TP-LINK®

User Guide

Archer CR700

AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router

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FCC 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 or more 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.

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.
2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 28 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

This device is restricted in indoor environment only.

Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSSs. 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 the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1） l'appareil ne doit pas produire de brouillage;

2） l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution:

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

The high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement:

Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

En outre, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

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.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Industry Canada Statement

CAN ICES-3 (B)/NMB-3(B)

NCC Notice& BSMI Notice:

注意！

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性或功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信規定作業之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。

減少電磁波影響，請妥適使用。

安全諮詢及注意事項

●請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。

●清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。

●注意防潮，請勿將水或其他液體潑灑到本產品上。

●插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。

●請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。

●請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。

Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don’t disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.
- Adapter shall be installed near the equipment and shall be easily accessible.
- The plug considered as disconnect device of adapter.
- Use only power supplies which are provided by manufacturer and in the original packing of this product.

Explanation of the symbols on the product label

Symbol	Explanation
⎓	DC voltage
	RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.

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Package Contents

The following contents should be found in your package:

- One Archer CR700 AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router
- One Power Adapter for Archer CR700 AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router
- Quick Installation Guide
- One RJ45 cable

☞ **Note:**

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact your distributor.

Chapter 1. Product Overview

Thank you for choosing the **Archer CR700 AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router**.

1.1 Overview of the Modem Router

The Archer CR700 AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router integrates DOCSIS 3.0 modem, NAT router, 4-port switch and wireless access point in one device provides a one-stop networking solution.

The modem router provides up to 450Mbps (2.4GHz) + 1300Mbps (5GHz) wireless connection with other wireless clients. The incredible speed makes it ideal for handling multiple data streams at the same time, which ensures your network stable and smooth. The performance of this 802.11ac wireless modem router will give you the unexpected networking experience at speed much faster than 802.11n. It is also compatible with all IEEE 802.11a, IEEE 802.11b, IEEE 802.11g and IEEE 802.11n, products.

With multiple protection measures, including SSID broadcast control and wireless LAN 64/128 WEP encryption, Wi-Fi protected Access (WPA2-PSK, WPA-PSK), as well as advanced Firewall protections, the Archer CR700 AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router provides complete data privacy.

The modem router provides flexible access control, so that parents or network administrators can establish restricted access policies for children or staffs. It also supports Virtual Server and DMZ host for Port Triggering, and then the network administrators can manage and monitor the network in real time with the remote management function.

Since the modem router is compatible with virtually all the major operating systems, it is very easy to manage. Detailed instructions are provided step by step in this user guide. Before installing the modem router, please look through this guide to know all the modem router's functions.

1.2 Main Features

- Supports 802.11ac - The next generation of Wi-Fi
- Dual band – for combined wireless speeds of up to 1.75Gbps at 2.4GHz and 5GHz band concurrently
- DOCSIS 3.0, Compatible with DOCSIS 2.0/1.1/1.0
- 16 Downstream Channel bonding, Up to 680Mbps Downstream for DOCSIS
- 4 Upstream Channel bonding, Up to 143Mbps Upstream
- Full Band Capture windows - Utilize any channels in the downstream spectrum.
- Dual-core processor –for wonderful performance with Internet, Wi-Fi, Ethernet and USB devices
- 6 internal antennas provide maximum Omni-directional wireless coverage and reliability
- Full gigabit ports ensure ultra fast data transfer speeds
- Dual USB Ports - easily share printers, files or media with your friends or family locally or over the Internet

- Guest Network Access provides secure Wi-Fi access for guests sharing your home or office network
- IPv6 supported, meeting the demands for the next generation of Internet
- Wi-Fi On/Off Button allows users to turn their wireless radio on or off
- Easy one-touch WPA wireless security encryption with the WPS button
- WPA-PSK/WPA2-PSK encryptions provide user networks with active defense against security threats
- Parental Controls allow parents or administrators to establish restricted access policies for children or staff

1.3 Panel Layout

1.3.1 The Front Panel

Figure 1-1

The modem router's LEDs are located on the side panel (View from top to bottom). They indicate the device's working status. For details, please refer to LED Explanation.

LED Explanation:

Name	Status	Indication
(Power)	On	Power is on.
	Off	Power is off.

(Downstream)	Green	The modem router is synchronized with more than one channel.
	White	The modem router is synchronized with one channel.
	Flashing	The modem router is scanning for downstream channels.
	Off	The initialization is not started, or has failed.
(Upstream)	Green	The modem router is synchronized with more than one channel.
	White	The modem router is synchronized with one channel.
	Flashing	The modem router is ranging or registering for upstream channels.
	Off	The initialization is not started, or has failed.
(Internet)	On	Internet service is available.
	Off	Internet service is not available.
	Flashing	The modem router is initializing.
(LAN)	On	At least one LAN port is connected.
	Off	No LAN port is connected.
(Wireless)	On	The wireless network is enabled.
	Off	The wireless network is disabled.
(WPS)	On/Off	The LED stays on for 5 minutes when a WPS connection is established before it turns off.
	Flashing	WPS connection is in progress. This may take up to 2 minutes.
(USB on the back panel)	Off	No USB device is plugged in to the USB port.
	On	The USB device is detected and ready to use.
	Flashing	A USB device is being detected.

1.3.2 The Back Panel

Figure 1-2

- **RESET**: There are two ways to reset the modem router's factory defaults.

  Method one: With the modem router powered on, use a pin to press and hold the Reset button for at least 8-10 seconds. And the modem router will reboot to its factory default settings.

  Method two: Restore the default setting from "5.10.6 Backup & Restore" of the modem router's Web-based Management.

- **WPS**: The switch for the WPS function.
- **WiFi ON/OFF**: The switch for the WiFi function. Press it to enable/disable the WiFi function.
- **USB2, USB1**: The USB port connects to a USB storage device or a USB printer.
- **LAN4, LAN3, LAN2, LAN1:** Through these ports, you can connect the modem router to your PC or the other Ethernet network devices.
- **Cable:** Through this port, you can connect the modem router to coaxial cable.
- **DC**: The power plug where you will connect the power adapter.
- **Power ON/OFF**: The switch for the power.

Chapter 2. Install the Modem Router

2.1 System Requirements

- Broadband Internet Access Service (Cable).
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors.
- TCP/IP protocol on each PC.
- Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari.

2.2 Installation Environment Requirements

- The Product should not be located where it will be exposed to moisture or excessive heat.
- Place the Router in a location where it can be connected to the various devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way so they do not create a tripping hazard.
- The Router can be placed on a shelf or desktop.
- Keep away from the strong electromagnetic radiation and the device of electromagnetic sensitive.

2.3 Connect the Hardware

Before installing the device, please make sure your broadband cable service provided by your ISP is available. If there is any problem, please contact your ISP. Before cable connection, cut off the power supply and keep your hands dry. You can follow the steps below to install it.

Step 1: Connect the coaxial cable and power adapter to the modem router, then power on your modem router.

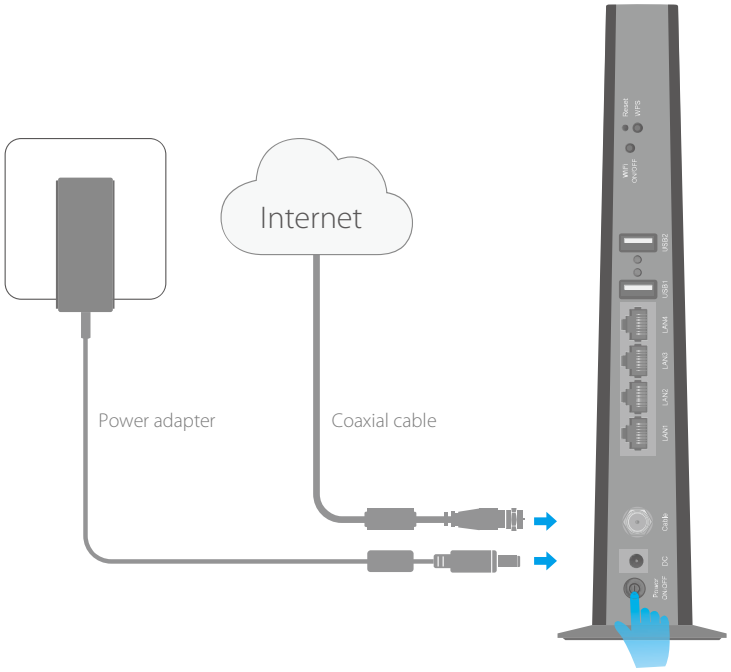


Figure 2-1

Step 2: Wait for about 1 minute until the following LEDs are solid on.

Step 3: Connect your computer to the modem router via a wired or wireless connection.

Wired: Connect the computer to the modem router's LAN port via an Ethernet cable.

Wireless: On your computer, select and connect to the modem router's wireless network. The default wireless network name (SSID) and password are printed on the product label at the bottom of the modem router.

Or you can set up a connection via the WPS button, which is on the back panel of the modem router. For more information about WPS, refer to 5.4.2 Primary Network.

2.4 Activate the Modem Router

Step 1: Get your Internet service account information and the modem router's product label ready for activating your modem router. To access the Internet, the modem router needs to be activated.

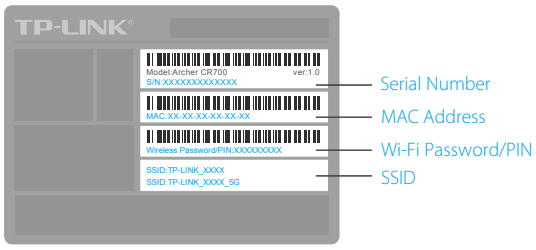


Figure 2-2

Step 2: If your computer is configured with a fixed IP, change it to "obtain an IP address dynamically".

Launch a web browser, and visit any website. You will be automatically redirected to your service provider's self-activation page.

Follow the on-screen self-activation instructions to activate the modem router. If the self-activation page does not show up, please call your service provider's customer service to activate the modem router.

Note:

For Comcast and Time Warner Cable (TWC):

Comcast Xfinity	1-800-934-6489	www.comcast.com
Time Warner Cable	1-855-704-4503	www.timewarnercable.com

The contact information listed might change. You can also find the contact number in your monthly Internet service billing statement.

2.5 Enjoy the Internet

After activating your modem router successfully, wait for about 10 minutes till these LEDs become solid on, then you can enjoy the Internet.

☞ **Note:**

If the Internet is not accessible, contact your Internet service provider and make sure that the modem router is activated.

Safety Information

The product should be connected to cable distribution system that grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93 - Grounding of Outer Conductive Shield of a Coaxial Cable.

Chapter 3. Log into the Modem Router

With a Web-based management page, it is easy to configure and manage the Archer CR700 AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router. The Web-based management page can be used on any Windows, Macintosh or UNIX OS with a Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari.

Set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC. If you need instructions as to how to do this, please refer to Appendix B: Trouble shooting.

To access the configuration utility, open a web-browser and type the default address http://tplinkmodem.net/ or 192.168.1.1 in the address field of the browser.

Figure 3-1

After a moment, a login window will appear. Enter **admin** for the Username and Password, both in lower case letters. Then click the **Login** button or press the Enter key.

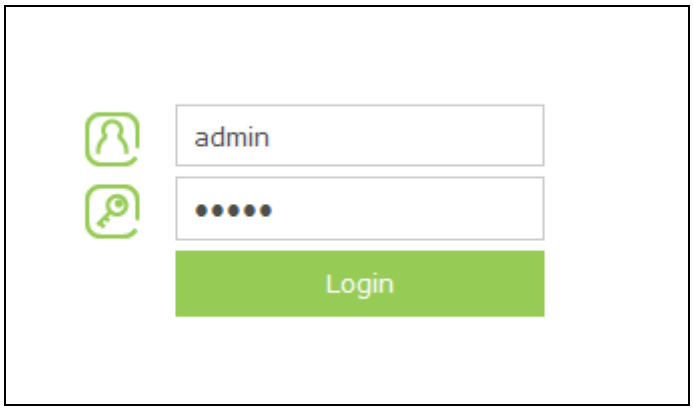


Figure 3-2

After your successful login, you will see the screen as shown below.

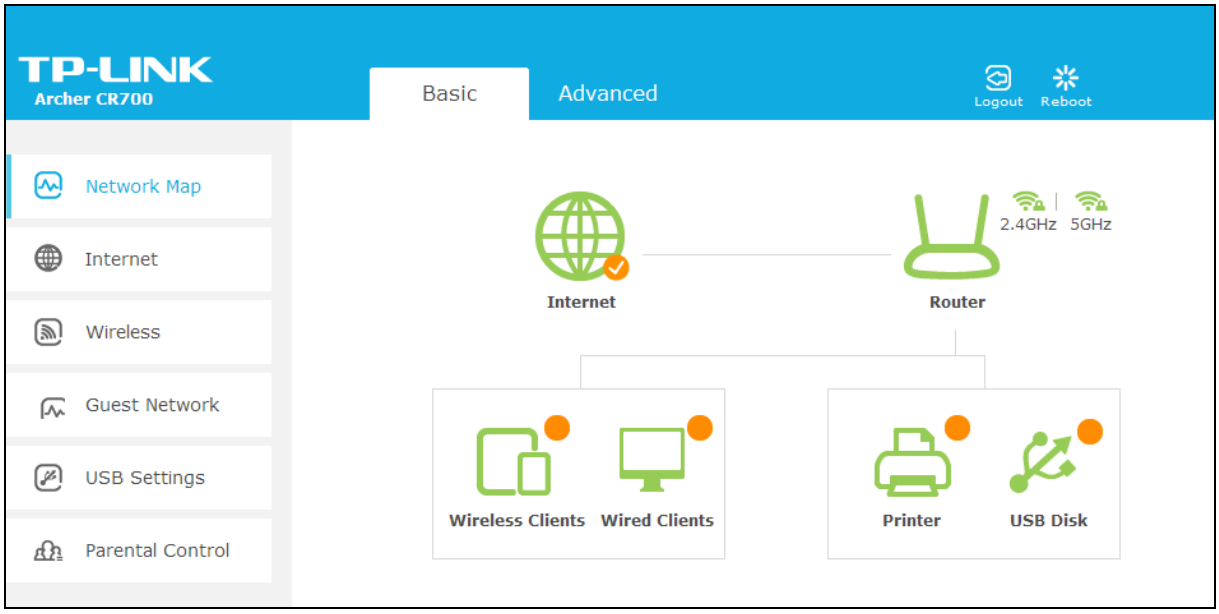


Figure 3-3

Chapter 4. Basic

4.1 Network Map

Network Map provides a dashboard that lets you see the status of your Internet connection and network at a glance. You can click any of the eight sections of the dashboard to view the detail information. All the information is read-only.

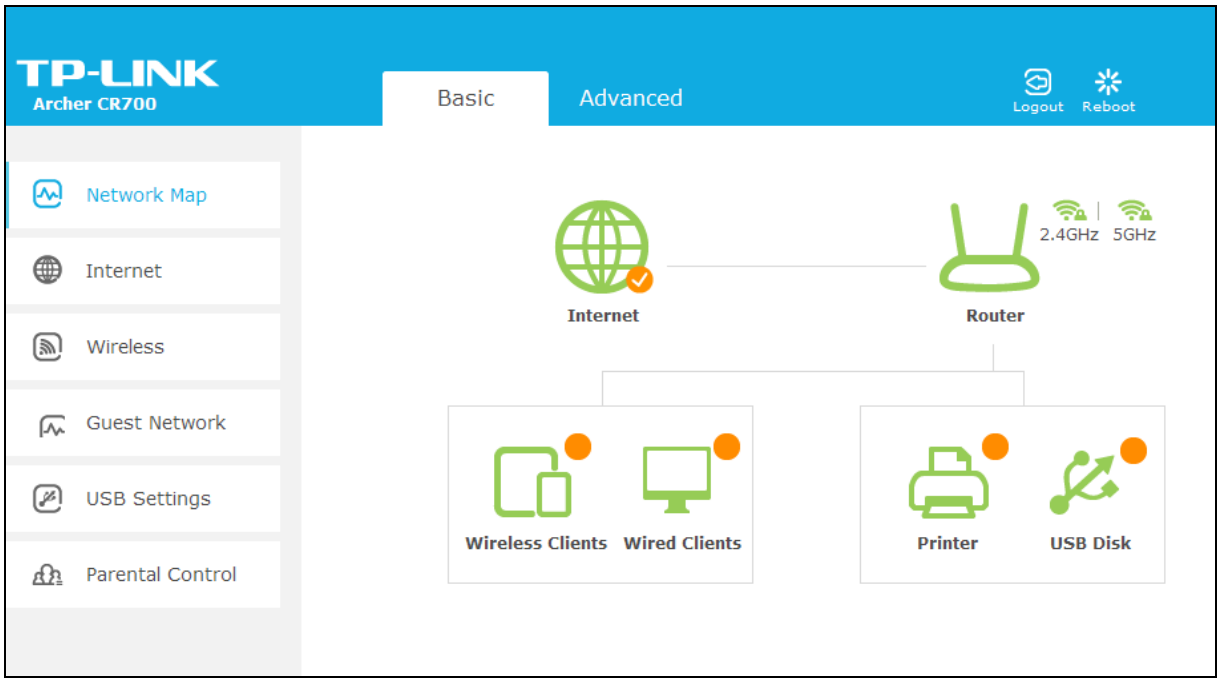


Figure 4-1

- **Internet -** View Check the ISP settings of your modem router.
- **Router -** View Check the Wireless and Guest Network settings.
- **Wireless Clients -** Click to view the wireless devices connected to your network.
- **Wired Clients -** Click to view the wired devices connected to your network.
- **Printer -** Click to view the information of the printer connected to your network.
- **USB Disk -** Click to view the information of the USB storage device connected to your network.

4.2 Internet

Choose "**Basic → Internet**", and you can configure the basic settings of the ISP Configuration and the Internet on this page.

There are four different connection types, Dynamic IP, Static IP, L2TP(Dynamic IP) and L2TP(Static). You can select the corresponding type according to your needs.

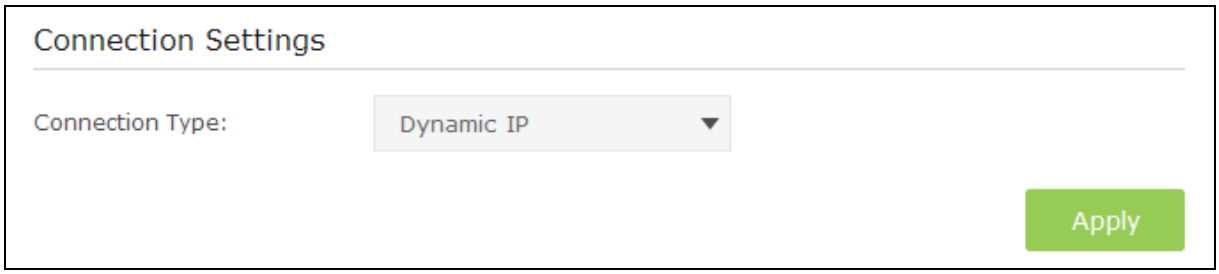


Figure 4-2

1) Dynamic IP

Choose **Dynamic IP** in the drop-down list, the modem router will be able to obtain IP network information dynamically from a DHCP server provided by your ISP.

Figure 4-3

Click the **Apply** button to save the settings.

2) Static IP

Choose **Static IP** in the drop-down list if your ISP provides static IP information to you. You should set static IP address, Subnet mask, and gateway address in the screen below.

Figure 4-4

- **IP Address -** Enter the IP address in dotted-decimal notation provided by your ISP.
- **Subnet Mask -** Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- **Default Gateway** - Enter the gateway IP address in dotted-decimal notation provided by your ISP.

- **Primary DNS/ Secondary DNS -** Here you can set DNS Server (at least one) manually. The Route will use this DNS Server for priority.

Click the **Apply** button to save the settings.

3) L2TP(Dynamic IP)

Choose **L2TP (Dynamic IP)** in the drop-down list if your ISP provides L2TP (Dynamic IP) information to you. You should set User name, Password and Server IP Address/Name in the screen below.

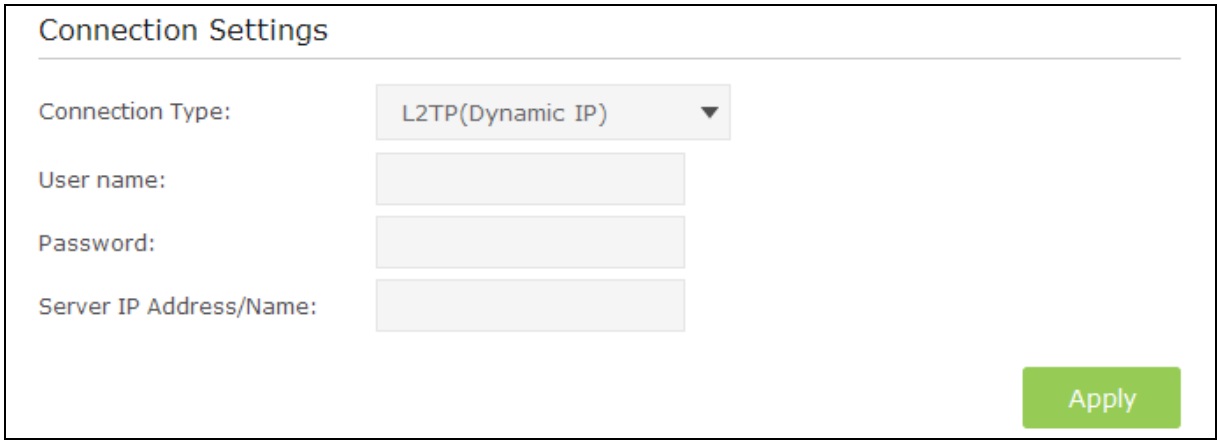


Figure 4-5

- **User name/Password -** Enter the **User name** and **Password** provided by your ISP. These fields are case-sensitive. If you have difficulty with this process, please contact your ISP.
- **Server IP Address/Name -** Enter the server IP address or domain name provided by your ISP. If you have difficulty with this process, please contact your ISP.

Click the **Apply** button to save the settings.

4) L2TP(Static)

Choose **L2TP (Static)** in the drop-down list if your ISP provides L2TP (Static) information to you. You should set User name, Password, Server IP Address/Name, IP Address, Subnet Mask and Default Gateway in the screen below.

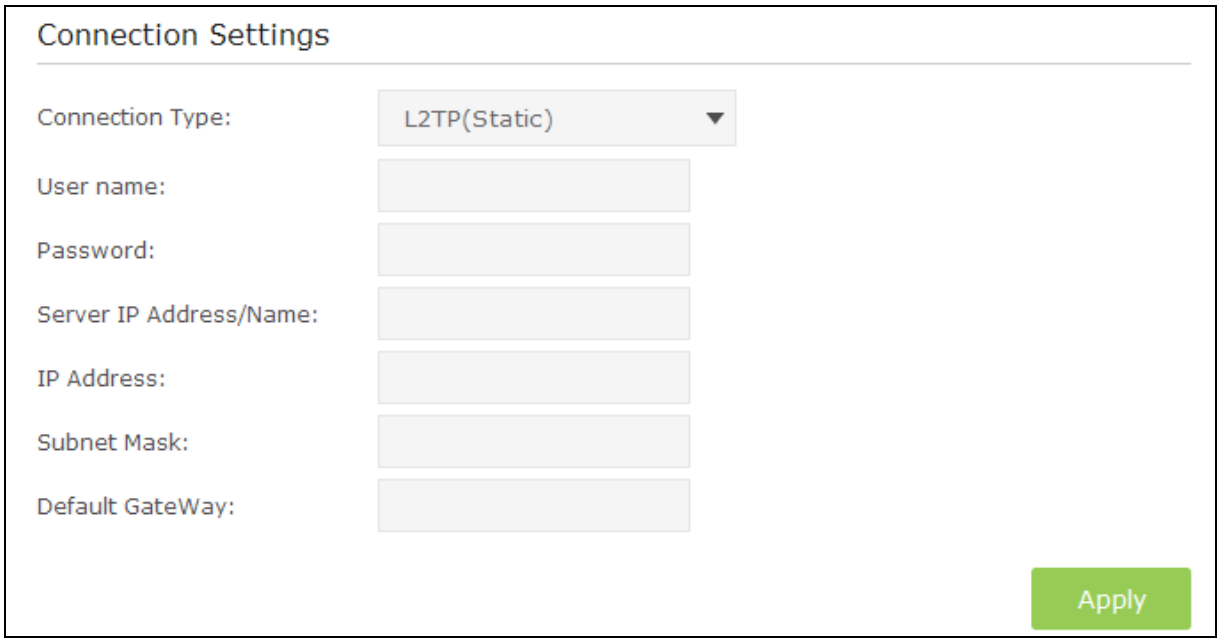


Figure 4-6

- **User name/Password -** Enter the **User name** and **Password** provided by your ISP. These fields are case-sensitive. If you have difficulty with this process, please contact your ISP.
- **Server IP Address/Name -** Enter the server IP address or domain name provided by your ISP. If you have difficulty with this process, please contact your ISP.
- **IP Address -** Enter the IP address in dotted-decimal notation provided by your ISP.
- **Subnet Mask -** Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- **Default Gateway** - Enter the gateway IP address in dotted-decimal notation provided by your ISP.

Click the **Apply** button to save the settings.

4.3 Wireless

Choose menu "**Basic**" → "**Wireless**", you can configure the basic settings for the wireless networks of 2.4GHz and 5GHz on this page.

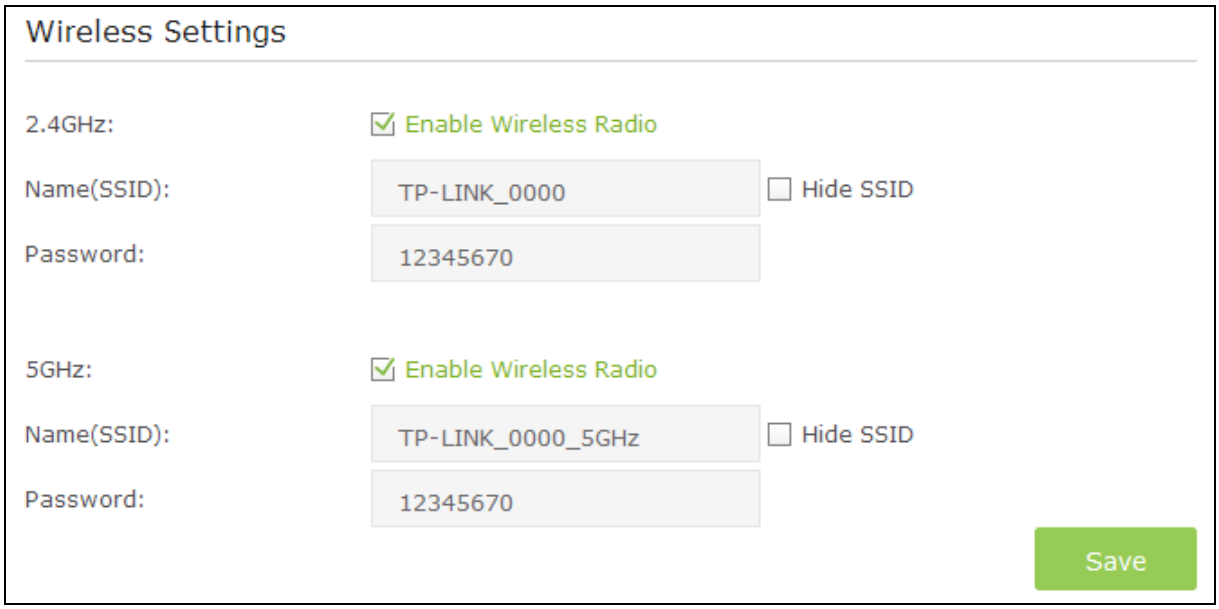


Figure 4-7

- **Enable Wireless Radio –** Check the box to enable the Wireless Radio.
- **Name (SSID) –** Create a name (up to 32 characters) for your 2.4GHz/5GHz wireless network. The default SSID is set to be TP-LINK_XXXX for the wireless network of 2.4GHz and TP-LINK_XXXX _5G for the wireless network of 5GHz.
- **Hide SSID –** If you want to hide the SSID of your wireless network from the Wi-Fi network, you should check the box.
- **Password –**You can enter ASCII characters between 8 and 63 characters or 8 to 64 Hexadecimal characters. The default password is the same with the default PIN code, which is labeled on the bottom of the modem router.

Click the **Save** button to save the settings.

4.4 Guest Network

Choose menu "**Basic → Guest Network**", and you will see the screen as shown below. This feature allows you to create a separate network for your guests without allowing them to access your main network and the computers connected to it.

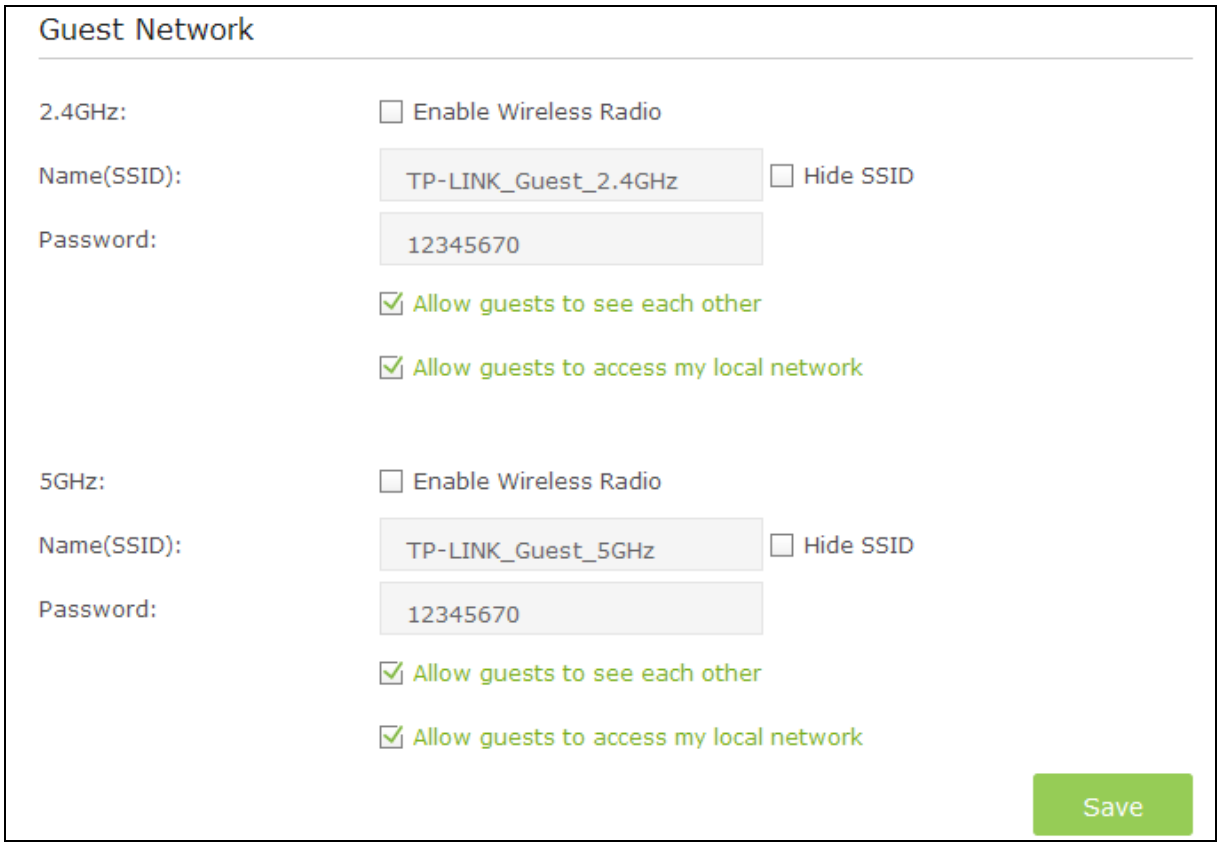


Figure 4-8

- **2.4GHz -** If **Enable Wireless Radio** is selected, please complete the following parameters.

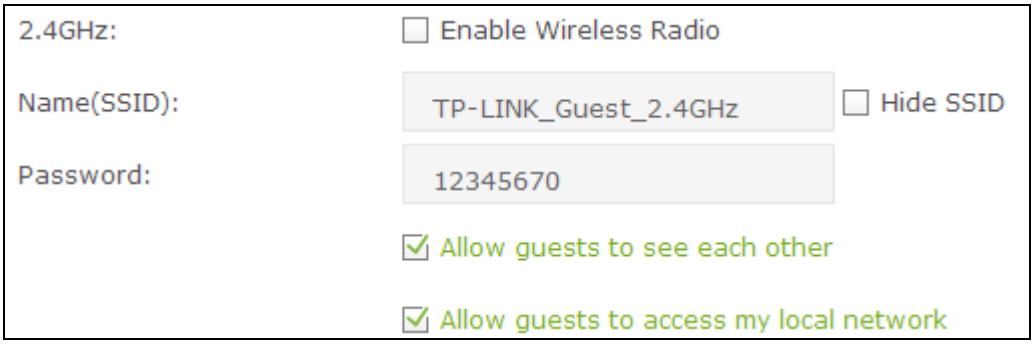


Figure 4-9

- **Name (SSID) -** Create a name for the guest network. When setting up a Guest network, it is strongly recommended to use a name that easily distinguishes it from your primary network. The default name is TP-LINK_Guest_2.4GHz. If you want to hide the guest network from the Wi-Fi network, check the **Hide SSID**.
- **Password -** Create a password for the guest network. The password must have a minimum of 8 characters in length.
- **Allow guests to see each other -** If **Allow guests to see each other** is selected, anyone who connects to the guest network can **access** each other.
- **Allow guests to access my local network -** If **Allow guests to access my local network** is selected, anyone who connects to the guest network has access to your local network, not just Internet access.

- **5GHz -** If **Enable Wireless Radio** is selected, please complete the following parameters.

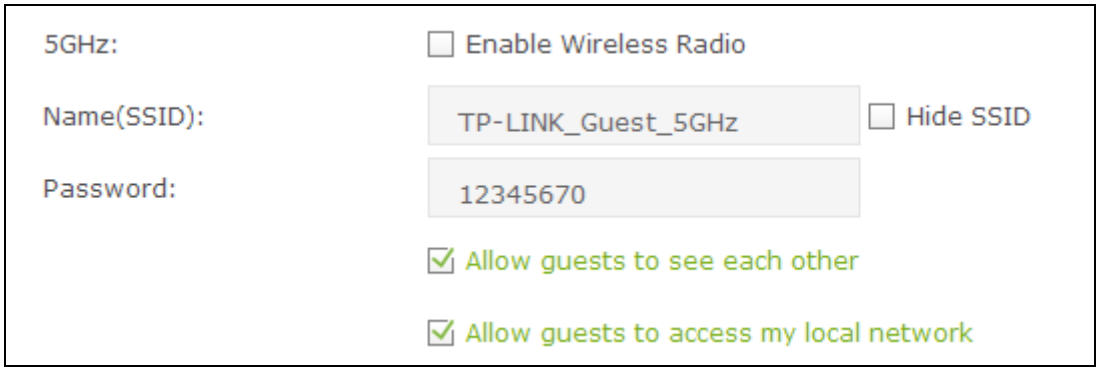


Figure 4-10

- **Name (SSID) -** Create a name for the guest network. When setting up a Guest network, it is strongly recommended to use a name that easily distinguishes it from your primary network. The default name is TP-LINK_Guest_XXXX_5G. If you want to hide the guest network from the Wi-Fi network, check the **Hide SSID**.
- **Password -** Create a password for the guest network. The password must have a minimum of 8 characters in length.
- **Allow guests to see each other -** If **Allow guests to see each other** is selected, anyone who connects to the guest network can **access** each other.
- **Allow guests to access my local network -** If **Allow guests to access my local network** is selected, anyone who connects to the guest network has access to your local network, not just Internet access.

Click the **Save** button to save the settings.

4.5 USB Settings

There are two submenus under the USB Settings menu, **Folder Sharing** and **Print Server.** Click any of them, and you will be able to configure the corresponding function.

4.5.1 Folder Sharing

Choose menu "**Basic → USB Settings → Folder Sharing**", you can view the basic information about the connected USB mass storage, and configure Sharing Folders(Media file, Document files, Compress files and so on.)

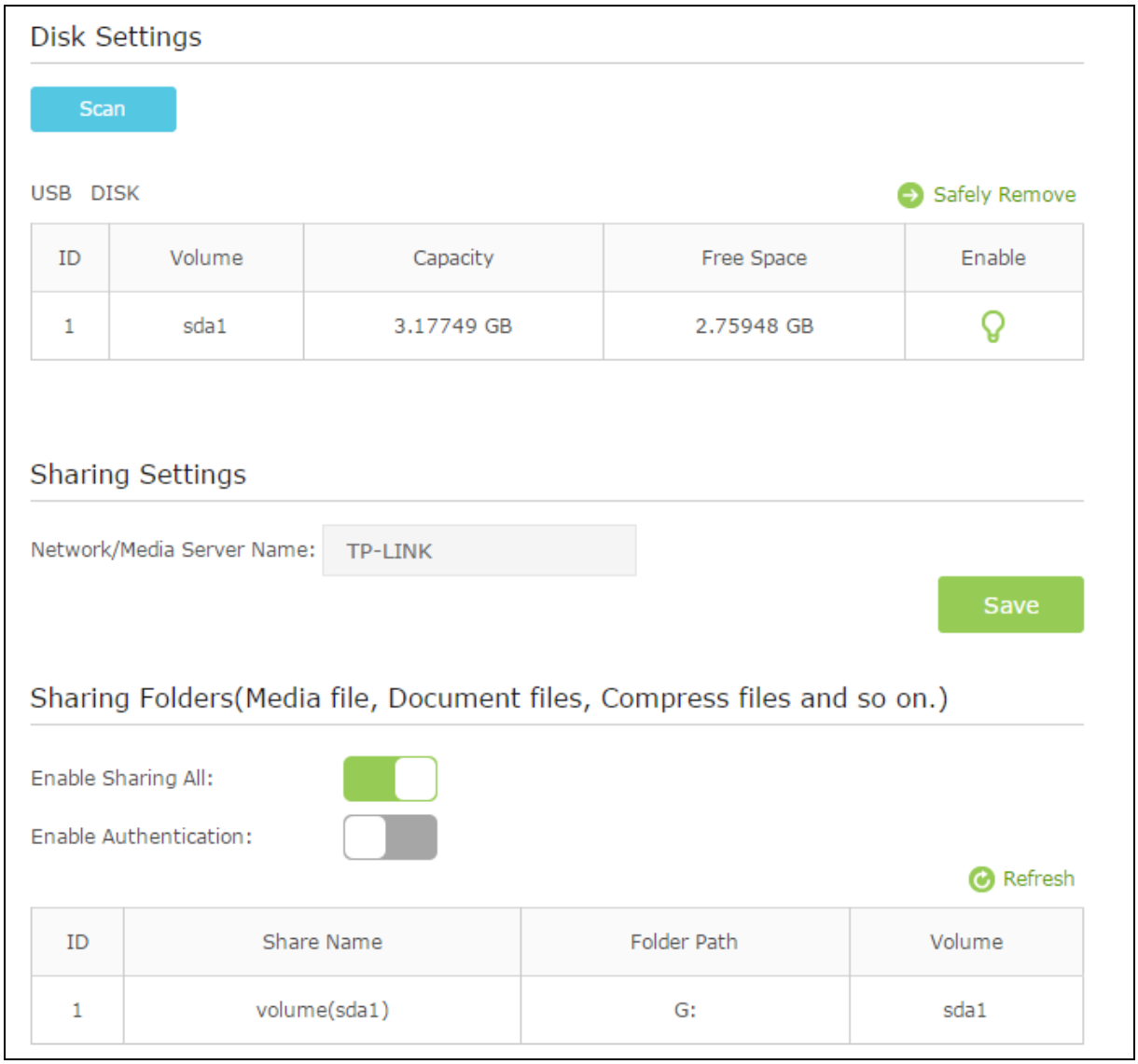


Figure 4-11

Disk Settings:

- **Scan -** Click the button to display the information of the USB storage device connected to the modem router.
- **Volume -** The volume name of the USB drive the users have access to.
- **Capacity -** The storage capacity of the USB driver.
- **Free Space -** The available capacity of the USB driver.
- **Enable -** When the volume is shared, you can click the icon to stop sharing the volume; when volume is non-shared, you can click the icon to share the volume.

Click **Safely Remove** button to remove the USB storage device that is connected to USB port.

Note:

Before removing the USB storage device, you should click "Safely Remove" to make sure that all your data have been saved completely. Removing device directly may cause your USB storage device crashed.

Sharing Settings:

- **Network/Media Server Name -** Show the name of the network/media server. This is the name used to access the USB device connected to the modem router.

Sharing Folders (Media file, Document files, Compress files and so on.):

- **Enable Sharing All -** The switch for sharing all the folders. If turn on the switch, the field will become green and all the folders in the USB drive will be shared.
- **Enable Authentication -** If turn on this switch, the folder sharing is need authentication. The default setting is off.

To share the folders you specified, please follow the steps below.

1. Turn off the **Enable Sharing All** switch and the next screen will pop-up as shown in Figure 4-12.

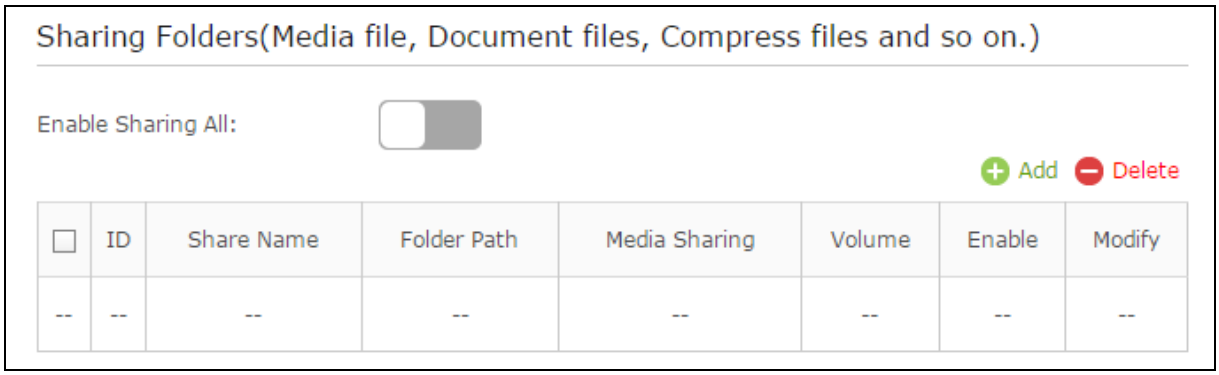


Figure 4-12

2. Click the **Add** button and the next screen will pop-up as shown in Figure 4-13.

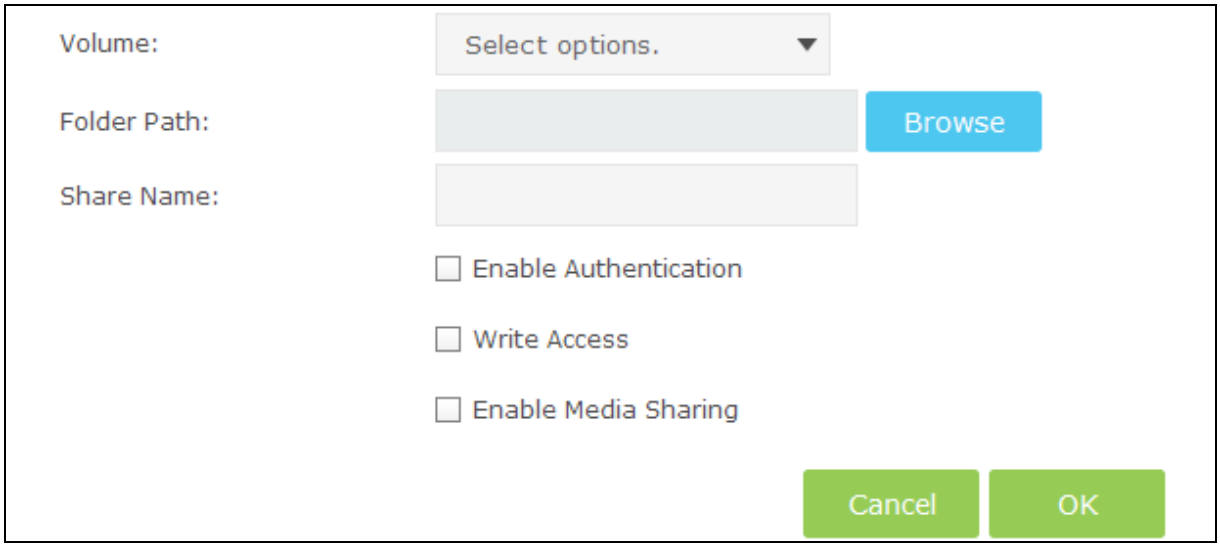
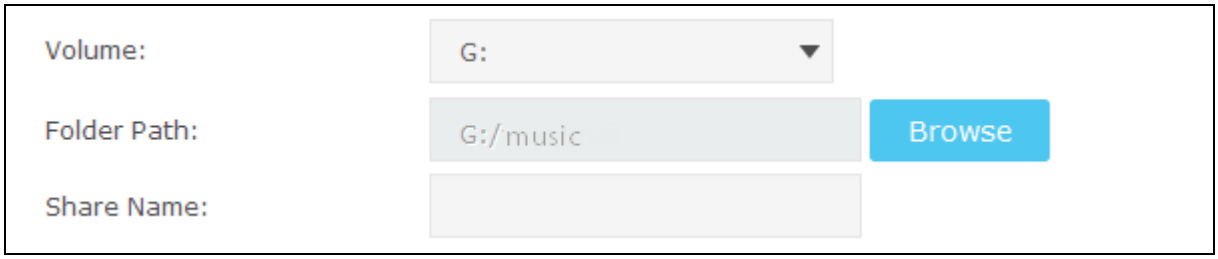


Figure 4-13

3. Select the volume desired to share from the **Volume** drop-down list. Then click the **Browse** button to select the folder path. You can create a share name, e.g. music.



4. Select the checkboxes in Figure 4-13.according to your needs.
   - **Enable Authentication -** If this checkbox is selected, then the folder sharing is need authentication.
   - **Write Access -** If this checkbox is selected, then the sharing folder is allowed write access.
   - **Enable Media Sharing -** Select this checkbox to enable media sharing.

Click **OK** to complete the settings.

4.5.2 Print Server

Choose menu "**Basic→USB Settings→Print Server**", you can enable or disable the print server.

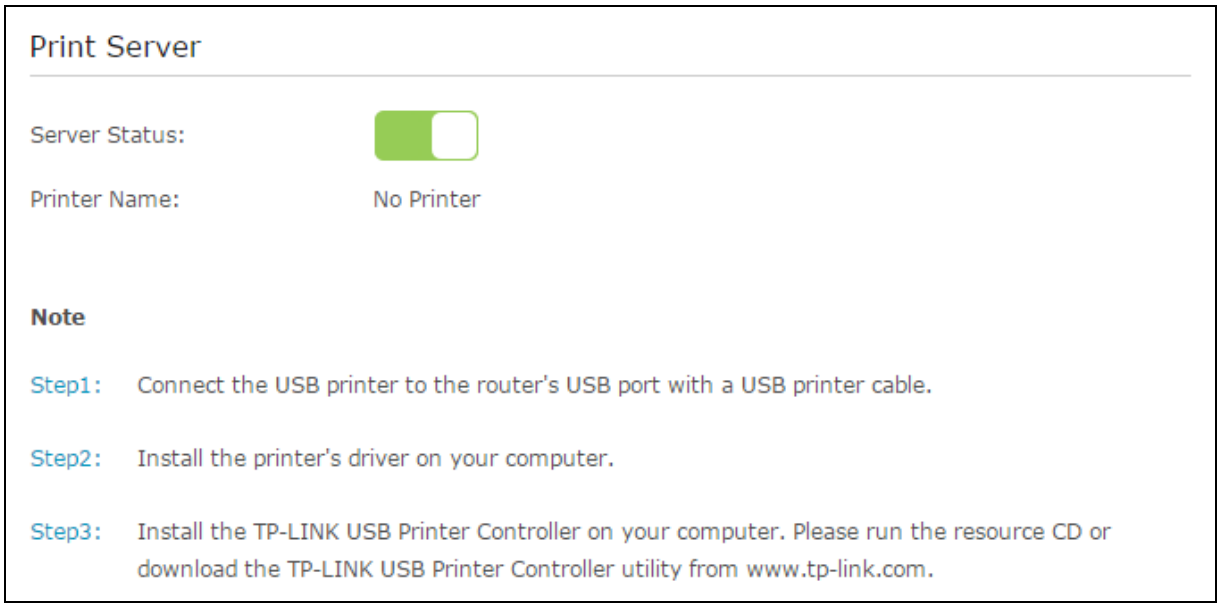


Figure 4-14

4.6 Parental Control

Choose menu "**Basic→Parental Control**", and then you can configure the parental control. The Parental Control function can be used to control the internet activities of the child, limit the child to access certain websites and restrict the time of surfing.

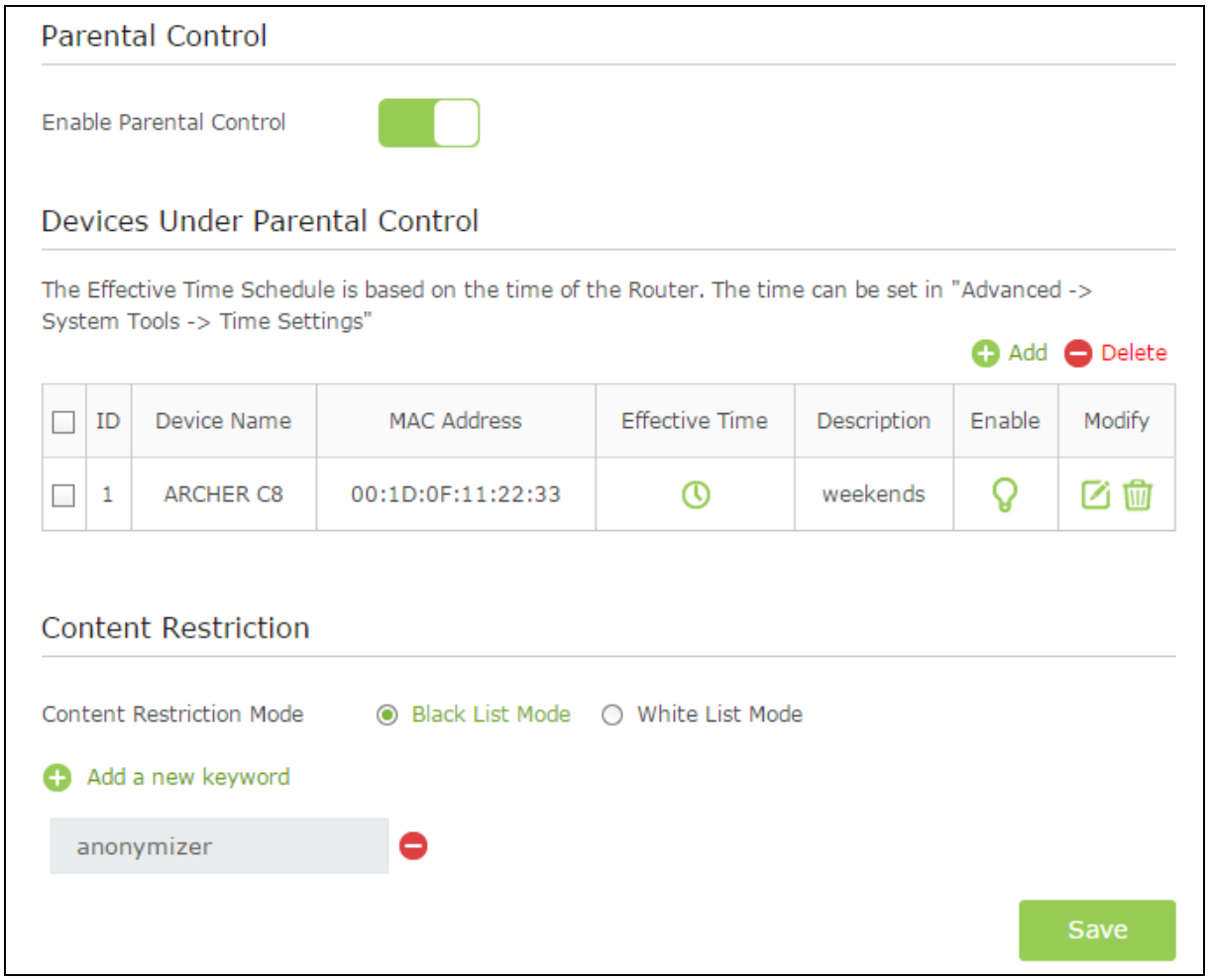


Figure 4-15

Parental Control:

- **Enable Parental Control -** The switch for the parental control. If turn on the switch, the field will become green.

Devices Under Parental Control:

- **Add -** You can add a new device for the parental control by clicking this button.
- **Delete -** You can click the button to delete the selected entries.
- **Device Name -**The name used for identifying a device.
- **MAC Address -** This field displays the MAC address of the PC that is managing this modem router.
- **Effective Time -** The time period allowed for the PC controlled to access the Internet. You can click the icon to configure the time period.
- **Description -** Here displays the description about the parental control and this description is unique.
- **Enable –** Click the icon to enable the function. If this function has taken effect, the icon will become .

- **Modify –** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To add a new entry, please follow the steps below.

1. Click the **Add** button and the next screen will pop-up.

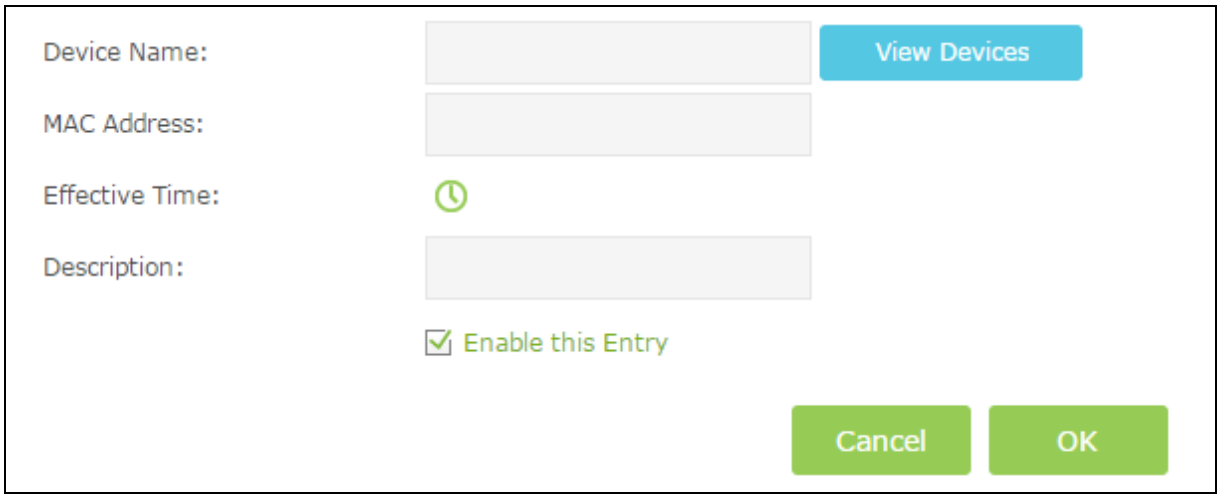
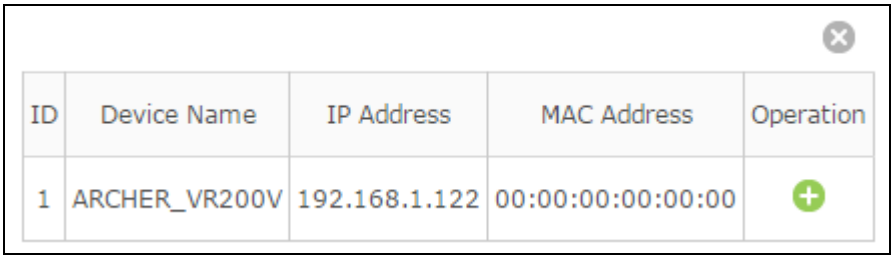


Figure 4-16

2. Click **View Device** button and the next screen will pop-up. You'd like to click the icon to select a device.



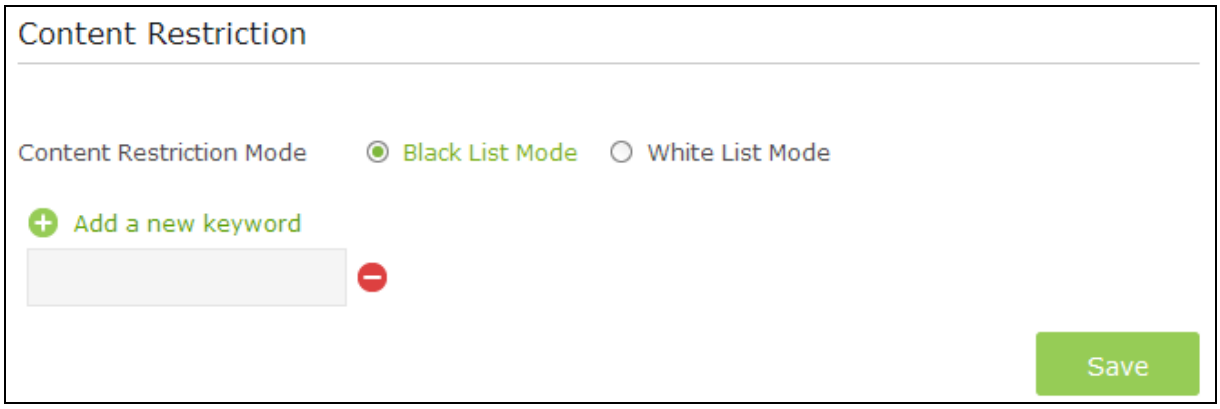
ID	Device Name	IP Address	MAC Address	Operation
1	ARCHER_VR200V	192.168.1.122	00:00:00:00:00:00	

Figure 4-17

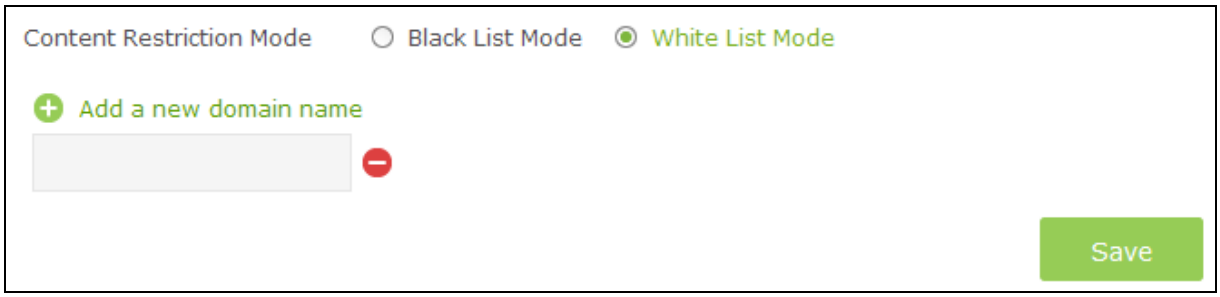
3. Click to create a new schedule. You'd like to click the Schedule in green below to go to the Advance Schedule Settings page and create the schedule you need. Then enter the **Description**.
4. Check the box **Enable this Entry** to enable this function.
5. Click **OK** to complete the settings.

Content Restriction:

- **Content Restriction Mode –** Select the **Black List Mode** or **White List Mode** for this account.
- **Black List Mode -** All webs entered within the Black List will be denied to access. Check the box to enable this mode. You'd like to click **Add a new keyword** button and input the net addresses which the child is denied to access.



- **White List Mode -** Only the web entered within the White List will be allowed. Check the box to enable this mode. You'd like to click **Add a new keyword** button and input the net addresses which the child is allowed to access.



Click **Save** to complete the settings.

Chapter 5. Advanced

5.1 Status

Choose menu "**Advanced→Status**", you can see the current status information about the modem router.

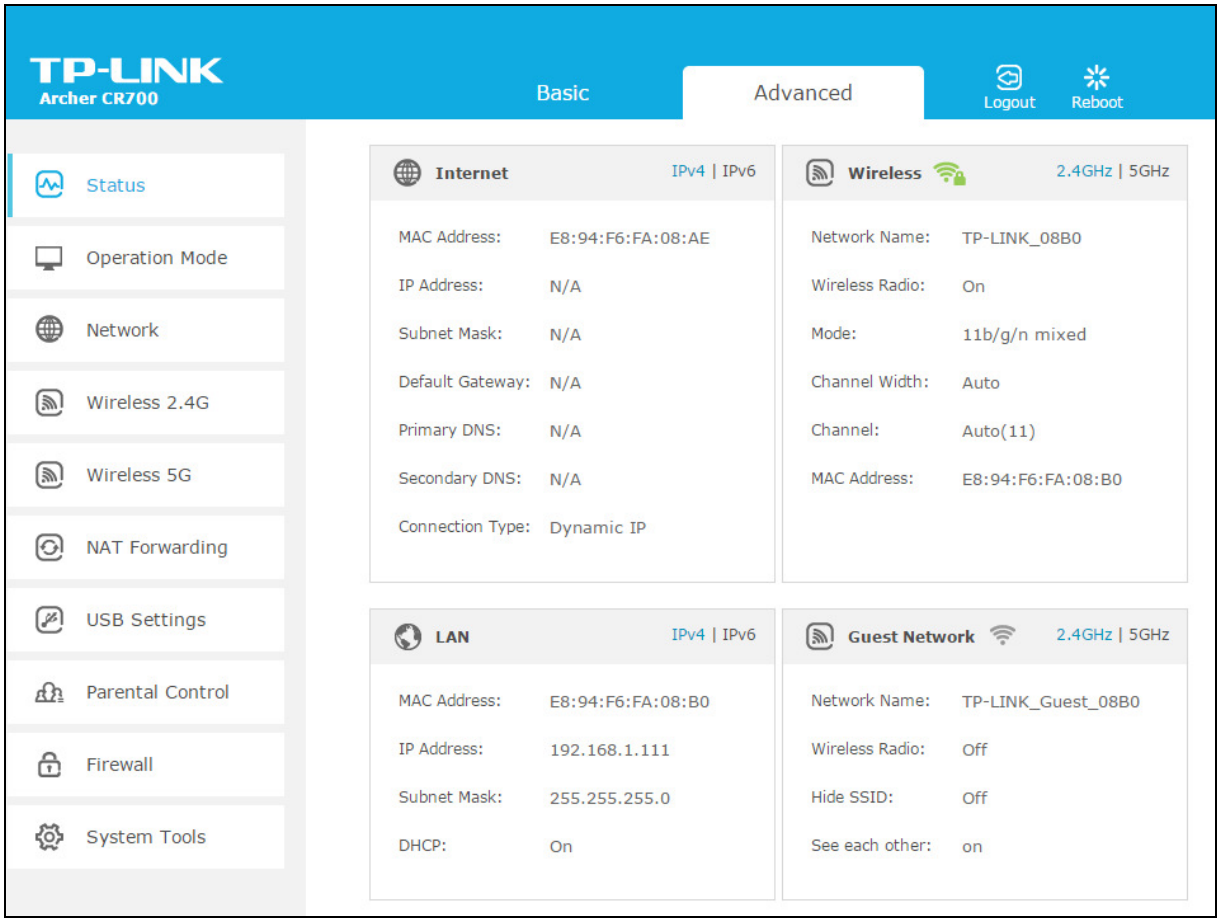


Figure 5-1

5.2 Operation Mode

Choose menu "**Advanced→Operation Mode**", and you will see the screen as shown in Figure 5-2.Select your desired mode and then click **Save**.

Figure 5-2

- **Router Mode -** The device enables multi-users to share Internet via cable using its Cable port and share it wirelessly at 450Mbps wireless speeds over the crystal clear 5GHz band and 1300Mbps over the 2.4GHz band.
- **Bridge Mode –** In this mode, the modem router can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN. If you were in Bridge Mode, you could log in the web-based management at 192.168.100.1, and then change the setting to obtain an IP address automatically.

After you click the **Save** button, the modem router will reboot. Please wait.

5.3 Network

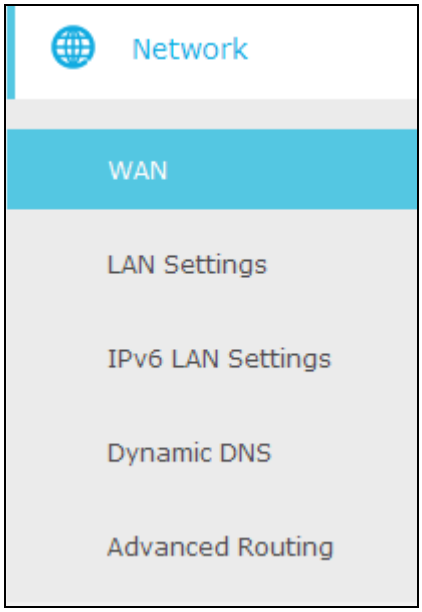


Figure 5-3

There are five submenus under the Network menu: **WAN, LAN Settings**, **IPv6 LAN Settings**, **Dynamic DNS** and **Advanced Routing**. Click any of them, and you will be able to configure the corresponding function.

5.3.1 WAN

Choose "**Advanced →Network → WAN**", you can configure the IP parameters of the WAN on the screen below.

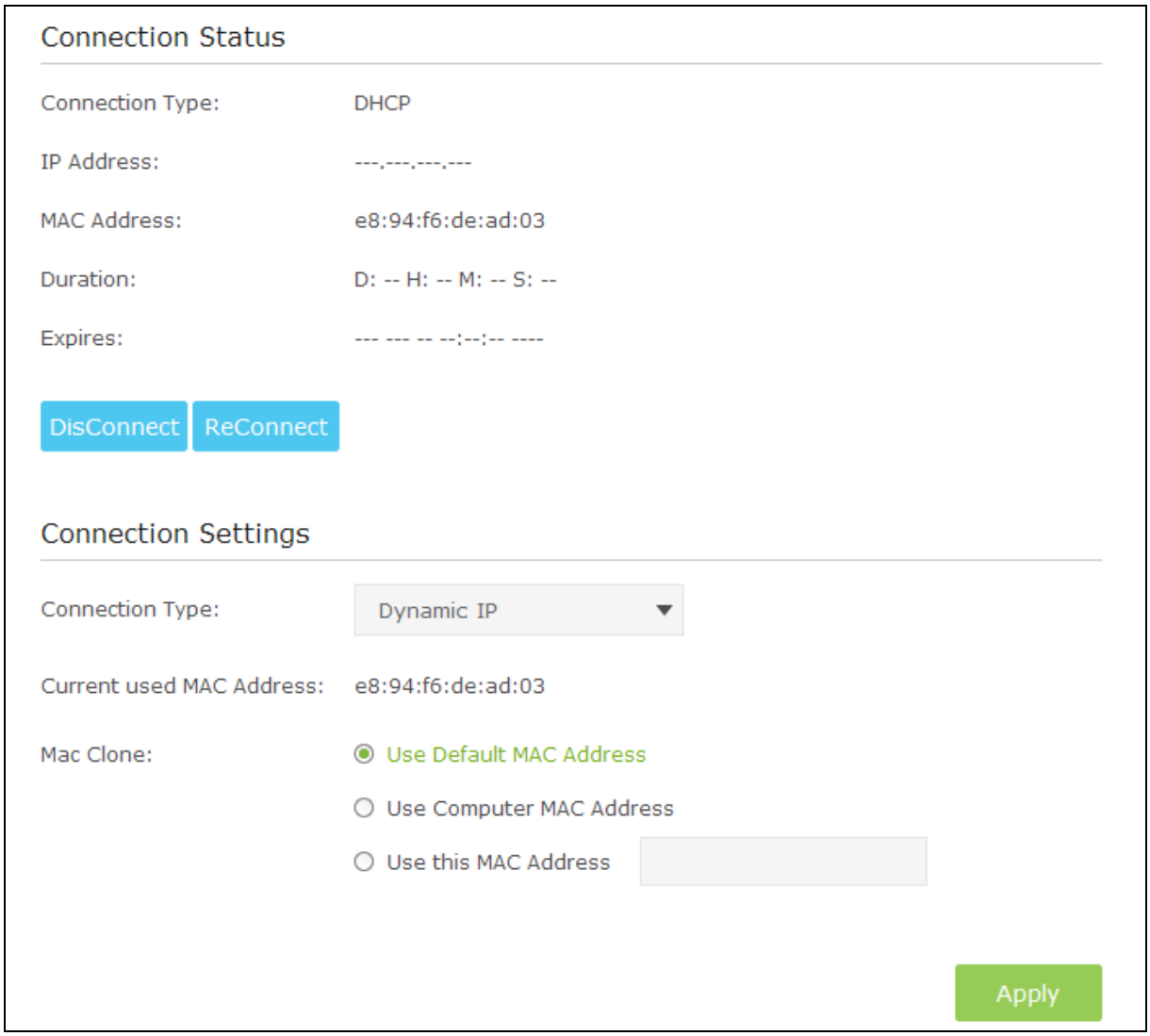
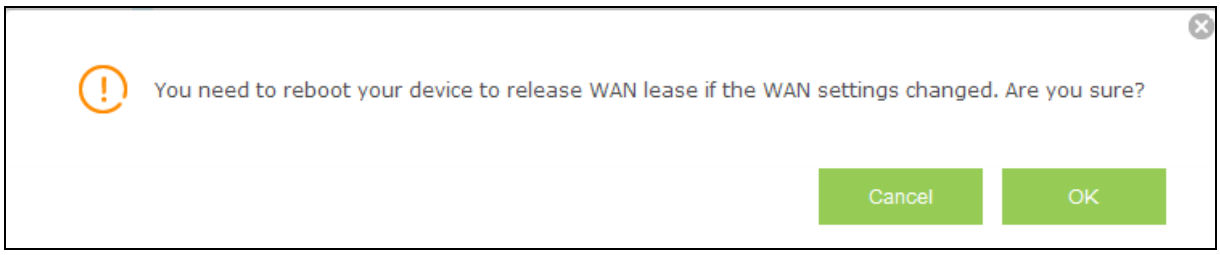


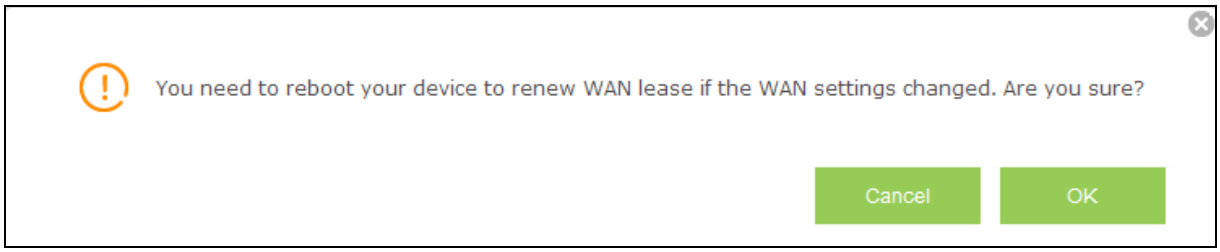
Figure 5-4

Connection Status:

- **Connection Type –** Display the connection type for WAN.
- **IP/MAC Address -** This field displays the current IP/MAC address of the Internet port.
- **Duration –** Display the total connection time.
- **Expires –** Display the expiration time of the DHCP servers leases an IP address to a new device.
- **DisConnect -** Click the **DisConnect** button to release WAN lease, then the Note Dialog will appear. You can click the **OK** button to disconnect immediately.



- **ReConnect –**Click the **ReConnect** button to renew WAN lease, then the Note Dialog will appear. You can click the **OK** button to disconnect immediately.



Connection settings:

There are four different connection types, Dynamic IP, Static IP, L2TP(Dynamic IP) and L2TP(Static). You can select the corresponding type according to your needs.

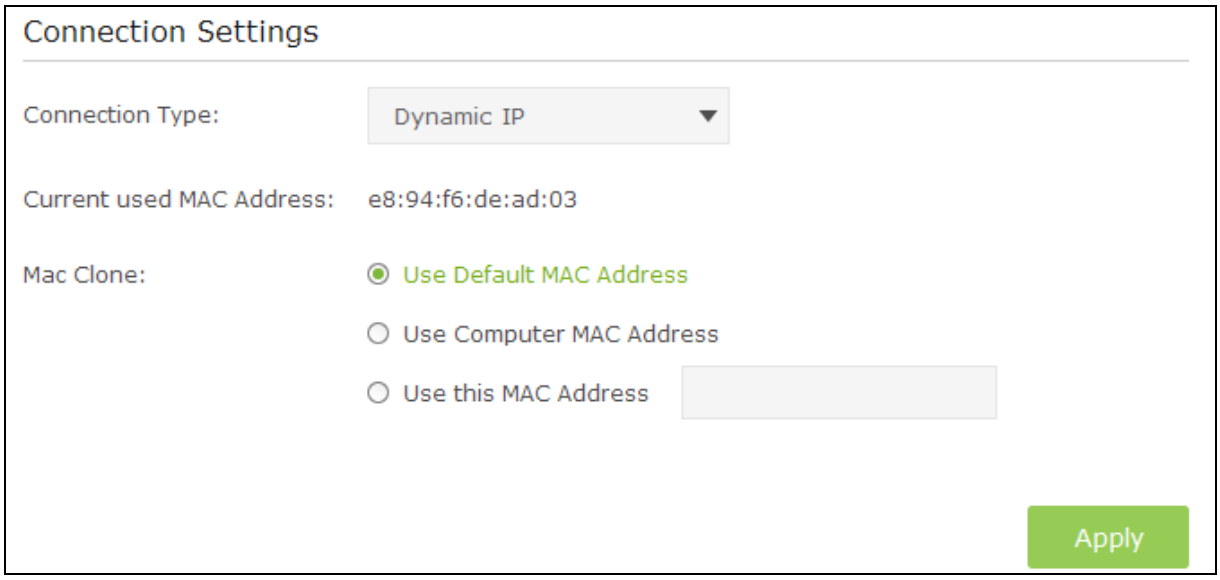


Figure 5-5

1) Dynamic IP

Choose **Dynamic IP** in the drop-down list, the modem router will be able to obtain IP network information dynamically from a DHCP server provided by your ISP.

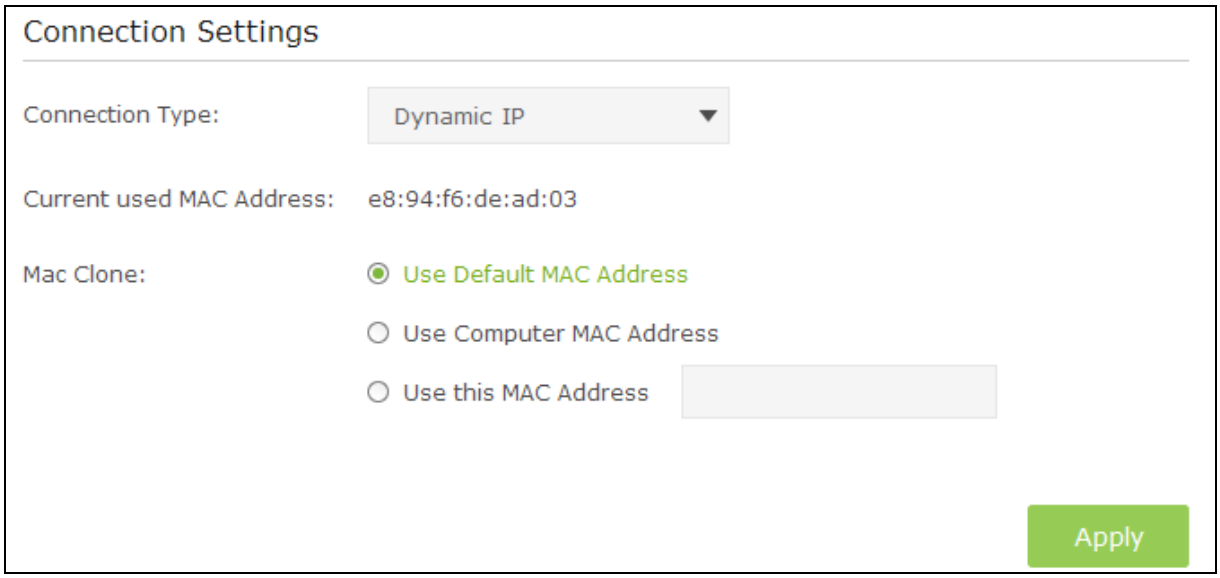


Figure 5-6

- **Current used MAC Address -** This field displays the current MAC address of the Internet port.
- **MAC Clone -** You can select one of below methods to change MAC address for this WAN Interface depend on your needs. If you select **Use this MAC Address**, you can enter the MAC Address you want to change.

Click the **Apply** button to save the settings.

2) Static IP

Choose **Static IP** in the drop-down list if your ISP provides static IP information to you. You should set static IP address, Subnet mask, and gateway address in the screen below.

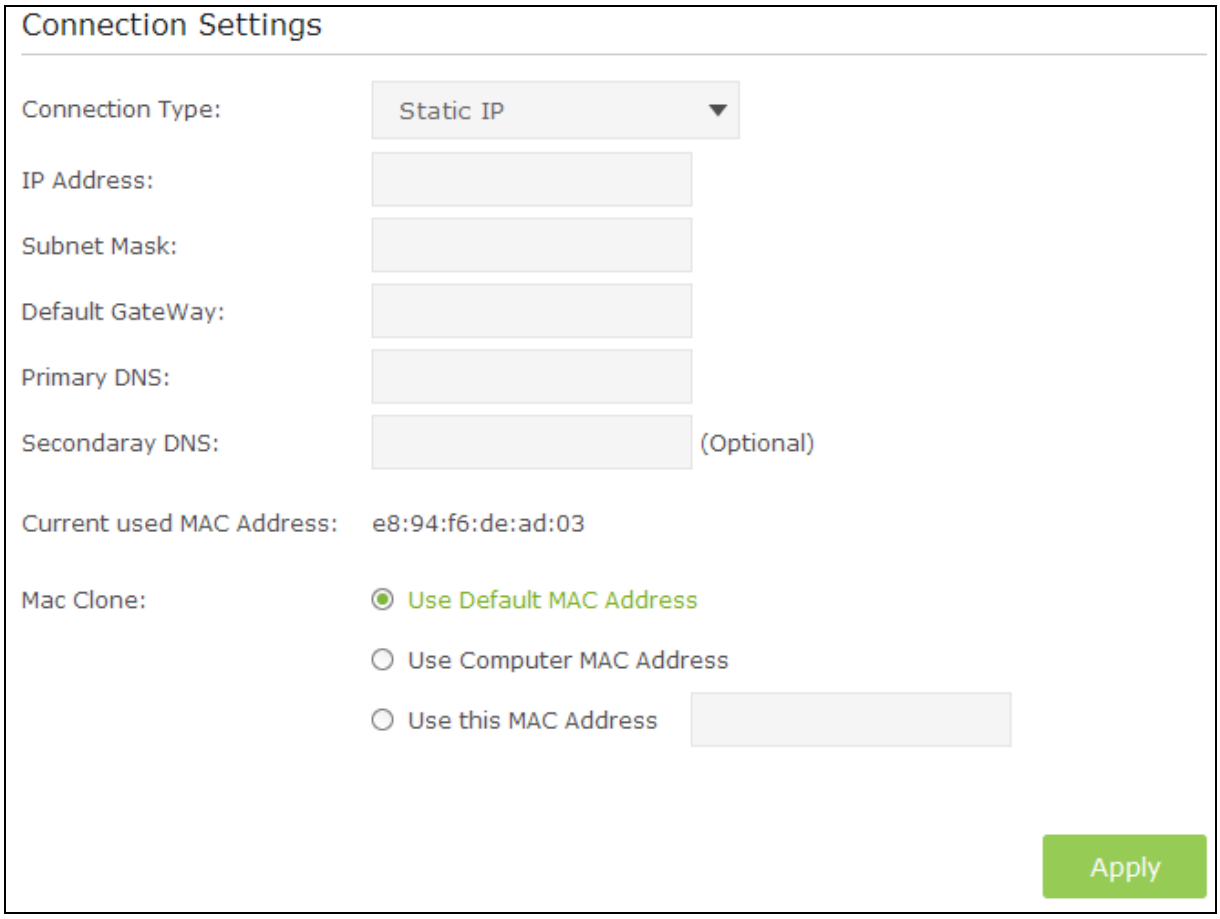


Figure 5-7

- **IP Address -** Enter the IP address in dotted-decimal notation provided by your ISP.
- **Subnet Mask -** Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- **Default Gateway** - Enter the gateway IP address in dotted-decimal notation provided by your ISP.
- **Primary DNS/ Secondary DNS -** Here you can set DNS Server (at least one) manually. The Route will use this DNS Server for priority.
- **Current used MAC Address -** This field displays the current MAC address of the Internet port.
- **MAC Clone -** You can select one of below methods to change MAC address for this WAN Interface depend on your needs. If you select **Use this MAC Address**, you can enter the MAC Address you want to change.

Click the **Apply** button to save the settings.

3) L2TP(Dynamic IP)

Choose **L2TP(Dynamic IP)** in the drop-down list if your ISP provides L2TP(Dynamic IP) information to you. You should set User name, Password and Server IP Address/Name in the screen below.

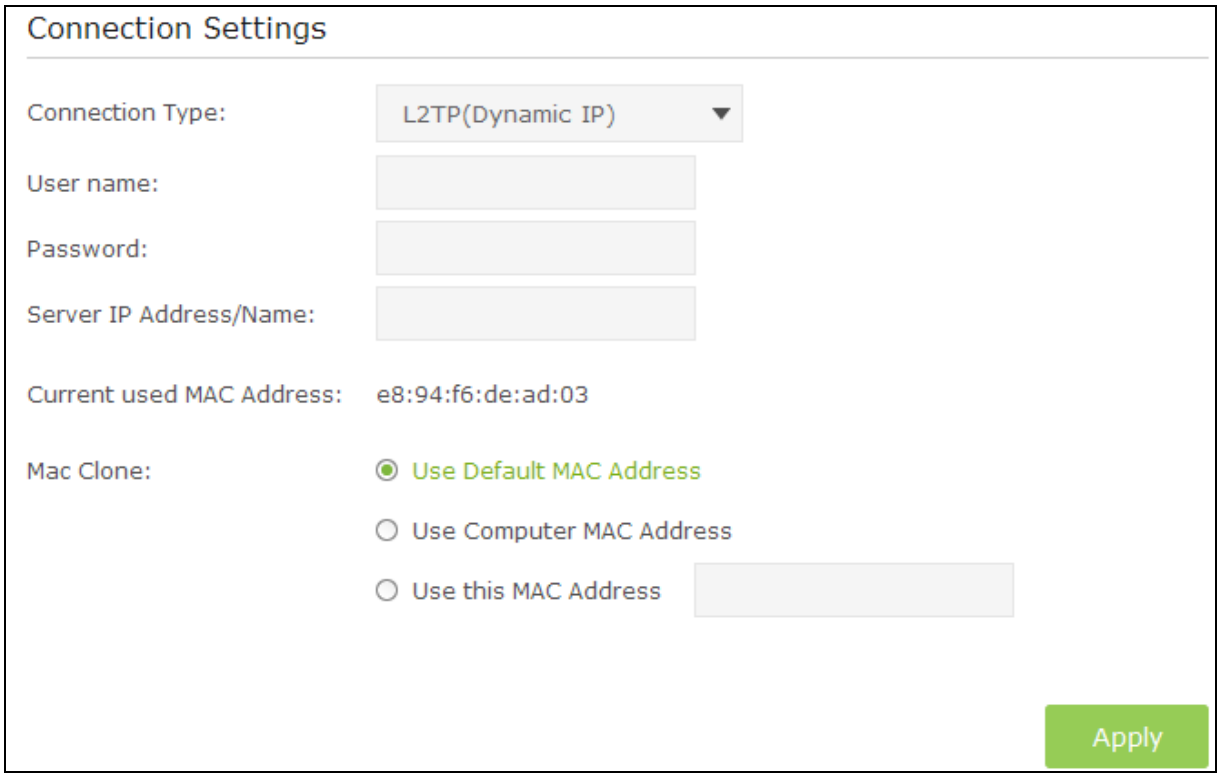


Figure 5-8

- **User name/Password -** Enter the **User name** and **Password** provided by your ISP. These fields are case-sensitive. If you have difficulty with this process, please contact your ISP.
- **Server IP Address/Name -** Enter the server IP address or domain name provided by your ISP. If you have difficulty with this process, please contact your ISP.
- **Current used MAC Address -** This field displays the current MAC address of the Internet port.
- **MAC Clone -** You can select one of below methods to change MAC address for this WAN Interface depend on your needs. If you select **Use this MAC Address**, you can enter the MAC Address you want to change.

Click the **Apply** button to save the settings.

4) L2TP(Static)

Choose **L2TP (Static)** in the drop-down list if your ISP provides L2TP (Static IP) information to you. You should set User name, Password, Server IP Address/Name, IP Address, Subnet Mask and Default Gateway in the screen below.

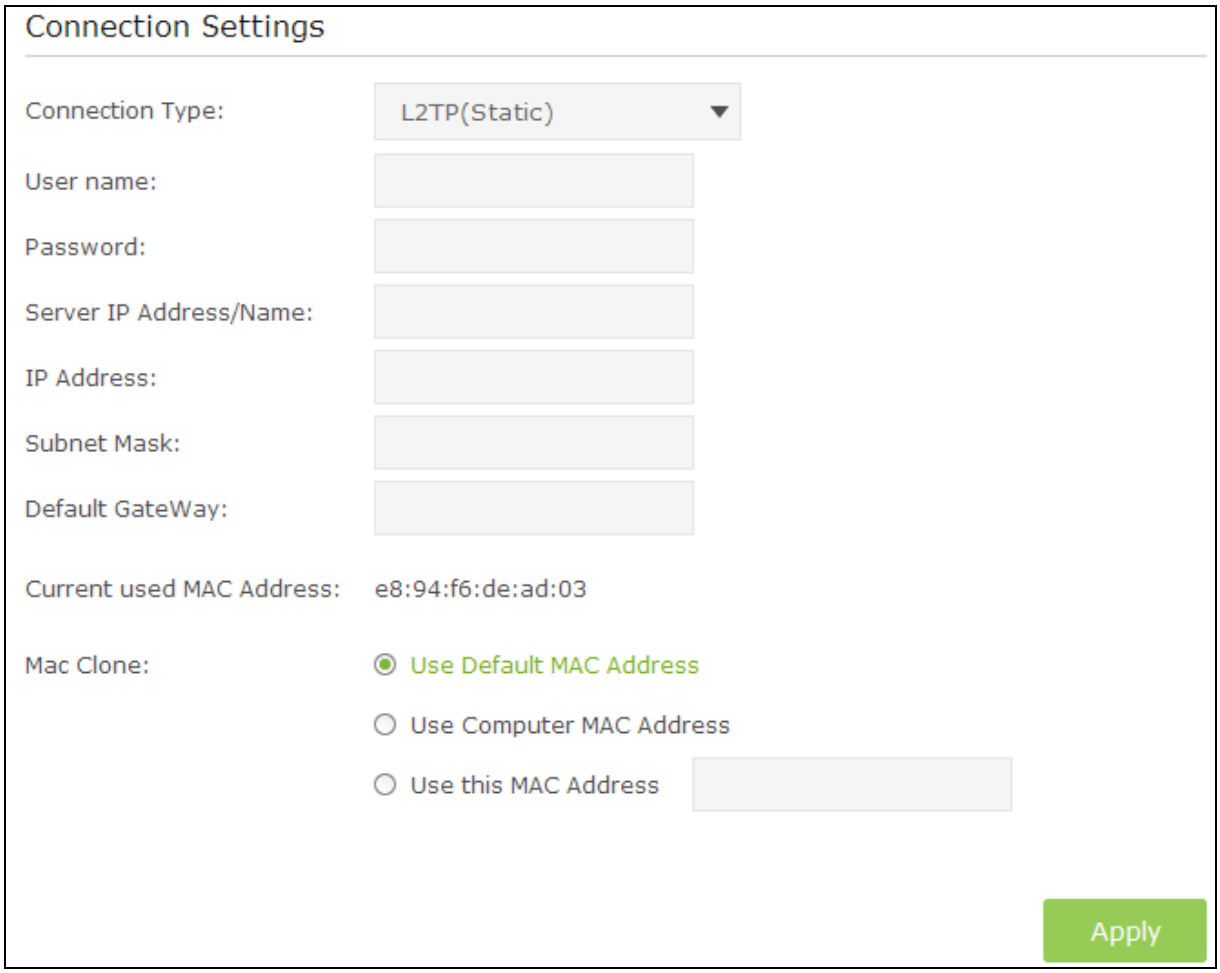


Figure 5-9

- **User name/Password -** Enter the **User name** and **Password** provided by your ISP. These fields are case-sensitive. If you have difficulty with this process, please contact your ISP.
- **Server IP Address/Name -** Enter the server IP address or domain name provided by your ISP. If you have difficulty with this process, please contact your ISP.
- **IP Address -** Enter the IP address in dotted-decimal notation provided by your ISP.
- **Subnet Mask -** Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- **Default Gateway** - Enter the gateway IP address in dotted-decimal notation provided by your ISP.
- **Current used MAC Address -** This field displays the current MAC address of the Internet port.
- **MAC Clone -** You can select one of below methods to change MAC address for this WAN Interface depend on your needs. If you select **Use this MAC Address**, you can enter the MAC Address you want to change.

Click the **Apply** button to save the settings.

5.3.2 LAN Settings

Choose "**Advanced→Network→LAN Settings**" menu, and you will see the LAN screen shown below. Please configure the parameters for LAN ports according to the descriptions below.

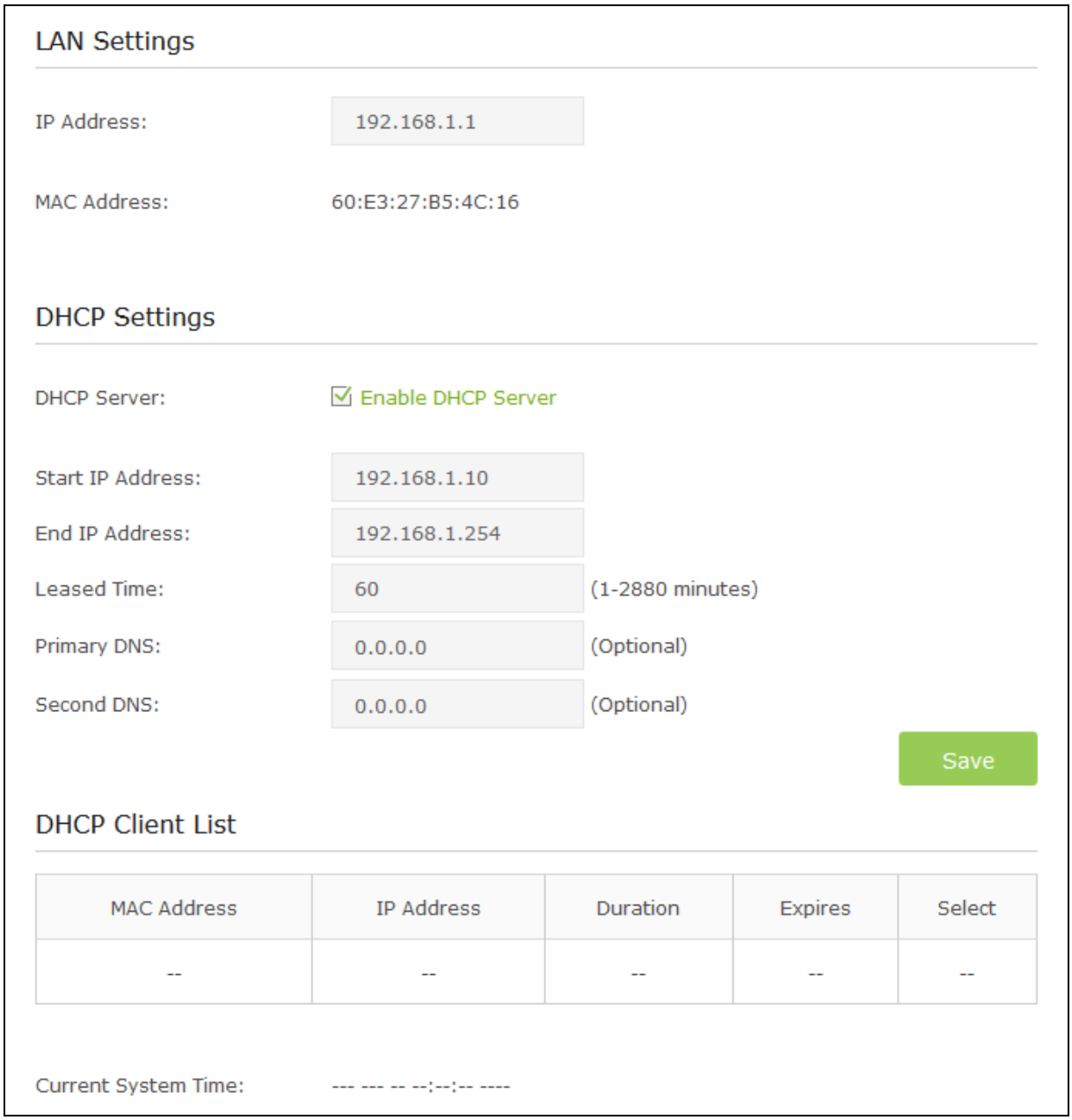


Figure 5-10

LAN Settings:

- **IP Address -** Enter the modem router's local IP Address, then you can access to the Web-based management page via the IP Address, the default value is 192.168.1.1.
- **MAC Address -** The physical address of the modem router, as seen from the LAN. The value can't be changed.

DHCP Settings:

- **DHCP Sever –** Check the box to enable this function. If DHCP Server is enabled, the modem router will work as a DHCP server, which provides the TCP/IP configuration for all the PC(s) that are connected to it on the LAN.
- **MAC Address -** The MAC address of the DHCP client
- **Start IP Address -** Enter a value for the DHCP server to start with when issuing IP addresses.
- **End IP Address -** Enter a value for the DHCP server to end with when issuing IP addresses.
- **Leased Time -** The Leased Time is the amount of time in which a network user will be allowed connection to the modem router with their current dynamic IP address. Enter the amount of time, in hours, then the user will be "leased" this dynamic IP address. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is 60 minutes.
- **Primary DNS/Second DNS -** The Domain Name System (DNS) translates host names and Internet domains to IP addresses. The information of these DNS servers is assigned by the Internet Service Provider (ISP). Enter the DNS server address(es) in dotted decimal notation provided by your ISP.

Click the **Save** button to save the settings.

DHCP Client List:

- **MAC Address -** The MAC address of the DHCP client
- **IP Address -** The IP address that the modem router has allocated to the DHCP client
- **Duration -** Display the total connection time.
- **Expires-** Display the expiration time of the DHCP client leased.
- **Select –** Click the icon to delete this entry.

5.3.3 IPv6 LAN Settings

Choose "**Advanced→Network→IPv6 LAN Settings**" menu, and you will see the IPv6 LAN screen. Please configure the parameters for IPv6 LAN ports according to the descriptions below.

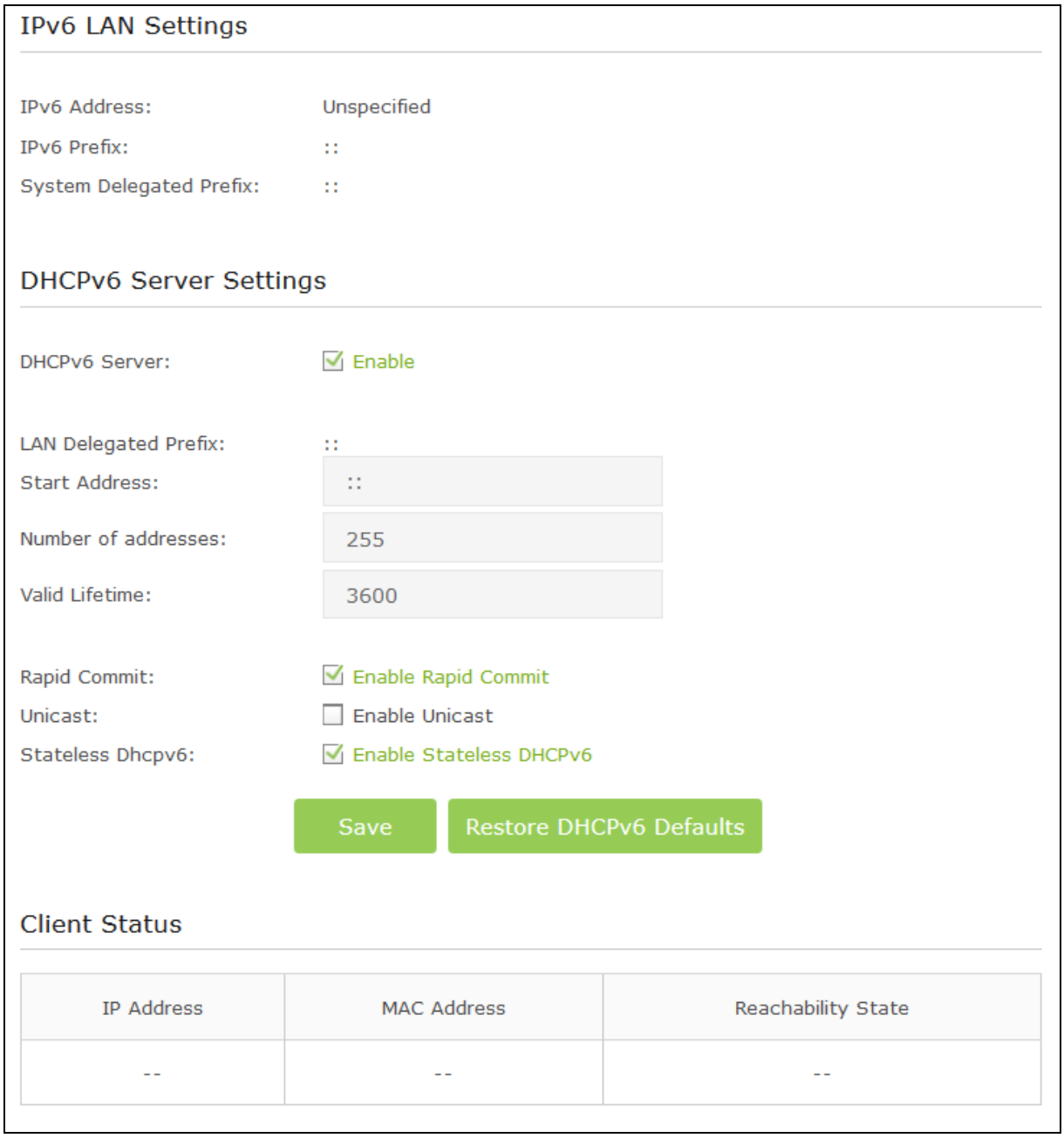


Figure 5-11

IPv6 LAN Settings:

- **IPv6 Address -** Display the modem router's local IPv6 Address.
- **IPv6 Prefix –** Display the IPv6 prefix address.
- **System Delegated Prefix –** Display the prefix address used for the tunnel.

DHCPv6 Server Settings:

- **DHCPv6 Server –** Check the box to enable DHCPv6 server.
- **LAN Delegated Prefix –** Display the LAN prefix address.
- **Start address -** Enter a value for the DHCPv6 server to start with when issuing IP addresses.
- **Number of addresses –** Enter a value between 0-255 for DHCPv6 server preference. The default value is 255.

- **Valid Lifetime -** The Valid Lifetime is the amount of time in which a network user will be allowed connection to the modem router with their current dynamic IP address. Enter the amount of time, in seconds, then the user will be assigned this dynamic IP address. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is 3600 seconds.
- **Rapid Commit** – Check the box to enable prefix fast distribution function.
- **Unicast** – Select the checkbox to enable unicast function. The default setting is disabled.
- **Stateless Dhcpv6 -** Stateless DHCPv6 is a combination of "stateless Address Autoconfiguration" and "Dynamic Host Configuration Protocol for IPv6" and is specified by RFC3736. Check the box to enable this function.

Client Status:

- **IP Address -** The IP address of the DHCP client
- **MAC Address -** The MAC address of the DHCP client
- **Reachability State –** Display the reachability of network.

5.3.4 Dynamic DNS

Choose menu "**Advanced → Network → Dynamic DNS**", and you can configure the Dynamic DNS function.

The modem router offers the **DDNS** (Dynamic Domain Name System) feature, which allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (named by yourself) and a dynamic IP address, and then your friends can connect to your server by entering your domain name no matter what your IP address is. Before using this feature, you need to sign up for DDNS service providers such as dyn.com/dns/. The Dynamic DNS client service provider will give you a password or key.

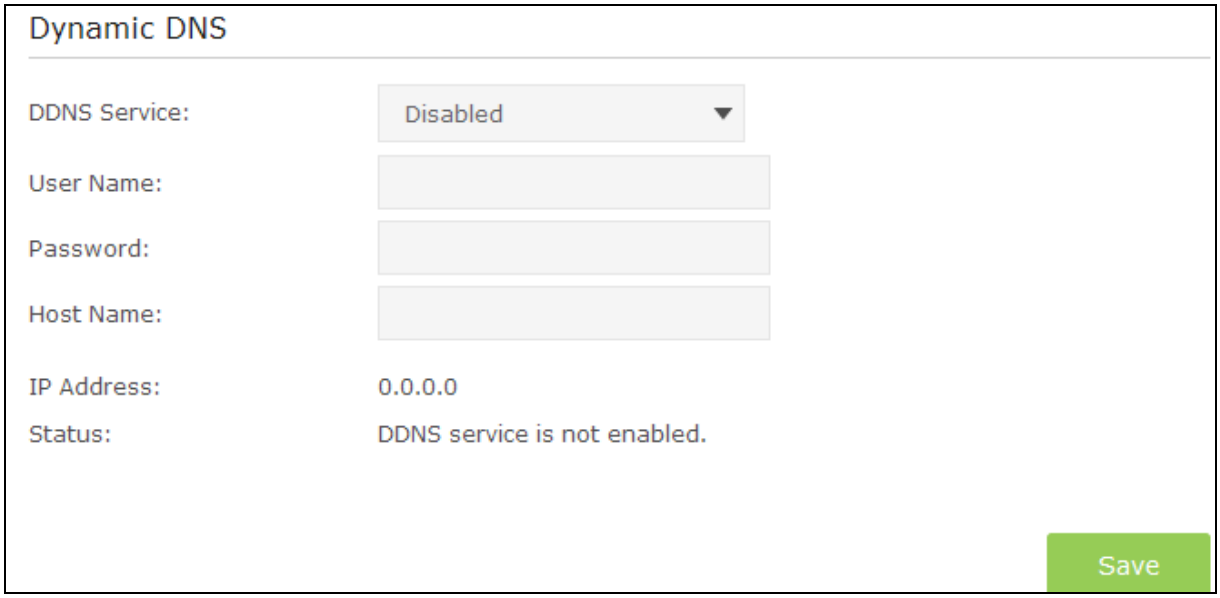


Figure 5-12

- **DDNS Service -** The service provider of DDNS. In this field you could select Disabled, dyn.com/dns/ or www.noip.com . If you have selected dyn.com/dns/ or www.noip.com , you need to sign up for DDNS service providers.
- **User Name & Password -** Type the "User Name" and "Password" for your DDNS account.

- **Host Name -** Enter the Domain name you want to set.
- **IP Address –** Display the WAN IP address.

Click the **Save** button to save your settings.

5.3.5 Advanced Routing

Choose "**Advanced** → **Network** → **Advanced Routing**", you can view all the current groups on this page.

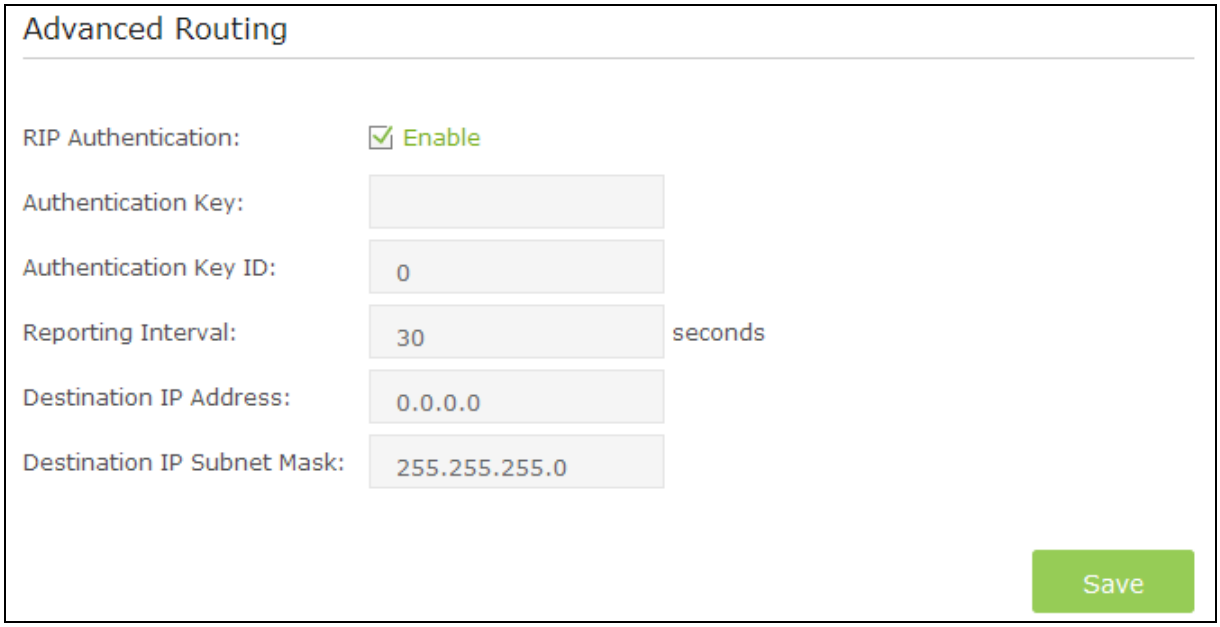
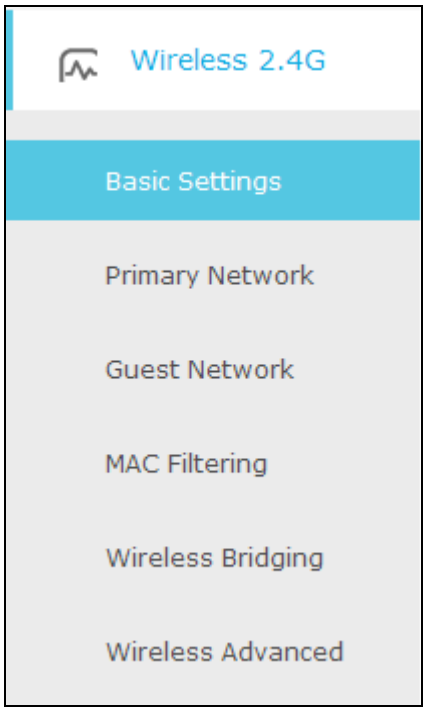


Figure 5-13

- **RIP Authentication –** Check the box to enable the RIP Authentication function.
- **Authentication Key –** Create a key（up to 16 characters）for the RIP authentication.
- **Authentication Key ID -** Create a ID（up to 3 characters） for identity a authentication key.
- **Reporting Interval –** Refer to the update interval for routing information.
- **Destination IP Address –**The **Destination IP Address** is the address of the network or host that you want to assign to a static route.
- **Destination IP Subnet Mask –**The **Destination IP Subnet Mask** determines which portion of an IP Address is the network portion, and which portion is the host portion.

Click **Save** button to save the settings.

5.4 Wireless 2.4G



Choose menu "**Advanced→Wireless 2.4G**", you will see six submenus under the Wireless menu: **Basic Settings**, **Primary Network, Guest Network**, **MAC Filtering**, **Wireless Bridging** and **Wireless Advanced**. Click any of them, and you will be able to configure the corresponding function.

5.4.1 Basic Settings

Choose menu "**Advanced → Wireless 2.4G → Basic Settings**", you can configure the advanced wireless settings for the wireless 2.4G network.

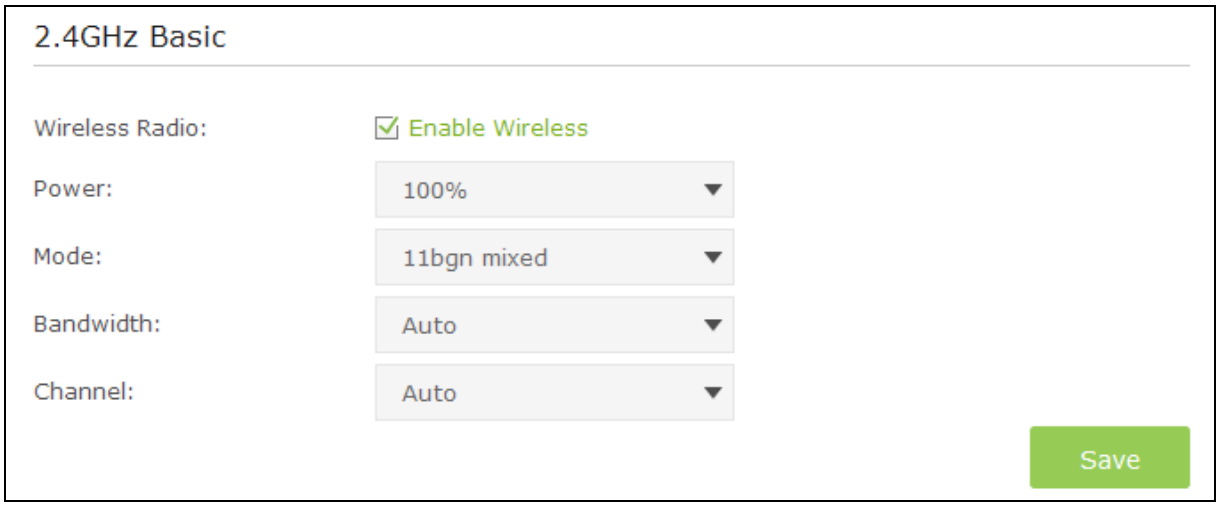


Figure 5-14

- **Wireless Radio –** Check the box to enable the Wireless Radio.
- **Power –** Here you can specify the transmit power of the modem router. You can select 25%, 50%, 75% and 100% which you would like. 100% is the default setting and is recommended.

- **Mode –** Select the desired mode.

  11bgn mixed: Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.

  11gn mixed: Select if you are using both 802.11g and 802.11n wireless clients.

  11n only: Select if you are using 802.11n wireless clients only.

  Select the desired wireless mode. It is strongly recommended that you set the Mode to **11bgn mixed**, and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the modem router.

- **BandWidth -** Select the channel width from the drop-down list. The default setting is Auto, which can adjust the channel width for your clients automatically.
- **Channel -** Select the channel you want to use from the drop-down list of Channel. This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

Click the **Save** button to save the settings.

5.4.2 Primary Network

Choose menu "**Advanced → Wireless 2.4G → Primary Network**", You can configure the wireless 2.4GHz primary network.

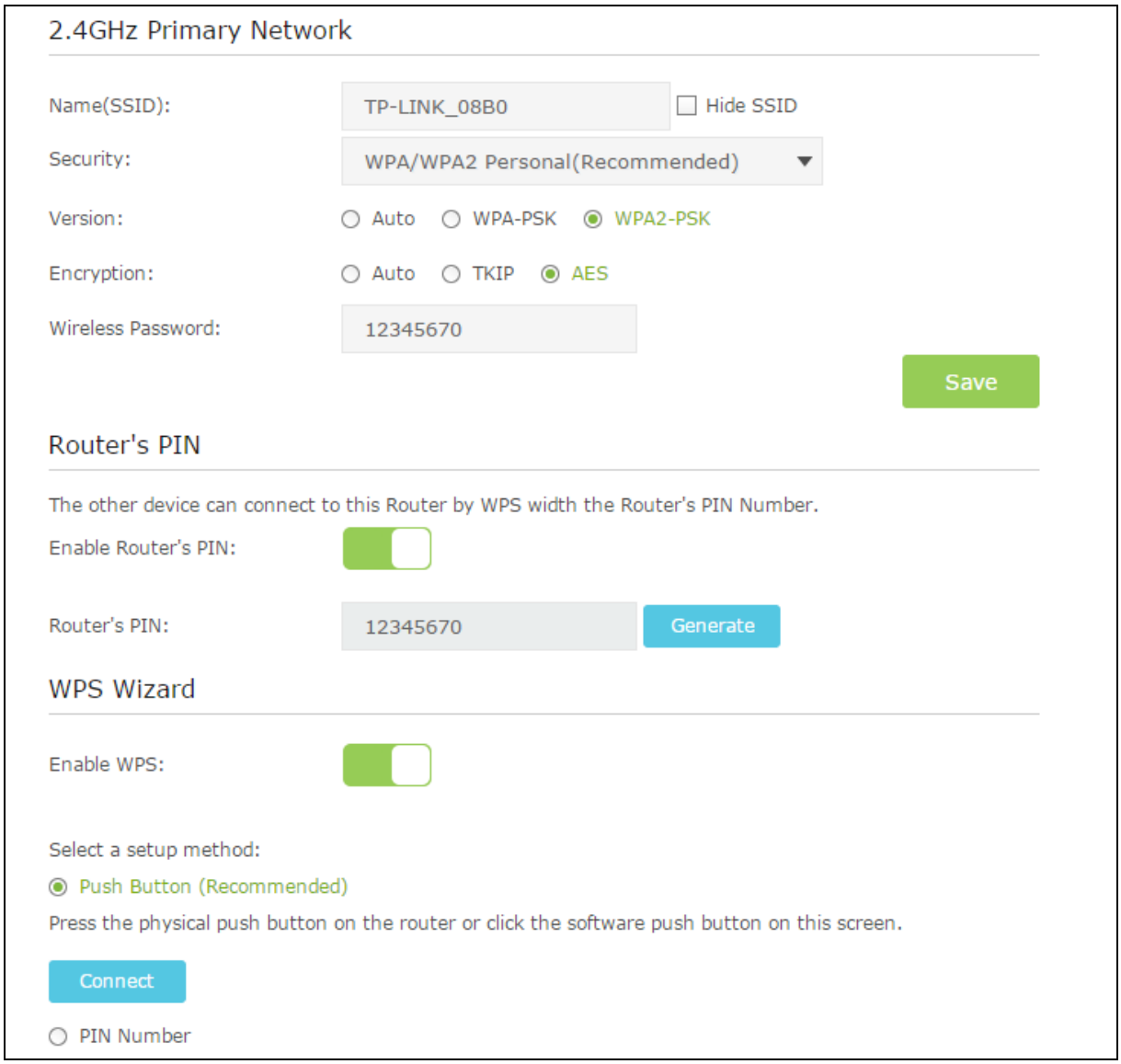


Figure 5-15

2.4GHz Primary Network:

- **Name (SSID) –** Create a name (up to 32 characters) for your 2.4GHz wireless network. The default SSID is set to be TP-LINK_XXXX.
- **Hide SSID –** If you want to hide the SSID of your wireless network from the Wi-Fi network, you should check the box.
- **Security –** There are four wireless security modes supported by the modem router: **No Security**, **WPA/WPA2 Personal (Recommended)**, **WPA/WPA2 Enterprise**, **WEP**. You can choose one of them from the drop-down list.

1) **No Security:** If you do not want to use wireless security, choose **No Security**. But it's recommended to use wireless security.

2) **WPA-PSK/WPA2-PSK Personal(Recommended):**

- **Version –**You can choose the version of the WPA-PSK/WPA2-PSK security by selecting **Auto, WPA-PSK** or **WPA2-PSK**. The default setting is **WPA2-PSK**.

- **Encryption –** You can choose the encryption by selecting **Auto, TKIP** or **AES**. The default setting is **AES**.
- **Wireless Password –** You can enter ASCII characters between 8 and 63 characters or 8 to 64 Hexadecimal characters. The default password is the same with the default PIN code, which is labeled on the bottom of the modem router.

3) WPA/WPA2 Enterprise:

- **Version –**You can choose the version of the WPA/WPA2 Enterprise security by selecting **Auto**, **WPA** or **WPA2**. The default setting is **WPA2**.
- **Encryption –** You can select **Auto, TKIP** or **AES** as Encryption. The default setting is **AES**.
- **RADIUS Server IP:** Enter the IP address of the Radius Server.
- **RADIUS Port:** Enter the port that radius service used.
- **RADIUS Password:** Enter the password for the Radius Server.

4) WEP:

- **Key Selected –** Select one of the four keys from the drop-down list.
- **Key Type –**You can select the WEP key length (64-bit, or 128-bit.) for encryption.

  64-bit: You can enter 10 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 5 ASCII characters.

  128-bit: You can enter 26 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 13 ASCII characters.
- **Key Format – ASCII** and **Hexadecimal** formats are provided here. **ASCII** format stands for any combination of keyboard characters in the specified length. **Hexadecimal** format stands for any combination of hexadecimal digits (0-9, a-f, A-F) in the specified length.
- **Key Value -** Enter the WEP key that you create. Make sure these values are identical on all wireless stations in your network.

☞ **Note:**

If you do not set the key, the wireless security function is still disabled even if you have selected Shared Key.

Router's PIN:

- **Enable Router's PIN -** The switch for the Router's PIN. If you turn on this button, the field will become green and other device can connect to this Router by WPS with the Router's PIN Number.
- **Router's PIN -** The current value of the modem router's PIN is displayed here. The default PIN of the modem router can be found in the label.
- **Generate -** Click this button, and then you can get a new random value for the modem router's PIN. You can ensure the network security by generating a new PIN.

☞ **Note:**

You cannot connect other device to this modem router by entering the router's PIN on your client device if you haven't switch on **Enable Router's PIN**.

WPS Wizard:

- **Enable WPS -** The switch for the WPS. If you turn on this button, the field will become green and you can add a new wireless device to an existing network quickly by **WPS** (also called **QSS**) function.
- **Select a setup method –** You can select either of **Push Button (Recommended)** or **PIN Number** as the WPS setup method.
- **Push Button (Recommended) –** When you select this method, you can add a new device by pressing the physical button on the router or by clicking the software push **Connect** button on this screen.
- **PIN Number -** When you select this method, you can add a new device by entering the client's PIN in the field and then click **Connect** button.

To add a new device:

If the wireless adapter supports Wi-Fi Protected Setup (WPS), you can establish a wireless connection between wireless adapter and modem router using either Push Button method or PIN Number method.

☞ **Note:**

To build a successful connection by WPS, you should also do the corresponding configuration of the new device for WPS function meanwhile.

I. Use the WPS Button

Use this method if your client device has a Wi-Fi Protected Setup (WPS) button.

Step 1: Press the physical button on the router (as shown in Figure 5-16) or click the software push button: **Connect** (as shown in Figure 5-17).

Figure 5-16

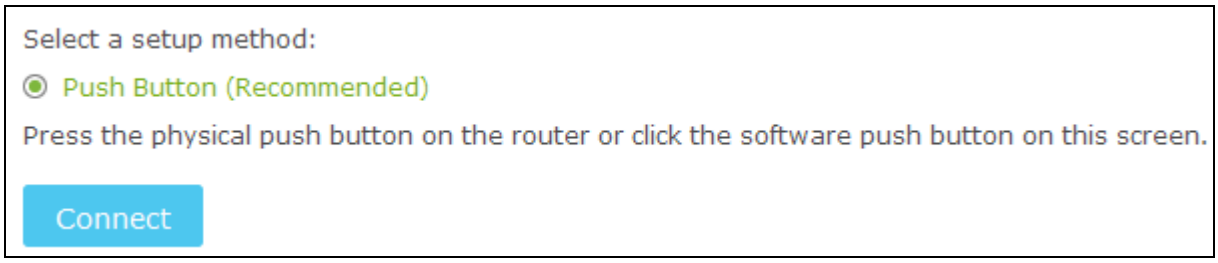


Figure 5-17

Step 2: Press and hold the WPS button of the client device directly.

Step 3: The WPS LED flashes for two minutes during the Wi-Fi Protected Setup process.

Step 4: When the WPS LED is on, the client device has successfully connected to the modem router.

Refer back to your client device or its documentation for further instructions.

II. Enter the client device's PIN on the modem router

Use this method if your client device has a Wi-Fi Protected Setup PIN number.

Step 1: Enter the PIN number from the client device in the field, as shown in the following figure. Then click **Connect** button.

Figure 5-18

Step 2: "**Device has been added successfully!**" will appear on the screen, which means the client device has successfully connected to the modem router.

☞ **Note:**

1) The WPS LED on the modem router will light green for five minutes if the device has been successfully added to the network.

2) The WPS function cannot be configured if the **Enable Router's PIN** switch is off. Please make sure the **Enable Router's PIN** switch is on before configuring the WPS.

5.4.3 Guest Network

Choose menu "**Advanced → Wireless 2.4G → Guest Network**", you can configure the advanced settings of your guest network.

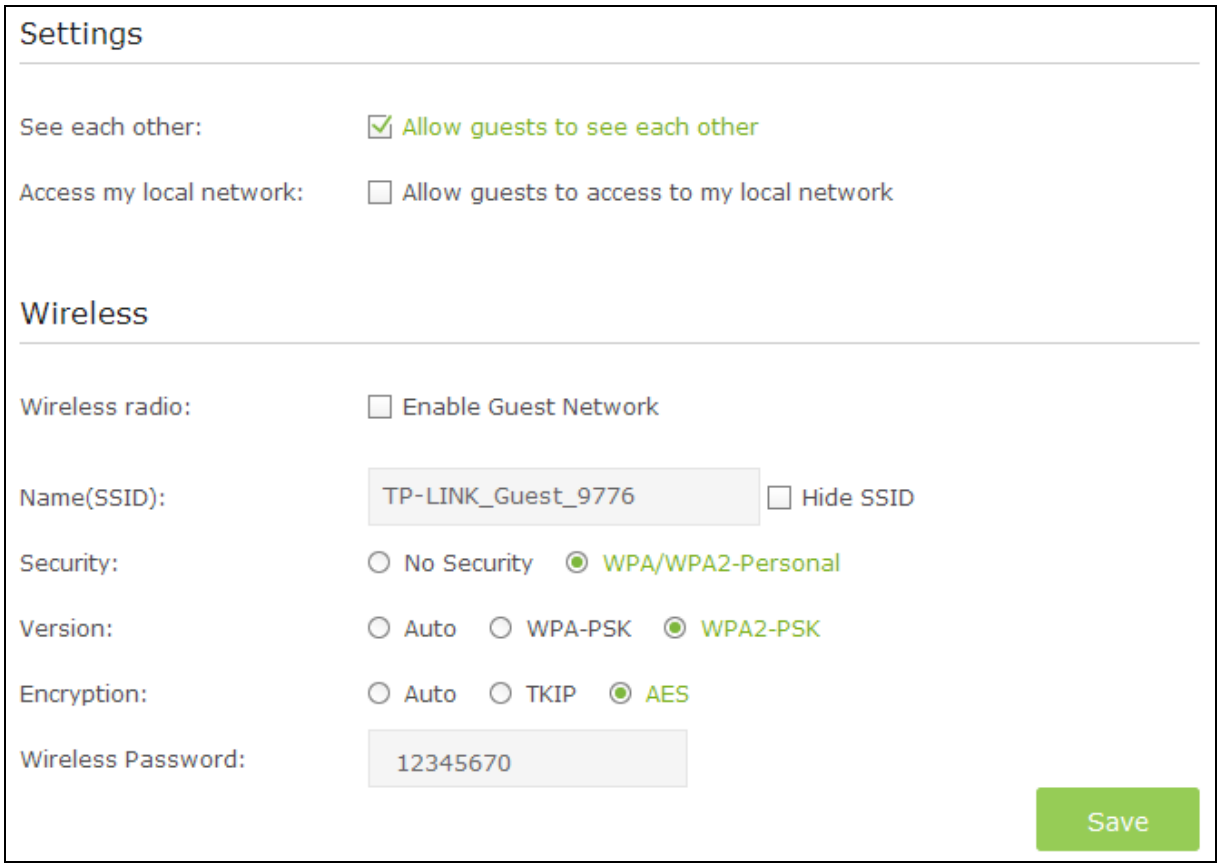


Figure 5-19

Settings:

- **See each other -** If **Allow guests to see each other** is selected, anyone who connects to the guest network can **access** each other.
- **Access my local network -** If **Allow guests to access my local network** is selected, anyone who connects to the guest network has access to your local network, not just Internet access.

Wireless:

- **Wireless radio –** Check the box to enable this function. The guest network function is disabled by default.
- **Name (SSID) -** Create a name for the guest network. When setting up a Guest network, it is strongly recommended to use a name that easily distinguishes it from your primary network. The default name is TP-LINK_Guest_2.4GHz. If you want to hide the guest network from the Wi-Fi network, check the **Hide SSID**.
- **Security -** It's strongly recommended to select **WPA/WPA2 Personal**. If you do not want to use wireless security, choose **No Security**.
- **Version -**You can choose the version of the WPA-PSK/WPA2-PSK security by selecting **Auto, WPA-PSK** or **WPA2-PSK**. The default setting is **WPA2-PSK**.
- **Encryption -** You can choose the encryption by selecting **Auto, TKIP** or **AES**.
- **Wireless Password -** Create a password for the guest network. The password must have a minimum of 8 characters in length.

Click **Save** button to save the settings.

5.4.4 MAC Filtering

Choose menu "**Advanced → Wireless 2.4GHz → MAC Filtering**", you can control the wireless access by configuring the **MAC Filtering** function.

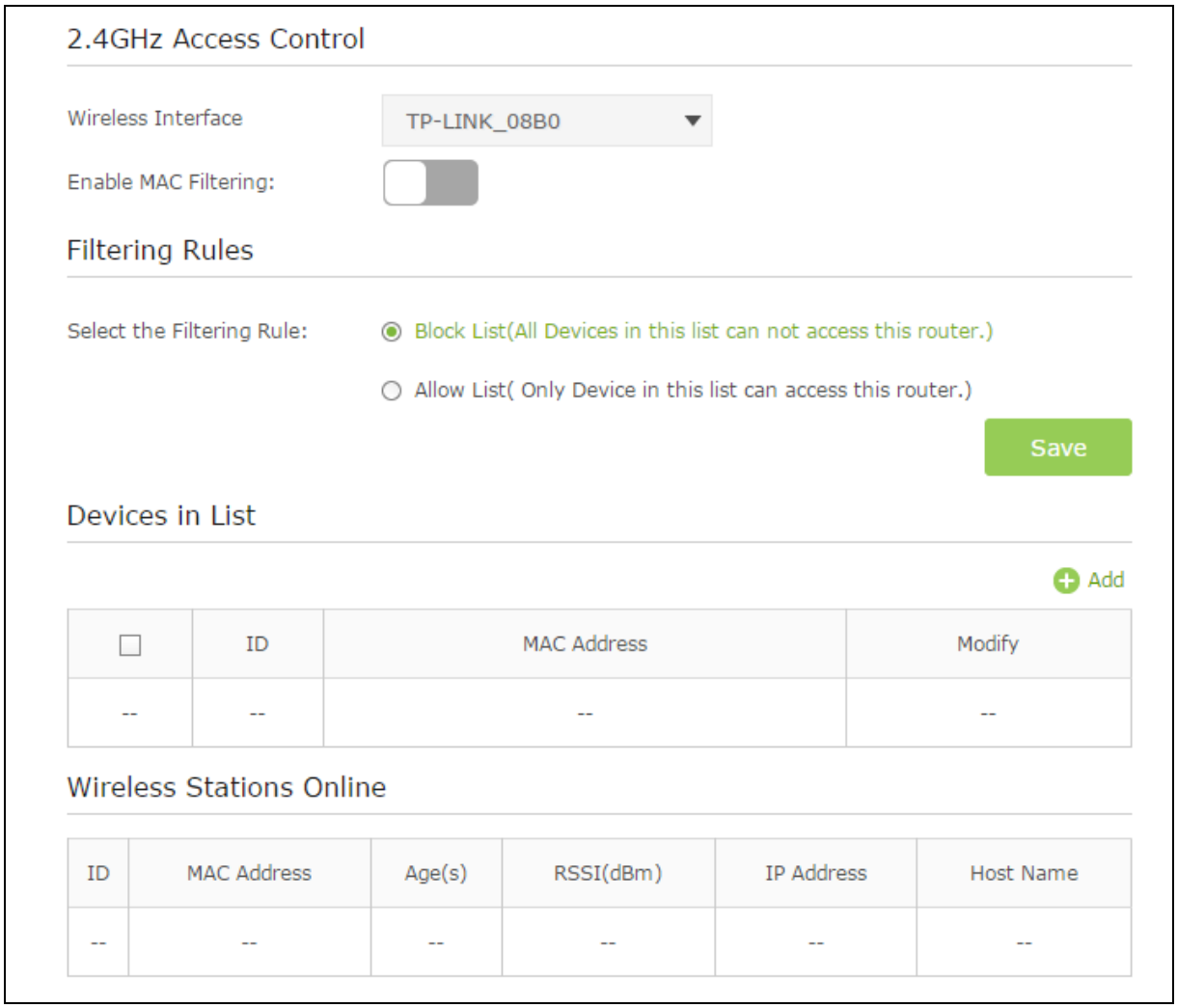


Figure 5-20

2.4GHz Access Control:

- **Wireless Interface -** Select an available wireless interface from the drop-down list.
- **Enable MAC Filtering-** The switch for the MAC Filtering. If you turn on this button, the field will become green and you can filter wireless users by MAC Address.

Filtering Rules:

- **Select the Filtering Rule -** You can select either of **Block List** or **Allow List** as the MAC filtering rule.

Click the **Save** button to save the settings.

Devices in List:

- **Add -** You can add a new device for the MAC Filtering rule by clicking Add button.

- **MAC Address -** This field displays the MAC address of the wireless station that cannot access this router/can access this router.
- **Modify -** Click the icon to delete this entry.

To add a MAC Address Filtering entry:

1. Click Add button, then you will see a setting page.
2. Enter the appropriate MAC Address into the **MAC Address** field. The format of the MAC Address is XX-XX-XX-XX-XX-XX (X is any hexadecimal digit). For example: 00-1D-0F-11-22-33.

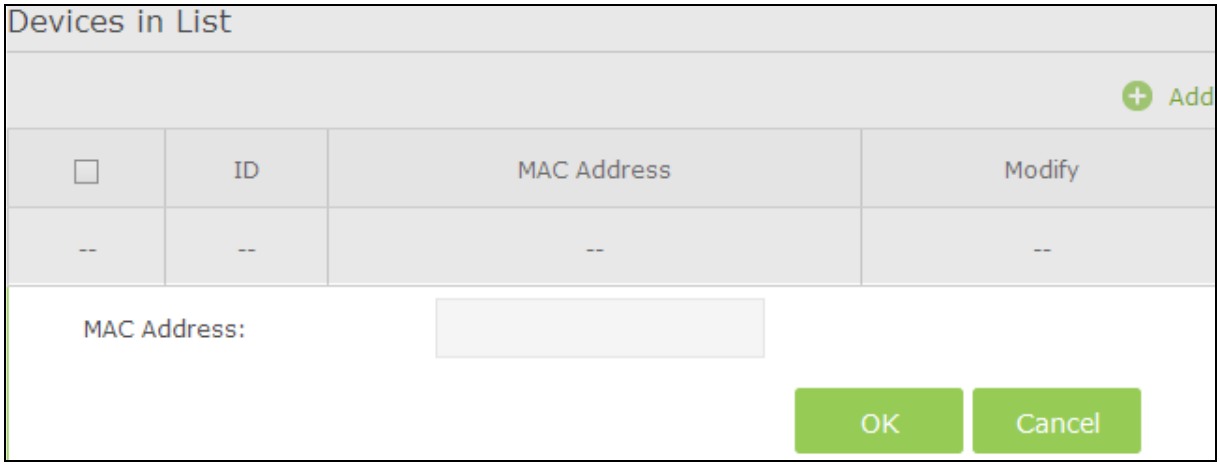


Figure 5-21

3. Click the **OK** button to save this entry. If you do not want to save this entry, click the **Cancel** button.

For example: If you desire that the wireless station A with MAC address 00-1D-0F-11-22-33 and the wireless station B with MAC address 00-0A-EB-00-07-5F are able to access the modem router, but all the other wireless stations cannot access the modem router, you can configure the **MAC Filtering** settings by following these steps:

1. Switch on the **Enable MAC Filtering** button to enable this function.
2. Select the **White List** for **Filtering Rules**.
3. Delete all or disable all entries if there are any entries already.
4. Click the Add button.
   1) Enter the MAC address 00-1D-0F-11-22-33/00-0A-EB-00-07-5F in the **MAC Address** field.
   2) Click the **OK** button.

The filtering rules that configured should be similar to the following figure:

Devices in List

Add

	ID	MAC Address	Modify
☐	1	00:1D:0F:11:22:33	
☐	2	00:0A:EB:00:07:5F	

Figure 5-22

Wireless Stations Online:

- **MAC Address -** The MAC address of the wireless station online.
- **Age(s) –** Display the duration time of wireless station online.
- **RSSI(dBm) –** Refers to the Received Signal Strength Indication.
- **IP Address-** The IP address of the wireless station online.
- **Host Name –** Display the host name of the wireless station.

5.4.5 Wireless Bridging

Choose menu "**Advanced → Wireless 2.4G → Wireless Bridging**". With this function, the modem router can bridge more WLANs.

2.4GHz Bridging

Wireless Bridging: ☐ Enable WDS Scan AP

Remote Bridges:

Save

Figure 5-23

- **WDS Bridging -** With this function, the modem router can bridge more WLANs. If you check the **Enable WDS**, you can click the **Scan AP** button to scan the nearby wireless access points.
- **Remote Bridges –** Enter the MAC address of the access point which you choose to be bridged.

Click the **Save** button to save the settings.

5.4.6 Wireless Advanced

Choose menu "**Advanced → Wireless 2.4G → Wireless Advanced**", you can configure the advanced settings of your wireless network.

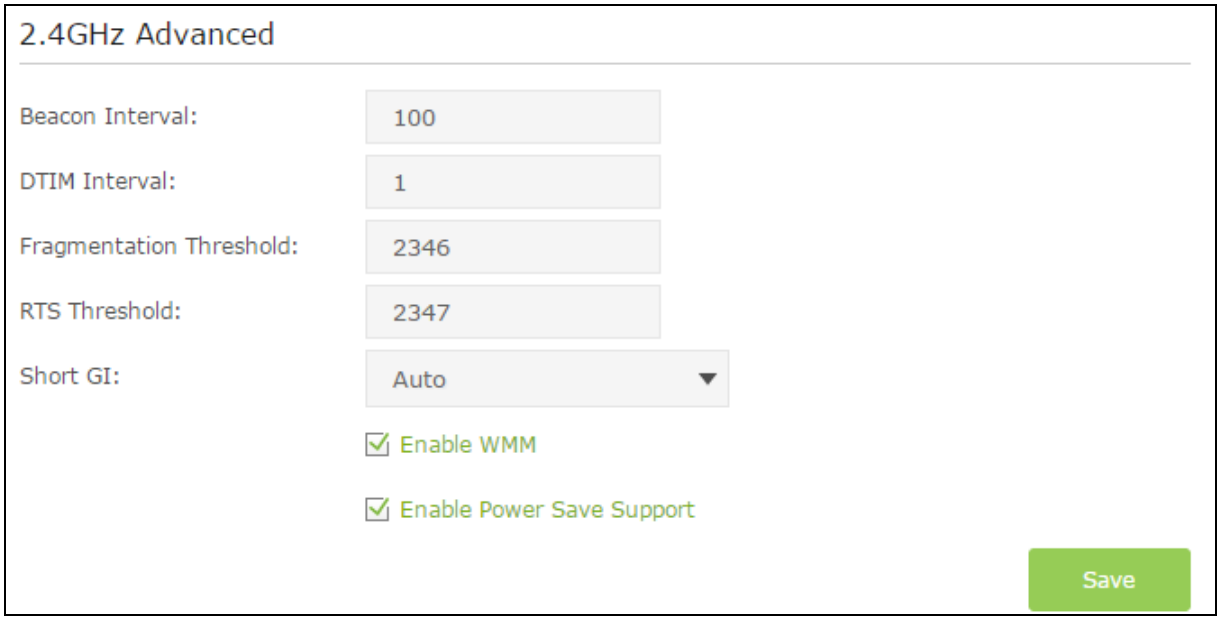


Figure 5-24

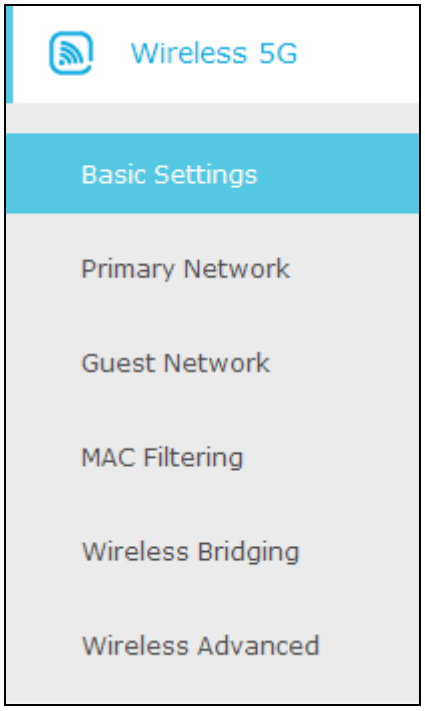
2.4GHz Advanced:

- **Beacon Interval -** Enter a value between 25-1000 milliseconds for Beacon Interval here. The beacons are the packets sent by the modem router to synchronize a wireless network. Beacon Interval value determines the time interval of the beacons. The default value is 100.
- **DTIM Interval -** This value determines the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the modem router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. You can specify the value between 1-255 Beacon Intervals. The default value is 1, which indicates the DTIM Interval is the same as Beacon Interval.
- **Fragmentation Threshold -** This value is the maximum size determining whether packets will be fragmented. Setting the Fragmentation Threshold too low may result in poor network performance because of excessive packets. 2346 is the default setting and is recommended.
- **RTS Threshold -** Here you can specify the RTS (Request to Send) Threshold. If the packet is larger than the specified RTS Threshold size, the modem router will send RTS frames to a particular receiving station and negotiate the sending of a data frame. The default value is 2347.
- **Short GI -** This function is recommended for it will increase the data capacity by reducing the guard interval time. Short GI is enabled by default.
- **Enable WMM –** Check the box to enable this function. WMM function can guarantee the packets with high-priority messages being transmitted preferentially, which is strongly recommended. It is enabled by default.
- **Enable Power Save Support -** Check the box to enable this function. This function can make the wireless client has only antenna is in working condition, and the remaining

antennas are dormant, so as to achieve the purpose of saving power.

Click the **Save** button to save the settings.

5.5 Wireless 5G



Choose menu "**Advanced→Wireless 5G**", you will see six submenus under the Wireless menu: **Basic Settings**, **Primary Network, Guest Network**, **MAC Filtering**, **Wireless Bridging** and **Wireless Advanced**. Click any of them, and you will be able to configure the corresponding function.

5.5.1 Basic Settings

Choose menu "**Advanced → Wireless 5G → Basic Settings**", you can configure the advanced wireless settings for the wireless 5G network.

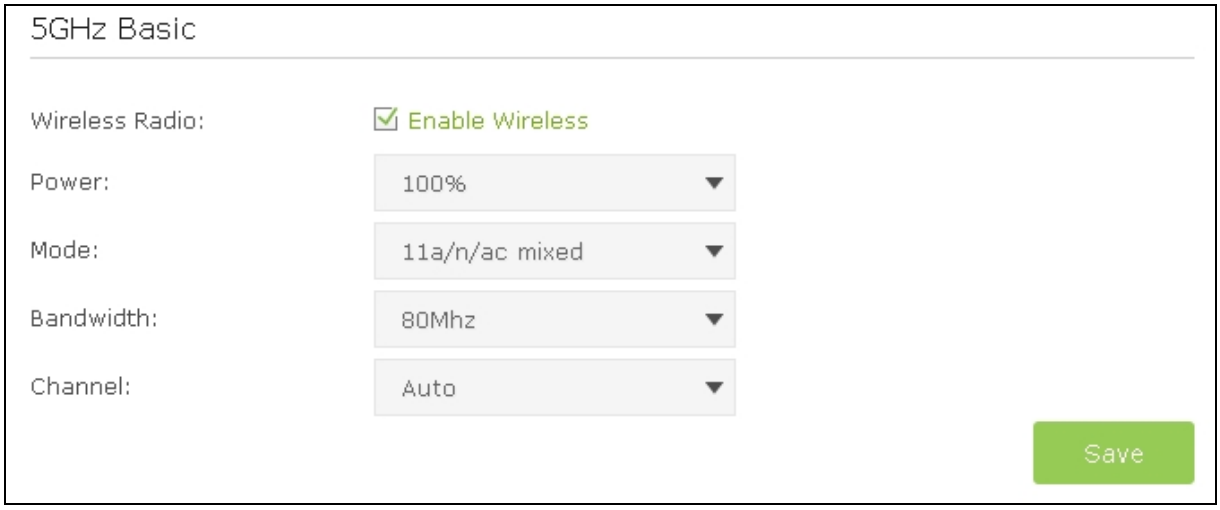


Figure 5-25

- **Wireless Radio –** Check the box to enable the Wireless Radio.
- **Power –** Here you can specify the transmit power of the modem router. You can select 25%, 50%, 75% and 100% which you would like. 100% is the default setting and is recommended.
- **Mode –** Select the desired mode.

  11a/n/ac mixed: Select if you are using a mix of 802.11a, 11n and 11ac wireless clients.

  11ac/n mixed: Select if you are using a mix of 802.11ac and 11n wireless clients.

  11ac only: Select if you are using 802.11a wireless clients.

  Select the desired wireless mode. It is strongly recommended that you set the Mode to **11a/n/ac mixed**, and all of 802.11a, 802.11n, and 802.11ac wireless stations can connect to the modem router.
- **BandWidth -** Select the channel width from the drop-down list. The default setting is Auto, which can adjust the channel width for your clients automatically.
- **Channel -** Select the channel you want to use from the drop-down list of Channel. This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

Click the **Save** button to save the settings.

5.5.2 Primary Network

Choose menu "**Advanced → Wireless 5G → Primary Network**", You can configure the wireless 5G primary network.

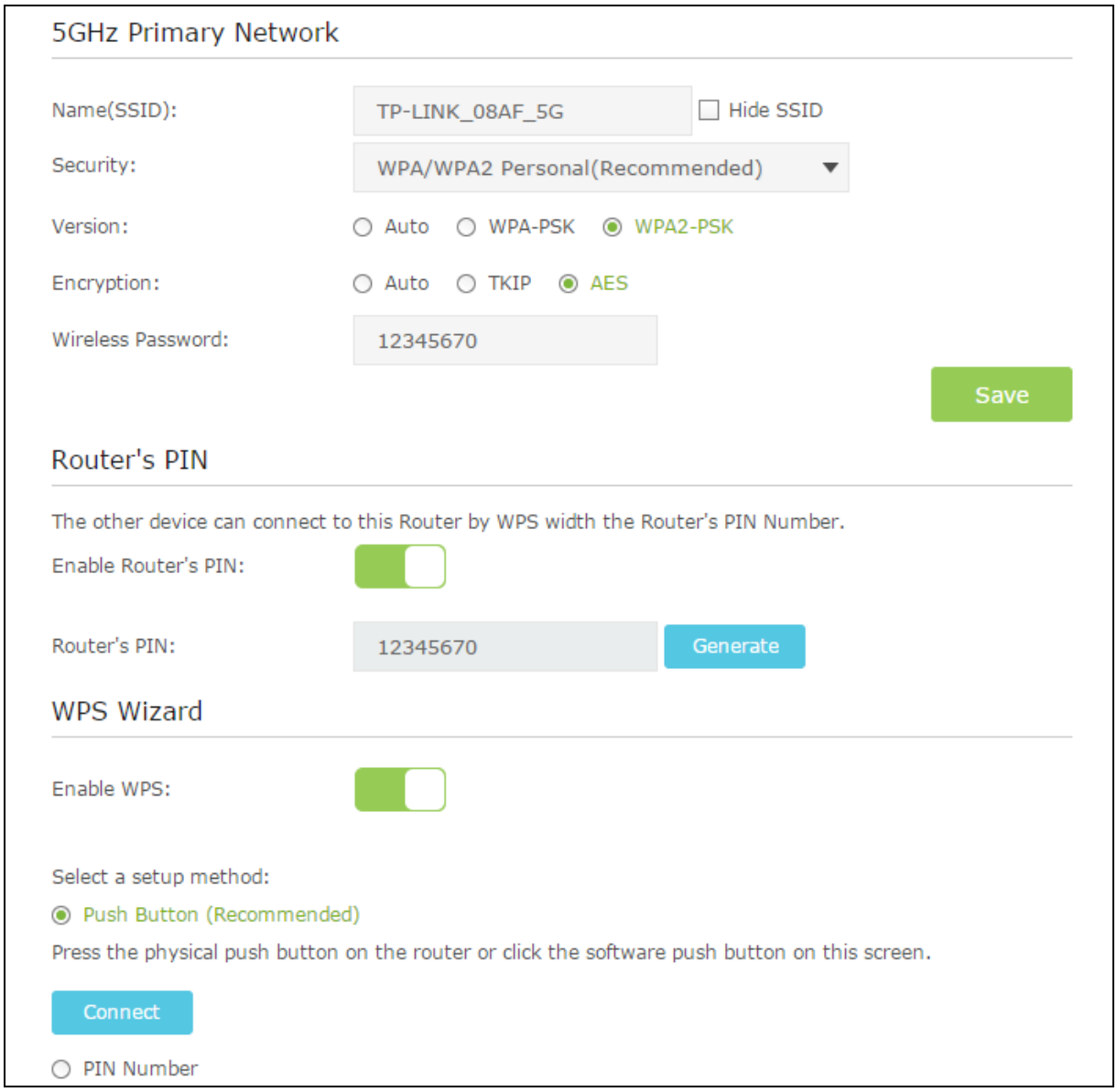


Figure 5-26

2.4GHz Primary Network:

- **Wireless Radio –** Check the box to enable the Wireless Radio.
- **Name (SSID) –** Create a name (up to 32 characters) for your 5GHz wireless network. The default SSID is set to be TP-LINK_XXXX _5GHz.
- **Hide SSID –** If you want to hide the SSID of your wireless network from the Wi-Fi network, you should check the box.
- **Security –** There are four wireless security modes supported by the modem router: **No Security**, **WPA/WPA2 Personal (Recommended)**, **WPA/WPA2 Enterprise**, **WEP**. You can choose one of them from the drop-down list.

5) **No Security:** If you do not want to use wireless security, choose **No Security**. But it's recommended to use wireless security.

6) WPA-PSK/WPA2-PSK Personal(Recommended):

- **Version –**You can choose the version of the WPA-PSK/WPA2-PSK security by selecting **Auto, WPA-PSK** or **WPA2-PSK**. The default setting is **WPA2-PSK**.
- **Encryption –** You can choose the encryption by selecting **Auto, TKIP** or **AES**. The default setting is **AES**.
- **Wireless Password –** You can enter ASCII characters between 8 and 63 characters or 8 to 64 Hexadecimal characters. The default password is the same with the default PIN code, which is labeled on the bottom of the modem router.

7) WPA/WPA2 Enterprise:

- **Version –**You can choose the version of the WPA/WPA2 Enterprise security by selecting **Auto**, **WPA** or **WPA2**. The default setting is **WPA2**.
- **Encryption –** You can select **Auto, TKIP** or **AES** as Encryption. The default setting is **AES**.
- **RADIUS Server IP:** Enter the IP address of the Radius Server.
- **RADIUS Port:** Enter the port that radius service used.
- **RADIUS Password:** Enter the password for the Radius Server.

8) WEP:

- **Key Selected –** Select one of the four keys from the drop-down list.
- **Key Type –**You can select the WEP key length (64-bit, or 128-bit.) for encryption.

  64-bit: You can enter 10 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 5 ASCII characters.

  128-bit: You can enter 26 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 13 ASCII characters.
- **Key Format – ASCII** and **Hexadecimal** formats are provided here. **ASCII** format stands for any combination of keyboard characters in the specified length. **Hexadecimal** format stands for any combination of hexadecimal digits (0-9, a-f, A-F) in the specified length.
- **Key Value -** Enter the WEP key that you create. Make sure these values are identical on all wireless stations in your network.

☞ **Note:**

If you do not set the key, the wireless security function is still disabled even if you have selected Shared Key.

Router's PIN:

- **Enable Router's PIN -** The switch for the Router's PIN. If you turn on this button, the field will become green and other device can connect to this Router by WPS with the Router's PIN Number.
- **Router's PIN -** The current value of the modem router's PIN is displayed here. The default PIN of the modem router can be found in the label.
- **Generate -** Click this button, and then you can get a new random value for the modem router's PIN. You can ensure the network security by generating a new PIN.

☞ **Note:**

You cannot connect other device to this modem router by entering the router's PIN on your client device if you haven't switch on **Enable Router's PIN**.

WPS Wizard:

- **Enable WPS -** The switch for the WPS. If you turn on this button, the field will become green and you can add a new wireless device to an existing network quickly by **WPS** (also called **QSS**) function.
- **Select a setup method –** You can select either of **Push Button (Recommended)** or **PIN Number** as the WPS setup method.
- **Push Button (Recommended) –** When you select this method, you can add a new device by pressing the physical button on the router or by clicking the software push **Connect** button on this screen.
- **PIN Number -** When you select this method, you can add a new device by entering the client's PIN in the field and then click **Connect** button.

To add a new device:

If the wireless adapter supports Wi-Fi Protected Setup (WPS), you can establish a wireless connection between wireless adapter and modem router using either Push Button method or PIN Number method.

☞ **Note:**

To build a successful connection by WPS, you should also do the corresponding configuration of the new device for WPS function meanwhile.

III. Use the WPS Button

Use this method if your client device has a Wi-Fi Protected Setup (WPS) button.

Step 5: Press the physical button on the router (as shown in Figure 5-27) or click the software push button: **Connect** (as shown in Figure 5-28).

Figure 5-27

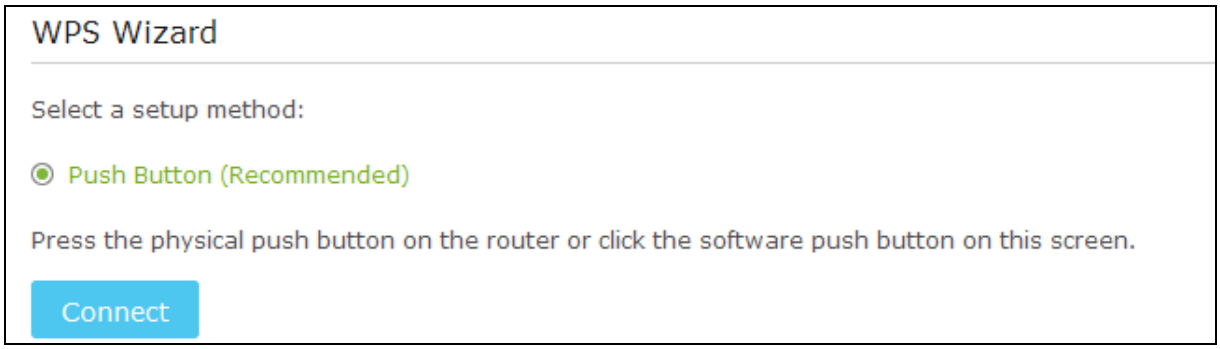


Figure 5-28

Step 6: Press and hold the WPS button of the client device directly.

Step 7: The WPS LED flashes for two minutes during the Wi-Fi Protected Setup process.

Step 8: When the WPS LED is on, the client device has successfully connected to the modem router.

Refer back to your client device or its documentation for further instructions.

IV. Enter the client device's PIN on the modem router

Use this method if your client device has a Wi-Fi Protected Setup PIN number.

Step 3: Enter the PIN number from the client device in the field, as shown in the following figure. Then click **Connect** button.

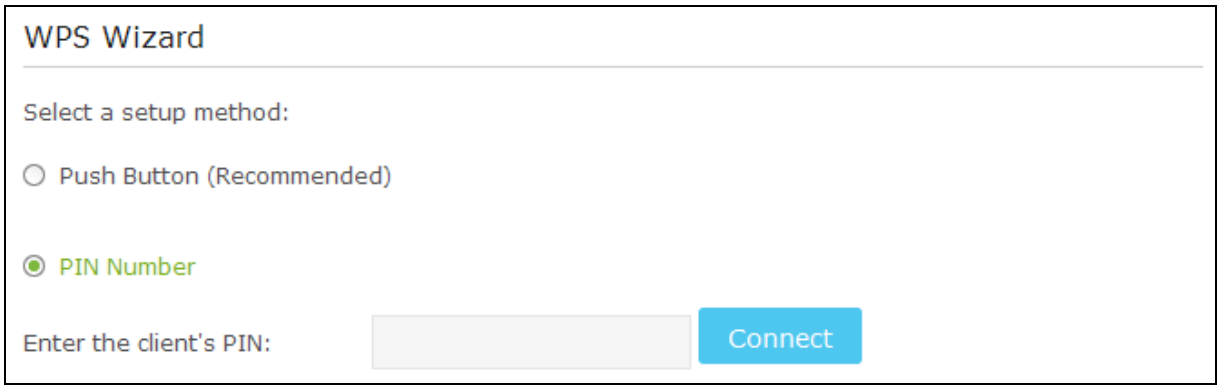


Figure 5-29

Step 4: "**Device has been added successfully!**" will appear on the screen, which means the client device has successfully connected to the modem router.

☞ **Note:**

1) The WPS LED on the modem router will light green for five minutes if the device has been successfully added to the network.

2) The WPS function cannot be configured if the **Enable Router's PIN** switch is off. Please make sure the **Enable Router's PIN** switch is on before configuring the WPS.

5.5.3 Guest Network

Choose menu "**Advanced→ Wireless 5G → Guest Network**", you can configure the advanced settings of your guest network.

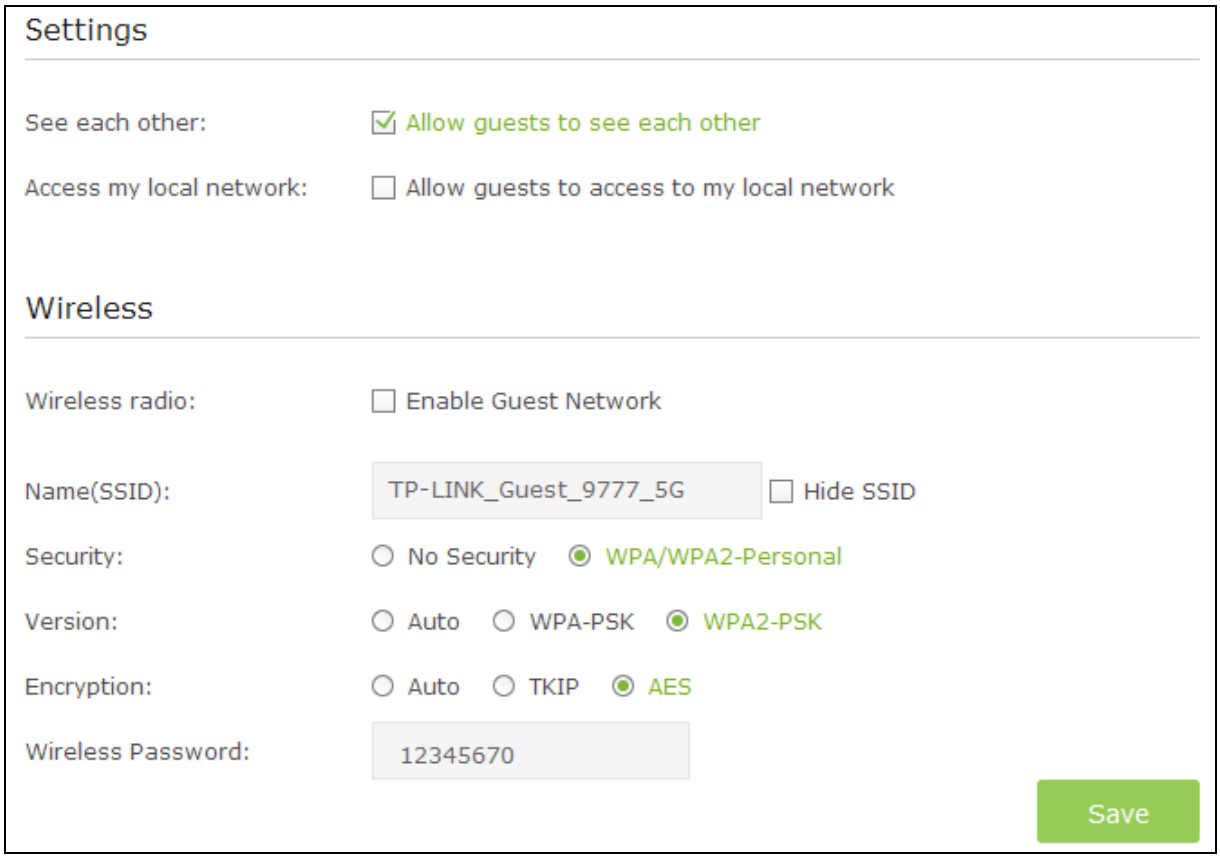


Figure 5-30

Settings:

- **See each other -** If **Allow guests to see each other** is selected, anyone who connects to the guest network can **access** each other.
- **Access my local network -** If **Allow guests to access my local network** is selected, anyone who connects to the guest network has access to your local network, not just Internet access.

Wireless:

- **Wireless radio –** Check the box to enable this function. The guest network function is disabled by default.
- **Name (SSID) -** Create a name for the guest network. When setting up a Guest network, it is strongly recommended to use a name that easily distinguishes it from your primary network. The default name is TP-LINK_Guest_5GHz. If you want to hide the guest network from the Wi-Fi network, check the **Hide SSID**.
- **Security -** It's strongly recommended to select **WPA/WPA2 Personal**. If you do not want to use wireless security, choose **No Security**.
- **Version -**You can choose the version of the WPA-PSK/WPA2-PSK security by selecting **Auto, WPA-PSK** or **WPA2-PSK**. The default setting is **WPA2-PSK**.
- **Encryption -** You can choose the encryption by selecting **Auto, TKIP** or **AES**.
- **Wireless Password -** Create a password for the guest network. The password must have a minimum of 8 characters in length.

Click **Save** button to save the settings.

5.5.4 MAC Filtering

Choose menu "**Advanced → Wireless 5GHz → MAC Filtering**", you can control the wireless access by configuring the **MAC Filtering** function.

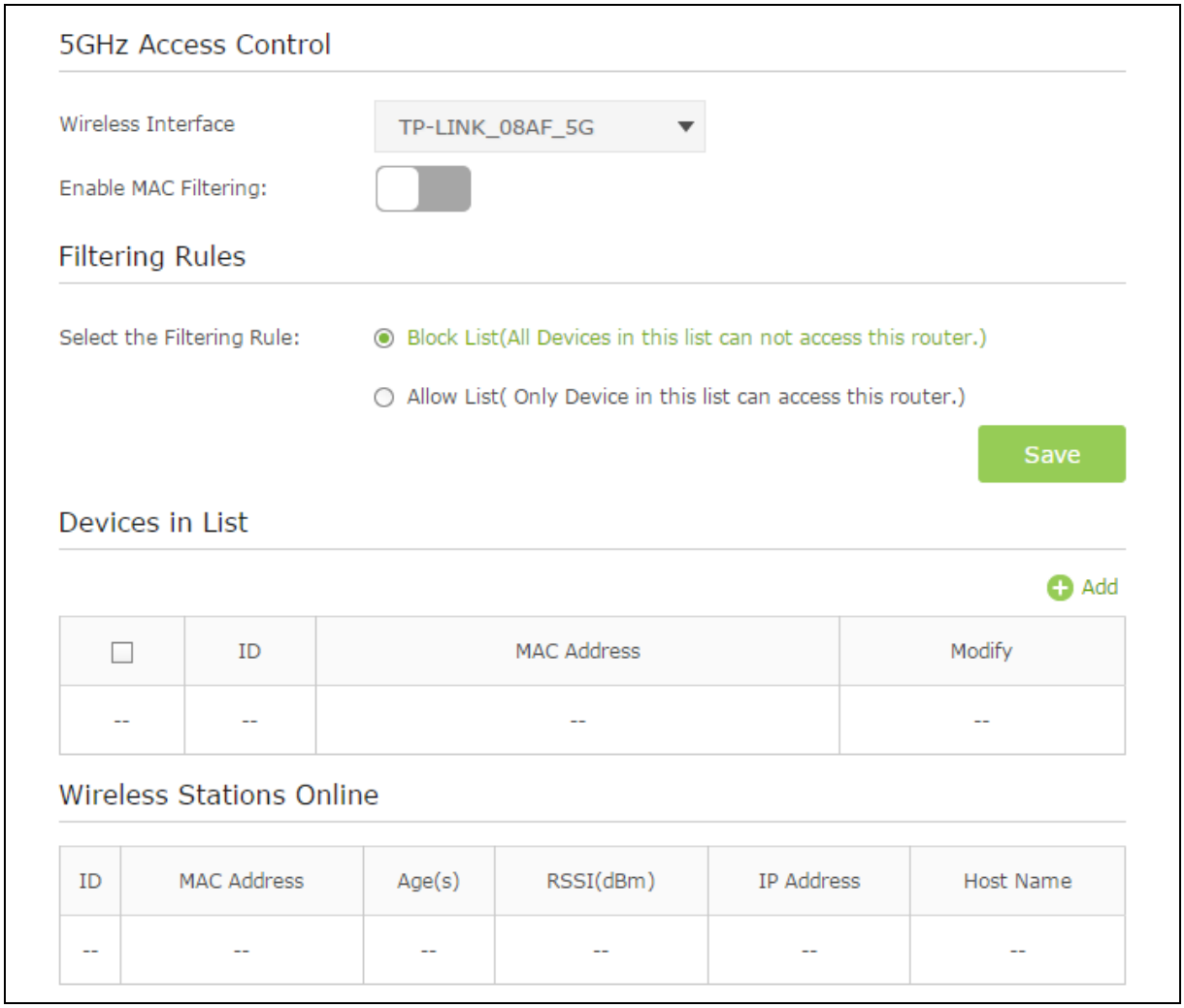


Figure 5-31

5GHz Access Control:

- **Wireless Interface -** Select an available wireless interface from the drop-down list.
- **Enable MAC Filtering-** The switch for the MAC Filtering. If you turn on this button, the field will become green and you can filter wireless users by MAC Address.

Filtering Rules:

- **Select the Filtering Rule -** You can select either of **White List** or **Black List** as the MAC filtering rule.

Click the **Save** button to save the settings.

Devices in List:

- **Add -** You can add a new device for the MAC Filtering rule by clicking Add button.
- **MAC Address -** This field displays the MAC address of the wireless station that cannot access this router/can access this router.

➢ **Modify -** Click the icon to delete this entry.

To add a MAC Address Filtering entry:

1. Click Add button, then you will see a setting page.
2. Enter the appropriate MAC Address into the **MAC Address** field. The format of the MAC Address is XX-XX-XX-XX-XX-XX (X is any hexadecimal digit). For example: 00-1D-0F-11-22-33.

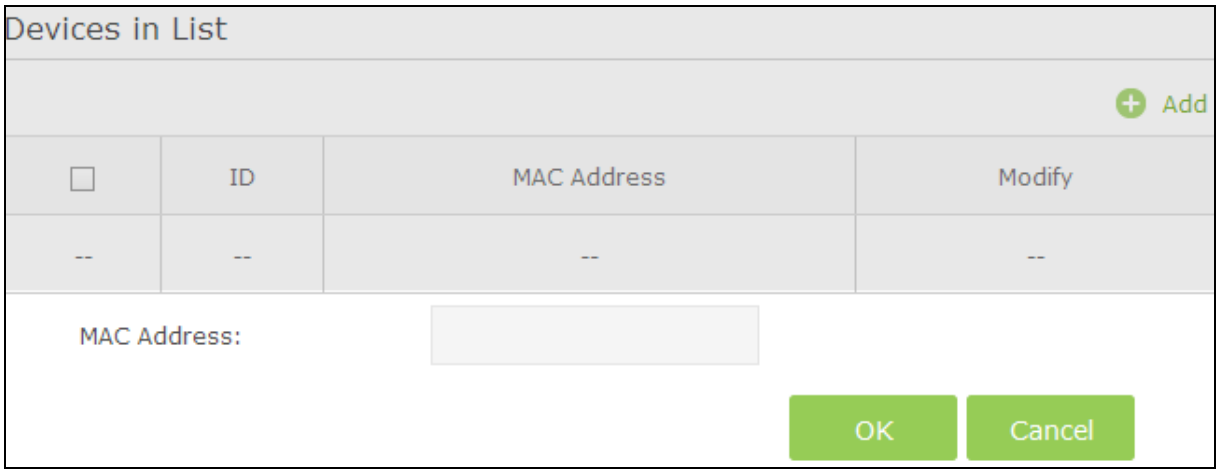


Figure 5-32

3. Click the **OK** button to save this entry. If you do not want to save this entry, click the **Cancel** button.

For example: If you desire that the wireless station A with MAC address 00-1D-0F-11-22-33 and the wireless station B with MAC address 00-0A-EB-00-07-5F are able to access the modem router, but all the other wireless stations cannot access the modem router, you can configure the **MAC Filtering** settings by following these steps:

1. Switch on the **Enable MAC Filtering** button to enable this function.
2. Select the **White List** for **Filtering Rules**.
3. Delete all or disable all entries if there are any entries already.
4. Click the Add button.
   1) Enter the MAC address 00-1D-0F-11-22-33/00-0A-EB-00-07-5F in the **MAC Address** field.
   2) Click the **OK** button.

The filtering rules that configured should be similar to the following figure:

Devices in List

Add

	ID	MAC Address	Modify
☐	1	00:1D:0F:11:22:33	
☐	2	00:0A:EB:00:07:5F	

Figure 5-33

Wireless Stations Online:

Wireless Stations Online

ID	MAC Address	Age(s)	RSSI(dBm)	IP Address	Host Name
--	--	--	--	--	--

- **MAC Address -** The MAC address of the wireless station online.
- **Age(s) –** Display the duration time of wireless station online.
- **RSSI(dBm) –** Refers to the Received Signal Strength Indication.
- **IP Address-** The IP address of the wireless station online.
- **Host Name –** Display the host name of the wireless station.

5.5.5 Wireless Bridging

Choose menu "**Advanced → Wireless 5G → Wireless Bridging**". With this function, the modem router can bridge more WLANs.

5GHz Bridging

Wireless Bridging: ☐ Enable WDS Scan AP

Remote Bridges:

Save

Figure 5-34

- **WDS Bridging -** With this function, the modem router can bridge more WLANs. If you check the **Enable WDS**, you can click the **Scan AP** button to scan the nearby wireless access points.
- **Remote Bridges –** Enter the MAC address of the access point which you choose to be bridged.

Click the **Save** button to save the settings.

5.5.6 Wireless Advanced

Choose menu "**Advanced → Wireless 5G → Wireless Advanced**", you can configure the advanced settings of your wireless network.

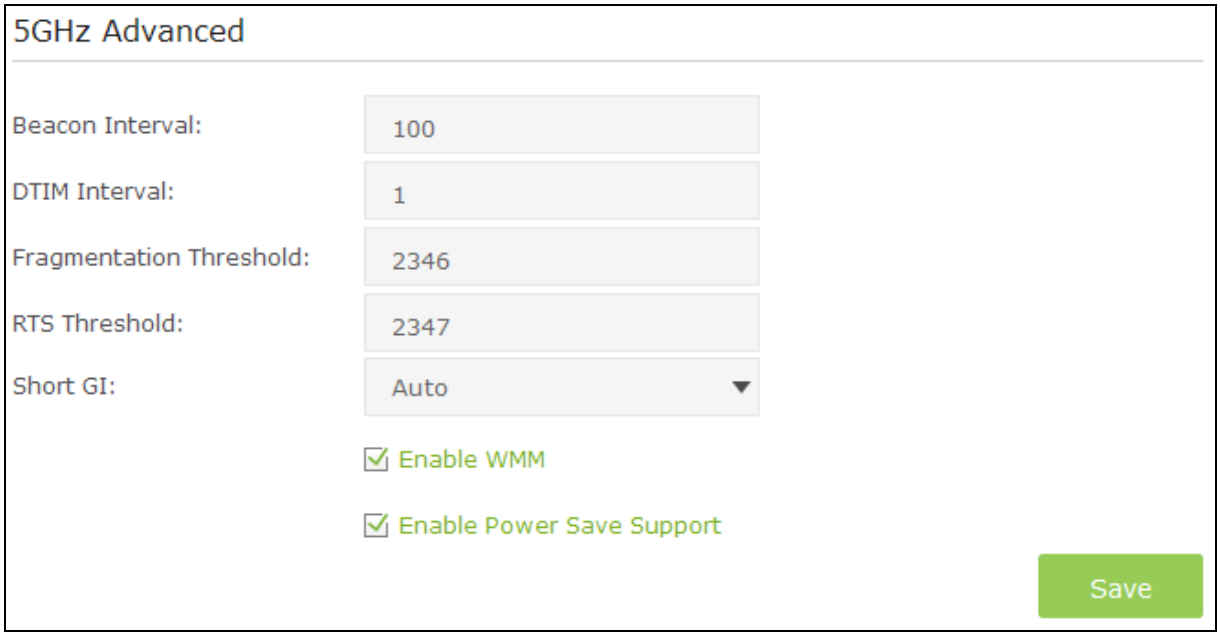


Figure 5-35

5GHz Advanced:

- **Beacon Interval -** Enter a value between 25-1000 milliseconds for Beacon Interval here. The beacons are the packets sent by the modem router to synchronize a wireless network. Beacon Interval value determines the time interval of the beacons. The default value is 100.
- **DTIM Interval -** This value determines the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the modem router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. You can specify the value between 1-255 Beacon Intervals. The default value is 1, which indicates the DTIM Interval is the same as Beacon Interval.
- **Fragmentation Threshold -** This value is the maximum size determining whether packets will be fragmented. Setting the Fragmentation Threshold too low may result in poor network performance because of excessive packets. 2346 is the default setting and is recommended.
- **RTS Threshold -** Here you can specify the RTS (Request to Send) Threshold. If the packet is larger than the specified RTS Threshold size, the modem router will send RTS frames to a particular receiving station and negotiate the sending of a data frame. The default value is 2347.

- **Short GI -** This function is recommended for it will increase the data capacity by reducing the guard interval time. Short GI is enabled by default.
- **Enable WMM –** Check the box to enable this function. WMM function can guarantee the packets with high-priority messages being transmitted preferentially, which is strongly recommended. It is enabled by default.
- **Enable Power Save Support -** Check the box to enable this function. This function can make the wireless client has only antenna is in working condition, and the remaining antennas are dormant, so as to achieve the purpose of saving power.

Click the **Save** button to save the settings.

5.6 NAT Forwarding

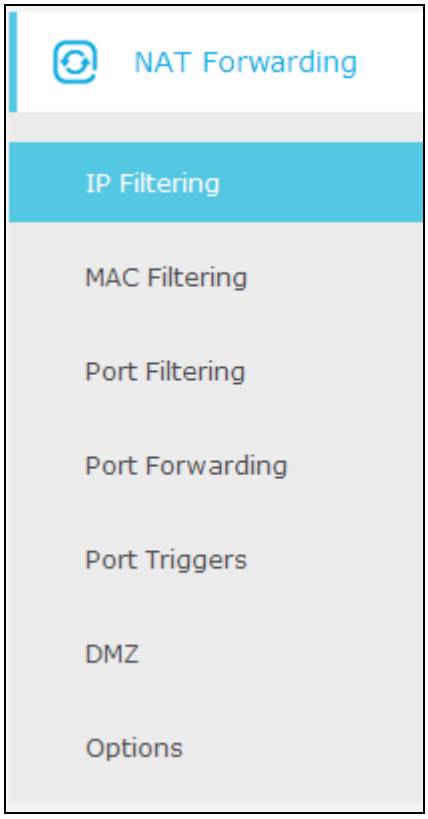


Figure 5-36 The Forwarding menu

There are seven submenus under the Forwarding menu: **IP Filtering**, **MAC Filtering**, **Port Filtering**, **Port Forwarding, Port Triggers, DMZ** and **Options**. Click any of them, and you will be able to configure the corresponding function.

5.6.1 IP Filtering

Choose menu "**Advanced → NAT Forwarding → IP Filtering**", and then you can control the client's access by configuring the **IP Filtering** function.

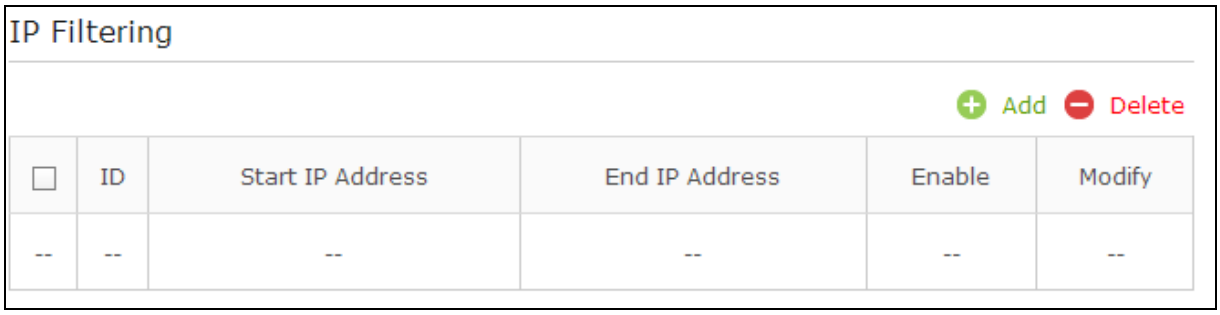


Figure 5-37

IP Filtering:

- **Start/End IP Address –**Display the start IP Address/end IP Address of the client that cannot access this router.
- **Enable -** Click the icon to enable the function. If this function has taken effect, the icon will become .
- **Modify -** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To add a IP Address Filtering entry:

1. Click Add button, then you will see a setting page.
2. Enter the **Start IP Address** and the **End IP Address.**
3. Check **Enable this Entry** for this entry, as shown in the following figure.

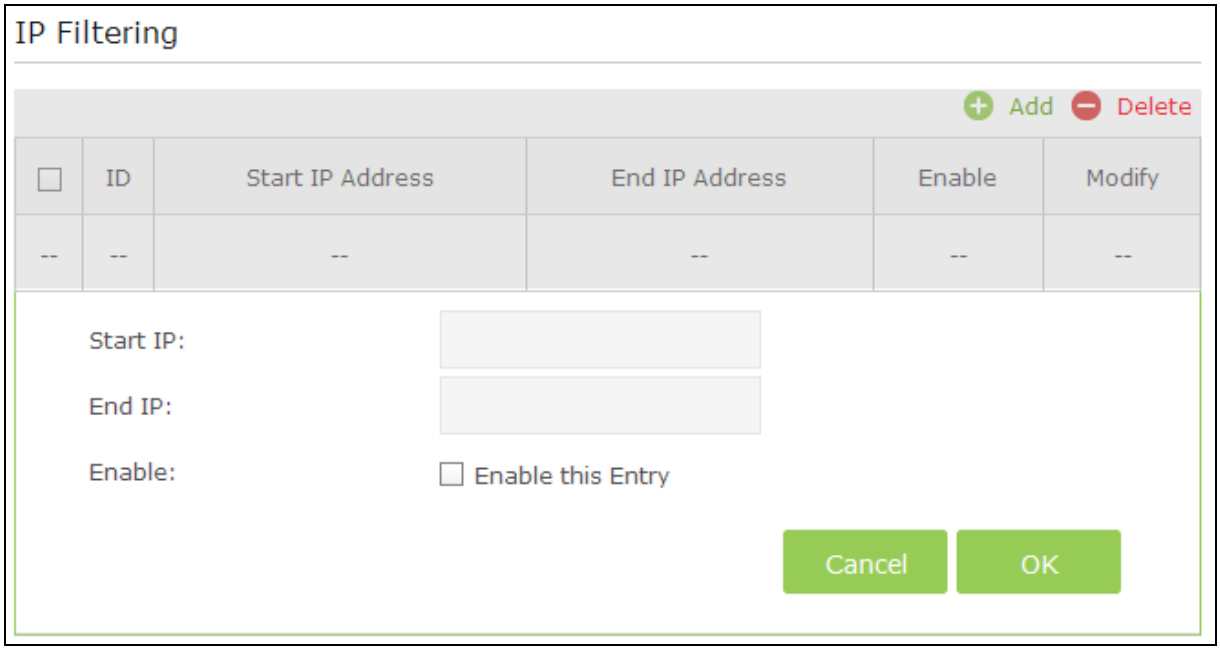


Figure 5-38

4. Click the **OK** button to save this entry. If you do not want to save this entry, click the **Cancel** button.

5.6.2 MAC Filtering

Choose menu "**Advanced → NAT Forwarding → MAC Filtering**", and then then you can control the client's access by configuring the **MAC Filtering** function.

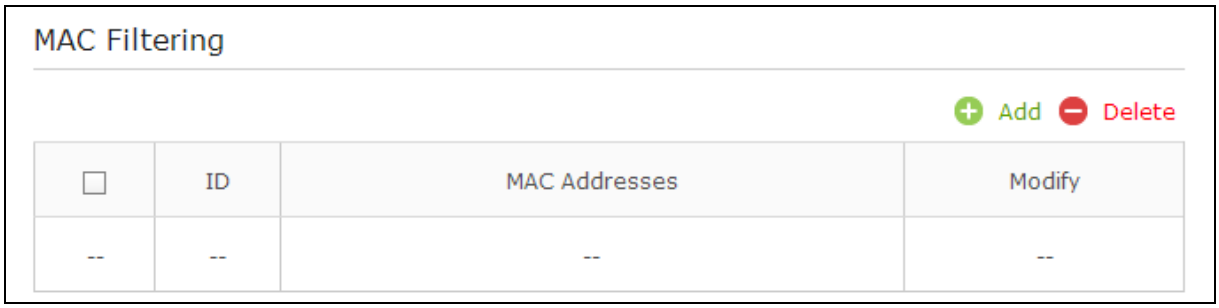


Figure 5-39

MAC Filtering:

- **MAC Address -** This field displays the MAC address of the station that cannot access this router.
- **Modify -** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To add a MAC Address Filtering entry:

1. Click Add button, then you will see a setting page.
2. Enter the appropriate MAC Address into the **MAC Address** field. The format of the MAC Address is XX:XX:XX:XX:XX:XX (X is any hexadecimal digit). For example: 00:1D:0F:11:22:33.

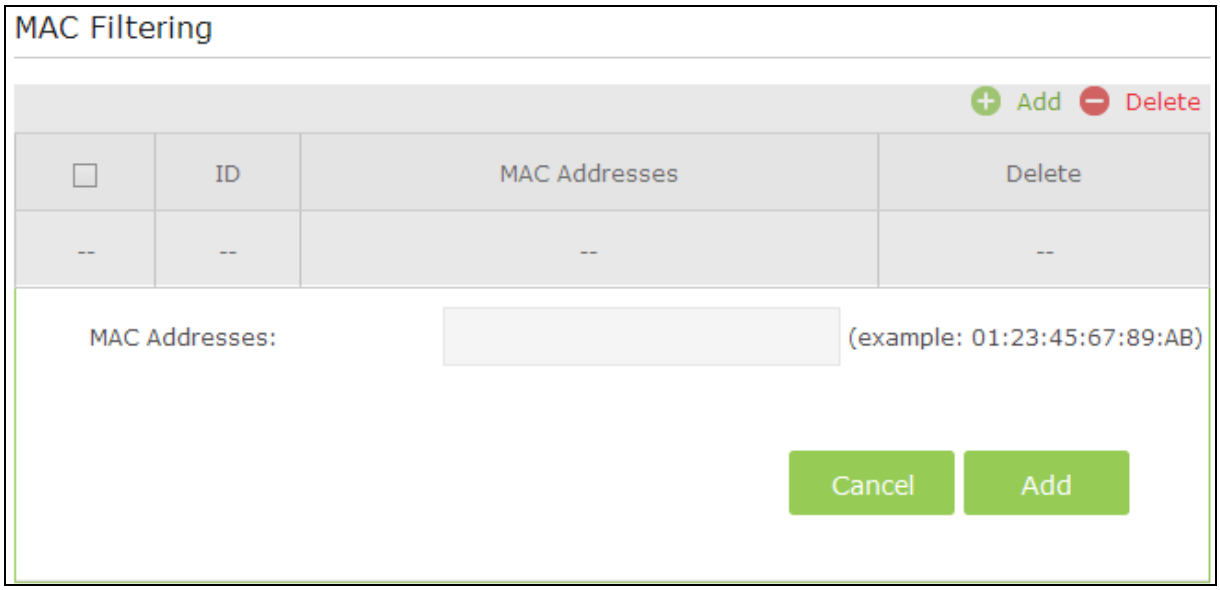


Figure 5-40

3. Click the **Add** button to save this entry. If you do not want to save this entry, click the **Cancel** button.

5.6.3 Port Filtering

Choose menu "**Advanced → NAT Forwarding → Port Filtering**", and then you can control the client's access by configuring the **Port Filtering** function.

Port Filtering

Add Delete

☐	ID	Start Port	End Port	Portocol	Enabled	Modify
--	--	--	--	--	--	--

Figure 5-41

Port Filtering:

- **Add -** You can add a new device for the MAC Filtering rule by clicking Add button.
- **Delete -** You can click Delete button to delete the selected entries.
- **Start/End Port -** Display the start port/end port that cannot access this router.
- **Protocol** - The protocol used for this application, either **TCP**, **UDP**, or **BOTH** (all protocols supported by the modem router).
- **Modify -** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To add an IP Address Filtering entry:

1. Click Add button, then you will see a setting page.
2. Enter the **Start Port** and the **End Port.**
3. Select the **Protocol** which you want.
4. Check **Enable this Entry** for this entry, as shown in the following figure.

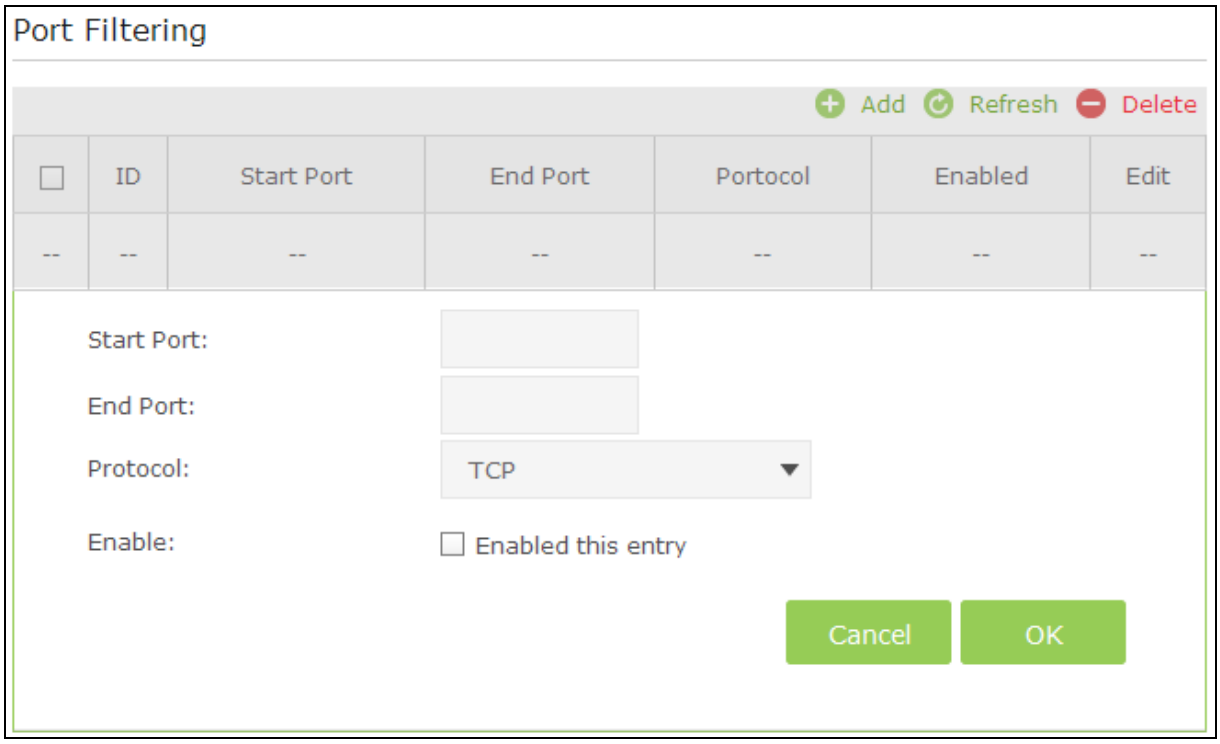
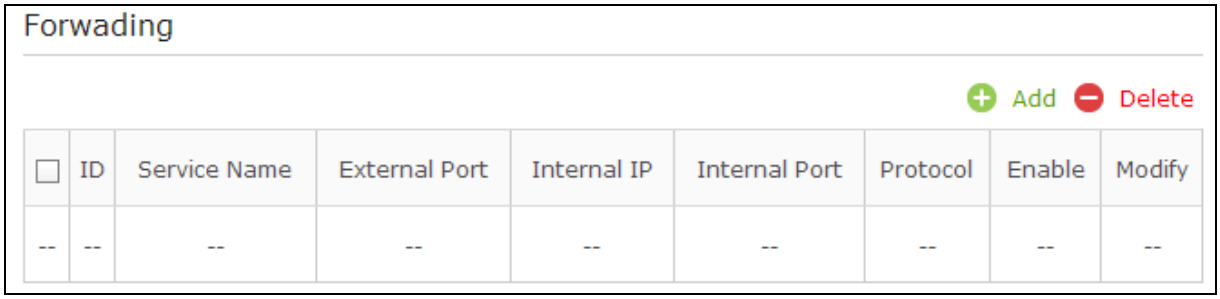


Figure 5-42

5. Click the **OK** button to save this entry. If you do not want to save this entry, click the **Cancel** button.

5.6.4 Port Forwarding

Choose menu "**Advanced → NAT Forwarding → Port Forwarding**", and then you will see the screen as shown below.



- **Service Name** - The port forwarding you want to use.
- **External Port** - The numbers of External Service Ports. You can enter a service port (the value between 1-65535).
- **Internal IP** - The IP address of the PC running the service application (which is in the same subnet with LAN IP).
- **Internal Port** - The Internal Service Port number of the PC running the service application. You can enter a service port (the value between 1-65535).
- **Protocol** - The protocol used for this application, either **TCP**, **UDP**, or **BOTH** (all protocols supported by the modem router).

- **Enable –** Click the icon to enable the function. If this function has taken effect, the icon will become .
- **Modify –** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To setup a port forwarding entry:

1. Click the **Add** button.
2. Enter the **Service Name**.
3. Enter the external port of the computer running the service application in the **External Port** field.
4. Enter the IP address of the computer running the service application in the **Internal IP** field.
5. Enter the internal port of the computer running the service application in the **Internal Port** field.
6. Select the protocol used for this application in the **Protocol** drop-down list, either **TCP**, **UDP**, or **BOTH**.
7. Enable the **Enabled this entry** checkbox.
8. Click the **OK** button.

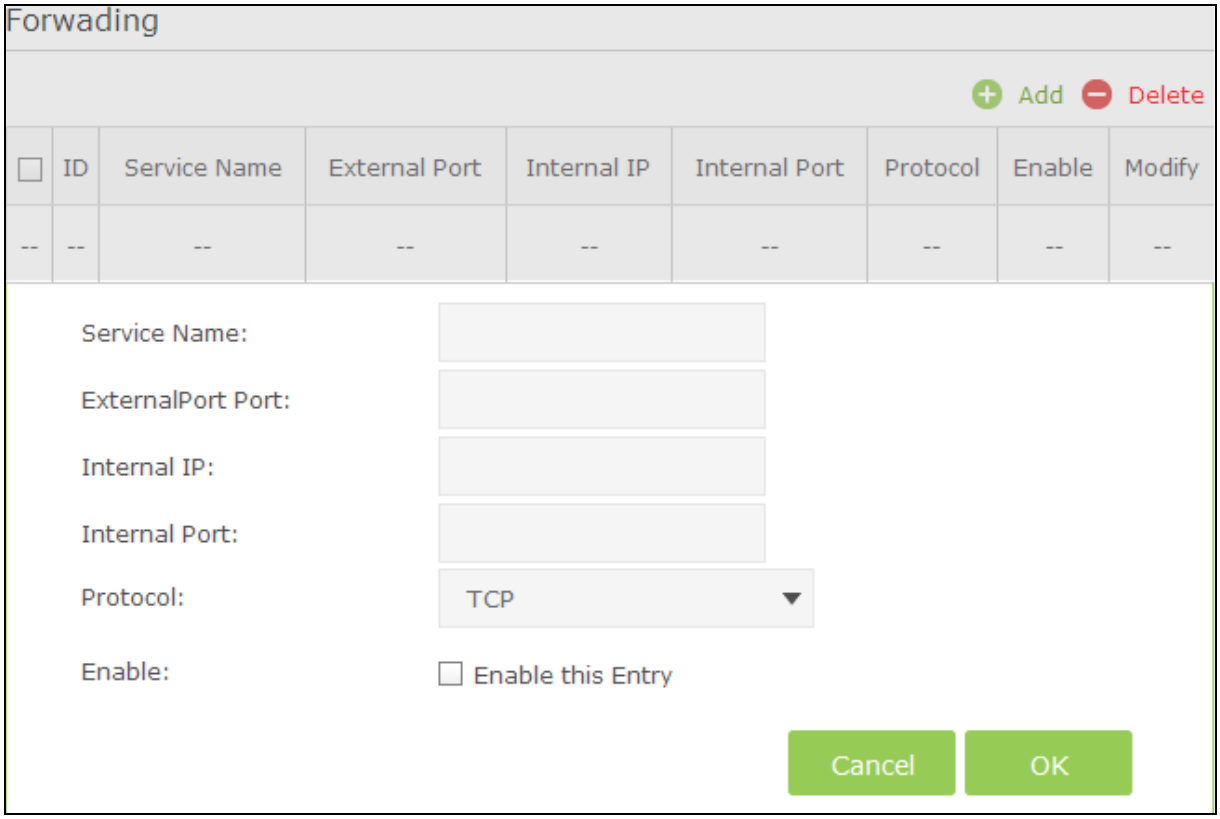


Figure 5-43

5.6.5 Port Triggers

Choose menu "**Advanced→ NAT Forwarding→Port Triggering**", you can view and add port triggering in the next screen shown below. Some applications require multiple connections, like

Internet games, video conferencing, Internet telephoning and so on. Port Triggering is used for some of these applications that cannot work with a pure NAT modem router.

Port Triggers

Add Delete

☐	ID	Desc	Trigger Start Port	Trigger End Port	External Start Port	External End Port	Protocol	Enable	Modify
--	--	--	--	--	--	--	--	--	--

Figure 5-44

- **Triggering Start/End Port** - The start port/end port for outgoing traffic. An outgoing connection using this port will trigger this rule.
- **External Start/End Port** - The port used by the remote system when it responds to the outgoing request. A response using one of these ports will be forwarded to the PC which triggered this rule.
- **Protocol** - The protocol used for **External Port**, either **TCP**, **UDP**, or **ALL** (all protocols supported by the router).
- **Enable –** Click the icon to enable the function. If this function has taken effect, the icon will become .
- **Modify –** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To add a new rule, follow the steps below.

1. Click the **Add** button.
2. Enter the number of the **Triggering Start/End and External Start/End Port.**
3. Select the protocol used for this application in the **Protocol** drop-down list, either **TCP**, **UDP**, or **Both**.
4. Enable the **Enable this entry** checkbox.
5. Click the **OK** button.

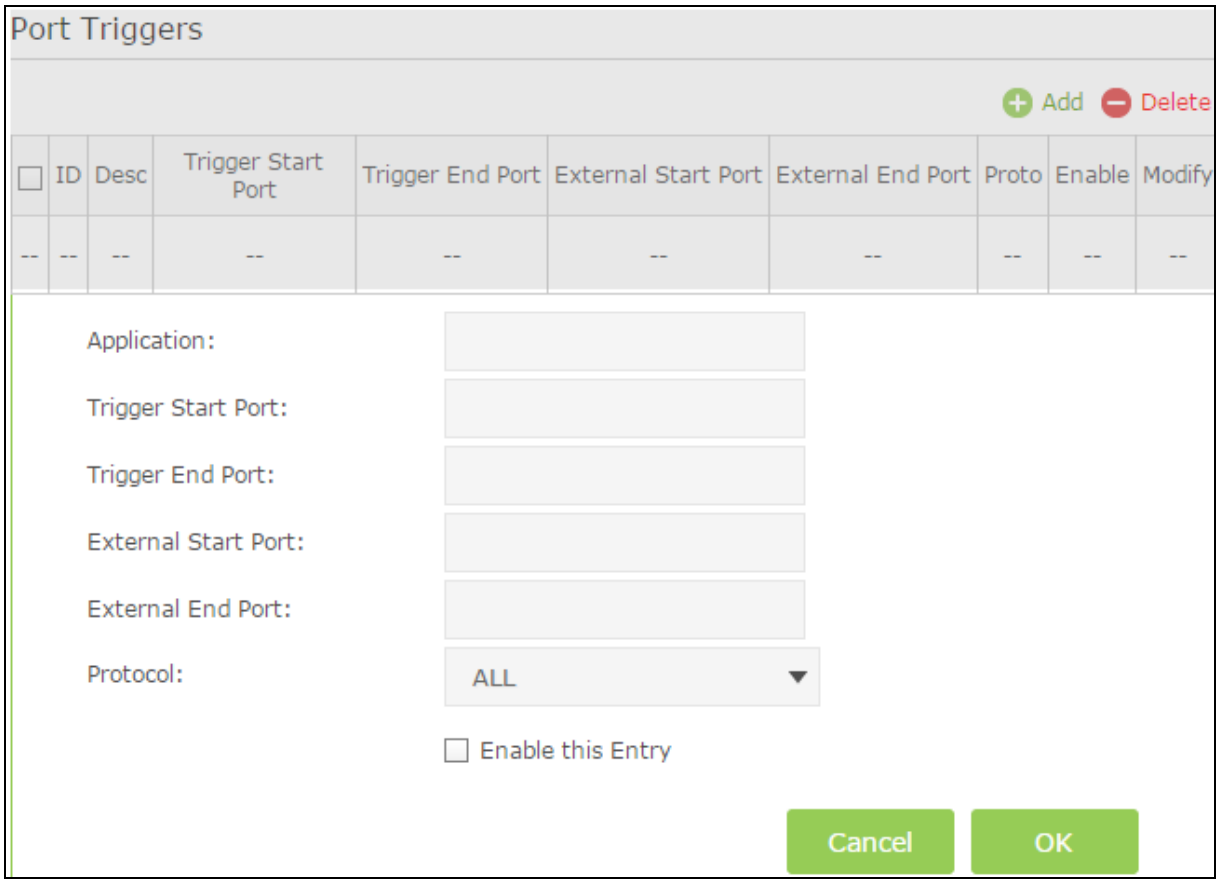


Figure 5-45

Note:

1. When the trigger connection is released, the corresponding opened ports will be closed.
2. Each rule can only be used by one host on the LAN at a time. The trigger connection of other hosts on the LAN will be refused.
3. **External Port** ranges cannot overlap each other.

5.6.6 DMZ

Choose menu "**Advanced → NAT Forwarding → DMZ**", and then you can view and configure DMZ host in the screen shown below. The DMZ host feature allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or videoconferencing. The router forwards packets of all services to the DMZ host. Any PC whose port is being forwarded must have its DHCP client function disabled and should have a new static IP Address assigned to it because its IP Address may be changed when using the DHCP function.

Figure 5-46

To assign a computer or server to be a DMZ server:

1. Enter the IP address of a local PC that is set to be DMZ host in the **DMZ Host IP Address** field.
2. Click the **Apply** button.

5.6.7 Options

Choose menu "**Advanced → NAT Forwarding → Options**", and then you can view the information in the screen shown below.

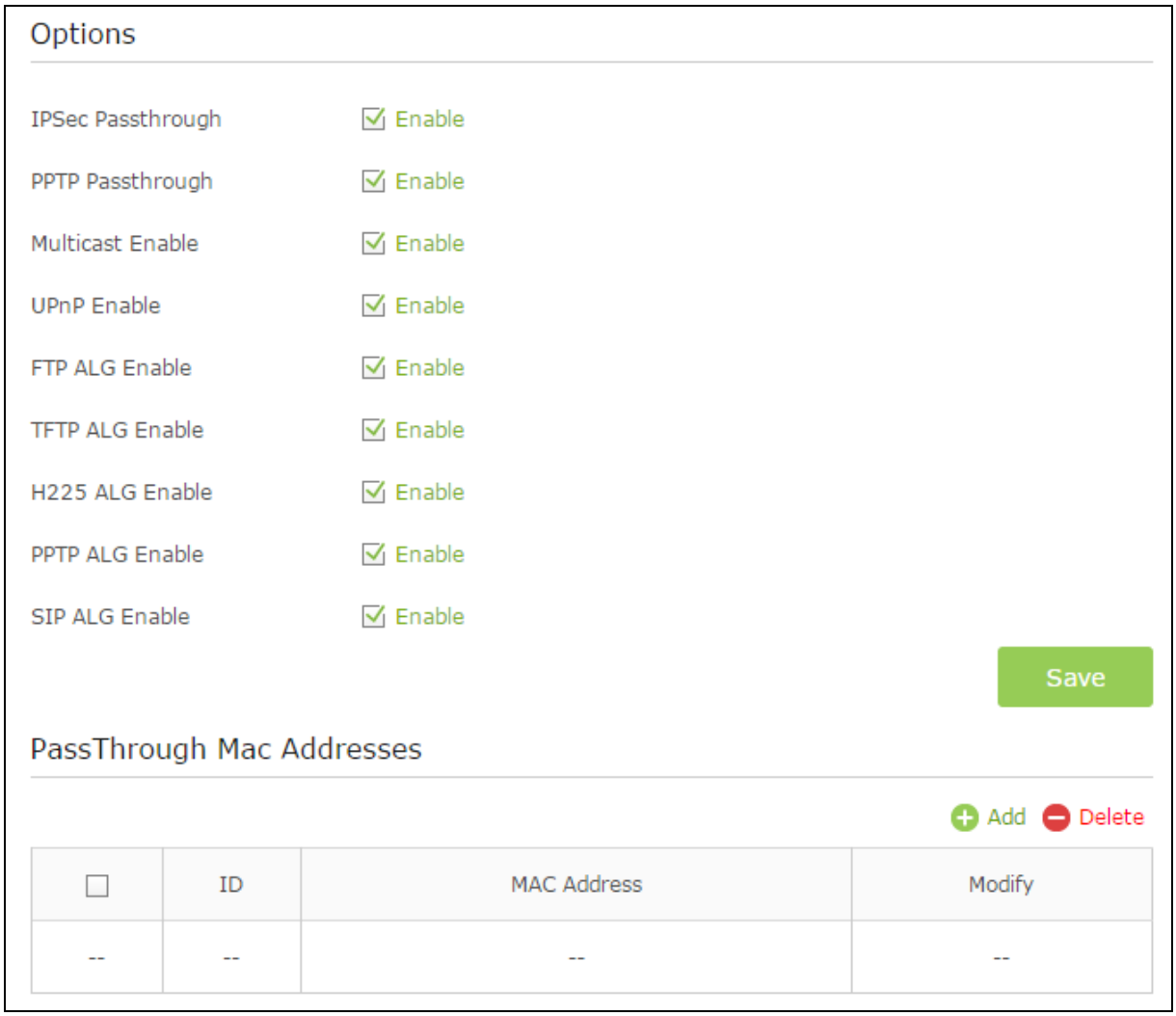


Figure 5-47

- **IPSec Passthrough -** Internet Protocol security (IPSec) is a suite of protocols for ensuring private, secure communications over Internet Protocol (IP) networks, through the use of cryptographic security services. To allow IPSec tunnels to pass through the modem router, turn on the switch.
- **PPTP Passthrough -** Point-to-Point Tunneling Protocol (PPTP) allows the Point-to-Point Protocol (PPP) to be tunneled through an IP network. To allow PPTP tunnels to pass through the modem router, turn on the switch.
- **Multicast Enable -** Multicasting allows a single transmission to simultaneously reach specific within your local network. Check the box to enable multicasting.
- **UPnP Enable –** Check the box to enable UPnP. This feature is enabled by default.
- **FTP ALG Enable -** To allow FTP clients and servers to transfer data across NAT, turn on the switch.
- **TFTP ALG Enable -** To allow TFTP clients and servers to transfer data across NAT, turn on the switch.
- **H225 ALG Enable -** To allow H225 clients and servers to transfer data across NAT, turn on the switch.
- **PPTP ALG Enable -** To allow PPTP clients and servers to transfer data across NAT, turn on the switch.

- **SIP ALG Enable-** To allow SIP clients and servers to transfer data across NAT, turn on the switch.

Click **Save** button to save these settings.

PassThrough MAC Address

- **MAC Address –**This field displays the MAC address which is allowed to pass through the modem router
- **Modify –** Delete this entry, you can click the icon.

To add a new entry, please follow the steps below.

1. Click the **Add** button and the next screen will pop-up as shown below.

2. Enter the **MAC Address**.
3. Click **OK** button to save these settings.

5.7 USB Settings

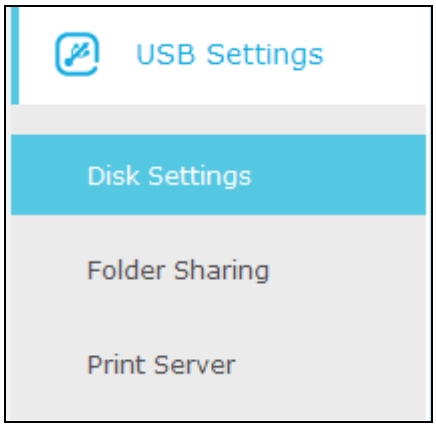


Figure 5-48

There are three submenus under the USB Settings menu: **Disk Settings**, **Folder Sharing** and **Print Server**. Click any of them, and you will be able to configure the corresponding functions.

5.7.1 Disk Settings

Choose menu "**Advanced→USB Settings→Disk Settings**", you can configure the USB disk drive attached to the modem router and view the information.

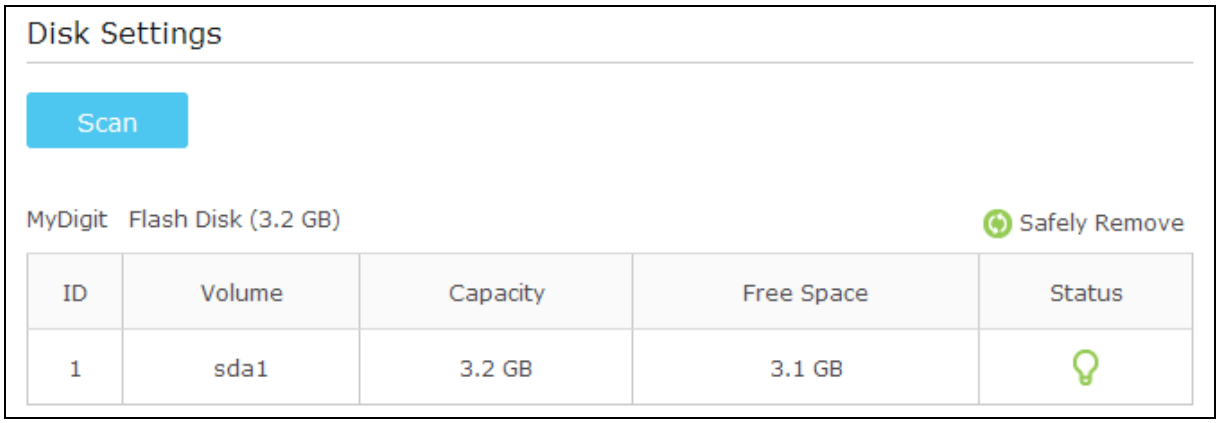


Figure 5-49

Click the **Scan** button to scan the USB drive connected to the router.

- **Volume** - The volume name of the USB drive the users have access to.
- **Capacity** - The storage capacity of the USB driver.
- **Free Space**- The available space of the USB driver.
- **Status:** When the volume is shared, you can click the icon to stop sharing the volume; when volume is non-shared, you can click to icon share the volume.

Click **Safely Remove** button to remove the USB storage device that is connected to USB port.

5.7.2 Folder Sharing

Choose menu "**Advanced→USB Settings→Folder Sharing**", you can configure the sharing account and sharing settings.

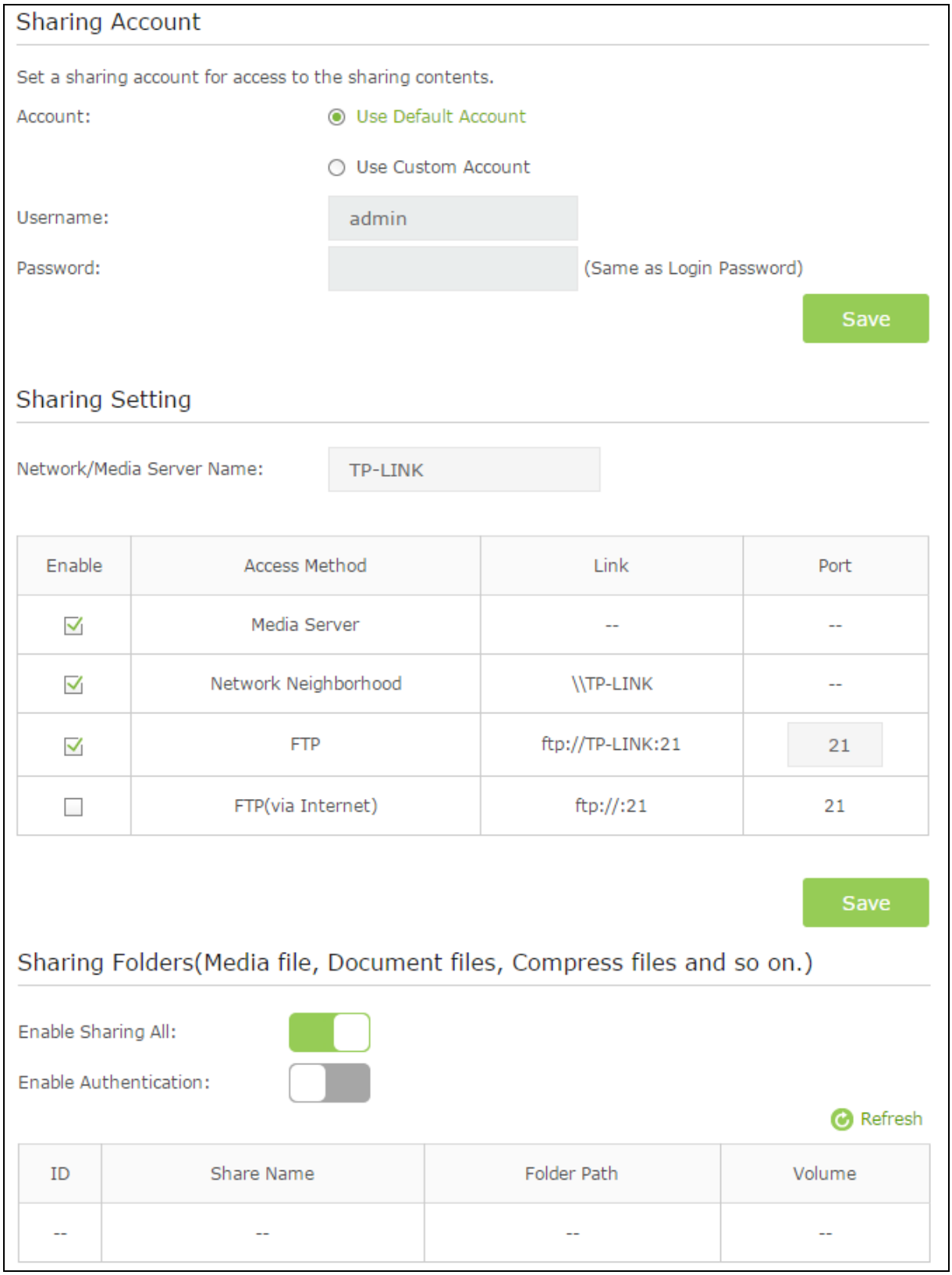


Figure 5-50

Sharing Account

- Account – You can select **Use Default Account** or **Use Custom Account** to log in sharing Folders.

- **Use Default Account -** Select this radio button, and the sharing account username is **admin**, and password is the same as Login Password.
- **Use Custom Account -** Select this radio button, then you have to specify the new username and password in the **Username** and **Password** fields for sharing account.

Click **Save** button to save these settings.

Sharing Settings

- **Network/Media Server Name -** Show the name of the network/media server. This is the name used to access the USB device connected to the router.
- **Access Method -** Select the check boxes for the access methods that you want.

1) **Network Neighborhood:** This method is enabled by default. To access the USB drive for example from a Windows computer:

   i. Select **Start > Run**.

   ii. Enter \\TP-LINK in the dialog box and click the **OK** button.

2) **FTP:** This method is enabled by default. If you select this check box and click the **Save** button, the LAN users can access the USB drive through FTP. To access the USB drive for example from a Windows computer:

   i. Select **Start > Run**.

   iii. Enter ftp://TP-LINK:21 in the dialog box and click the **OK** button.

3) **FTP (via Internet):** This method is disabled by default. If you select this check box, remote users can access the USB drive through FTP over the Internet. This feature supports both downloading and uploading of files. To access the USB drive for example from a Windows computer:

   i. Select **Start > Run**.

   ii. Enter ftp://:21 in the dialog box and click the **OK** button.

☞ **Note:**

If the port for FTP is changed, the port for FTP (via Internet) will be changed to the same port.

Sharing Folders (Media file, Document files, Compress files and so on.)

- **Enable Sharing All -** The switch for sharing all the folders. If you turn on the switch, the field will become green and all the folders in the USB drive will be shared.
- **Enable Authentication -** If you turn on this switch, the folder sharing needs authentication. The default setting is off.

To share the folders you specified, please follow the steps below.

1. Turn off the **Enable Sharing All** switch and the next screen will pop-up as shown in Figure 5-51.

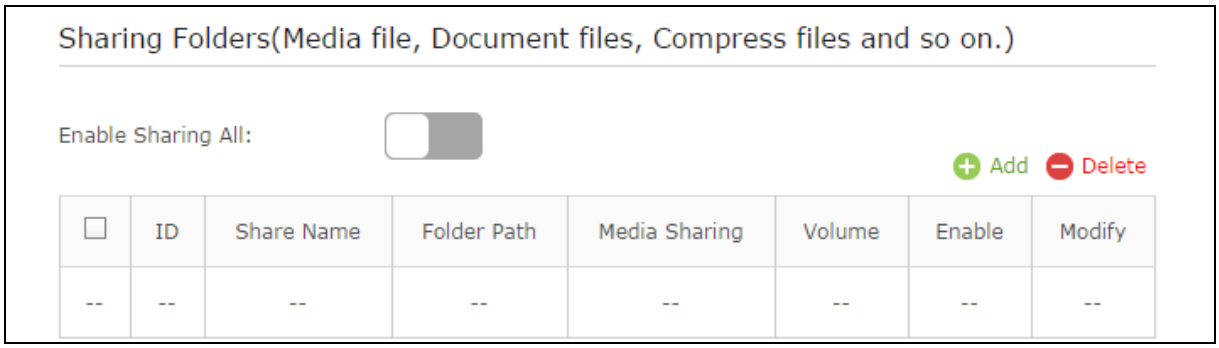


Figure 5-51

2. Click the **Add** button and the next screen will pop-up as shown below.

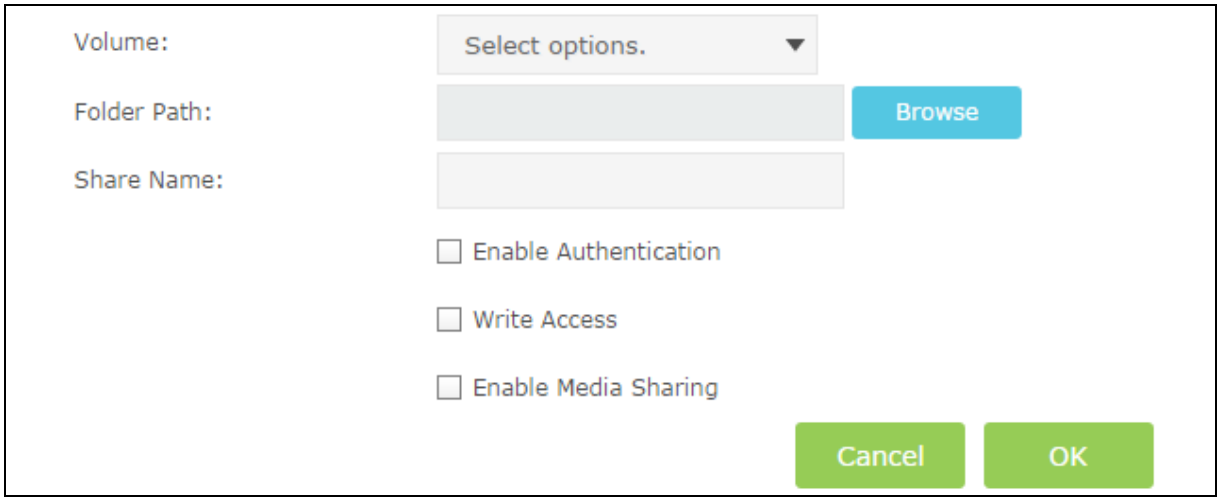
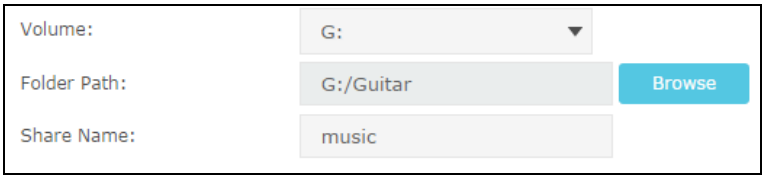


Figure 5-52

3. Select the volume desired to share from the **Volume** drop-down list. Then click the **Browse** button to select the folder path. You can create a share name, e.g. image.



4. Select the checkboxes in Figure 5-52.according to your needs.

- **Enable Authentication -** If this checkbox is selected, then the folder sharing needs authentication.
- **Write Access -** If this checkbox is selected, then the sharing folder is allowed write access.
- **Enable Media Sharing -** Select this checkbox to enable media sharing.

5. Click **OK** to complete the settings.

5.7.3 Print Server

Please refer to Section 4.5.2 Print Server.

5.8 Parental Control

Choose menu "**Advanced→Parental Control**", and then you can configure the parental control in the screen as shown below. The Parental Control function can be used to control the internet activities of the child, limit the child to access certain websites and restrict the time of surfing.

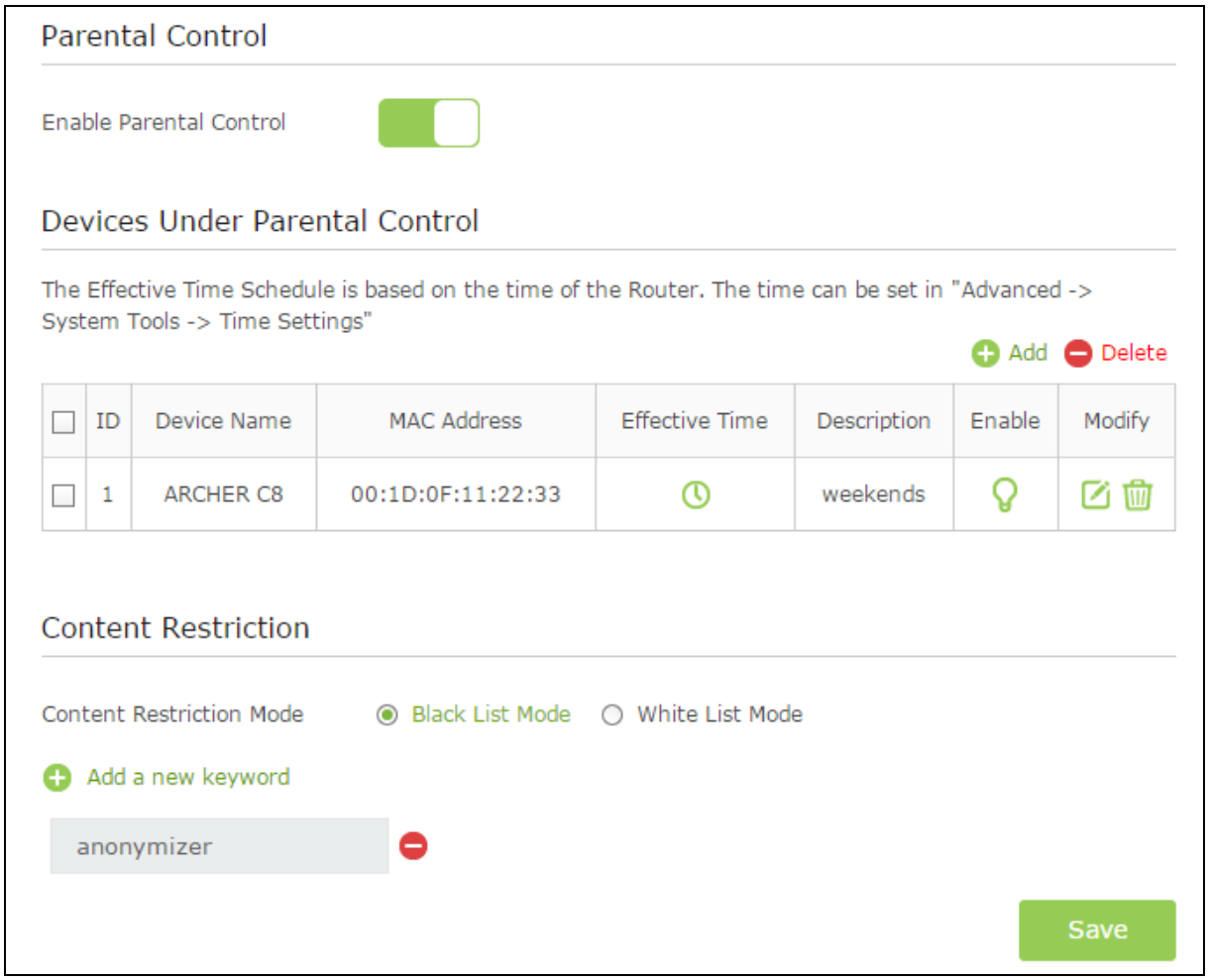


Figure 5-53

- **Enable Parental Control -** The switch for the parental control. If turn on the switch, the field will become green

Devices Under Parental Control:

- **Add -** You can add a new device for the parental control by clicking this button.
- **Delete -** You can click the button to delete the selected entries.
- **Device Name -**The name used for identifying a device.
- **MAC Address -** This field displays the MAC address of the PC that is managing this modem router.
- **Effective Time -** The time period allowed for the PC controlled to access the Internet. You can click the icon to configure the time period.
- **Description -** Here displays the description about the parental control and this description is unique.

- **Enable –** Click the icon to enable the function. If this function has taken effect, the icon will become .
- **Modify –** Click the icon to edit the corresponding entry. If you want to delete this entry, you can click the icon.

To add a new entry, please follow the steps below.

4. Click the **Add** button and the next screen will pop-up as shown below.

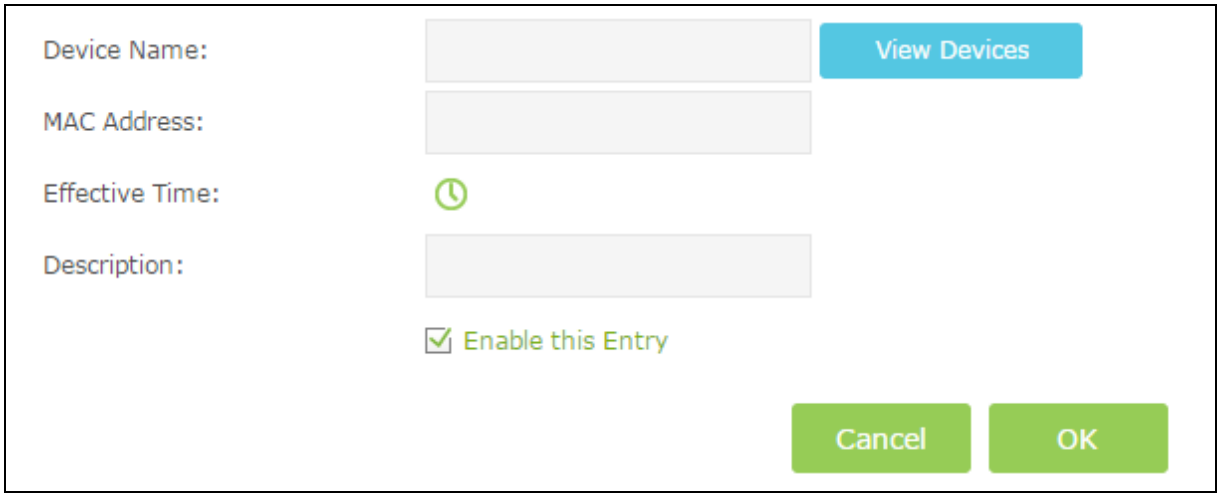
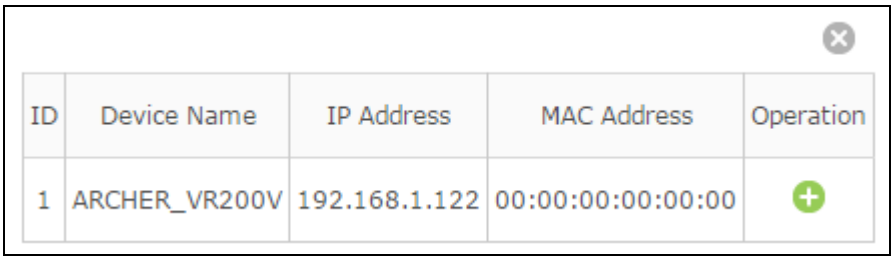


Figure 5-54

5. Click **View Device** button and the next screen will pop-up as shown below. You'd like to click the icon to select a device.



ID	Device Name	IP Address	MAC Address	Operation
1	ARCHER_VR200V	192.168.1.122	00:00:00:00:00:00	

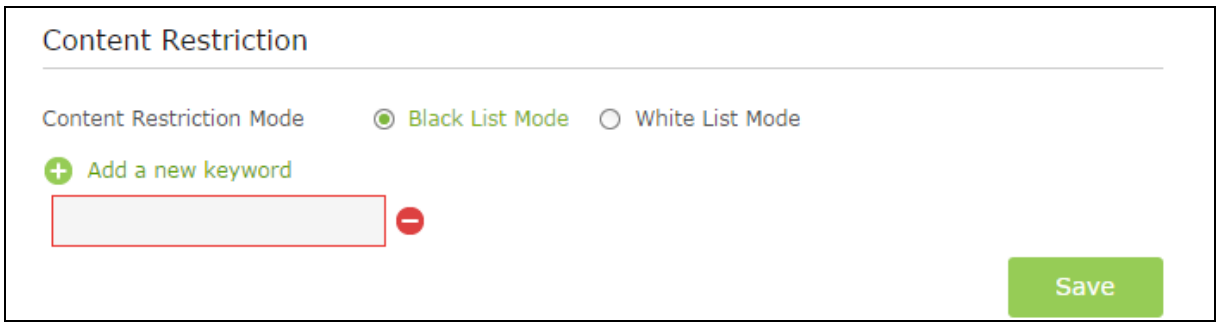
Figure 5-55

6. Enter the **Device Name** in Figure 5-54.
7. Click to create a new schedule. You'd like to click the Schedule in green below to go to the Advance Schedule Settings page and create the schedule you need. Then enter the **Description**.
8. Check the box **Enable this Entry** to enable this function.
9. Click **OK** to complete the settings.

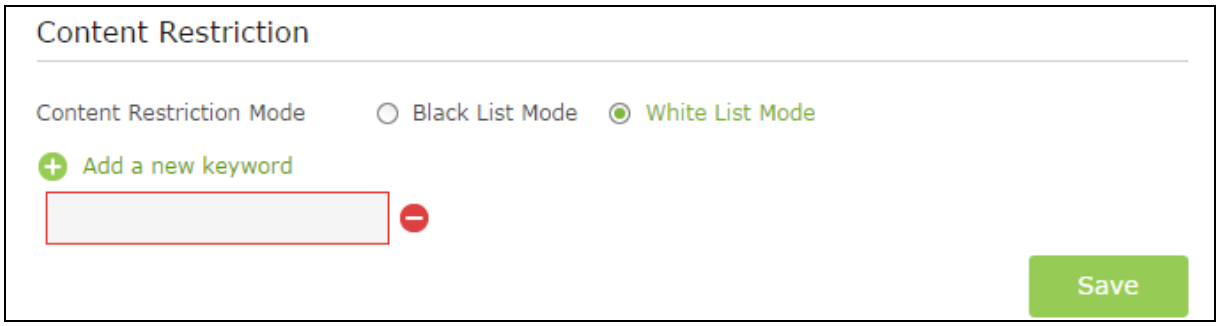
Content Restriction:

- **Content Restriction Mode –** Select the **Black List Mode** or **White List Mode** for this account.

- **Black List Mode -** All webs entered within the Black List will be denied to access. Check the box to enable this mode. You'd like to click **Add a new keyword** button and input the net addresses which the child is denied to access.



- **White List Mode -** Only the web entered within the White List will be allowed. Check the box to enable this mode. You'd like to click **Add a new keyword** button and input the net addresses which the child is allowed to access.



Click **Save** to complete the settings.

5.9 Firewall

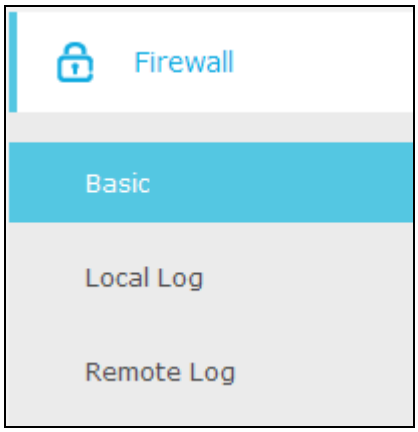


Figure 5-56

There are three submenus under the Security menu: **Basic, Local Log**, and **Remote Log**. Click any of them, and you will be able to configure the corresponding functions.

5.9.1 Basic

Choose menu "**Advanced → Firewall → Basic**", and you can configure the basic firewall function.

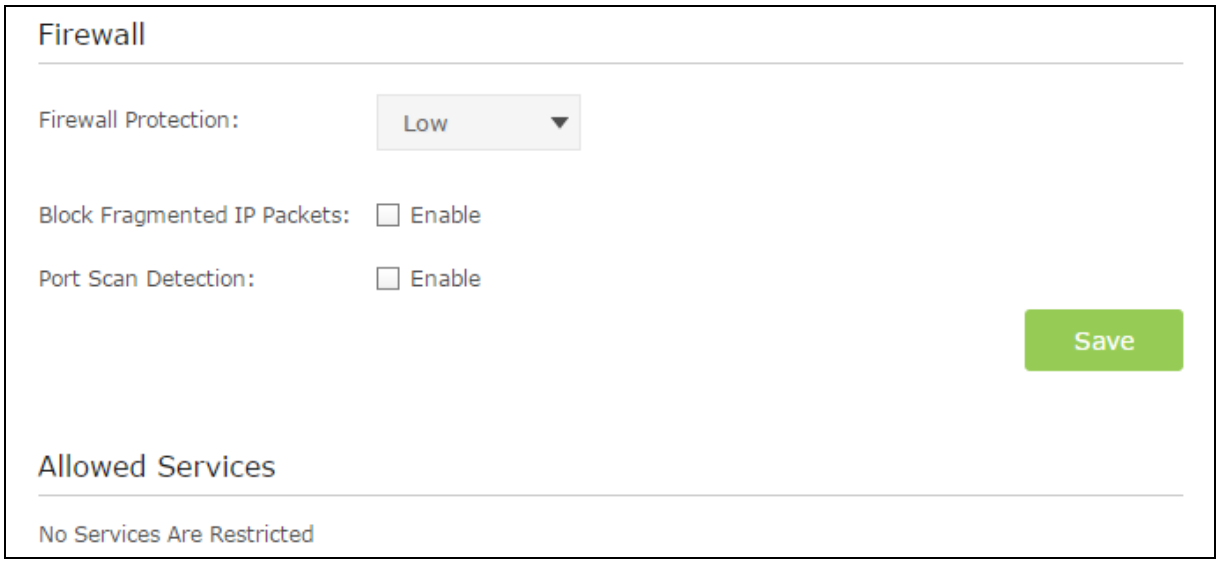


Figure 5-57

Firewall:

- **Firewall Protection -** You can select **Off, Low**, **Medium** or **High** which you would like.
- **Block Fragmented IP Packets -** This feature helps protect your private local network from Internet based denial of service attacks. Check the box to enable this function.
- **Port Scan Detection -** This feature can protect your private local network from Internet based hackers who attempt to gain unsolicited access your network by detecting open IP ports on your gateway Check the box to enable this function.

Click the **Save** button to save your settings.

5.9.2 Local Log

Choose menu "**Advanced→ Firewall → Local Log**", and then you can configure the function in the screen as shown below

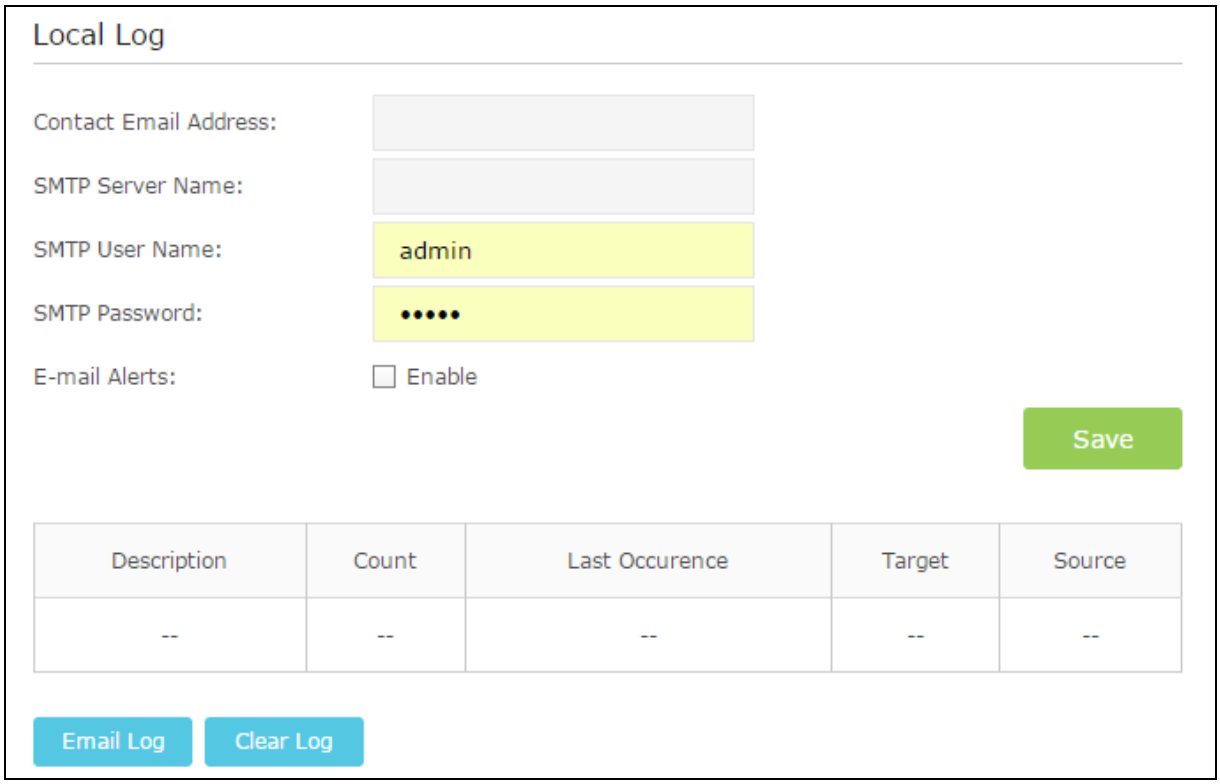


Figure 5-58

- **Contact Email Address –** The modem router can email you its logs. Enter your email address here.
- **SMTP Server Name -** Enter the name of your SMTP sever.
- **SMTP User Name/Password –** The default User Name/Password is admin/admin. You can also specify the new username/password.
- **Email Alerts –** Check the box to enable this function. This feature can send alerts when someone attempts to visit a blocked site.

Click the **Save** button to save your settings.

- **Email Log –** Click to email the log immediately.
- **Clear Log –** Click to delete all the logs.

5.9.3 Remote Log

Choose menu "**Advanced→ Firewall → Remote Log**", and then you can configure the function in the screen as shown below.

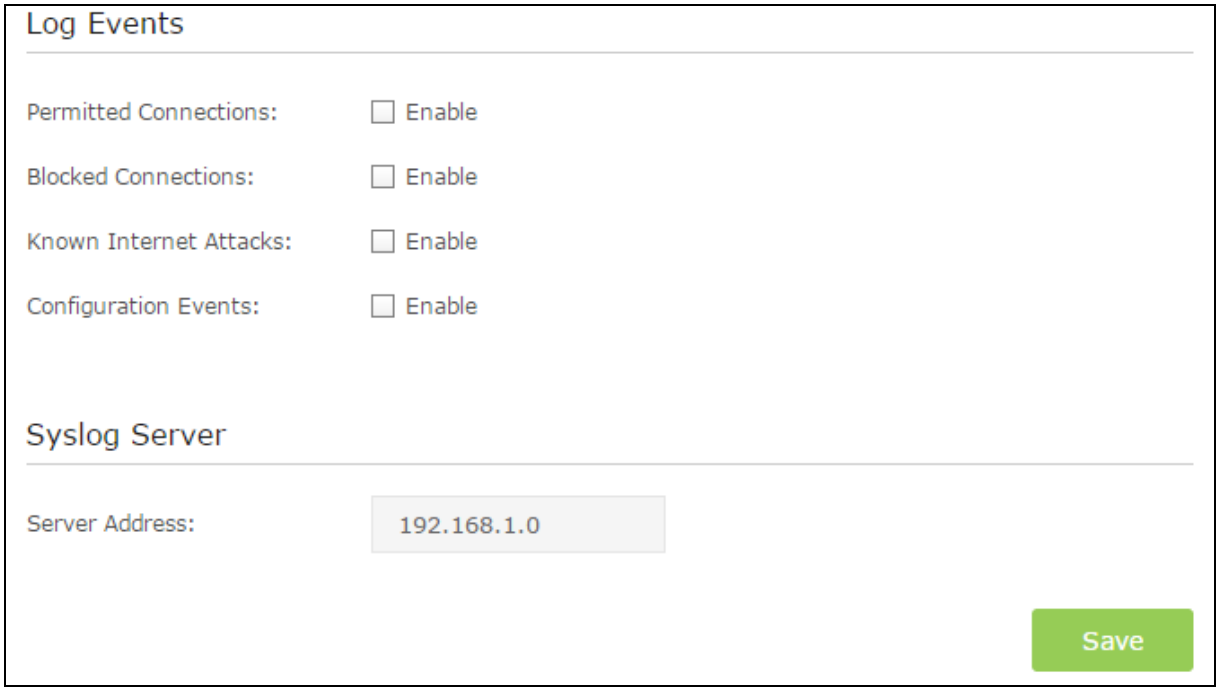


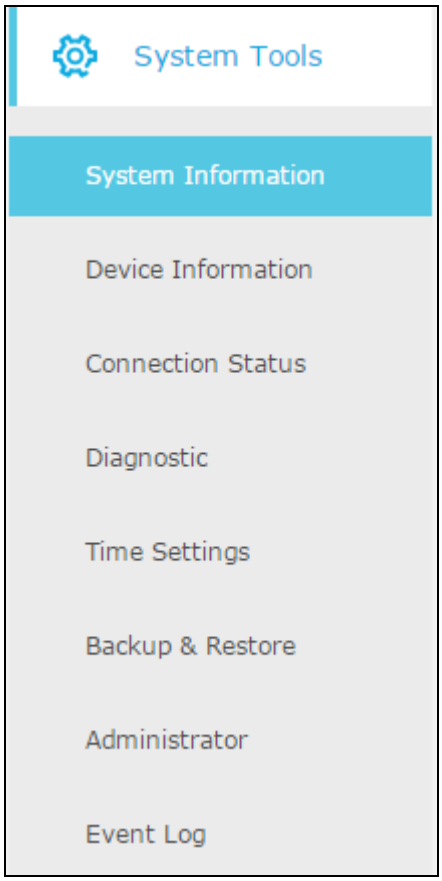
Figure 5-59

Select the Log checkbox to view the corresponding events.

- **Server Address -** The specified IP address of the remote system log server.

Click **Save** button to save these settings.

5.10 System Tools



Choose menu "**Advanced→System Tools**", you will see eight submenus under the System Tools menu: **System Information**, **Device Information**, **Connection Status**, **Diagnostic**, **Time Settings**, **Backup & Restore**, **Administrator** and **Event Log.** Click any of them, and you will be able to configure the corresponding function. The detailed explanations for each submenu are provided below.

5.10.1 System Information

Choose menu "**Advanced→System Tools→System Information**", you can see the current status information about the modem router.

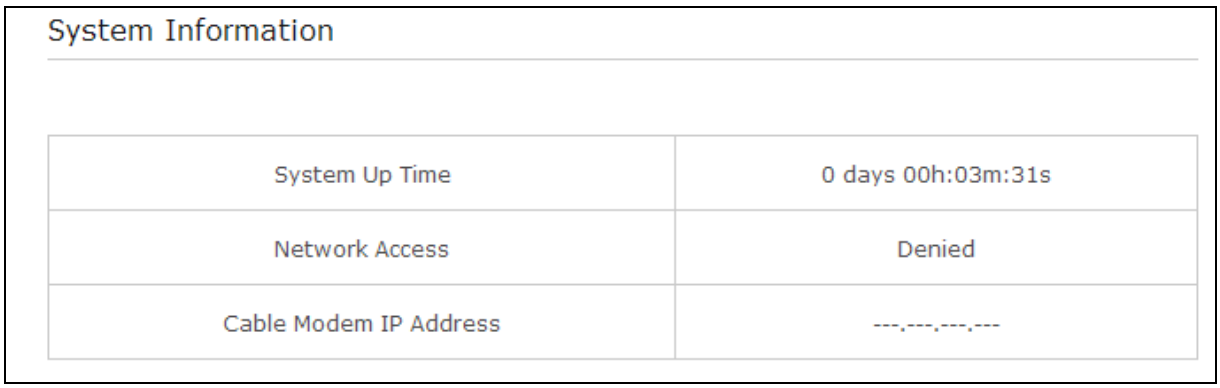


Figure 5-60

5.10.2 Device Information

Choose menu "**Advanced→System Tools→Device Information**", you can see the current information about the modem router.

Device Information

Standard Specification Compliant	DOCSIS 3.0
Hardware Version	V1.1
Software Version	v1.0.2 Build 20150302 Rel52012
Cable Modem MAC Address	30:B5:C2:33:97:73
Cable Modem Serial Number	339773
CM certificate	Installed

Figure 5-61

5.10.3 Connection Status

Choose menu "**Advanced→System Tools→Connection Status**", you can see the current connection status about the modem router.

Startup Procedure

Procedure	Status	Comment
Acquire Downstream Channel	219000000 Hz	In Progress
Connectivity State	In Progress	Not Synchronized
Boot State	In Progress	Unknown
Configuration File	In Progress	In Progress
Security	Disabled	Disabled

Downstream Bonded Channels

Channel	Status	Modulation	Channel ID	Frequency	Power	SNR
1	Not Locked	unknown	0	195000000 Hz	-18.1 dBmV	0.0 dB
2	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
3	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
4	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
5	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
6	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
7	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
8	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
9	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
10	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
11	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
12	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
13	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
14	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
15	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB
16	Not Locked	Unknown	0	0 Hz	0.0 dBmV	0.0 dB

Upstream Bonded Channels

Channel	Status	Channel Type	Channel ID	Symbol Rate	Frequency	Power
1	Not Locked	Unknown	0	0 ksym/sec	0 Hz	0.0 dBmV
2	Not Locked	Unknown	0	0 ksym/sec	0 Hz	0.0 dBmV
3	Not Locked	Unknown	0	0 ksym/sec	0 Hz	0.0 dBmV
4	Not Locked	Unknown	0	0 ksym/sec	0 Hz	0.0 dBmV

Time Information

CM IP Address	
Duration	
Expires	
Current Systime Time	--- --- -- --:--:-- ----

Figure 5-62

- **Startup Procedure -** Display the initialization progress.
- **Downstream/Upstream Bonded Channels -** Display the status of each channel.
- **Time Information –**The time information will display when the modem router is initialized.

5.10.4 Diagnostic

Choose menu "**Advanced→System Tools→Diagnostic**", you can test the connectivity of the Internet on the following screen.

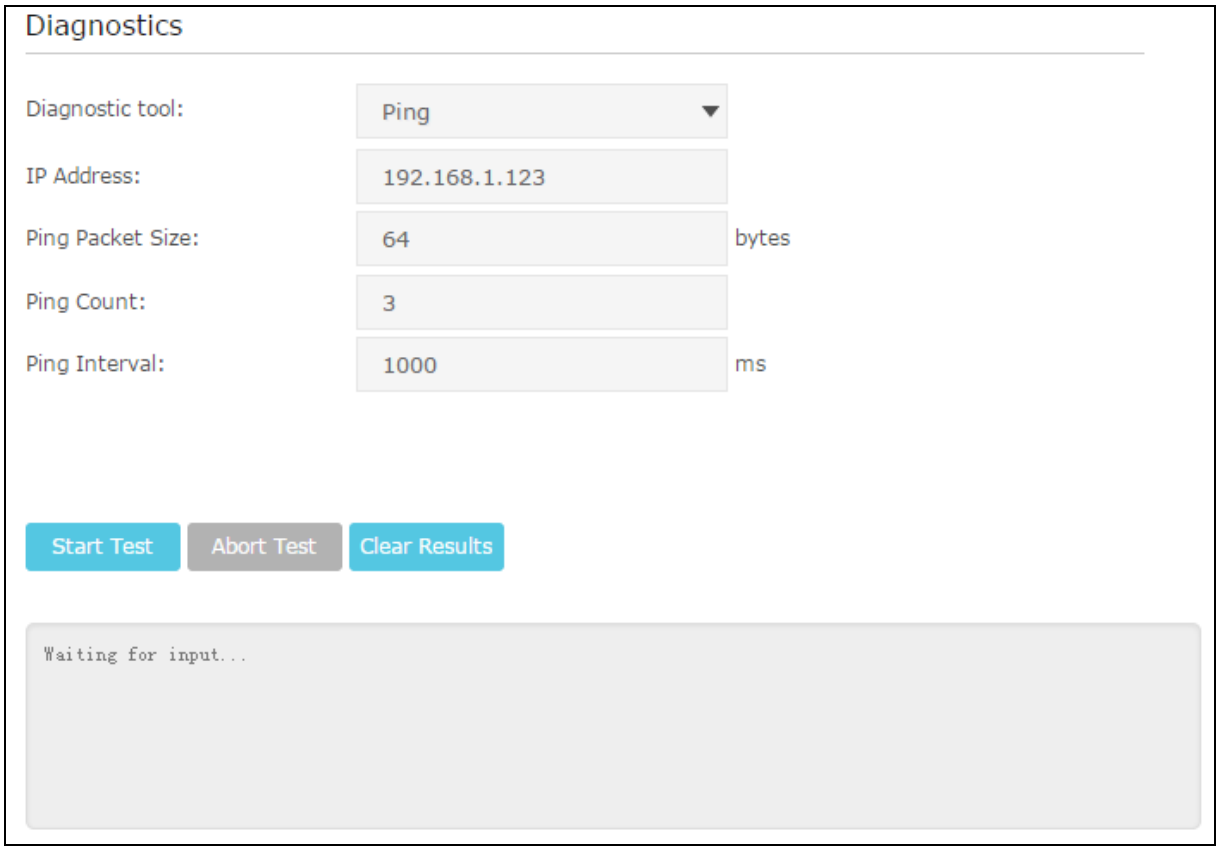


Figure 5-63

- **Diagnostic tool -** There are two tools to diagnose, which is **PING** and **Traceroute**. You can select the corresponding type according to your needs.

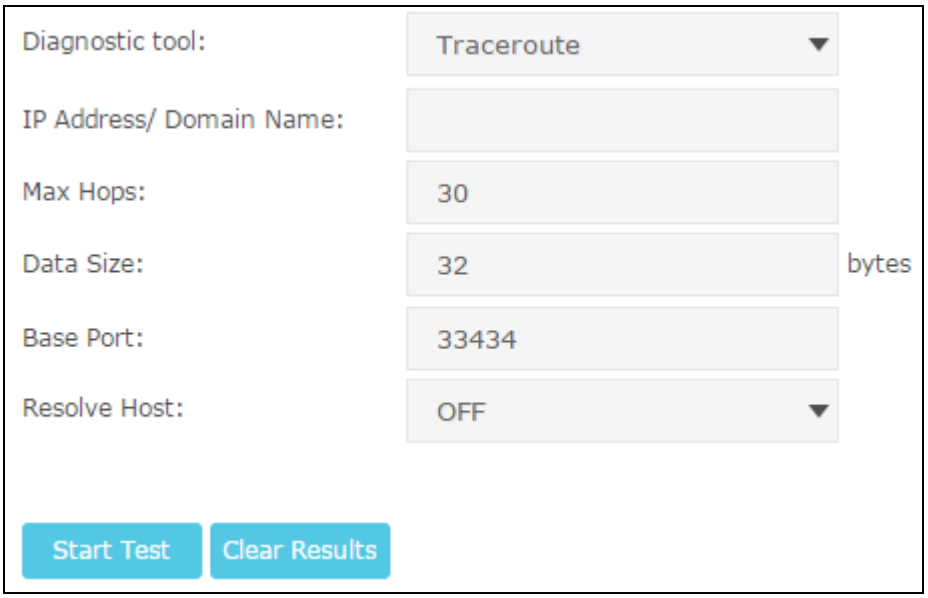
  1) **PING:** If you select this option, you could check the status of the Internet connection.
     - **IP Address –** Enter the IP address that you want to PING.
     - **PING Packet Size –** Enter the size of the PING packet you want to use.
     - **PING Count –** Enter the number of times you want to ping the target device.
     - **PING Interval –** Enter the time period between each ping.

     Click **Start Test** to check the connectivity of the Internet. The page will display the result of diagnosis.

     Click **Abort Test** to end the connectivity of the Internet.

     Click **Clear Results** to delete the logs.

  2) **Traceroute:** If you select this option, all the anonymous calls would be blocked.



- **IP Address/ Domain Name –** Enter the IP Address or Domain Name you want to trace.
- **Max Hops –** Enter the max number of hops.
- **Data Size –** Enter the size of data you want to use.
- **Base Port –** Enter the port number to send packets.
- **Resolve Host –** To resolve the host name to the IP address you can select **ON** from the drop-down list. The default status is **OFF**.

Click **Start Test** to check the connectivity of the Internet. The page will display the result of diagnosis.

Click **Clear Results** to delete the logs.

Note:

Only one user can use the diagnostic tools at one time.

5.10.5 Time Settings

Choose menu "**Advanced→System Tools→Time Settings**", you can configure the time settings on the following screen.

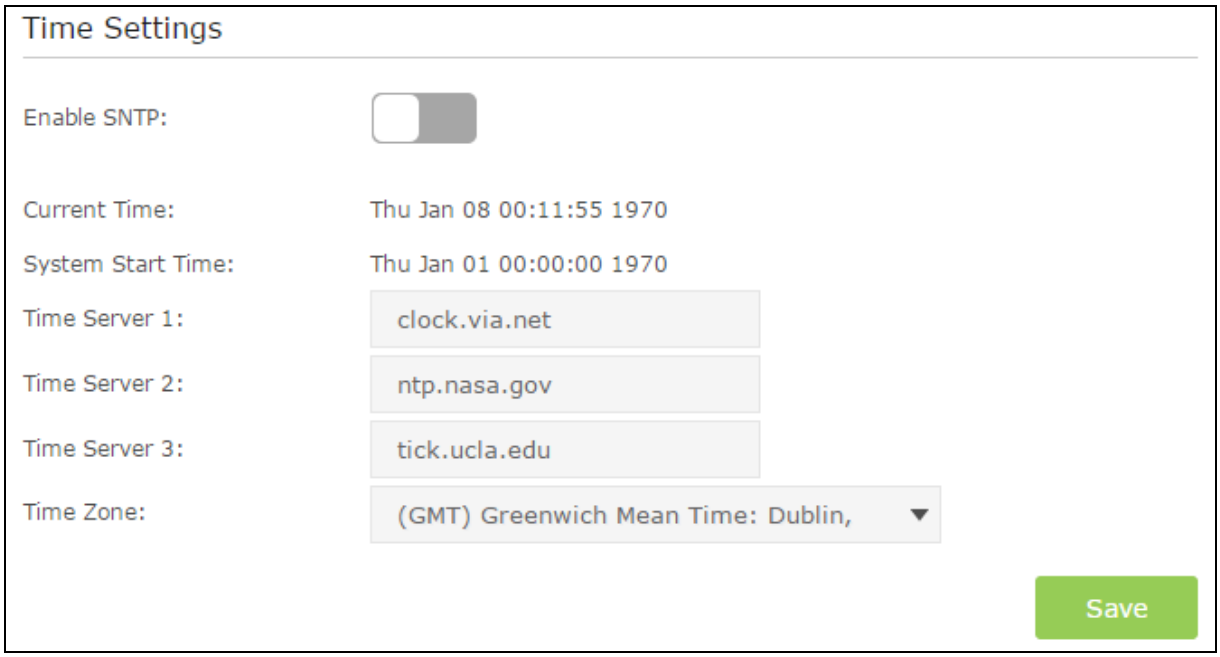


Figure 5-64

Time Settings:

- **Enable SNTP -** The switch for SNTP function. If you turn on the switch, the field will become green.
- **Current Time –** Display the current time.
- **System Start Time –** Display the system start time.
- **Time Server 1 / Time Server 2 / Time Server 3-** Enter the address or domain of the **Server 1** or **Server 2**, and then the modem router will get the time from the Server preferentially. In addition, the modem router built-in some common Servers, so it can get time automatically once it connects the Internet.
- **Time Zone -** Select your local time zone from the pull down list.

Click **Save** button to save these settings.

Note:

1. This setting will be used for some time-based functions such as parental control and firewall. You must specify your time zone once you login to the router successfully; otherwise, these functions will not take effect.
2. The time will be lost if the router is turned off.
3. The router will automatically obtain GMT from the Internet if it is configured accordingly.
4. The Daylight Saving will take effect one minute after the configurations are completed.

5.10.6 Backup & Restore

Choose menu "**Advanced→System Tools→Backup & Restore**", and then you can save the current configuration of the modem router as a backup file and restore the configuration via a backup file as shown in the following figure.

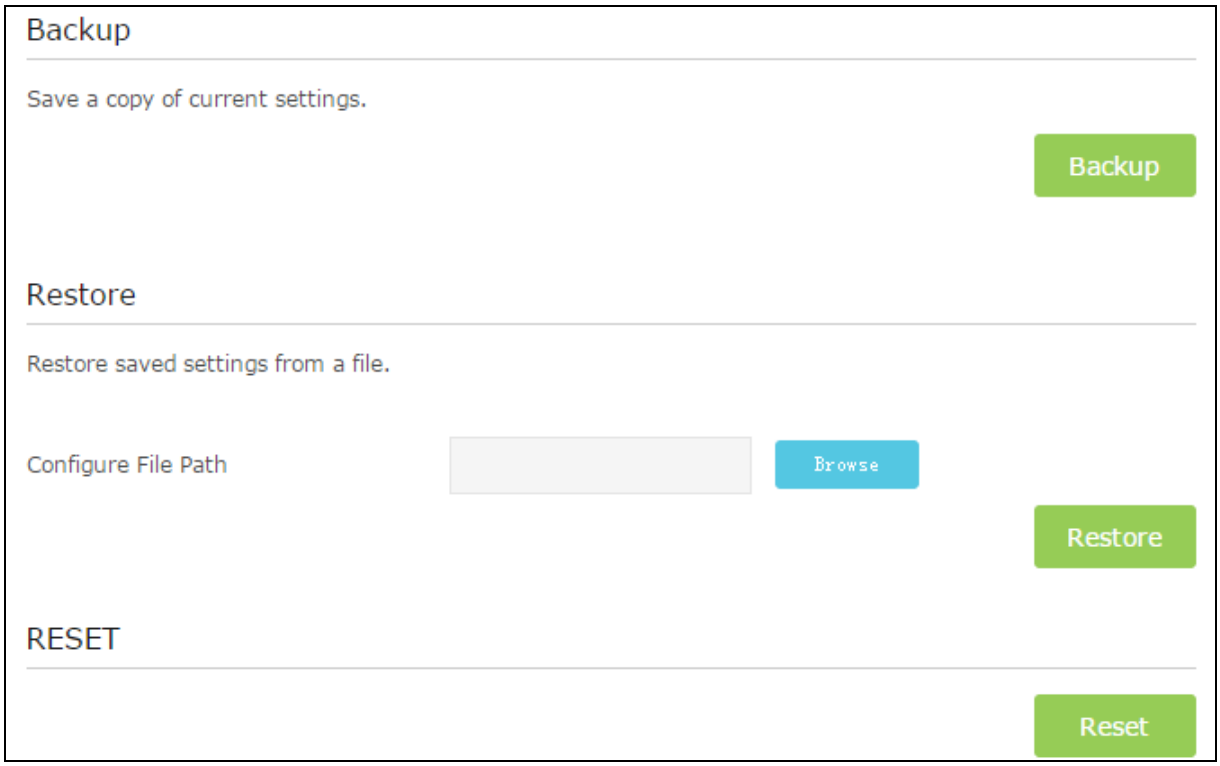


Figure 5-65

Backup:

Click the **Backup** button to save all configuration settings as a backup file in your local computer.

Restore:

To restore the modem router's configuration, follow these instructions.

- Click the **Browse** button to find the configuration file which you want to restore.
- Click the **Restore** button to restore the configuration with the file whose path is the one you have input or selected in the blank.

Reset:

Click the **Reset** button to reset all configuration settings to their default values.

☞ **Note:**

1. The current configuration will be covered with the uploading configuration file. Wrong process will lead the device unmanaged. The restoring process lasts for 20 seconds and the modem router will restart automatically then. Keep the power of the modem router on during the process, in case of any damage.
2. All changed settings will be lost when defaults are restored.

5.10.7 Administrator

Choose menu "**Advanced→System Tools→Administrator**", you will see the following screen.

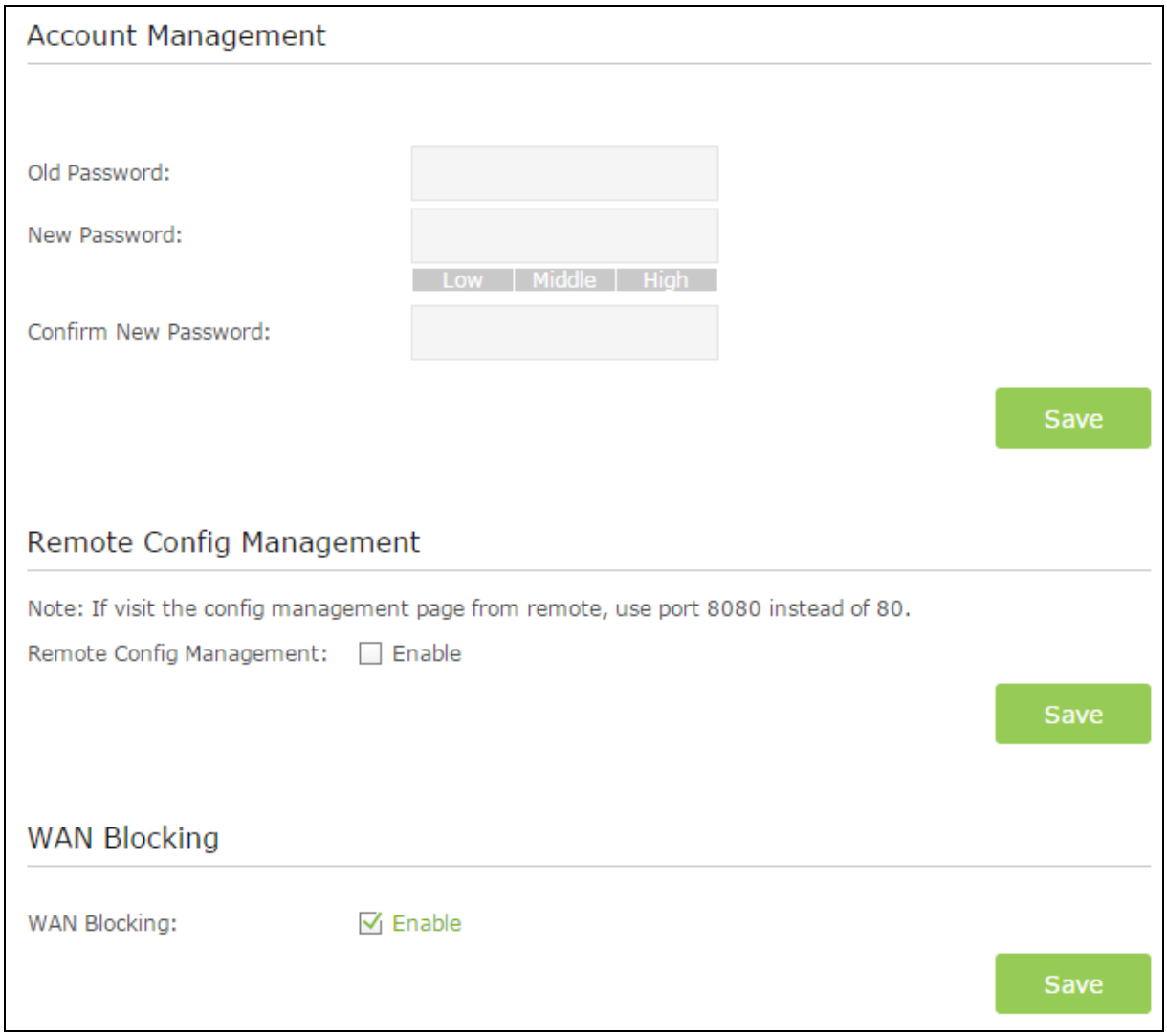


Figure 5-66

Account Management:

Here you can set the account user information about **Old Password**, **New Password and Confirm Password**.

It is strongly recommended that you should change the factory default password of the router, because all users who try to access the router's Web-based utility or Quick Setup will be prompted for the router's default username and password.

Note:

Enter the new Password twice to confirm it. The level of the new password's security will be shown on the screen as **Low**, **Middle** or **High**.

Click the **Save** button to save the settings.

Remote Config Management:

- **Remote Config Management –** Check the **Enable** to enable the remote management.

Click the **Save** button to save the settings.

☞ **Note:**

To access the router, you should type your router's WAN IP address into your browser's address (in IE) or Location (in Navigator) box, followed by a colon and the custom port number. For example, if your router's WAN address is 202.96.12.8, and the port number used is 8080, please enter http://202.96.12.8:8080 in your browser. Later, you may be asked for the router's password. After successfully entering the username and password, you will be able to access the router's web-based utility.

WAN Blocking:

- **WAN Blocking –** Check the **Enable** to block anonymous Internet requests.

Click the **Save** button to save the settings.

5.10.8 Event Log

Choose menu "**Advanced→System Tools→Event Log**", and then you can view and clear the logs of the modem router.

System Log

Time	Priority	Description
Time Not Established	Critical (3)	SYNC Timing Synchronization failure - Failed to acquire QAM/QPSK symbol timing;;CM-MAC=e8:94:f6:de:ad:01;CMTS-MAC=00:00:00:00...

Clear Log

Figure 5-67

- **Clear Log –** Click to delete all the logs.

Appendix A: Specifications

HARDWARE FEATURES	
Interface	1 F-Connector, female 75 Ω 4 10/100/1000Mbps RJ45 LAN Ports 2 USB 2.0 Ports 1 Power Jack
Button	1 Power On/Off Button 1 Wi-Fi On/Off Button 1 WPS Button 1 Reset Button
External Power Supply	12VDC/3.3A
IEEE Standards	IEEE 802.3/3u/3ab, IEEE 802.11a/b/g/n/ac
DOCSIS Standards	DOCSIS 3.0 DOCSIS 2.0 DOCSIS 1.1 DOCSIS 1.0
Dimensions (W x D x H)	2.5 x 7.6 x 9.7 in. (63 x 193 x 246mm)
Antenna Type	Omni directional, Internal
Antenna Gain	2.4GHz: Ant1: 3.2 dBi, Ant2: 2.1 dBi, Ant3: 1.6 dBi 5GHz B1: Ant1: 2.6 dBi, Ant2: 2.5 dBi, Ant3: 2.5 dBi 5GHz B4: Ant1: 4.4 dBi, Ant2: 2.8 dBi, Ant3: 5.0 dBi
DOCSIS Downstream	
Channel Binding	Up to 16
Modulation	64 /256 / 1024 QAM
Maximum PHY Rate	DOCSIS Up to 680 Mbps

HARDWARE FEATURES		
Bandwidth	DOCSIS	96 MHz(16 channels) / 6MHz (single channel)
Frequency Range	108 to 1002 MHz (edge to edge)	
Frequency Plan	DOCSIS	Annex B
Symbol Rate	DOCSIS	64 QAM 5.057 Msym/s; 256 QAM 5.361 Msym/s
Operating Level Range	-15 to 15 dBmV (DOCSIS)	
Security	DOCSIS 3.0 Security (BPI+, EAE, SSD)	
DOCSIS UPSTREAM		
Channel Binding	Up to 4	
Modulation	QPSK and 8, 16, 32, 64, 128, 256 QAM	
Maximum PHY Rate	Up to 143Mbps	
Channel Bandwidth	200 kHz, 400 kHz, 800 kHz, 1.6 MHz,3.2 MHz, 6.4 MHz	
Frequency Range	DOCSIS	5-42 MHz (edge to edge),
Symbol Rate	160, 320, 640, 1280, 2560, 5120 ksym/s	
Level range	TDMA	Pmin to +57 dBmV (32 QAM, 64 QAM) Pmin to +58 dBmV (8 QAM, 16 QAM) Pmin to +61 dBmV (QPSK)
	Note: TDMA max output power reduced 3dB when transmitting two channels and 6dB when transmitting 3 or 4 channels	
	S-CDMA	Pmin to +56 dBmV (all modulations) Pmin = +17 dBmV, 1280 kHz modulation rate Pmin = +20 dBmV, 2560 kHz modulation rate Pmin = +23 dBmV, 5120 kHz modulation rate
	Note: S-CDMA max output reduced 3dB when transmitting 2 or more channels	

WIRELESS FEATURES	
Wireless Standards	IEEE 802.11ac/n/a 5GHz IEEE 802.11b/g/n 2.4GHz
Wireless Speeds	5GHz: Up to 1300Mbps 2.4GHz: Up to 450Mbps
Frequency	2.4GHz and 5GHz
EIRP	<20dBm(EIRP)
Wireless Functions	Enable/Disable Wireless Radio, WDS Bridge, WMM, Wireless Statistics
Wireless Security	64/128-bit WEP,WPA / WPA2,WPA-PSK/ WPA2-PSK encryption, Wireless MAC Filtering
Guest Network	2.4GHz guest network × 1 5GHz guest network × 1
WPS	Support PIN and Push button

SOFTWARE FEATURES	
WAN Connection Type	Dynamic IP、Static IP、L2TP（Dynamic）、L2TP（Static）
DHCP	Server, Client, DHCP Client List,
Port Forwarding	Virtual Server, Port Triggering, DMZ, ALGs
USB Sharing	Support Samba(Storage)/FTP Server/Media Server/Printer Server
Dynamic DNS	DynDns, NO-IP
IPv6	IPv6 and IPv4 dual stack
Security	NAT Firewall, SPI Firewall, Access Control, Denial of Service(DoS), SYN Flooding, Ping of Death MAC / IP / Port/ URL Filtering, Baseline Encryption (BPI)/ BPI+/ EAE/ SSD
Management	Web Based Configuration(HTTP), Command Line Interface;

SOFTWARE FEATURES	
	Remote management, SSL for TR-069, SNMP v1/v2c/v3; Diagnostic Tools
Advanced Features	Parental Control, Network Address Translation (NAT); RIP v1/v2(optional); DNS, DNS Proxy, IGMP V1/V2/V3, UPnP

OTHERS	
Certification	FCC, RoHS, CableLabs, UL
Package Contents	Archer CR700 RJ-45 Ethernet Cable Quick Installation Guide Power Adapter
System Requirements	Microsoft® Windows® 98SE, NT, 2000, XP, Vista™, Windows 7, Windows 8, MAC® OS, NetWare®, UNIX® or Linux.
Environment	Operating Temperature: 0℃~40℃ (32℉~104℉) Storage Temperature: -40℃~70℃ (-40℉~158℉) Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~90% non-condensing

Appendix B: Troubleshooting

T1. How do I restore the modem router to its factory default settings?

1) With the modem router powered on, press and hold the **Reset** button on the rear panel of the modem router until all LEDs turn back on, then release the button.
2) Log in to the web management page of the modem router. Go to **Advanced > System tools > Back up & Restore** and click **Reset**. The modem router will restore and reboot automatically.

☞ **Note**:

Once the modem router is reset, the current configuration settings will be lost and you will need to re-configure the router.

T2. What can I do if I forgot my password?

For the web management page password:

Restore the modem router to its factory default settings and use the default **admin** (all lowercase) for both username and password to log in.

For the default wireless password:

1) The default Wireless Password/PIN is printed on the product label of the Archer CR700.
2) If the default wireless password has been changed, log in to the web management page and go to **Basic > Wireless** to retrieve or reset your password.

For the Guest Network password:

Log into the web management page and go to **Basic > Guest Network** to retrieve or reset the password.

T3. What can I do if I cannot access the web-based configuration page?

1) If the computer is set to a static or fixed IP address, change the setting to obtain an IP address automatically.

For Mac OS X

- Click the **Apple** icon on the upper left corner of the screen.
- Go to "**System Preferences** -> **Network**".
- Select **Airport** on the left menu bar, and then click **Advanced** for wireless configuration; or select **Ethernet** for wired configuration.
- In the **Con-figure IPv4** box under **TCP/IP**, select **Using DHCP**.
- Click **Apply** to save the settings.

For Windows 7

- Click "**Start** -> **Control Panel** -> **Network and Internet** -> **View network status** -> **Change adapter settings**".
- Right-click **Wireless Network Connection** (or **Local Area Connection**), and then click **Properties**.
- Select **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.
- Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Then click **OK**.

For Windows XP

- Click "**Start** -> **Control Panel** -> **Network and Internet Connections** -> **Network Connections**".
- Right-click **Wireless Network Connection** (or **Local Area Connection**), and then click **Properties**.
- Select **Internet Protocol (TCP/IP)**, and then click **Properties**.
- Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Then click **OK**.

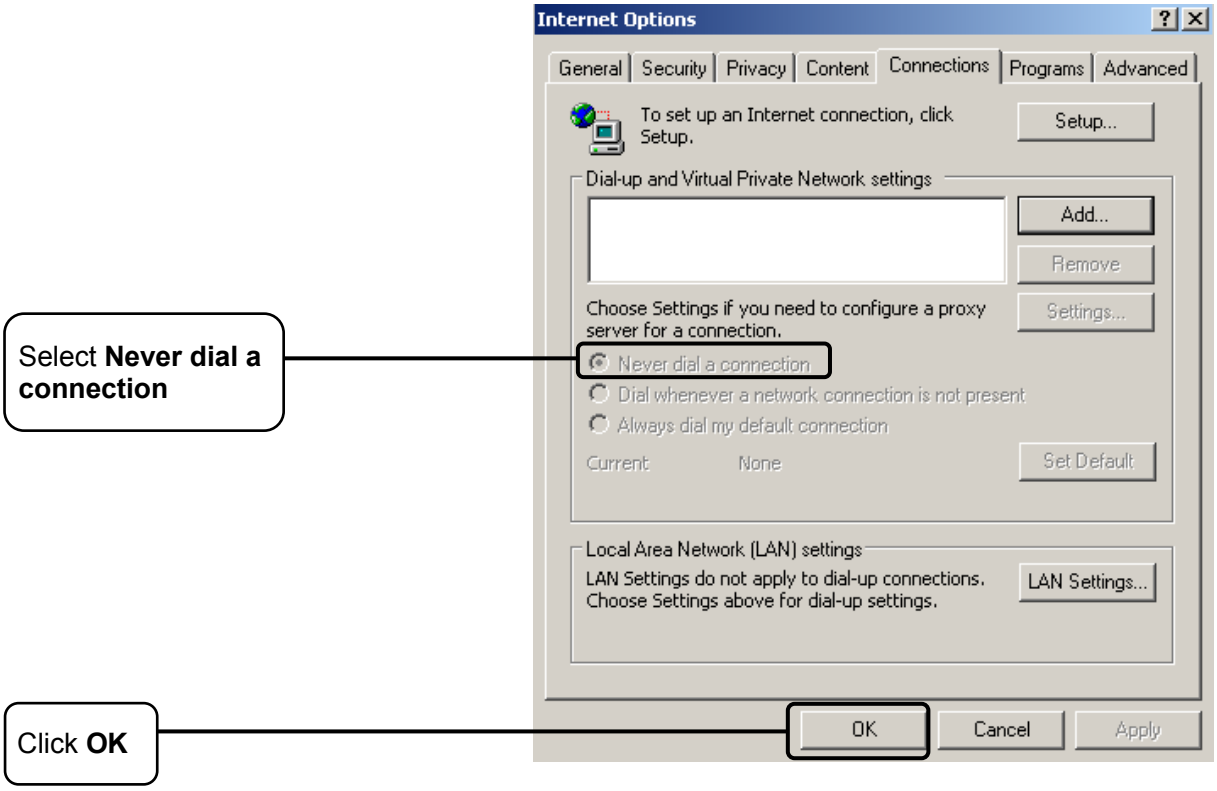
For Windows 8

- Move your mouse to the lower right corner and you will see **Search** icon in the Popups. Go to " -> **Apps**". Type **Control Panel** in the search box and press **Enter**, then you will go to **Control Panel**.
- Click "**View network status and tasks** > **Change adapter settings**".
- Right-click "**Ethernet**" and then select **Properties**.
- Double-click **Internet Protocol Version 4 (TCP/IPv4)**. Select **Obtain an IP address automatically**, choose **Obtain DNS server address automatically** and then click **OK**.

2) Configure your IE browser

Open your IE browser, click **Tools** tab and you will see the following screen.

Click **Internet Options**



Now, try to log on to the Web-based management page again after the above settings have been configured. If you still cannot access the configuration page, please restore your modem router's factory default settings and reconfigure your modem router following the instructions in 3 Configure the Modem Router. Please feel free to contact our Technical Support if the problem still exists.

T4. What can I do if I cannot access the Internet?

1) Make sure the coaxial cable, Ethernet cable and power adapter are plugged in correctly.

2) Contact your ISP to make sure the modem router is activated.

3) Contact our Technical Support if the problem persists.

☞ **Note:**

For more details about Troubleshooting and Technical Support contact information, please log on to our Technical Support Website: **http://www.tp-link.com/en/support**