WiFi Combo Broadband Gateway

無線路由器

User Guide

CDW530AM

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FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/A1 Class B.

The specification is subject to change without notice.

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1. Introduction

The WiFi Combo Broadband Router is a high-performance tool that supports wireless networking at home, work, or in a public place. The WiFi Combo Broadband Router supports uses a USB 3G modem card, either WCDMA or EVDO and even HSDPA as well, and supports wireless data transfers up to 300M bps, and wired data transfers up to 100 Mbps.
The WiFi Combo Broadband Router is compatible with industry security features.

1.1. Package Contents

Importance: Check your product package contents FIRST.

The WiFi Combo Broadband Router package should contain the items listed below. If any of the items are missing, please contact your reseller.

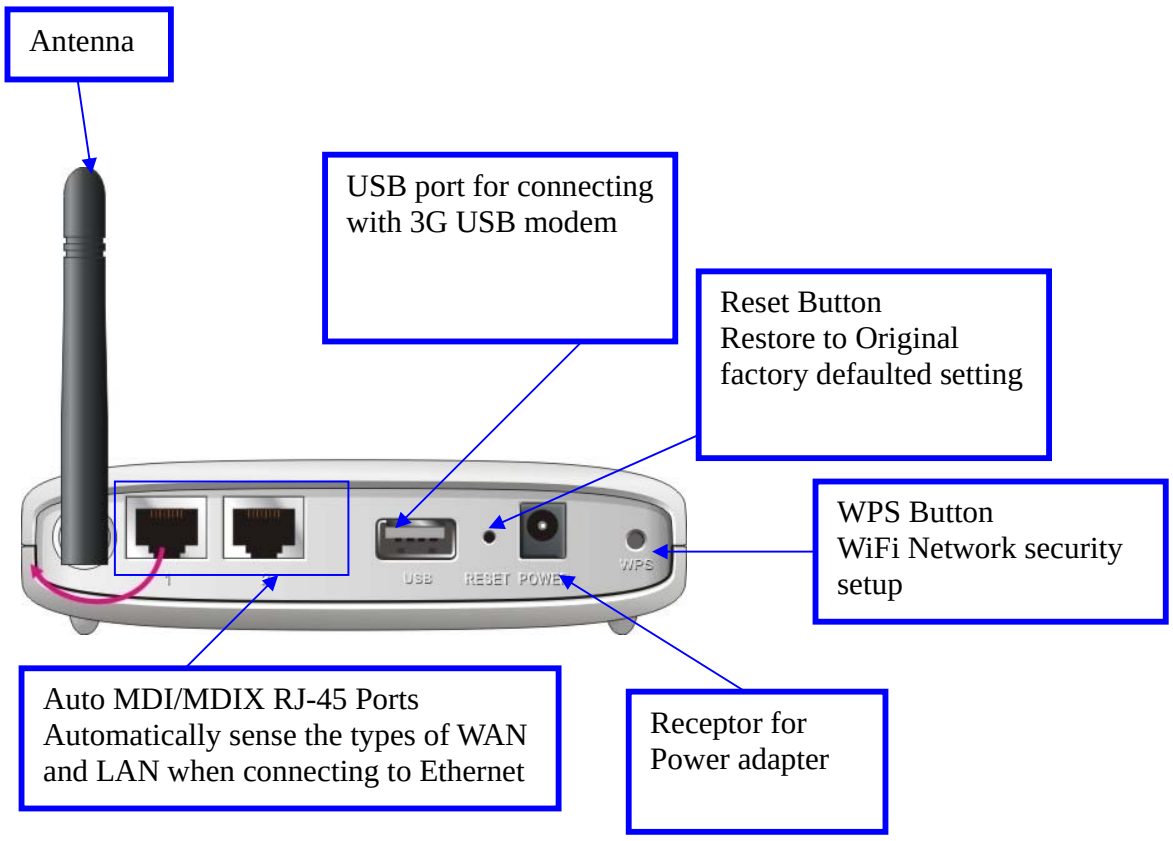
items	Description	Quantity
1	WiFi Combo Broadband Router	1
2	RJ-45 Cable	1
3	Power adapter 5V 2.0A	1
4	Quick Installation Guide	1
5	CD	1
6	Cradle set	1
7	Rubber pad and Sponge	1

Caution: Using a power supply with a different voltage rating than the one included with the WiFi Combo Broadband Router will cause damage and void the warranty for this product.

1.2. System Requirements for Configuration

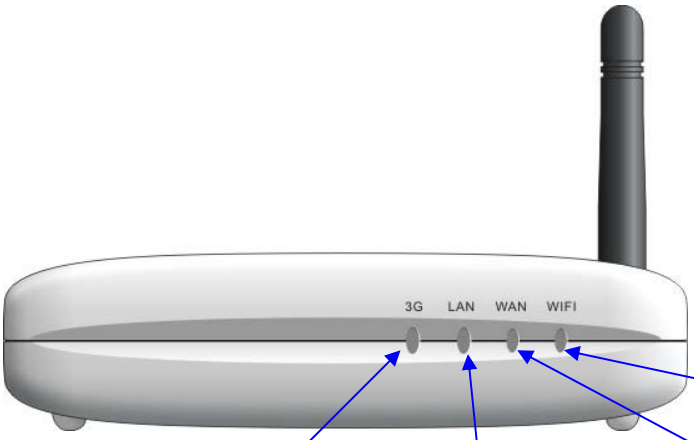
• A compatible USB 3G modem card *with service*
Note: Subject to services and service terms available from your carrier.
• Computers with Windows, Macintosh, or Linux-based operating systems with an installed Ethernet adapter.
• Internet Explorer version 6.0 or Netscape Navigator version 7.0 and above.
• Wi-Fi System Requirements: An 802.11b, 802.11g, or 802.11n Adapter.

1.3. Interfaces - the Rear View



Note:
Contains a reset button to restore the setting back to original factory defaulted setting as if your convenience of forgetting your applicable setting

1.4. LEDs– the Front View



WiFi LED
A green light as connection on WLAN available

3G Status LED
A green light as power is on and ready

LAN LED
A green light as connected to local Ethernet and blinks during data is transmission

WAN LED
A green light as WAN is connected

1.5. Features

- Automatic take over back up with 3G connection as Ethernet WAN failover.
- Implementation within 3 minutes allows the network to go where wires cannot go – even outside the home or office.
- Utilizes **OFDM** technology (**O**rthogonal **F**requency **D**ivision **M**ultiplexing).
- User-friendly configuration and diagnostic utilities.
- Operates in the 2.4GHz frequency range.
- Advanced Firewall features.
- Supports NAT with VPN pass-through, providing added security.
  - MAC Filtering
  - IP Filtering
  - Port Scheduling
- DHCP server enables all networked computers to automatically receive IP addresses.
- Web-based interface for Managing and Configuring.
- Access Control to manage users on the network.
- Supports special applications that require multiple connections.
- Equipped with 2*10/100 Ethernet ports, for LAN and WAN access, and USB port for 3G network connection.
- Connects multiple computers to a Broadband either WCDMA or EV-DO even HSDPA modem to share the Internet connection.

Note: The WiFi Combo Broadband Router is designed to work with either EVDO or WCDMA (UMTS) even up to 3.5G HSPA PC interface.
Please refer to your service provider for detailed feature information.

2. Configuring WiFi Combo Broadband Router

2.1. Installation Considerations

The WiFi Combo Broadband Router allows you access your network using a wireless connection, from virtually anywhere within its operating range. Keep in mind however, that the number, thickness, and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit this range.
Typical ranges vary depending on the types of materials used, and background RF (radio frequency) noise in your home or business.

To maximize your wireless range, please follow these guidelines:

1. Keep the number of walls and ceilings between the WiFi Combo Broadband Router and other network devices to a minimum. Each wall or ceiling can reduce the WiFi Combo Broadband Router's range from 3-90 feet (1-30 meters).
   Note: The same considerations apply to your broadband EVDO connection.
2. Keep your product aware from electrical devices (such as microwaves, air conditioners, and televisions) that emit large quantities of RFI (Radio Frequency Interference).

2.1.1. Installation Instructions- Get Start Networking

Connect the Wireless Router to Your Network
Note: *DO NOT connect WiFi Combo Broadband Router to power before performing the installation steps below*.
1. Attach the antenna---picture 2.1

Picture 2.1

a. Remove the antenna from its plastic wrapper.

b. Screw the antenna in a clockwise direction to the back panel of the unit.
c. Once secured, position the antenna upward at its connecting joint. This will ensure optimal reception.

2. Connect a USB modem *with service* to the WiFi Combo Broadband Router in one of the following ways:
   → You can plug your USB modem into the USB interface**---see Picture 2.2**

Picture 2.2

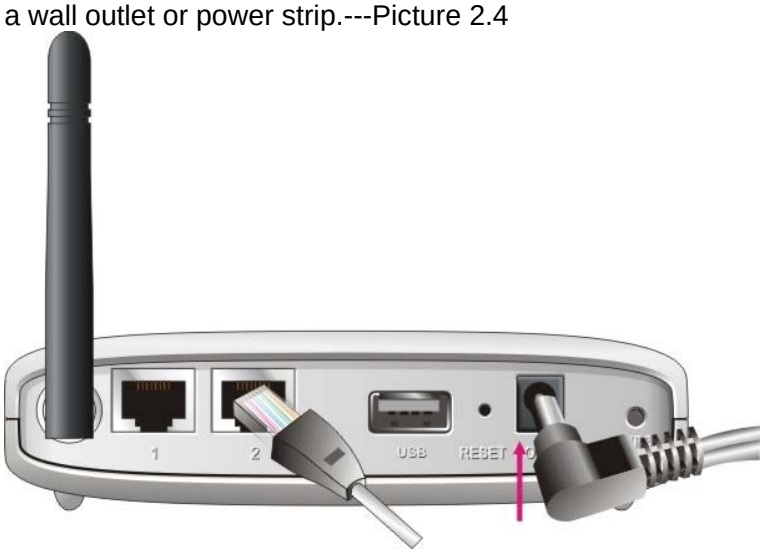
Note: The WiFi Combo Broadband Router is designed to work with either UMTS or EV-DO and even HSDPA 3G card that can be used as a modem (support tethered data). Please refer to your service provider for detailed feature information.

3. Insert the Ethernet patch cable into LAN Port on the back panel of the WiFi Combo Broadband Router, and an available Ethernet port on the network adapter in the computer you will use to configure the unit.-**see Picture 2.3**

Picture 2.3

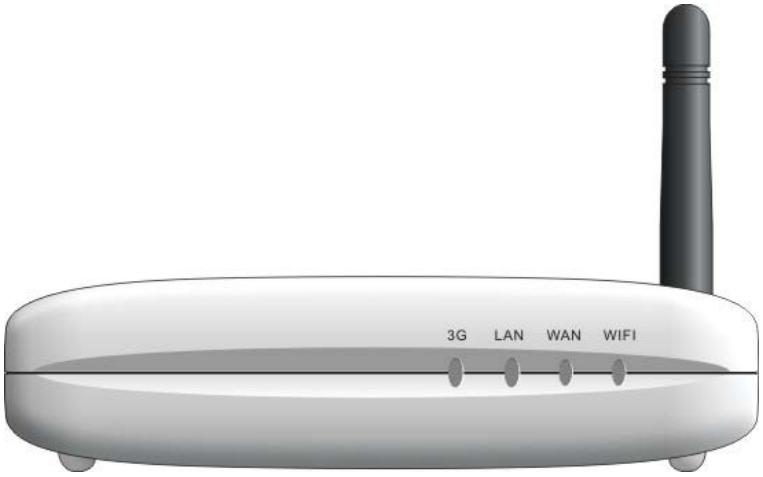
Note: The WiFi Combo Broadband Router LAN Port is “Auto-MDI/MDIX.” This provides patch Ethernet cable LAN Port access.

4. Connect the power adapter to the receptor on the back panel of your WiFi Combo Broadband Router. Then plug the other end of the power adapter into a wall outlet or power strip.---Picture 2.4



Picture 2.4

5. The LEDs (See Picture 2.5)
   a. The 3G(Status) LED will turn ON(when 3G modem inserts) or flash(When 3G modem doesn’t insert) to indicate power has been applied.
   b. When complete, the following LEDs will illuminate green: 3G(Status), LAN, and WiFi.
   c. Reference the Section 1.4, LEDs– the Front View.



Picture 2.5

2.1.2. Establish WiFi Connection

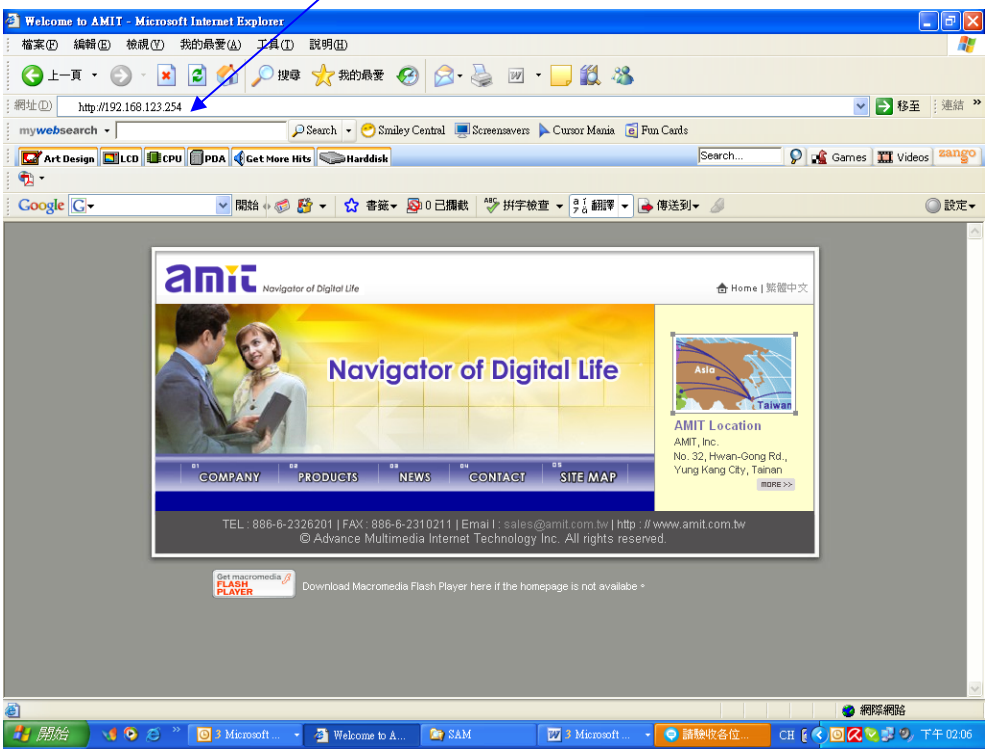
If you selected either **WEP** or **WPA-PSK** encryption, ensure these settings match your WiFi adapter settings.

WiFi and encryption settings must match for access to the HSPA WiFi Combo Broadband Router Configuration Menu, and the Internet. Please refer to your WiFi adapter documentation for additional information.

3. Using the Configuration Menu

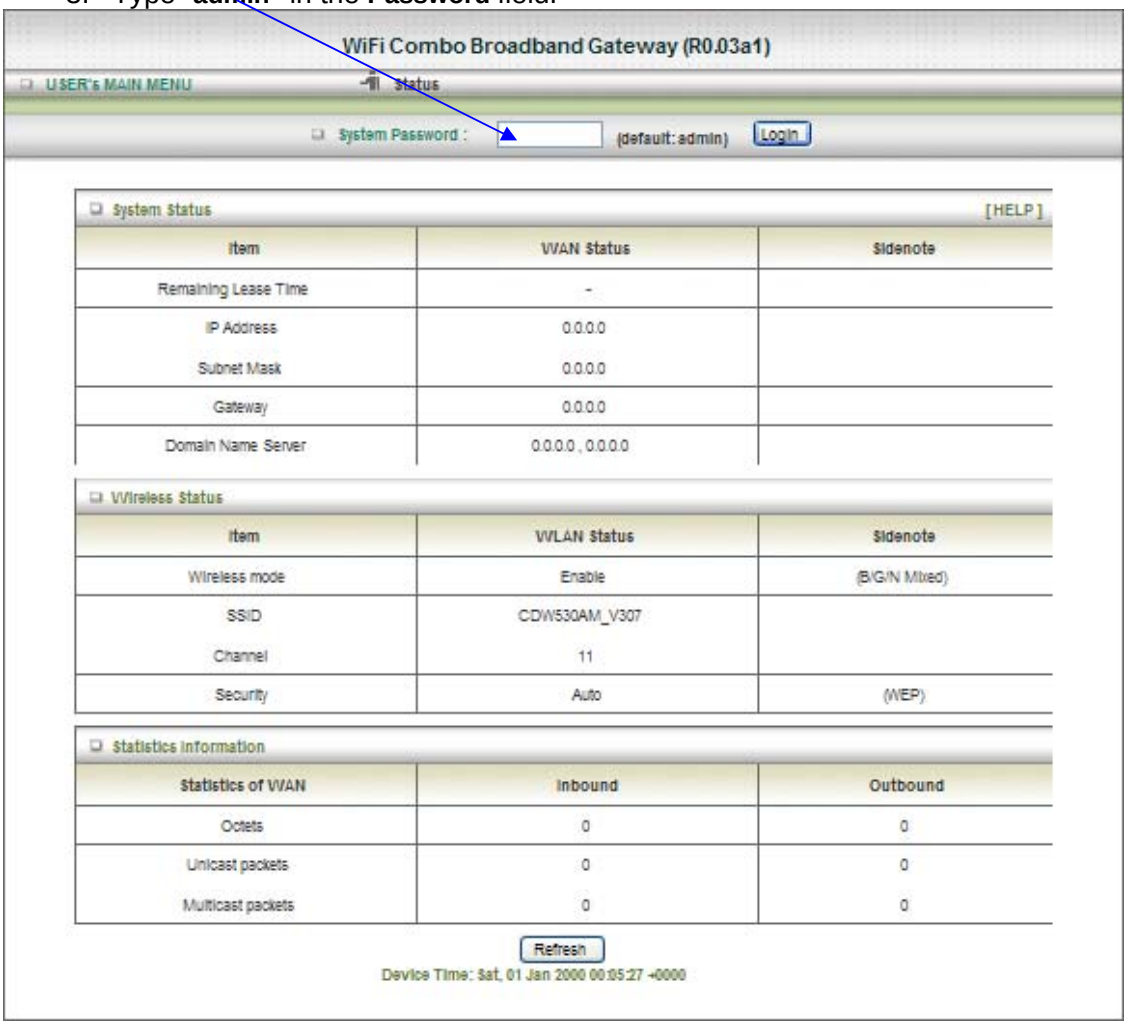
Once properly configured, the WiFi Combo Broadband Router will obtain and assign IP address information automatically. Configuration settings can be established through the WiFi Combo Broadband Router Configuration Menu. You can access this interface by performing the steps listed below:

1. Open a web-browser.
2. Type in the **IP Address** (http://192.168.123.254) of the WiFi Combo Broadband Router



Note: If you have changed the **default** IP Address assigned to the WiFi Combo Broadband Router, ensure you enter the correct IP Address now.

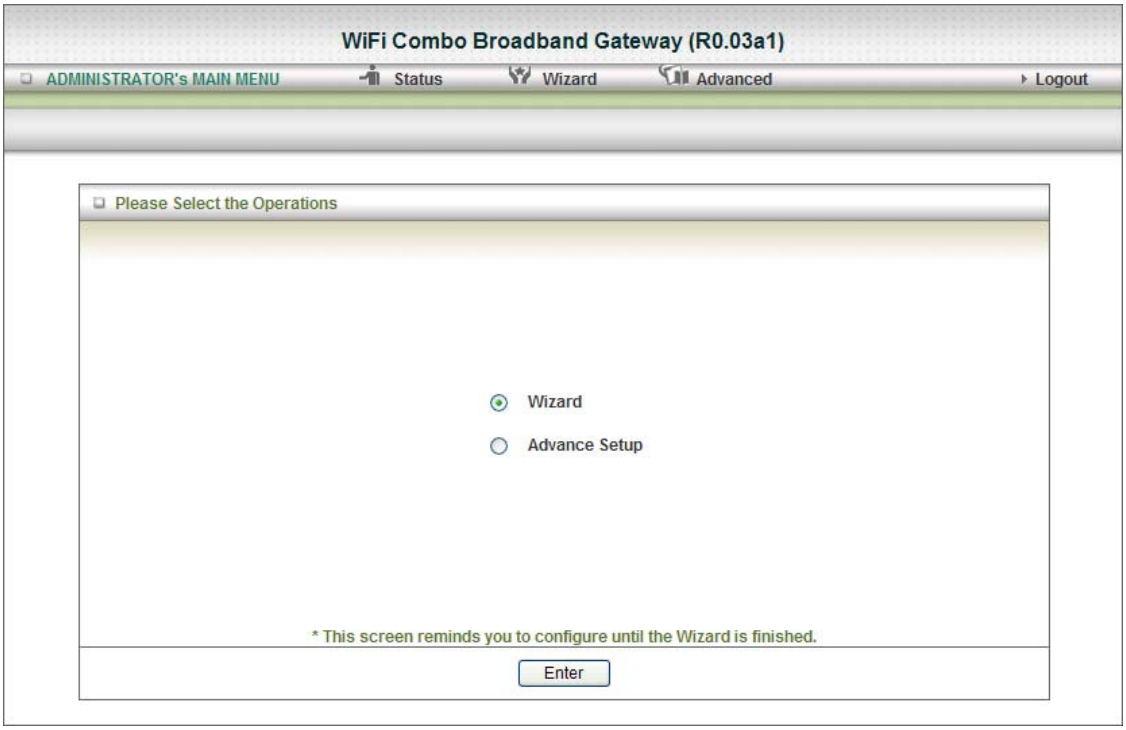
3. Type “**admin”** in the **Password** field.



4. Click “login” button.

3.1. Wizard setting

- Press “**Wizard**” button → for basic settings with simpler way. (Please check section 3.1)
- Or you may click on “**Advanced Setup**” → for advanced settings. (Please check the section Administrator’s Main Menu. each item from section 3.2)

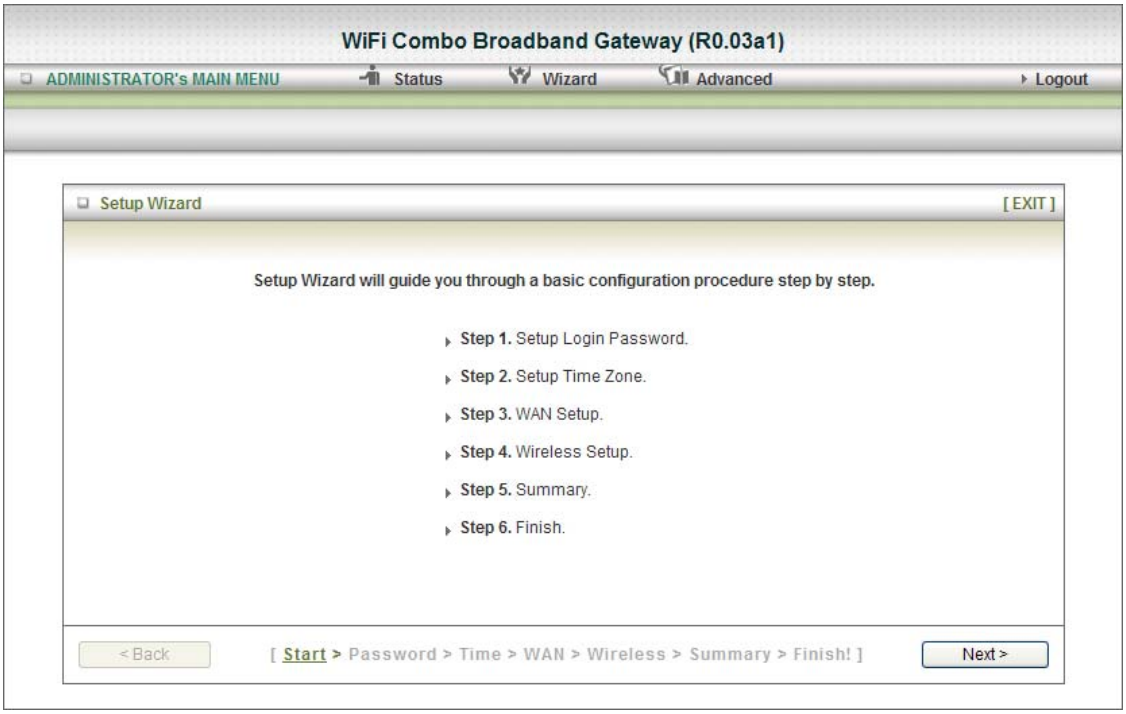


- **Click on "Enter" button to get start.**

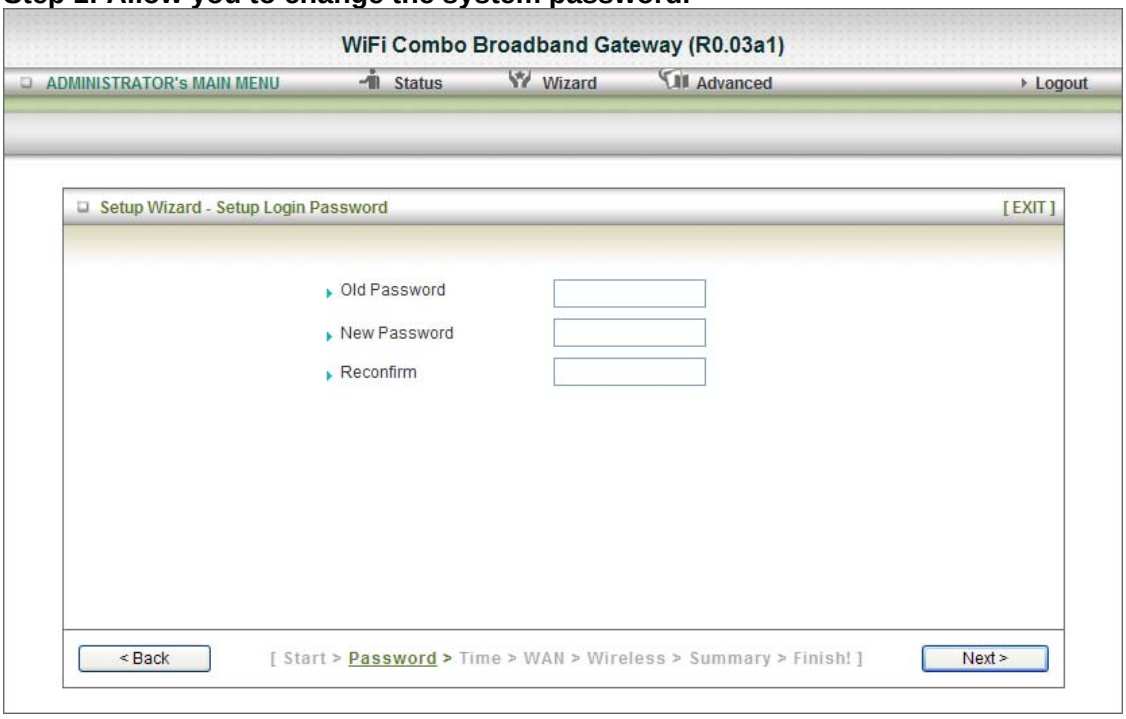
With wizard setting steps, you could configure the router in a very simple way. This configuration wizard includes settings of

a. **Login Password**,
b. **WAN Setup**
c. **Wireless Setup**,

Press **"Next"** button to start configuration.



Step 1: Allow you to change the system password.



You can change Password here.
It is recommended that you change the system password into the one you prefer to on the basis of security.

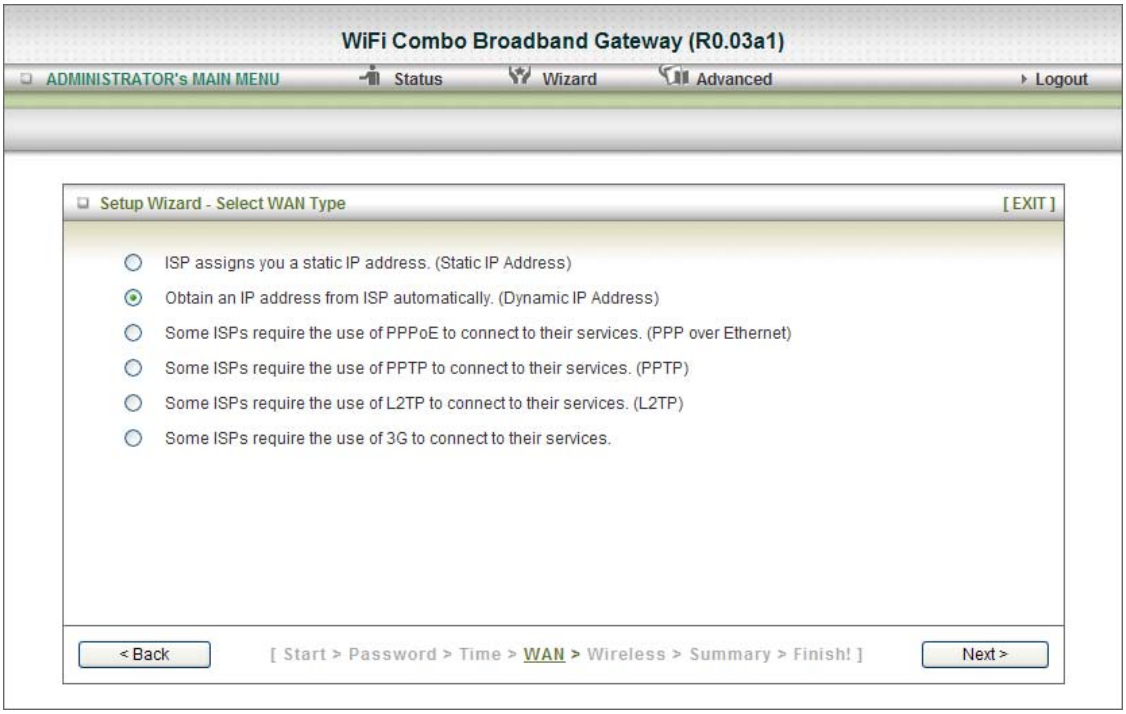
1. Key in your Old Password (if it is the first initiation, the “admin” will be the defaulted one.
2: Enter your New Password

3: Enter your Password again for confirmation; it must be the same as the New Password.
4. Then click on “Next” to get into next installation.

Step 2: Allow you to change the Time Zone.

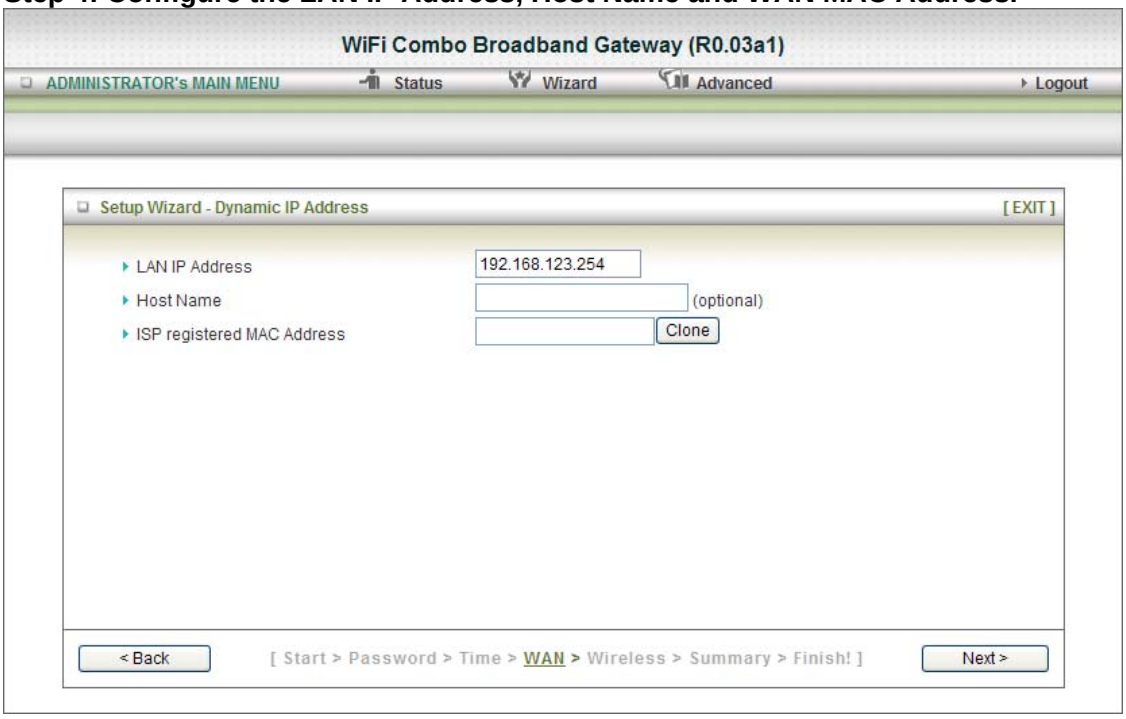
You can change Time Zone here.
Or you can click the button “Detect Again”, the Time Zone will be changed to same with your PC.

Step 3: Select WAN Types will be used for Internet connection



Pick up one of types you preferred to.
Click on "**Next"** button

Step 4: Configure the LAN IP Address, Host Name and WAN MAC Address.



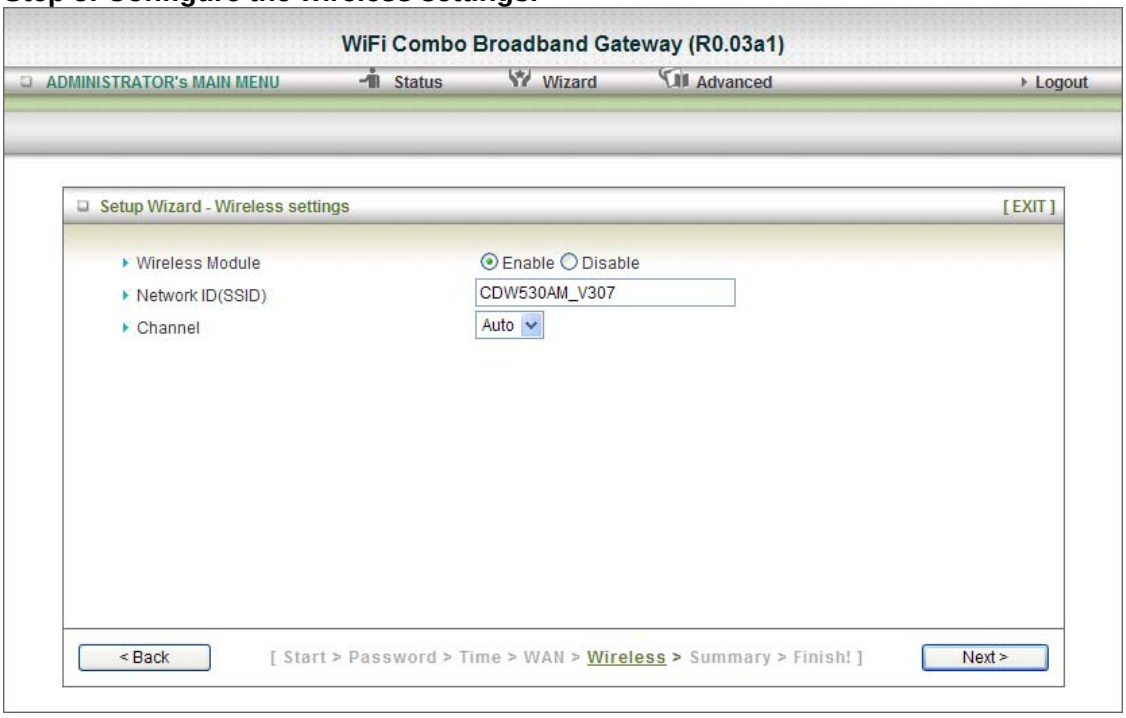
LAN is short for Local Area Network, and is considered your internal network. These are the IP settings of the LAN interface for the WiFi Combo Broadband

Router, and they may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

Note: There are 254 addresses available on the WiFi Combo Broadband Router when using a 255.255.255.0 (Class C) subnet. Example: The router's IP address is 192.168.123.1. The available client IP range is 192.168.123.2 through 192.168.123.254.

1. **LAN IP Address-** The IP address of the LAN interface. The **default** IP address is: **192.168.123.254**
2. Host Name is optional
3. WAN's MAC Address
   If you click the Clone MAC button, you will find the MAC address of your NIC shown in WAN's MAC Address
4. Click on "**Next**" to continue.

Step 5: Configure the wireless settings.

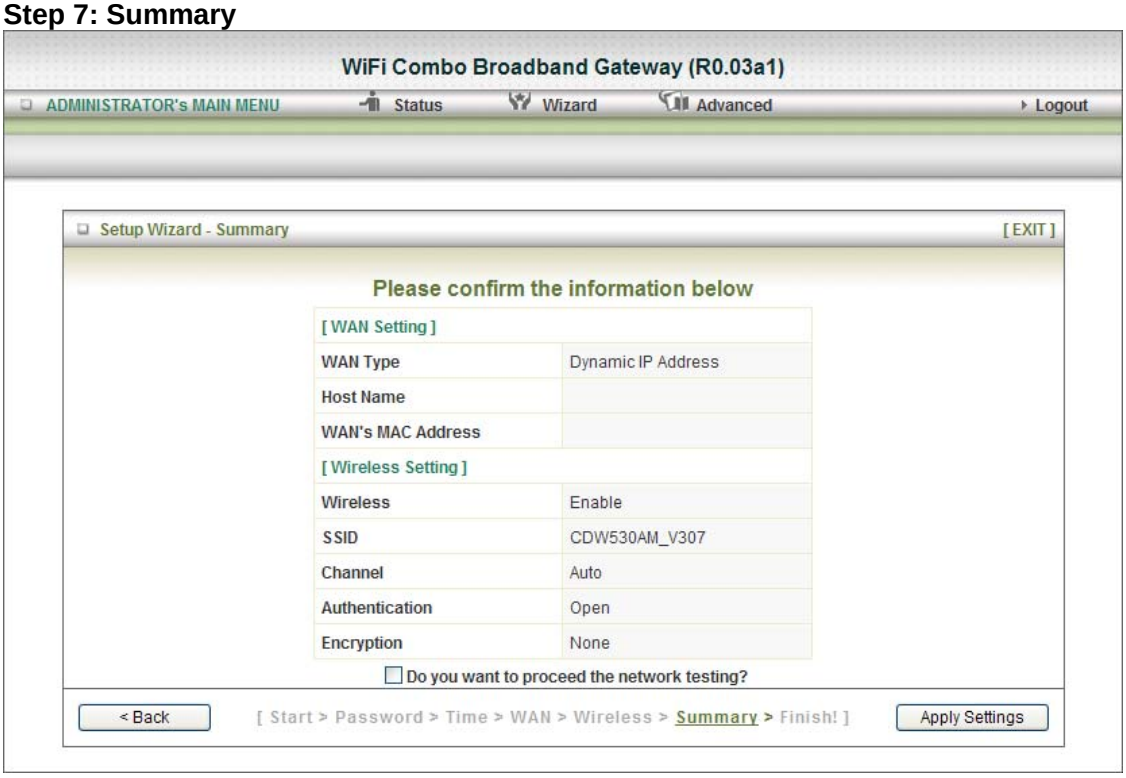


1. Select "**Enable**" or "**Disable**". The default setting is "**Enable**".
2. Network ID(SSID) will be defaulted.
3. **Channel→** Select Wireless Channel matching to your local area for Wireless connection.
4. Click on "**Next**" to continue.

Step 6: Select the Wireless security method of your wireless configuration.

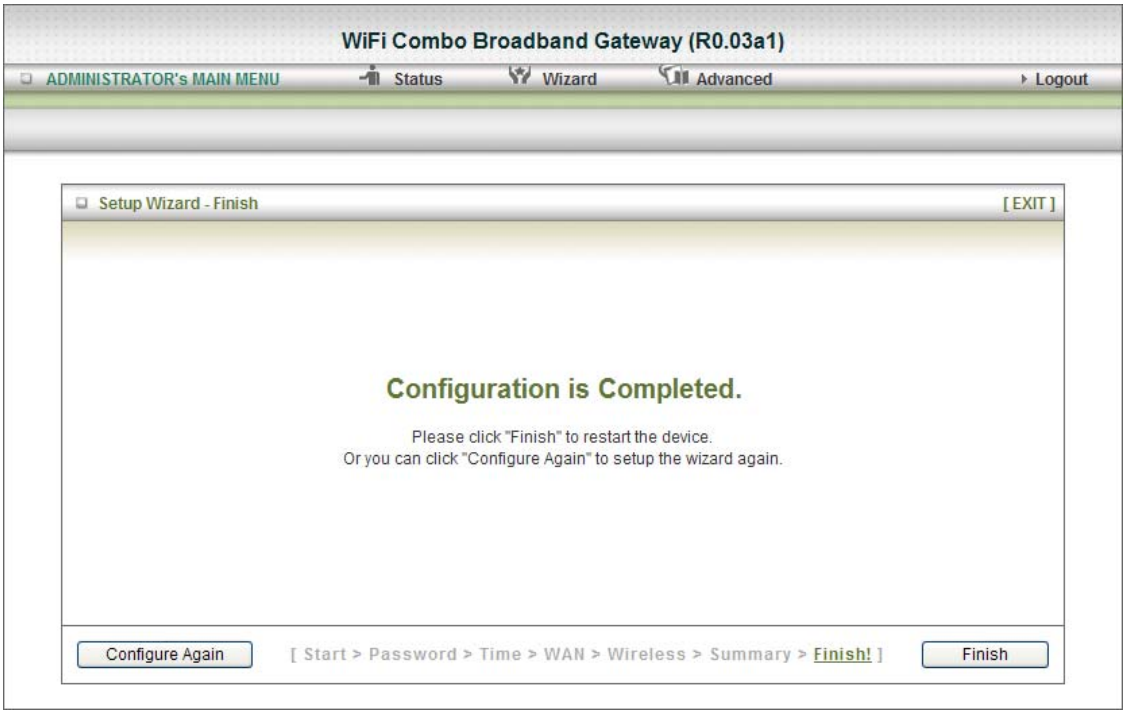
Click on "**Next**" to continue.

Step 7: Summary



Click on the "**Apply Settings**" button

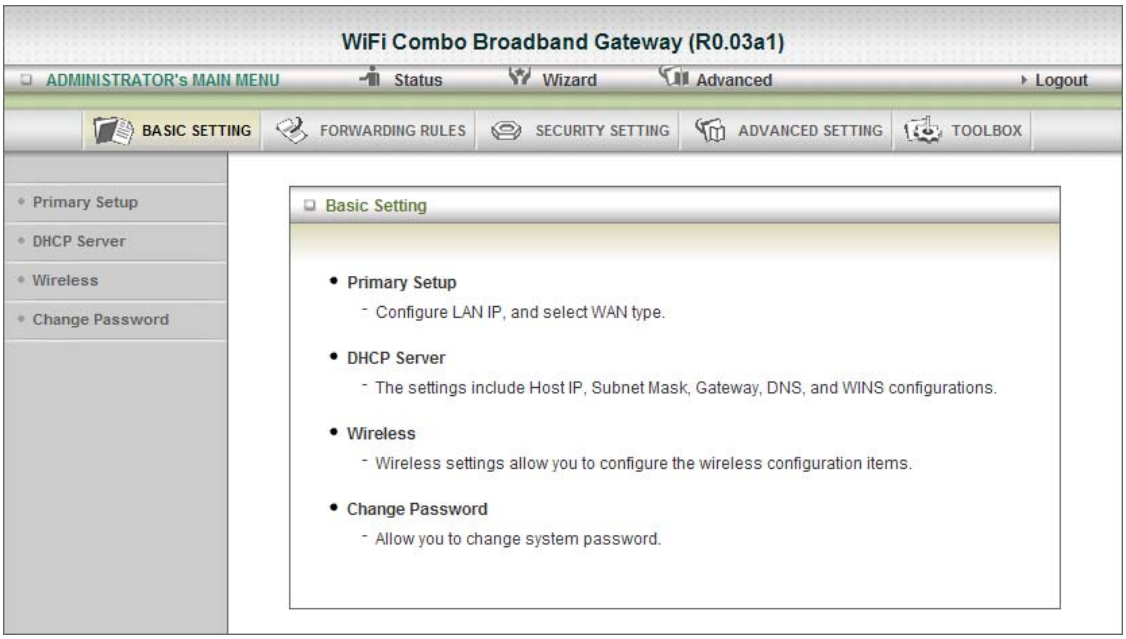
Step 8: System is applying.



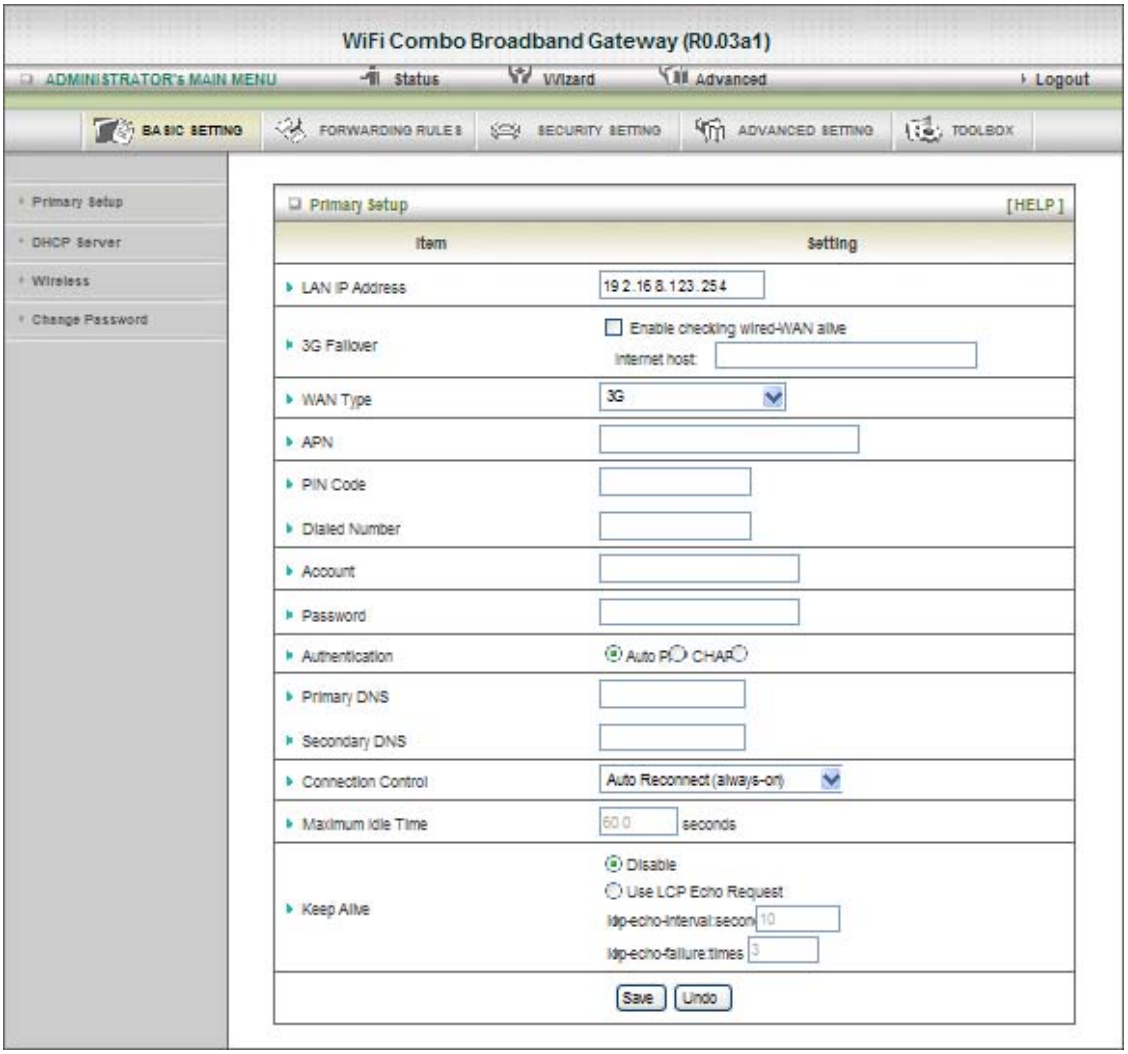
Click “**Finish**” button to back the Status Page.

3.2. Administrator's Main Menu

3.2.1 Basic Setting



3.2.1.1 Primary Setup



1. **LAP IP Address:** the local IP address of this device. The computers on your network must use the LAN IP address of your product as their Default Gateway. You can change it if necessary.
2. **3G Auto-Backup:** The WAN type will be change to 3G automatically, if the wired-WAN is defunct.
3. **WAN Type**: WAN connection type of your ISP. You can click WAN Type Combo button to choose a correct one from the following options:

   Static IP Address:
   WAN IP Address, Subnet Mask, Gateway, Primary and Secondary DNS: enter the proper setting provided by your ISP.

   Dynamic IP Address:
   1. Host Name: optional, required by some ISPs, for example, @Home.
   2. Renew IP Forever: this feature enables this product to renew your IP address automatically when the lease time is expiring-- even when the system is idle.

   PPP over Ethernet

1. PPPoE Account and Password: the account and password your ISP assigned to you. For security, this field appears blank. If you don't want to change the password, leave it empty.
2. Connection Control: There are 3 modes to select:
   Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.
   Auto Reconnect (Always-on): The device will link with ISP until the connection is established.
   Manually: The device will not make the link until someone clicks the connect-button in the Status-page.
3. Maximum Idle Time: the amount of time of inactivity before disconnecting your PPPoE session. Set it to zero or enable Auto-reconnect to disable this feature.
4. PPPoE Service Name: optional. Input the service name if your ISP requires it. Otherwise, leave it blank.
5. Maximum Transmission Unit (MTU): Most ISP offers MTU value to users. The most common MTU value is 1492.

PPTP

First, please check your ISP assigned and Select Static IP Address or Dynamic IP Address.

1. My IP Address and My Subnet Mask: the private IP address and subnet mask your ISP assigned to you.
2. Server IP Address: the IP address of the PPTP server.
3. PPTP Account and Password: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
4. Connection ID: optional. Input the connection ID if your ISP requires it.
5. Maximum Idle Time: the time of no activity to disconnect your PPTP session. Set it to zero or enable Auto-reconnect to disable this feature. If Auto-reconnect is enabled, this product will connect to ISP automatically, after system is restarted or connection is dropped.
6. Connection Control: There are 3 modes to select:
   Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.
   Auto Reconnect (Always-on):The device will link with ISP until the connection is established.
   Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

L2TP

First, please check your ISP assigned and Select Static IP Address or Dynamic IP Address. For example: Use Static

1. My IP Address and My Subnet Mask: the private IP address and subnet mask your ISP assigned to you.
2. Server IP Address: the IP address of the PPTP server.
3. PPTP Account and Password: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
4. Connection ID: optional. Input the connection ID if your ISP requires it.
5. Maximum Idle Time: the time of no activity to disconnect your L2TP session. Set it to zero or enable Auto-reconnect to disable this feature. If Auto-reconnect is enabled, this product will connect to ISP automatically, after system is restarted or connection is dropped.
6. Connection Control: There are 3 modes to select:
   Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.
   Auto Reconnect (Always-on): The device will link with ISP until the connection is

established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

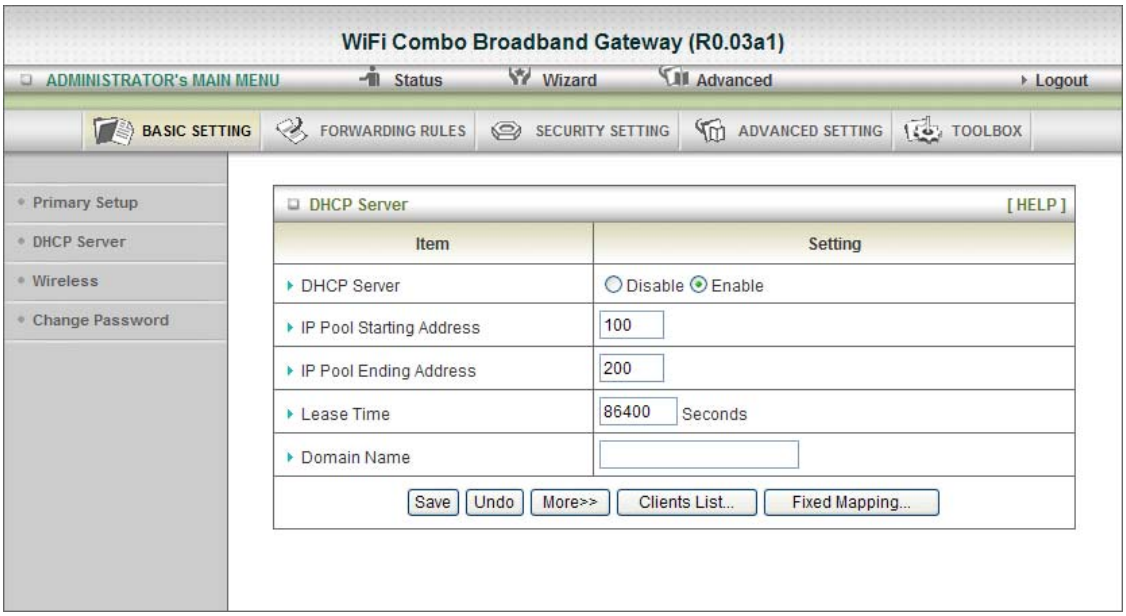
3G

For 3G WAN Networking. The WAN fields may not be necessary for your connection. The information on this page will only be used when your service provider requires you to enter a User Name and Password to connect to the 3G network.

Please refer to your documentation or service provider for additional information.

1. APN: Enter the APN for your PC card here.
2. Pin Code: Enter the Pin Code for your SIM card
3. Dial-Number: This field should not be altered except when required by your service provider.
4. User Name: Enter the new *User Name* for your PC card here.
5. Password: Enter the new *Password* for your PC card here.
6. Primary DNS: This feature allows you to assign a Primary DNS Server（Optional）
7. Secondary DNS: This feature allows you to assign a Secondary DNS Server （Optional）
8. Maximum Idle Time: The Connection will be broken when the idle time arrives.

3.2.1.2 DHCP Server



Press **"More>>",**

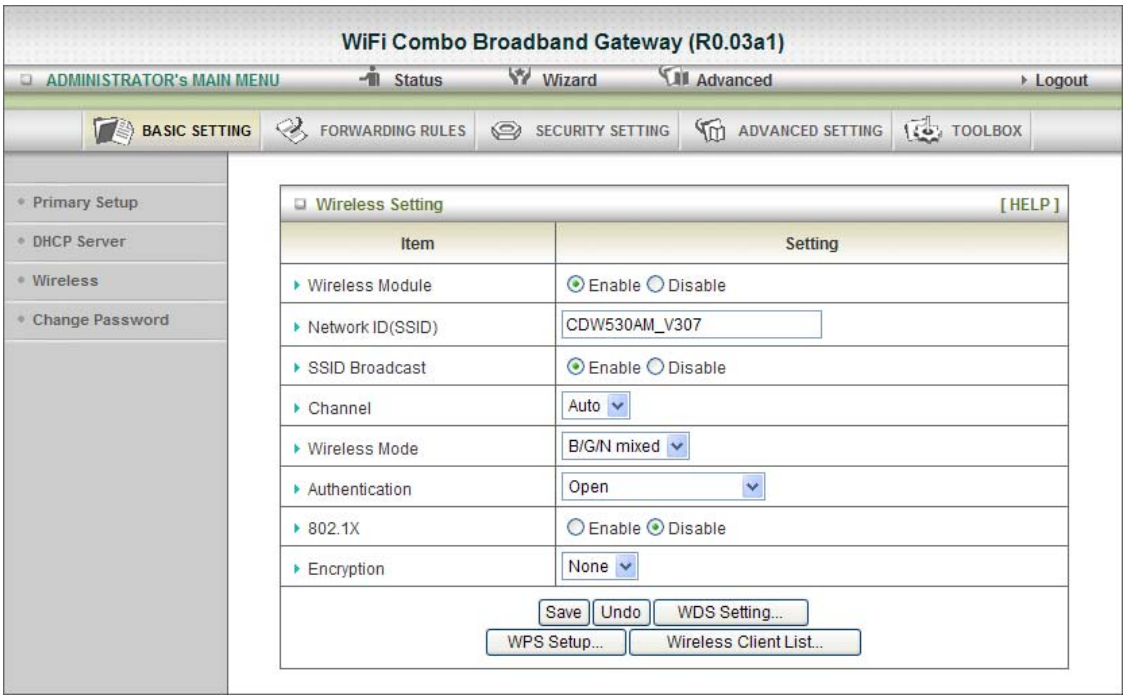
1. **DHCP Server:** Choose either **Disable** or **Enable**
2. **Lease Time:** DHCP lease time to the DHCP client
3. **IP Pool Starting/Ending Address:** Whenever there is a request, the DHCP server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting / ending address of the IP address pool
4. **Domain Name:** Optional, this information will be passed to the client
5. **Primary DNS/Secondary DNS:** Optional, This feature allows you to assign a DNS Servers
6. **Primary WINS/Secondary WINS:** Optional, this feature allows you to assign a WINS Servers
7. **Gateway:** Optional, Gateway Address would be the IP address of an alternate Gateway.

   This function enables you to assign another gateway to your PC, when DHCP server offers an IP to your PC.

After you finish your selection then

Either Click on **"Save"** to store what you just pick or click "**Undo"** to give up

3.2.1.3 Wireless Settings



Wireless settings allow you to set the wireless configuration items.

1. **Wireless:** *Enabled* is the default**.** Selecting this option will allow you to set your Wireless Access Point (WAP) settings.
2. **Wireless Operation Mode:** Choose *AP mode* or *Client mode*. The factory default setting is *AP mode*.
3. **Network ID(SSID):** Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is *default*. The SSID can be easily changed to establish a new wireless network.(Note: SSID names may contain up to 32 ASCII characters).
4. **SSID Broadcast**: The router will broadcast beacons that have some information, including ssid so that wireless clients can know how many AP devices by scanning function in the network. Therefore, this function is disabled; the wireless clients can not find the device from beacons.
5. **Channel:** *Auto* is the default. Devices on the network must share the same channel. (Note: Wireless adapters automatically scan and match the wireless settings. You may also select the channel you wish to use).
6. **Wireless Mode:** Choose *B/G Mixed, B only, G only, N only, G/N Mixed or B/G/N mixed*. The factory default setting is *B/G/N mixed*.
7. **Authentication mode:** You may select from nine kinds of authentication to secure your wireless network: Open, Shared, Auto, WPA-PSK, WPA, WPA2-PSK, WPA2, WPA-PSK/WPA2-PSK, WPA/WPA2.

   Open
   Open system authentication simply consists of two communications. The first is an authentication request by the client that contains the station ID (typically the MAC address). This is followed by an authentication response from the AP/router containing a

success or failure message. An example of when a failure may occur is if the client's MAC address is explicitly excluded in the AP/router configuration.

Shared

Shared key authentication relies on the fact that both stations taking part in the authentication process have the same "shared" key or passphrase. The shared key is manually set on both the client station and the AP/router. Three types of shared key authentication are available today for home or small office WLAN environments.

Auto

The AP will Select the Open or Shared by the client's request automatically.

WPA-PSK

Select Encryption and Pre-share Key Mode
If you select HEX, you have to fill in 64 hexadecimal (0, 1, 2…8, 9, A, B…F) digits.
If you select ASCII, the length of pre-share key is from 8 to 63.
Fill in the key, Ex 12345678

WPA

Check Box was used to switch the function of the WPA. When the WPA function is enabled, the Wireless user must **authenticate** to this router first to use the Network service. RADIUS Server IP address or the 802.1X server's domain-name.
Select Encryption and RADIUS Shared Key
If you select HEX, you have to fill in 64 hexadecimal (0, 1, 2…8, 9, A, B…F) digits
If you select ASCII, the length of pre-share key is from 8 to 63.
Key value shared by the RADIUS server and this router. This key value is consistent with the key value in the RADIUS server.

WPA-PSK2

WPA-PSK2 user AES and TKIP for Same the encryption, the others are same the WPA-PSK.

WPA2

WPA2 add uses AES and TKIP for encryption, the others are same the WPA.

WPA-PSK/WPA-PSK2

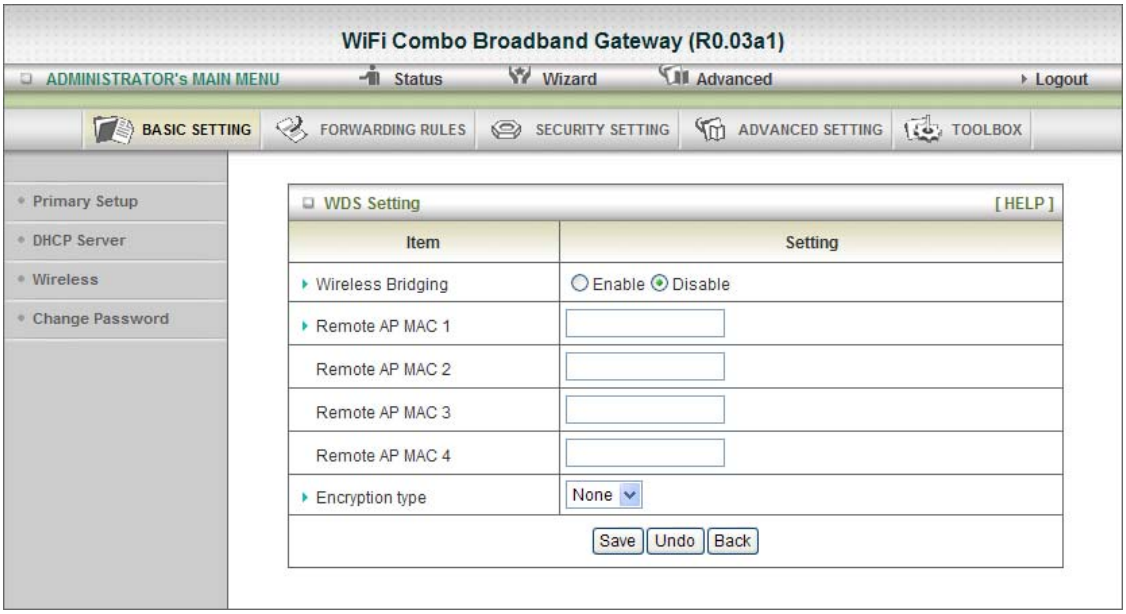
Another encryption options for WPA-PSK-TKIP and WPA-PSK2-AES, the others are same the WPA-PSK.

WPA/WPA2

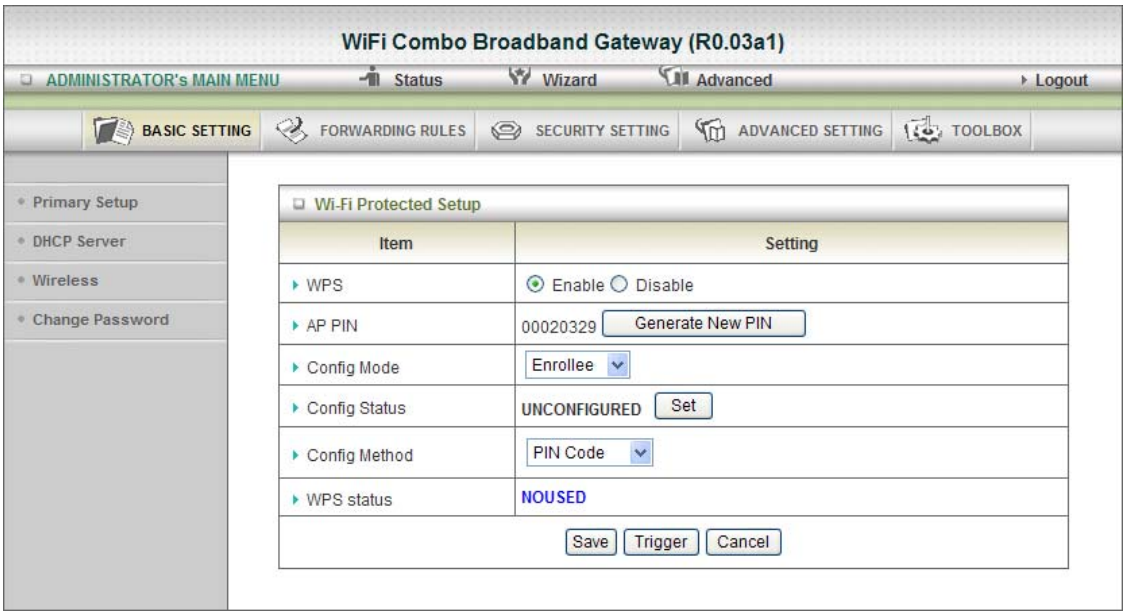
Another encryption options for WPA-TKIP and WPA2-AES, the others are same the WPA.

WDS(Wireless Distribution System) Setting

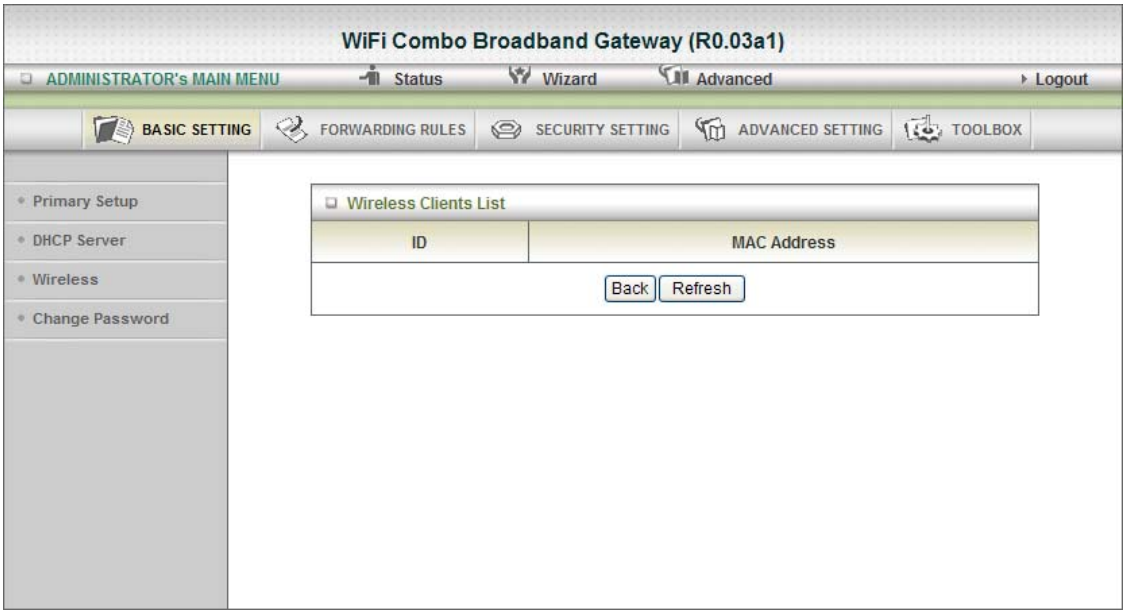
WDS operation as defined by the IEEE802.11 standard has been made available. Using WDS it is possible to wirelessly connect Access Points, and in doing so extend a wired infrastructure to locations where cabling is not possible or inefficient to implement.



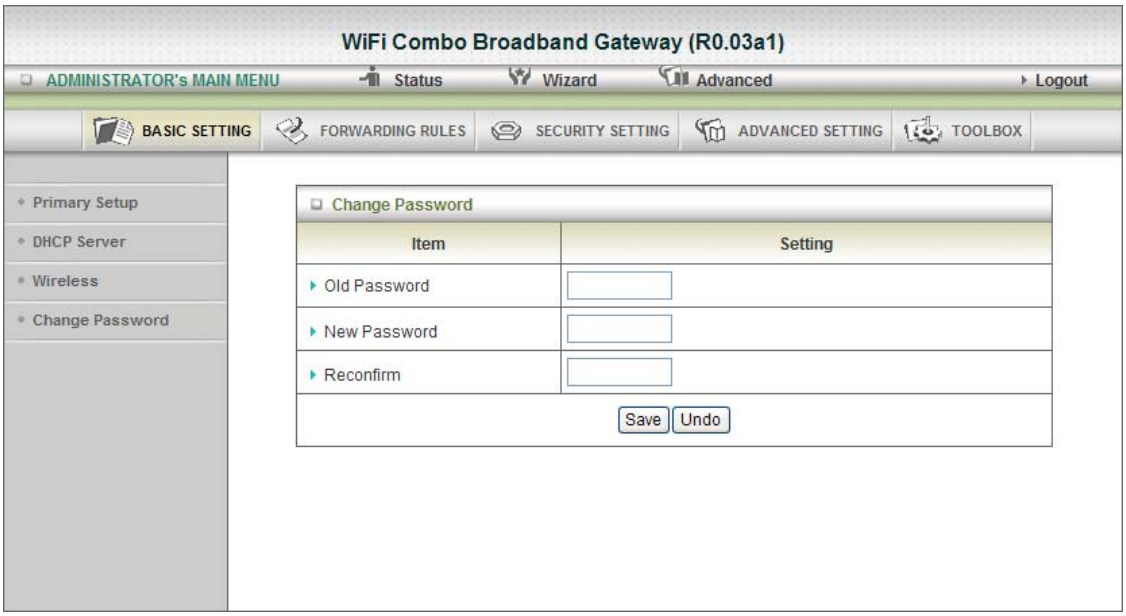
WPS(Wi-Fi Protection Setup) (OPTION)
WPS is Wi-Fi Protection Setup which is similar to WCN-NET and offers safe and easy way in Wireless Connection.



Wireless Client List
The list of wireless client is shows here.


WiFi Combo Broadband Gateway (R0.03a1)
ADMINISTRATOR's MAIN MENU
Status
Wizard
Advanced
Logout
BASIC SETTING
FORWARDING RULES
SECURITY SETTING
ADVANCED SETTING
TOOLBOX
Primary Setup
DHCP Server
Wireless
Change Password
Wireless Clients List
ID
MAC Address
Back
Refresh

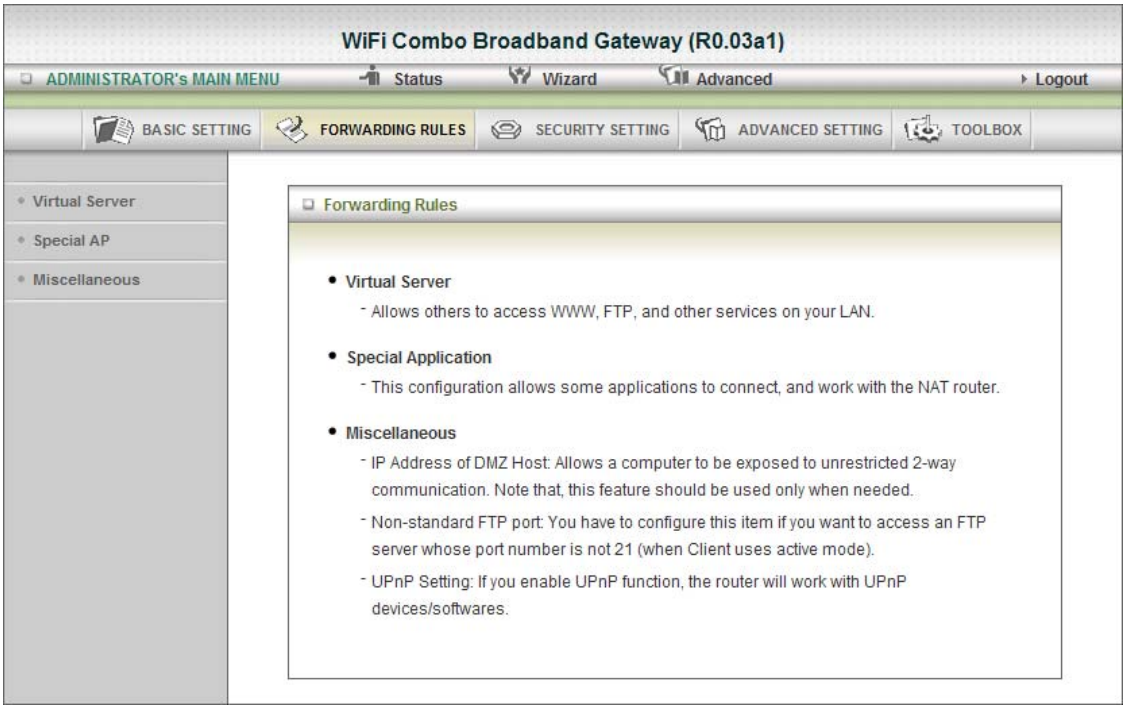
3.2.1.4 Change Password



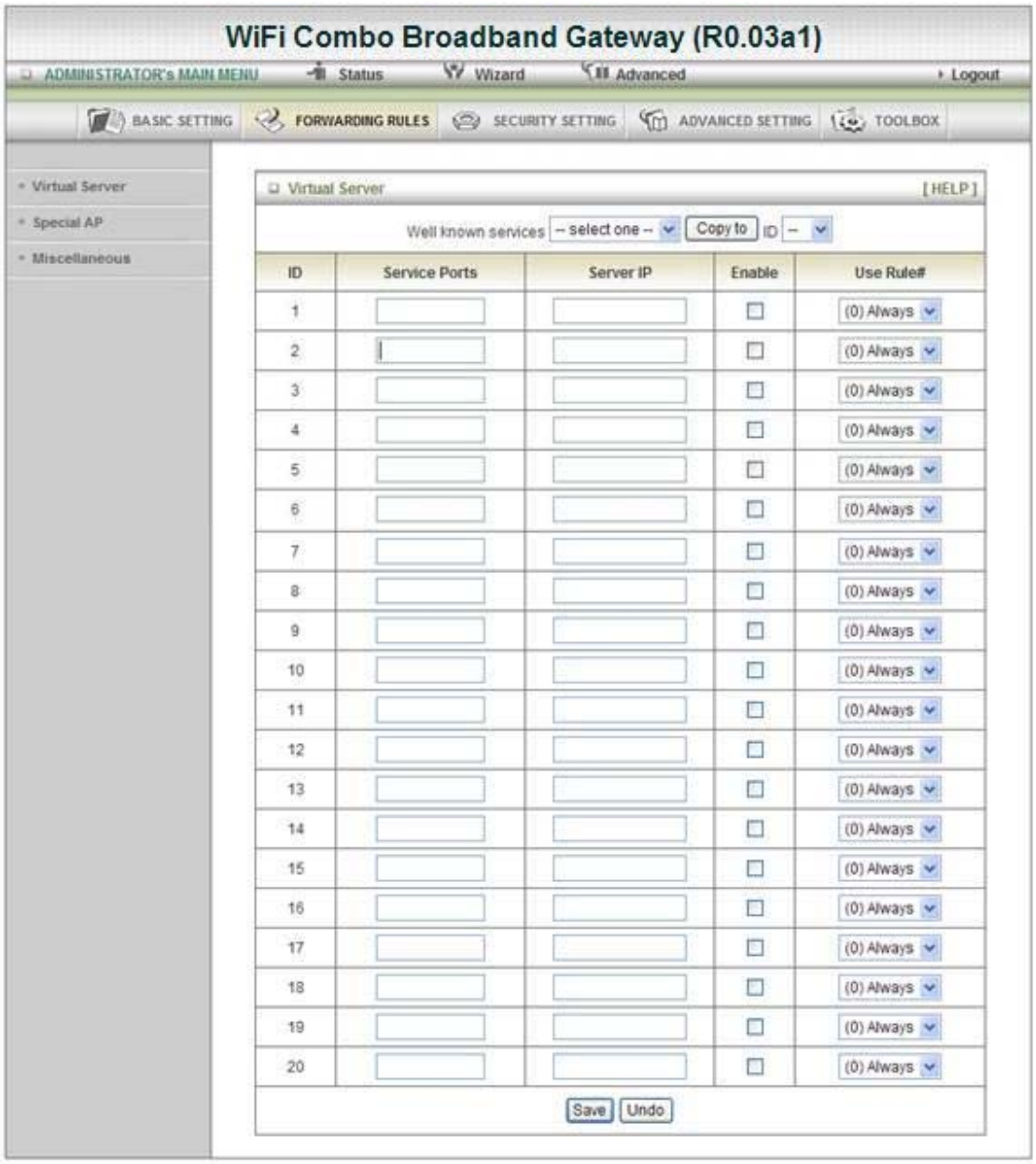
You can change Password here. We **strongly** recommend you to change the system password for security reason.

Click on "Save" to store what you just select or "Undo" to give up

3.2.2 Forwarding Rules



3.2.2.1 Virtual Server



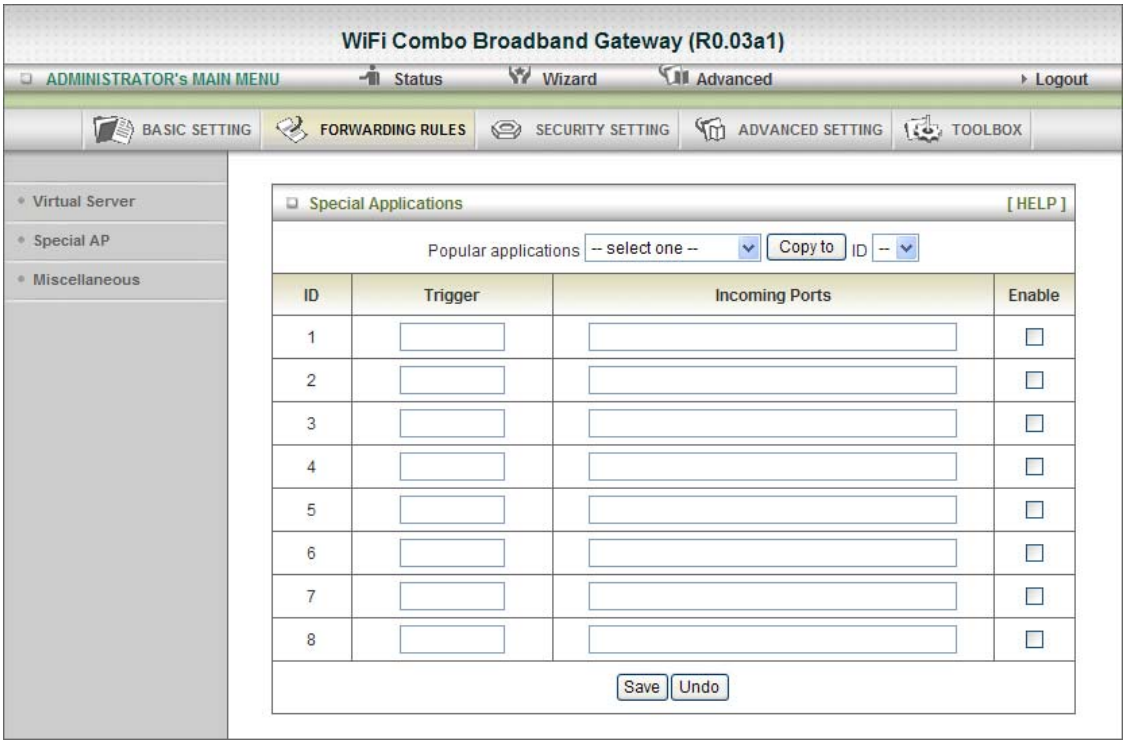
This product's NAT firewall filters out unrecognized packets to protect your Intranet, so all hosts behind this product are invisible to the outside world. If you wish, you can make some of them accessible by enabling the Virtual Server Mapping.
A virtual server is defined as a Service Port, and all requests to this port will be redirected to the computer specified by the Server IP. Virtual Server can work with Scheduling Rules, and give user more flexibility on Access control. For Detail, please refer to Scheduling Rule.

For example, if you have an FTP server (port 21) at 192.168.123.1, a Web server (port 80) at 192.168.123.2, and a VPN server at 192.168.123.6, then you need to specify the following virtual server mapping table:

Service Port	Server IP	Enable
21	192.168.123.1	V
80	192.168.123.2	V
1723	192.168.123.6	V

Click on “Save” to store what you just select or “Undo” to give up

3.2.2.2 Special AP



Some applications require multiple connections, like Internet games, Video conferencing, Internet telephony, etc. Because of the firewall function, these applications cannot work with a pure NAT router. The Special Applications feature allows some of these applications to work with this product. If the mechanism of Special Applications fails to make an application work, try setting your computer as the DMZ host instead.

1. **Trigger:** the outbound port number issued by the application.
2. **Incoming Ports**: when the trigger packet is detected, the inbound packets sent to the specified port numbers are allowed to pass through the firewall.

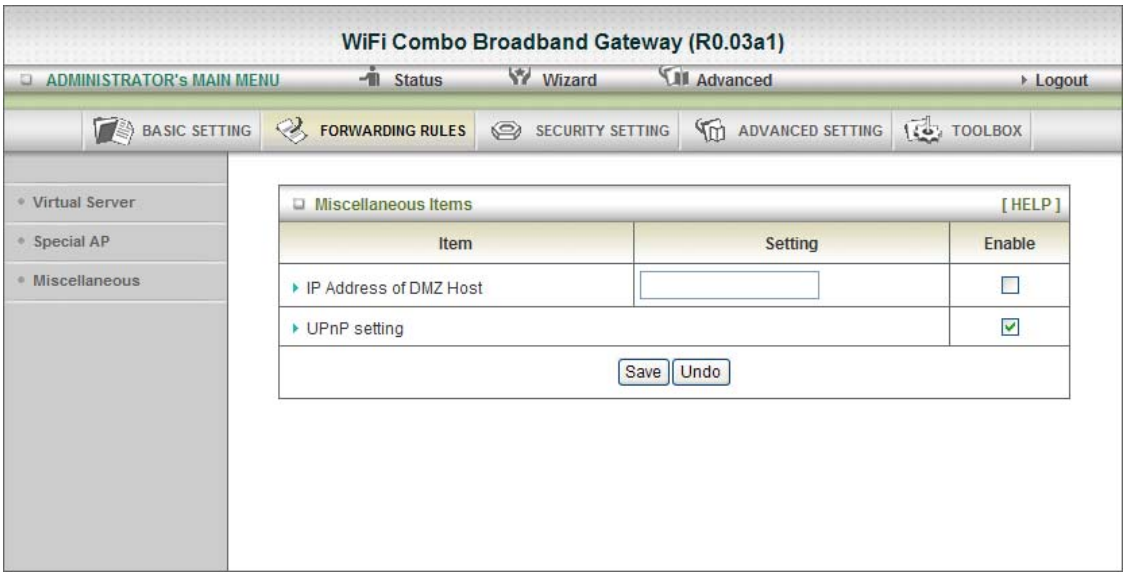
   This product provides some predefined settings.

   1. Select your application and
   2. Click "**Copy to"** to add the predefined setting to your list.

   Note! At any given time, only one PC can use each Special Application tunnel.

Click on "Save" to store what you just select or" Undo" to give up

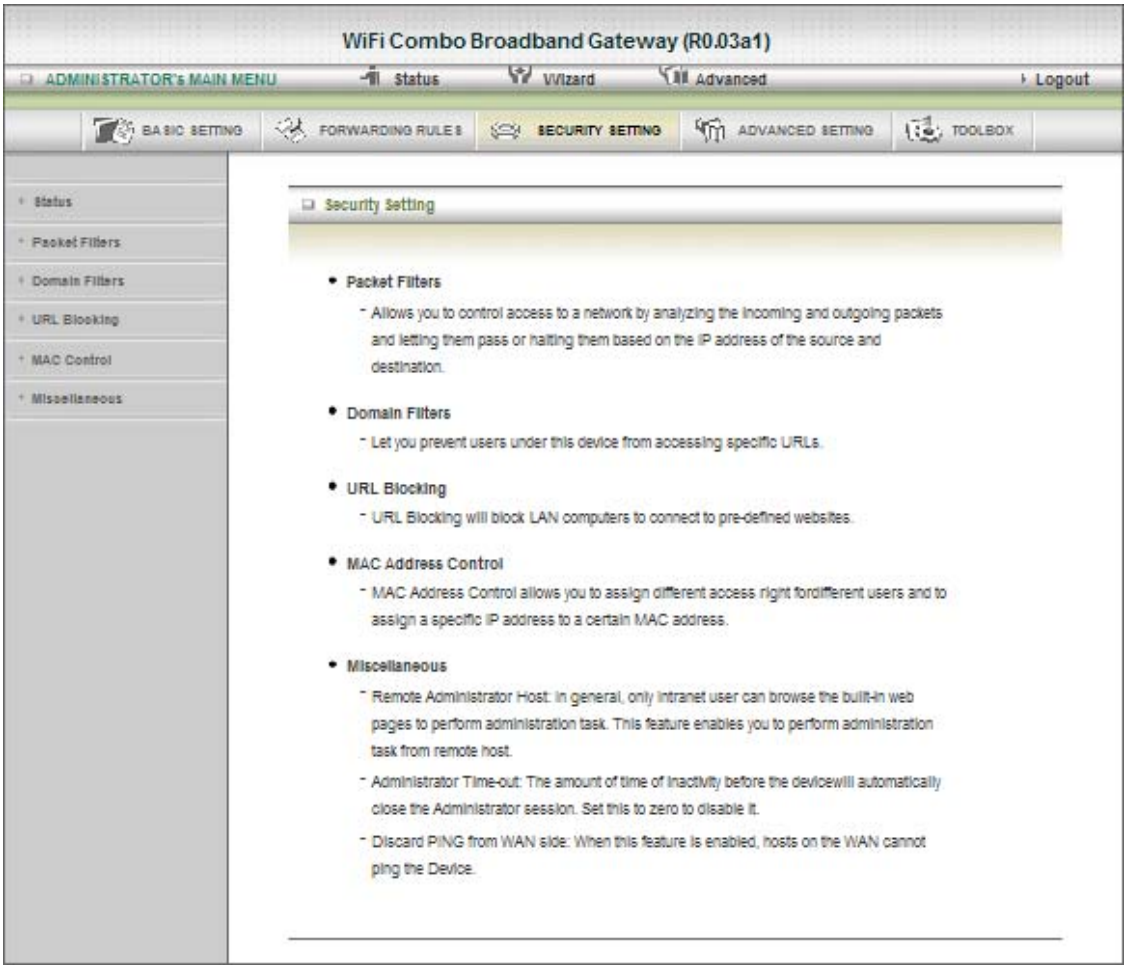
3.2.2.3 Miscellaneous



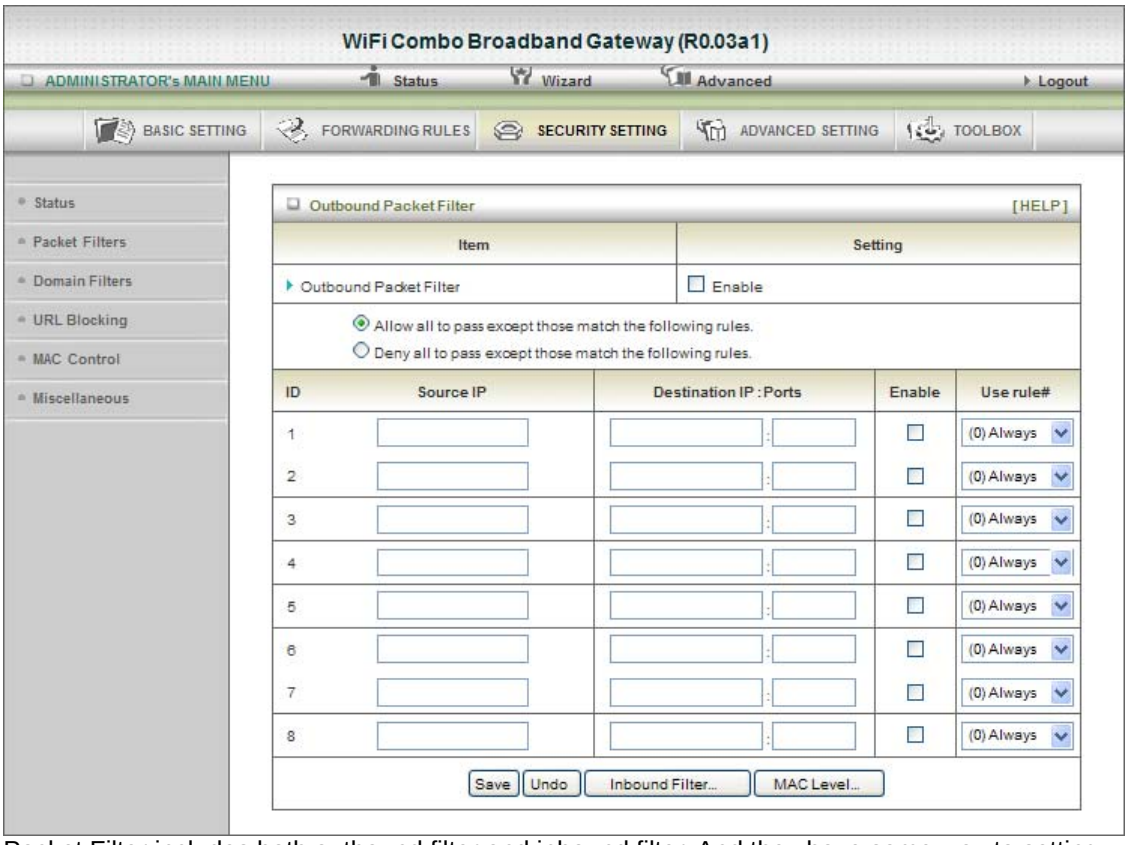
1. **IP Address of DMZ Host**
   DMZ (Demilitarized Zone) Host is a host without the protection of firewall. It allows a computer to be exposed to unrestricted 2-way communication for Internet games, Video conferencing, Internet telephony and other special applications.
2. **UPnP Setting**
   The device also supports this function. If the OS supports this function enable it, like Windows XP. When the user gets IP from Device and will see icon as below:
3. **IGMP setting**
   Select the “Enable” item to enable the IGMP Multicast.

Click on “Save” to store what you just select or “Undo” to give up

3.2.3 Security Setting



3.2.3.1 Packet Filters



Packet Filter includes both outbound filter and inbound filter. And they have same way to setting. Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets. However, inbound filter applies on packets that destined to Virtual Servers or DMZ host only. You can select one of the two filtering policies:

1. Allow all to pass except those match the specified rules
2. Deny all to pass except those match the specified rules

You can specify 8 rules for each direction: inbound or outbound. For each rule, you can define the following:

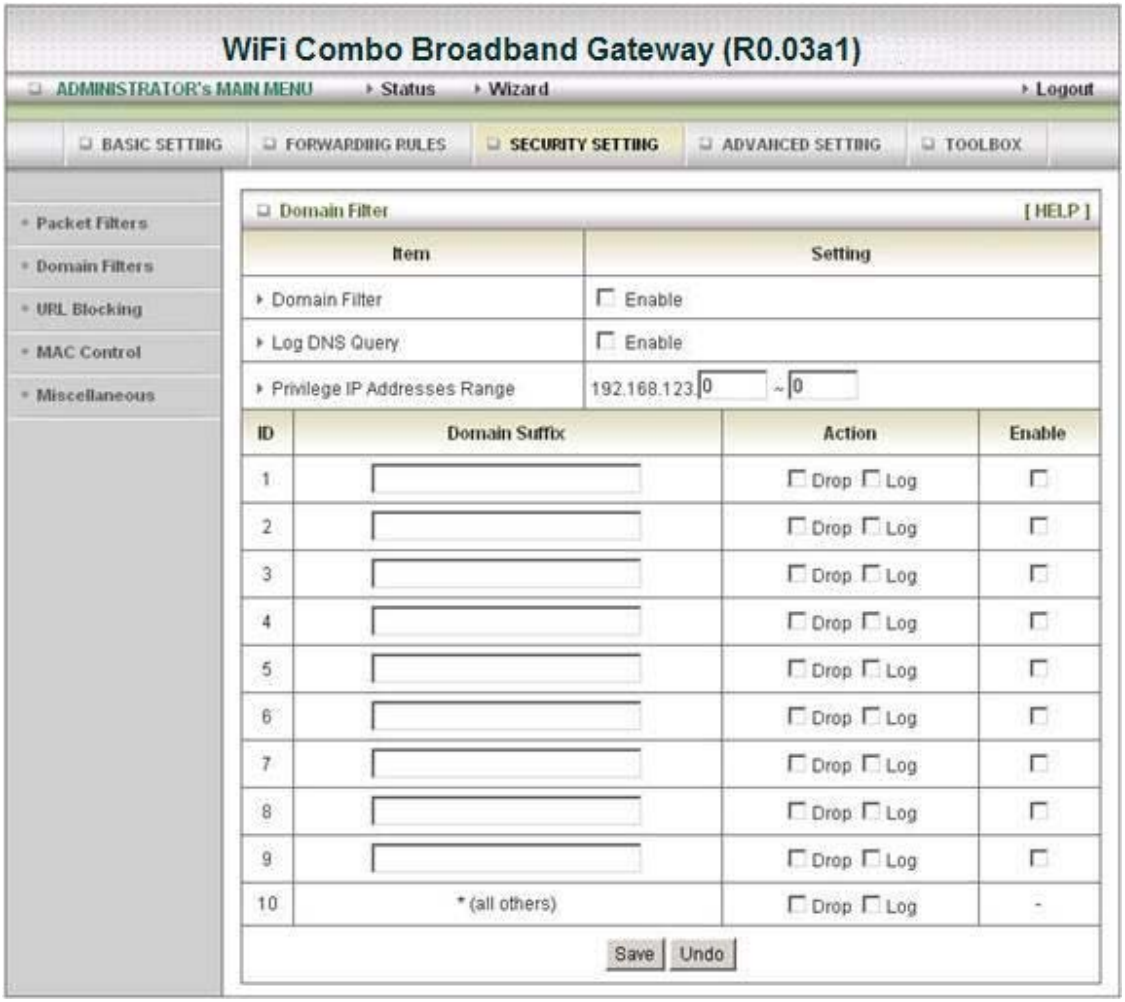
- Source IP address
- Source port
- Destination IP address
- Destination port
- Protocol: TCP or UDP or both.
- Use Rule#

For source or destination IP address, you can define a single IP address (4.3.2.1) or a range of IP addresses (4.3.2.1-4.3.2.254). An empty implies all IP addresses.
For source or destination port, you can define a single port (80) or a range of ports (1000-1999). Add prefix "T" or "U" to specify TCP or UDP protocol. For example, T80, U53, U2000-2999, No prefix indicates both TCP and UDP are defined. An empty implies all port addresses. Packet Filter can work with Scheduling Rules, and give user more flexibility on Access control. For Detail, please refer to Scheduling Rule.

Each rule can be enabled or disabled individually.

Click on “Save” to store what you just select or “Undo” to give up

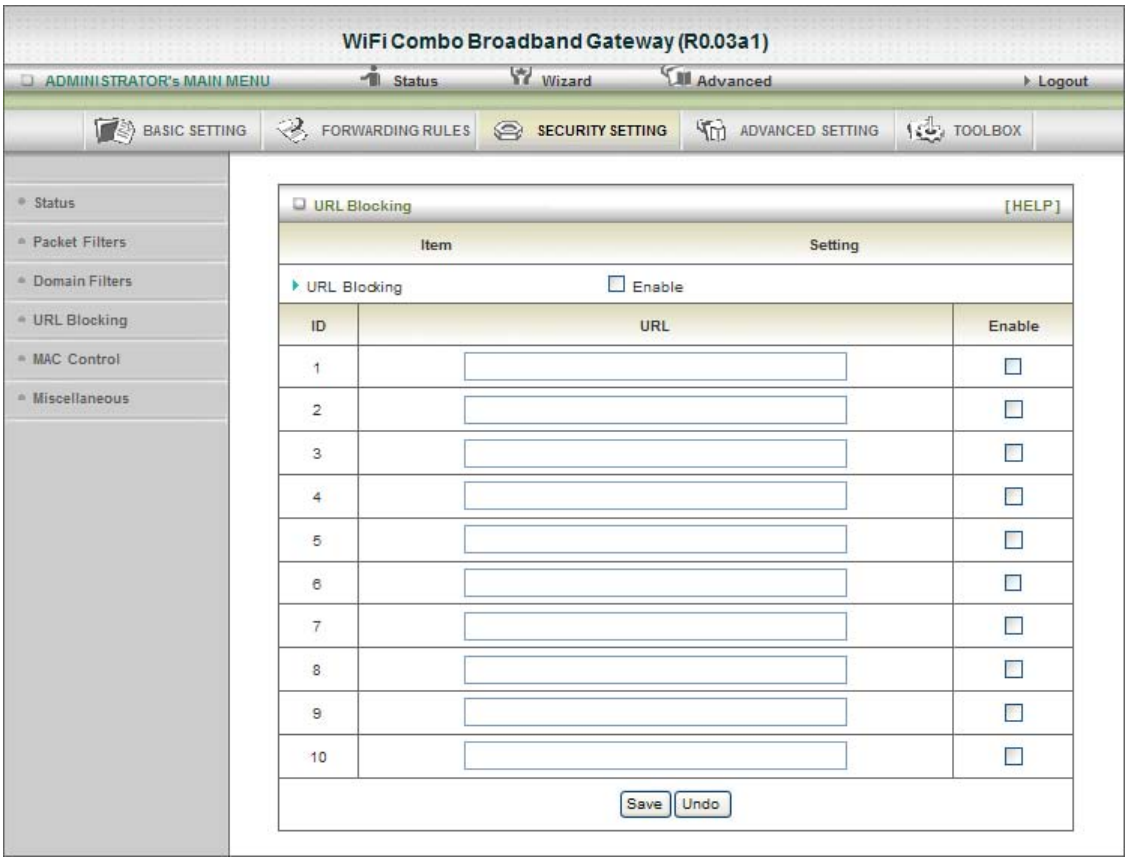
3.2.3.2 Domain Filters



1. **Domain Filter**
   Let you prevent users under this device from accessing specific URLs.
2. **Domain Filter Enable**
   Check if you want to enable Domain Filter.
3. **Log DNS Query**
   Check if you want to log the action when someone accesses the specific URLs.
4. **Privilege IP Address Range**
   Setting a group of hosts and privilege these hosts to access network without restriction.
5. **Domain Suffix**
   A suffix of URL can be restricted, for example, ".com", "xxx.com".
6. **Action**
   When someone is accessing the URL met the domain-suffix, what kind of action you want. Check drop to block the access. Check “log” to log these access.
7. **Enable**
   Check to enable each rule.

Click on “Save” to store what you just select or “Undo” to give up

3.2.3.3 URL Blocking

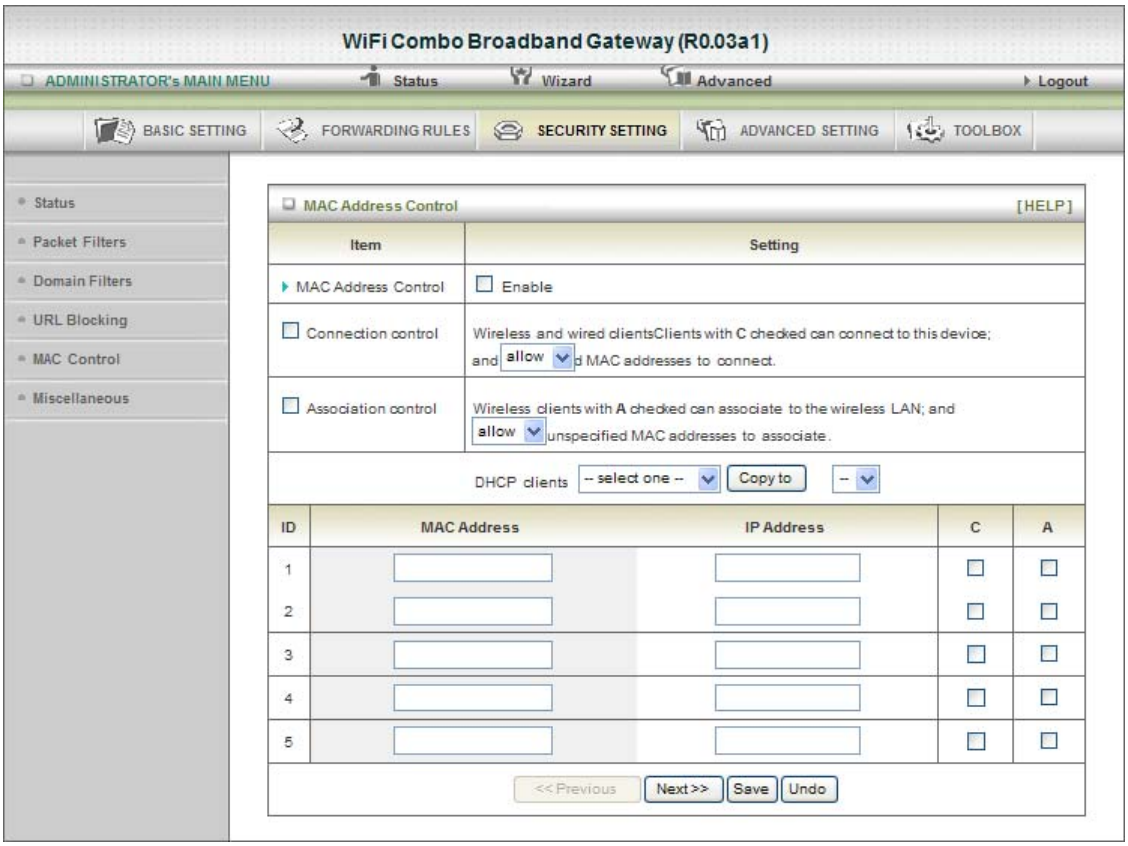


URL Blocking will block LAN computers to connect to pre-define Websites. The major difference between “Domain filter” and “URL Blocking” is Domain filter require user to input suffix (like .com or .org, etc), while URL Blocking require user to input a keyword only. In other words, Domain filter can block specific website, while URL Blocking can block hundreds of websites by simply a keyword.

1. **URL Blocking Enable**
   Check if you want to enable URL Blocking.
2. **URL**
   If any part of the Website's URL matches the pre-defined word, the connection will be blocked.
   For example, you can use pre-defined word "sex" to block all websites if their URLs contain pre-defined word "sex".
3. **Enable**
   Check to enable each rule.

Click on “Save” to store what you just select or “Undo” to give up

3.2.3.4 MAC Control



MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.

1. **MAC Address Control**

   Check “Enable” to enable the “MAC Address Control”. All of the settings in this page will take effect only when “Enable” is checked.

2. **Connection control**

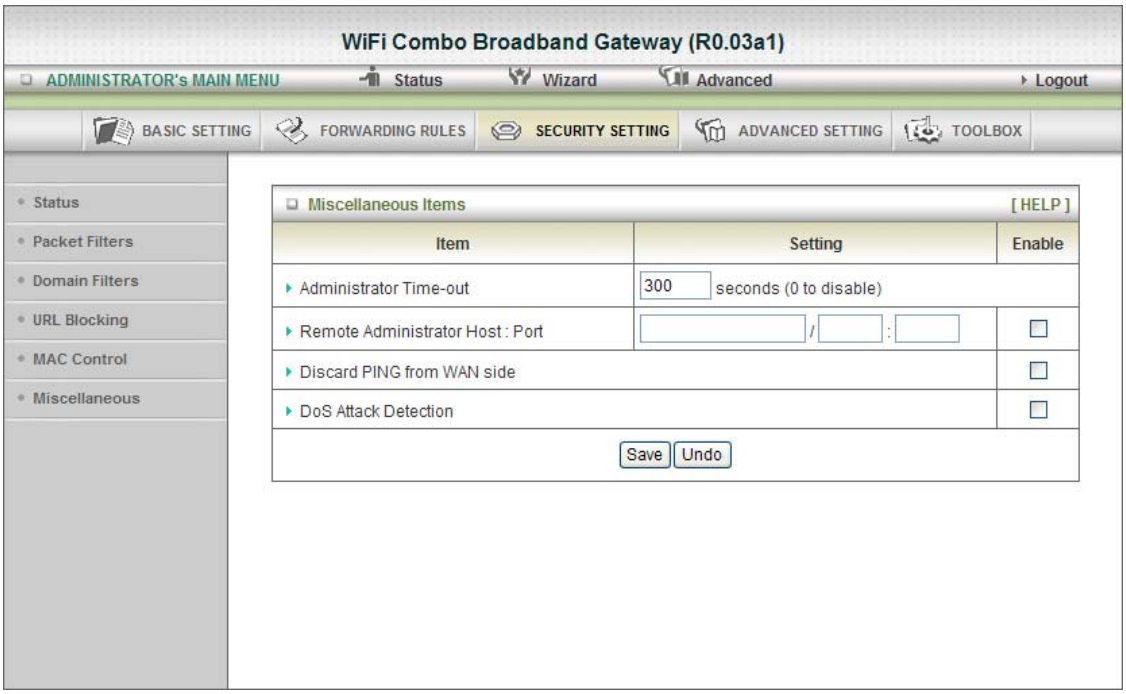
   Check "Connection control" to enable the controlling of which wired and wireless clients can connect to this device. If a client is denied to connect to this device, it means the client can't access to the Internet either. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table" (please see below), to connect to this device.

3. **Association control**

   Check "Association control" to enable the controlling of which wireless client can associate to the wireless LAN. If a client is denied to associate to the wireless LAN, it means the client can't send or receive any data via this device. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table", to associate to the wireless LAN

Click on “Save” to store what you just select or “Undo” to give up
Click on “Next Page” to go down or “Previous page” back to last page

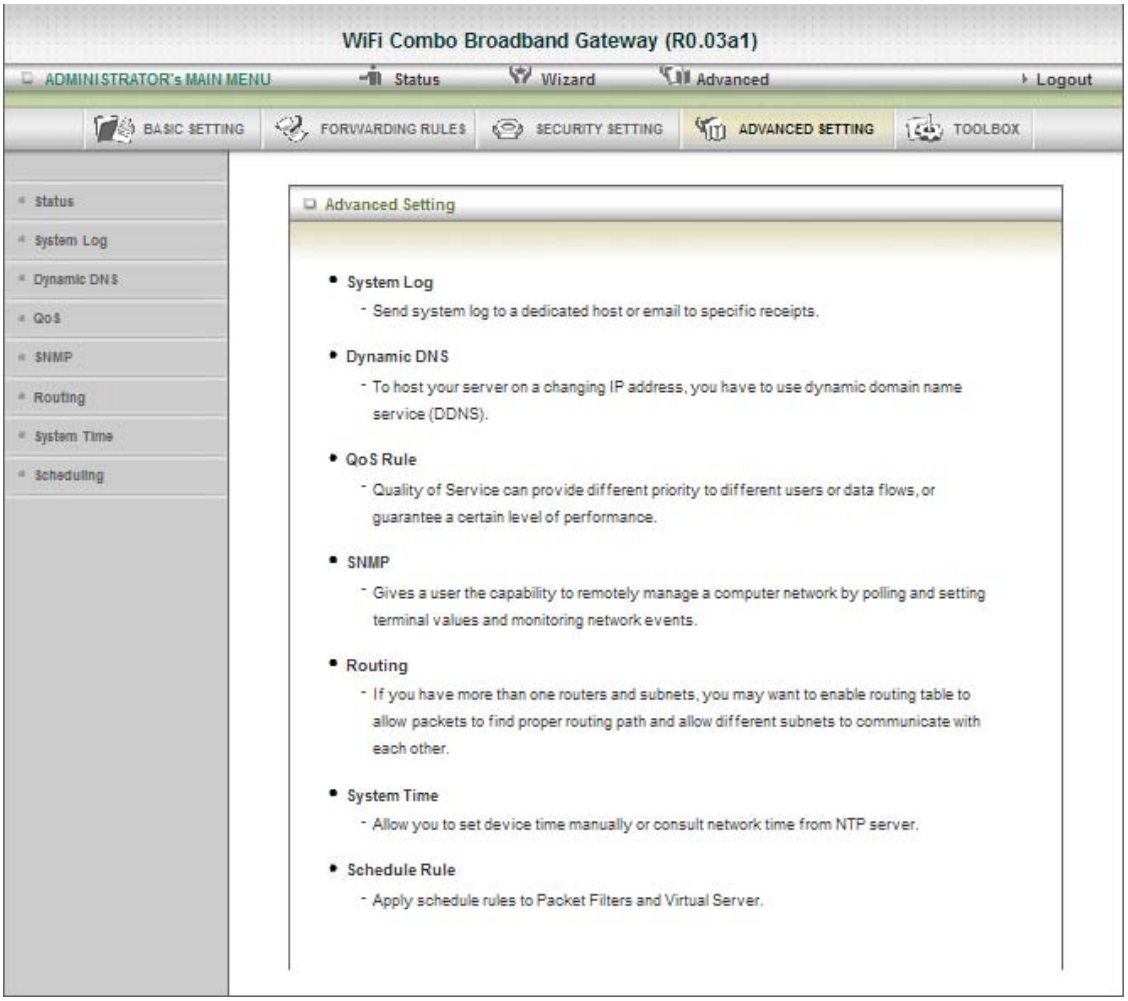
3.2.3.5 Miscellaneous



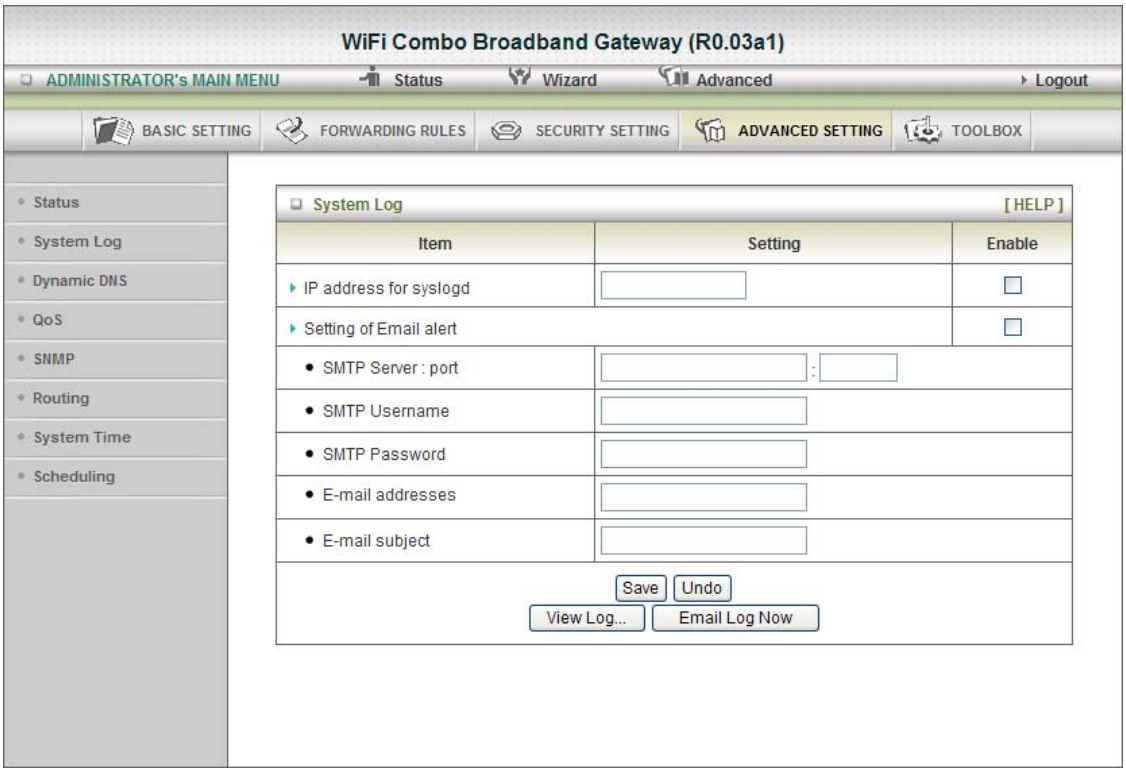
1. **Administrator Time-out**
   The time of no activity to logout automatically, you may set it to zero to disable this feature.
2. **Remote Administrator Host/Port**
   In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host. If this feature is enabled, only the specified IP address can perform remote administration. If the specified IP address is 0.0.0.0, any host can connect to this product to perform administration task. You can use subnet mask bits "/nn" notation to specified a group of trusted IP addresses for example, "10.1.2.0/24".
   NOTE: When Remote Administration is enabled, the web server port will be shifted to 80. You can change web server port to other port, too.
3. **Discard PING from WAN side**
   When this feature is enabled, any host on the WAN cannot ping this product.
4. **DoS Attack Detection**
   When this feature is enabled, the router will detect and log the DoS attack comes from the Internet. Currently, the router can detect the following DoS attack: SYN Attack, WinNuke, Port Scan, Ping of Death, Land Attack etc.

Click on “Save” to store what you just select or” Undo” to give up

3.2.4 Advanced Setting



3.2.4.1 System Log



This page support two methods to export system logs to specific destination by means of syslog (UDP) and SMTP(TCP). The items you have to setup including:

1. **IP Address for Syslog**

   Host IP of destination where syslog will be sent to.
   Check **Enable** to enable this function.
2. **E-mail Alert Enable**

   Check if you want to enable Email alert (send syslog via email).
3. **SMTP Server IP and Port**

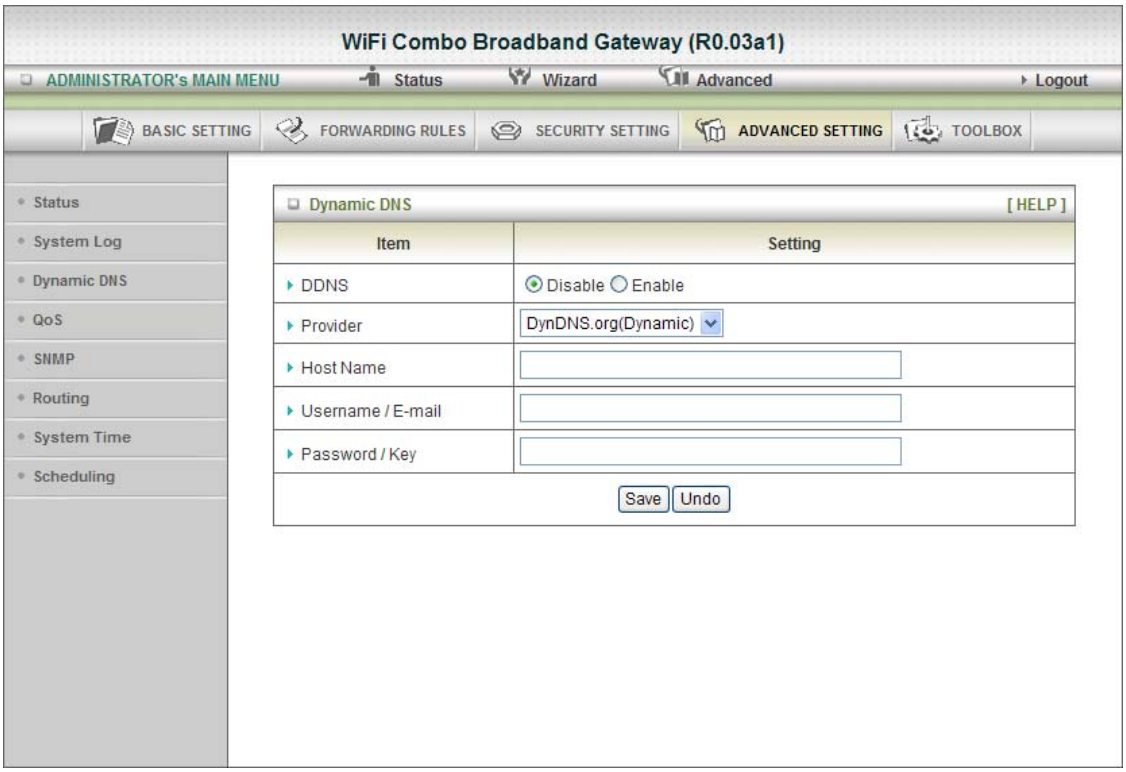
   Input the SMTP server IP and port, which are concated with ':'. If you do not specify port number, the default value is 25.
   For example, "mail.your_url.com" or "192.168.1.100:26".
4. **Send E-mail alert to**

   The recipients who will receive these logs, you can assign more than 1 recipient, using ';' or ',' to separate these email addresses.
5. **E-mail Subject**

   The subject of email alert, this setting is optional.

Click on “Save” to store what you just select or “Undo” to give up

3.2.4.2 Dynamic DNS



To host your server on a changing IP address, you have to use dynamic domain name service (DDNS).
So that anyone wishing to reach your host only needs to know the name of it. Dynamic DNS will map the name of your host to your current IP address, which changes each time you connect your Internet service provider.

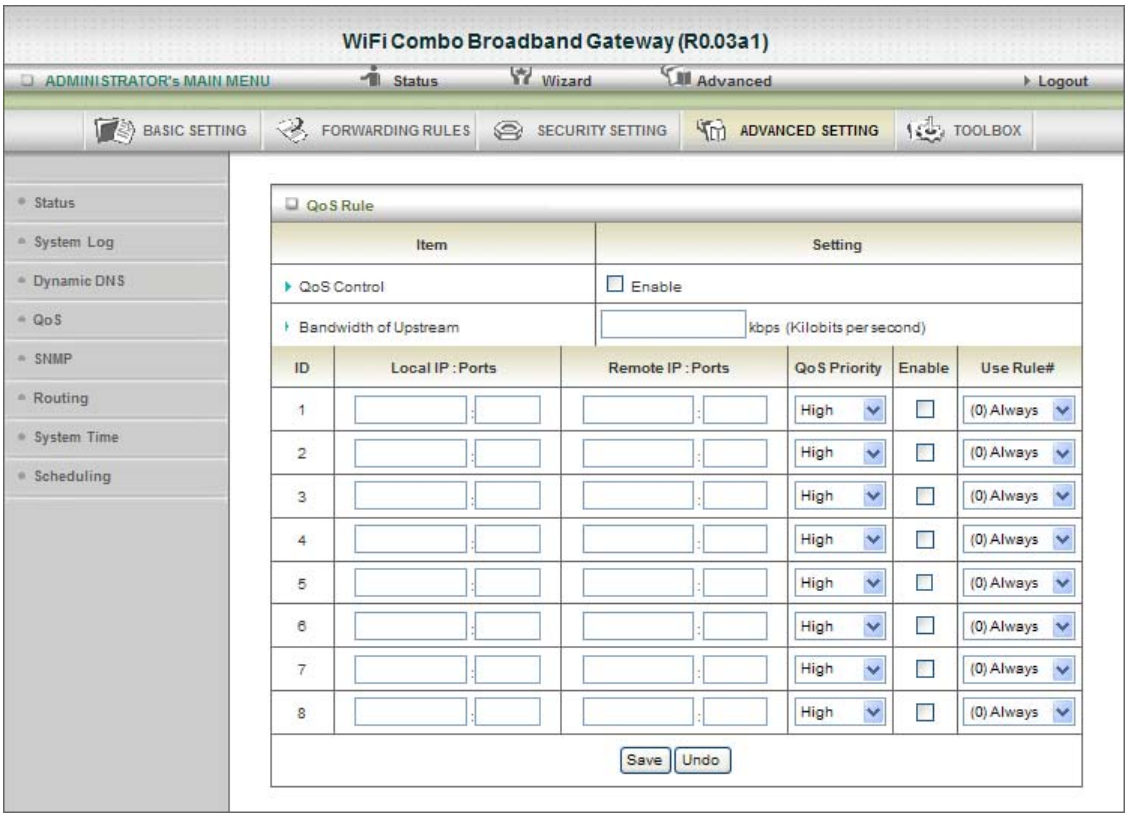
Before you enable Dynamic DNS, you need to register an account on one of these Dynamic DNS servers that we list in provider field.
To enable Dynamic DNS click the check box next to Enable in the DDNS field.
Next you can enter the appropriate information about your Dynamic DNS Server.

You have to define:
Provider
Host Name
Username/E-mail
Password/Key

You will get this information when you register an account on a Dynamic DNS server.

Click on “Save” to store what you just select or “Undo” to give up

3.2.4.3 QOS



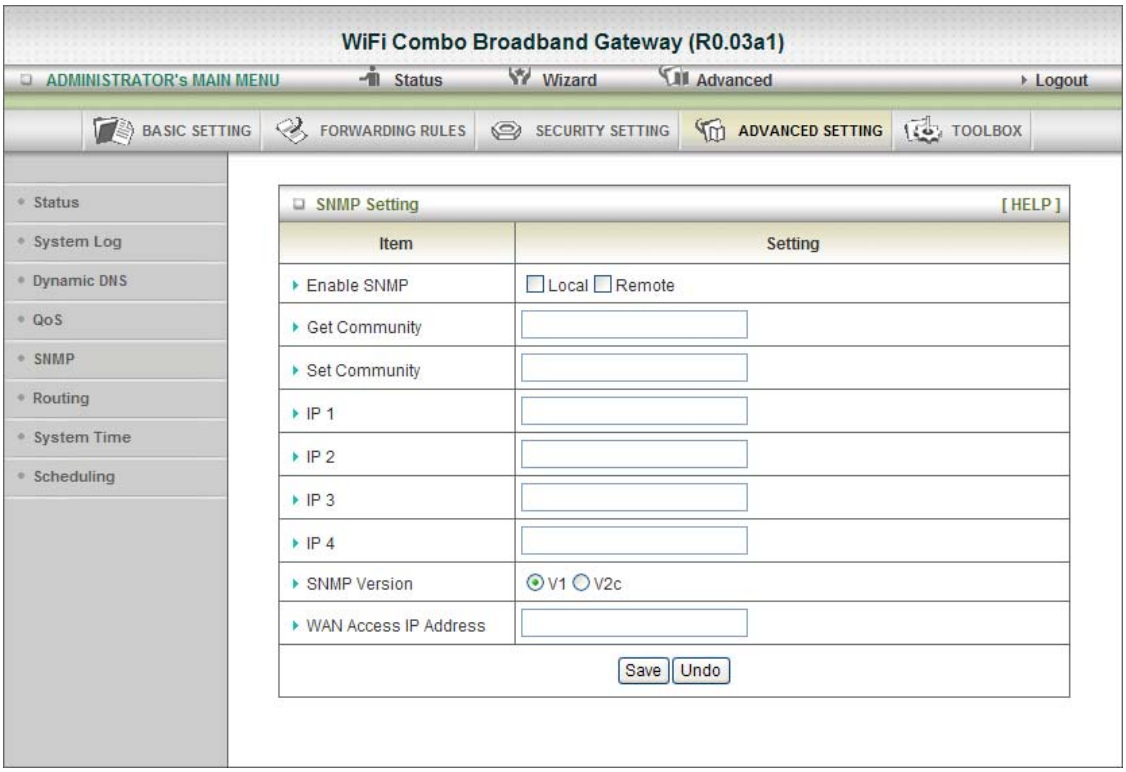
Provide different priority to different users or data flows, or guarantee a certain level of performance.

1. **Enable**
   This Item enables QoS function or not.
2. **Bandwidth of Upstream**
   Set the limitation of upstream speed.
3. **Local: IP**
   Define the Local IP address of packets here.
4. **Local: Ports**
   Define the Local port of the packets in this field.
5. **Remote: IP**
   Define the Remote IP address of packets here.
6. **Remote: Ports**
   Define the Remote port of the packets in this field.
7. **QoS Priority**
   This defines the priority level of the current Policy Configuration. Packets associated with this policy will be serviced based upon the priority level set. For critical applications High or Normal levels are recommended. For non-critical applications select a Low level.
8. **User Rule#**
   The QoS item can work with Scheduling Rule number#. Please reference the section

4.7.7 schedule.

Click on “Save” to store what you just select or “Undo” to give up

3.2.4.4 SNMP



In brief, SNMP, the Simple Network Management Protocol, is a protocol designed to give a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.

1. **Enable SNMP**

   You must check Local, Remote or both to enable SNMP function. If Local is checked, this device will response request from LAN. If Remote is checked, this device will response request from WAN.

2. **Get Community**

   Setting the community of GetRequest your device will response.

3. **Set Community**

   Setting the community of SetRequest your device will accept.

   IP 1, IP 2, IP 3, IP 4

   Input your SNMP Management PC's IP here. User has to configure to where this device should send SNMP Trap message.

4. **SNMP Version**

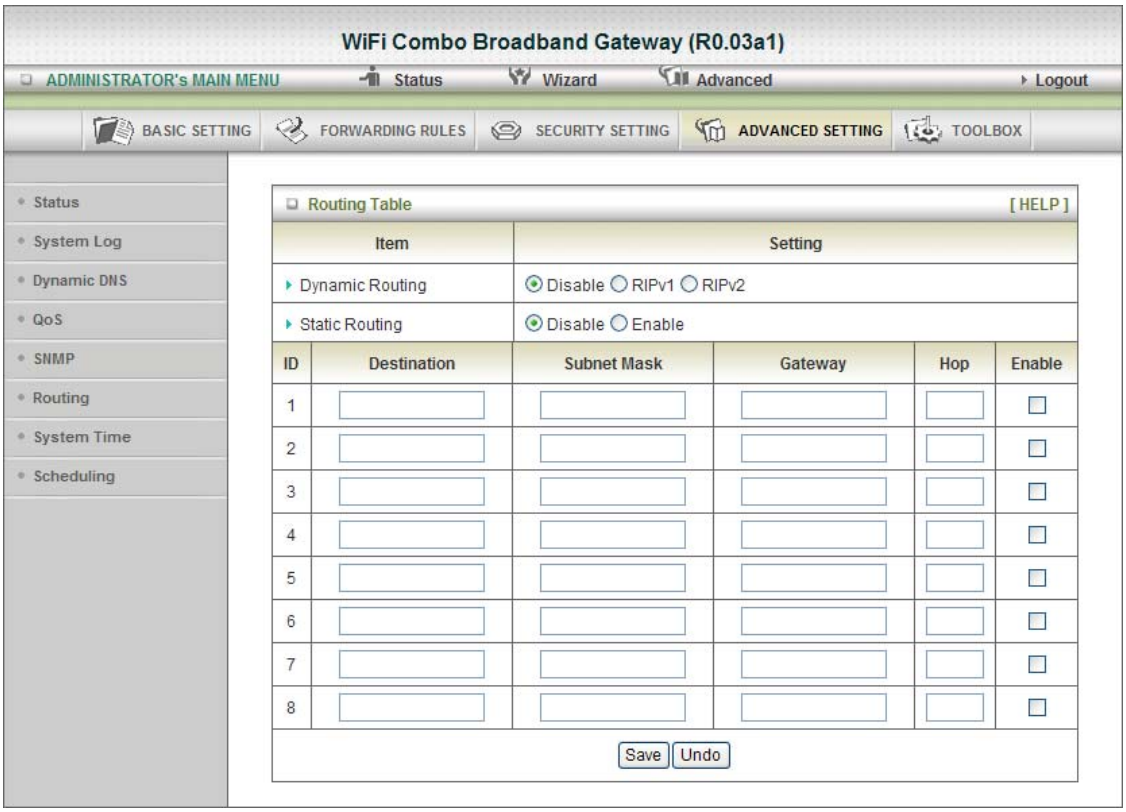
   Please select proper SNMP Version that your SNMP Management software supports.

5. **WAN Access IP Address**

   If the user wants to limit to specific the IP address to access, please input in the item. The default 0.0.0.0 and means every IP of Internet can get some information of device with SNMP protocol.

   Click on "Save" to store what you just select or "Undo" to give up.

3.2.4.5 Routing



1. **Routing Tables**

   Allow you to determine which physical interface address to use for outgoing IP data grams. If you have more than one routers and subnets, you will need to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other.

   Routing Table settings are settings used to setup the functions of static and dynamic routing.

2. **Dynamic Routing**

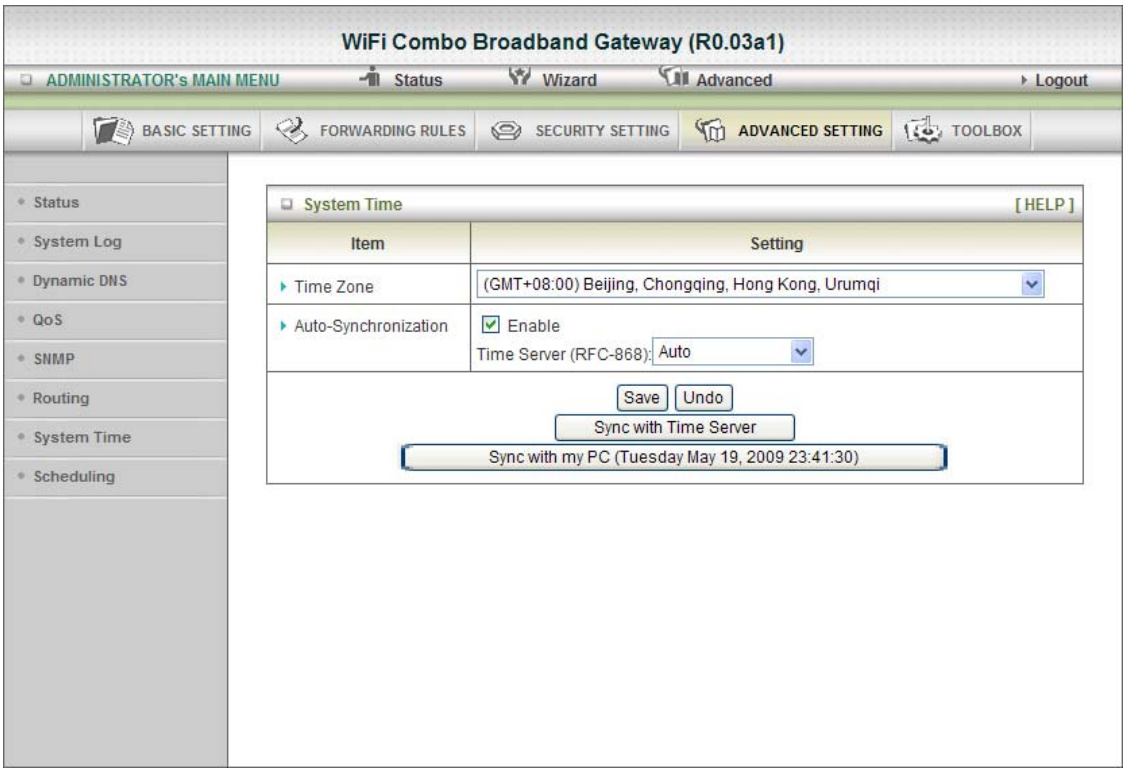
   Routing Information Protocol (RIP) will exchange information about destinations for computing routes throughout the network. Please select RIPv2 only if you have different subnet in your network. Otherwise, please select RIPv1 if you need this protocol.

3. **Static Routing**

   For static routing, you can specify up to 8 routing rules. You can enter the destination IP address, subnet mask, gateway, hop for each routing rule, and then enable or disable the rule by checking or un-checking the Enable checkbox.

Click on “Save” to store what you just select or “Undo” to give up.

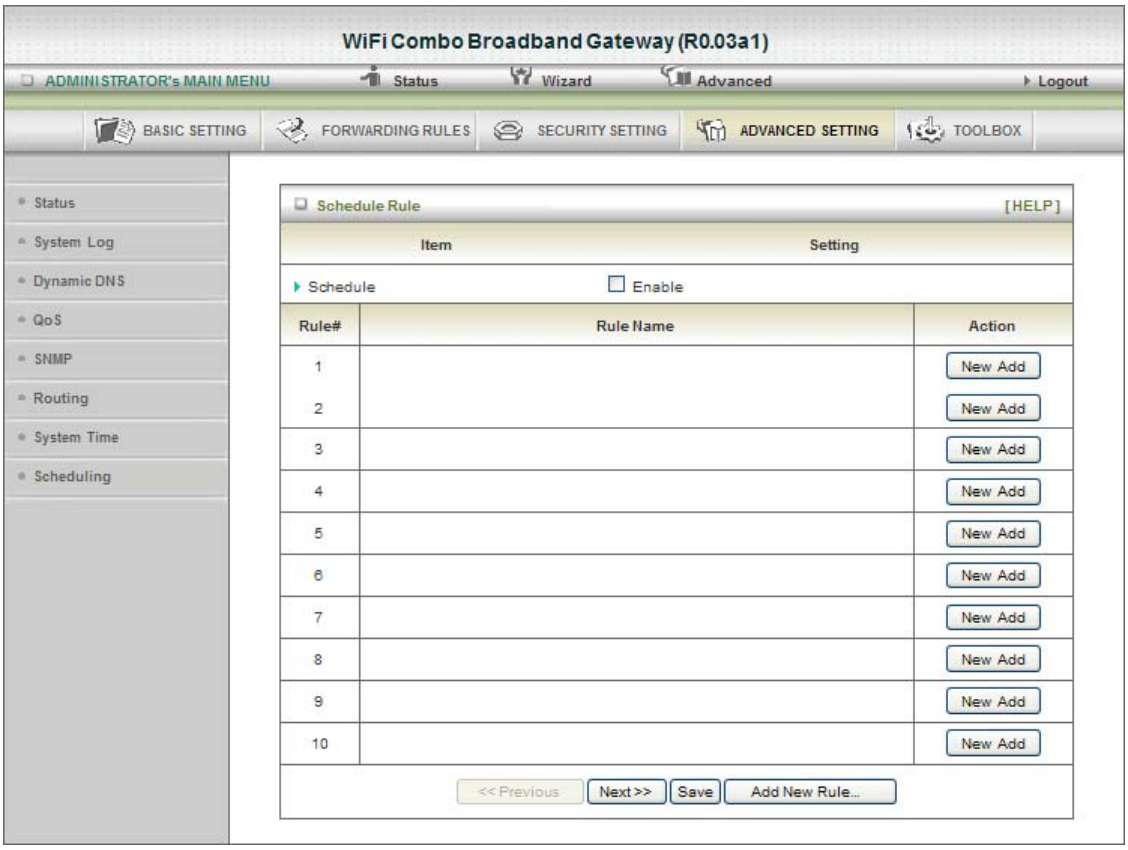
3.2.4.6 System Time



1. **Time Zone**
   Select a time zone where this device locates.
2. **Time Server**
   Select a NTP time server to consult UTC time
3. **Auto-Synchronization**
   Select the “Enable” item to enable this function.
4. **Sync with Time Server**
   Select if you want to set Date and Time by NTP Protocol.
5. **Sync with my PC**
   Select if you want to set Date and Time using PC’s Date and Time

Click on “Save” to store what you just select or “Undo” to give up.

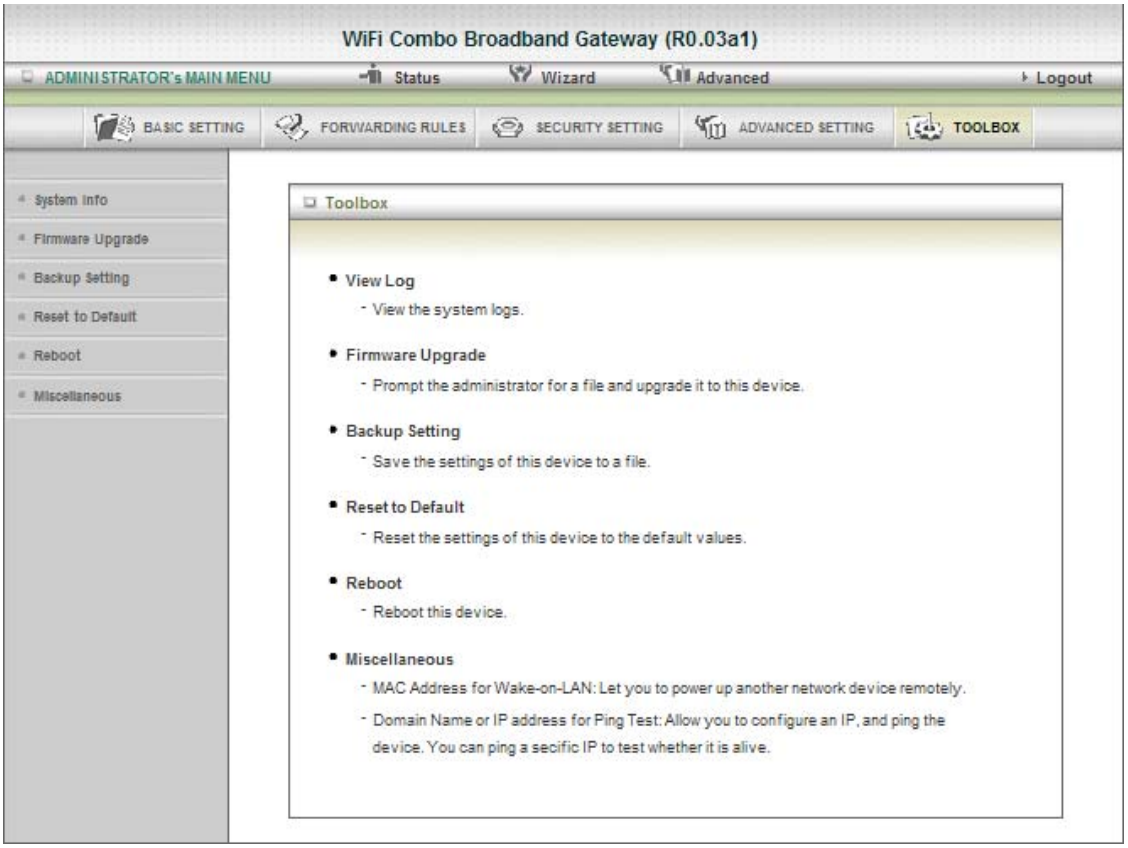
3.2.4.7 Scheduling



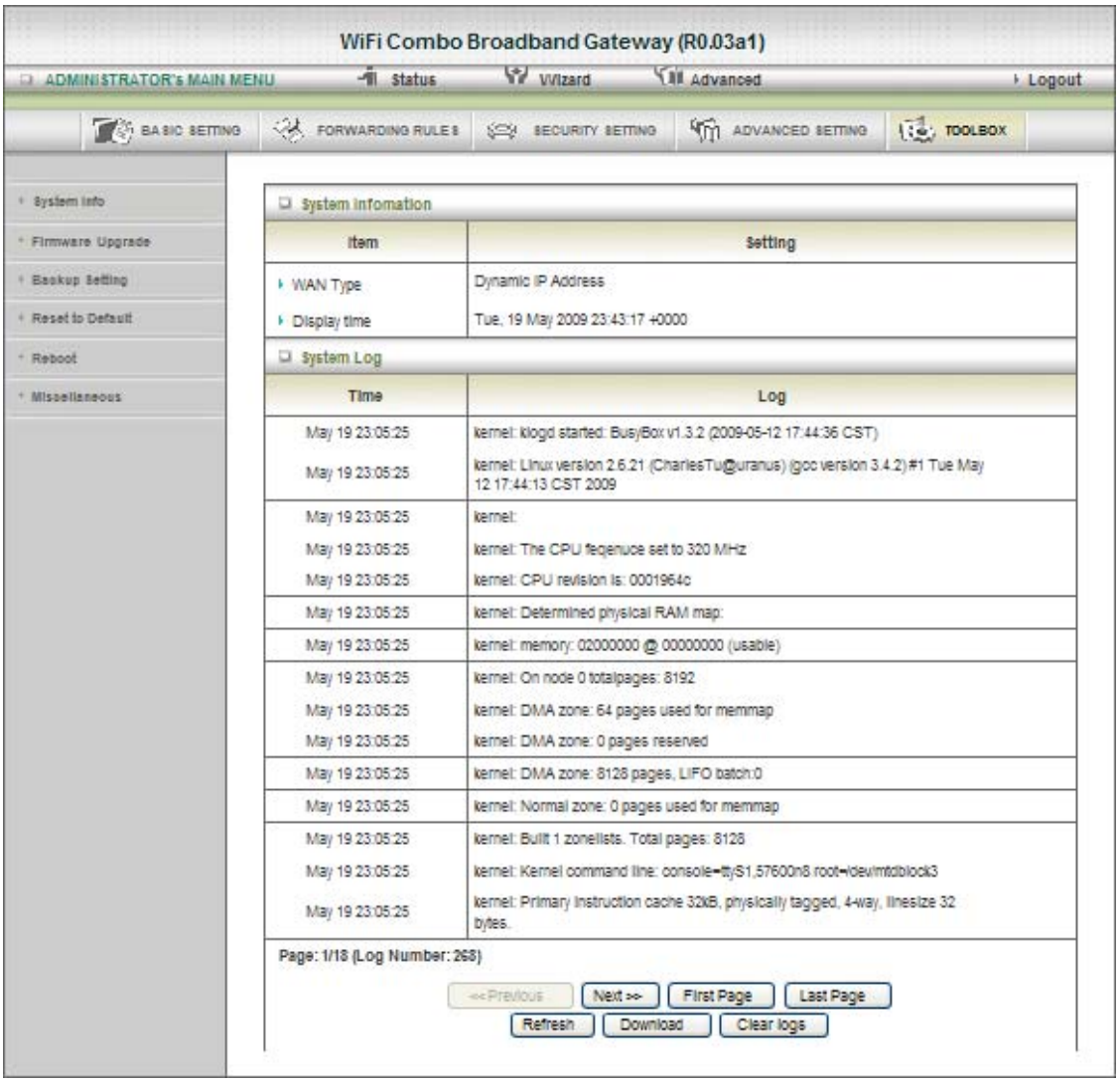
You can set the schedule time to decide which service will be turned on or off.
Select the “Enable” item. Press “Add New Rule” You can write a rule name and set which day and what time to schedule from “Start Time” to “End Time”. The following example configure “ftp time” as everyday 14:10 to 16:20

Click on “Save” to store what you just select.

3.2.5 Tool Box


WiFi Combo Broadband Gateway (R0.03a1)
ADMINISTRATOR's MAIN MENU
Status
Wizard
Advanced
Logout
BASIC SETTING
FORWARDING RULES
SECURITY SETTING
ADVANCED SETTING
TOOLBOX
System Info
Firmware Upgrade
Backup Setting
Reset to Default
Reboot
Miscellaneous
Toolbox
View Log
- View the system logs.
Firmware Upgrade
- Prompt the administrator for a file and upgrade it to this device.
Backup Setting
- Save the settings of this device to a file.
Reset to Default
- Reset the settings of this device to the default values.
Reboot
- Reboot this device.
Miscellaneous
- MAC Address for Wake-on-LAN: Let you to power up another network device remotely.
- Domain Name or IP address for Ping Test: Allow you to configure an IP, and ping the device. You can ping a secific IP to test whether it is alive.

3.2.5.1 System Info



You can view the System Information and System log.
And download/clear the System log, in this page.

3.2.5.2 Firmware Upgrade

You can upgrade firmware by clicking “Upgrade” button.

3.2.5.3 Backup Setting

You can backup your settings by clicking the “**Backup Setting”** button and save it as a bin file. Once you want to restore these settings, please reference the Section 3.2.5.2 **Firmware Upgrade**.

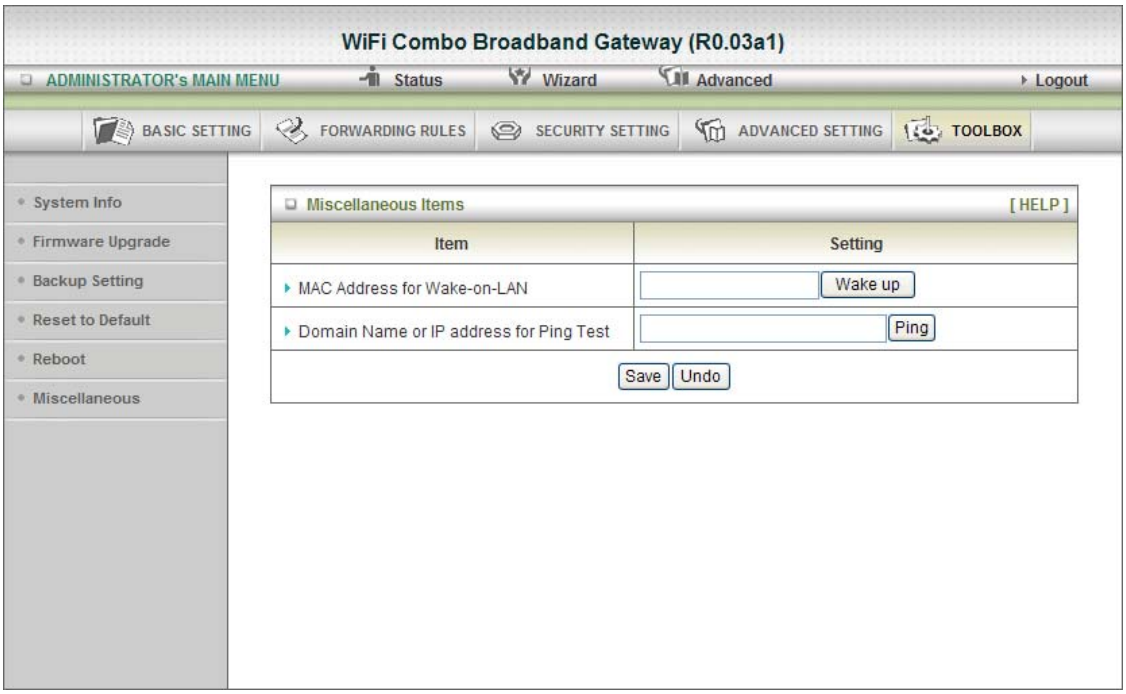
3.2.5.4 Reset to Default

You can also reset this product to factory default by clicking the **Reset to default** button.

3.2.5.5 Reboot

You can also reboot this product by clicking the **Reboot** button.

3.2.5.6 Miscellaneous



1. **MAC Address for Wake-on-LAN**

   Wake-on-LAN is a technology that enables you to power up a networked device remotely. In order to enjoy this feature, the target device must be Wake-on-LAN enabled and you have to know the MAC address of this device, say 00-11-22-33-44-55. Clicking "Wake up" button will make the router to send the wake-up frame to the target device immediately.

2. **Domain Name or IP address for Ping Test**

   You can key in URL or IP address, and then click the “Ping” button for test.

4. Troubleshooting

This section provides an overview of common issues, and possible solutions for the installation and operation of the WiFi Combo Broadband Router.

1. Unable to access the Configuration Menu when I use my computer to configure the router. Why?

Note: It is recommended that you use an Ethernet connection to configure the

Ensure that the **Ethernet LED** on the WiFi Combo Broadband Router is **ON**.
If the **LED** is **NOT ON**, check to see if the cable for the Ethernet connection is securely inserted.

> **Note:** Ensure that the **IP Address** is in the same range and subnet as the WiFi Combo Broadband Router. The IP Address of the WiFi Combo Broadband Router is 192.168.123.254. All the computers on the network must have a unique IP Address within the same range (e.g., 192.168.123.x). Any computers that have identical IP Addresses will not be visible on the network. All computers must also have the same subnet mask (e.g., 255.255.255.0).

Do a **Ping test** to make sure that the WiFi Combo Broadband Router is responding.

Go to **Start > Run**.

1:Type **cmd**.
2:Press **Enter.**
3:Type "**ping 192.168.123.254".** A successful ping shows four replies.

> **Note:** If you have changed the **default** IP Address, ensure you ping the correct IP Address assigned to the WiFi Combo Broadband Router.

Ensure that your Ethernet Adapter is working properly, and that all network drivers are installed properly.

> **Note:** Network adapter names will vary depending on your specific adapter. The installation steps listed below are applicable for all network adapters.

1. Go to **Start > My Computer > Properties**.
2. **Select** the **Hardware Tab**.
3. Click **Device Manager**.
4. Double-click on "**Network Adapters"**.
5. Right-click on **Wireless Cardbus Adapter**, or **your specific network adapter**.
6. Select **Properties** to ensure that all drivers are installed properly.
7. Look under **Device Status** to see if the device is working properly.
8. Click "**OK"**.

2**. Why my wireless client can NOT access the Internet?**

Note: Establish WiFi Connection. As long as you select either **WEP** or **WPA-PSK** encryption, ensure encryption settings match your WiFi settings. Please refer to your WiFi adapter documentation for additional information.

Ensure that the wireless client is associated and joined with the correct Access Point. To check this connection, follow the steps below:

1. **Right-click** on the **Local Area Connection icon** in the taskbar.
2. Select **View Available Wireless Networks in Wireless Configure**. The **Connect to**

Wireless Network screen appears. Ensure you have selected the correct available network.

Ensure the IP Address assigned to the wireless adapter is within the same subnet as the Access Point and gateway. The WiFi Combo Broadband Router has an IP Address of **192.168.123.254.** Wireless adapters must have an IP Address in the same range (e.g., 192.168.123.x). Although the subnet mask must be the same for all the computers on the network, no two devices may have the same IP Address. Therefore, each device must have a unique IP Address.

To check the **IP Address** assigned to the wireless adapter, follow the steps below:

1.Enter ipconfig /all in command mode

2.Enter ping 192.168.123.254.to check if you can access the WiFi Combo Broadband Router

3. Why does my wireless connection keep dropping?

You may try following steps to solve.

- Antenna Orientation.
  - 1: Try different antenna orientations for the WiFi Combo Broadband Router.
  - 2: Try to keep the antenna at least 6 inches away from the wall or other objects.
- Try changing the channel on the WiFi Combo Broadband Router, and your Access Point and Wireless adapter to a different channel to avoid interference.
- Keep your product away (at least 3-6 feet) from electrical devices that generate RF noise, like microwaves, monitors, electric motors, etc.

4. Why I am unable to achieve a wireless connection?

Note: An Ethernet connection is required to troubleshoot the WiFi Combo Broadband Router.

If you have enabled Encryption on the WiFi Combo Broadband Router, you must also enable encryption on all wireless clients in order to establish a wireless connection.

- For 802.11g, the encryption settings are: 64 or 128 bit. Ensure that the encryption bit level is the same for both the WiFi Combo Broadband Router, and your Wireless Client.
- Ensure that the SSID (Service Set Identifier) on the WiFi Combo Broadband Router and the Wireless Client are exactly the same.
  If they are not, your wireless connection will not be established.
- Move the WiFi Combo Broadband Router and the wireless client into the same room, and then test the wireless connection.
- Disable all security settings such as **WEP**, and **MAC Address Control**.
- Turn off the WiFi Combo Broadband Router and the client.
  Turn the WiFi Combo Broadband Router back on again, and then turn on the client.
- Ensure that all devices are set to **Infrastructure** mode.
- Ensure that the LED indicators are indicating normal activity. If not, ensure that the AC power and Ethernet cables are firmly connected.
- Ensure that the IP Address, subnet mask, gateway and DNS settings are correctly entered for the network.
- If you are using 2.4GHz cordless phones, X-10 equipment, or other home security systems, ceiling fans, or lights, your wireless connection may degrade dramatically, or drop altogether.

To avoid interference, change the Channel on the WiFi Combo Broadband Router, and all devices in your network.

• Keep your product at least 3-6 feet away from electrical devices that generate RF noise. Examples include: microwaves, monitors, electric motors, and so forth.

5. I just do not remember my encryption key. What should I do?

• If you forgot your encryption key, the WiFi card will be unable to establish a proper connection.

If an encryption key setting has been set for the WiFi Combo Broadband Router, it must also be set for the WiFi card that will connect to the WiFi Combo Broadband Router.

To reset the encryption key(s), login to the WiFi Combo Broadband Router using a wired connection. (Please refer to “Basic > Wireless (Security–No Encryption)” on page 10, for additional information).

6. How do I reset my WiFi Combo Broadband Router to its factory default settings?

If other troubleshooting methods have failed, you may choose to **Reset** the WiFi Combo Broadband Router to its factory default settings.

To hard-reset the WiFi Combo Broadband Router its factory **default** settings, follow the steps listed below:

1. Ensure the WiFi Combo Broadband Router is powered on
2. Locate the **Reset** button on the back of the WiFi Combo Broadband Router.
3. Use a paper clip to press the **Reset** button.
4. Hold for 10 seconds and then release.
5. After the WiFi Combo Broadband Router reboots, it is reset to the factory **default** settings.

Note: Please note that this process will take a few minutes.

7. What is VPN?

• VPN stands for “Virtual Private Networking.” VPNs create a "tunnel" through an existing Internet connection using PPTP (Point-to-Point Tunneling Protocol) or IPSec (IP Security) protocols with various encryption schemes including Microsoft Challenge Handshake Authentication Protocol (MS-CHAP) .

• This feature allows you to use your existing Internet connection to connect to a remote site with added security. If your VPN connection is not functional, verify that your VPN dial-up configuration is correct.

Note: This information should be provided to you from your VPN provider.

Pressing the Reset Button restores to its original factory **default** settings.

8. What can I do if my Ethernet cable does not work properly?

• First, ensure that there is a solid cable connection between the Ethernet port on the Router, and your NIC (Network Interface Card).

• Second, ensure that the settings on your NIC adapter are “Enabled,” and set to accept an IP address from the DHCP.

• If settings appear to be correct, ensure that you are *not* using a crossover Ethernet cable. Although the WiFi Combo Broadband Router is MDI/MDIX compatible, not all NICs are. Therefore, it is recommended that you use a patch cable when possible.

第十二條

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及功能。

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信；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，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

FCC Caution:

1.The device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

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

2.This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

3. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

FCC statement in User's Manual (for class B)

"Federal Communications Commission (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.