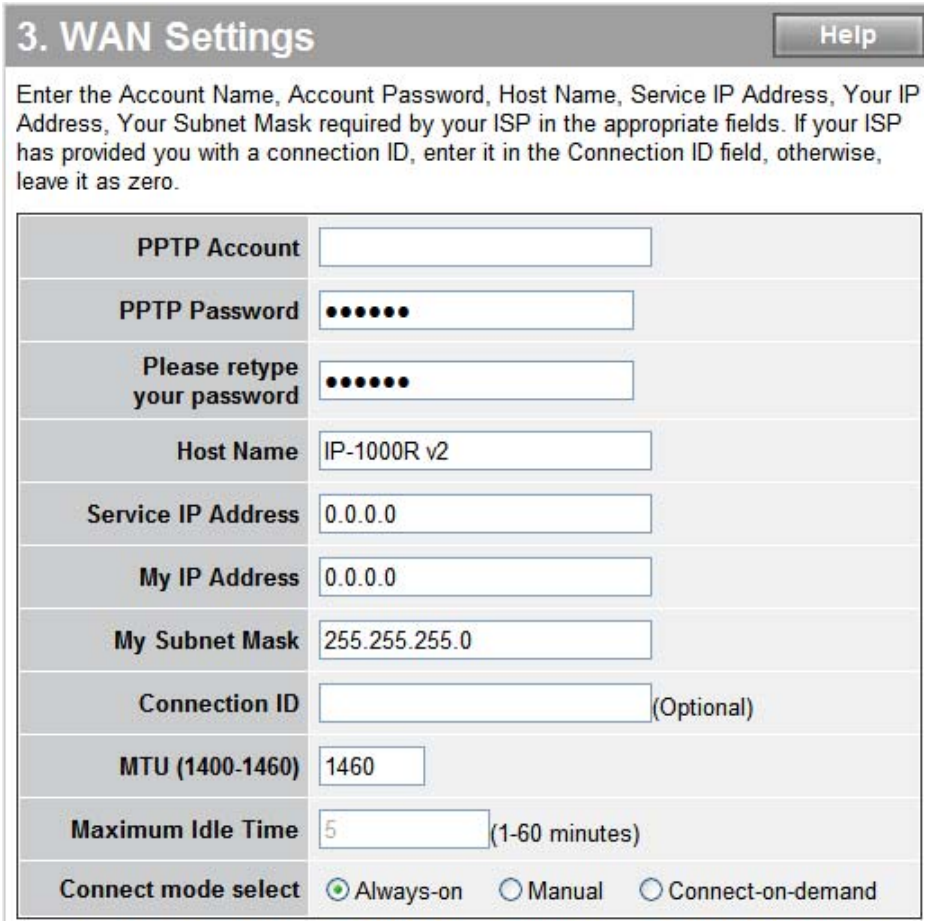


4.2.4 PPTP

If connecting to the Internet using a PPTP DSL Modem, enter the PPTP Account Name, PPTP Password, Host Name, Service IP Address, My IP Address, and My Subnet Mask in the appropriate fields provided by your ISP. If your ISP has provided you with a Connection ID, enter it in the Connection ID field. Otherwise, leave it blank.

The MTU feature specifies the maximum packet size permitted for network transmission. Enter the value desired; for most DSL Broadband Internet connection users, 1460 is recommended. By default, MTU is set at 1460. The Maximum Idle Time feature can control the Internet connection time (default time=0, always connect).

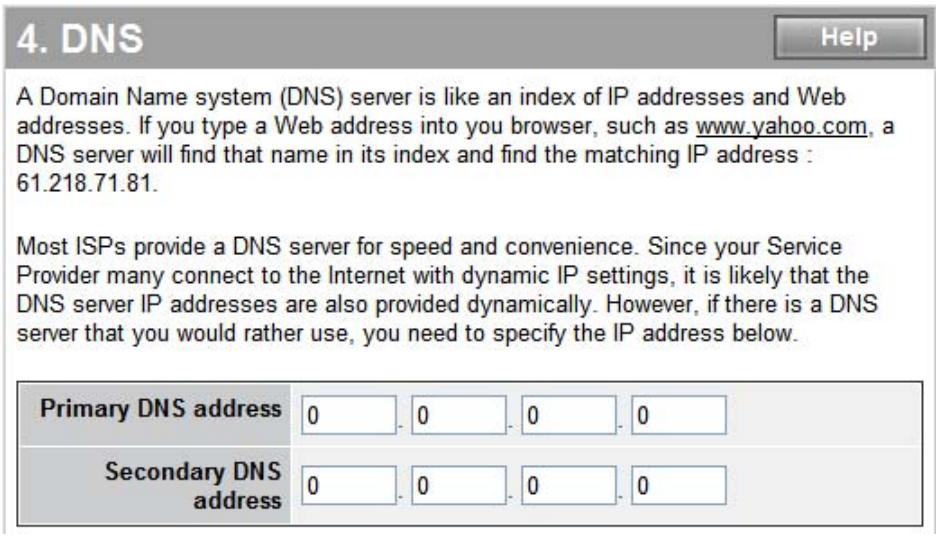
Select Connect-on-demand for the Connect mode select feature to enable the IP-1000R v2 Broadband Router to connect to your ISP whenever an Internet connection is required.



4.2.5 DNS

The Domain Name System (DNS) manages the translation of a domain name into an IP address, and vice versa that of an IP address into a domain name.

Your ISP should provide one or more DNS Server IP addresses, type those IP addresses in the Primary DNS address and Secondary DNS address fields, the IP-1000R v2 Broadband Router will utilize these simultaneously for quicker access to functioning DNS Servers.



5 System

The IP-1000R v2 Broadband Router supports advanced functions like System settings, WAN settings, LAN settings, NAT Settings, and Firewall settings.

This page includes all of the basic configuration tools for the IP-1000R v2 Broadband Router. Under "**System**" located on the left-hand of the windows, select that you want to configure.

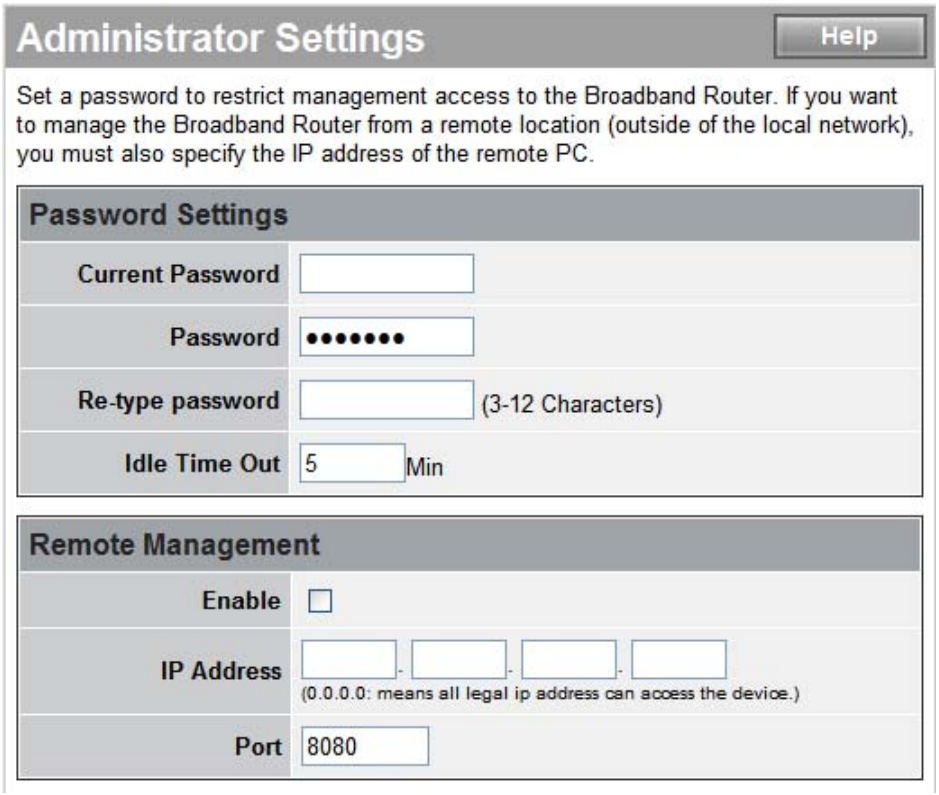
5.1 System Time

Connecting to a Simple Network Time Protocol (SNTP) server allows the IP-1000R v2 Broadband Router to synchronize the system clock to the global Internet time through the SNTP Server. The synchronized clock in the IP-1000R v2 Broadband Router is used to record the system log and control client filtering.

5.2 Administrator Settings

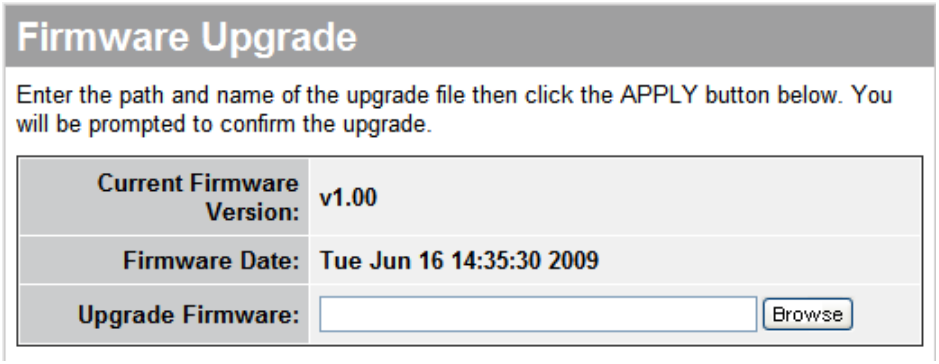
Password Settings: Set an Administrator password if you wish to restrict management access to the IP-1000R v2 Broadband Router.

Remote Management: To manage the IP-1000R v2 Broadband Router from a remote location (outside of the local network), you must specify the IP address of the remote computer. Leave the IP address as 0.0.0.0, to allow any IP address to access to the IP-1000R v2 Broadband Router.

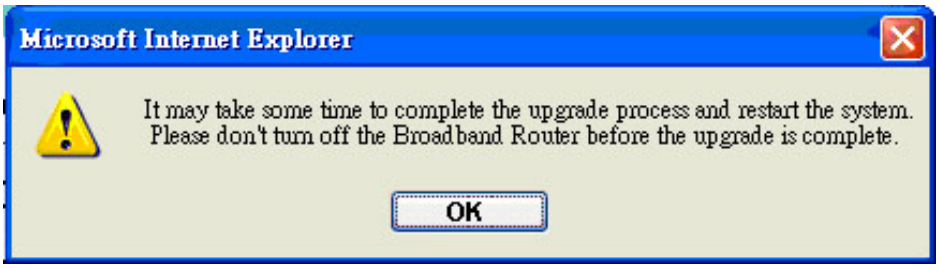


5.3 Firmware Upgrade

Upgrading firmware for the IP-1000R v2 Broadband Router improves functionality and performance. Specify the path and name of the upgrade file then click the “APPLY” button. You will be prompted to confirm the upgrade.



While upgrading the firmware, please wait after pressing the “APPLY” button, and follow the instructions on the screen; the System LED on the front panel will start blinking when the firmware has been upgraded successfully.



5.4 Configuration Tools

Use the "**Backup Settings**" tool to save the IP-1000R v2 Broadband Router current configuration to a file named "config.bin" on your PC. You can then use the "**Restore Settings**" tool to restore the saved configuration file back to the IP-1000R v2 Broadband Router that was set previously. Select "**Restore to Factory Default**" tool to force the IP-1000R v2 Broadband Router to reset and restore the original factory settings.

- **Restore Factory Default**

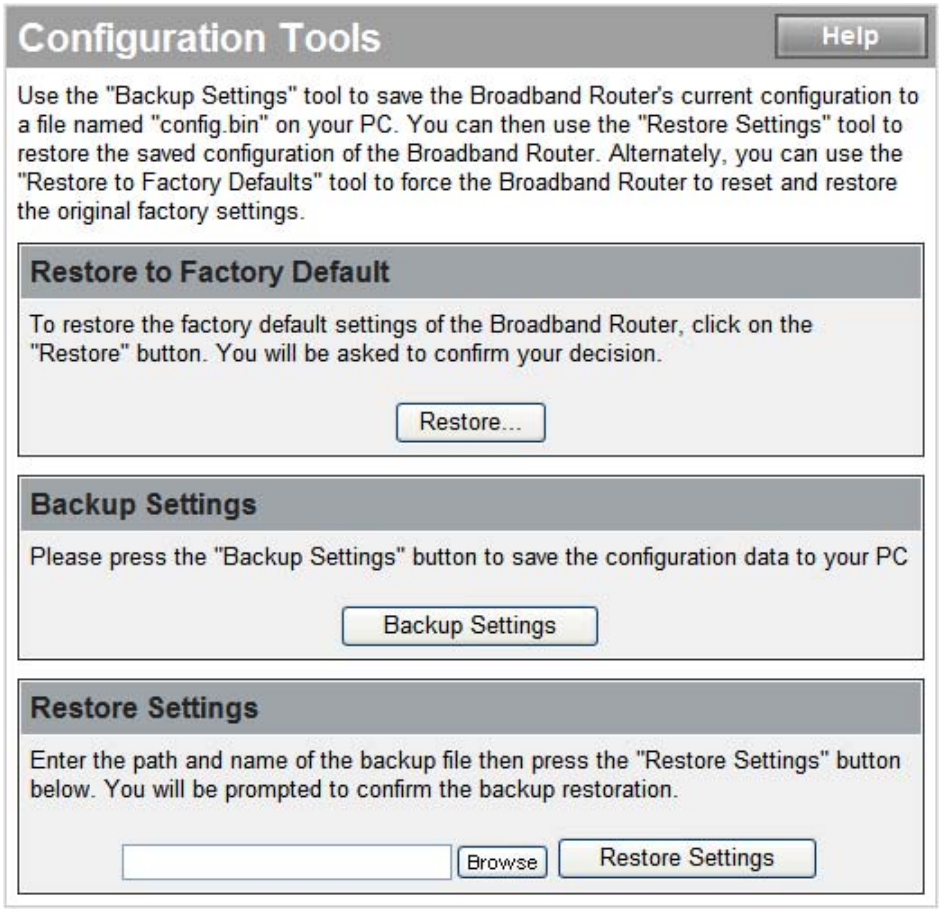
To restore the factory default settings of the IP-1000R v2 Broadband Router, select the "**Restore to Factory Default** " option.

- **Backup Settings**

Select the "**Backup Settings**" option to save the current IP-1000R v2 Broadband Router settings in a file called "config.bin," or save to a filename of your choosing.

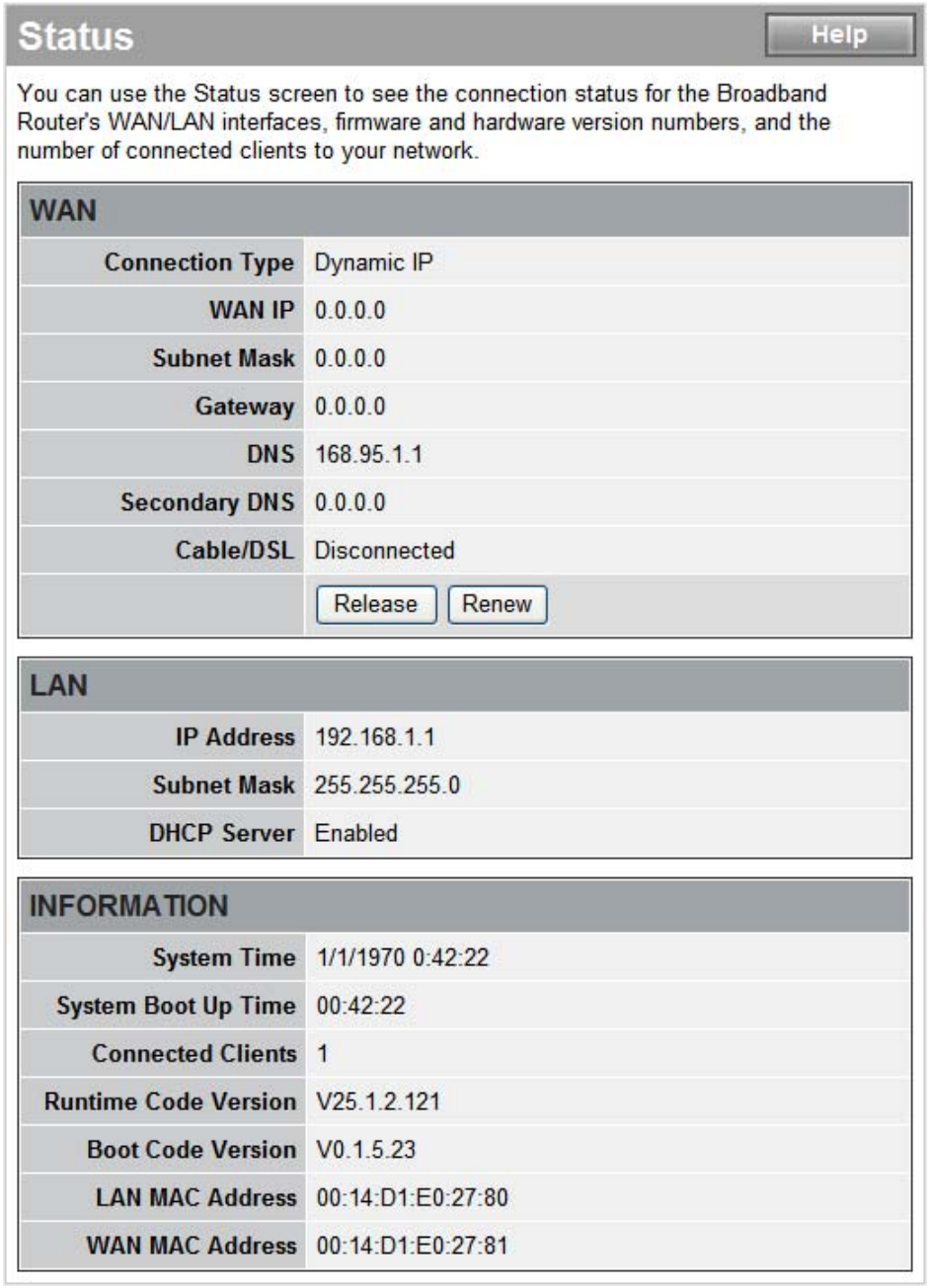
- **Restore Settings**

To restore a backup file back to the IP-1000R v2 Broadband Router, specify the path and filename of the backup file (i.e. config.bin).



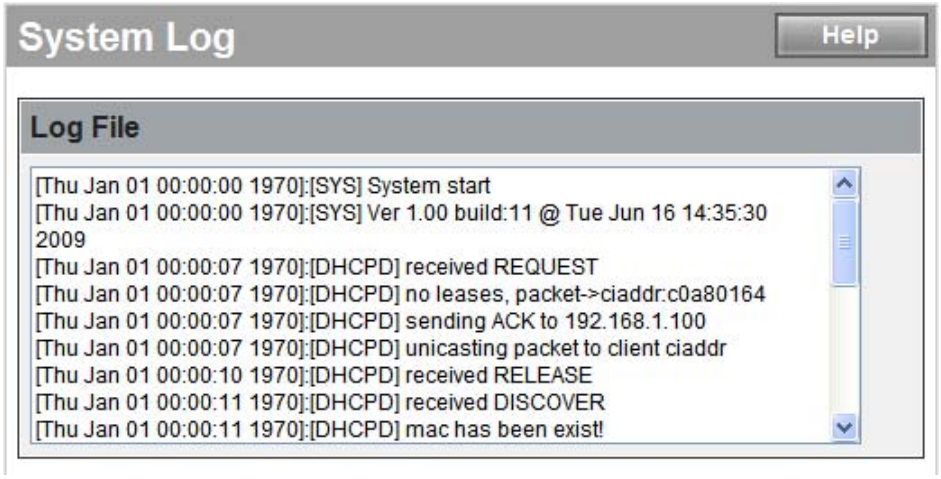
5.5 Status

The "**Status**" screen will display the IP-1000R v2 Broadband Routers' WAN/LAN interfaces, firmware and hardware version numbers, and the number of connected clients to the network.



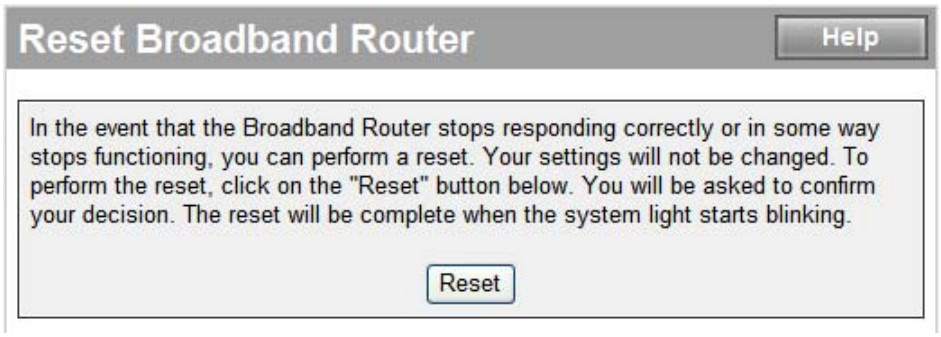
5.6 System Log

View any attempts that have been made to gain access to the network.



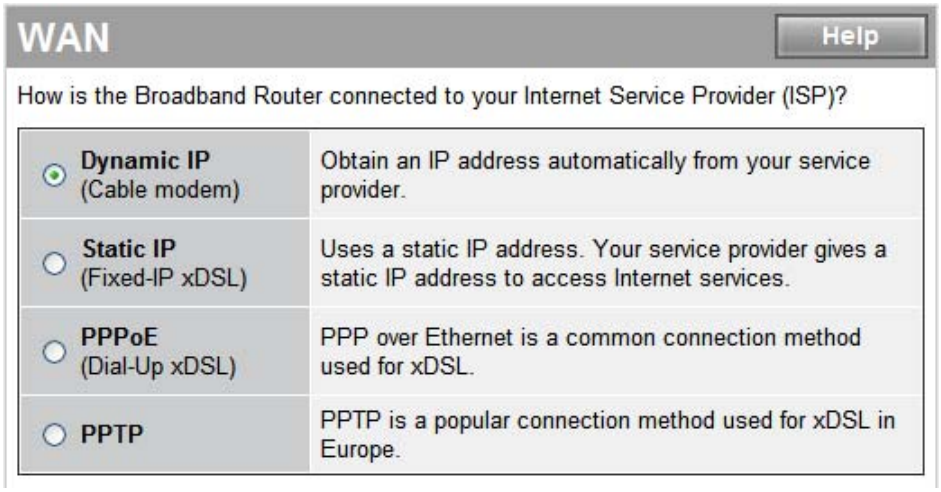
5.7 Reset

For some reason if you need to reset the IP-1000R v2 Broadband Router without changing any settings, click on the “Reset” to reset the IP-1000R v2 Broadband Router.



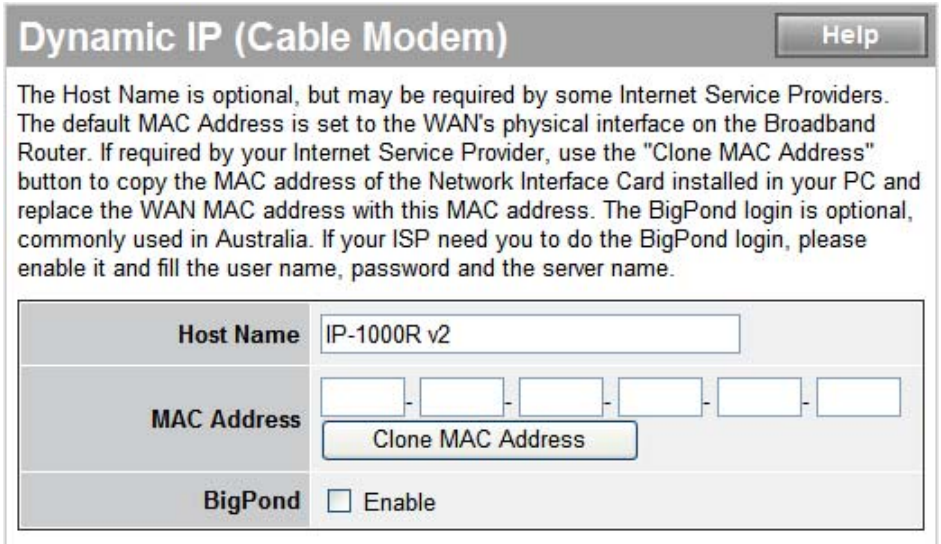
6 WAN

The IP-1000R v2 Broadband Router supports the following types of the Internet connections: Dynamic IP Address, Static IP Address, PPPoE, and PPTP.



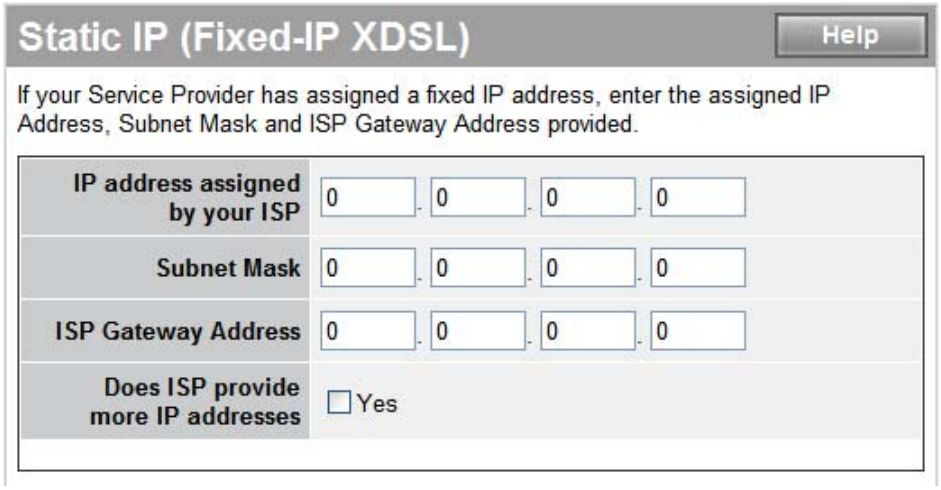
6.1 Dynamic IP

The Host Name is optional, but may be required by some Internet Service Providers. The MAC address is set to the WAN's physical interface on the IP-1000R v2 Broadband Router. If the Internet Service Provider requires the MAC address, type it in. Click the "**Clone MAC Address**" button to copy the MAC address of the Ethernet network adapter installed in the PC. The WAN MAC address will be replaced by this MAC address. If your ISP is BigPond (Australia), check the Enable box.



6.2 Static IP

If the Internet Service Provider has assigned a fixed IP address, enter the assigned IP address, subnet mask and gateway IP address fields. Click "**Yes**" if you are using two or more IP addresses.

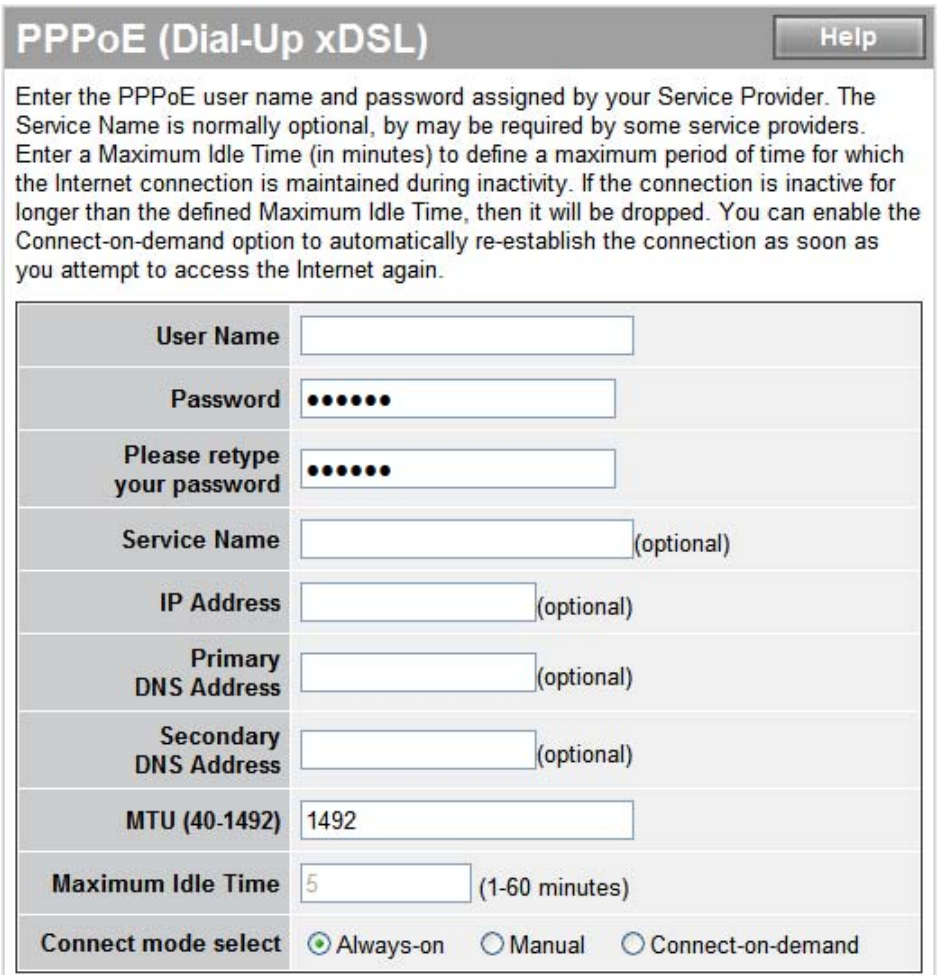


6.3 PPPoE (Dial-Up xDSL)

If you are connecting to the Internet using a PPPoE (Dialup xDSL) Modem and your ISP has provided you with a password and username, then your ISP uses PPPoE. Select this option, and enter the required information. If the ISP provided a Service Name, enter it in the Service Name field. Otherwise, leave it blank.

The Service Name, IP Address, and DNS Address fields must be completed if your ISP provides you with this information. If your ISP provides a Dynamic IP Address, skip these fields.

The MTU feature specifies the maximum packet size permitted for network transmission. Enter the value desired; for most DSL Broadband Internet connection users, 1492 is recommended. By default, MTU is set at 1492. The Maximum Idle Time feature can control the Internet connection time if you want to reduce the connection fees charged by your ISP (default time=0, always connect).



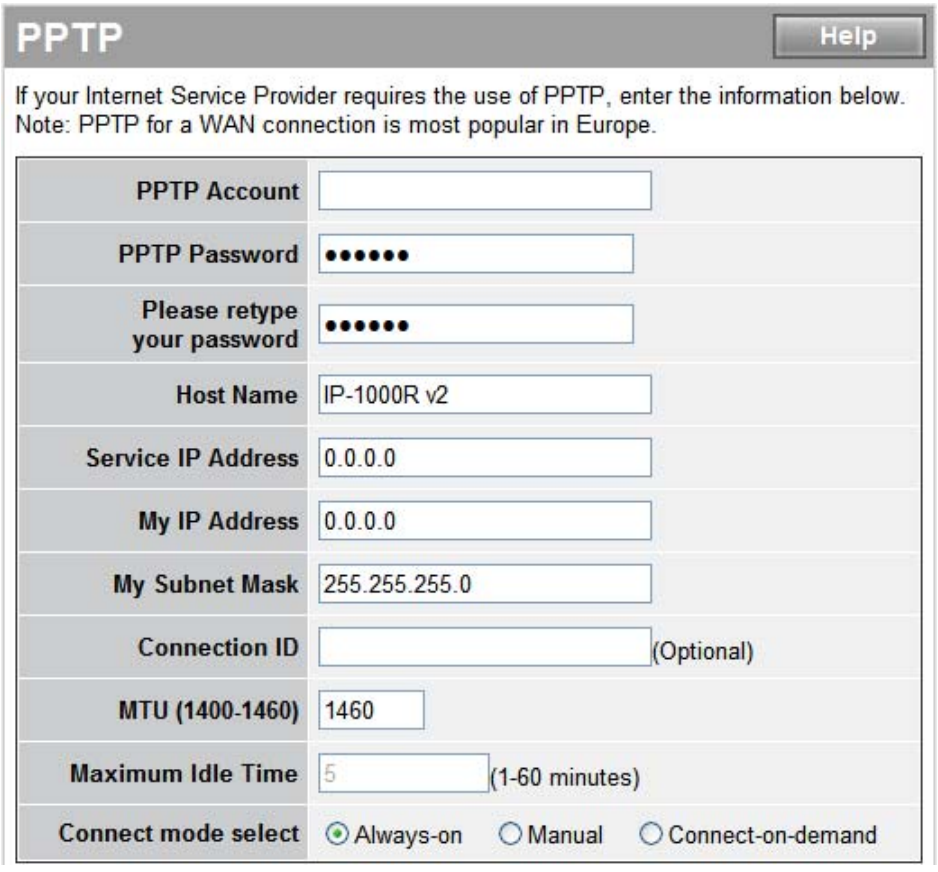
6.4 PPTP

If connecting to the Internet using a PPTP DSL Modem, enter the PPTP Account Name, PPTP Password, Host Name, Service IP Address, My IP Address, and My Subnet Mask as provided by your ISP in the appropriate fields. If your ISP has provided you with a Connection ID, enter it in the Connection ID field. Otherwise, leave it blank.

The MTU feature specifies the maximum packet size permitted for network transmission. Enter the value desired; for most DSL Broadband Internet connection users, 1460 is recommended.

By default, MTU is set at 1460.

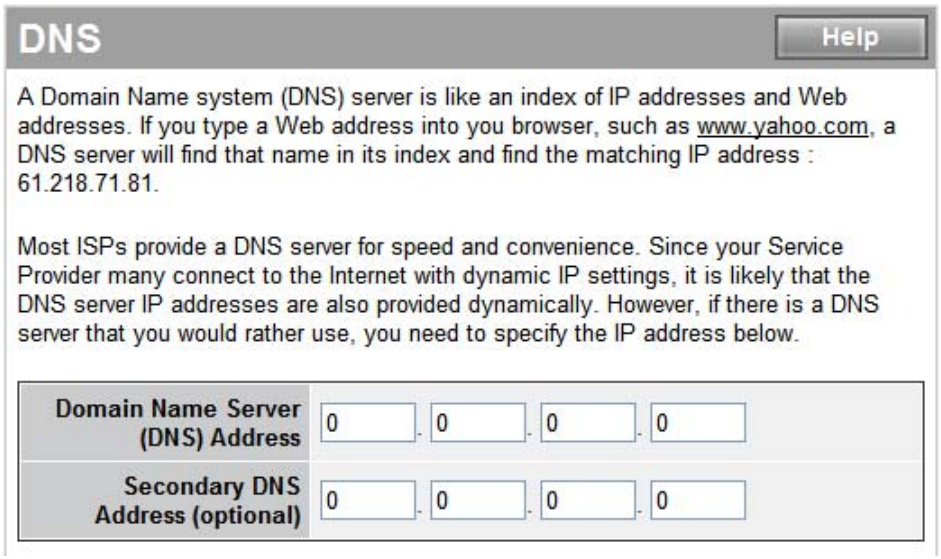
The Maximum Idle Time feature can control the Internet connection time (default time=0, always connect). Select Connect-on-demand for the Connect mode select feature to enable the IP-1000R v2 Broadband Router to connect to your ISP whenever an Internet connection is required.



6.5 DNS

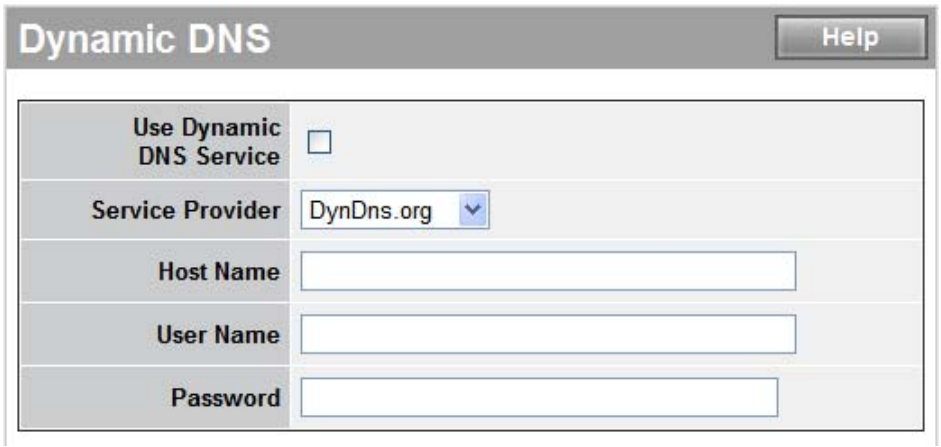
The Domain Name System (DNS) manages the translation of a domain name into an IP address, and vice versa that of an IP address into a domain name.

Your ISP should provide one or more DNS Server IP addresses, type those IP addresses in the Primary DNS address and Secondary DNS address fields, the IP-1000R v2 Broadband Router will utilize these simultaneously for quicker access to functioning DNS Servers.



6.6 DDNS

The Dynamic DNS feature allows you to host a server (Web, FTP, Game Server, etc.) using a host name with your dynamically assigned IP address. Most Broadband Internet Service Providers assign dynamic IP addresses. When you use a Dynamic DNS service provider, your friends can enter your host name to connect to your server, no matter what your IP address is.



7 LAN

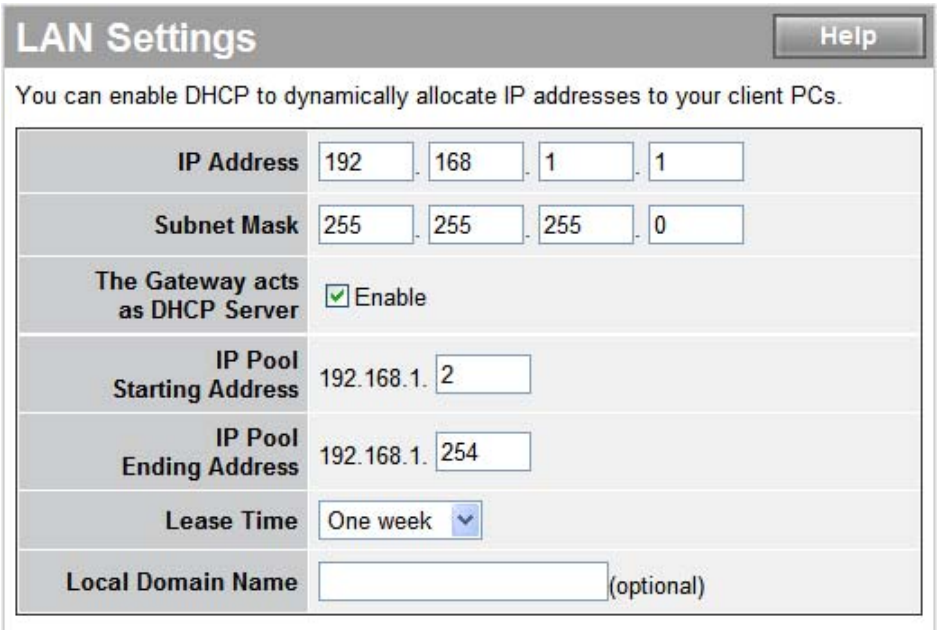
7.1 LAN Settings

The default value of the IP-1000R v2 Broadband Router is 192.168.0.1 for the IP address and 255.255.255.0 for the Subnet Mask. You may change the value according to your needs.

To enable the DHCP server to allocate dynamic IP addresses to the clients PCs, click “Enable”. The client can get an IP Address that is between the IP Pool Starting Address and the IP Pool Ending Address. You may also change the IP Pool range value.

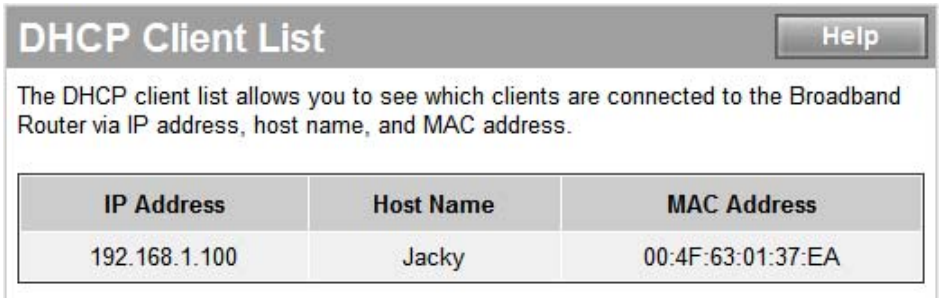
The Lease Time is the amount of time a network user will be allowed to connect to the IP-1000R v2 Broadband Router with his/her current dynamic IP address. Enter the amount of time, in hours, days or weeks, which the user will be “leased” this dynamic IP address.

You can enter your local domain name in the Local Domain Name fields.



7.2 DHCP Client List

The DHCP client list allows you to see which clients are connected to the IP-1000R v2 Broadband Router via IP address, host name, and MAC address.



8 NAT

Network Address Translation (NAT) allows multiple users at the local site to access the Internet through a single public IP address. NAT can also prevent hacker attacks by mapping local addresses to public addresses for key services such as the Web or FTP.

8.1 Special Application

Some applications require multiple connections, such as Internet gaming, video conferencing, and Internet telephony. These applications cannot work when Network Address Translation (NAT) is enabled. When users send this type of request to your network via the Internet, the IP-1000R v2 Broadband Router will forward those requests to the appropriate PC. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

- **TCP (**Transmission Control Protocol) - A method (protocol) used along with the Internet Protocol (Internet Protocol) to send data in the form of message units between computers over the Internet. While IP takes care of handling the actual delivery of the data, TCP takes care of keeping track of the individual units of data (called packets) that a message is divided into for efficient routing through the Internet.

- **UDP (**User Datagram Protocol) - A communications method (protocol) that offers a limited amount of service when messages are exchanged between computers in a network that use the Internet Protocol IP). UDP is an alternative to the TCP and, together with IP, is sometimes referred to as UDP/IP. Like the Transmission Control Protocol, UDP uses the Internet Protocol to actually get a data unit (called a datagram) from one computer to another. Unlike TCP, however, UDP does not provide the service of dividing a message into packets (data grams) and reassembling it at the other end. Specifically, UDP doesn't provide sequencing of the packets that the data arrives in. This means that the application program that uses UDP must be able to make sure that the entire message has arrived and is in the right order. Network applications that want to save processing time because they have very small data units to exchange (and therefore very little message reassembling to do) may prefer UDP to TCP

Special Application

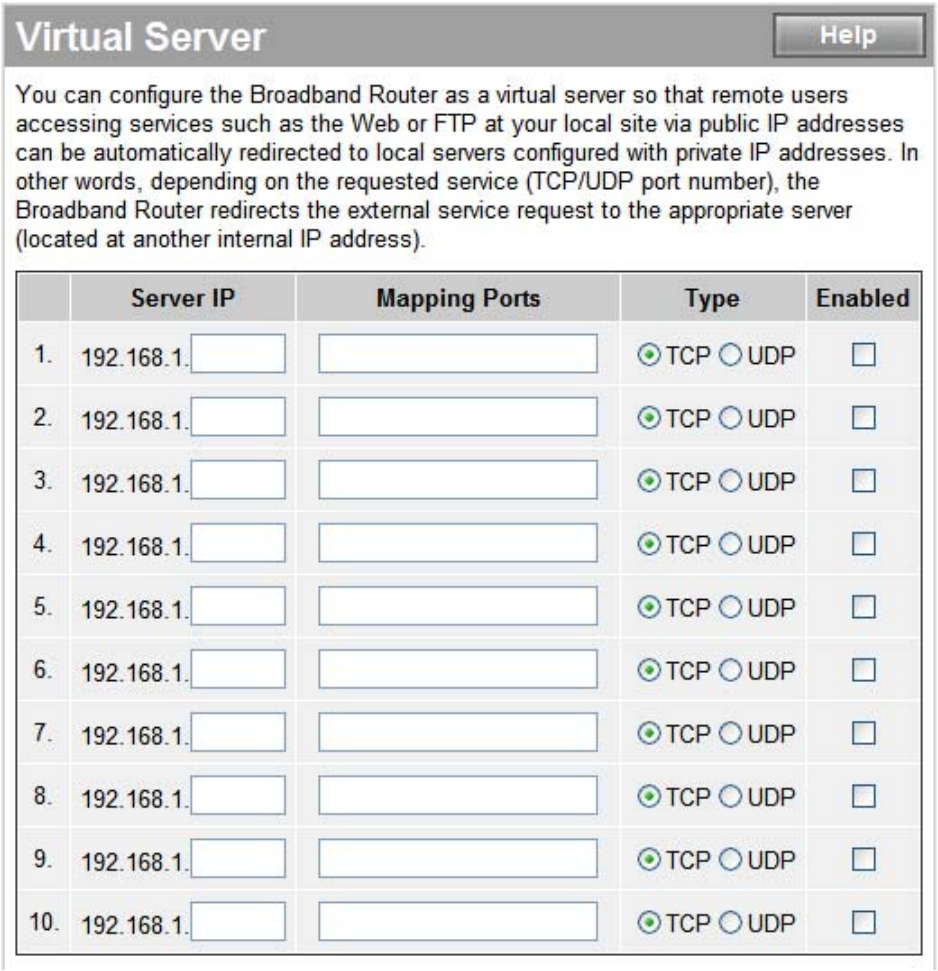
Help

Applications such as Internet gaming, video conferencing, and Internet telephony require multiple connections. The Special Application feature allows these applications to work properly.

	Trigger Port	Trigger Type	Public Port	Public Type	Enabled
1.		TCP UDP		TCP UDP	
2.		TCP UDP		TCP UDP	
3.		TCP UDP		TCP UDP	
4.		TCP UDP		TCP UDP	
5.		TCP UDP		TCP UDP	
6.		TCP UDP		TCP UDP	
7.		TCP UDP		TCP UDP	
8.		TCP UDP		TCP UDP	
9.		TCP UDP		TCP UDP	
10.		TCP UDP		TCP UDP	

8.2 Virtual Server

The virtual server option allows you to define port number on your IP-1000R v2 Broadband Router for redirection to an internal LAN IP address. This feature is useful for hosting online services such as FTP or Web servers.



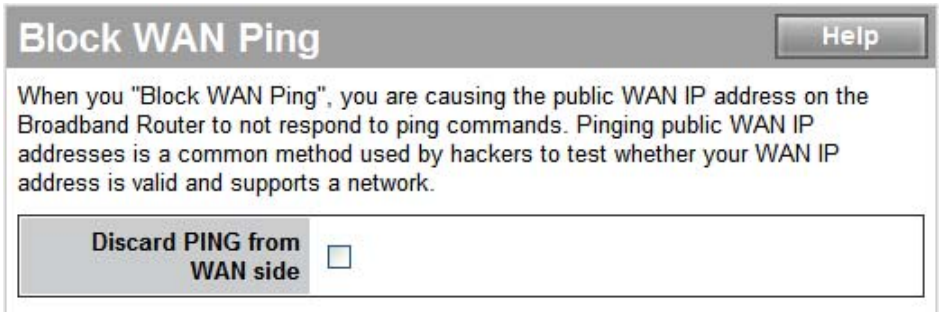
9 Firewall

The IP-1000R v2 Broadband Router provides extensive Firewall protection by restricting connection parameters to limit the risk of hacker attacks and by defending against a wide array of common hacker attacks.

The IP-1000R v2 Broadband Router provides packet filtering rules by restricting service ports, IP address or MAC address. However, for applications that require unrestricted access to the Internet, you may configure a specific client/server as a demilitarized zone (DMZ)

9.1 Block WAN Ping

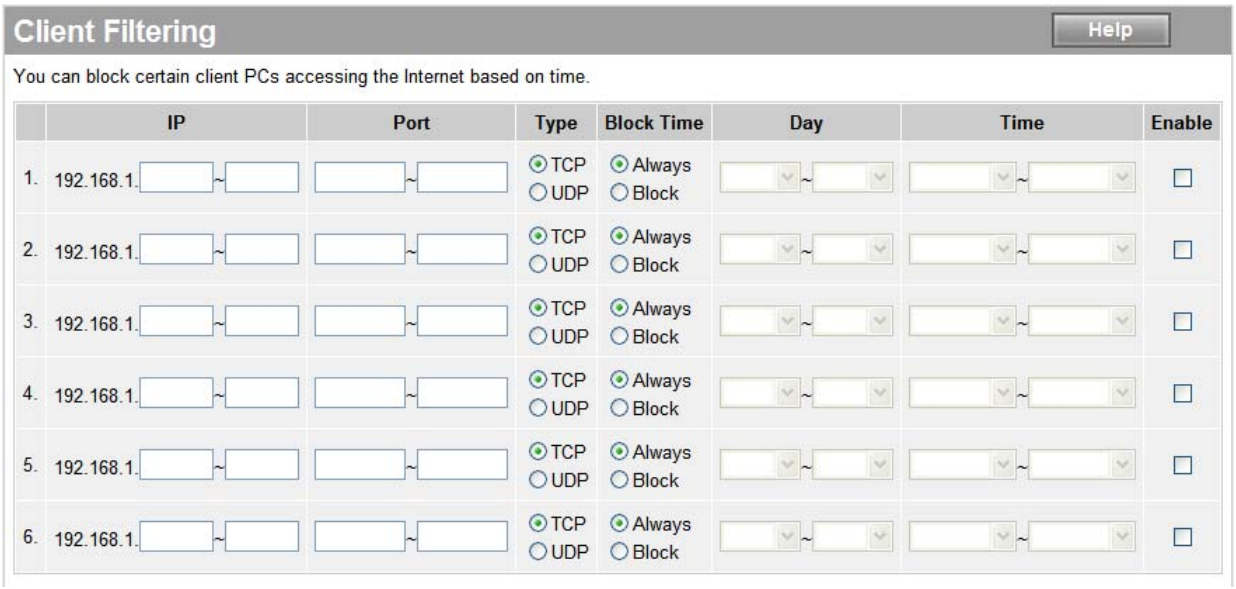
When "**Discard PING from WAN side**" is checked, it causes the public WAN IP address on the IP-1000R v2 Broadband Router to ignore ping commands. Pinging public WAN IP addresses is a common method used by hackers to test whether the WAN IP address is valid.



9.2 Client Filtering

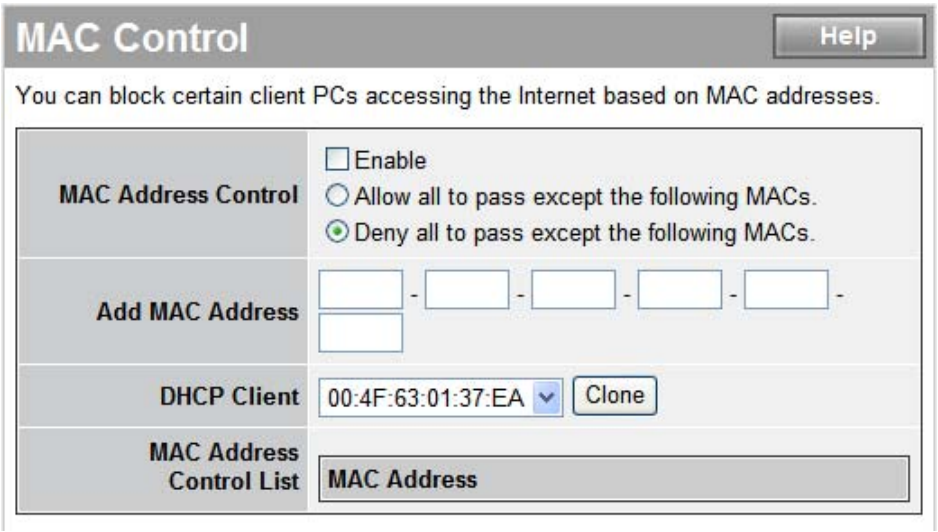
You can filter Internet access for local clients based on IP addresses, application types, (i.e., HTTP port), and time of day.

For example, this screen shows that clients in the address range 192.168.0.50-60 are blocked from using FTP (Port 21) from Sunday to the following Saturday and from 2:00AM to 11:00 PM



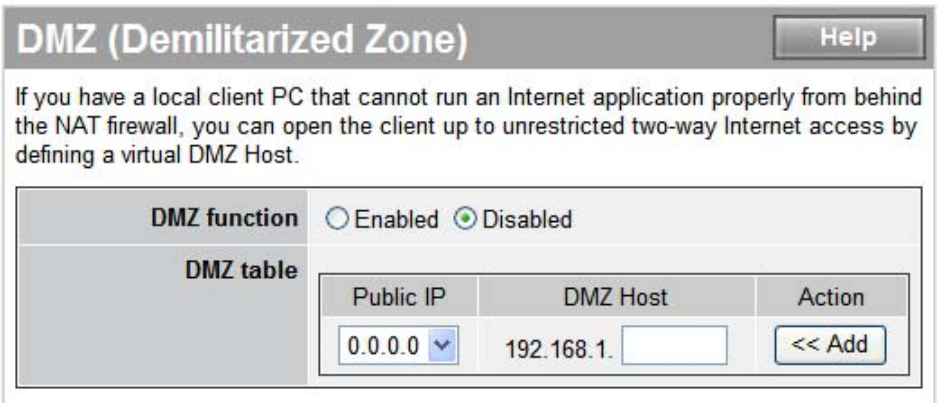
9.3 MAC Control

MAC Control allows you to block certain client PCs from accessing the Internet based on MAC addresses.



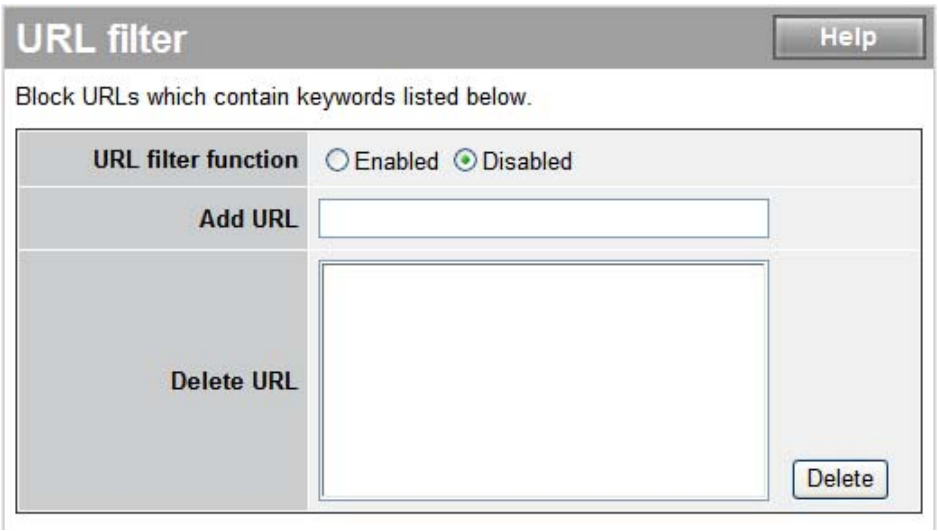
9.4 DMZ (De-Militarized Zone)

If a local client PC cannot run an Internet application properly from behind the NAT firewall, open the client up to unrestricted two-way Internet access by defining a PC as a virtual DMZ Host.



9.5 URL Filter

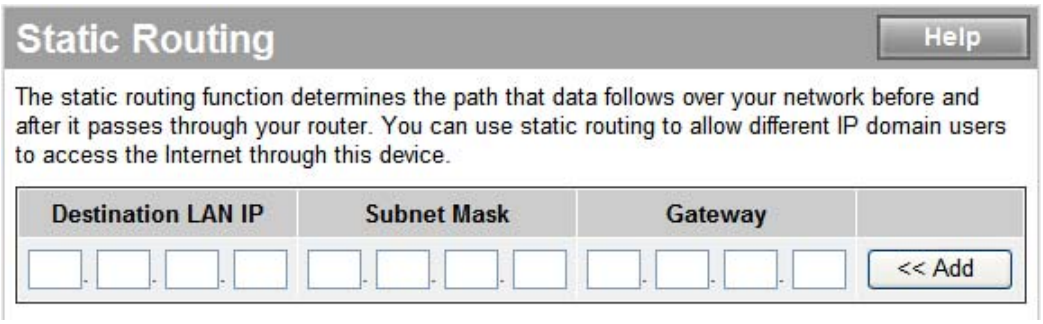
URL Filter is used to deny LAN computers from accessing specific web sites by its URL. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the blocked word, the site will not be accessible. If any part of the URL contains the blocked word, the web page will also not display.



10 Routing

10.1 Static Routing

The process by manually specify a specific route packets should take on the way to a destination address. You need to configure the Static Routing only for such as multiple Routers or multiple IP subnets located on your network.



11 Specifications

Standards	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3x Flow Control
WAN Interface	RJ-45 10BASE-T/100BASE-TX port
LAN Interfaces	4 x RJ-45 10BASE-T/100BASE-TX ports
Firewall	IP Filter MAC Filter Domain Blocking URL Blocking Scheduling UPnP enable
VPN Support	IPSec pass-through, PPTP pass-through
Configuration & Management	Web-based configuration
Diagnostic LED	Power Status WAN Link/Act 1, 2, 3, 4 LAN ports
Power Input	DC 5V, 800mA
Dimension	109 x 155 x 33mm
Operating Temperature	0°- 55°C (32° – 131° F)
Humidity	90%RH maximum non-condensing
EMI Certification	FCC Class B CE Class B

12 Network Glossary

RJ-45

Standard connectors for Twisted Pair copper cable used in Ethernet networks. Although they look similar to standard RJ-11 telephone connectors, RJ-45 connectors can have up to eight wires, whereas telephone connectors have only four.

100Base-TX

Also known as 802.3u. The IEEE standard defines how to transmit Fast Ethernet 100Mbps data using Cat.5 UTP/STP cable. The 100Base-TX standard is backward compatible with the 10Mbps 10-BaseT standard.

WAN

Wide Area Network. A communication system of connecting PCs and other computing devices across a large local, regional, national or international geographic area.

LAN

Local Area Network. It is a computer network covering a small physical area or small group of buildings.

DMZ

Demilitarized Zone. When a router opens a DMZ port to an internal network device, it opens all the TCP/UDP service ports to this particular device.

PPPoE

Point-to-Point over Ethernet. PPPoE relies on two widely accepted standards; PPP and Ethernet. PPPoE is a specification for connecting the users on an Ethernet to the Internet through a common broadband medium, such as single DSL line, wireless device or cable modem.

Transparent

Transparent mode works to transfer real IP address from WAN interface to the device that connects to DMZ port. So the DMZ device can also get real IP address and offer the service with Internet users.

NAT

Network Address Translation. A network algorithm used by Routers to enables several PCs to share single IP address provided by the ISP. The IP that a router gets from the ISP side is called Real IP, the IP assigned to PC under the NAT environment is called Private IP.

DHCP

Dynamic Host Configuration Protocol. A protocol that enables a server to dynamically assign IP addresses. When DHCP is used, whenever a computer logs onto the network, it automatically gets an IP address assigned to it by DHCP server. A DHCP server can either be a designated PC on the network or another network device, such as router.

DNS

A program that translates URLs to IP addresses by accessing a database maintained on a collection or Internet servers.

DDNS

Dynamic Domain Name System. An Algorithm that allows the use of dynamic IP address for hosting Internet Server. DDNS service provides each user account with a domain name. Router with DDNS capability has a built-in DDNS client that updates the IP address information to DDNS service provider whenever there is a change. Therefore, users can build website or other Internet servers even if they don't have fixed IP connection.

Subnetwork or Subnet

Found in larger networks, these smaller networks are used to simplify addressing between numerous computers. Subnets connect to the central network through a router, switch or gateway. Each individual wireless LAN will probably use the same subnet for all the local computers it talks to.

IP Address

IP (Internet Protocol) is a layrer-3 network protocol that is the basis of all Internet communication. An IP address is 32-bit number that identifies each sender or receiver of information that is sent across the Internet. An IP address has two parts: an identifier of a particular network on the Internet and an identifier of the particular device (which can be a server or a workstation) within that network. The new IPv6 specification supports 128-bit IP address format.

MAC

Media Access Control. MAC address provides layer-2 identification for Networking Devices. Each Ethernet device has its own unique address. The first 6 digits are unique for each manufacturer. When a network device have MAC access control feature, only the devices with the approved MAC address can connect with the network.

TCP

A layre-4 protocol used along with the IP to send data between computers over the Internet. While IP takes care of handling the actual delivery of the data, TCP takes care of keeping track of the packets that a message is divided into for efficient routing through the Internet.

UDP

User Datagram Protocol. A layer-4 network protocol for transmitting data that does not require acknowledgement from the recipient of the data.

DoS Attack

Denial of Service. A type of network attack that floods the network with useless traffic. Many DoS attacks, such as the Ping of Death and Teardrop attacks, exploit limitations in the TCP/IP protocols.