NOTE: This guide covers only the most common situations. Please refer to the full User Manual on the Router CD-ROM if your network LAN has any of the following:

- another connected router
- an existing DHCP Server
- PCs using Fixed (Static) IP Addresses

A Network Systems Solution
UNICOM™

802.11g Wireless Router

Multi-function wireless router with 4-Port Fast Ethernet switch

WEP-72104G-1

User's Guide

Regulatory notes and statements

Wireless LAN, Health and Authorization for use

Radio frequency electromagnetic energy is emitted from Wireless LAN devices. The energy levels of these emissions however are far much less than the electromagnetic energy emissions from wireless devices like for example mobile phones. Wireless LAN devices are safe for use frequency safety standards and recommendations. The use of Wireless LAN devices may be restricted in some situations or environments, for example:

·On board of airplanes, or

·In an explosive environment, or

·In case the interference risk to other devices or services is perceived or identified as harmful

In case the policy regarding the use of Wireless LAN devices in specific organizations or environments (e.g. airports, hospitals, chemical/oil/gas industrial plants, private buildings etc.) is not clear, please ask for authorization to use these devices before operating the equipment.

Regulatory Information/disclaimers

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications made to this device not expressly approved by the manufacturer may void the user's authority to operate the equipment. The Manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, of the substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

USA-FCC (Federal Communications Commission) statement

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of this device.

FCC Radio Frequency Exposure statement

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65 and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. The radiated output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation is minimized.

When nearby persons has to be kept to ensure RF exposure compliance, in order to comply with RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than 20 cm.

FCC 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. If not installed and used in accordance with the instructions, it 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 and correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the distance between the equipment and the receiver.

3. Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

4. Consult the dealer or an experienced radio/TV technician for help.

Export restrictions

This product or software contains encryption code that may not be exported or transferred from the US of Canada without an approved US Department of Commerce export license.

Safety Information

Your device contains a low power transmitter. When device transmits, it sends out radio frequency (RF) signal.

CAUTION: To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. Use on the supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Protection requirements for health and safety – Article 3.1a

Testing for electric safety according to EN 60950 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility – Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1, EN 301 489-17 and EN 55024 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum – Article 3.2

Testing for radio test suites according to EN 300 328-2 has been conducted. These are considered relevant and sufficient.

CE in which Countries where the product may be used freely:

Germany, UK, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway and Iceland.

France: except the channel 10 through 13, law prohibits the use of other channels.

FC CE

TABLE OF CONTENTS

ABOUT THIS GUIDE

Congratulations on your purchase of this Unicom's 802.11g Wireless Router. This integrated access device combines Internet gateway functions with wireless LAN and a Fast Ethernet switch. It provides a complete solution for Internet surfing and office resource sharing plus it is easy to install and maintain.

Purpose

This manual discusses how to install and configure the 802.11g Wireless Router.

Overview of this User's Guide

Introduction. Describes the Wireless Router and its features.

Unpacking and Setup. Helps you get started with the basic installation of the Wireless Router.

Identifying External Components. Describes the front panel, rear panel, and LED indicators of the Wireless Router.

Connecting the Router. Explains how to can connect the Wireless Router to your xDSL/Cable Modem.

Technical Specifications. Lists the technical, general, physical, and environmental specifications and the performance settings of the Wireless Router.

TRODUCTION

With the explosive growth of the Internet, accessing information and services at any time, c
ght, has become a standard requirement for the modern family. The era of the standalone
ning. Networking technology is now commonplace and is often included in new computers.

Unicom's Wireless Broadband Router combines Internet gateway functions with Wireless
LAN) and a Fast Ethernet switch. Designed for the small business and home, it eliminates the
a separate modem and ISP line for each computer while providing a ready connection for all
red or wireless.

Broadband network access, such as DSL and Cable, is also gaining ground. Since multipl
es would be impractical and expensive, there is a need to share one legal IP address over a
ernet connection to link the home with the Internet.

Using a shared Internet connection through Unicom's Wireless Broadband Router can solve
work access costs. All linked computers can make full use of broadband capabilities over this d

Unicom's Wireless Broadband Router not only comes equipped with a wide range of feature
n also be installed and configured quickly and easily right out of the box. It supports a simple
ea Network and Internet access sharing.

The Local Area Network (LAN) connects home computers while allowing any of the comp
access the Internet, share resources such as printers, or play online games—the basis of the m
nily computing lifestyle.

pplications:

oadband Internet access:
veral computers can share one high-speed broadband connection through wireless or
nnections. (WLAN, LAN, and WAN-Internet).

source sharing:
are resources such as printers, scanners, and other peripherals.

e sharing:
change data, messages, and distribute files among network users.

line gaming:
sily setup online gaming and e-commerce services through the local area network.

rewall:
built-in firewall function and anti-hack system for optimum security.

atures:

- High speed data transfer rate

asy configuration via WEB Browser.

NPACKING AND SETUP

is chapter provides unpacking and setup information for Unicom's Wireless Broadband Router.

npacking

e Wireless Router box should contain the following items:

(1) Wireless Broadband Router
(1) External power adapter
(1) CD-Rom with this User's Guide
(1) Installation Quick Guide
(1) Registration Card

any item is missing or damaged, please contact your local reseller for replacement.

tup

e setup of the Wireless Router can be properly performed using the following methods:

The power outlet should be within 1.82 meters (6 feet) of the Broadband Router.

Visually inspect the DC power jack and make sure that it is fully secured to the power adapter.

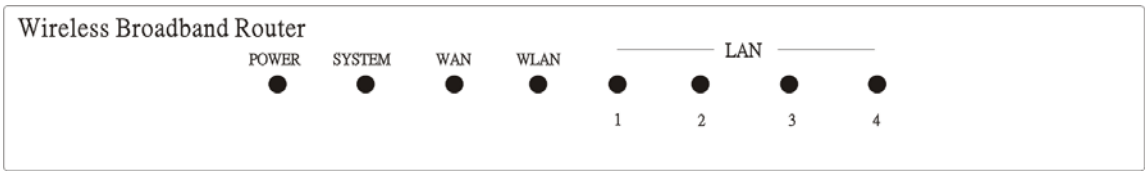
Make sure that there is proper heat dissipation from and adequate ventilation around the Broad Router. Do not place heavy objects on the Broadband Router.

Fix the direction of the antennas. Try to place the Wireless Router in a position that can best your wireless network. Normally, the higher you place the antenna, the better the performanc be. The antenna's position enhances the receiving sensitivity.

DWARE INSTALLATION

t Panel

igure below shows the front panel of the Wireless Router.



WEP-72104G-1 Front Panel

ER

ndicator lights green when the hub is receiving power; otherwise, it is off.

TEM

indicator blinks green when the Internet Broadband Router is working successfully. If t
tor is either solidly on or off, the router is experiencing a failure.

(Link/ACT)

ndicators light green when the WAN port is successfully connected to an xDSL/Cable modem.
blink green while the WAN port is transmitting or receiving data from the xDSL/Cable modem.

N (ACT)

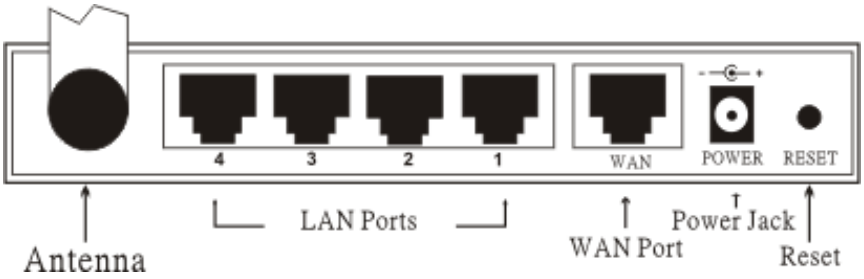
indicator lights green when there are wireless devices connected and transmitting data to
ess Router.

(Link/ACT)

indicators light green when the LAN ports are connected successfully.
blink green while the LAN ports are transmitting data.

ear Panel

e figure below shows the rear panel of the WEP-72104G-1.



WEP-72104G-1 Rear Panel

tenna

ere is one 2dB Gain Antenna in the rear panel for wireless connection.

AN (1-4)

ur RJ-45 10/100Mbps Auto-MDIX ports for connecting to either 10Mbps or 100Mbps Eth nnections.

AN

nnect your xDSL/Cable modem to this port.

C IN

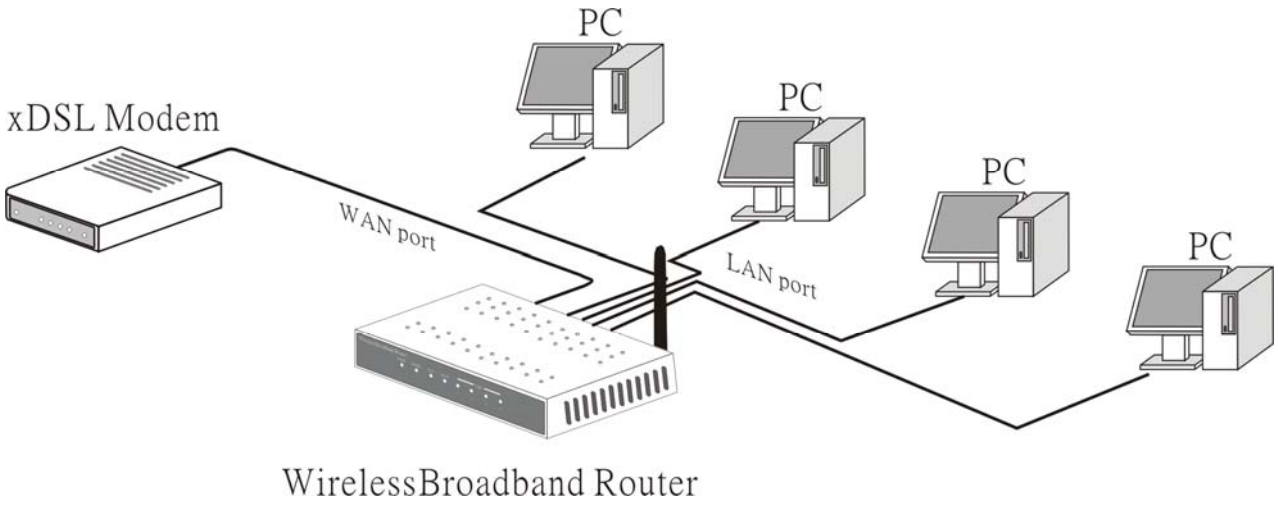
ug the power adapter into this power jack

ESET

e this to reset the Router to its factory default settings. It can be a useful way to reset the ssword, however the settings will return to their default mode.

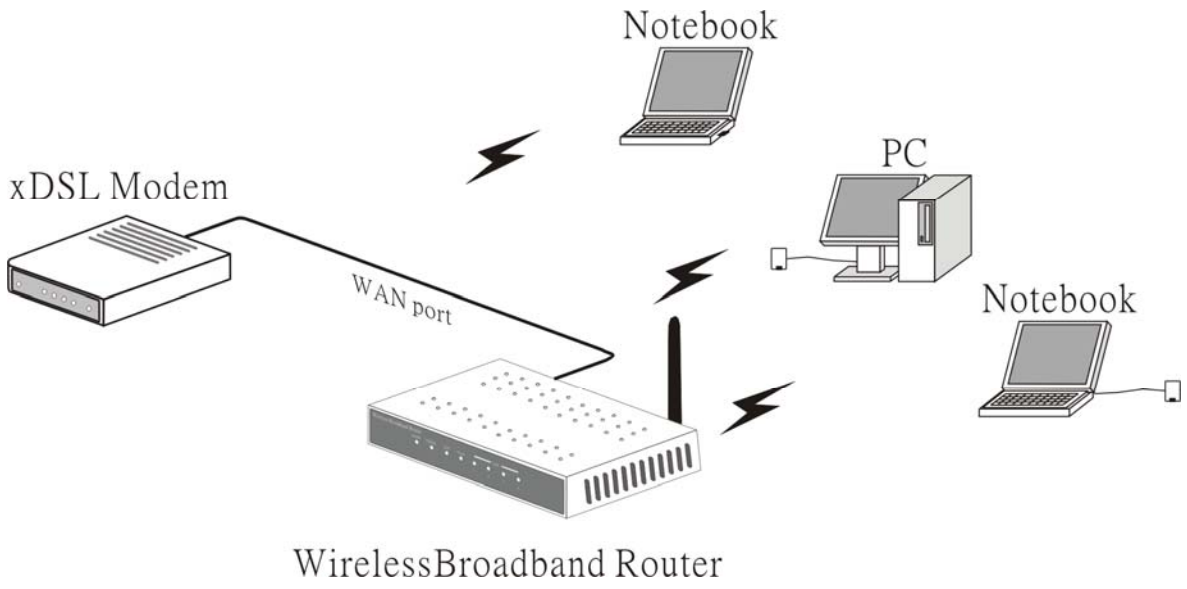
ware connections

ect the Router using LAN



ug in one end of the network cable to the WAN port of the Wireless Router.
ug in the other end of the network cable to the Ethernet port of the xDSL or Cable modem.
ing another network cable, connect the Ethernet port on the computer to a LAN port of the WI
104G-1. Since the Wireless Router has four ports, you can connect up to four computers direc
the unit. The Wireless Router functions as both a connection-sharing router and a switch.

nnect the Router using Wireless LAN



Plug one end of the RJ45 network cable into the xDSL/Cable Modem.

Plug the other end of the RJ45 network cable into the Wireless Internet Broadband Router's V port.

eck the installation

e control LEDs of the WEP-72104G-1 are clearly visible and the status of the network link c n instantly:

With the power source on, once the device is connected to the broadband modem, the Power, LAN, WLAN and WAN port link LEDs will light up indicating a normal status.

While the WAN is linked to the ADSL/Cable modem, the WAN port's Link/ACT LED will ligh

While the LAN is linked to the computer system, the LAN port's Link/ACT LED will light up.

ETWORK TCP/IP SETTING

network TCP/IP settings differ based on the computer's operating system. Configuration ows 95/98/ME/NT/2000/XP is as follows:

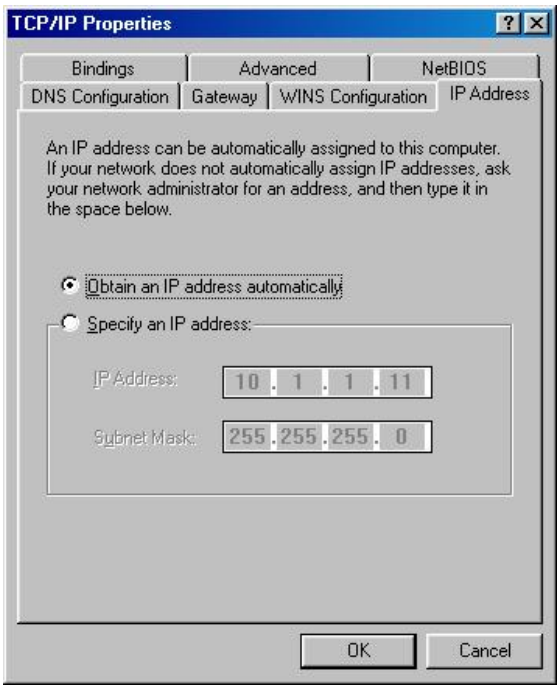
lows 95/98/ME

ck on the "**Network neighborhood**" icon found on the desktop.

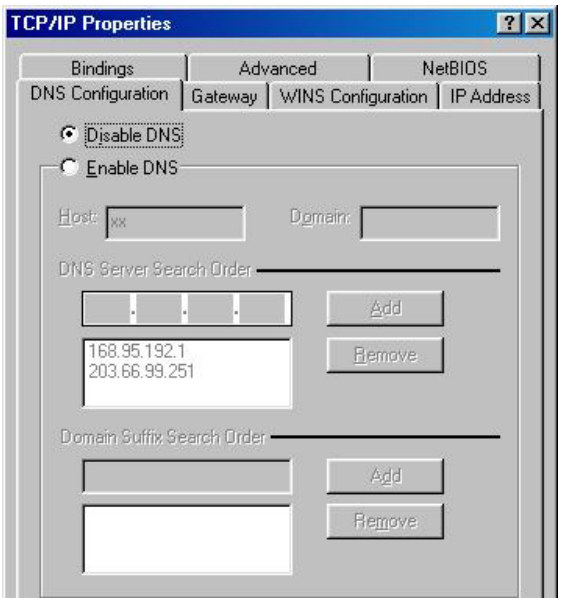
ck the right mouse button and a context menu will be show.

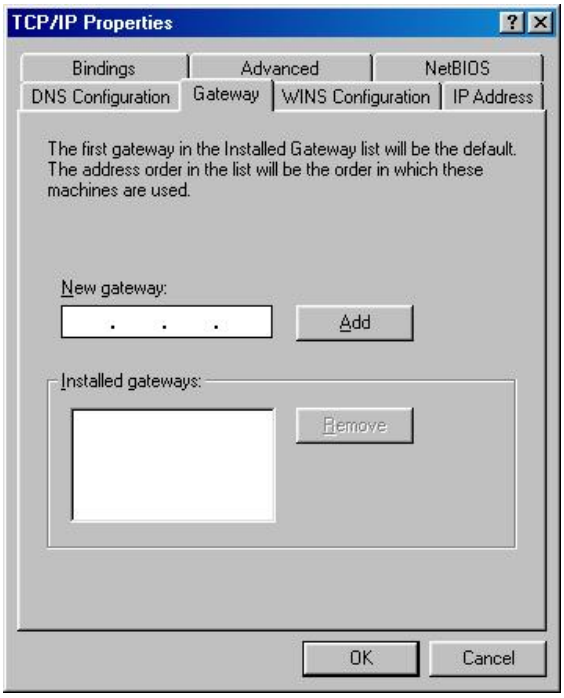
lect "**Properties**" to enter the TCP/IP setting screen.

lect "**Obtain an IP address automatically**" on the "**IP address**" field.



lect "**Disable DNS**" in the "**DNS**" field.





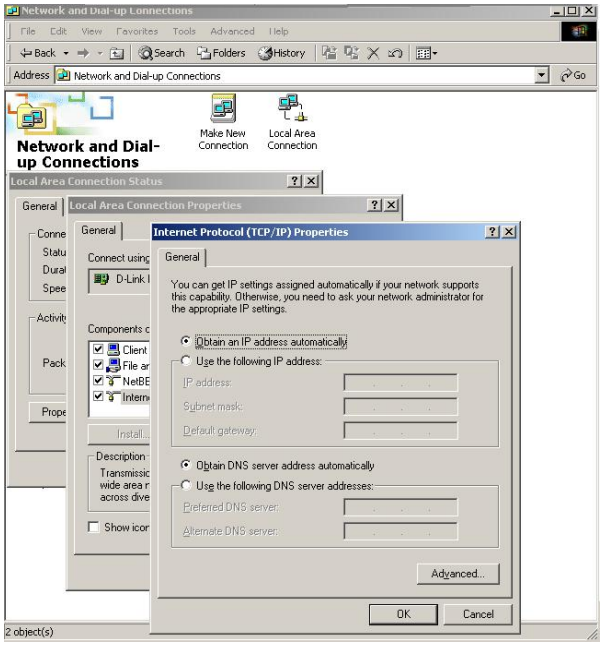
ndows 2000

uble click on the "**My computer**" icon on the desktop. When "**My computer**" window opens, "**Control panel**" and then open the "**Network dialup connection**" applet. Double click o ocal area network connection" icon. Select "Properties" to enter the TCP/IP setting window.

In the "**Local area network status**" window, click on "**Properties**."

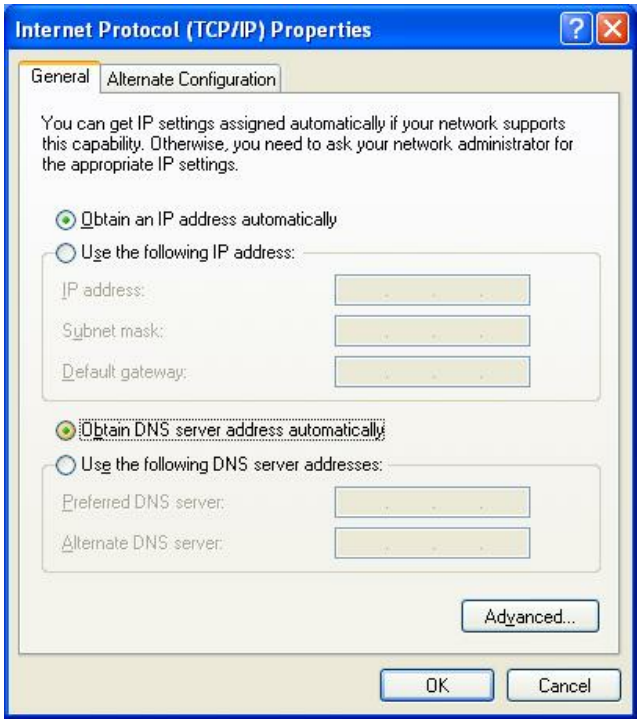
In the "**Local area network connection**" window, first select TCP/IP setting and then "**Properties**."

Set both "**IP address**" and "**DNS**" to **Automatic configuration**.



lows XP

the cursor and click the right button on the “My Network Place” icon.
t “properties” to enter the TCP/IP setting window.
et “**IP address**” to “**Obtain an IP address automatically**.”
et “**DNS**” to “**Obtain DNS server address automatically**.”



IRELESS ROUTER CONFIGURATION

st, make sure that the network connections are functioning normally.

e WEP-72104G-1 can be configured using Internet Explorer 4.0 or newer web browser versions

gin to the Wireless Router through WLAN

fore configuring the Wireless Router through WLAN, make sure that the SSID, Channel, ar
EP are set properly.

e default setting of the Wireless Router:

SSID: default

Channel: 6

Security: disable

gin to the Wireless Router through LAN

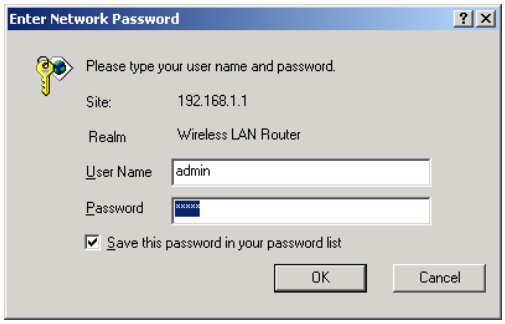
fore you configure this device, note that when the Wireless Router is configured through an Eth
nnection, the host computer must be set on an **IP subnetwork** that can be accessed b
SL/Cable modem. For example, when the default network address of the xDSL/Cable m
ernet interface is 192.168.1.x, then the host computer should be set at 192.168.1.xxx (where xx
mber between 2 and 254) and the default subnet mask is 255.255.255.0.

sing the Web Browser

Open your Internet browser.

Enter IP address ***http://192.168.1.1*** (the factory-default IP address setting) to the URL web addr
location.

When the following dialog box appears, enter the user name and password to login to the main
configuration window, the default username and password is "***admin***".

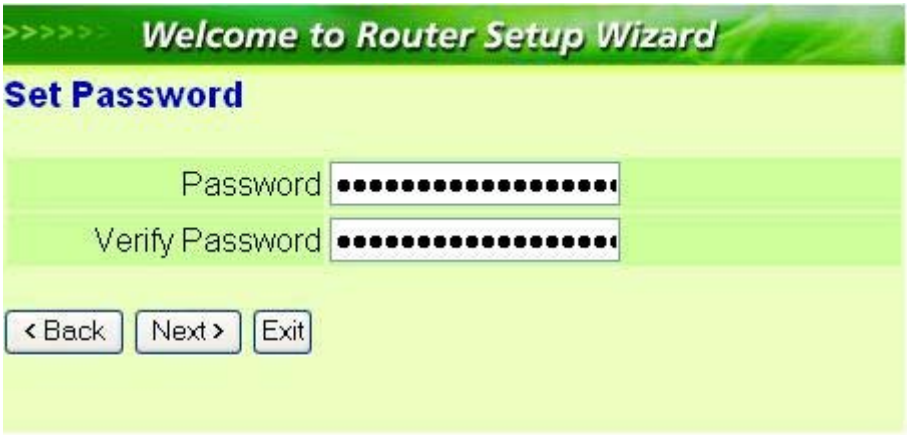


te: To set a password, refer to the "Main Page Password Setting".


Welcome to Router Setup Wizard
Step 1. Set your new password
Step 2. Choose your time zone
Step 3. Set LAN connection and DHCP server
Step 4. Set internet connection
Step 5. Set wireless LAN connection
Step 6. Restart
Next >
Exit
display wizard next time?
Yes
No
update

ep 1: Set up new Password

er can change the password and then click “Next” to continue.



ep 2: Choose time zone

lect the time zone from the drop down list. Please click “Next” to continue.

ep 3: Set LAN connection and DHCP server

t user’s IP address and mask. The default IP is 192.168.1.1. To enable DHCP, please click “Enal
HCP enable automatically assigns IP addresses. Please assign the range of IP addresses in the fie
ange start” and “Range end”. Please click “Next” to continue.

4: Set Internet connection

t how the router will set up the Internet connection: Obtain IP automatically, Fixed IP addre
E to obtain IP automatically, PPPoE with a fixed IP address, or PPTP.

n IP automatically (DHCP client):

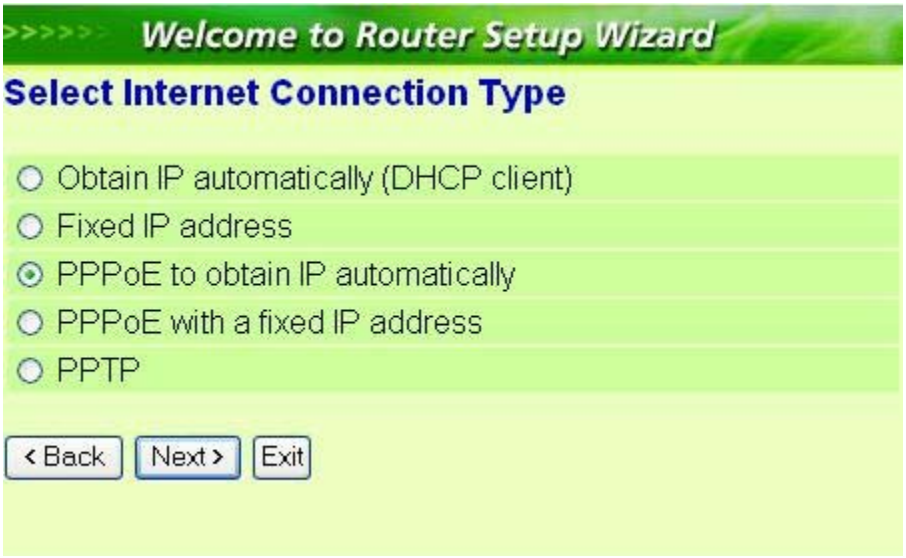
r has enabled DHCP server, choose "Obtain IP automatically (DHCP client)" to have the rou
n IP addresses automatically.

IP Address:

he Internet Service Providers assigned a fixed IP address, choose this option and enter the ad
net mask, gateway IP, and DNS IP addresses for your Broadband Router.

E to obtain IP automatically:

nected to the Internet using a PPPoE (Dial-up xDSL) Modem, the ISP will provide a Passwo
ser Name, and then the ISP uses PPPoE. Choose this option and enter the required information.



PoE with a fixed IP address:

connected to the Internet using a PPPoE (Dial-up xDSL) Modem, the ISP will provide a Passwo
er Name and a Fixed IP Address, choose this option and enter the required information.

:

nnected to the Internet using an (PPTP) xDSL Modem, enter the IP Address, Subnet Ma
way, Server IP, PPTP Account, and PPTP Password in the appropriate fields. If your ISP l
ded you with a Connection ID, enter it in the Connection ID field, otherwise, leave it "zero".

ep 5: Set Wireless LAN connection

ck “Enable” to enable wireless LAN. If user enables the wireless LAN, type the SSID in the tex
d select a communications channel. The SSID and channel must be the same as wireless de
empting communication with the router.

ep 6: Restart

e Setup wizard is now completed. The new settings will be effective after the Wireless rou
tarted. Please click “Restart” to reboot the router. Click “Exit” to exit the wizard without s
anges. Click "Back" to modify the previous setting.

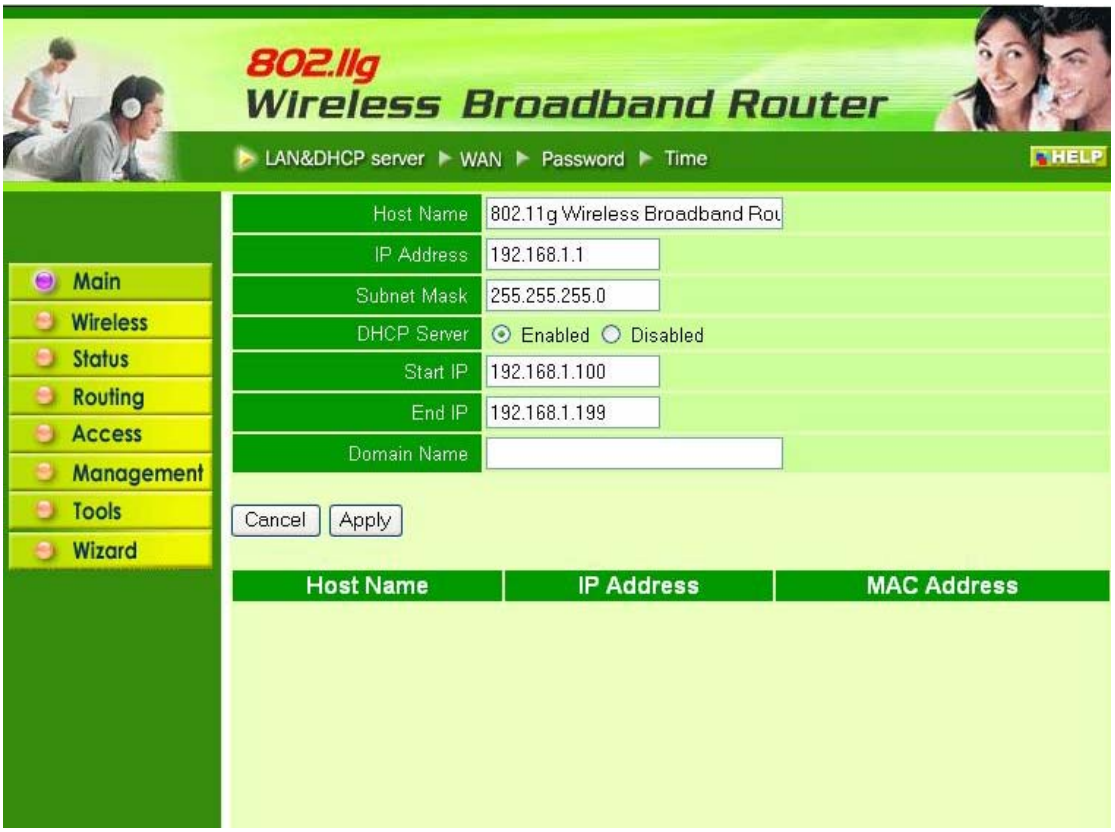
ance Setup

LAN Setting

screen enables users to configure the LAN & DHCP Server, set WAN parameters, cre
nistrator and User passwords, and set the local time, time zone, and dynamic DNS.

LAN & DHCP Server

AN and DHCP properties here, such as the host name, IP address, subnet mask, and domain nar
and DHCP profiles are listed in the DHCP table at the bottom of the screen.



Name: Type the host name in the text box. The host name is required by some ISPs. The defa
ame is "AP-Router."

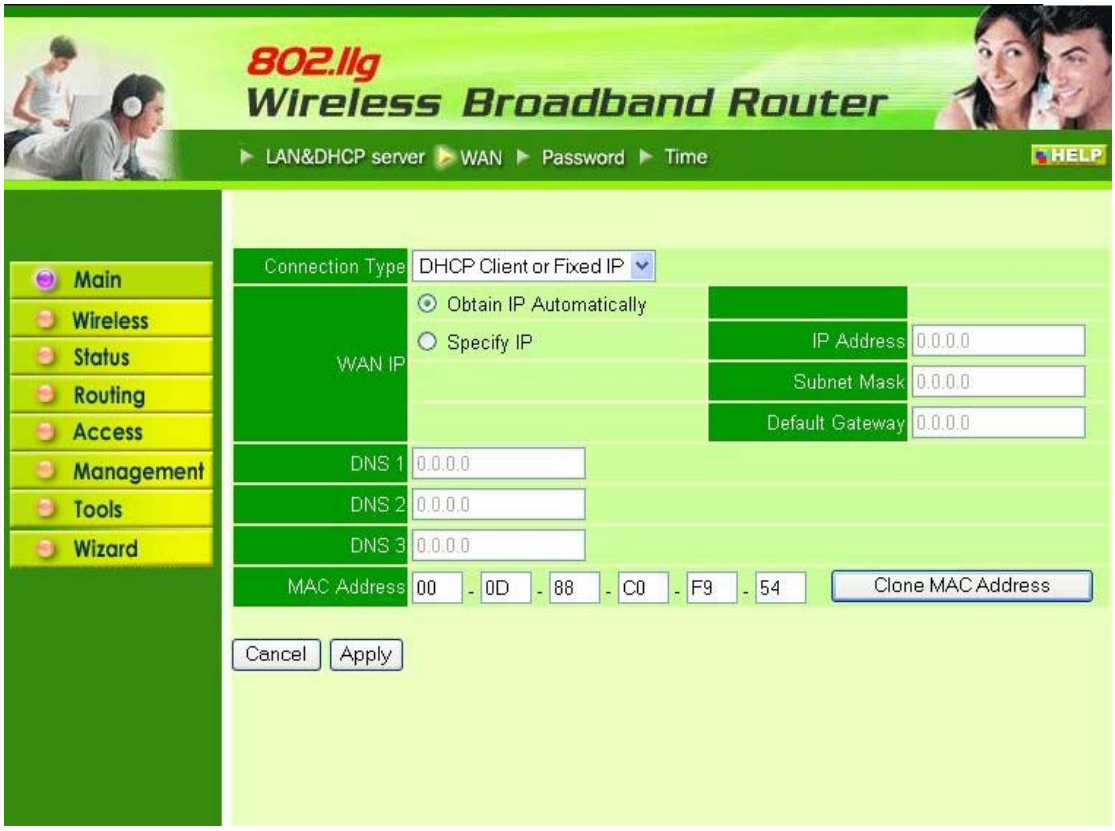
dress: This is the IP address of the router. The default IP address is 192.168.1.1.

et Mask: Type the subnet mask for the router in the text box. The default subnet mask
55.255.0.

P Server: Enables the DHCP server to allow the router to automatically assign IP addresses
es connecting to the LAN. *DHCP is enabled by default.*

HCP client computers are listed in the table at the bottom of the screen, providing the host nar
dress, and MAC address of the client.

IP: Type an IP address to serve as the start of the IP range that DHCP will use to assign
sses to all LAN devices connected to the router.



nnection Type: Select the connection type, DHCP client, Fixed IP, or PPPoE, from the drop-
.

AN IP: Select whether user wants to specify an IP address manually, or want DHCP to obtain
dress automatically. When Specify IP is selected, type the IP address, subnet mask, and d
eway in the text boxes. User's ISP will provide with this information.

NS 1/2/3: Type up to three DNS numbers in the text boxes. User's ISP will provide wit
ormation.

AC Address: If required by user's ISP, type the MAC address of the router WAN interface i
ld.

NS 1/2/3: Type up to three DNS numbers in the text boxes. User's ISP will provide wit
ormation.

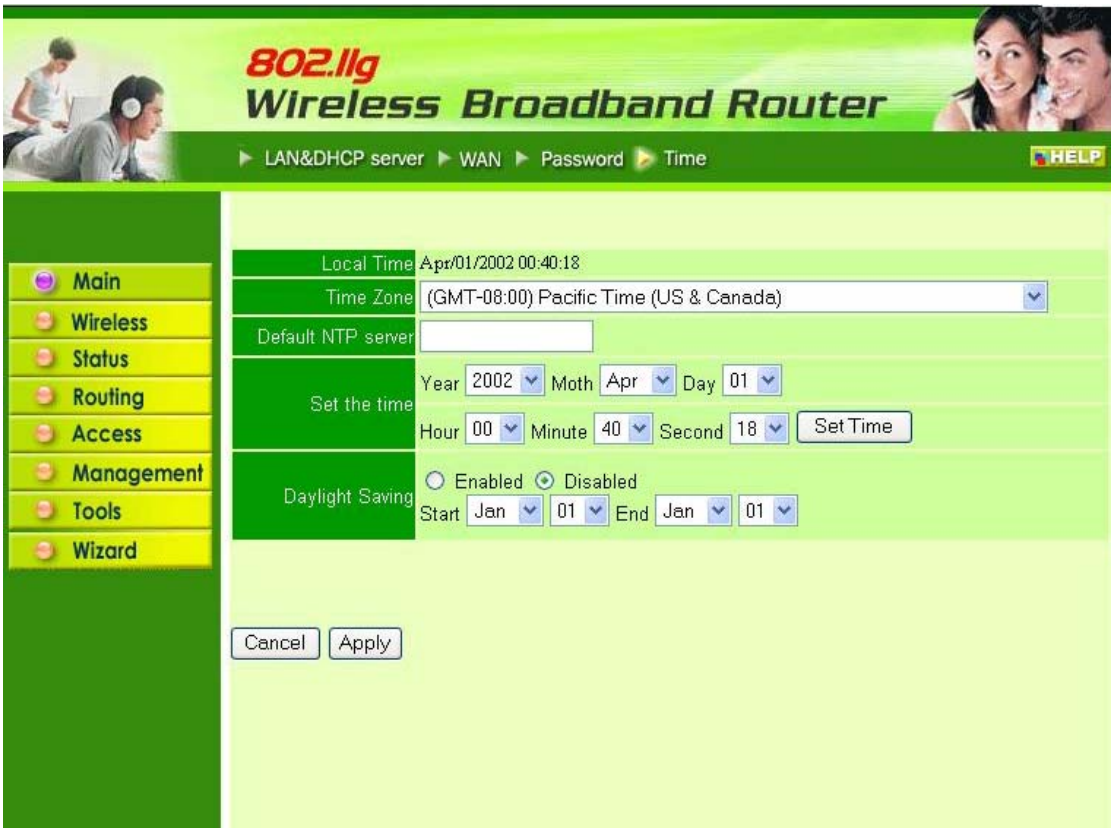
.3 Password

is screen enables user to set administrative and user passwords. These passwords are used to
cess to the router interface.

nistrator: Type the password the Administrator will use to log in to the system. The passwo
be typed again for confirmation.

Time

screen enables users to set the time and date for the router's real-time clock, select properly ti
and enable or disable daylight saving.



Time: Displays the local time and date.

Zone: Select the time zone from the drop-down list.

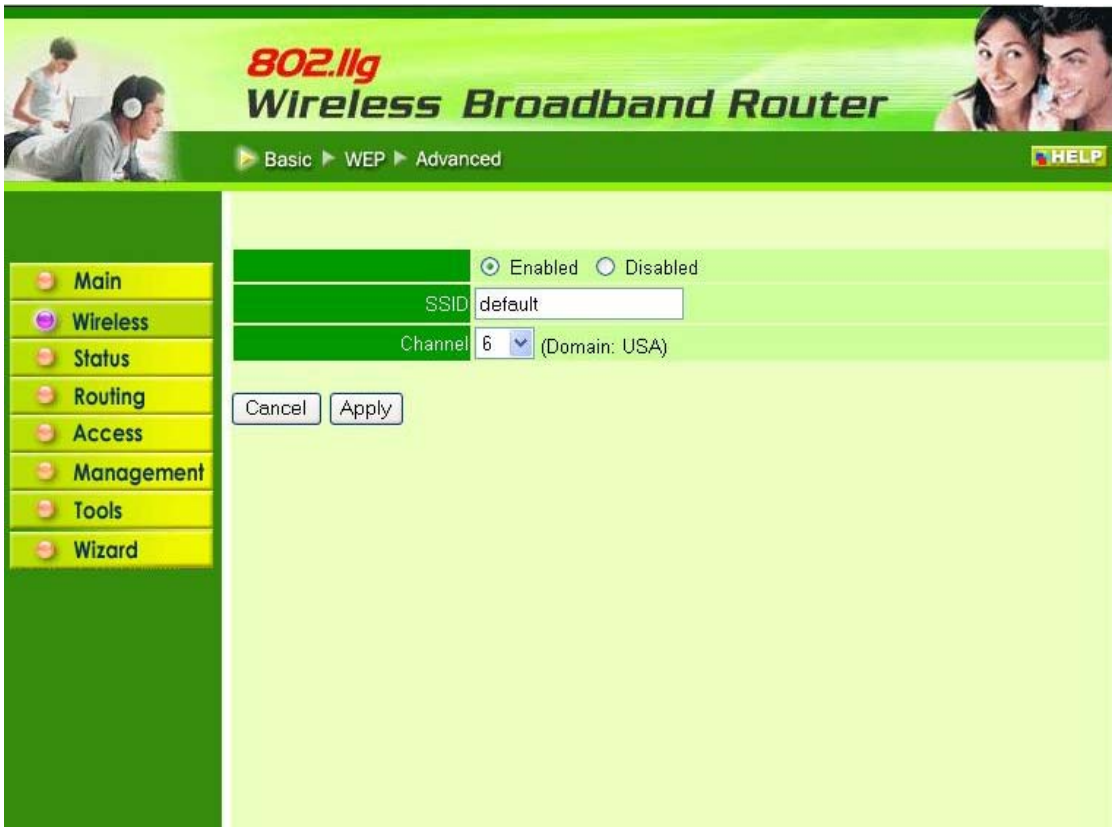
ght Saving: Enables user to enable or disable daylight saving time. When enabled, select the st
nd date for daylight saving time.

2 Wireless

is section enables users to set wireless communications parameters for the router's wireless
ture.

.1 Basic

is page enables and disables the wireless LAN function, creates a SSID, and selects the chann
reless communications.



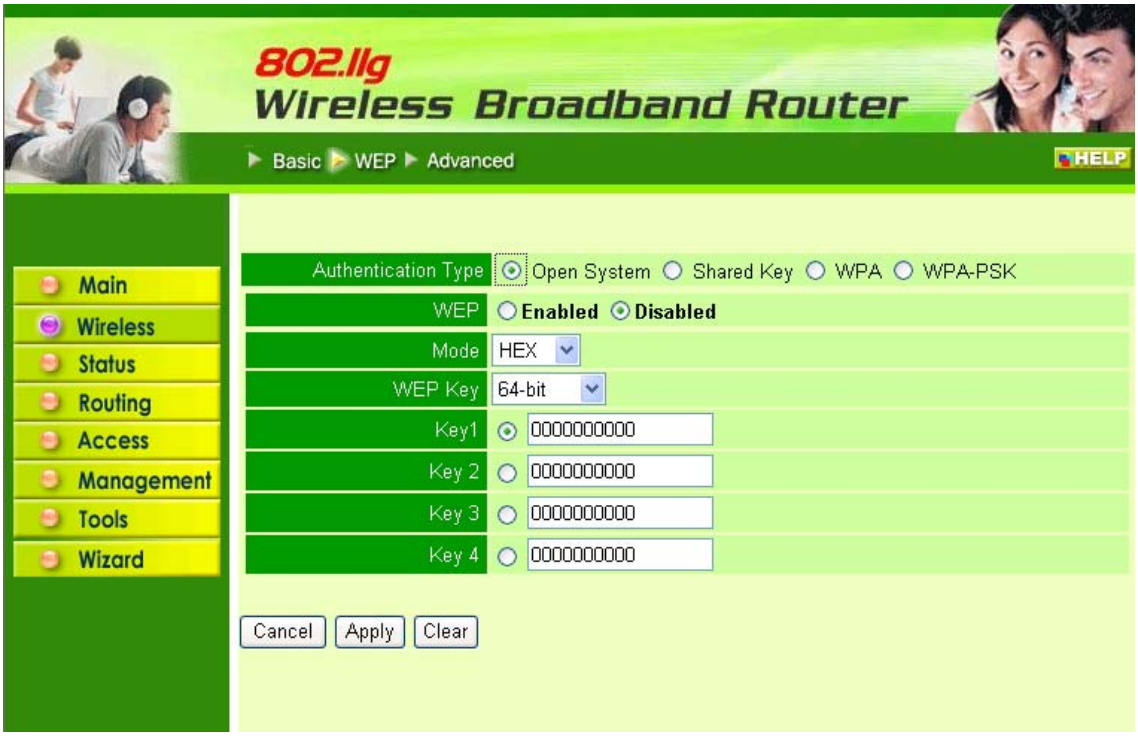
able/Disable: Enables and disables wireless LAN via the router.

ID: Type an SSID in the text box. The SSID of any wireless device must match the SSID typed
order for the wireless device to access the LAN and WAN via the router.

annel: Select a transmission channel for wireless communications. The channel of any wi
vice must match the channel selected here in order for the wireless device to access the LAN
AN via the router.

Authentication

screen enables user to set authentication type for secure wireless communications. Open Syst
s public access to the router via wireless communications. Shared Key requires the user to se
key to exchange data with other wireless clients that have the same WEP key. This router a
rts WPA and WPA-PSK.



ntication Type: The authentication type default is set to open system. There are three optio
System: Shared Key, WPA and WPA-PKS.

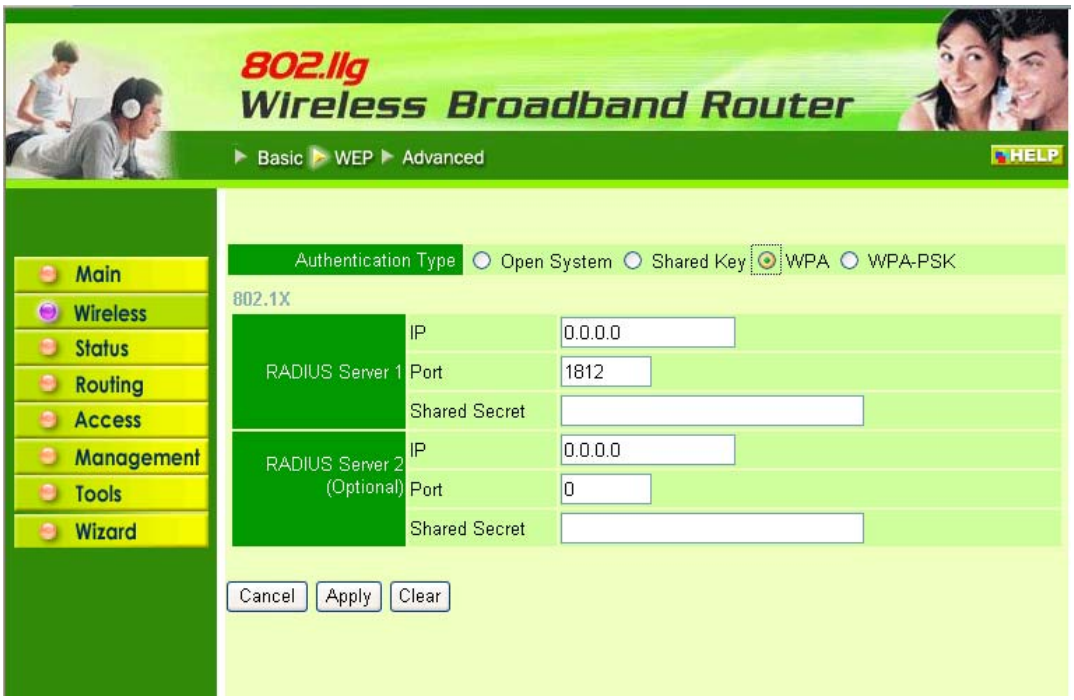
Enable or Disabled. This is to make WEP enabled or disabled.

: Select the key mode in ASCII or HEX

Key: Select the level of encryption from the drop-down list. The router supports, 64- and 128-
ption.

~ Key 4: Enables user to create an encryption scheme for Wireless LAN transmissions. Manua
a set of values for each key. Select a key to use by clicking the radio button next to the key. Cl
r" to erase key values.

WPA is selected, the below screen is shown. Please set the length of the encryption key ar
rameters for the RADIUS server.



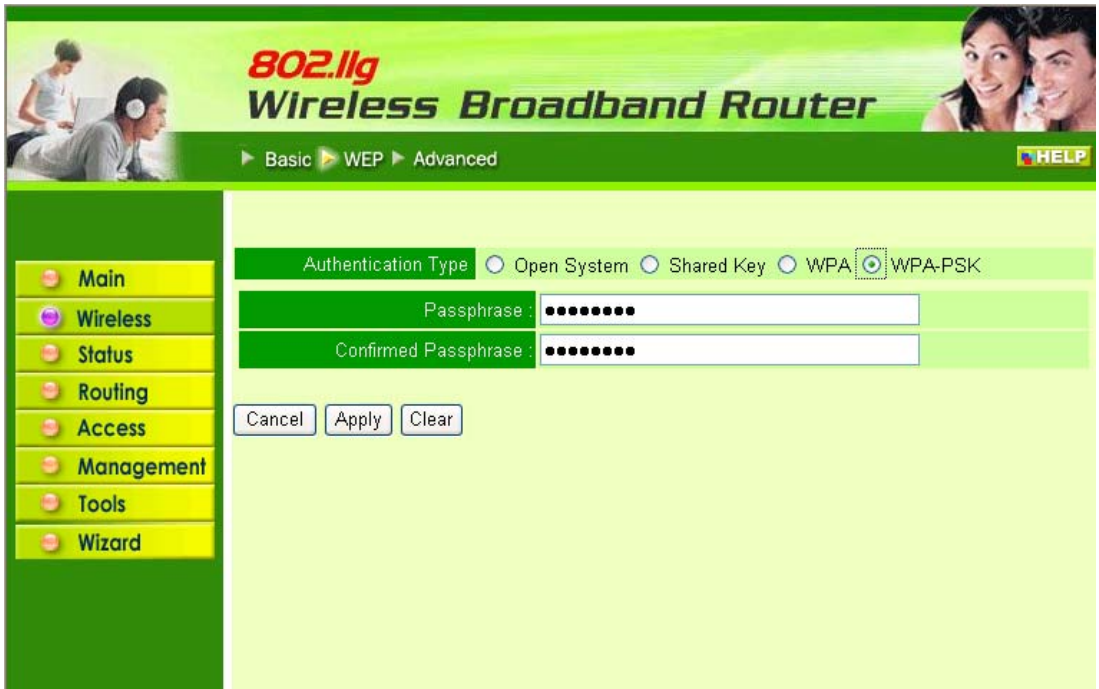
ADIUS Server:

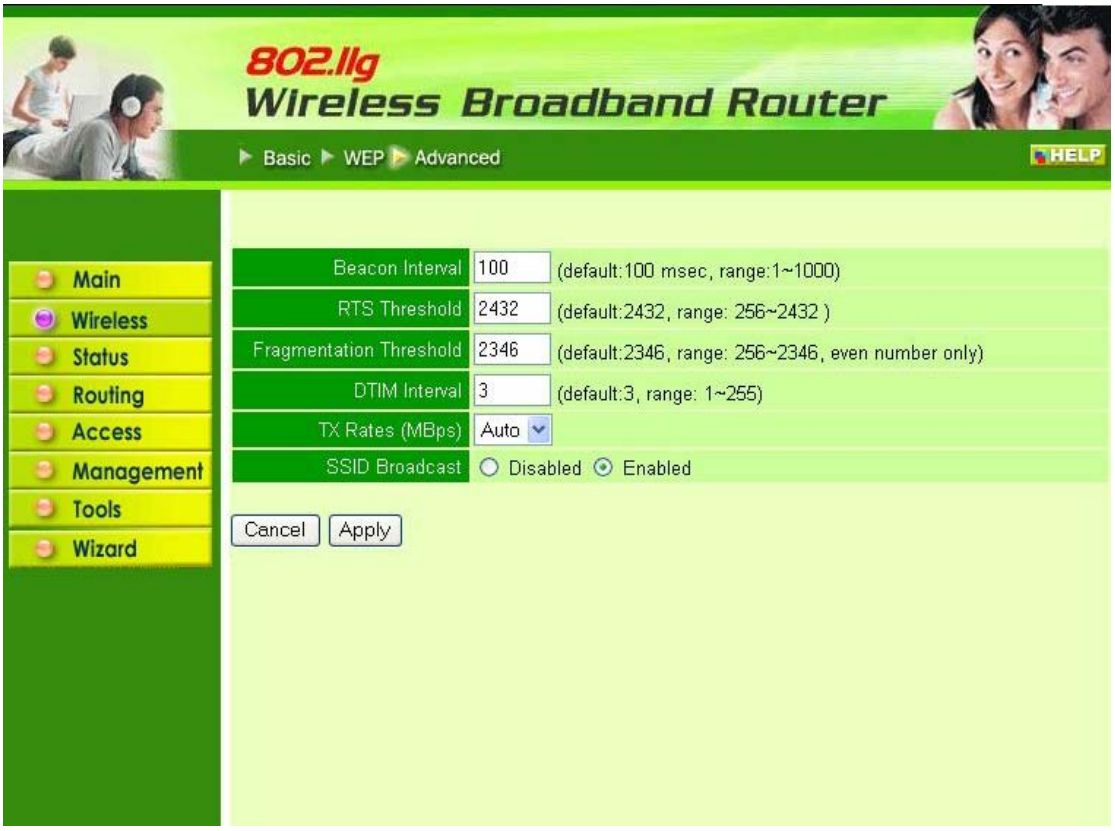
Enter the **IP address** of and the **Port** used by the **Primary** Radius Server

Enter the **Shared Secret**, which is used by the Radius Server.

Enter the **IP address** of, **Port** and **Shared Secret** used by the **Secondary** Radius Server.

WPA-PSK is selected, please set the PSK key in the pass phrase field. The pass phrase shou
ght characters at least.





on Interval: Type the beacon interval in the text box. User can specify a value from 1 to 1000. T
lt beacon interval is 100.

Threshold: Type the RTS (Request-To-Send) threshold in the text box. This value stabilizes d
If data flow is irregular, choose values between 256 and 2432 until data flow is normalized.

mentation Threshold: Type the fragmentation threshold in the text box. If packet transfer er
are high, choose values between 256 and 2432 until packet transfer rates are minimized. (NOT
is fragmentation threshold value may diminish system performance.)

I Interval: Type a DTIM (Delivery Traffic Indication Message) interval in the text box. User c
fy a value between 1 and 65535. The default value is 3.

ates (Mbps): Select one of the wireless communications transfer rates, measured in megabytes
d, based upon the speed of wireless adapters connected to the WLAN.

Status

selection enables user to view the status of the router LAN, WAN connections, and view logs a
tics pertaining to connections and packet transfers.

Device Information

screen enables user to view the router LAN, Wireless and WAN configuration

N: This field displays the router's LAN interface MAC address, IP address, subnet mask, and D
ver status. Click “DHCP Table” to view a list of client stations currently connected to the
N interface.

reless: Displays the router's wireless connection information, including the router's wireless inte
AC address, the connection status, the SSID status, which channel is being used, and whether W
abled or not.

AN: This field displays the router's WAN interface MAC address, DHCP client status, IP ad
net mask, default gateway, and DNS.

ck “DHCP Release” to release all IP addresses assigned to client stations connected to the WA
router. Click “DHCP Renew” to reassign IP addresses to client stations connected to the WAN

.2 Log

is screen enables user to view a running log of router system statistics, events, and activities. Th
plays up to 200 entries. Older entries are overwritten by new entries. The Log screen comman
follows:

ck “First Page” to view the first page of the log

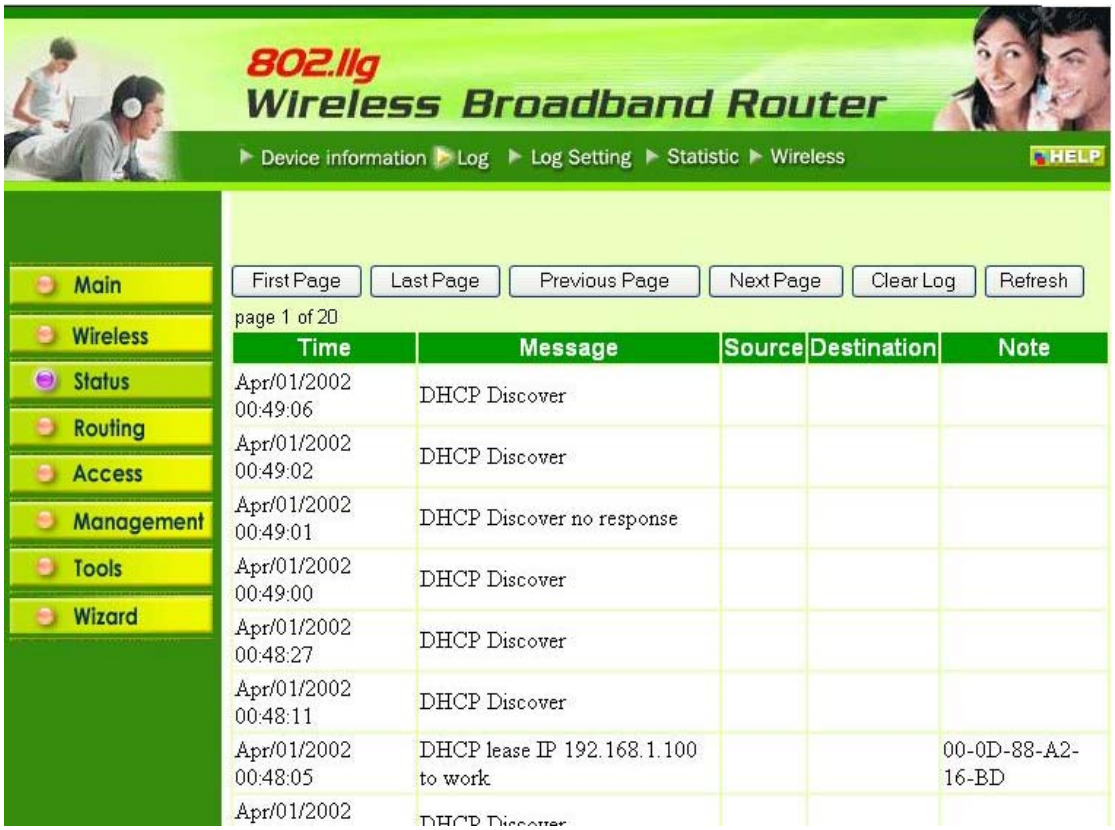
ck “Last Page” to view the final page of the log

ck “Previous Page” to view the page just before the current page

ck “Next Page” to view the page just after the current page

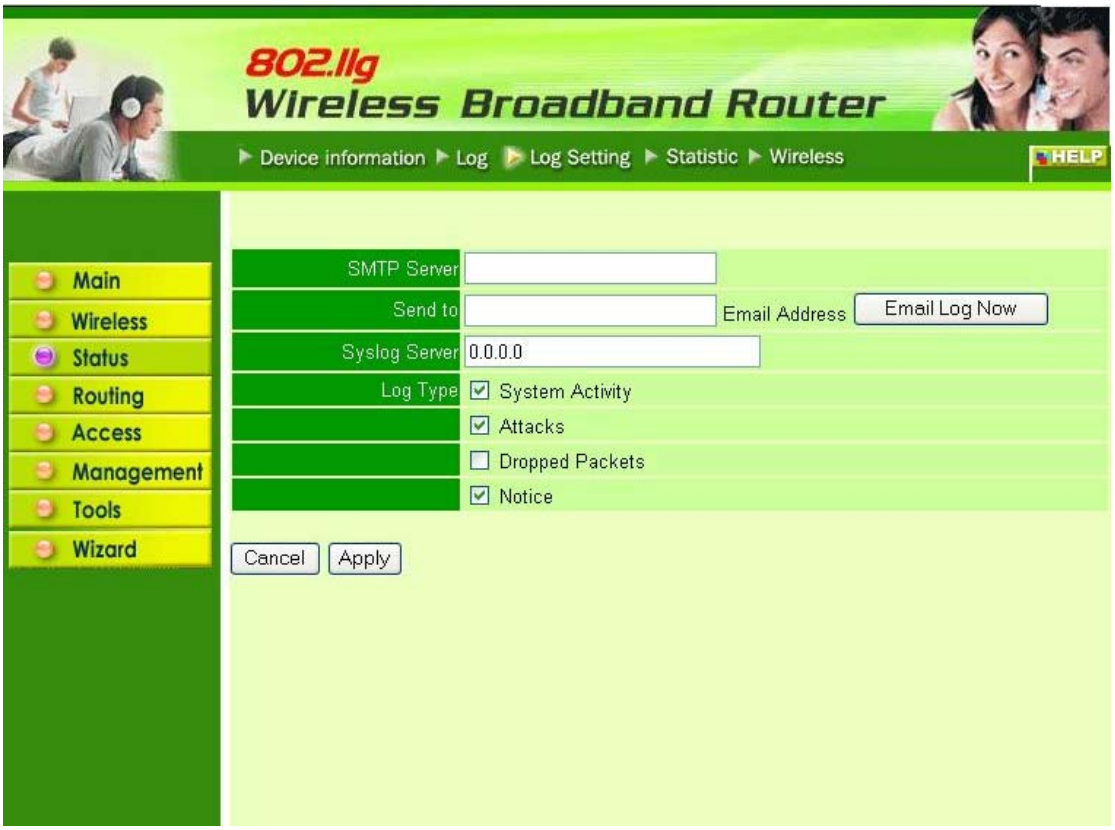
ck “Clear Log” to delete the contents of the log and begin a new log

ck “Refresh” to renew log statistics



Log Setting

screen enables user to set router logging parameters.



P Server: Type the SMTP server address for the recipient email in the next field.

to: Type an email address for the log to be sent to. Click “Email Log Now” to immediately se
urrent log.

g Server: Type the IP address of the Syslog Server if user wants the router to listen and rece
ning Syslog messages.

Type: Enables user to select what items will be included in the log:

System Activity: Displays information related to router operation.

Debug Information: Displays information related to errors and system malfunction.

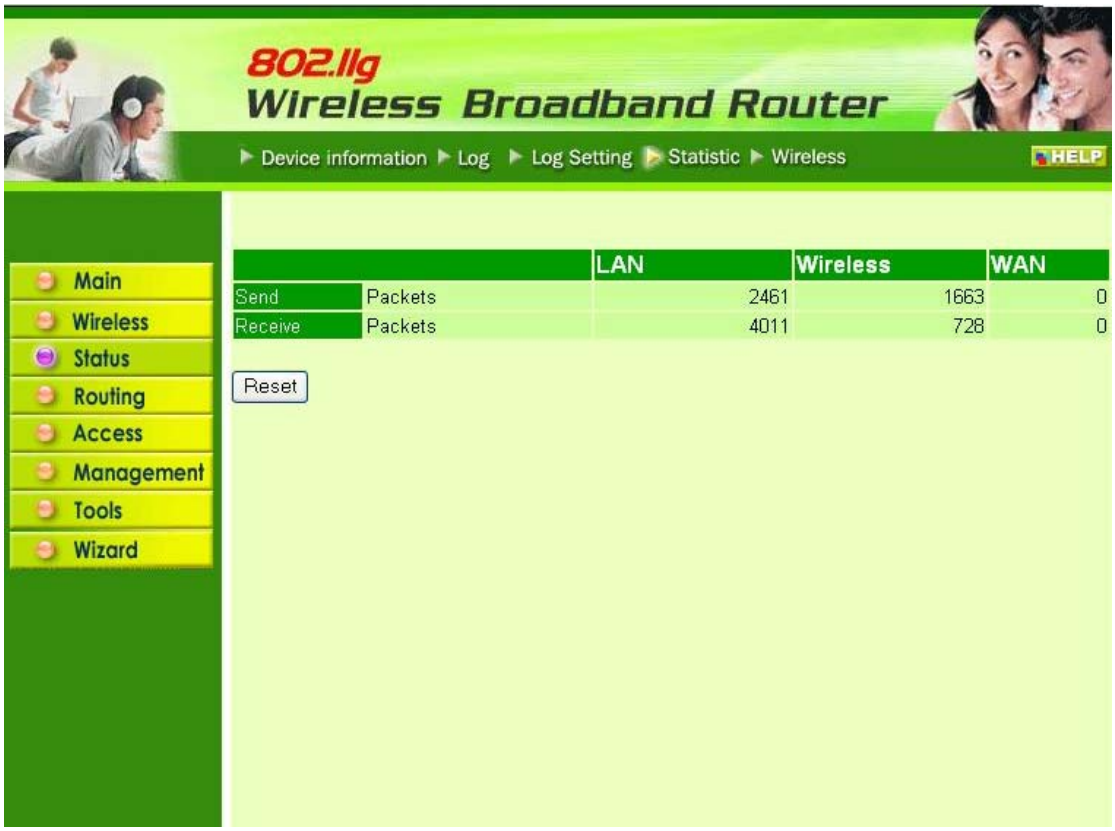
Attacks: Displays information about any malicious activity on the network.

Dropped Packets: Displays information about packets that have not been transfer
successfully.

Notice: Displays important notices by the system administrator.

.4 Statistic

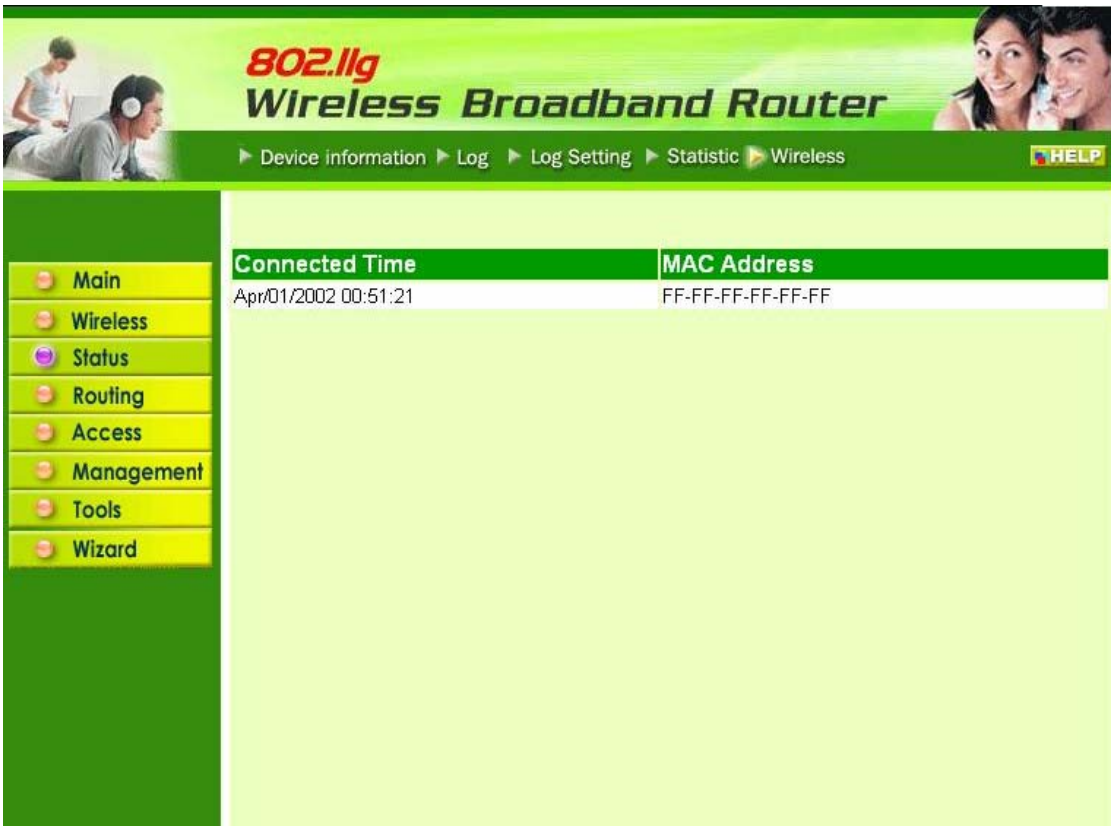
is screen displays a table that shows the rate of packet transmission via the router LAN and W
rts (in bytes per second).



ck “Reset” to erase all statistics and begin logging statistics again.

Wireless

screen enables user to view information about wireless devices that are connected to the wirel
r.



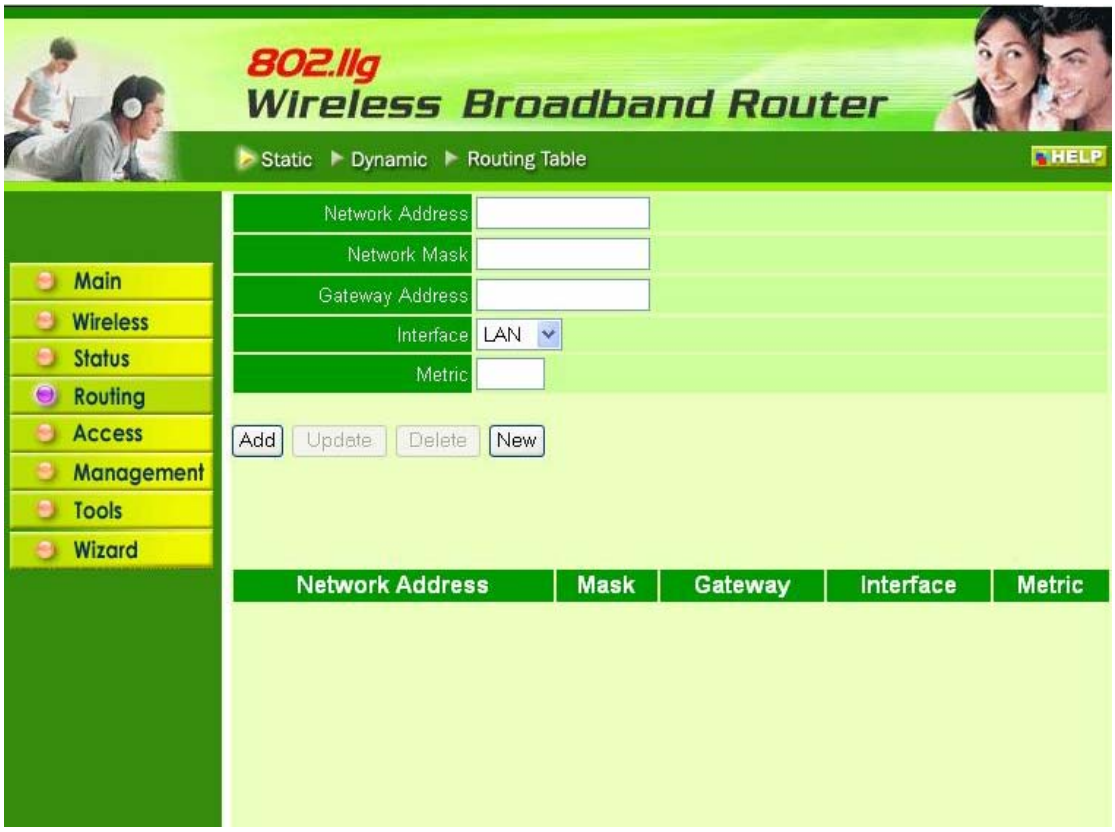
ected Time: Displays how long the wireless device has been connected to the LAN via the route
Address: Displays the devices wireless LAN interface MAC address.

4 Routing

is selection enables user to set how the router forwards data: Static and Dynamic. Routing ables user to view the information created by the router that displays the network interconne ology.

.1 Static

enables user to set parameters by which the router forwards data to its destination if user's ne s a static IP address.



twork Address: Type the static IP address user's network uses to access the Internet. User's I work administrator provides user with this information.

twork Mask: Type the network (subnet) mask for user's network. If user does not type a value network mask defaults to 255.255.255.255. User's ISP or network administrator provides use s information.

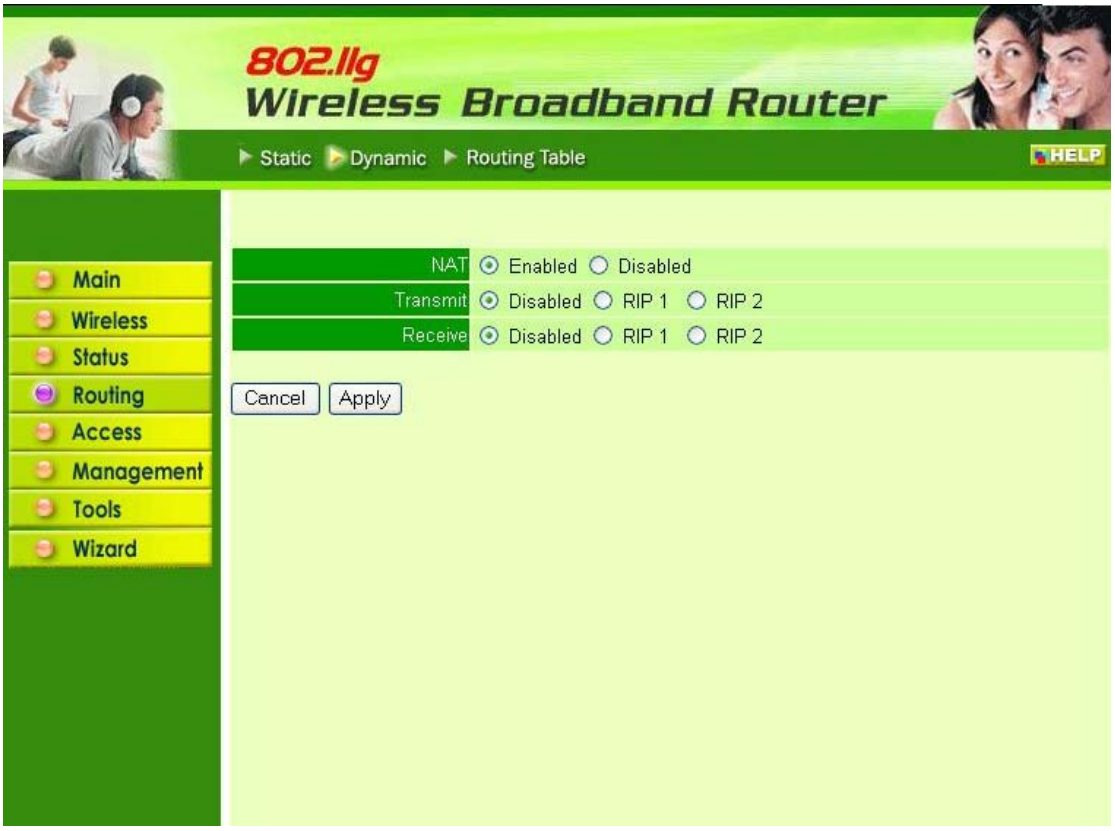
teway Address: Type the gateway address for network. User's ISP or network administrator pro er with this information.

erface: Select an interface, WAN or LAN, to connect to the Internet.

tric: Select which metric that user want to apply to this configuration.

d: Click to add the configuration to the static IP address table at the bottom of the page.

date: Select one of the entries in the static IP address table at the bottom of the page and,



Click the radio buttons to enable or disable NAT.

mit: Click the radio buttons to set the desired transmit parameters, disabled, RIP 1, or RIP 2.

ve: Click the radio buttons to set the desired transmit parameters, disabled, RIP 1, or RIP 2.

Routing Table

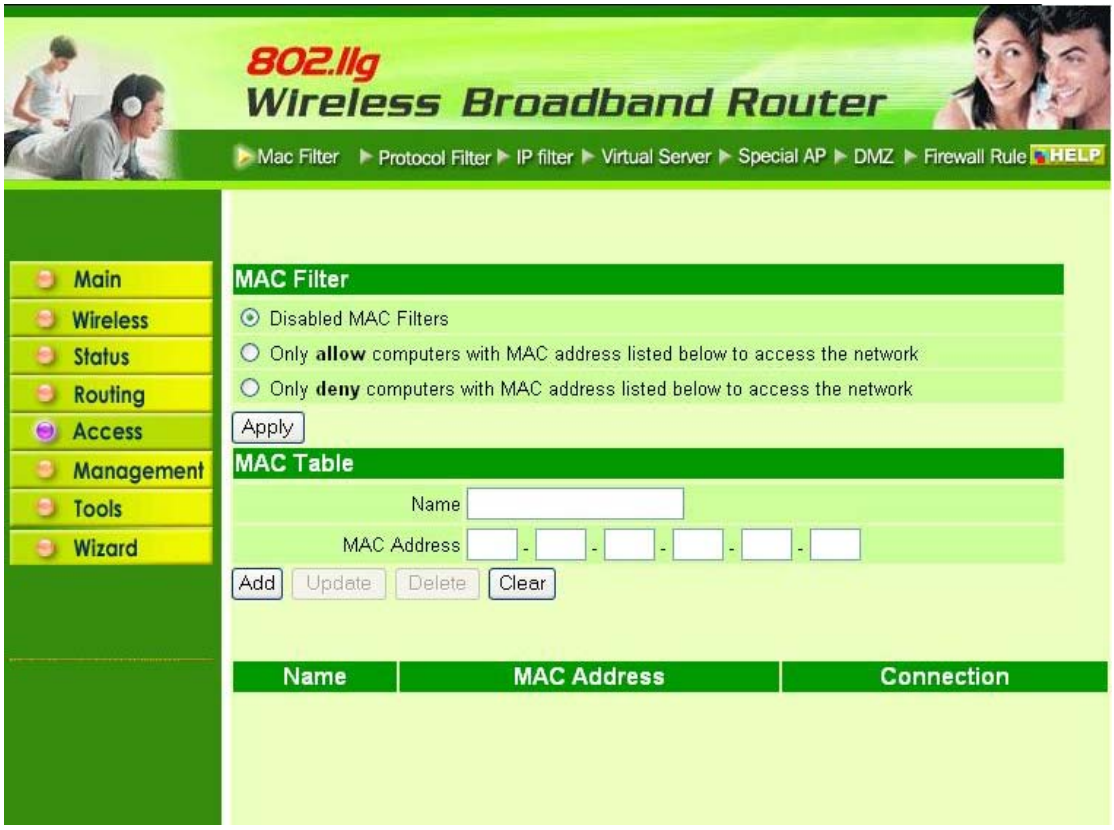
screen enables user to view the routing table for the router. The routing table is a database crea
e router that displays the network interconnection topology.

5 Access

is page enables user to define access restrictions, set up protocol and IP filters, create virtual se
fine access for special applications such as games, and set firewall rules.

.1 MAC Filters

ables user to allow or deny Internet access to users within the LAN based upon the MAC addr
ir network interface. Click the radio button next to “Disabled” to disable the MAC filter.



sable: Once the function of MAC filter is disabled, those listed in the MAC Table are all
ernet access.

able: All users are allowed Internet access except those users in the MAC Table are denied In
cess.

AC Table: Use this section to create a user profile which Internet access is denied or allowed
er profiles are listed in the table at the bottom of the page. (Note: Click anywhere in the item.
line is selected, the fields automatically load the item's parameters, which user can edit.)

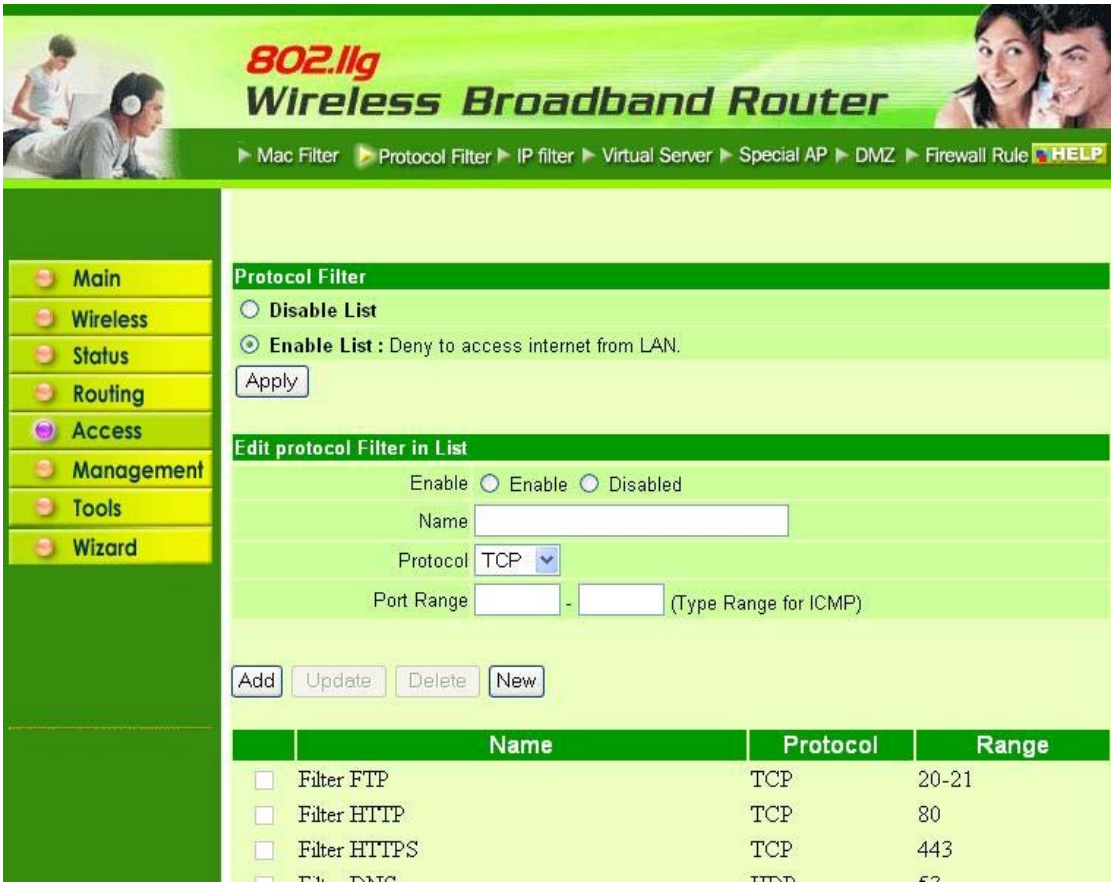
me: Type the name of the user to be permitted/denied access.

AC Address: Type the MAC address of the user's network interface.

d: Click to add the user to the list at the bottom of the page.

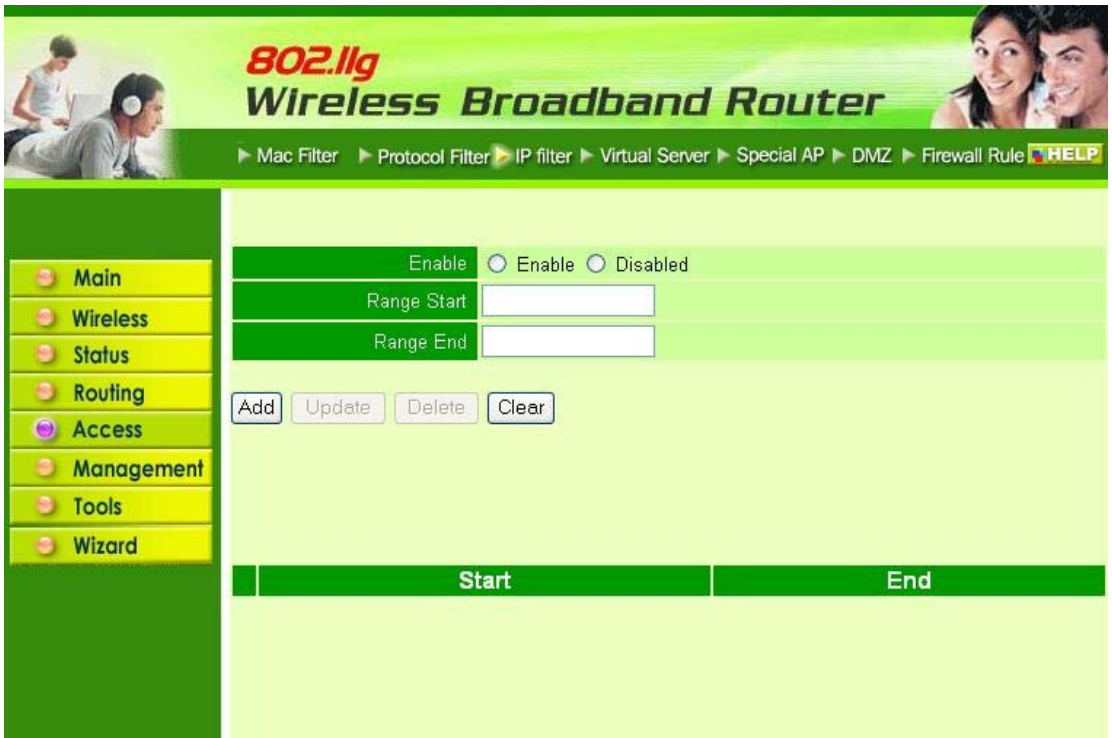
date: Click to update information for the user, if user has changed any of the fields.

lete: Select a user from the table at the bottom of the list and click “Delete” to remove the
file.



IP Filter

screen enables user to define a minimum and maximum IP address range filter; no IP addres
g within the range are allowed Internet access. The IP filter profiles are listed in the table at
m of the page. (Note: Click anywhere in the item. Once the line is selected, the fie
natically load the item's parameters, which user can edit.)

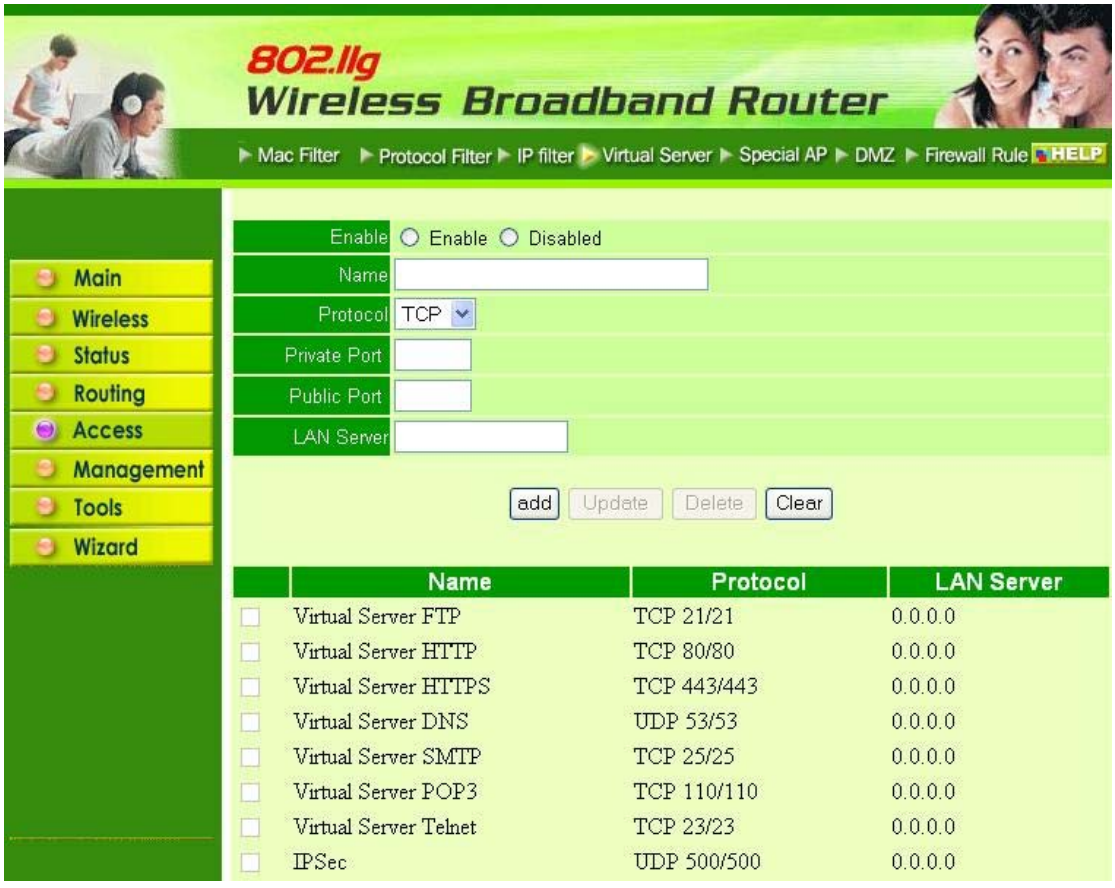


w: Click “New” to erase all fields and enter new information.

.4 Virtual Server

is screen enables user to create a virtual server via the router. If the router is set as a virtual s
note users requesting Web or FTP services through the WAN are directed to local servers i
AN. The router redirects the request via the protocol and port numbers to the correct LAN server
rtual Sever profiles are listed in the table at the bottom of the page.

te: When selecting items in the table at the bottom, click anywhere in the item. The line is sel
d the fields automatically load the item's parameters, which user can edit.



able: Click to enable or disable the virtual server.

me: Type a descriptive name for the virtual server.

otocol: Select a protocol (TCP or UDP) to use for the virtual server.

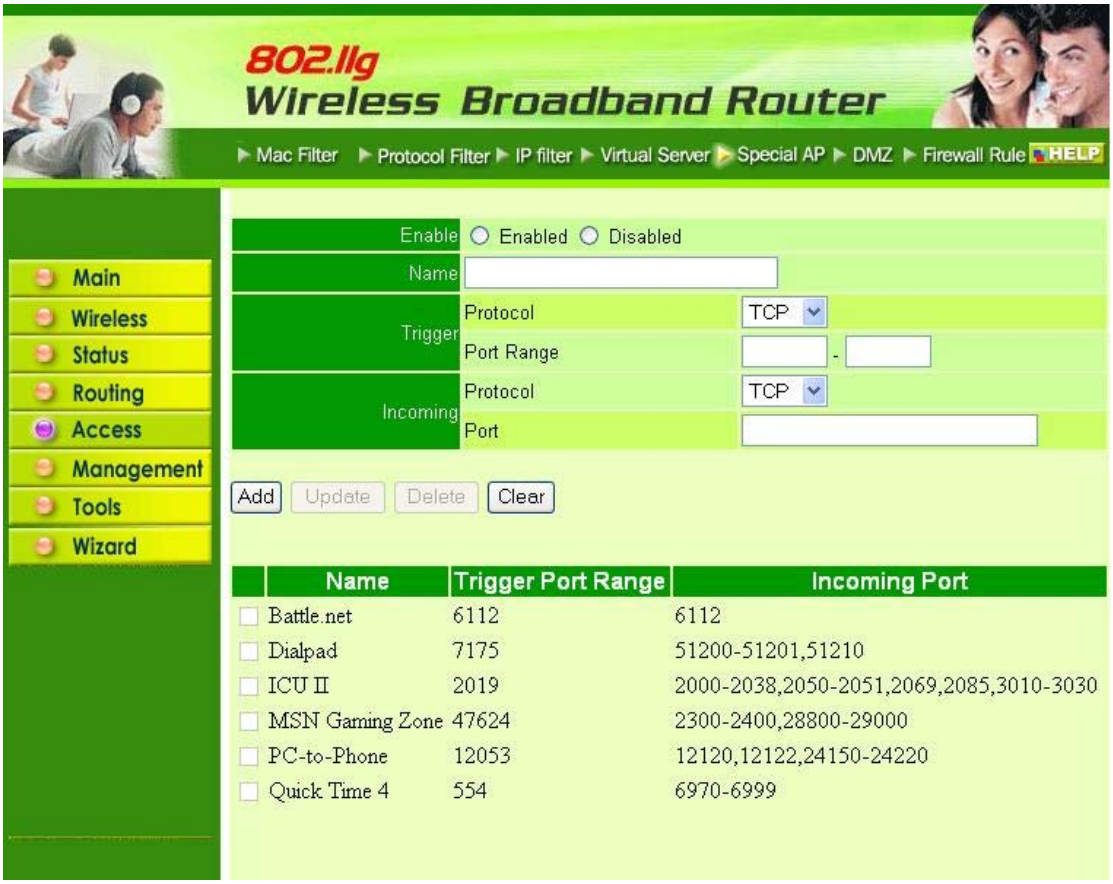
ivate Port: Type the port number of the computer on the LAN that is being used to act as a v
ver.

blic Port: Type the port number on the WAN that will be used to provide access to the virtual se

N Server: Type the LAN IP address that will be assigned to the virtual server.

d: Click to add the virtual server to the table at the bottom of the screen.

date: Click to update information for the virtual server if user have selected a list item and



le: Click to enable or disable the application profile. When enabled, users will be able to conn application via the router WAN connection. Click "Disabled" on a profile to prevent users fr sing the application on the WAN.

: Type a descriptive name for the application.

er: Defines the outgoing communication that determines whether the user has legitimate access pplication.

Protocol: Select the protocol (TCP, UDP, or ICMP) that can be used to access the application.

Port Range: Type the port range that can be used to access the application in the text boxes.

Incoming: Defines which incoming communications users are permitted to receive.

Protocol: Selects the protocol (TCP, UDP, or ICMP) that can be used by the incomi communication.

Port: Type the port number that can be used for the incoming communication.

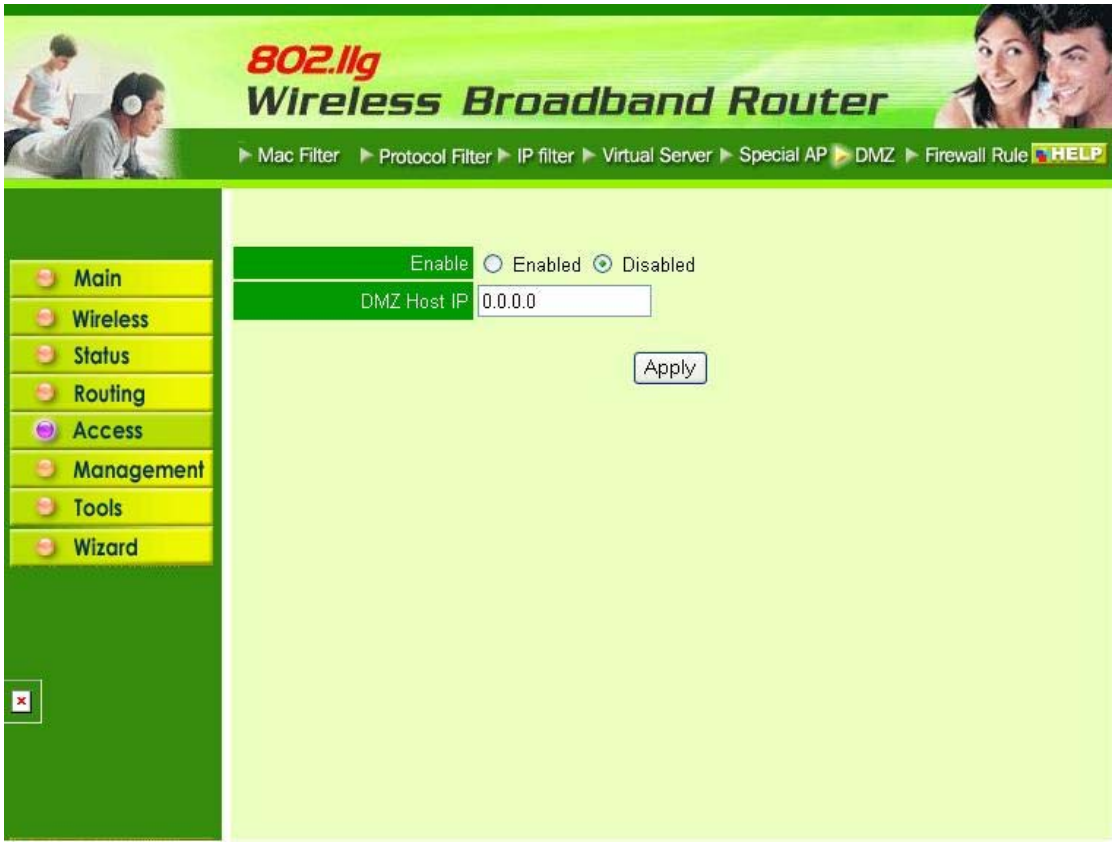
Click to add the special application profile to the table at the bottom of the screen.

te: Click to update information for the special application if user have selected a list item and ha changes.

e: Select a list item and click Delete to remove the item from the list.

Click "New" to erase all fields and enter new information.

DMZ



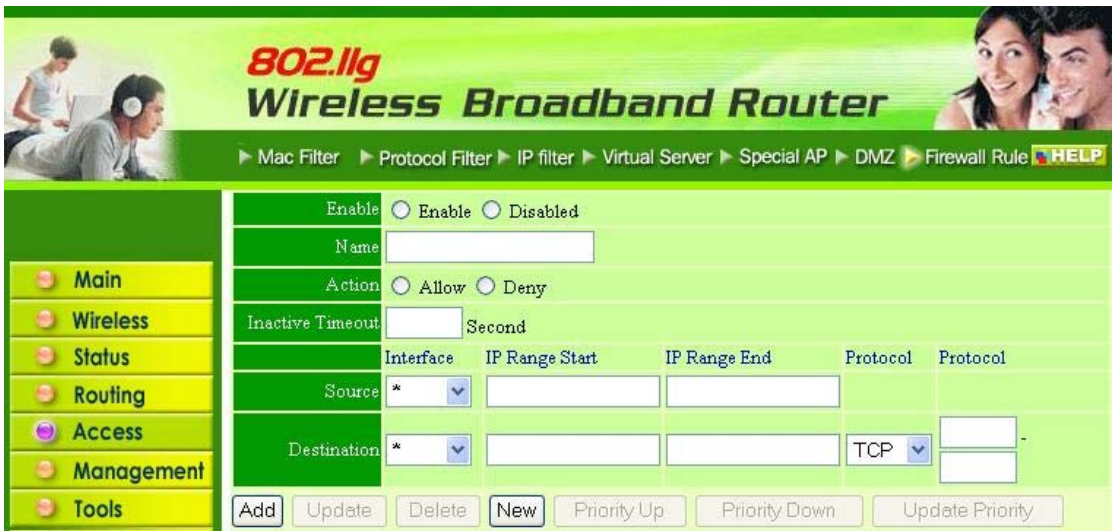
able: Click to enable or disable the DMZ.

MZ Host IP: Type a host IP address for the DMZ. The computer with this IP address acts as a st with unlimited Internet access.

ply: Click to save the settings.

.7 Firewall Rule

is screen enables user to set up the firewall. The router provides basic firewall functions, by fil the packets that enter the router using a set of rules. The rules are in an order sequence list--the rule number, the higher the priority the rule has.



e: Defines the source of the incoming packet where rule is applied.
Interface: Select which interface (WAN or LAN) the rule is applied to.
IP Range Start: Type the start IP address where rule is applied.
IP Range End: Type the end IP address where rule is applied.
nation: Defines the destination of the incoming packet where rule is applied.
Interface: Select which interface (WAN or LAN) the rule is applied to.
IP Range Start: Type the start IP address where rule is applied.
IP Range End: Type the end IP address where rule is applied.
Protocol: Select the protocol (TCP, UDP, or ICMP) of the destination.
Port Range: Select the port range.
Click to add the rule profile to the table at the bottom of the screen.
te: Click to update information for the rule if user have selected a list item and have ma
ges.
e: Select a list item and click **"Delete"** to remove the item from the list.
Click **"New"** to erase all fields and enter new information.
ity Up: Select a rule from the list and click **"Priority Up"** to increase the priority of the rule.
ity Down: Select a rule from the list and click **"Priority Down"** to decrease the priority of

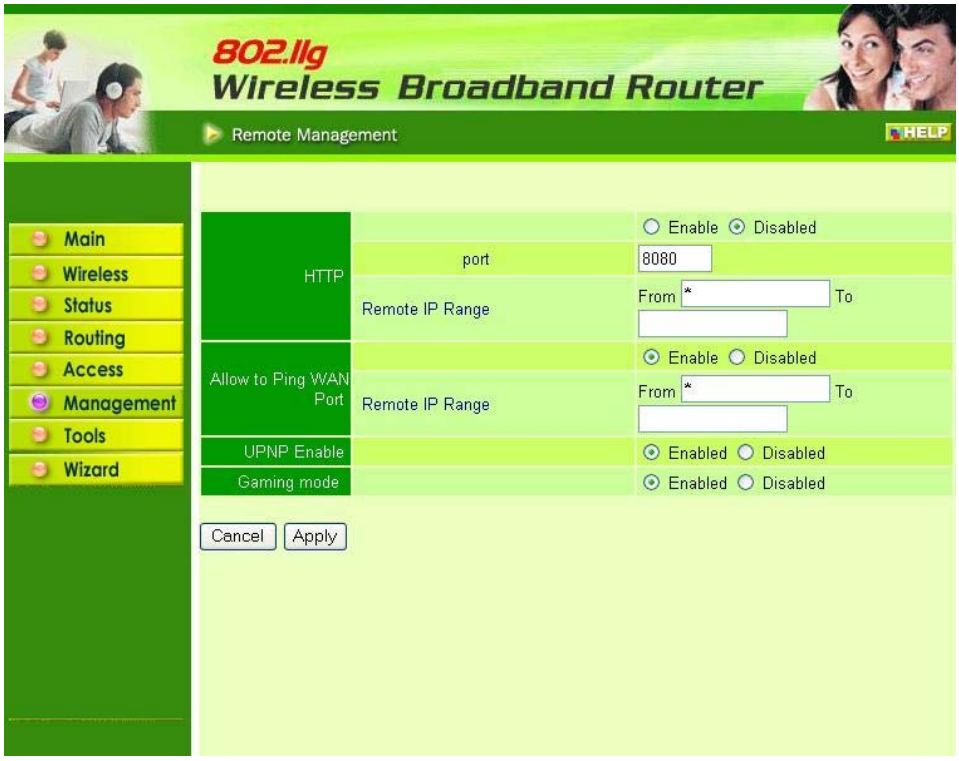
te Priority: After increasing or decreasing the priority of a rule, click **"Update Priority"** to sa
anges.

6 Management

anagement enables user to set up Remote Management features.

.1 Remote Management

is screen enables user to set up remote management. Using remote management, the router c
nfigured via a Web browser. A user name and password are required to perform remote manage



TP: Enables user to set up HTTP access for remote management.

ow to Ping WAN Port: Type a range of router IP addresses that can be pinged from remote locat

PNP: UPNP is short for Universal Plug and Play that is a networking architecture that pro
mpatibility among networking equipment, software, and peripherals. The Router is an UPnP en
uter and will only work with other UPnP devices/software. If user does not want to use the
nctionality, selecting “Disabled” can disable it.

AMING MODE: If user is experiencing difficulties when playing online games or even c
plications that use voice data, user may need to enable Gaming Mode for these applications to
rrectly. When not playing games or using these voice applications, it is recommended that Ga
ode be disabled.

TP: Enables user to set up PPTP access for remote management.

Sec: Enables user to set up IPSec access for remote management.

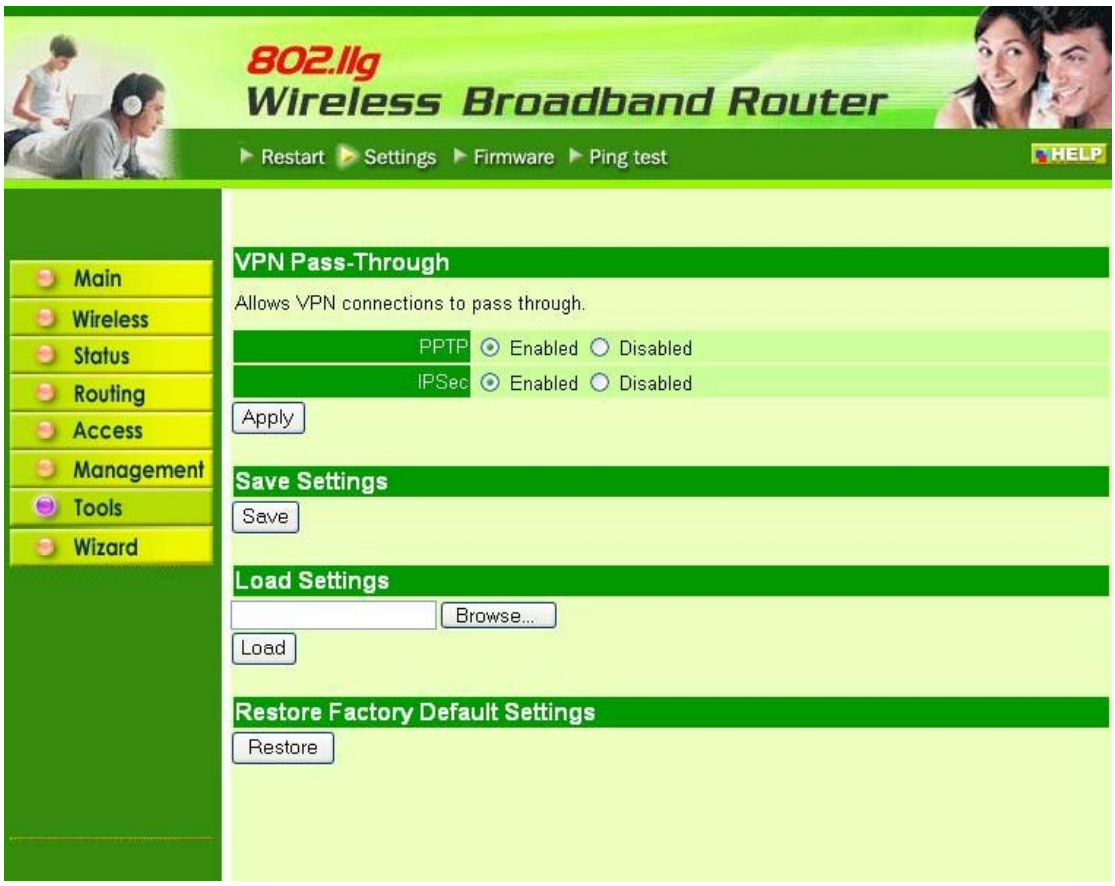
ENT: Default is stealth. This enables user to set port 113 stealth.

7 Tools


802.11g
Wireless Broadband Router
Restart
Settings
Firmware
Ping test
HELP
Main
Wireless
Status
Routing
Access
Management
Tools
Wizard
Restart

.2 Settings

is screen enables user to save settings as a profile and load profiles for different circumstances. n also load the factory default settings, and run a setup wizard to configure the router and erface.



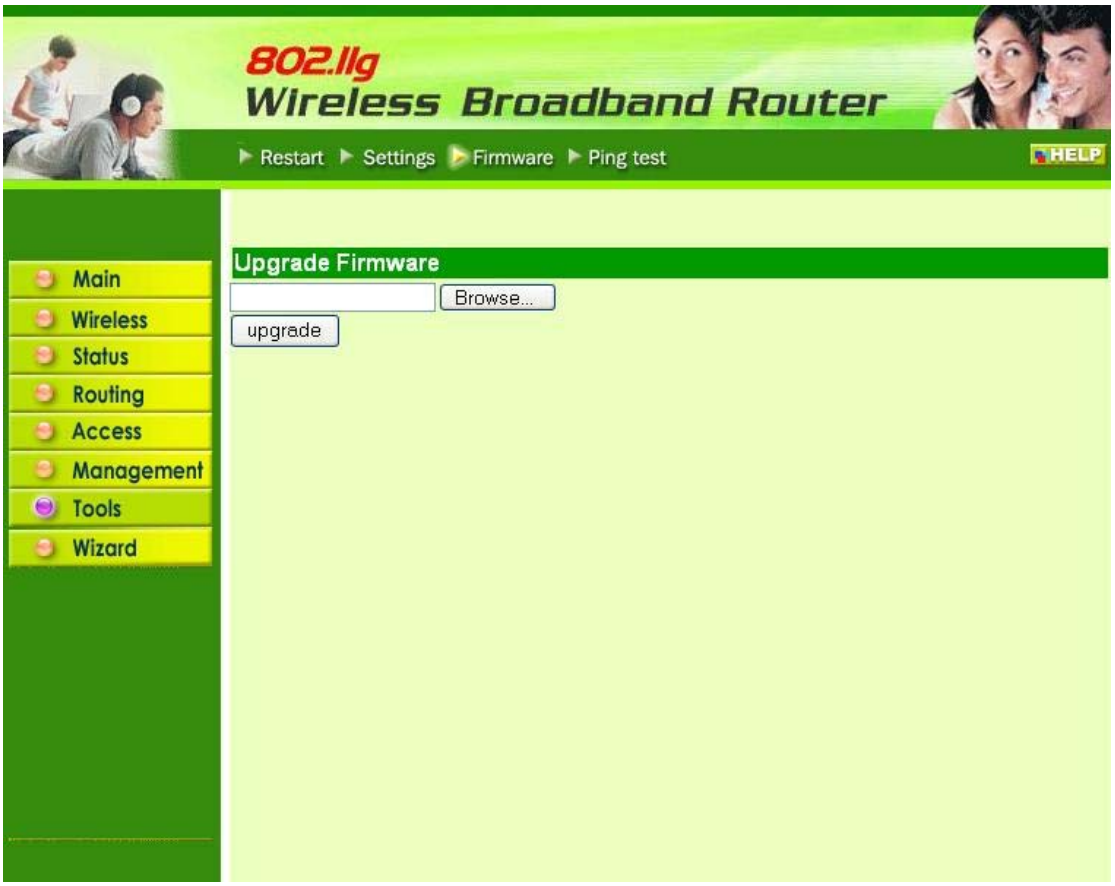
ve Settings: Click “Save” to save the current configuration as a profile that can load when neces

ad Settings: Click “Browse” and go to the location of a stored profile. Click “Load” to load the ofile's settings.

store Factory Default Settings: Click “Restore” to restore the default settings. All configuration anges will be lost.

Firmware

screen enables user to keep the router firmware up to date.



e follow the below instructions:

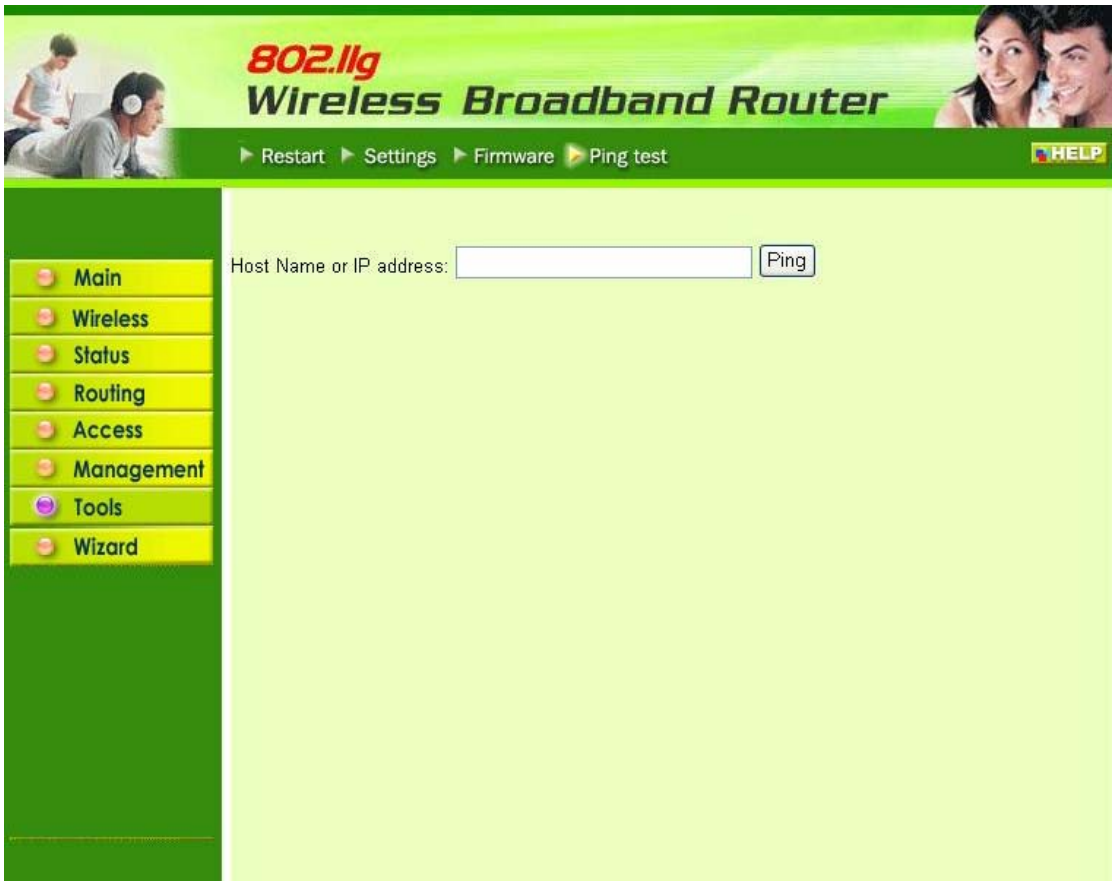
load the latest firmware from the manufacturer's Web site, and save it to disk.

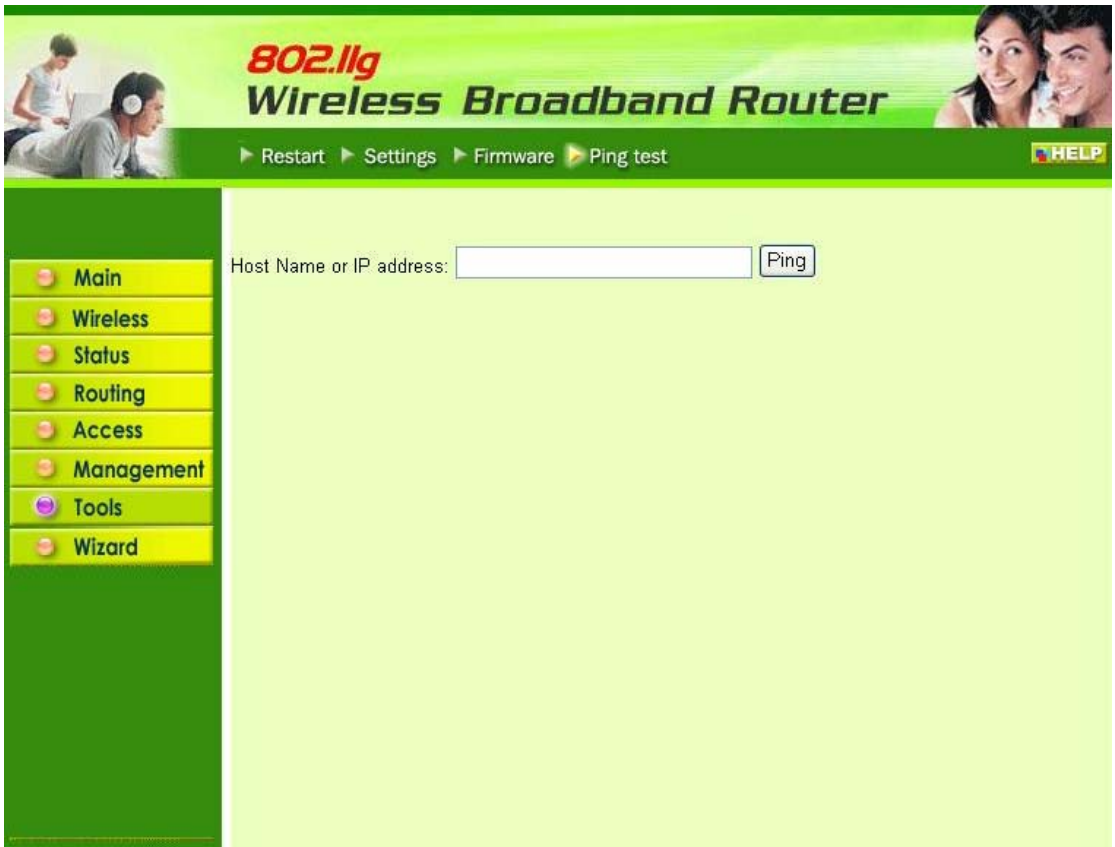
“Browse” and go to the location of the downloaded firmware file.

t the file and click “Upgrade” to update the firmware to the latest release.

.4 Ping Test

e ping test enables user to determine whether an IP address or host is present on the Internet. host name or IP address in the text box and click Ping.





Technical Specifications	
Standards	IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.11g; IEEE 802.11b
Protocol	CSMA/CD
Radio Technology	IEEE 802.11g Orthogonal Frequency Division Modulation
Data Transfer Rate	802.11b: 1, 2, 5.5, 11Mbps (auto sense) 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps @802.11g(auto sense) Ethernet: 10Mbps (half duplex), 20Mbps (full-duplex) Fast Ethernet: 100Mbps (half duplex), 200Mbps (full- duplex)
Topology	Star
Receiver Sensitivity	54Mbps: Typical -70dBm @ 10% PER (Packet Error Rate) 11Mbps: Typical -85dBm @ 8% PER (Packet Error Rate)
TX Power	13dBm typically @ 802.11g 13dBm typically @ 802.11b
Network Cables	10Base-T: 2-pair UTP Cat. 3,4,5 (100 m), EIA/TIA- 568 100-ohm STP (100 m) 100Base-TX: 2-pair UTP Cat. 5 (100 m), EIA/TIA-568 100-ohm STP (100 m)
Frequency Range	2412 ~ 2484 MHz ISM band (channels 1 ~ 14)
Modulation Schemes	DBPSK/DQPSK/CCK/OFDM
Security	64/128-bits WEP Encryption; WPA, WPA-PSK
Channels	1 ~ 11 channels (FCC); 1 ~ 13 channels (ETSI); 1 ~ 14 channels (MKK)
Number of Ports	LAN: 4 x 10/100Mbps Auto-MDIX Fast Ethernet port WAN: 1 x 10/100Mbps Auto-MDIX Fast Ethernet port
Physical and Environmental	
DC inputs	DC 5V 2.5A
Power Consumption	3W (Max)
Temperature	Operating: 0° ~ 40° C, Storage: -10° ~ 70° C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
Dimensions	147 x 115 x 35 mm (W x H x D) without Antenna
EMI:	FCC Class B, CE Mark B