TRENDnet®

User's Guide

TEW-671BR

1.01

Table of Content

1. Introduction

1.1. Summary

TEW-671BR is a Dual Band Concurrent Wireless 11N Broadband Router with dual CPU that offers user unprecedented network performance. WMM support boosts streaming and multimedia intensive services. It supports 2.4GHz band under 802.11 b/g/n modes while providing 5GHz band to guarantee an interference-free network access.

Multiple SSID provides advance users to manage multiple users of various needs. Isolation, filter, firewall and full coverage of security standards promise a secure network environment.

Dual CPU operates work simultaneously therefore users can enjoy gaming, music or HD video on 5GHz band while web-surfing or emailing on 2.4GHz. It also provides with built-in 4-port full-duplex 10/100 Fast Switch that allows wired Ethernet for standard PC and other network devices. TEW-671BR is definitely the optimal choice for both SOHO and small business entities.

1.2. Wireless Performance Considerations

There are a number of factors that can impact the range of wireless devices.

1. Adjust your wireless devices so that the signal is traveling in a straight path, rather than at an angle. The more material the signal has to pass through the more signal you will lose.
2. Keep the number of obstructions to a minimum. Each obstruction can reduce the range of a wireless device. Position the wireless devices in a manner that will minimize the amount of obstructions between them.
3. Building materials can have a large impact on your wireless signal. In an indoor environment, try to position the wireless devices so that the signal passes through less dense material such as dry wall. Dense materials like metal, solid wood, glass or even furniture may block or degrade the signal.
4. Antenna orientation can also have a large impact on your wireless signal. Use the wireless adapter’s site survey tool to determine the best antenna orientation for your wireless devices.
5. Interference from devices that produce RF (radio frequency) noise can also impact your signal. Position your wireless devices away from anything that generates RF noise, such as microwaves, radios and baby monitors.
6. Any device operating on the 2.4GHz or 5GHz frequency will cause interference. Devices such as 2.4GHz or 5GHz cordless phones or other wireless remotes operating on the 2.4GHz or 5GHz frequency can potentially drop the wireless signal. Although the

phone may not be in use, the base can still transmit wireless signal. Move the phone's base station as far away as possible from your wireless devices.

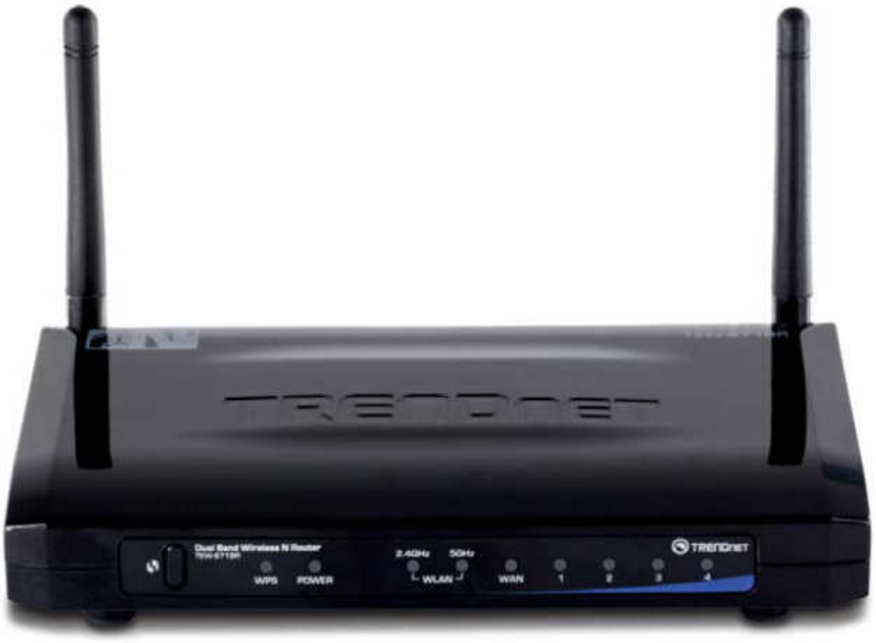
If you are still experiencing low or no signal consider repositioning the wireless devices or installing additional access points. The use of higher gain antennas may also provide the necessary coverage depending on the environment.

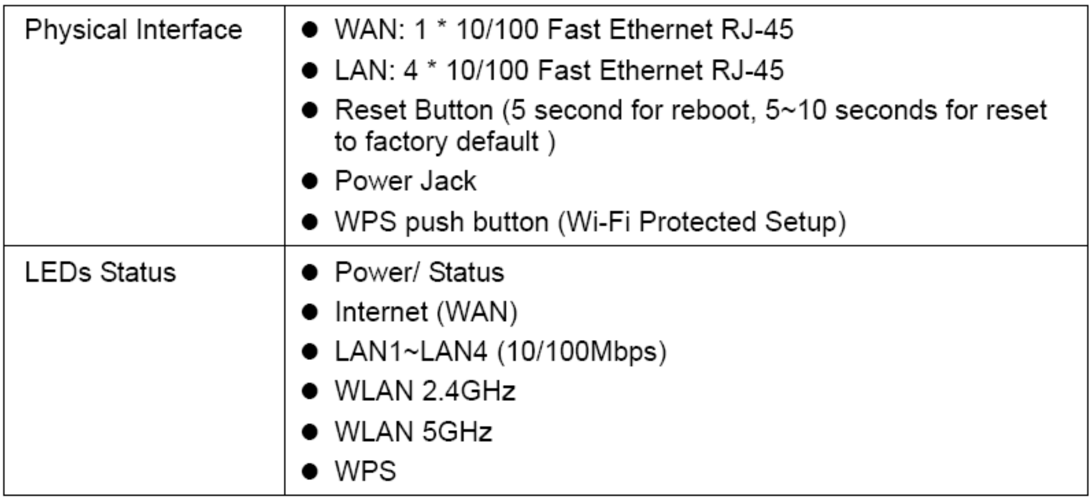
1.3. Package Contents

Open the package carefully, and make sure that none of the items listed below are missing. Do not discard the packing materials, in case of return; the unit must be shipped back in its original package.

- TEW-671BR Dual Band Wireless N Router
- Multi-Language Quick Installation Guide
- CD-ROM (User's Guide)
- Cat.5 Ethernet cable (0.5m / 1.6ft)
- Power adapter (12V, 1A)

1.4. Product Layout





Physical Interface	● WAN: 1 * 10/100 Fast Ethernet RJ-45 ● LAN: 4 * 10/100 Fast Ethernet RJ-45 ● Reset Button (5 second for reboot, 5~10 seconds for reset to factory default) ● Power Jack ● WPS push button (Wi-Fi Protected Setup)
LEDs Status	● Power/ Status ● Internet (WAN) ● LAN1~LAN4 (10/100Mbps) ● WLAN 2.4GHz ● WLAN 5GHz ● WPS

2. Installation

2.1. System Requirements

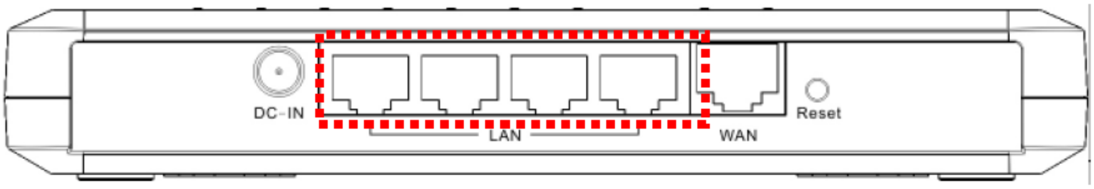
To begin using the TEW-671BR, make sure you meet the following as minimum requirements:

- Operating System – Microsoft Windows 98SE/ME/XP/2000/VISTA
- One Free Ethernet port on your PC or a Wireless client adapter
- External xDSL (ADSL) or Cable modem with an Ethernet port (RJ-45).
- PC/Laptop with Web-Browser application (Internet Explorer, Safari, Firefox, Opera etc.)
- Cat.5 Ethernet cables (optional)

2.2. LAN & WAN

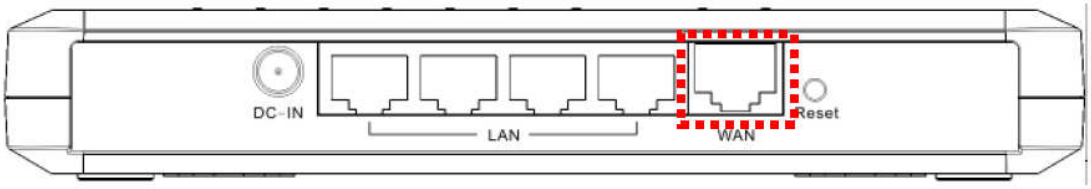
LAN connection:

Connect Ethernet cable between your PC/Laptop LAN port & one of the 4 available LAN ports on TEW-671BR.



WAN connection:

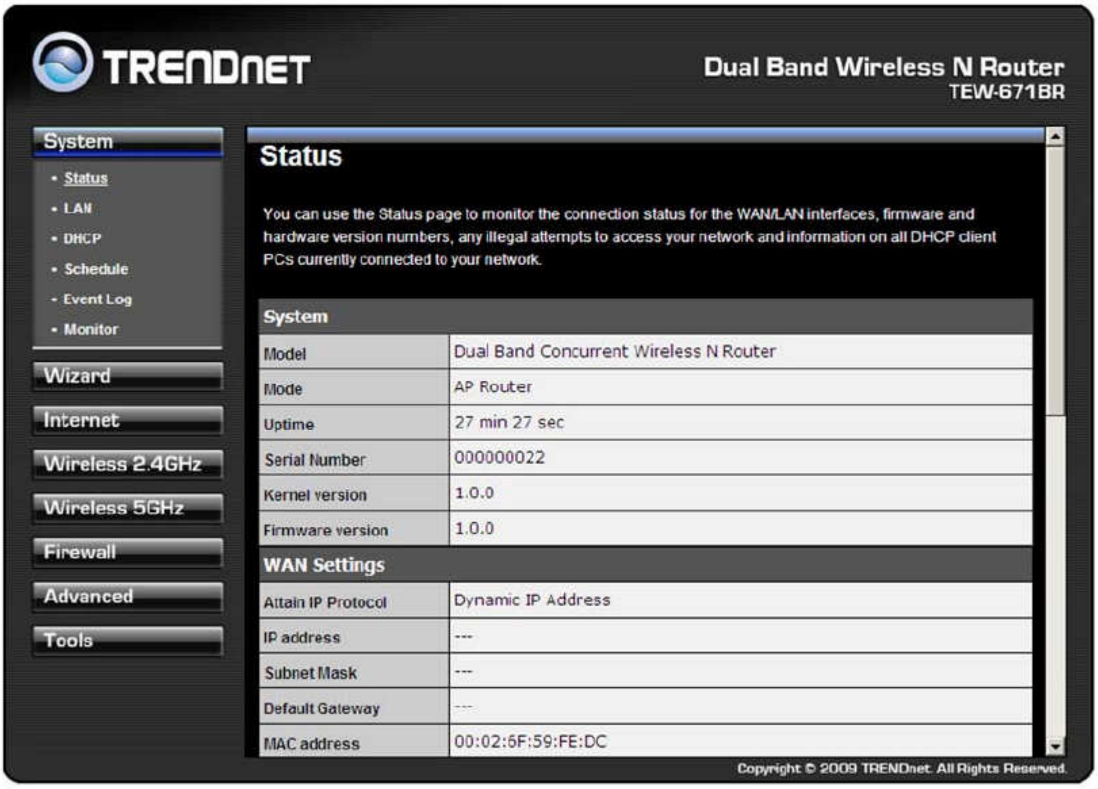
Connect Ethernet cable between WAN ports of your ADSL/CABLE modem & internet port of TEW-671BR. Make sure your ADSL/CABLE modem is working well. Contact your ISP if you have any questions.



2.3. Login to TEW-671BR

TEW-671BR provides web-interface for configuration through web browser, such as Internet Explorer (6.0 or above), Firefox or Safari.

1. Open your browser (e.g. Internet Explorer).
2. Type in http://192.168.10.1 in the address bar and click **Enter**.
3. You will be prompt with login window, the default username and password is admin and admin. After you type in the login information, click **OK**.
4. You will see the System page of TEW-671BR as follows.



Status

You can use the Status page to monitor the connection status for the WAN/LAN interfaces, firmware and hardware version numbers, any illegal attempts to access your network and information on all DHCP client PCs currently connected to your network.

System	
Model	Dual Band Concurrent Wireless N Router
Mode	AP Router
Uptime	27 min 27 sec
Serial Number	000000022
Kernel version	1.0.0
Firmware version	1.0.0
WAN Settings	
Attain IP Protocol	Dynamic IP Address
IP address	---
Subnet Mask	---
Default Gateway	---
MAC address	00:02:6F:59:FE:DC

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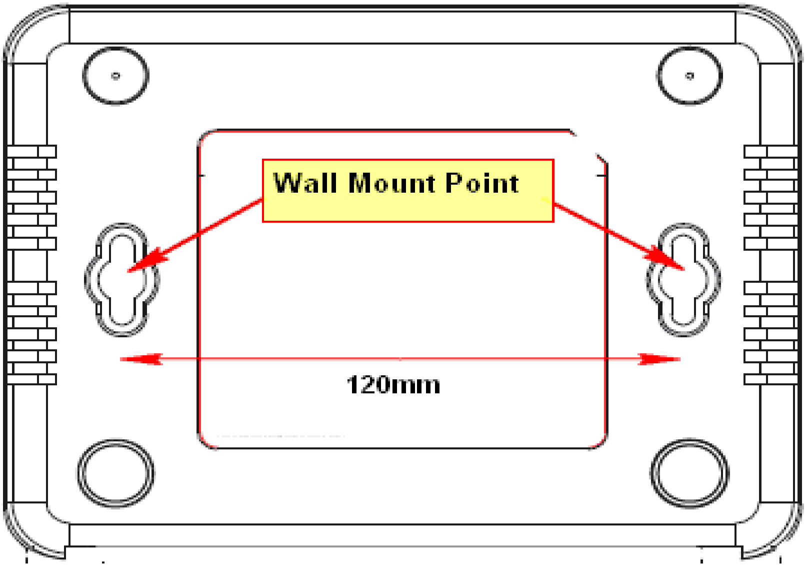
2.4. Wall Mount

You can mount the device on the wall. There are two mounting points on the bottom of the device. Please find a proper spot where two nails can be applied. The distance between the two nails is around 120mm. Finally, carefully mount the device onto the wall and make sure the nails are firmly locked on the mount points.

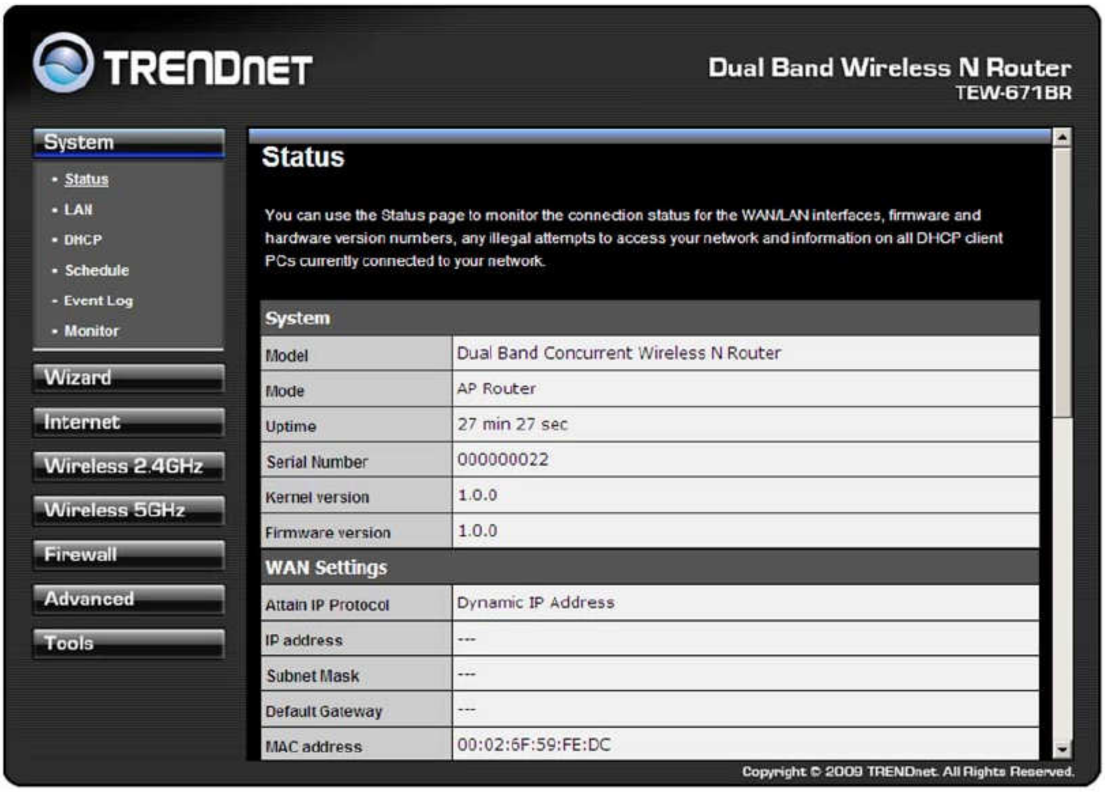
Note: there is a mounting screw set in the package.



3. System

3.1. Status

This page allows you to monitor the current status of your router. You can use the status page to quickly see if you have the latest firmware available. (For most updated firmware, please visit http://www.trendnet.com/downloads)



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WAN Settings	
Attain IP Protocol	Dynamic IP Address
IP address	---
Subnet Mask	---
Default Gateway	---
MAC address	00:02:6F:59:FE:DC

System: You can see the unit up time, hardware information, serial number as well as firmware version information.

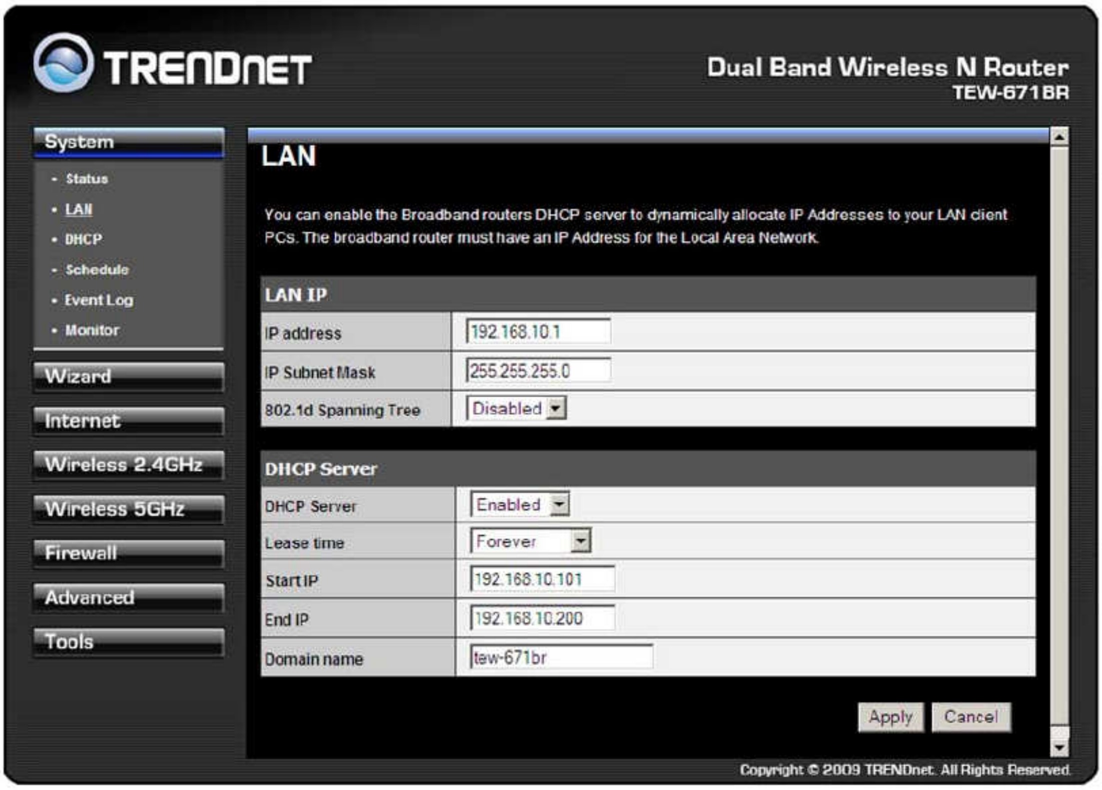
WAN Settings: This section displays whether the WAN port is connected to a Cable/DSL connection. It also displays the router's WAN IP address, Subnet Mask, and ISP Gateway as well as MAC address, the Primary DNS. Press **Renew** button to renew your WAN IP address.

LAN Settings: This section displays the Broadband router LAN port's current LAN & WLAN information. It also shows whether the DHCP Server function is enabled / disabled.

WLAN Settings: This section displays the current WLAN configuration settings you've configured in the Wizard / Basic Settings / Wireless Settings section. Wireless configuration details such as SSID, Security settings, BSSID, Channel number, mode of operation are briefly shown.

3.2. LAN

The LAN tab reveals LAN settings which can be altered at will. If you are an entry level user, try accessing a website from your browser. If you can access website without a glitch, just do not change any of these settings.



LAN

You can enable the Broadband routers DHCP server to dynamically allocate IP Addresses to your LAN client PCs. The broadband router must have an IP Address for the Local Area Network.

LAN IP	
IP address	192.168.10.1
IP Subnet Mask	255.255.255.0
802.1d Spanning Tree	Disabled

DHCP Server	
DHCP Server	Enabled
Lease time	Forever
Start IP	192.168.10.101
End IP	192.168.10.200
Domain name	tew-671br

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LAN IP

IP address: 192.168.10.1. It is the router's default IP address. It can be changed based on your own choice.

IP Subnet Mask: 255.255.255.0 Specify a Subnet Mask for your LAN segment.

802.1d Spanning Tree: This is disabled by default. If 802.1d Spanning Tree function is enabled, this router will use the spanning tree protocol to prevent network loops.

DHCP Server

DHCP Server: This will enable or disable the Dynamic Pool setting..

Lease time: This is the lease time of each assigned IP address.

Start IP: This will be the beginning of the pool of IP addresses available for client devices.

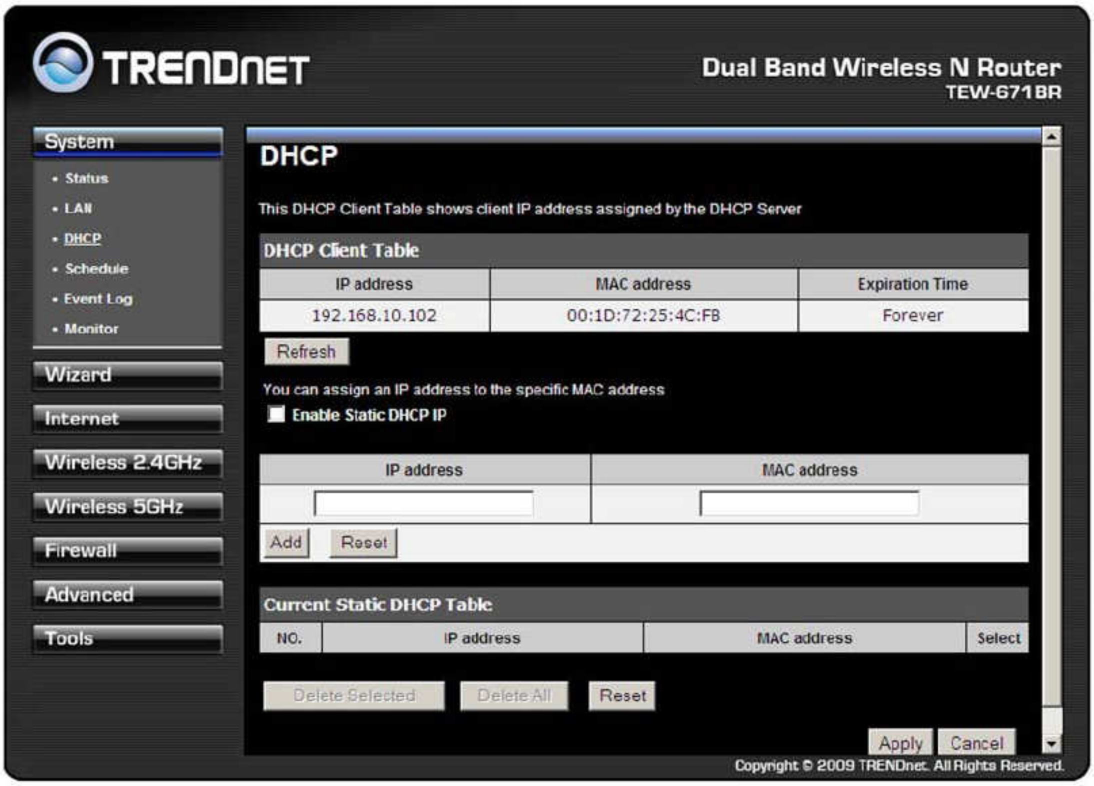
End IP: This will be the end of the pool of IP addresses available for client devices.

Domain name: The Domain Name for the existing or customized network.

3.3. DHCP

View the current LAN clients which are assigned with an IP Address by the DHCP-server. This page shows all DHCP clients (LAN PCs) currently connected to your network. The table shows the assigned IP address, MAC address and expiration time for each DHCP leased client. Use the **Refresh** button to update the available information. Hit **Refresh** to get the updated table.

You can check “Enable Static DHCP IP“. It is possible to add more static DHCP IPs. They are listed in the table “Current Static DHCP Table“. IP address can be deleted at will from the table.



DHCP

This DHCP Client Table shows client IP address assigned by the DHCP Server

DHCP Client Table

IP address	MAC address	Expiration Time
192.168.10.102	00:1D:72:25:4C:FB	Forever

You can assign an IP address to the specific MAC address

□ Enable Static DHCP IP

IP address	MAC address

Current Static DHCP Table

NO.	IP address	MAC address	Select

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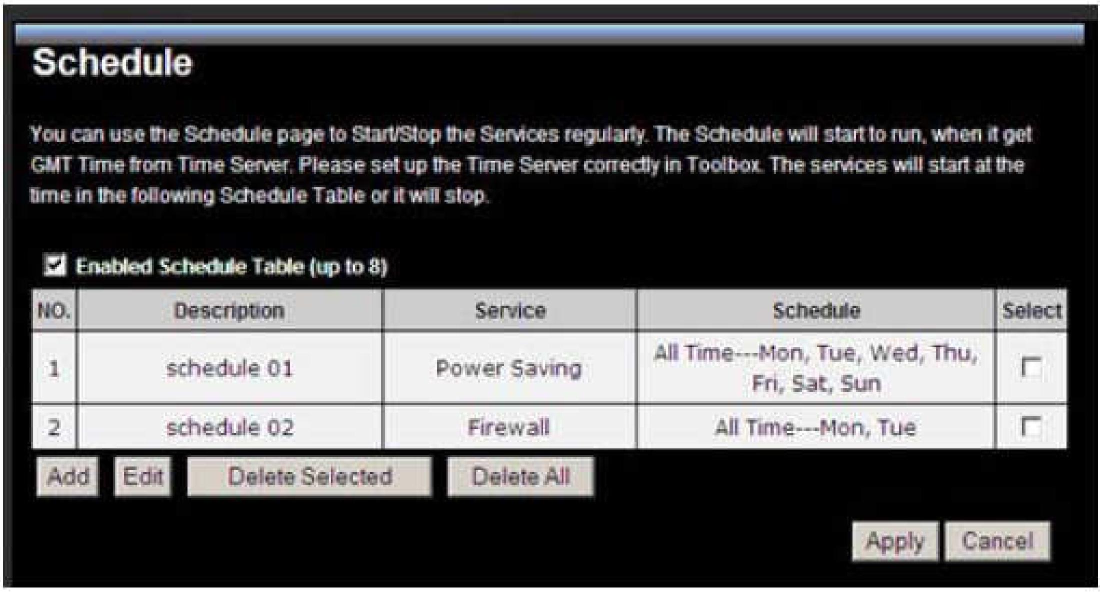
Note: Static DHCP IP means the PC with the particular MAC address will always receive the same IP address from the DHCP server.

3.4. Schedule

This page allows user to set up schedule function for Firewall and Power Saving.



Schedule

You can use the Schedule page to Start/Stop the Services regularly. The Schedule will start to run, when it get GMT Time from Time Server. Please set up the Time Server correctly in Toolbox. The services will start at the time in the following Schedule Table or it will stop.

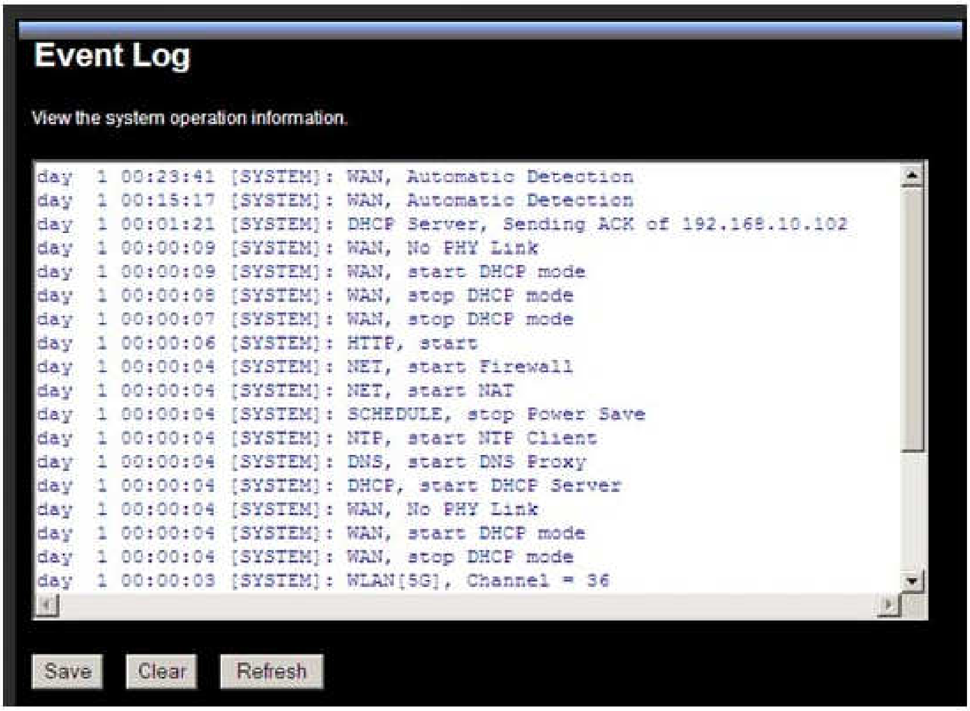
☑ Enabled Schedule Table (up to 8)

NO.	Description	Service	Schedule	Select
1	schedule 01	Power Saving	All Time---Mon, Tue, Wed, Thu, Fri, Sat, Sun	□
2	schedule 02	Firewall	All Time---Mon, Tue	□

Add schedule, edit schedule options to allow configuration of firewall and power savings services. Fill in the schedule and select type of service. Click **Apply** to implement those settings. The schedule table lists the pre-schedule service-runs. You can select any of them using the check box.

3.5. Event Log

View **operation event log**. This page shows the current system log of the Broadband router. It displays any event occurred after system start up. At the bottom of the page, the system log can be saved **Save** to a local file for further processing or the system log can be cleared **Clear** or it can be refreshed **Refresh** to get the most updated information. When the system is powered down, the system log will disappear if not saved to a local file.



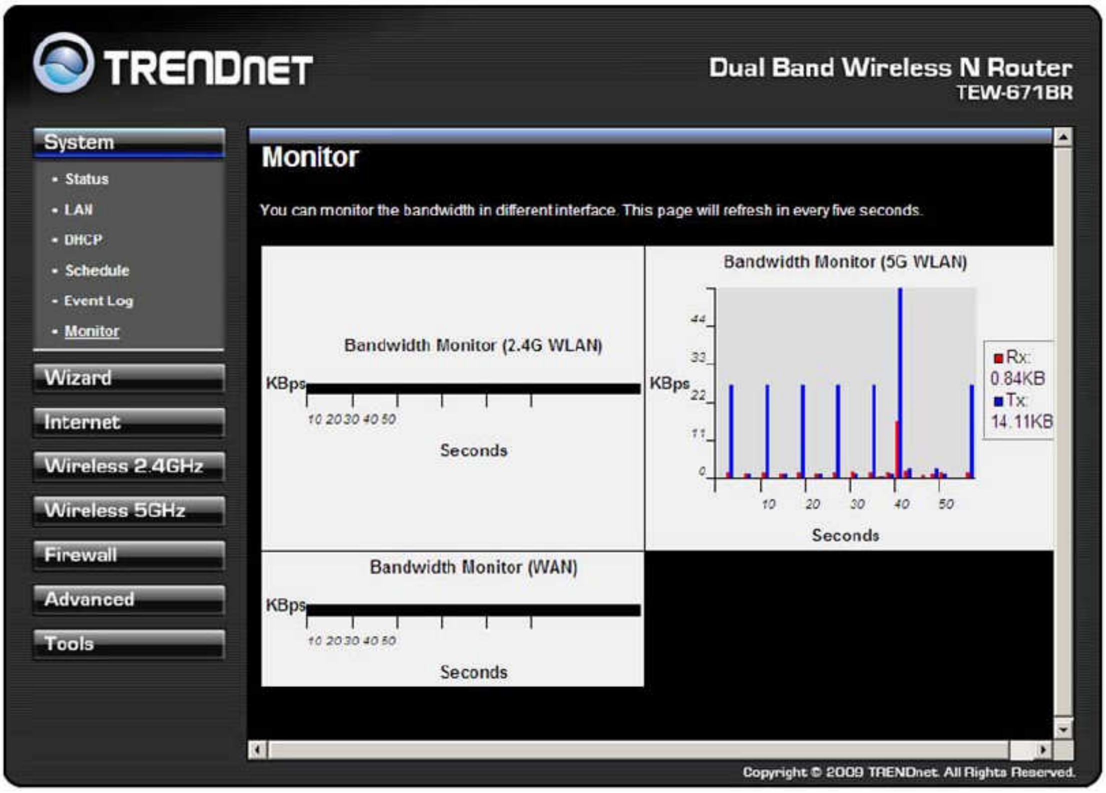
Event Log

View the system operation information.

```
day  1 00:23:41 [SYSTEM]: WAN, Automatic Detection
day  1 00:15:17 [SYSTEM]: WAN, Automatic Detection
day  1 00:01:21 [SYSTEM]: DHCP Server, Sending ACK of 192.168.10.102
day  1 00:00:09 [SYSTEM]: WAN, No PHY Link
day  1 00:00:09 [SYSTEM]: WAN, start DHCP mode
day  1 00:00:08 [SYSTEM]: WAN, stop DHCP mode
day  1 00:00:07 [SYSTEM]: WAN, stop DHCP mode
day  1 00:00:06 [SYSTEM]: HTTP, start
day  1 00:00:04 [SYSTEM]: NET, start Firewall
day  1 00:00:04 [SYSTEM]: NET, start NAT
day  1 00:00:04 [SYSTEM]: SCHEDULE, stop Power Save
day  1 00:00:04 [SYSTEM]: NTP, start NTP Client
day  1 00:00:04 [SYSTEM]: DNS, start DNS Proxy
day  1 00:00:04 [SYSTEM]: DHCP, start DHCP Server
day  1 00:00:04 [SYSTEM]: WAN, No PHY Link
day  1 00:00:04 [SYSTEM]: WAN, start DHCP mode
day  1 00:00:04 [SYSTEM]: WAN, stop DHCP mode
day  1 00:00:03 [SYSTEM]: WLAN[5G], Channel = 36
```

3.6. Monitor

Show histogram for network connection on WAN, LAN & WLAN. Auto refresh keeps information updated frequently.



Monitor

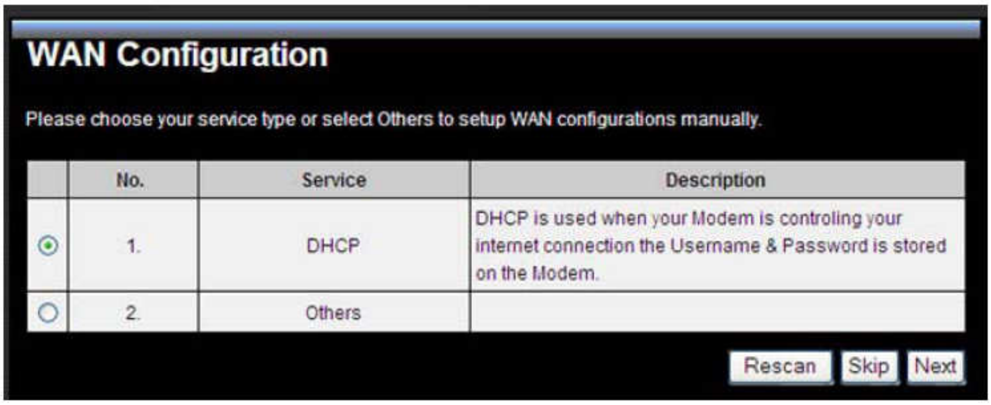
You can monitor the bandwidth in different interface. This page will refresh in every five seconds.

4. Wizard

The wizard will take you step by step to setup your internet connection with the router. Please make sure you have a valid internet connection from your ADSL/Cable modem to the WAN port of TEW-671BR with active LED. After the router finished scaning the WAN port, you will see either of the following 2 screens (section 4.1 & 4.2).

4.1. Valid WAN Connection

When you have a valid internet connection, you can select **DHCP** option if that’s your connection type or **Others** when you have Static IP, PPPoE or PPTP type connections.



WAN Configuration

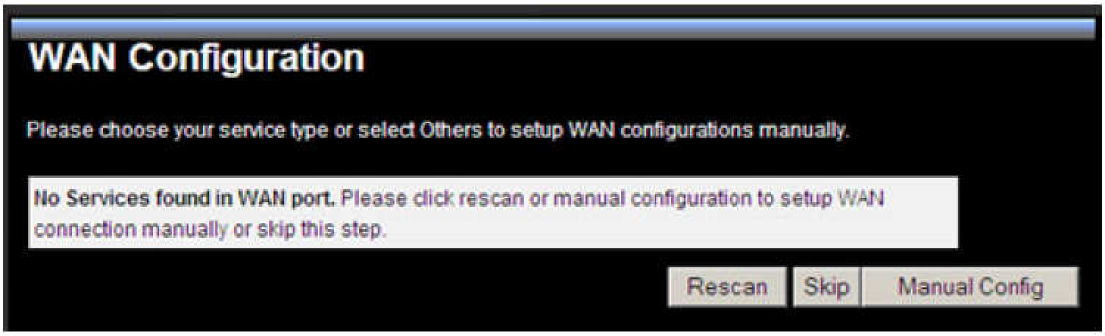
Please choose your service type or select Others to setup WAN configurations manually.

	No.	Service	Description
●	1.	DHCP	DHCP is used when your Modem is controling your internet connection the Username & Password is stored on the Modem.
○	2.	Others	

For detail internet connection settings, please refer to **Section 5**. And refer to section **4.3** for Wizard's wireless setups.

4.2. Invalid WAN Connection

The router was not able to find a valid connection, please check the cable connection and make sure the WAN LED is on. After the verification, you can either use **Rescan** or choose **Manual Config** to continue setting up the router manually.



WAN Configuration

Please choose your service type or select Others to setup WAN configurations manually.

No Services found in WAN port. Please click rescan or manual configuration to setup WAN connection manually or skip this step.

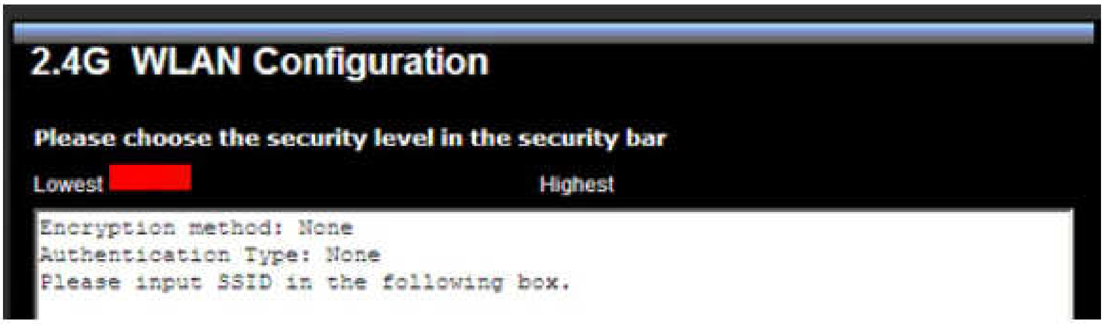
Note: When pressing the **Skip** option, it will skip the Internet settings and go to Wireless settings section.

For detail internet connection settings, please refer to **Section 5**. And refer to section **4.3** for Wizard's wireless setups.

4.3. WLAN Setups

We recommend you setting up the wireless encryptions immediately to protect your network. To change security levels, please point to the bars, you can extend the security by clicking next to the existing bar.

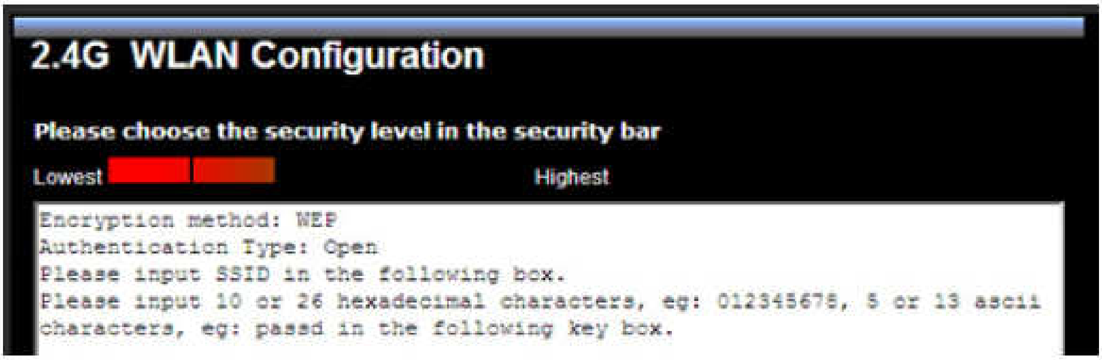
Security options from **Lowest** security with no encryption, WEP (Open) then **Medium** security WEP (Shared Key), and **High** security WPA-PSK, and last Highest security WPA2-PSK.



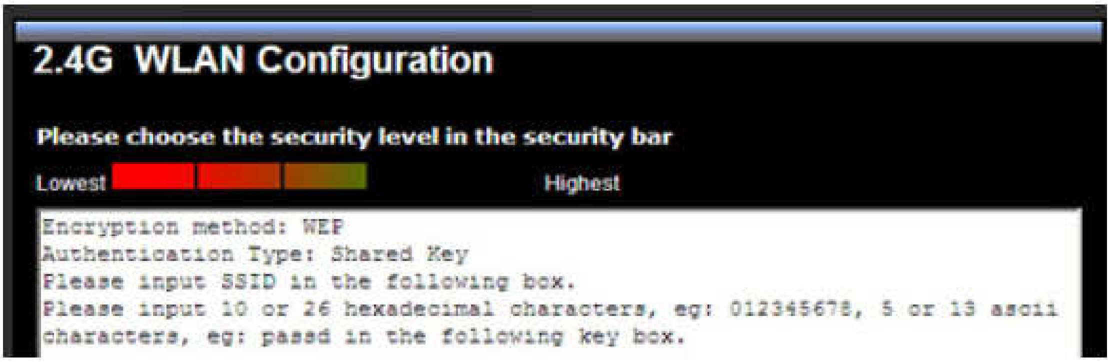
2.4G WLAN Configuration

Please choose the security level in the security bar

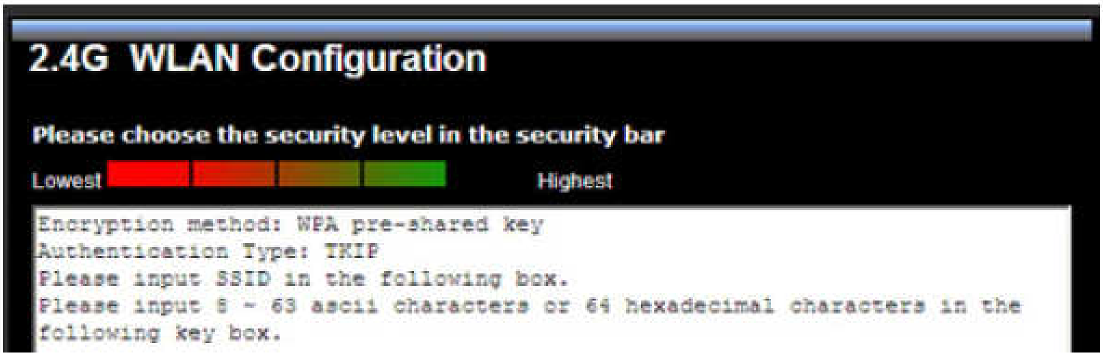
```
Encryption method: None
Authentication Type: None
Please input SSID in the following box.
```



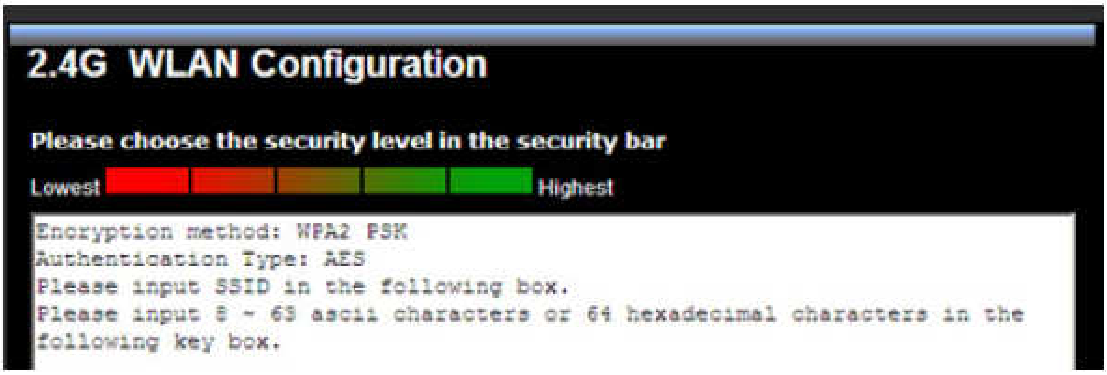
```
Encryption method: WEP
Authentication Type: Open
Please input SSID in the following box.
Please input 10 or 26 hexadecimal characters, eg: 012345678, 5 or 13 ascii
characters, eg: passd in the following key box.
```



```
Encryption method: WEP
Authentication Type: Shared Key
Please input SSID in the following box.
Please input 10 or 26 hexadecimal characters, eg: 012345678, 5 or 13 ascii
characters, eg: passd in the following key box.
```



```
Encryption method: WPA pre-shared key
Authentication Type: TKIP
Please input SSID in the following box.
Please input 8 ~ 63 ascii characters or 64 hexadecimal characters in the
following key box.
```

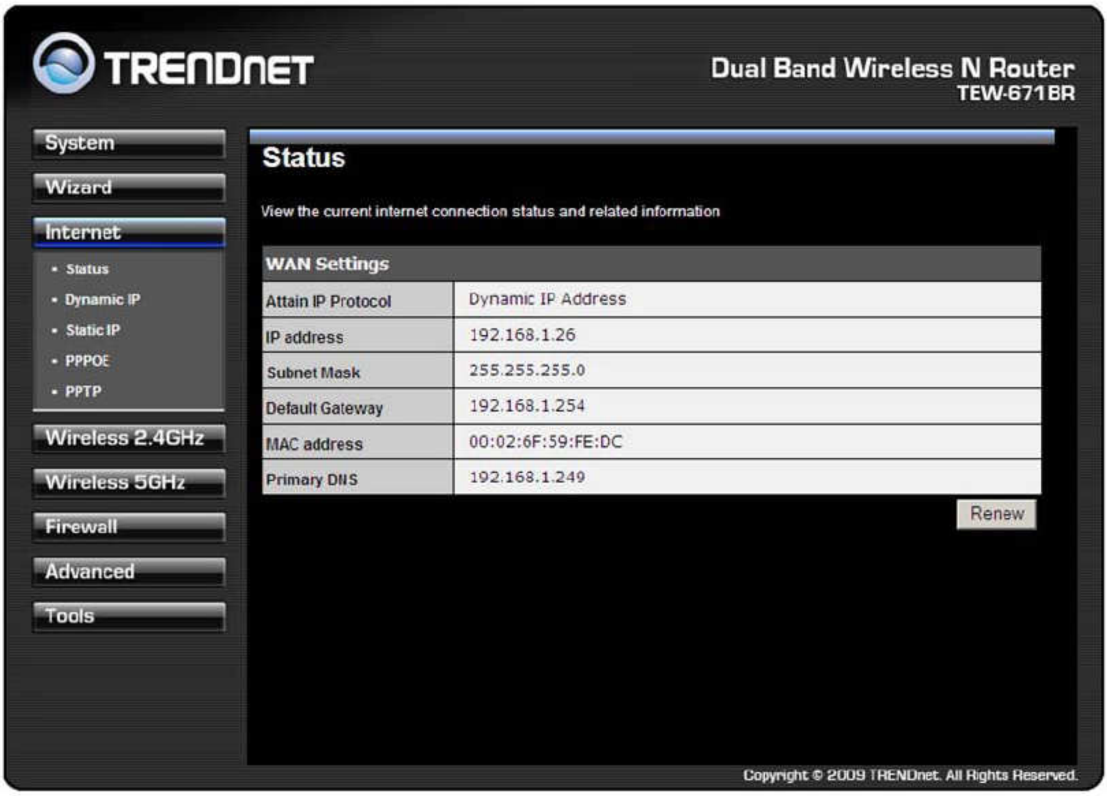


```
Encryption method: WPA2 PSK
Authentication Type: AES
Please input SSID in the following box.
Please input 8 ~ 63 ascii characters or 64 hexadecimal characters in the
following key box.
```

5. Internet

5.1. Status

This page shows the current Internet connection type and status



Status

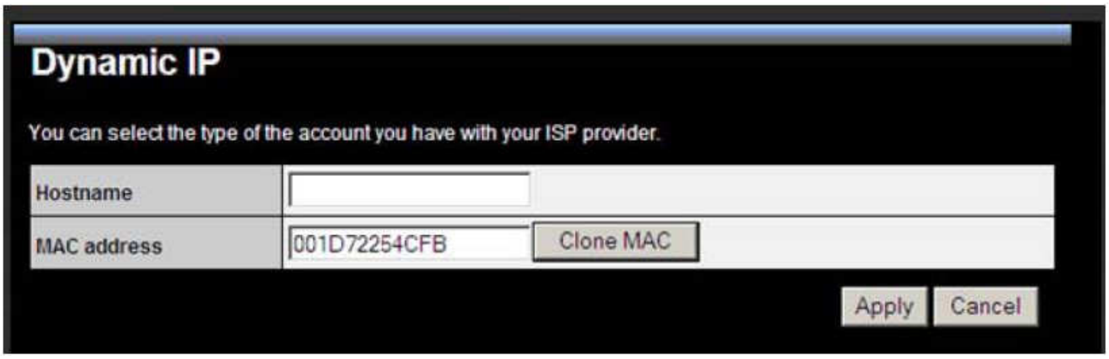
View the current internet connection status and related information

WAN Settings	
Attain IP Protocol	Dynamic IP Address
IP address	192.168.1.26
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.254
MAC address	00:02:6F:59:FE:DC
Primary DNS	192.168.1.249

Note: The Renew button works only when you have a Dynamic IP connection. When you want to remotely manage the router, you can use the IP address shown here to access.

5.2. Dynamic IP

Use the MAC address when registering for Internet service, and do not change it unless required by your Internet Services Provider (ISP). If your ISP used the MAC address of the Ethernet card as an identifier, connect only the PC with the registered MAC address to the broadband router and click the **Clone MAC Address** button. This will replace the current MAC address with the already registered Ethernet card MAC address.



Dynamic IP

You can select the type of the account you have with your ISP provider.

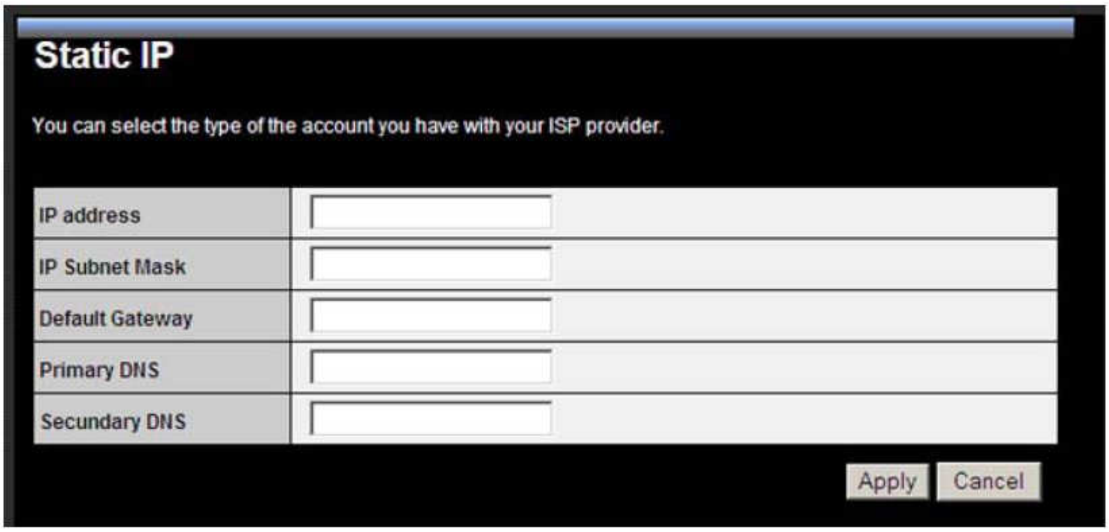
Hostname	
MAC address	001D72254CFB

Host Name: This is optional.

MAC address: The default value is set to the WAN's physical interface of the broadband router. Most Dynamic IP connections do not require MAC Address therefore you can leave this section blank if you think this does not apply to your account.

5.3. Static IP

If your ISP Provider has assigned a fixed IP address, you can enter the assigned IP address, Subnet mask, Default Gateway IP address, and Primary DNS of your ISP provider.



Static IP

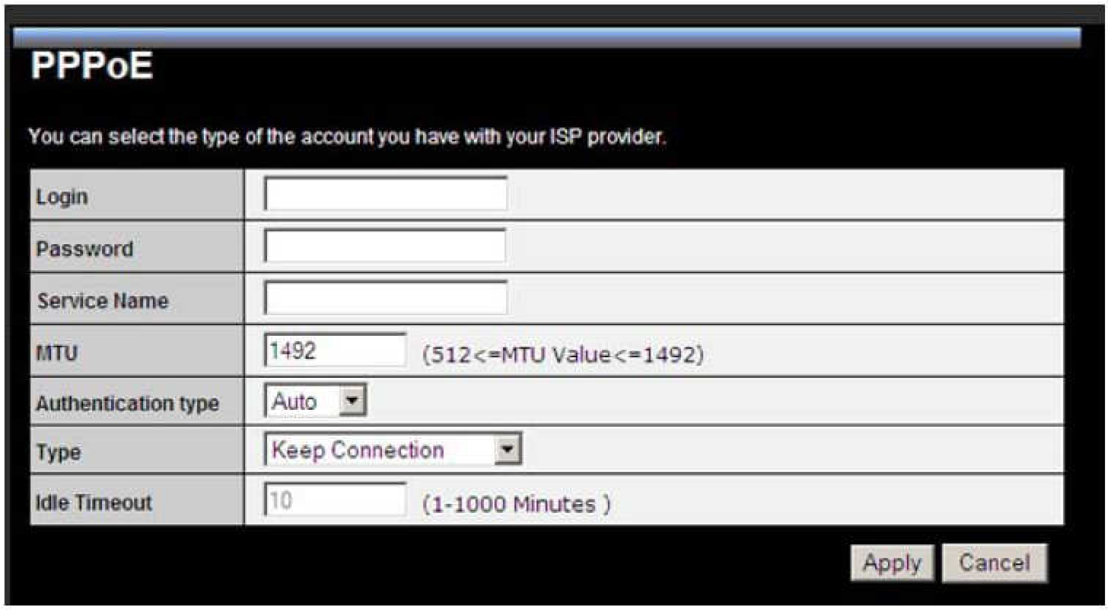
You can select the type of the account you have with your ISP provider.

IP address	
IP Subnet Mask	
Default Gateway	
Primary DNS	
Secundary DNS	

When you have a Static IP account, you should have all the information above provided by our ISP. If you don’t, please contact your ISP first.

5.4. PPPoE

For PPPoE connection, you should have a login name and password assigned from your provider.



PPPoE

You can select the type of the account you have with your ISP provider.

Login	
Password	
Service Name	
MTU	1492 (512<=MTU Value<=1492)
Authentication type	Auto
Type	Keep Connection
Idle Timeout	10 (1-1000 Minutes)

Login / Password: Enter the PPPoE username and password (Case sensitive)

Service Name: This is normally optional.

Maximum Transmission Unit (MTU): This is the maximum size of the packets.

Type: Enable the Auto-reconnect option to automatically re-establish the connection when an application attempts to access the Internet again.

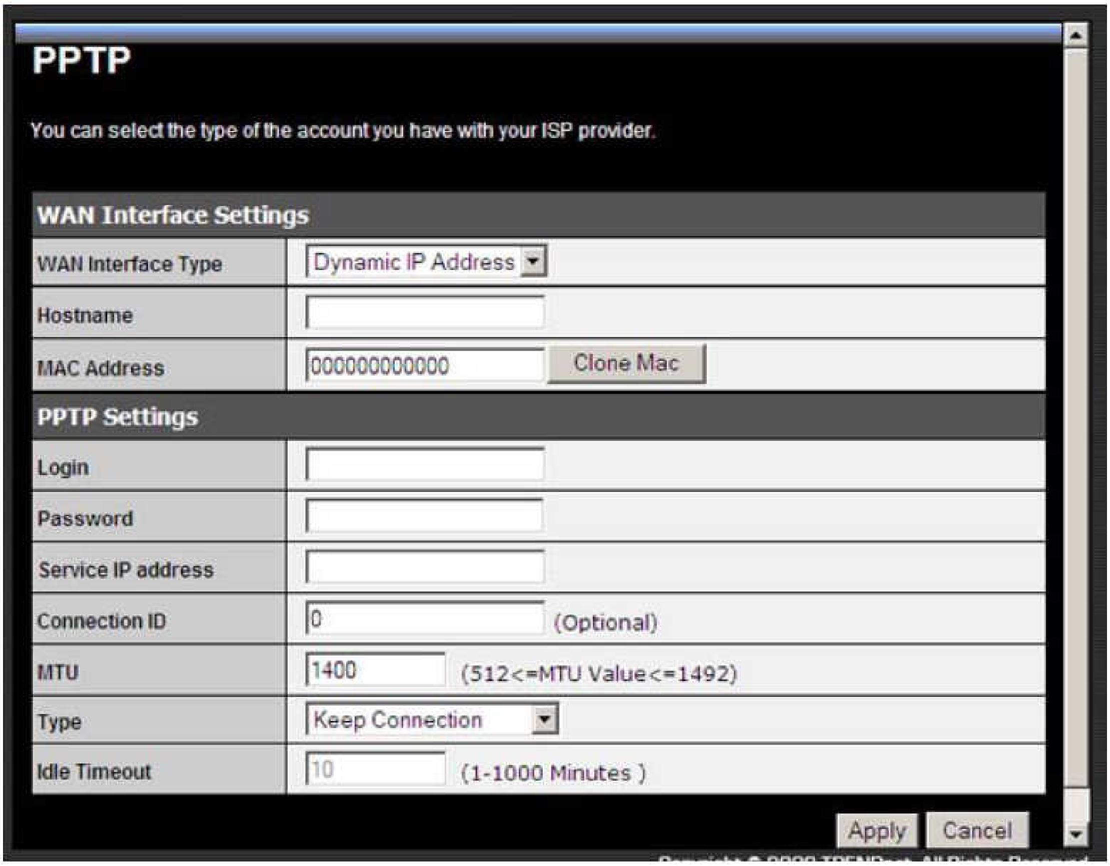
Idle Timeout: This is a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the Maximum Idle

Time, it will be dropped.

Note: you can leave the MTU, Authentication type, Type and idle Timeout settings as default if you do not know what to choose.

5.5. PPTP

PPTP allows the secure connection over the Internet by simply dialing in a local point provided by your ISP provider. The following screen allows client PCs to establish a normal PPTP session and provides hassle-free configuration of the PPTP client on each client PC.



PPTP

You can select the type of the account you have with your ISP provider.

WAN Interface Settings	
WAN Interface Type	Dynamic IP Address
Hostname	
MAC Address	000000000000 Clone Mac
PPTP Settings	
Login	
Password	
Service IP address	
Connection ID	0 (Optional)
MTU	1400 (512<=MTU Value<=1492)
Type	Keep Connection
Idle Timeout	10 (1-1000 Minutes)

Host Name: This is optional.

MAC address: The default value is set to the WAN's physical interface of the broadband router.

Login / Password: Enter the PPTP username and password assigned by your ISP provider.

Service Name: This is normally optional.

Maximum Transmission Unit (MTU): This is the maximum size of the packets.

Type: Enable the Auto-reconnect option to automatically re-establish the connection when an application attempts to access the Internet again.

Idle Timeout: This is a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the Maximum Idle

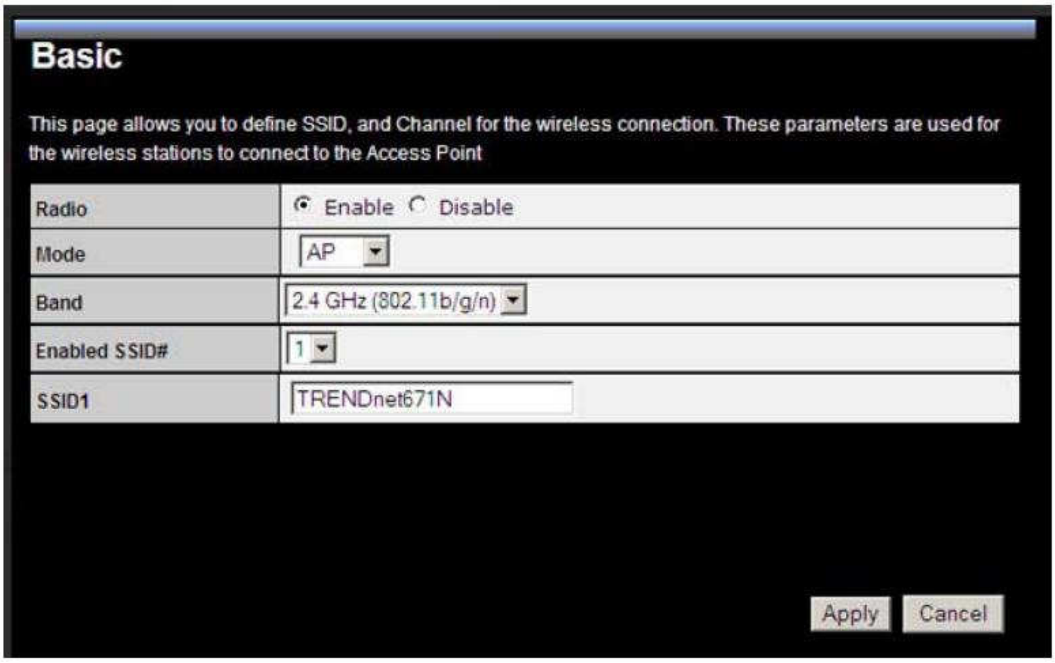
Time, it will be dropped.

Note: you can leave the Host Name, MTU, Type and idle Timeout settings as default if you do not know what to choose.

6. Wireless 2.4GHz & 5GHz

TEW-671BR is a dual band concurrent product, therefore two wireless radio configurations are provided. Both radios share the same features except for open band and available channels under “Basic” section.

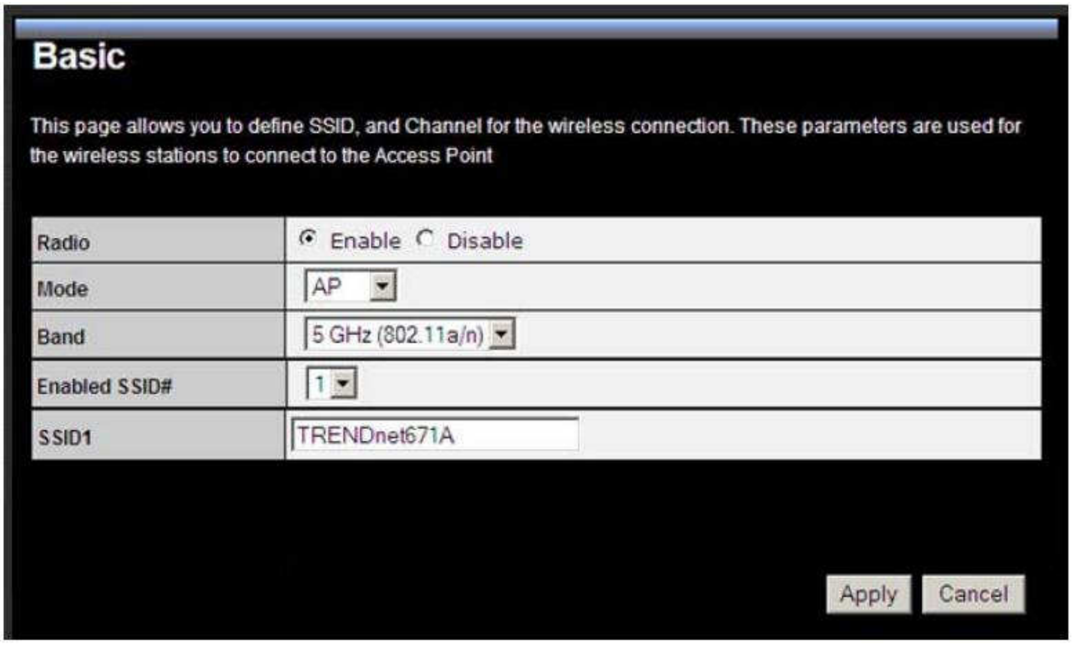
6.1. Basic



Basic

This page allows you to define SSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point

Radio	● Enable ○ Disable
Mode	AP
Band	2.4 GHz (802.11b/g/n)
Enabled SSID#	1
SSID1	TRENDnet671N



Basic

This page allows you to define SSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point

Radio	● Enable ○ Disable
Mode	AP
Band	5 GHz (802.11a/n)
Enabled SSID#	1
SSID1	TRENDnet671A

Radio: You can turn on/off wireless radio. If wireless Radio is off, you cannot associate with AP through wireless.

Mode: In this device, we support two operation modes which are **AP router** and **WDS.**

Band: You can select the wireless standards running on your network environment.

- **2.4G Band**

  2.4 GHz (802.11b/g): All 802.11b/g/n devices can connect to the router up to 54Mbps speed. You can select this option when your wireless clients are all 802.11b/g devices.

  2.4 GHz (802.11n): Only 802.11n compliant devices can connect to the router at up to 300Mbps speed.

  2.4 GHz (802.11b/g/n): All 802.11b/g/n devices can connect to the router at their best speed.

- **5G Band**

  5 GHz (802.11a): If all of your clients are 802.11a, select this one.

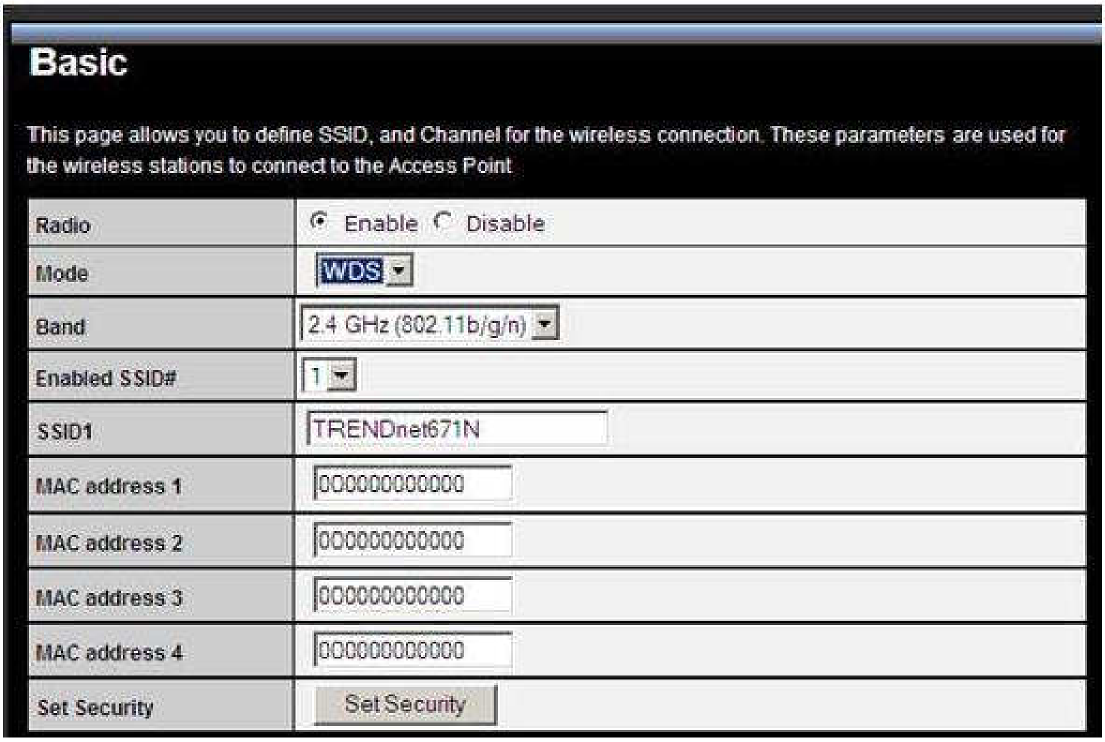
  5 GHz (802.11a/n): Either 802.11a or 802.11n wireless devices are in your environment.

Enable ESSID: We support 4 multiple SSIDs in this device. Please select how many SSIDs you would like to use in your network environment.

ESSID1~4: ESSID is the name of your wireless network. It might be a unique name to identify this wireless device in the Wireless LAN. It is case sensitive and up to 32 printable characters. You might change the default ESSID for added security.

6.2. Mode: WDS

Wireless Distribution System, a system that enables the wireless interconnection of access point, allows a wireless network to be expended using multiple access points without a wired backbone to like them. Each WDS Router needs to set the same channel and encryption type.



Basic

This page allows you to define SSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point

Radio	● Enable ○ Disable
Mode	WDS
Band	2.4 GHz (802.11b/g/n)
Enabled SSID#	1
SSID1	TRENDnet671N
MAC address 1	000000000000
MAC address 2	000000000000
MAC address 3	000000000000
MAC address 4	000000000000
Set Security	Set Security

MAC address 1~4: Please enter the MAC address of the neighboring ROUTERs that participates in WDS up to 4 devices.

Set Security: WDS Security depends on your router's security settings. If you've setup the encryption for your router, you do not have to configure again here. And if you setup the encryptions here, your router's security will be changed as well.

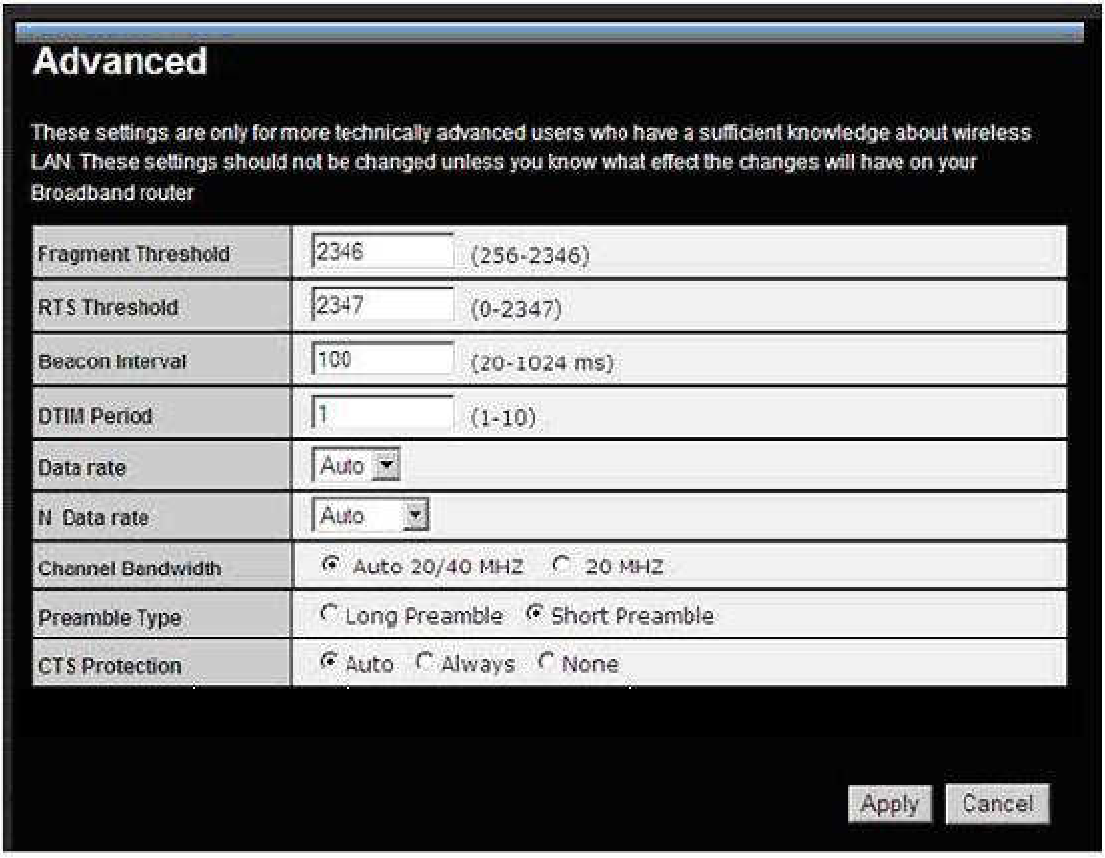
Note: it does not support **mixed mode** such as WPA-PSK/WPA2-PSK Mixed mode.

Note: TEW-671BR supports of up to 4 MAC addresses using WDS feature. All units have to enter the other units' MAC address to create a point to point or point to multiple point bridge networks.

WDS security is separated from the AP's security settings meaning you need to configure the WDS encryption in this screen again once you change the mode to WDS.

6.3. Advanced

This section allows you to set the advanced wireless options. The options included are Authentication Type, Fragment Threshold, RTS Threshold, Beacon Interval, and Preamble Type. You should not change these parameters unless you know what effect the changes will have on the router.



Advanced

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Broadband router

Fragment Threshold	2346 (256-2346)
RTS Threshold	2347 (0-2347)
Beacon Interval	100 (20-1024 ms)
DTIM Period	1 (1-10)
Data rate	Auto
N Data rate	Auto
Channel Bandwidth	● Auto 20/40 MHZ ○ 20 MHZ
Preamble Type	○ Long Preamble ● Short Preamble
CTS Protection	● Auto ○ Always ○ None

Note: if you are not sure how to configure the settings in this section, we recommend you to leave the settings as default. These settings are configured to provide the best performance for common usage.

Fragment Threshold: This specifies the maximum size of a packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in bad performance.

RTS Threshold: When the packet size is smaller than the RTS threshold, the wireless router will not use the RTS/CTS mechanism to send this packet.

Beacon Interval: is the interval of time that this wireless router broadcasts a beacon. A Beacon is used to synchronize the wireless network.

DTIM Period: Enter a value between 1 and 255 for the Delivery Traffic Indication Message (DTIM). A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages

Data Rate: The “Data Rate” is the rate that this access point uses to transmit data packets. The access point will use the highest possible selected transmission rate to transmit the data packets.

N Data Rate: The “Data Rate” is the rate that this access point uses to transmit data packets for N compliant wireless nodes. Highest to lowest data rate can be fixed.

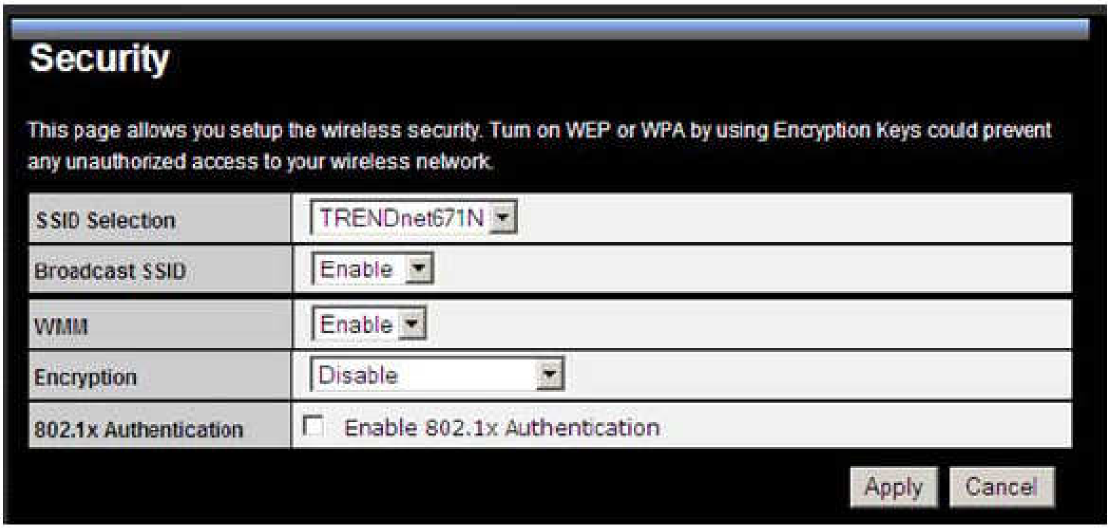
Channel Bandwidth: This is the range of frequencies that will be used. 20/40MHz provides the dual channel bandwidth support and gives you the connection speed of up to 270Mbps. 20MHz provides single channel bandwidth and it provides you the speed of up to 150Mbps.

Preamble Type: The “Long Preamble” can provide better wireless LAN compatibility while the “Short Preamble” can provide better wireless LAN performance.

CTS Protection: It is recommended to enable the protection mechanism. This mechanism can decrease the rate of data collision between 802.11b and 802.11g wireless stations. When the protection mode is enabled, the throughput of the Router will be a little lower due to a lot of frame-network that is transmitted.

6.4. Security

This Access Point provides complete wireless LAN security functions, included are WEP, IEEE 802.1x, WPA with pre-shared key and WPA with RADIUS. With these security functions, you can prevent your wireless LAN from illegal access. Please make sure your wireless stations use the same security function, and are setup with the same security key.



Security

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

SSID Selection	TRENDnet671N
Broadcast SSID	Enable
WMM	Enable
Encryption	Disable
802.1x Authentication	□ Enable 802.1x Authentication

ESSID Selection: This broadband router support multiple ESSID, you could select and set up the wanted ESSID.

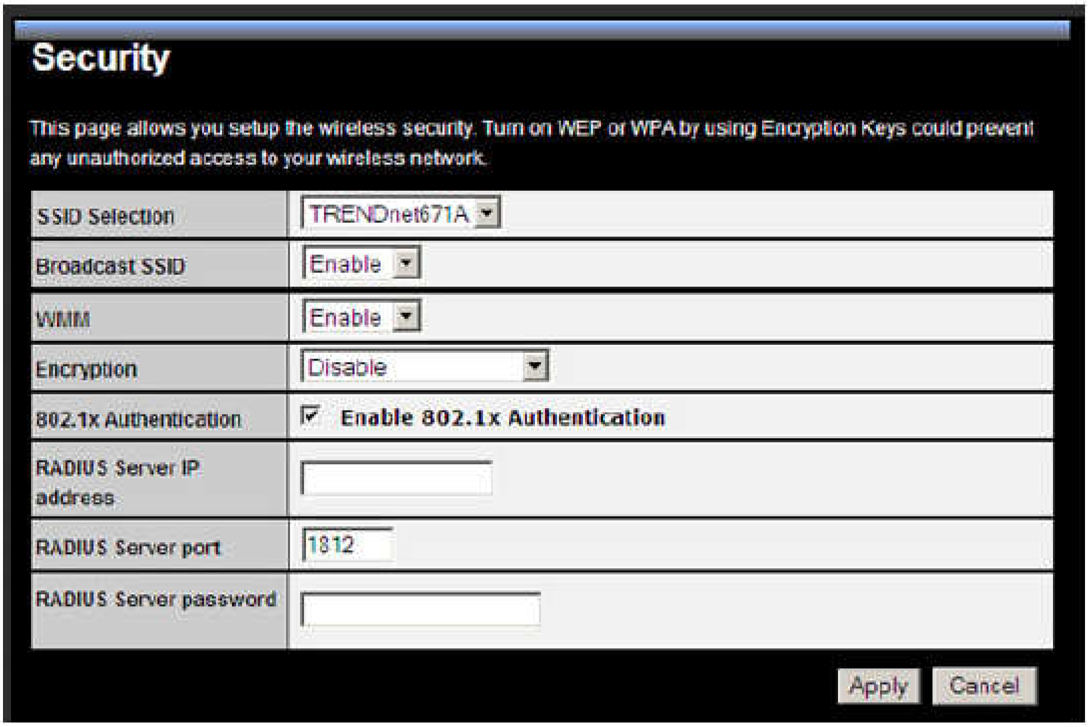
Broadcast ESSID: If you enabled “Broadcast ESSID”, every wireless station located within the coverage of this access point can discover this access point easily. If you are building a public wireless network, enabling this feature is recommended.

WMM: Wi-Fi Multi-Media if enabled supports QoS for experiencing better audio, video and voice in applications.

Encryption: When you choose to disable encryption, it is very insecure to operate TEW-671BR.

Enable 802.1x Authentication

IEEE 802.1x is an authentication protocol. Every user must use a valid account to login to this Access Point before accessing the wireless LAN. The authentication is processed by a RADIUS server. This mode only authenticates users by IEEE 802.1x, but it does not encrypt the data during communication.



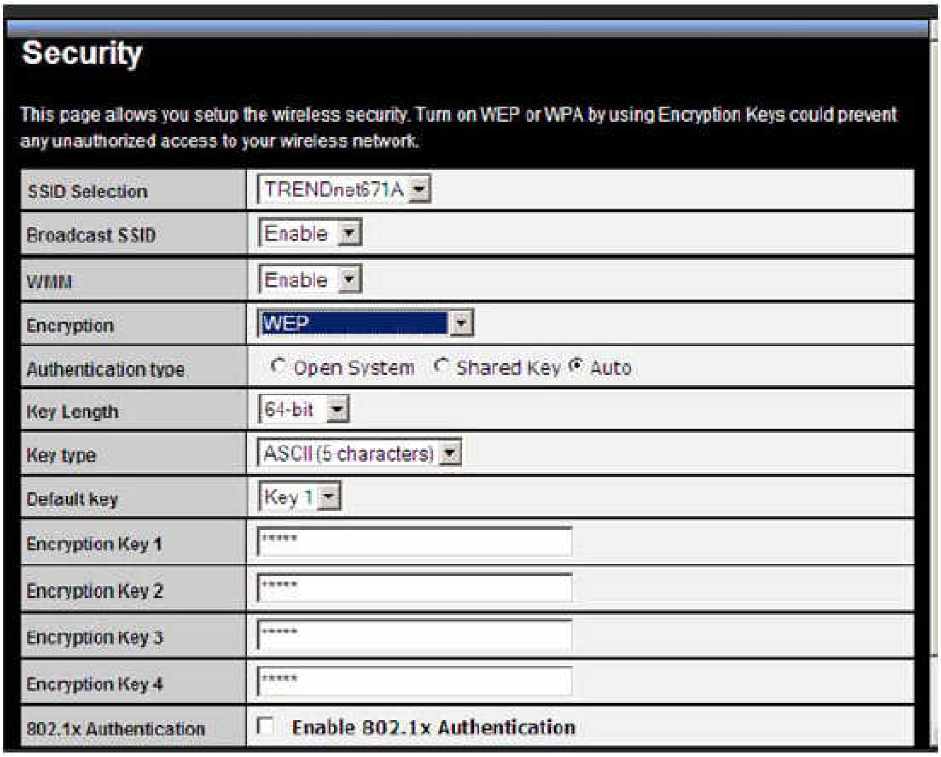
Security

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

SSID Selection	TRENDnet671A
Broadcast SSID	Enable
WMM	Enable
Encryption	Disable
802.1x Authentication	☑ Enable 802.1x Authentication
RADIUS Server IP address	
RADIUS Server port	1812
RADIUS Server password	

WEP Encryption

When you select 64-bit or 128-bit WEP key, you have to enter WEP keys to encrypt data. You can generate the key by yourself and enter it. You can enter four WEP keys and select one of them as a default key. Then the router can receive any packets encrypted by one of the four keys. WEP provides basic level or security, if you would like to use higher security encryption, please consider WPA2 encryption.



Security

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

SSID Selection	TRENDnet671A
Broadcast SSID	Enable
WMM	Enable
Encryption	WEP
Authentication type	○ Open System ○ Shared Key ● Auto
Key Length	64-bit
Key type	ASCII (5 characters)
Default key	Key 1
Encryption Key 1	*****
Encryption Key 2	*****
Encryption Key 3	*****
Encryption Key 4	*****
802.1x Authentication	□ Enable 802.1x Authentication

Authentication Type: There are two authentication types: **"Open System"** and **"Shared Key"**. When you select **"Open System"**, wireless stations can associate with this wireless router without WEP encryption. When you select **"Shared Key"**, you should also setup a WEP key in the **"Encryption"** page. After this has been done, make sure the wireless clients that you want to connect to the device are also setup with the same encryption key.

Key Length: You can select the WEP key length for encryption, 64-bit or 128-bit. The larger the key will be the higher level of security is used, but the throughput will be lower.

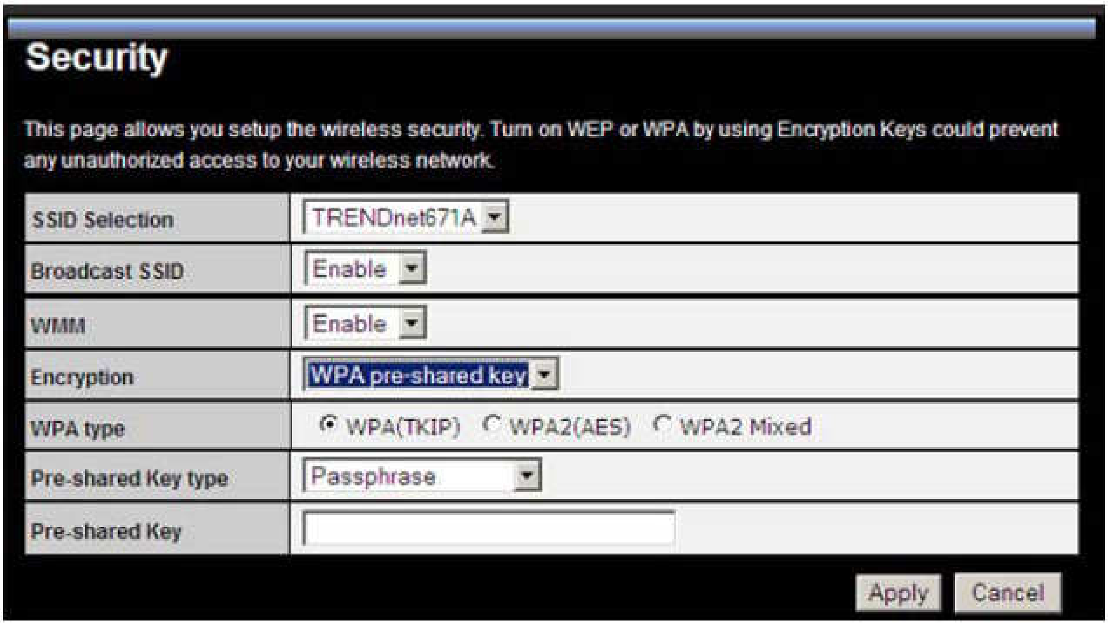
Key Type: You may select ASCII Characters (alphanumeric format) or Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the WEP Key.

Key1 - Key4: The WEP keys are used to encrypt data transmitted in the wireless network. Use the following rules to setup a WEP key on the device. 64-bit WEP: input 10-digits Hex values (in the "A-F", "a-f" and "0-9" range) or 5-digit ASCII character as the encryption keys. 128-bit WEP: input 26-digit Hex values (in the "A-F", "a-f" and "0-9" range) or 13-digit ASCII characters as the encryption keys.

Click **Apply** at the bottom of the screen to save the above configurations. You can now configure other sections by choosing Continue, or choose Apply to apply the settings and reboot the device.

WPA Pre-Shared Key Encryption

Wi-Fi Protected Access (WPA) is an advanced security standard. You can use a re-shared key to authenticate wireless stations and encrypt data during communication. It supports TKIP (WPA-PSK) or AES (WPA2-PSK) encryptions; this is the best security available.



Security

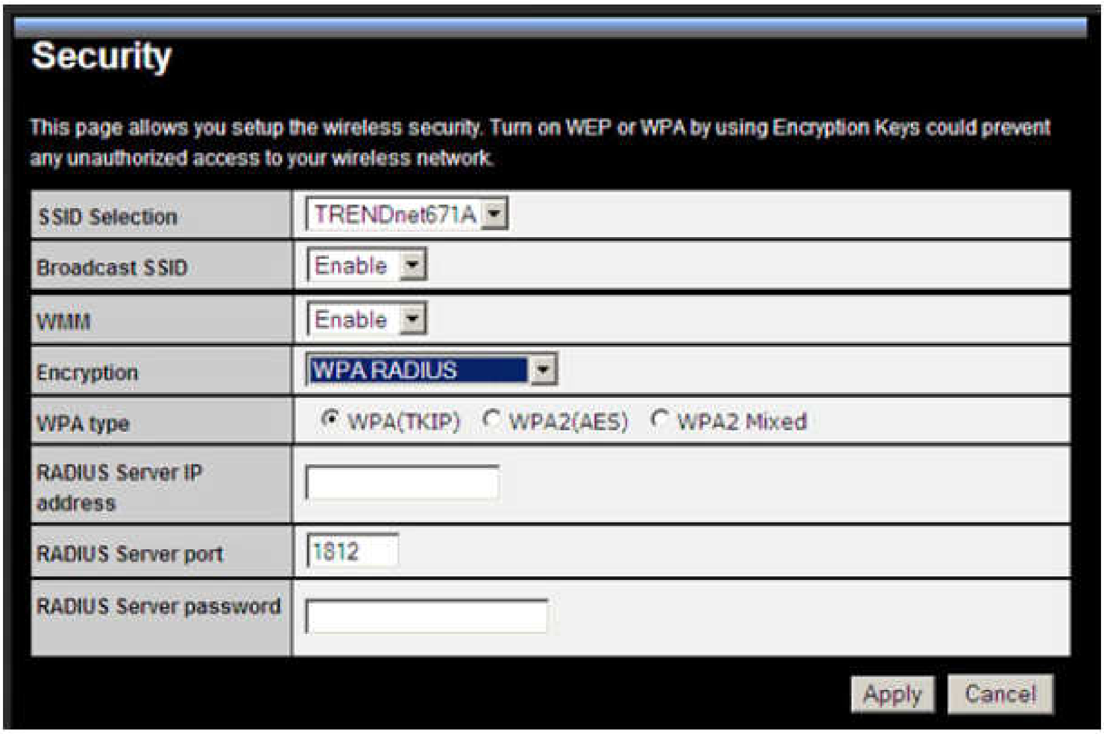
This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

SSID Selection	TRENDnet671A
Broadcast SSID	Enable
WMM	Enable
Encryption	WPA pre-shared key
WPA type	● WPA(TKIP) ○ WPA2(AES) ○ WPA2 Mixed
Pre-shared Key type	Passphrase
Pre-shared Key	

WPA-Radius Encryption

Wi-Fi Protected Access (**WPA**) is an advanced security standard. You can use an external RADIUS server to authenticate wireless stations and provide the session key to encrypt data during communication.

It supports **TKIP (WPA)** or **AES (WPA2)** encryptions. Press **Apply** button when you are done.



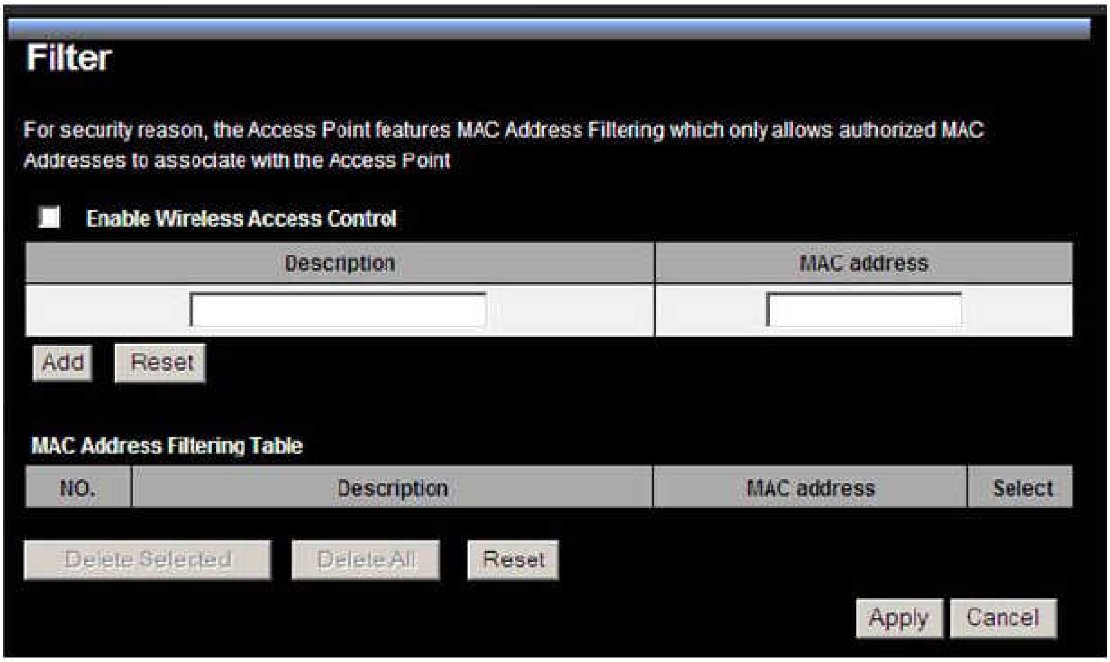
Security

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

SSID Selection	TRENDnet671A
Broadcast SSID	Enable
WMM	Enable
Encryption	WPA RADIUS
WPA type	● WPA(TKIP) ○ WPA2(AES) ○ WPA2 Mixed
RADIUS Server IP address	
RADIUS Server port	1812
RADIUS Server password	

6.5. Filter

This wireless router supports MAC Address Control, which prevents unauthorized clients from accessing your wireless network.



Filter

For security reason, the Access Point features MAC Address Filtering which only allows authorized MAC Addresses to associate with the Access Point

□ Enable Wireless Access Control

Description	MAC address

MAC Address Filtering Table

NO.	Description	MAC address	Select

Enable wireless access control: Enable the wireless access control function

Adding an address into the list

Enter the "MAC Address" and "Comment" of the wireless station to be added and then click **Add**. The wireless station will now be added into the "Current Access Control List" below. If you are having any difficulties filling in the fields, just click "Clear" and both "MAC Address" and "Comment" fields will be cleared.

Remove an address from the list

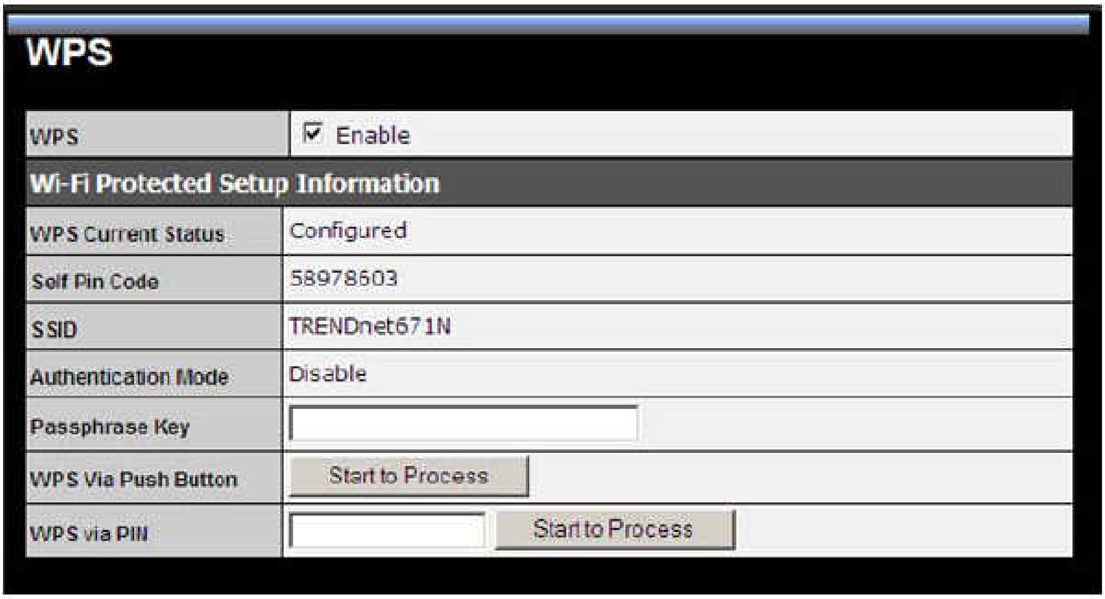
If you want to remove a MAC address from the "Current Access Control List ", select the MAC address that you want to remove in the list and then click "Delete Selected". If you want to remove all the MAC addresses from the list, just click the **Delete All** button. Click **Reset** will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configurations.

6.6. WPS (Wi-Fi Protected Setup)

WPS is the simplest way to establish a connection between the wireless clients and the wireless router. You don’t have to select the encryption mode and fill in a long encryption passphrase every time when you try to setup a wireless connection. You only need to press a button on both wireless client and wireless router, and the WPS will do the rest for you.

The wireless router supports two types of WPS: WPS via Push Button and WPS via PIN code. If you want to use the Push Button, you have to push a specific button on the wireless client or in the utility of the wireless client to start the WPS mode, and switch the wireless router to WPS mode. You can simply push the WPS button of the wireless router, or click the ‘Start to Process’ button in the web configuration interface. If you want to use the PIN code, you have to know the PIN code of the wireless client and switch it to WPS mode, then fill-in the PIN code of the wireless client through the web configuration interface of the wireless router.



WPS

WPS	☑ Enable
Wi-Fi Protected Setup Information	
WPS Current Status	Configured
Self Pin Code	58978603
SSID	TRENDnet671N
Authentication Mode	Disable
Passphrase Key	
WPS Via Push Button	Start to Process
WPS via PIN	Start to Process

WPS: Check the box to enable WPS function and uncheck it to disable the WPS function.

WPS Current Status: If the wireless security (encryption) function of this wireless router is properly set, you'll see a 'Configured' message here. Otherwise, you'll see 'UnConfigured'. The router will automatically enable encryption when you setup the WPS from default settings. Any WPS connection made after the router has been modified, the encryption type will stay as is.

Self Pin Code: This is the WPS PIN code of the wireless router. You may need this information when connecting to other WPS-enabled wireless devices.

SSID: This is the network broadcast name (SSID) of the router.

Authentication Mode: It shows the active authentication mode for the wireless connection.

Passphrase Key: It shows the passphrase key that is randomly generated by the wireless router during the WPS process. You may need this information when using a device which doesn't support WPS.

Interface: If device is set to repeater mode, you can choose **"Client"** interface to connect with other AP by using WPS, otherwise you may choose **"AP"** interface to do WPS with other clients.

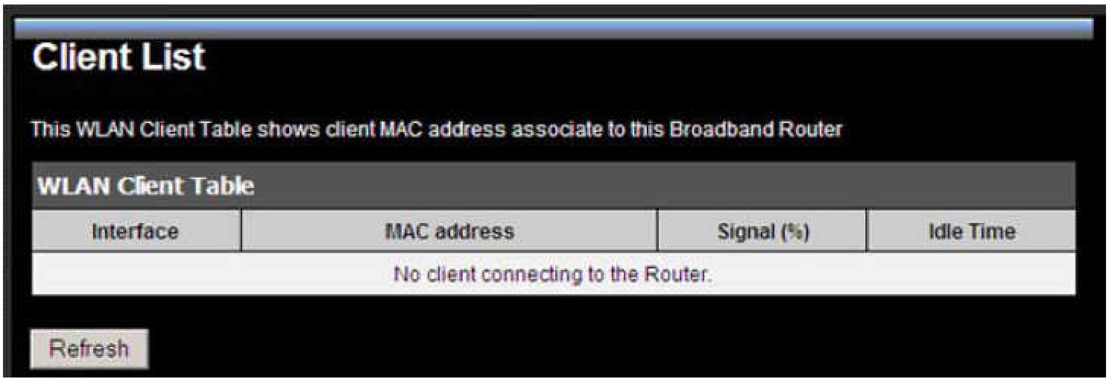
WPS via Push Button: Press the button to start the WPS process. The router will wait for the WPS request from the wireless devices within 2 minutes.

WPS via PIN: You can fill-in the PIN code of the wireless device such as your wireless adapter and press the button to start the WPS process. The router will wait for the
WPS request from the wireless device within 2 minutes.

Note: when connecting to the router via WPS, your wireless devices needs to support WPS. Otherwise you need to manually connect your wireless device to the router with all the proper settings such as SSID, encryptions and etc.

6.7. Client List

This WLAN Client Table shows the Wireless client associate to this Wireless Router.



Client List

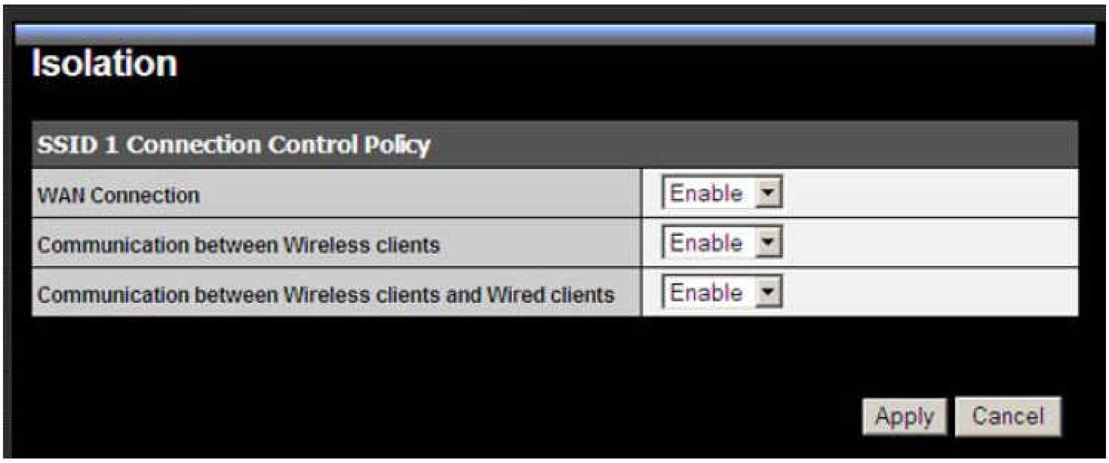
This WLAN Client Table shows client MAC address associate to this Broadband Router

WLAN Client Table

Interface	MAC address	Signal (%)	Idle Time
No client connecting to the Router.			

Note: if you want to make your wireless network more secure, you can either setup encryptions as well as using MAC address filter to block any unwanted access.

6.8. Isolation



Isolation

SSID 1 Connection Control Policy

WAN Connection	Enable
Communication between Wireless clients	Enable
Communication between Wireless clients and Wired clients	Enable

Policy provides a list of control policies. These settings define whether wireless or wired clients are able to “see” each in the LAN.

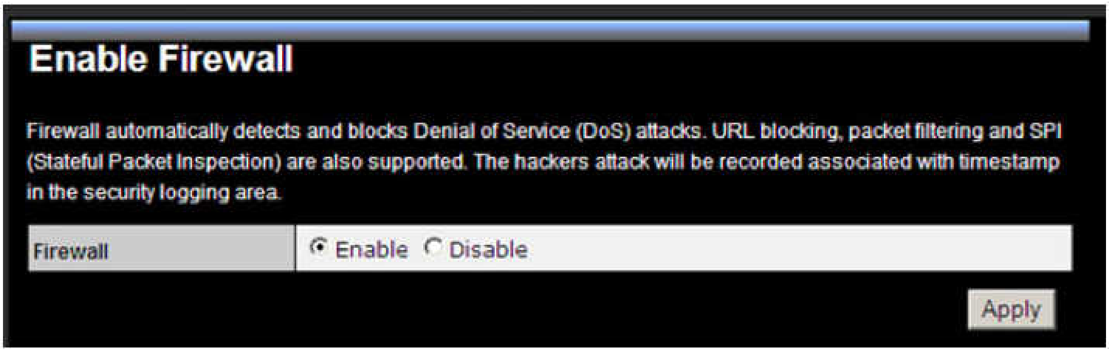
- If you are offering Internet access to your clients, please enable WAN connection.
- If you allow communication between Wireless clients please enable the second item.
- If you allow communication between Wireless client and Wired client please enable the last item.
- Disable WAN connection if you do not provide Internet access.
- Disable the items if you would like to enhance privacy between clients.

Note: By default all communications between internet/wired/wireless connections are enabled. If you would like to block certain access, select **Disable** from the desire field and click **Apply** to save the settings. You can make these configurations based on each SSID.

7. Firewall

7.1. Enable

The Broadband router provides extensive firewall protection by restricting connection parameters, thus limiting the risk of hacker attacks, and defending against a wide array of common Internet attacks. However, for applications that require unrestricted access to the Internet, you can configure a specific client/server as a Demilitarized Zone (DMZ).



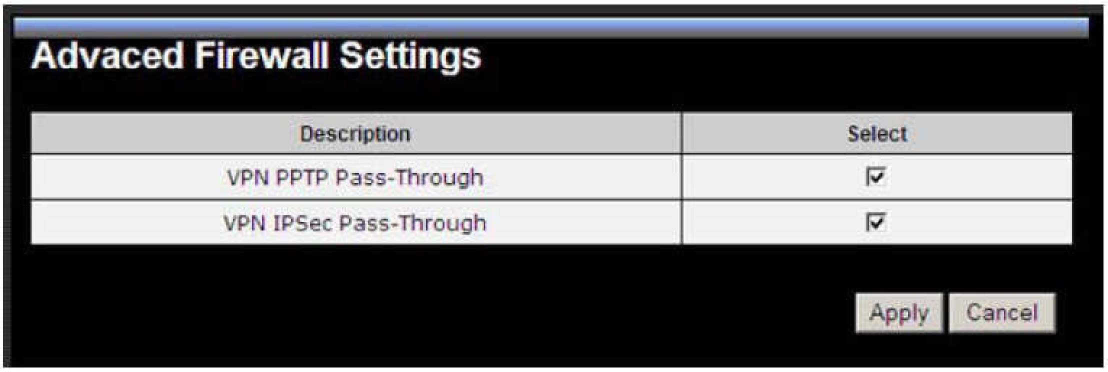
Enable Firewall

Firewall automatically detects and blocks Denial of Service (DoS) attacks. URL blocking, packet filtering and SPI (Stateful Packet Inspection) are also supported. The hackers attack will be recorded associated with timestamp in the security logging area.

Firewall	● Enable ○ Disable

7.2. Advanced

If you are using some VPN access for your work or other purpose, you can enable the options here to pass the VPN packets correctly. These options are enabled by default, the router is not a VPN server or client, it only pass through the packets.



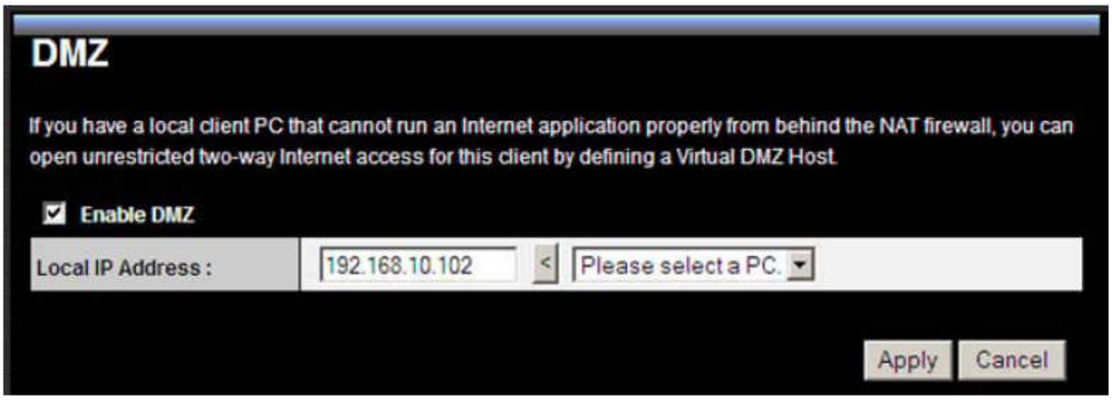
Advaced Firewall Settings

Description	Select
VPN PPTP Pass-Through	☑
VPN IPSec Pass-Through	☑

Note: For VPN connections, it might require to open some ports when you run your PC behind a router. For port information, please refer to each VPN software’s help site.

7.3. Demilitarized Zone (DMZ)

If you have a client PC that cannot run an Internet application (e.g. Games) properly from behind the NAT firewall, then you can open up the firewall restrictions to unrestricted two-way Internet access by defining a DMZ Host. The DMZ function allows you to re-direct all packets going to your WAN port IP address to a particular IP address in your LAN. The difference between the virtual server and the DMZ function is that the virtual server re-directs a particular service/Internet application (e.g. FTP, websites) to a particular LAN client/server, whereas DMZ re-directs all packets (regardless of services) going to your WAN IP address to a particular LAN client/server.



DMZ

If you have a local client PC that cannot run an Internet application properly from behind the NAT firewall, you can open unrestricted two-way Internet access for this client by defining a Virtual DMZ Host.

☑ Enable DMZ

Local IP Address : 192.168.10.102

Enable DMZ: Enable/disable DMZ

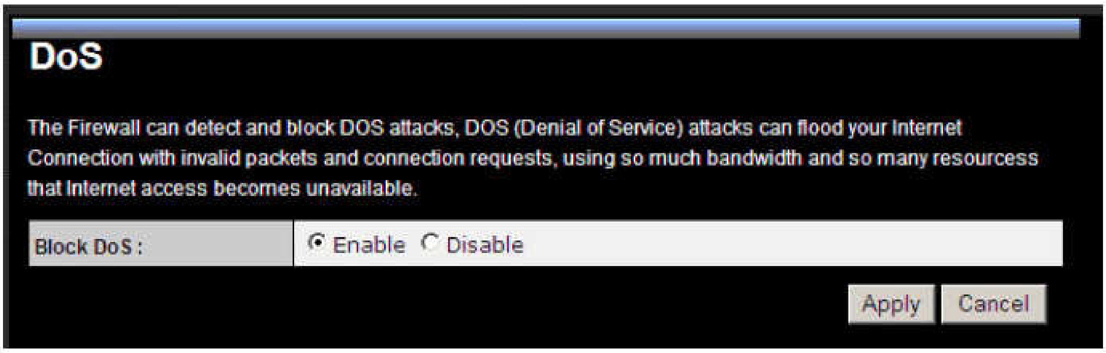
LAN IP Address: Fill-in the IP address of a particular host in your LAN Network that will receive all the packets originally going to the WAN port/Public IP address above.

Click **Apply** at the bottom of the screen to save the above configurations.

Note: When enabling DMZ, you are allowing your PC to be accessed by public without any protection. It is not recommended.

7.4. Denial of Service (DoS)

The Broadband router's firewall can block common hacker attacks, including Denial of Service, Ping of Death, Port Scan and Sync Flood. If Internet attacks occur the router can log the events.



DoS

The Firewall can detect and block DOS attacks, DOS (Denial of Service) attacks can flood your Internet Connection with invalid packets and connection requests, using so much bandwidth and so many resourcess that Internet access becomes unavailable.

Block DoS : ● Enable ○ Disable

Ping of Death: Protections from Ping of Death attack.

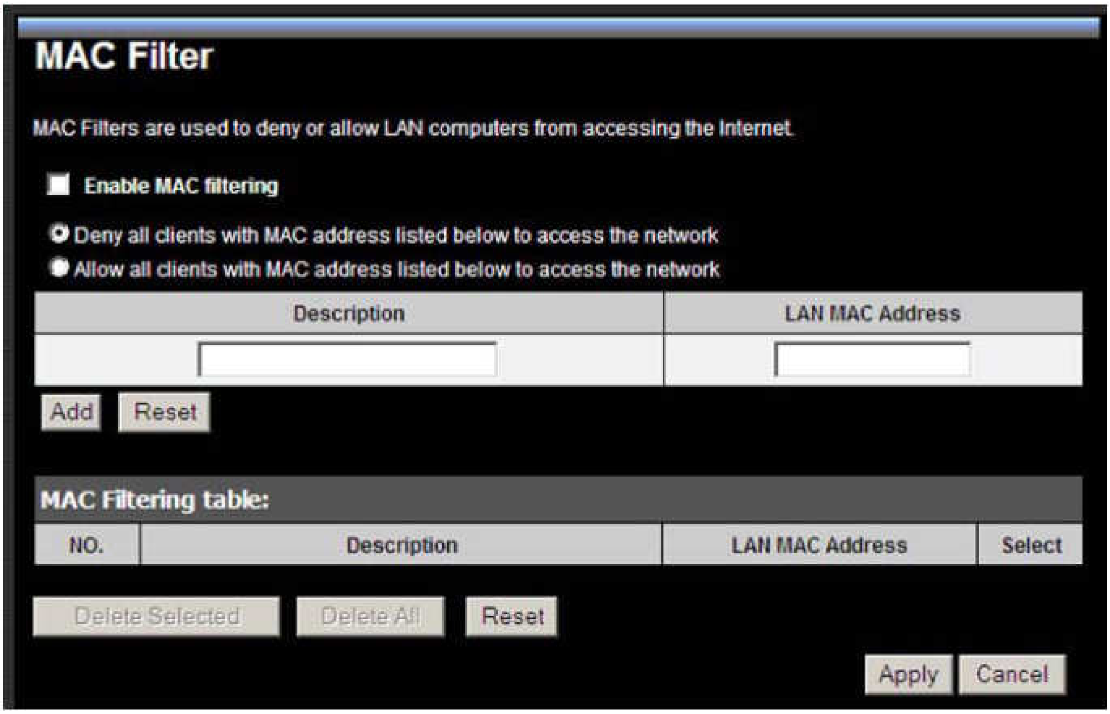
Discard Ping From WAN: The router’s WAN port will not respond to any Ping requests

Port Scan: Protects the router from Port Scans.

Sync Flood: Protects the router from Sync Flood attack.

7.5. MAC Filter

If you want to restrict users from accessing certain Internet applications / services (e.g. Internet websites, email, FTP etc.), and then this is the place to set that configuration. Access Control allows users to define the traffic type permitted in your LAN. You can control which PC client can have access to these services.



MAC Filter

MAC Filters are used to deny or allow LAN computers from accessing the Internet.

□ Enable MAC filtering

◉ Deny all clients with MAC address listed below to access the network
○ Allow all clients with MAC address listed below to access the network

Description	LAN MAC Address

MAC Filtering table:

NO.	Description	LAN MAC Address	Select

Enable MAC Filtering: Check to enable or disable MAC Filtering.

Deny: If you select "**Deny**" then all clients will be allowed to access Internet accept for the clients in the list below.

Allow: If you select "**Allow**" then all clients will be denied to access Internet accept for the PCs in the list below.

Add PC MAC Address

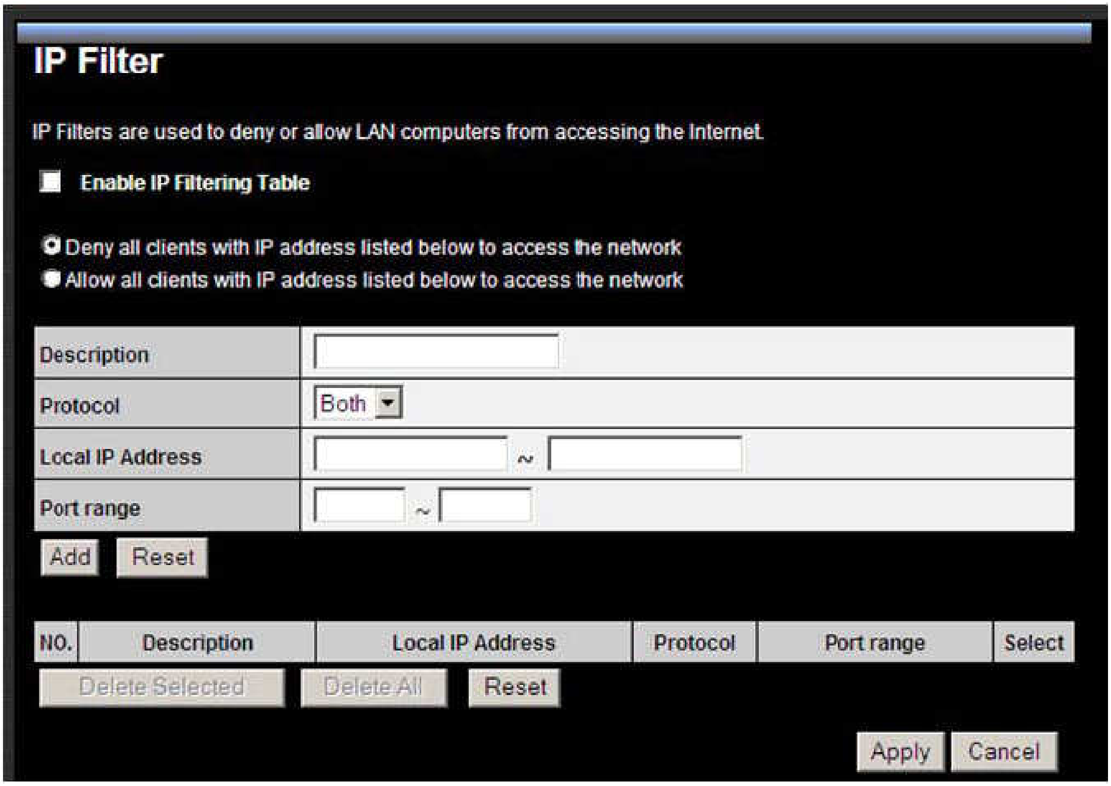
Fill in "**LAN MAC Address**" and **Description** of the PC that is allowed to access the Internet, and then click **Add**. If you find any typo before adding it and want to retype again, just click **Reset** and the fields will be cleared.

Remove PC MAC Address

If you want to remove some PC from the "**MAC Filtering Table**", select the PC you want to remove in the table and then click **Delete Selected**. If you want to remove all PCs from the table, just click the **Delete All** button. If you want to clear the selection and re-select again, just click **Reset**.

Click **Apply** at the bottom of the screen to save the above configurations.

7.6. IP Filter



IP Filter

IP Filters are used to deny or allow LAN computers from accessing the Internet.

□ Enable IP Filtering Table

● Deny all clients with IP address listed below to access the network
○ Allow all clients with IP address listed below to access the network

Description	
Protocol	Both
Local IP Address	~
Port range	~

NO.	Description	Local IP Address	Protocol	Port range	Select

Enable IP Filtering: Check to enable or disable IP Filtering.

Deny: If you select "**Deny**" then all clients will be allowed to access Internet accept for the clients in the list below.

Allow: If you select "**Allow**" then all clients will be denied to access Internet accept for the PCs in the list below.

Add PC IP Address

You can click **<Add>** PC to add an access control rule for users by an IP address or IP address range.

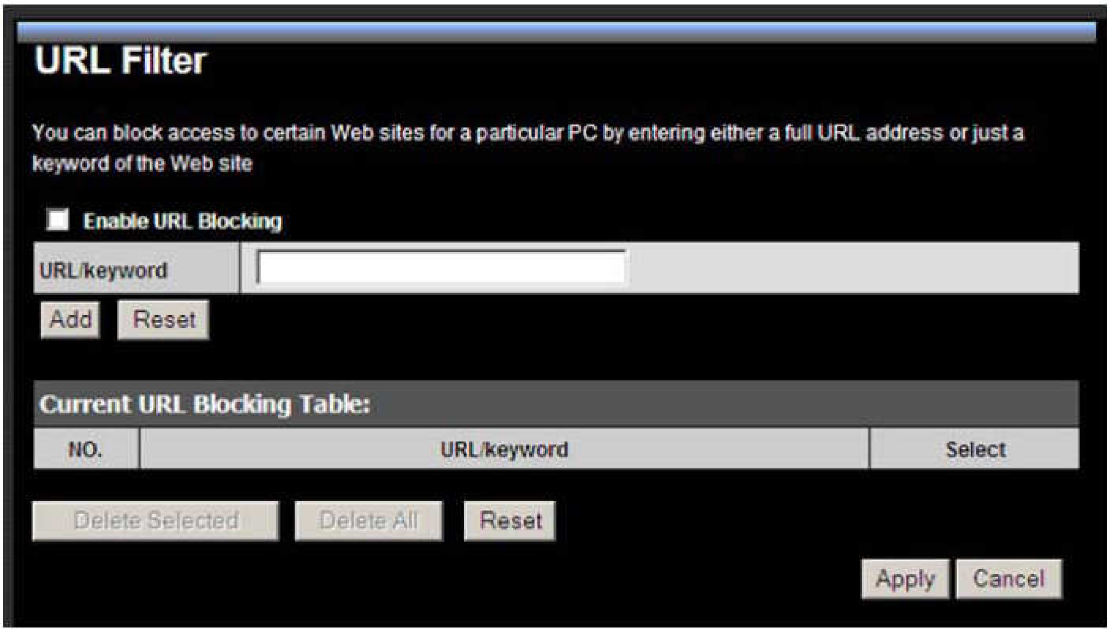
Remove PC IP Address

If you want to remove some PC IP from the **IP Filtering Table**, select the PC you want to remove in the table and then click **Delete Selected**. If you want to remove all PCs from the table, just click the **Delete All** button.

Click **Apply** at the bottom of the screen to save the above configurations.

7.7. URL Filter

You can block access to some Web sites from particular PCs by entering a full URL address or just keywords of the Web site.



URL Filter

You can block access to certain Web sites for a particular PC by entering either a full URL address or just a keyword of the Web site

□ Enable URL Blocking

URL/keyword	

Current URL Blocking Table:

NO.	URL/keyword	Select

Enable URL Blocking: Enable or disable URL Blocking

Add URL Keyword

Fill in “URL/Keyword” and then click **Add**. You can enter the full URL address or the keyword of the web site you want to block. If you happen to make a mistake and want to retype again, just click "Reset" and the field will be cleared.
(eg. If you want to block www.badcontents.com, you can either type in www.badcontents.com or badconents in the field. Both ways will block the site)

Remove URL Keyword

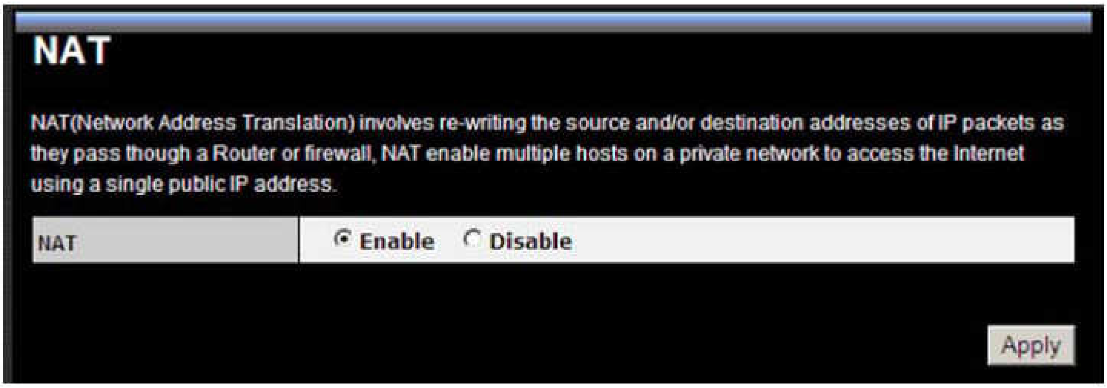
If you want to remove some URL keywords from the "**Current URL Blocking Table**", select the URL keyword you want to remove in the table and then click **Delete Selected**. If you want remove all URL keywords from the table, click **Delete All** button. If you want to clear the selection and re-select again, just click **Reset**.

Click **Apply** at the bottom of the screen to save the above configurations

8. Advanced

8.1. Network Address Translation (NAT)

Network Address Translation (NAT) allows multiple users at your local site to access the Internet through a single Public IP Address or multiple Public IP Addresses. NAT provides Firewall protection from hacker attacks and has the flexibility to allow you to map Private IP Addresses to Public IP Addresses for key services such as Websites and FTP. Select Disable to disable the NAT function.



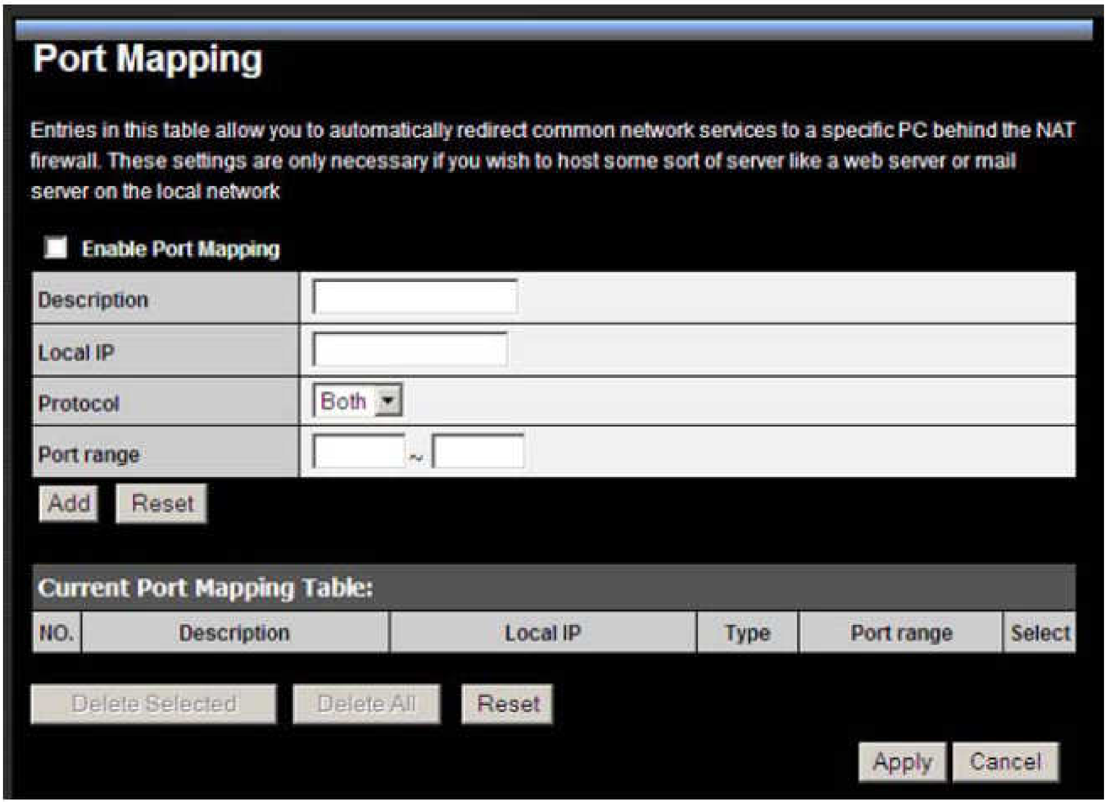
NAT

NAT(Network Address Translation) involves re-writing the source and/or destination addresses of IP packets as they pass though a Router or firewall, NAT enable multiple hosts on a private network to access the Internet using a single public IP address.

NAT	● Enable ○ Disable

8.2. - Port Mapping

Port Mapping allows you to re-direct a particular range of service port numbers (from the Internet / WAN Port) to a particular LAN IP address. It helps you to host servers behind the router NAT firewall.



Port Mapping

Entries in this table allow you to automatically redirect common network services to a specific PC behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the local network

□ Enable Port Mapping

Description	
Local IP	
Protocol	Both
Port range	~

Current Port Mapping Table:

NO.	Description	Local IP	Type	Port range	Select

Enable Port Mapping: Enable or disable port mapping function.

Description: description of this setting.

Local IP: This is the local IP of the server behind the NAT firewall.

Type: This is the protocol type to be forwarded. You can choose to forward “**TCP**” or “**UDP**” packets only, or select “**BOTH**” to forward both “**TCP**” and “**UDP**” packets.

Port Range: The range of ports to be forward to the private IP.

<u>Add Port Mapping</u>

Fill in the "**Local IP**", “**Type**”, “**Port Range**” and "**Description**" of the setting to be added and then click "**Add**". Then this Port Mapping setting will be added into the "**Current Port Mapping Table**" below. If you find any typo before adding it and want to retype again, just click **Clear** and the fields will be cleared.

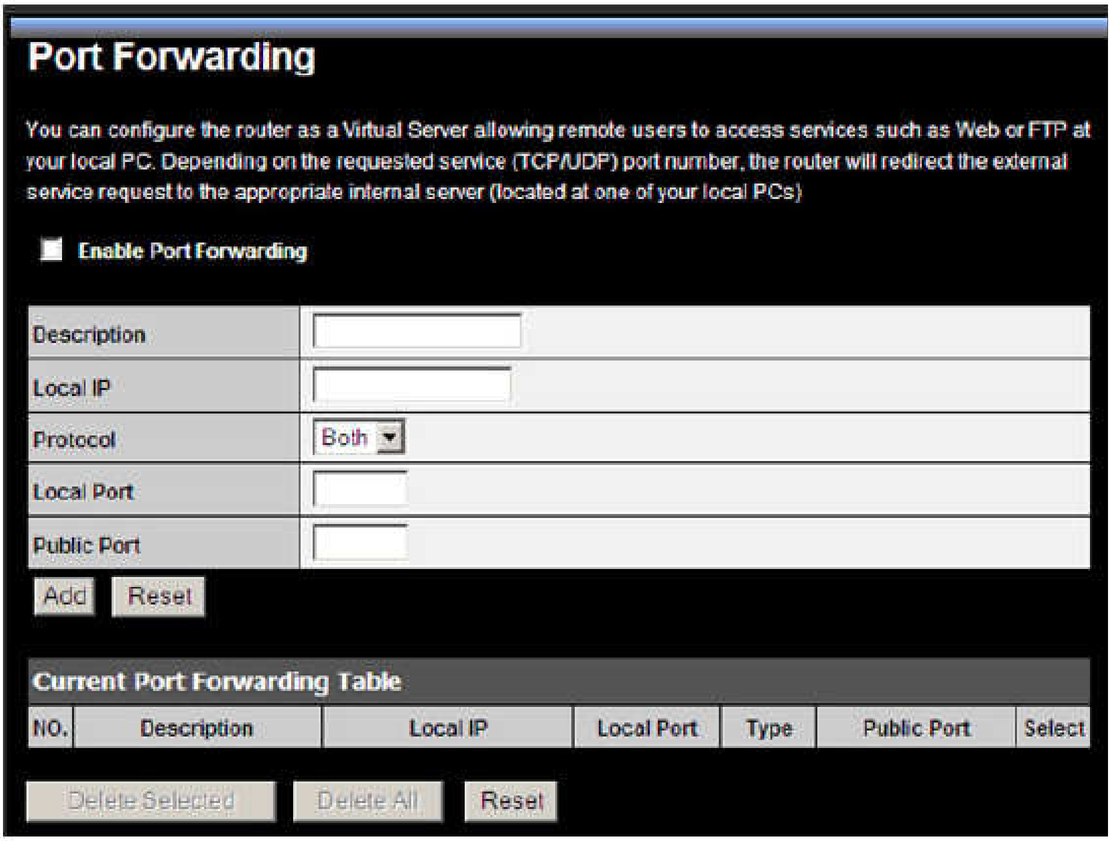
<u>Remove Port Mapping</u>

If you want to remove a Port Mapping setting from the "**Current Port Mapping Table**", select the Port Mapping setting that you want to remove in the table and then click **Delete Selected**. If you want to remove all Port Mapping settings from the table, click **Delete All** button. Click **Reset** will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configurations.

8.3. Port Forwarding (Virtual Server)

Use the Port Forwarding (Virtual Server) function when you want different servers/clients in your LAN to handle different service/Internet application type (e.g. Email, FTP, Web server etc.) from the Internet. Computers use numbers called port numbers to recognize a particular service/Internet application type. The Virtual Server allows you to re-direct a particular service port number (from the Internet/WAN Port) to a particular LAN private IP address and its service port number.



Port Forwarding

You can configure the router as a Virtual Server allowing remote users to access services such as Web or FTP at your local PC. Depending on the requested service (TCP/UDP) port number, the router will redirect the external service request to the appropriate internal server (located at one of your local PCs)

□ Enable Port Forwarding

Description	
Local IP	
Protocol	Both
Local Port	
Public Port	

Current Port Forwarding Table

NO.	Description	Local IP	Local Port	Type	Public Port	Select

Enable Port Forwarding: Enable or disable Port Forwarding.

Description: The description of this setting.

Local IP / Local Port: This is the LAN Client/Host IP address and Port number that the

Public Port number packet will be sent to.

Type: Select the port number protocol type (TCP, UDP or both). If you are unsure, then leave it to the default “both” setting. Public Port enters the service (service/Internet application) port number from the Internet that will be re-directed to the above Private IP address host in your LAN Network.

Public Port: Port number will be changed to Local Port when the packet enters your LAN Network.

Add Port Forwarding

Fill in the "**Description**" , "**Local IP**", "**Local Port**", "**Type**" and “**Public Port**” of the setting to be added and then click **Add** button. Then this Virtual Server setting will be added into the "**Current Port Forwarding Table**" below. If you find any typo before adding it and want to retype again, just click **Clear** and the fields will be cleared.

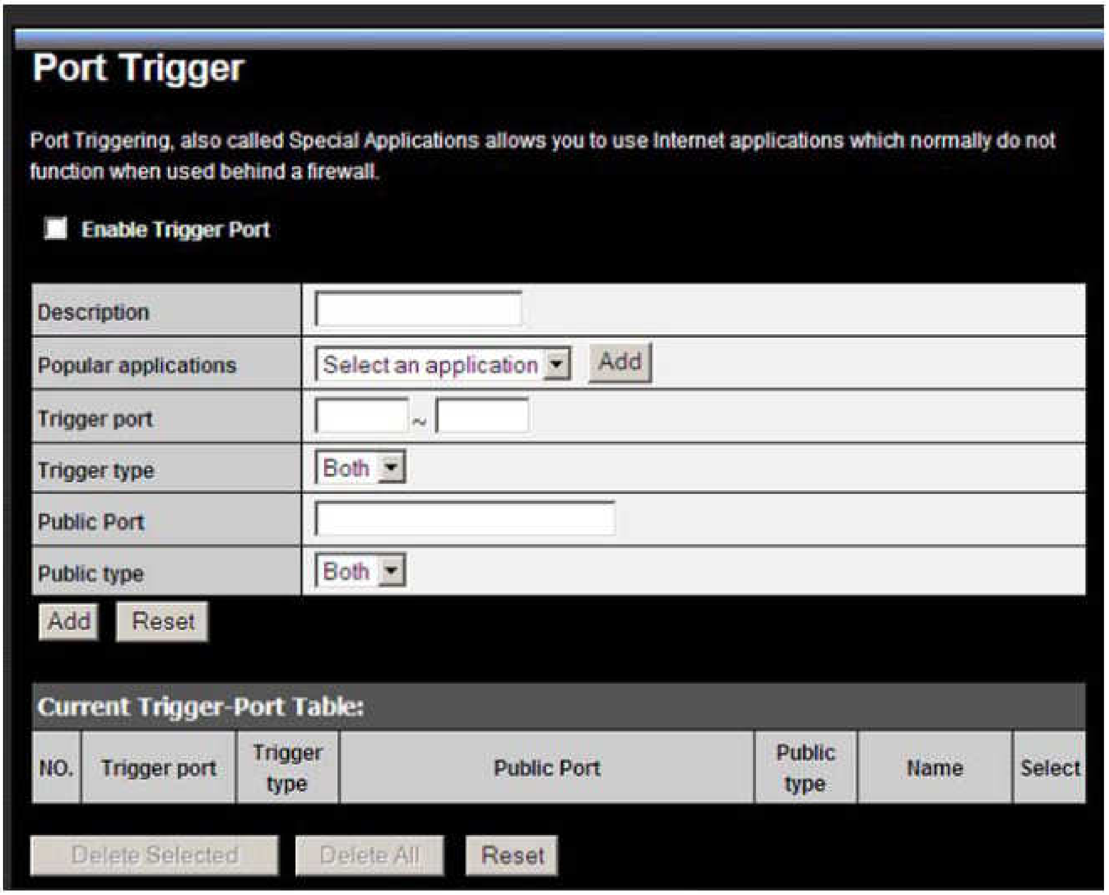
Remove Port Forwarding

If you want to remove Port Forwarding settings from the "**Current Port Forwarding Table**", select the Port Forwarding settings you want to remove in the table and then click "**Delete Selected**". If you want to remove all Port Forwarding settings from the table, just click the **Delete All** button. Click **Reset** will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configurations.

8.4. Port Triggering (Special Applications)

Some applications require multiple connections, such as Internet games, video conferencing, Internet telephony and others. In this section you can configure the router to support multiple connections for these types of applications.



Port Trigger

Port Triggering, also called Special Applications allows you to use Internet applications which normally do not function when used behind a firewall.

☐ Enable Trigger Port

Description	
Popular applications	Select an application ▾ Add
Trigger port	~
Trigger type	Both ▾
Public Port	
Public type	Both ▾

Current Trigger-Port Table:

NO.	Trigger port	Trigger type	Public Port	Public type	Name	Select

Enable Trigger Port: Enable or disable the Port Trigger function.

Trigger Port: This is the outgoing (Outbound) range of port numbers for this particular application.

Trigger Type: Select whether the outbound port protocol is “**TCP**”, “**UDP**” or “**BOTH**”.

Public Port: Enter the In-coming (Inbound) port or port range for this type of application (e.g. 2300-2400, 47624)

Public Type: Select the Inbound port protocol type: “**TCP**”, “**UDP**” or “**BOTH**”

Popular Applications: This section lists the more popular applications that require multiple connections. Select an application from the Popular Applications selection. Once you have selected an application, select a location (1-10) in the Copy to selection box and then click the Copy to button. This will automatically list the Public Ports required for this popular application in the location (1-10) you specified.

Add Port Triggering

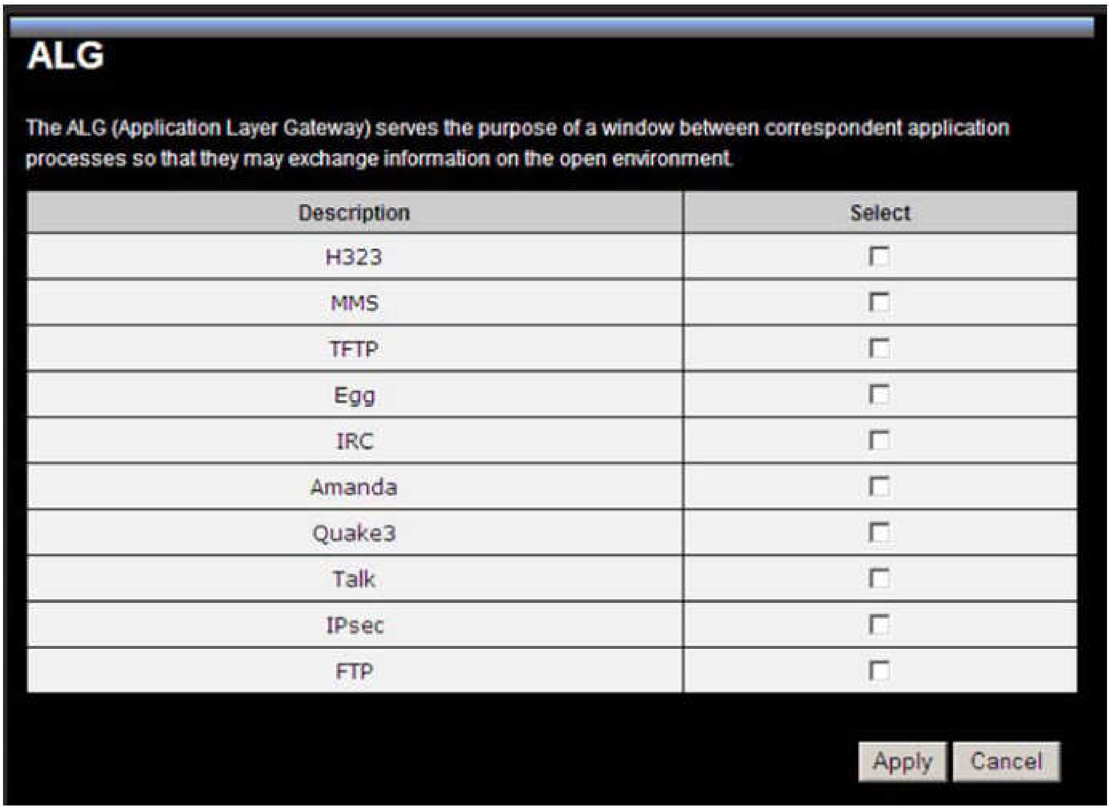
Fill in the "**Trigger Port**", "**Trigger Type**”, “**Public Port**”, "**Public Type**", "**Public Port**" and "**Description**" of the setting to be added and then Click **Add.** The Port Triggering setting will be added into the "**Current Trigger-Port Table**" below. If you happen to make a mistake, just click **Clear** and the fields will be cleared.

Remove Port Triggering

If you want to remove Special Application settings from the "**Current Trigger-Port Table**", select the Port Triggering settings you want to remove in the table and then click **Delete Selected**. If you want remove all Port Triggering settings from the table, just click the **Delete All** button. Click **Reset** will clear your current selections.

8.5. Application Layer Gateway (ALG)

You can select applications that need **ALG** support. The router will let the selected application to correctly pass through the NAT gateway.



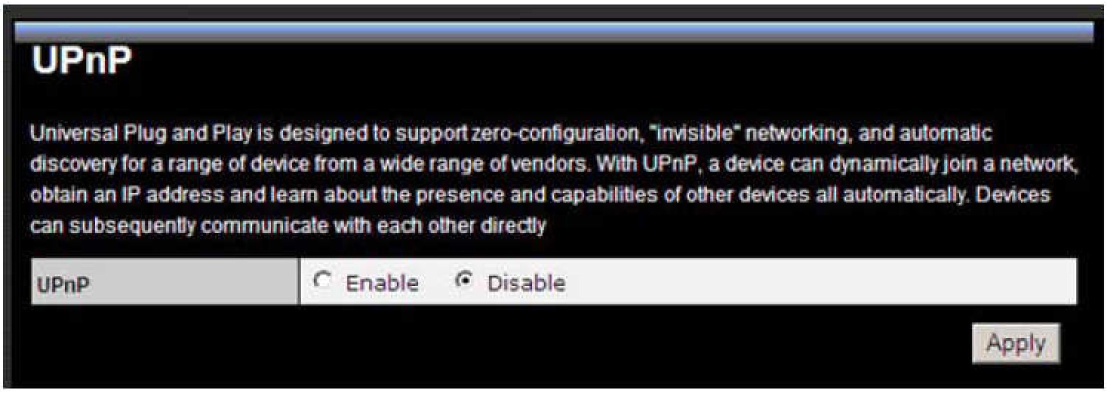
ALG

The ALG (Application Layer Gateway) serves the purpose of a window between correspondent application processes so that they may exchange information on the open environment.

Description	Select
H323	☐
MMS	☐
TFTP	☐
Egg	☐
IRC	☐
Amanda	☐
Quake3	☐
Talk	☐
IPsec	☐
FTP	☐

8.6. UPNP

With UPnP, all PCs in you Intranet will discover this router automatically. So, you don’t have to configure your PC and it can easily access the Internet through this router.



UPnP

Universal Plug and Play is designed to support zero-configuration, "invisible" networking, and automatic discovery for a range of device from a wide range of vendors. With UPnP, a device can dynamically join a network, obtain an IP address and learn about the presence and capabilities of other devices all automatically. Devices can subsequently communicate with each other directly

UPnP	○ Enable ● Disable

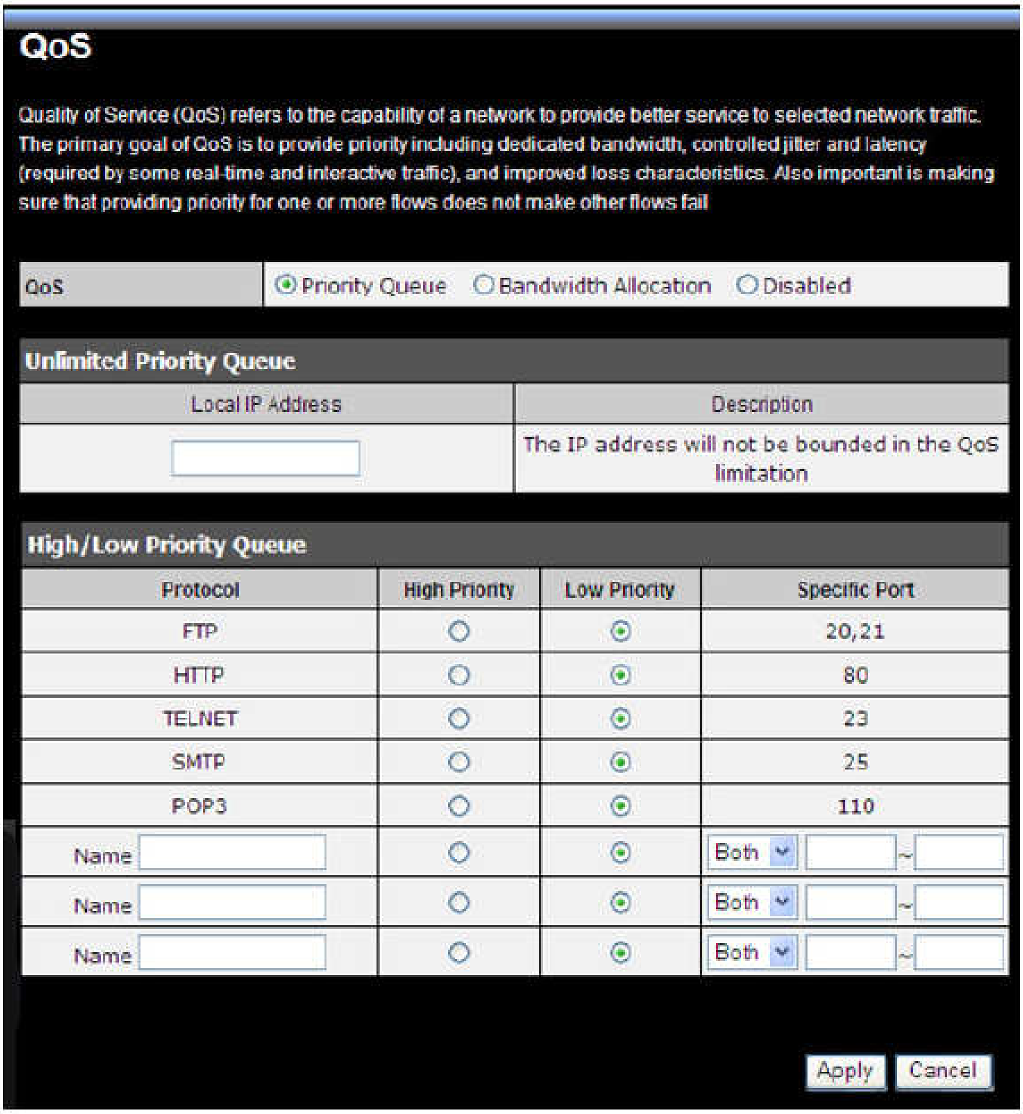
Enable/Disable UPnP: You can enable or Disable the UPnP feature here. After you enable the UPnP feature, all client systems that support UPnP, like Windows XP, can discover this router automatically and access the Internet through this router without having to configure anything. The NAT Traversal function provided by UPnP can let applications that support UPnP connect to the internet without having to configure the virtual server sections.

8.7. Quality of Service (QoS)

QoS can let you classify Internet application traffic by source/destination IP address and port number. You can assign priority for each type of application and reserve bandwidth for it. The packets of applications with higher priority will always go first. Lower priority applications will get bandwidth after higher priority applications get enough bandwidth. This can let you have a better experience in using critical real time services like Internet phone, video conference …etc. All the applications not specified by you are classified as rule “Others”.

Priority Queue Type:

This can put the packets of specific protocols in High/Low Queue. The packets in High Queue will process first.



QoS

Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail

QoS	● Priority Queue ○ Bandwidth Allocation ○ Disabled

Unlimited Priority Queue

Local IP Address	Description
	The IP address will not be bounded in the QoS limitation

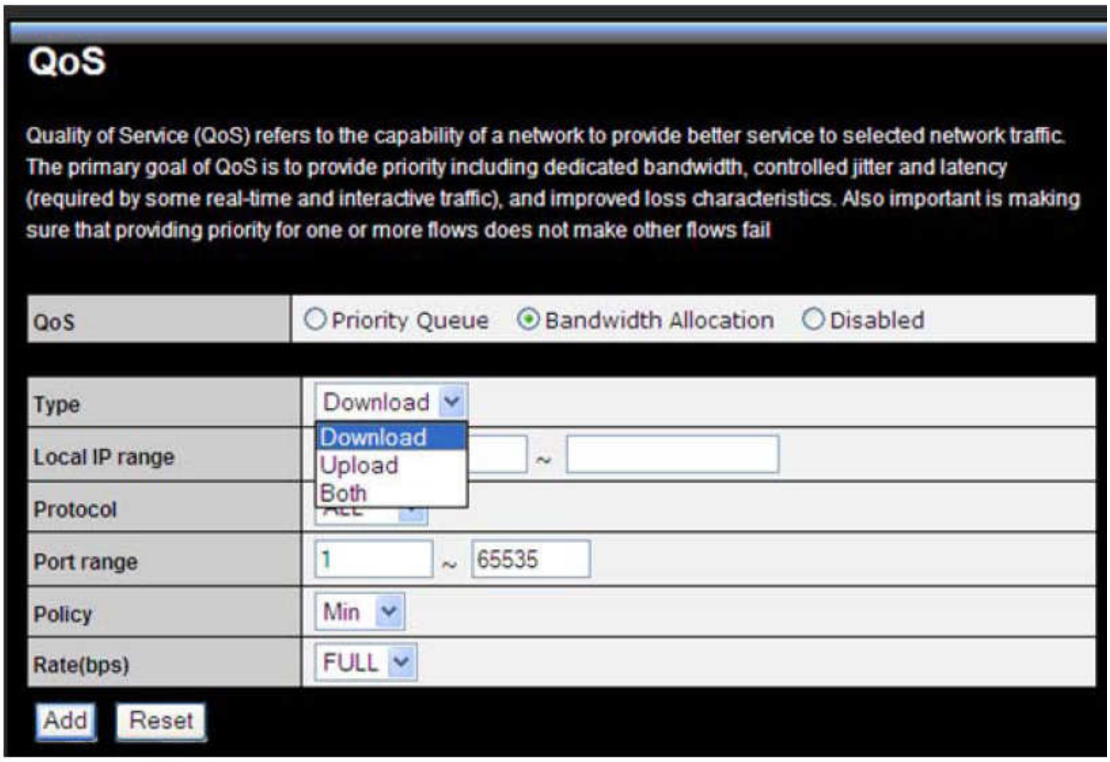
High/Low Priority Queue

Protocol	High Priority	Low Priority	Specific Port
FTP	○	●	20,21
HTTP	○	●	80
TELNET	○	●	23
SMTP	○	●	25
POP3	○	●	110
Name	○	●	Both ~
Name	○	●	Both ~
Name	○	●	Both ~

Unlimited Priority Queue: The LAN IP address will not be bounded in the QoS limitation.
High/Low Priority Queue: This can put the packets in the protocol and port range to High/Low QoS Queue.

Bandwidth Allocation:

This can reserve / limit the throughput of specific protocols and port range. You can set the upper bound and Lower bound.



QoS

Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail

QoS	○ Priority Queue ● Bandwidth Allocation ○ Disabled

Type	Download (Download / Upload / Both)
Local IP range	~
Protocol	ALL
Port range	1 ~ 65535
Policy	Min
Rate(bps)	FULL

Type: Specify the direction of packets. Upload or download.
IP range: Specify the IP address range. You could also fill one IP address
Protocol: Specify the packet type. The default ALL will put all packets in the QoS priority Queue.
Port range: Specify the Port range. You could also fill one Port.
Policy: Specify the policy the QoS, **Min** option will reserve the selected data rate in QoS queue. **Max** option will limit the selected data rate in QoS queue.
Rate: The data rate of QoS queue.

Note: If you select Min for Policy and 4M for Rate, the router will reserve at least 4Mbps data rate dedicated for the targeted protocol and IP range.

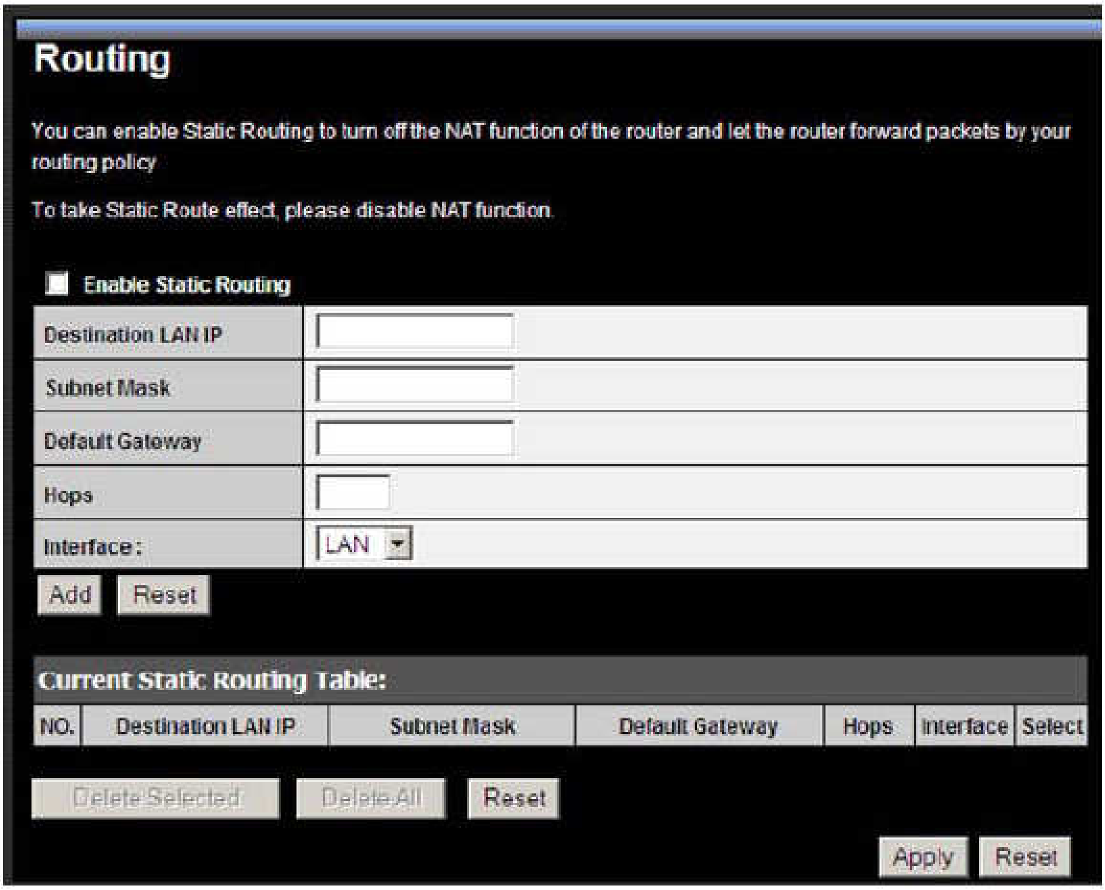
Disabled:

This could turn off QoS feature.

8.8. Routing

You can set enable Static Routing to let the router forward packets by your routing policy.

Static Route is used when network administrators need to route the packets to a different subnet with certain path. This type of setups is not for home users, you can skip this section if this does not apply to you.



Routing

You can enable Static Routing to turn off the NAT function of the router and let the router forward packets by your routing policy

To take Static Route effect, please disable NAT function.

☐ Enable Static Routing

Destination LAN IP	
Subnet Mask	
Default Gateway	
Hops	
Interface :	LAN

Current Static Routing Table:

NO.	Destination LAN IP	Subnet Mask	Default Gateway	Hops	Interface	Select

Destination LAN IP: Specify the destination LAN IP address of static routing rule.

Subnet Mask: Specify the Subnet Mask of static routing rule.

Default Gateway: Specify the default gateway of static routing rule.

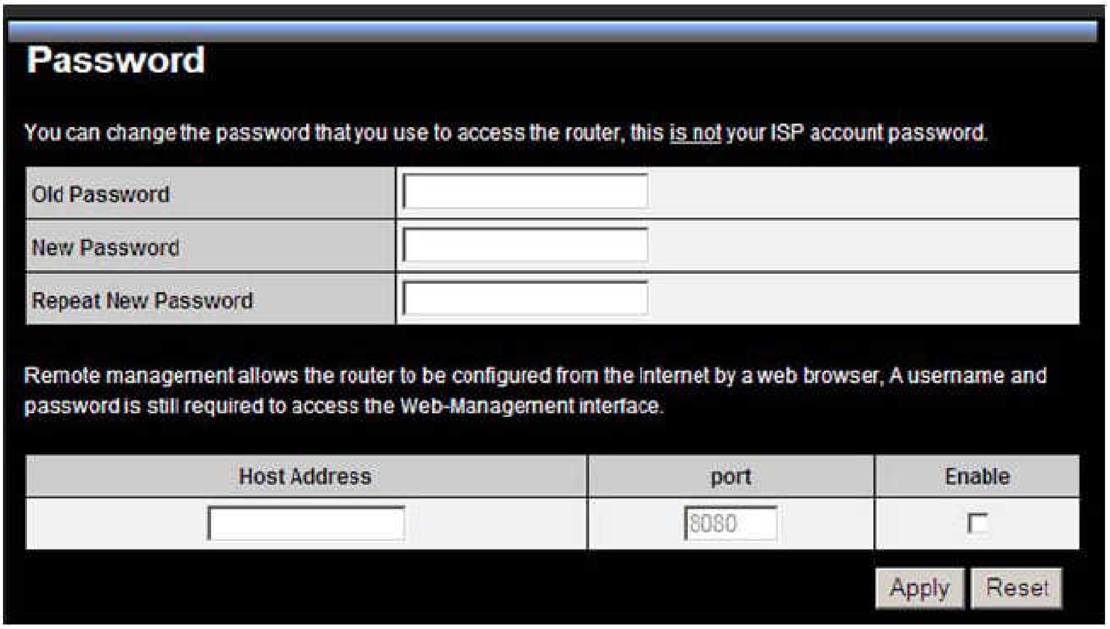
Hops: Specify the Max Hops number of static routing rule.

Interface: Specify the Interface of static routing rule.

9. Tools Setup

9.1. Password

You can change the password required to log into the broadband router's system web-based management. By default, the password is: admin. Passwords can contain 0 to 12 alphanumeric characters, and are case sensitive.



Password

You can change the password that you use to access the router, this is not your ISP account password.

Old Password	
New Password	
Repeat New Password	

Remote management allows the router to be configured from the Internet by a web browser, A username and password is still required to access the Web-Management interface.

Host Address	port	Enable
	8080	□

Current Password: Fill in the current password to allow changing to a new password.

New Password: Enter your new password and type it again in **Repeat New Password** for verification purposes

Remote management

This allows you to designate a host in the Internet the ability to configure the Broadband router from a remote site. Enter the designated host IP Address in the Host IP Address field.

Host Address: This is the IP address of the host in the Internet that will have management/configuration access to the Broadband router from a remote site. If the Host Address is left 0.0.0.0 this means anyone can access the router's web-based configuration from a remote location, providing they know the password.

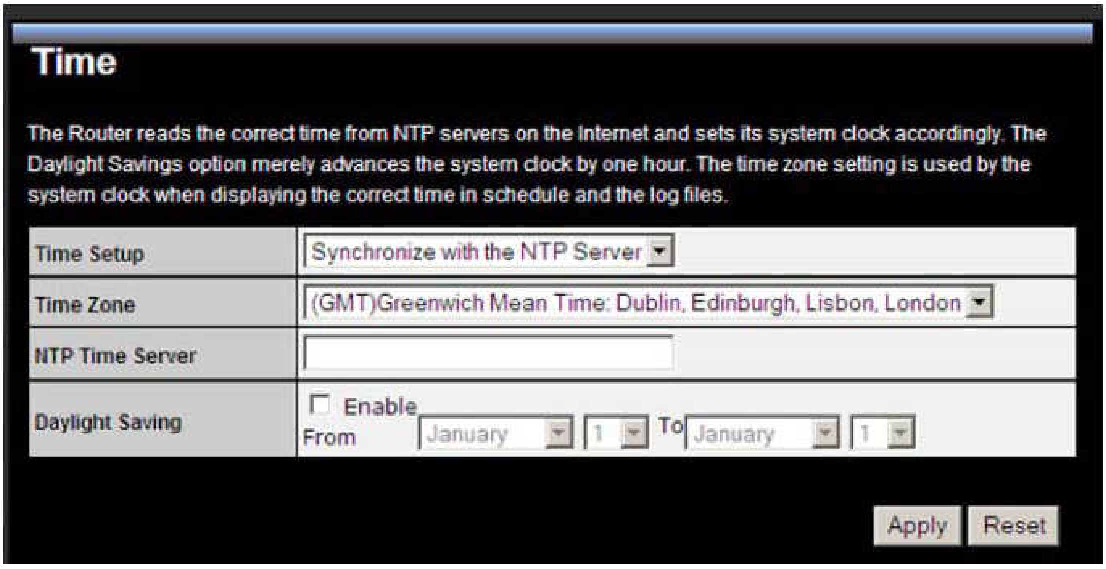
Port: The port number of the remote management web interface.

Enabled: Check to enable the remote management function.

Click **Apply** at the bottom of the screen to save the above configurations.

9.2. Time

The Time Zone allows your router to reference or base its time on the settings configured here, which will affect functions such as Log entries and Firewall settings.



Time

The Router reads the correct time from NTP servers on the Internet and sets its system clock accordingly. The Daylight Savings option merely advances the system clock by one hour. The time zone setting is used by the system clock when displaying the correct time in schedule and the log files.

Time Setup	Synchronize with the NTP Server
Time Zone	(GMT)Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
NTP Time Server	
Daylight Saving	□ Enable From January 1 To January 1

Time Zone: Select the time zone of the country you are currently in. The router will set its time based on your selection.

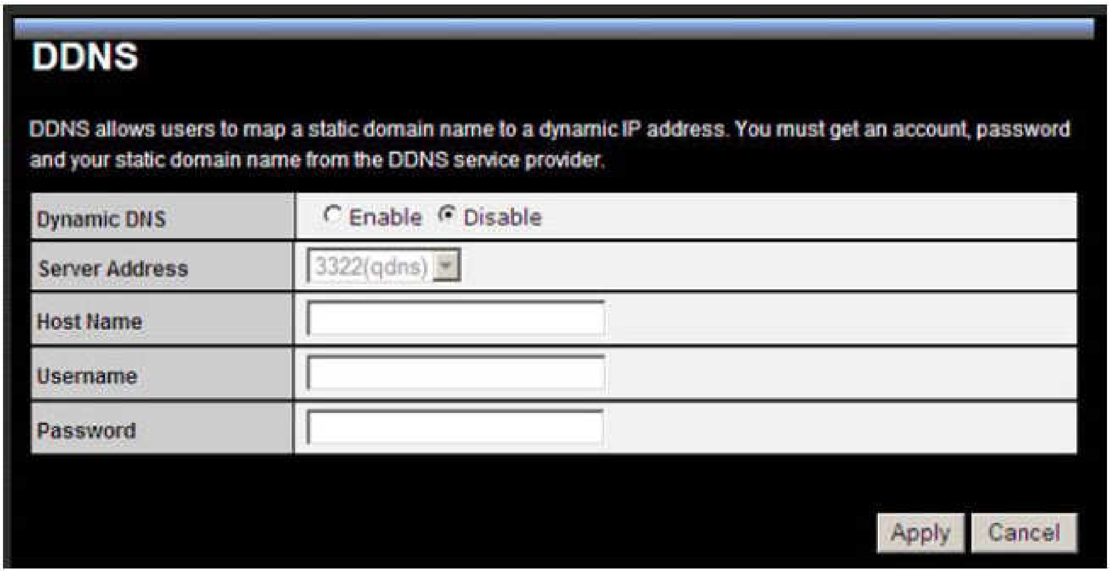
NTP Time Server: The router can set up external NTP Time Server.

Daylight Savings: The router can also take Daylight Savings into account. If you wish to use this function, you must select the Daylight Savings Time period and check/tick the enable box to enable your daylight saving configuration.

Click **Apply** at the bottom of the screen to save the above configurations.

9.3. DDNS

DDNS allows you to map the static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service providers. This router supports DynDNS, TZO and other common DDNS service providers.



DDNS

DDNS allows users to map a static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service provider.

Dynamic DNS	○ Enable ● Disable
Server Address	3322(qdns)
Host Name	
Username	
Password	

Enable/Disable DDNS: Enable or disable the DDNS function of this router

Server Address: Select a DDNS service provider

Host Name: Fill in your static domain name that uses DDNS.

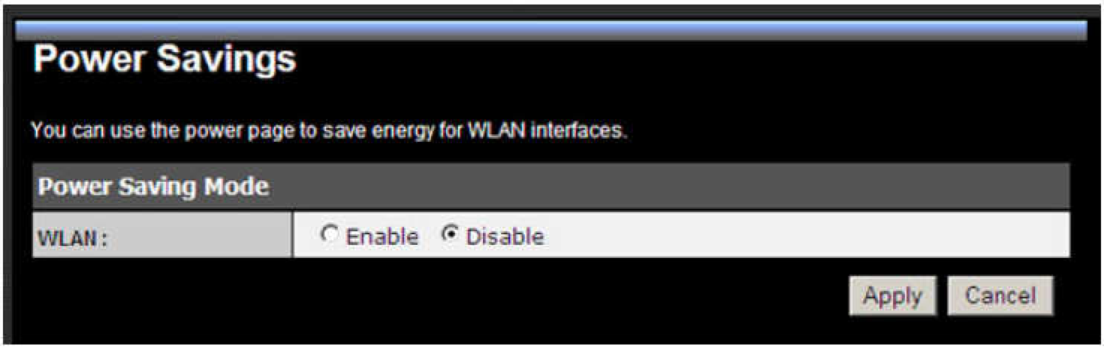
Username: The account that your DDNS service provider assigned to you.

Password: The password you set for the DDNS service account above

Click **Apply** at the bottom of the screen to save the above configurations.

9.4. Power Savings

Saving power in WLAN mode can be enabled/disabled in this page.



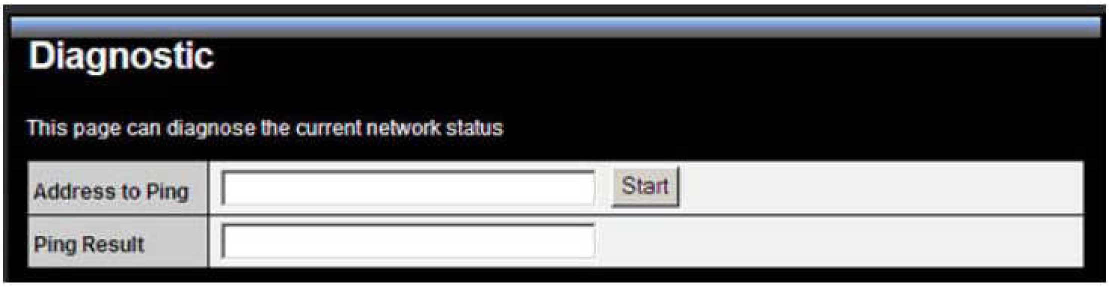
Power Savings

You can use the power page to save energy for WLAN interfaces.

Power Saving Mode	
WLAN :	○ Enable ● Disable

9.5. Diagnosis

This section could let you diagnosis your current network status by using PING command.



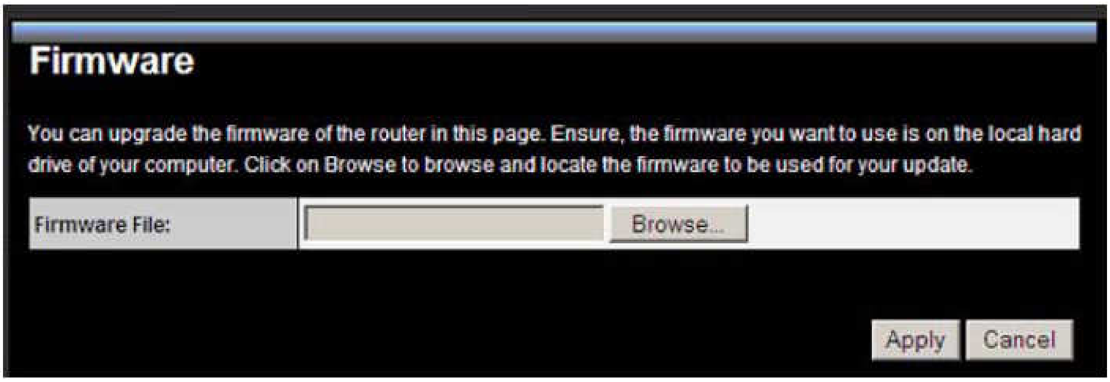
Diagnostic

This page can diagnose the current network status

Address to Ping	
Ping Result	

9.6. Firmware

This page allows you to upgrade the router’s firmware. To upgrade the firmware of your Broadband router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to find the firmware file on your PC.



Firmware

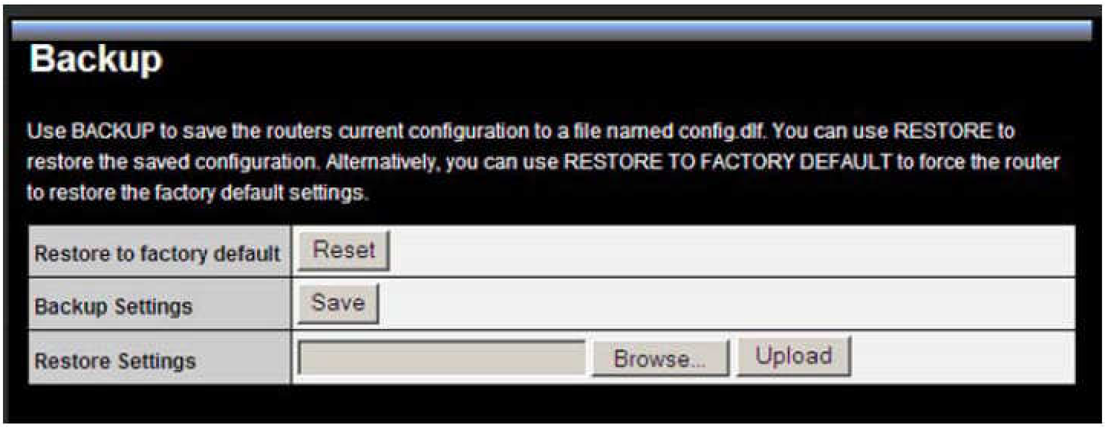
You can upgrade the firmware of the router in this page. Ensure, the firmware you want to use is on the local hard drive of your computer. Click on Browse to browse and locate the firmware to be used for your update.

Firmware File:	

Once you’ve selected the new firmware file, click **Apply** at the bottom of the screen to start the upgrade process

9.7. Backup

This page allows you to save the current router configurations. When you save the configurations, you also can re-load the saved configurations into the router through the **Restore Settings**. If extreme problems occur you can use the **Restore to Factory Defaults** to set all configurations to its original default settings.



Backup

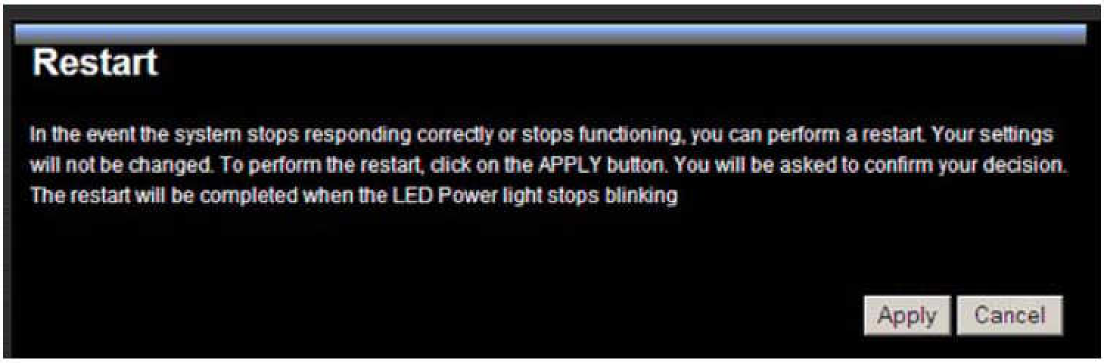
Use BACKUP to save the routers current configuration to a file named config.dlf. You can use RESTORE to restore the saved configuration. Alternatively, you can use RESTORE TO FACTORY DEFAULT to force the router to restore the factory default settings.

Restore to factory default	Reset
Backup Settings	Save
Restore Settings	Browse... Upload

Backup Settings: This can save the Broadband router current configuration to a file named "**config.bin**" on your PC. You can also use the **Upload** button to restore the saved configuration to the Broadband router. Alternatively, you can use the "**Restore to Factory Defaults**" tool to force the Broadband router to perform a power reset and restore the original factory settings.

9.8. Restart

You can reset the router when system stops responding correctly or stop functions.



Restart

In the event the system stops responding correctly or stops functioning, you can perform a restart. Your settings will not be changed. To perform the restart, click on the APPLY button. You will be asked to confirm your decision. The restart will be completed when the LED Power light stops blinking

Appendix A – FCC Interference Statement

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: 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.

Appendix B – IC Interference Statement

Industry Canada statement:

This device complies with RSS-210 of the Industry Canada 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:

Radiation Exposure Statement:

This equipment complies with IC 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.

Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

TEW-671BR – 3 Years Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

If a product does not operate as warranted during the applicable warranty period, TRENDnet shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original date of purchase. All products that are replaced become the property of TRENDnet. Replacement products may be new or reconditioned. TRENDnet does not issue refunds or credit. Please contact the point-of-purchase for their return policies.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product by any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting TRENDnet within the applicable warranty period and providing a copy of the dated proof of the purchase. Upon proper submission of required documentation a Return Material Authorization (RMA) number will be issued. An RMA number is required in order to initiate warranty service support for all TRENDnet products. Products that are sent to TRENDnet for RMA service must have the RMA number marked on the outside of return packages and sent to TRENDnet prepaid, insured and packaged appropriately for safe shipment. Customers shipping from outside of the USA and Canada are responsible for return shipping fees. Customers shipping from outside of the USA are responsible for custom charges, including but not limited to, duty, tax, and other fees.

WARRANTIES EXCLUSIVE: IF THE TRENDNET PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, THE CUSTOMER'S SOLE REMEDY SHALL BE, AT TRENDNET'S OPTION, REPAIR OR REPLACE. THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR

PURPOSE. TRENDNET NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION MAINTENANCE OR USE OF TRENDNET'S PRODUCTS.

TRENDNET SHALL NOT BE LIABLE UNDER THIS WARRANTY IF ITS TESTING AND EXAMINATION DISCLOSE THAT THE ALLEGED DEFECT IN THE PRODUCT DOES NOT EXIST OR WAS CAUSED BY CUSTOMER'S OR ANY THIRD PERSON'S MISUSE, NEGLECT, IMPROPER INSTALLATION OR TESTING, UNAUTHORIZED ATTEMPTS TO REPAIR OR MODIFY, OR ANY OTHER CAUSE BEYOND THE RANGE OF THE INTENDED USE, OR BY ACCIDENT, FIRE, LIGHTNING, OR OTHER HAZARD.

LIMITATION OF LIABILITY: TO THE FULL EXTENT ALLOWED BY LAW TRENDNET ALSO EXCLUDES FOR ITSELF AND ITS SUPPLIERS ANY LIABILITY, WHETHER BASED IN CONTRACT OR TORT (INCLUDING NEGLIGENCE), FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATE, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF THE POSSIBILITY OF SUCH DAMAGES, AND LIMITS ITS LIABILITY TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT TRENDNET'S OPTION. THIS DISCLAIMER OF LIABILITY FOR DAMAGES WILL NOT BE AFFECTED IF ANY REMEDY PROVIDED HEREIN SHALL FAIL OF ITS ESSENTIAL PURPOSE.

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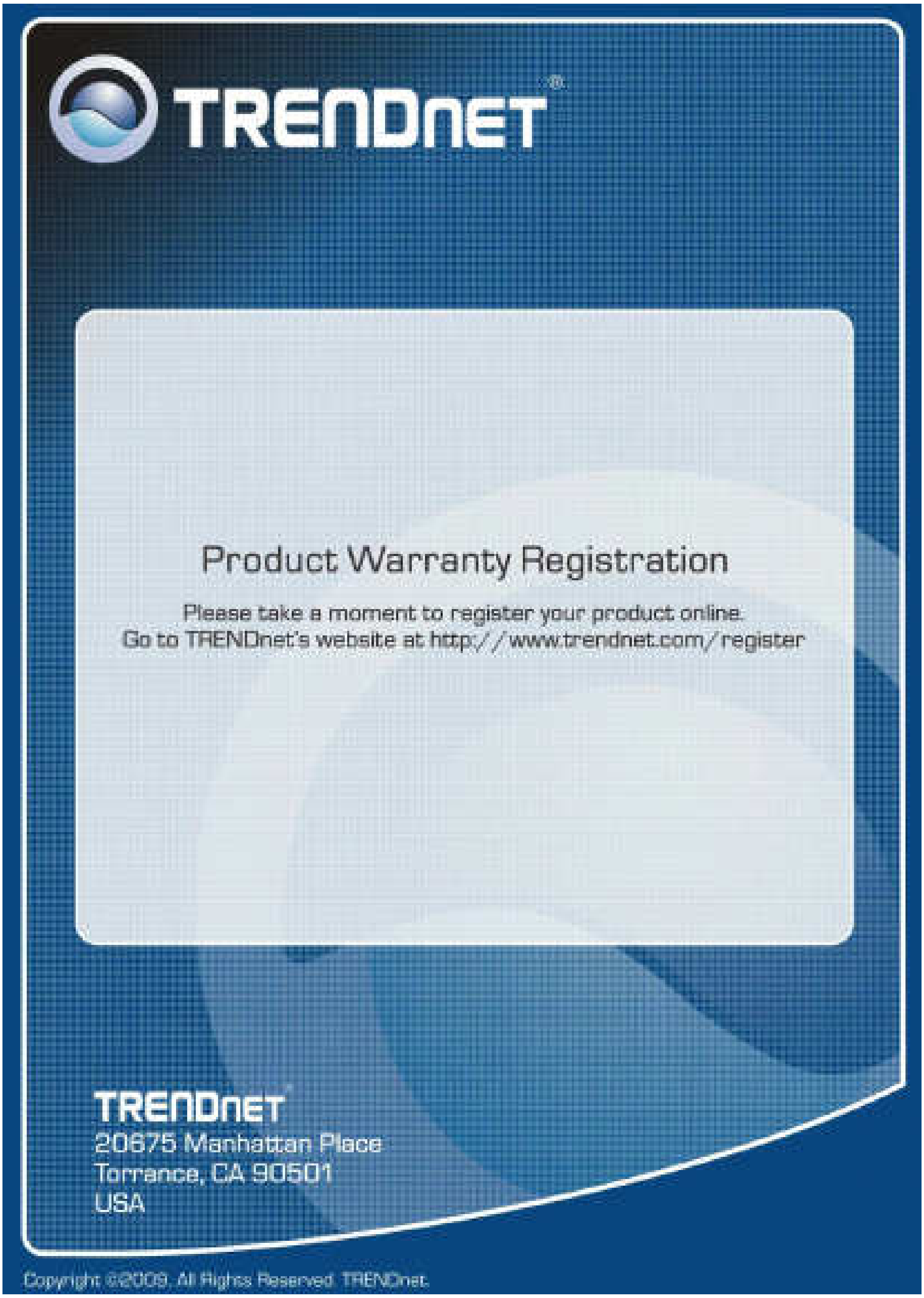

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