

KA300 Wireless Router User Manual

Default Login Details

IP Address	http://192.168.1.1
User Name	admin
Password	admin



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FCC Warning:

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: 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.

FCC Radiation Exposure Statement:

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Content

1 INTRODUCTION	3
1.1 MAIN FEATURES.....	3
1.1.1 <i>Wireless.....</i>	<i>3</i>
1.1.2 <i>Network Protocol and Features</i>	<i>3</i>
1.1.3 <i>Firewall.....</i>	<i>3</i>
1.1.4 <i>Management Support</i>	<i>4</i>
1.1.5 <i>Operating System Support</i>	<i>4</i>
1.1.6 <i>Environmental.....</i>	<i>4</i>
1.2 PACKET CONTENTS.....	4
1.3 SYSTEM REQUIREMENTS.....	4
1.4 FACTORY DEFAULTS	5
1.5 WARNINGS AND CAUTIONS	5
2 HARDWARE DESCRIPTION	6
3 HARDWARE INSTALLATION	7
4 PC CONFIGURATION GUIDE	8
4.1 LOCAL PC CONFIGURATION IN WINDOWS 95, 98, ME, XP.....	8
4.2 LOCAL PC CONFIGURATION IN WINDOWS 2000	9
4.3 LOCAL PC CONFIGURATION IN WINDOWS VISTA	9
4.4 LOCAL PC CONFIGURATION IN WINDOWS 7.....	10
5 QUICK SETUP OF THE ROUTER	10
6 WEB-BASED BASIC MANAGEMENT GUIDE	14
6.1 HOME PAGE BASIC SETTING.....	14
6.1.1 <i>Network (WANSettings)</i>	<i>14</i>
6.1.2 <i>LAN Settings</i>	<i>16</i>
6.1.3 <i>Wireless Settings</i>	<i>18</i>
6.2 PARENTAL CONTROL.....	18
6.3 ADMINISTRATION	19
6.3.1 <i>Time setting</i>	<i>19</i>
6.3.2 <i>Password:</i>	<i>20</i>
6.3.3 <i>Backup/restore/reset</i>	<i>20</i>
6.3.4 <i>Firmware update.....</i>	<i>21</i>
7 WEB-BASED ADVANCE MANAGEMENT GUIDE	22
7.1 SETUP	22
7.1.1 <i>WAN setup.....</i>	<i>22</i>
7.1.2 <i>LAN setup.....</i>	<i>25</i>
7.1.3 <i>IPV6</i>	<i>26</i>
7.1.4 <i>Advanced Routing Setup</i>	<i>27</i>
7.2 WIRELESS SETUP.....	28
7.2.1 <i>Wireless Basic Settings</i>	<i>28</i>
7.2.2 <i>Guest Access</i>	<i>29</i>

7.2.3	<i>Security</i>	30
7.2.4	<i>WPS Setup</i>	31
7.2.5	<i>Wireless Access Setup</i>	32
7.2.6	<i>WDS Setup</i>	33
7.3	SERVICE – QOS SETUP	36
7.4	SECURITY SETUP	37
7.4.1	<i>Firewall setup</i>	37
7.4.2	<i>URL Setup</i>	38
7.4.3	<i>Remote Access Setup</i>	38
7.4.4	<i>DoS</i>	39
APPENDIX:	FREQUENT ASKED QUESTIONS	40

1 Introduction

Thank you for choosing our product. The KA300 Wireless Router uses Broadcom's CPE solution that fully complies with IEEE802.11b/g/n standards. It will provide your SOHO with convenient Internet.

1.1 Main Features

1.1.1 Wireless

- Fully IEEE 802.11b /g /n compatible.
- Wireless data rate up to 300 Mbps
- Operating in the unlicensed 2.4 GHz ISM band
- Supports 64/128 bits WEP, WPA, WPA2, WPA/WPA2-PSK, 802.1x

1.1.2 Network Protocol and Features

- Ethernet to ADSL Self-Learning Transparent Bridging
- Internet Control Message Protocol (ICMP)
- IP Static Routing
- Routing Information Protocol (RIP, RIPv2)
- Network Address Translation (NAT)
- Virtual Server, Port Forwarding
- Dynamic Host Configuration Protocol (DHCP)
- DDNS
- Simple Network Time Protocol (SNTP)
- Parent control

1.1.3 Firewall

- Built-in NAT
- MAC Filtering
- Packet Filtering
- Stateful Packet Inspection (SPI)

- Denial of Service Prevention (DoS)
- DMZ

1.1.4 Management Support

- Web Based GUI
- Upgrade or update via FTP/HTTP
- Command Line Interface via Telnet
- Diagnostic Test
- Firmware upgrade-able for future feature enhancement

1.1.5 Operating System Support

- WINDOWS 98/SE/ME/2000/XP/VISTA/7
- Macintosh
- LINUX

1.1.6 Environmental

- Operating humidity: 10%-90% non-condensing
- Non-operating storage humidity: 5%-95% non-condensing

1.2 Packet Contents

The packet contents are as the following:

- ROUTER x 1
- Power Adapter x 1
- Ethernet Cable x 1
- CD x 1

1.3 System Requirements

- Broadband Internet Access Service (DSL/Cable/Ethernet)
- One DSL/Cable Modem that has an RJ45 connector (which is not necessary if the Router is connected directly to the Ethernet)
- 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

1.4 Factory Defaults

The device is configured with the following factory defaults:

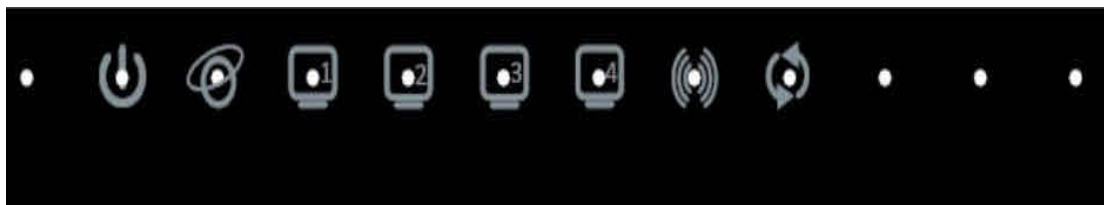
- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0






1.5 Warnings and Cautions

- never use the product near water.
- To prevent dangerous overloading of the power circuit, be careful about the designed maximum power load ratings. Not to follow the rating guideline could result in a dangerous situation.
- Please note that telephone line on modem must adopt the primary line that directly outputs from junction box. Do not connect Router to extension phone. In addition, if your house developer divides a telephone line to multi sockets inside the wall of house, please only use the telephone that has connected with the splitter of ADSL Router when you access the Internet. Under the above condition, if you also install telephone with anti-cheat-dial device, please pull out this kind of telephone, otherwise ADSL Router may occur frequently off-line.

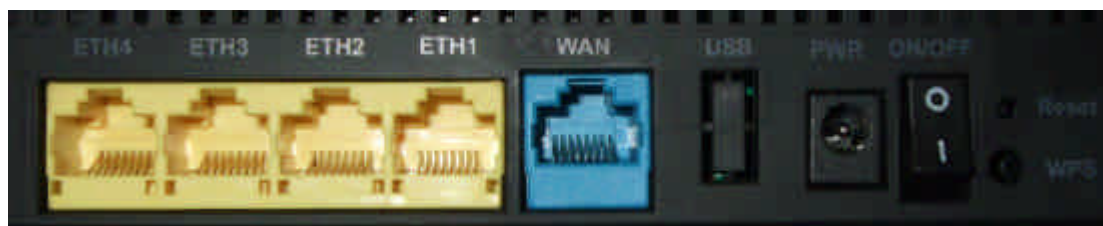
2 Hardware Description

Front Panel



LED	Color	Function
	Blue	Off: Power Not Supplied On: Power Supplied
	Blue	On: The WAN port has detected a link with an attached device Blinking: Data is being transmitted or received by the WAN port Off: No WAN link via the WAN port
	Blue	On: LAN link established and active via LAN port Blinking: ADSL data activity occurs Off: No LAN link via LAN port
	Blue	On: The wireless module is ready and idle Blinking: Data transmitting or receiving over WLAN Off: The wireless function is off
	Blue	On: WPS connection is established Blinking: Trying to establish a WPS connection Off: WPS function is off or no WPS connection

Rear panel



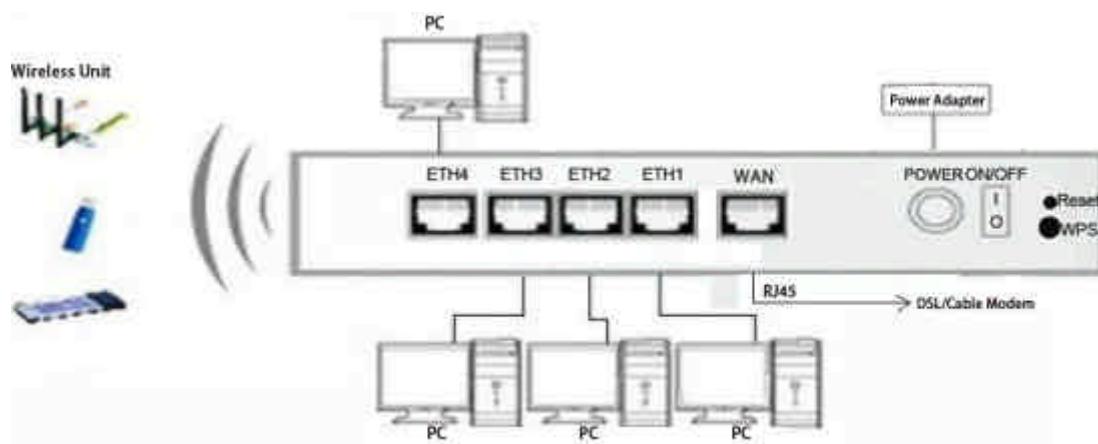
Port	Function
WAN	Connect the device to a cable or DSL modem
ETH1,2,3,4	Connect the device to your PC's Ethernet port, or to the uplink port on your hub/switch, using a RJ-45 cable
RESET	System reset or reset to factory defaults
WPS	On: WPS connection is established Blinking: Trying to establish a WPS connection Off: WPS function is off or no WPS connection
ON/OFF	Switch it on or off
POWER	Connect to the supplied power adapter

3 Hardware Installation

This chapter shows you how to connect Router. Meanwhile, it introduces the appropriate environment for the Router and installation instructions.

1. Using an Ethernet Cable to connect the WAN port of the ROUTER to a cable or DSL modem.
2. Using an Ethernet Cable to connect the LAN port of the ROUTER to your LAN or a PC with network card installed.

3. Connect the power cable to the PWR connector on ROUTER, then plug in the power adapter to the AC power outlet, and then press the on-off button.



4 PC Configuration Guide

4.1 Local PC Configuration in Windows 95, 98, ME, XP

1. In the Windows task bar, click the "Start" button, point to "Settings", and then click "Control Panel".
2. Double-click the "Network" icon.
3. On the "Configuration" tab, select the TCP/IP network associated with user's network card and then click "Properties".
4. In the "TCP/IP Properties" dialog box, click the "IP Address" tab. Set the IP address as 192.168.1.x (x can be a decimal number from 2 to 254.) like 192.168.1.2, and the subnet mask as 255.255.255.0.

5. On the “Gateway” tab, set a new gateway as 192.168.1.1, and then click “Add”.
6. Configure the “DNS” tab if necessary. For information on the IP address of the DNS server, please consult with user’s ISP.
7. Click “OK” twice to confirm and save user’s changes.
8. User will be prompted to restart Windows. Click “Yes”.

4.2 Local PC Configuration in Windows 2000

1. In the Windows task bar, click the “Start” button, point to “Settings”, and then click “Control Panel”.
2. Double-click the “Network and Dial-up Connections” icon.
3. In the “Network and Dial-up Connections” window, right-click the “Local Area Connection” icon, and then select “Properties”.
4. Highlight “Internet Protocol (TCP/IP)”, and then click “Properties”.
5. In the “Internet Protocol (TCP/IP) Properties” dialog box, set the IP address as 192.168.1.x (x can be a decimal number from 2 to 254.), and the subnet mask as 255.255.255.0 and the default gateway as 192.168.1.1. Then click “OK”.
6. Configure the “DNS” tab if necessary. For information on the IP address of the DNS server, please consult with user’s ISP.
7. Click “OK” twice to confirm and save user’s changes.

4.3 Local PC Configuration in Windows Vista

1. Go to Start. Click on Network.
2. Then click on Network and Sharing Center at the top bar.
3. When the Network and Sharing Center window pops up, select and click on Manage network connections on the left window column.
4. Select the Local Area Connection, and right click the icon to select Properties.
5. Select Internet Protocol Version 4 (TCP/IPv4) then click Properties.

6. In the TCP/IPv4 properties window, select the Obtain an IP address automatically and Obtain DNS Server address automatically radio buttons. Then click OK to exit the setting.
7. Click OK again in the Local Area Connection Properties window to apply the new configuration.

4.4 Local PC Configuration in Windows 7

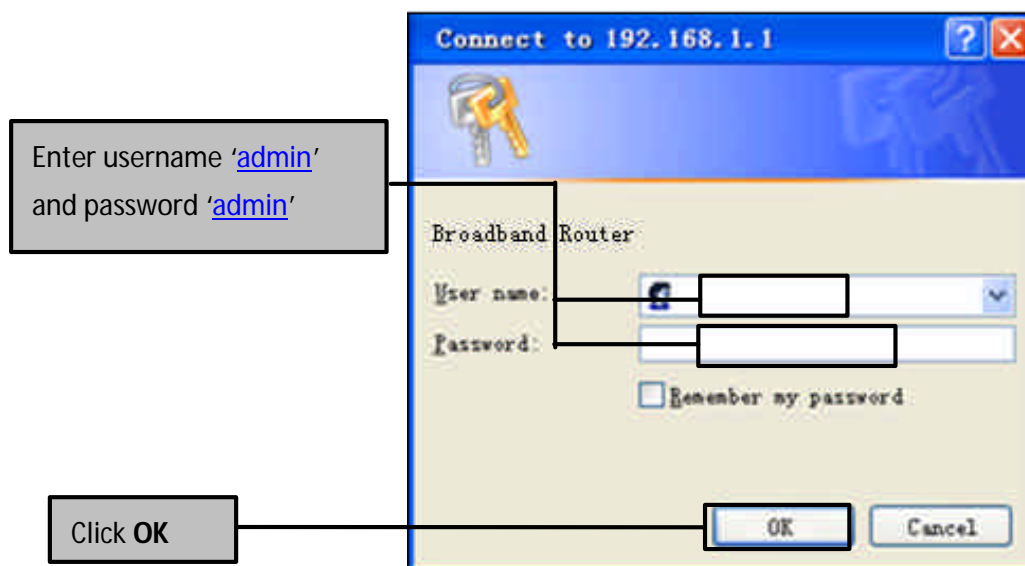
1. Go to Start. Click on Control Panel. Then click on Network and Internet.
2. When the Network and Sharing Center window pops up, select and click on Change adapter settings on the left window panel.
3. Select the Local Area Connection, and right click the icon to select Properties.
4. Select Internet Protocol Version 4(TCP/IPv4) then click Properties.
5. In the TCP/IPv4 properties window, select the Obtain an IP address automatically and Obtain DNS Server address automatically radio buttons. Then click OK to exit the setting.
6. Click OK again in the Local Area Connection Properties window to apply the new configuration.

5 Quick Setup of the Router

In order to use the web-based management software, it will be necessary to use a computer that occupies the same subnet as the Router. The simplest way to do this for many users will be to use DHCP server that is enabled by default on the Router. please make sure the wan connection is ok.

Internet Connection Setup Wizard will guide you through a step-by-step process to configure your router and connect to the Internet.ill guide you through a step-by-step process to configure your router and connect to the Internet.

(1) Launch a web browser, such as Internet Explorer, and then use <http://192.168.1.1> to log on to the setting pages. Enter username “admin” and password “admin”, then click “OK”.



(2) After log on ,you will see the following page. When WAN connection is ok , please press next. When the wan connection is bad, please check your cable.



(3) The WAN connection type will appear, the quick setup supports two popular mode PPPoE, DHCP(Dynamic IP) to connect to the internet, If the connection type is PPPoE , enter the username and password provided by your ISP. If the connection type is dynamic IP, the router will obtain an IP automatically from you ISP. Wireless is enabled by default. please enter SSID and Password for wireless network Then click “next”.

Internet Connection Type

PPPOE
 Automatic Configuration - DHCP

Username :

Password : (Enter at least 8 characters for password)

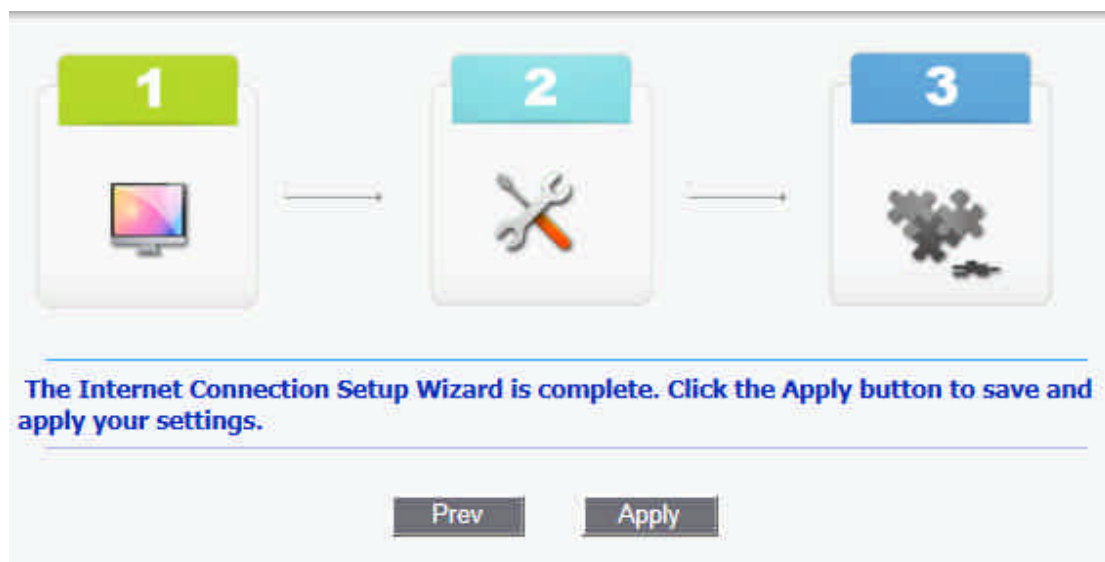
Wireless Setup

WiFi Enable
 WiFi Disable

Wireless SSID :

Wireless Password : (Nothing or enter 8 to 64 characters for the WiFi password)

(4)The Internet Connection Setup Wizard is complete. Click the Apply button to save and apply your settings.



After the configuration above , Now you can surf the Internet.

6 Web-based basic Management Guide


This chapter will introduce how to configure your router in detail , the home page is as shown. From home page, you can find basic & Advanced Setup option on the top router home configuration page. Basic menu has two options ,one is home and the other is administration .Below the home menu , there are two options: home & parent control.



6.1 home page basic setting

6.1.1 Network (WANSettings)

KA300 supports three types WAN connection.they are DHCP,Static IP,PPPOE, Select any of them you will be able to configure the corresponding connection of WAN. Click the

icon  ,the wan setup page will appear ,as shown ,you can configure the IP WAN parameters

WAN Setup

WAN Connection

Connection Type:

Username:

Password:

✧ DHCP connection type

If your ISP provides the DHCP service, please choose Dynamic IP type, and the Router will automatically get IP parameters including IP address, Subnet Mask, Default Gateway, from your ISP. You can see the page as follows .,

WAN Setup

WAN Connection

Connection Type:

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

✧ Static IP

If your ISP provides a static or fixed IP Address, Subnet Mask, Gateway and DNS setting, select Static IP. The Static IP settings page will appear.

WAN Setup

WAN Connection

Connection Type:

IP Address:

Subnet Mask:

Default Gateway:

DNS 1:

DNS 2 (Optional):

DNS 3 (Optional):

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.

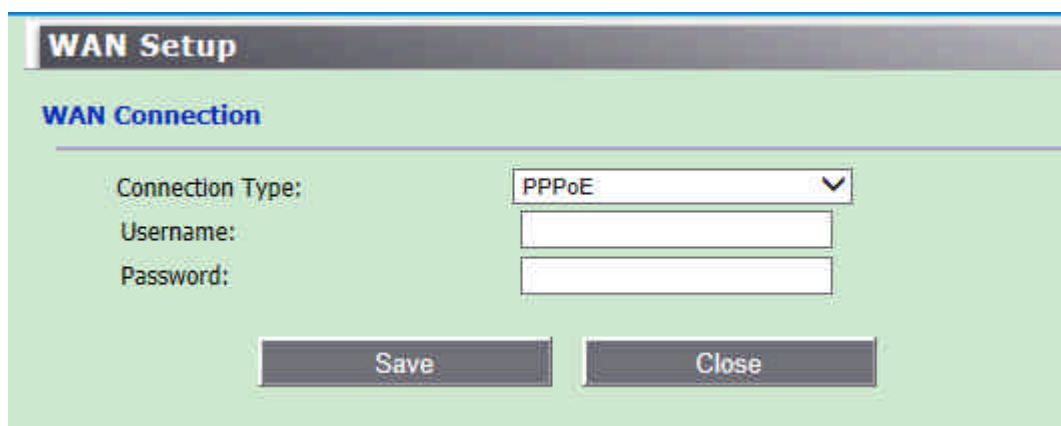
Default Gateway:(Optional) Enter the gateway IP address in dotted-decimal notation provided by your ISP.

DNS1/DNS2(Optional) /DNS3(Optional) : Enter one or two DNS addresses in dotted-decimal notation provided by your ISP.

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

✧ PPPOE

If your ISP provides a PPPoE connection, select PPPoE option. And you should enter the following parameters.




The screenshot shows a web interface titled "WAN Setup" with a sub-section "WAN Connection". Under "WAN Connection", there is a "Connection Type:" dropdown menu currently set to "PPPoE". Below this are two text input fields labeled "Username:" and "Password:". At the bottom of the section are two buttons: "Save" and "Close".

User Name/Password - Enter the User Name and Password provided by your ISP. These fields are case-sensitive.

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

6.1.2 LAN Settings



Click  (any lan port is OK) icon, you can configure the IP parameters of the LAN on the screen as below.

Network Setup

Router IP

Local IP Address: 192 . 168 . 1 . 1

DHCP Settings:

DHCP Server: Enabled Disabled

Start IP Address: 192.168.1.100

End IP Address: 192.168.1.150

Save Close

Local IP Address: Enter the IP address of your Router or reset it in dotted-decimal notation (factory default: 192.168.1.1).

DHCP Server: Enable or Disable the DHCP server. If you disable the Server, you must have another DHCP server within your network or else you must configure the computer manually.

Start IP Address: Specify an IP address for the DHCP Server to start with when assigning IP addresses. 192.168.1.100 is the default start address.


End IP Address: Specify an IP address for the DHCP Server to end with when assigning IP addresses. 192.168.1.150 is the default end address.

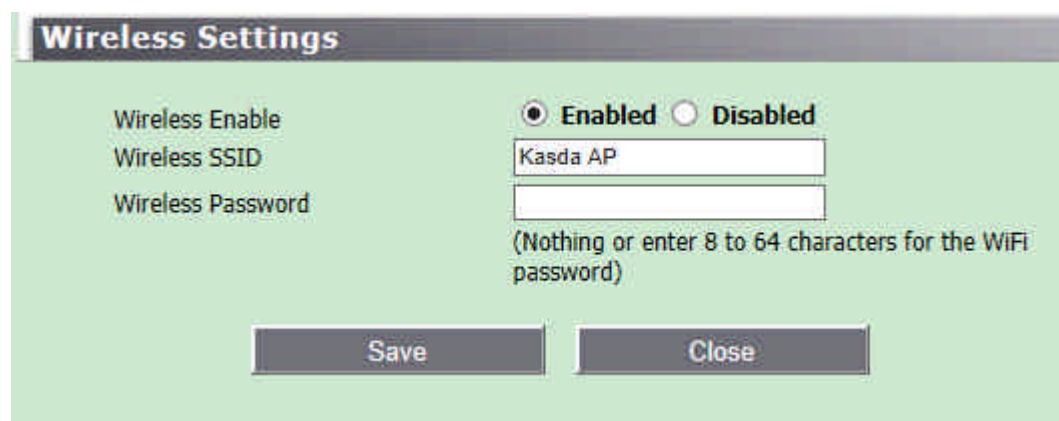
Click the Save button to save your settings.

Note:

- 1) If you change the IP Address of LAN, you must use the new IP Address to log in the Router.
- 2) If the new LAN IP Address you set is not in the same subnet, the IP Address pool of the DHCP server will change accordingly at the same time, while the Virtual Server and DMZ Host will not take effect until they are re-configured.

6.1.3 Wireless Settings

Click  icon, you can configure the basic settings for the wireless network of 2.4GHz on this page.



Wireless enable :Enable or disable the Wireless function here.

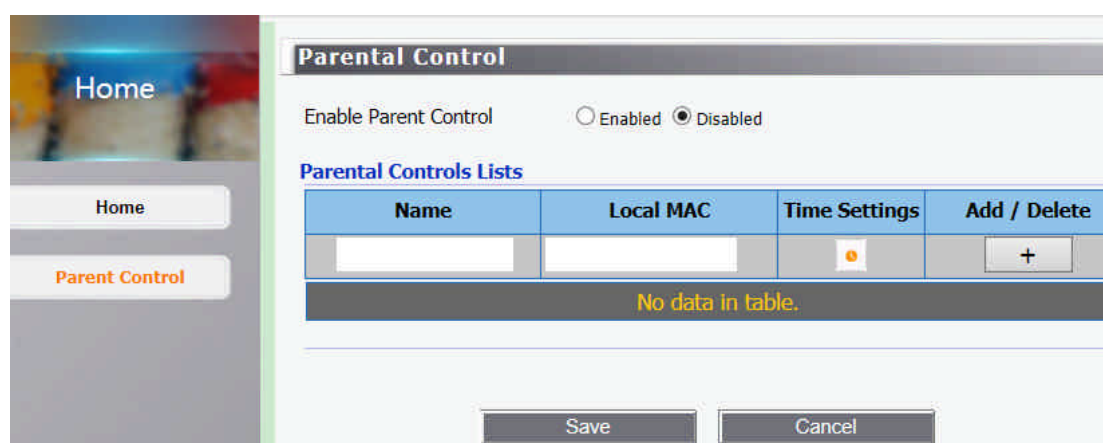
Network Name (SSID) : Also called the SSID. Enter a value of up to 32 characters. The same name must be assigned to all wireless devices in your network .

Wireless password : nothing or enter 8~64 characters for the wifi password.

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

6.2 Parental Control

Parental control allows you to set the time limit for a client's network usage.



Name	Local MAC	Time Settings	Add / Delete
<input type="text"/>	<input type="text"/>		<input data-bbox="1252 1612 1332 1657" type="button" value="+"/>

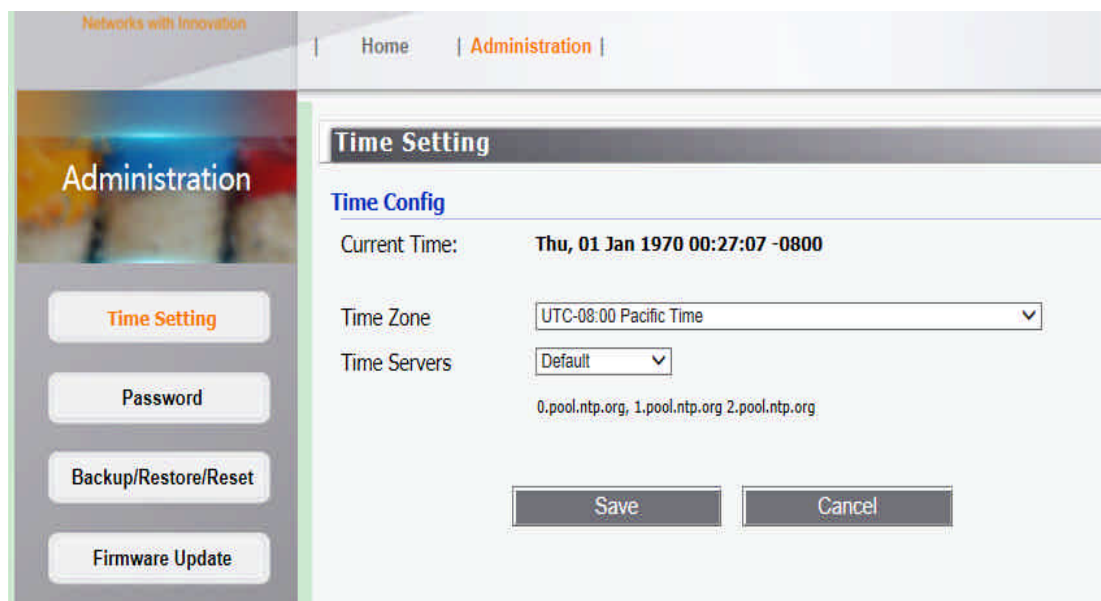
1. In the [Service Name] column, select the client whose network usage you want to control. You may also key in the clients MAC address in the [Local MAC] column.
2. In the [Add / Delete] column, click the Edit icon.

3. Set up allowed time limits in the [Time Settings] map. Drag and drop to desired day/time.

6.3 Administration

6.3.1 Time setting

This page allows you to set the time manually or to configure automatic time synchronization. The Router can automatically update the time from an NTP server via the Internet.



The screenshot shows the 'Time Setting' configuration page. The page has a navigation bar with 'Home' and 'Administration' (selected). A sidebar on the left contains 'Administration' and buttons for 'Time Setting', 'Password', 'Backup/Restore/Reset', and 'Firmware Update'. The main content area is titled 'Time Setting' and 'Time Config'. It displays the 'Current Time' as 'Thu, 01 Jan 1970 00:27:07 -0800'. Below this are two dropdown menus: 'Time Zone' set to 'UTC-08:00 Pacific Time' and 'Time Servers' set to 'Default'. Under 'Time Servers', the text '0.pool.ntp.org, 1.pool.ntp.org 2.pool.ntp.org' is visible. At the bottom are 'Save' and 'Cancel' buttons.

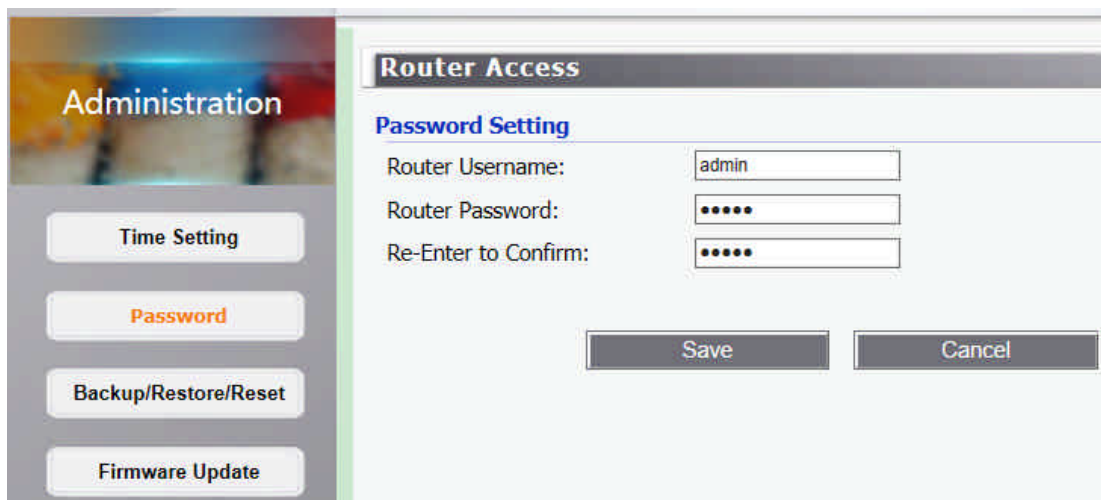
Time Zone - Select your local time zone from this pull-down list.

Time Servers - Select the time servers. You can choose the place where you are. Or select **Custom** to configure the servers by yourself.

Time will show up on the page (**Advanced--Status--Status, Current Time**).

Note: After you have made your changes, Click **Save** to apply the changes.

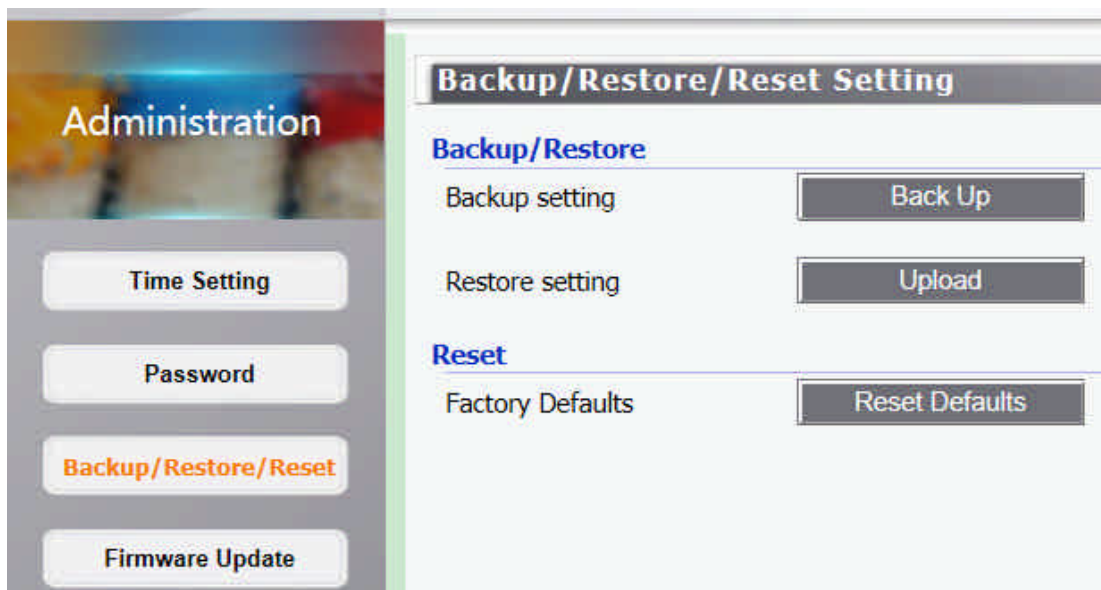
6.3.2 Password:



The screenshot shows the 'Router Access' configuration page. On the left is a navigation menu with 'Administration' at the top and buttons for 'Time Setting', 'Password' (highlighted in orange), 'Backup/Restore/Reset', and 'Firmware Update'. The main content area is titled 'Router Access' and contains a 'Password Setting' section. It includes three input fields: 'Router Username' with the value 'admin', 'Router Password' with masked characters '*****', and 'Re-Enter to Confirm' also with masked characters '*****'. At the bottom right of this section are 'Save' and 'Cancel' buttons.

It is strongly recommended that you change the factory default user name and password of the Router. All users who try to access the Router's web-based utility will be prompted for the Router's user name and password.

6.3.3 Backup/restore/reset



The screenshot shows the 'Backup/Restore/Reset Setting' page. The left navigation menu is the same as in the previous screenshot, but 'Backup/Restore/Reset' is highlighted in orange. The main content area is titled 'Backup/Restore/Reset Setting' and is divided into two sections. The 'Backup/Restore' section has two rows: 'Backup setting' with a 'Back Up' button, and 'Restore setting' with an 'Upload' button. The 'Reset' section has one row: 'Factory Defaults' with a 'Reset Defaults' button.

Click the **Backup** button to save all configuration settings to your local computer as a file. Click the **Browse** button to find the configuration file which you want to restore.

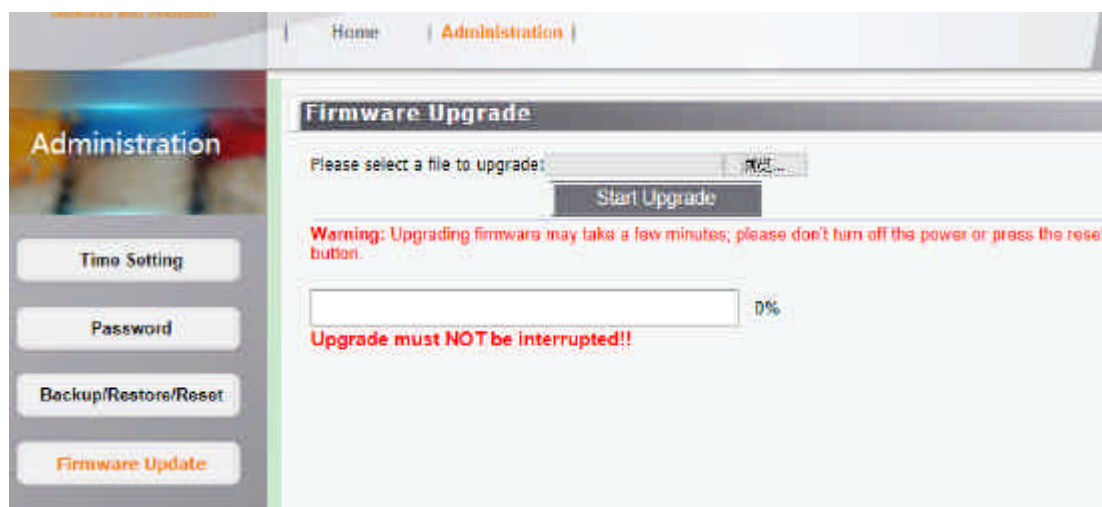
Click the **Upload** button to update the configuration with the file whose path is the one you have input or selected in the blank.

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

- ? The default User Name: admin
- ? The default Password: admin
- ? The default Subnet Mask: 255.255.255.0

Note: All changed settings will be lost when defaults are restored.

6.3.4 Firmware update



Click **Browse/Choose** and select the firmware upgrade file. Then click **Start Upgrade**.

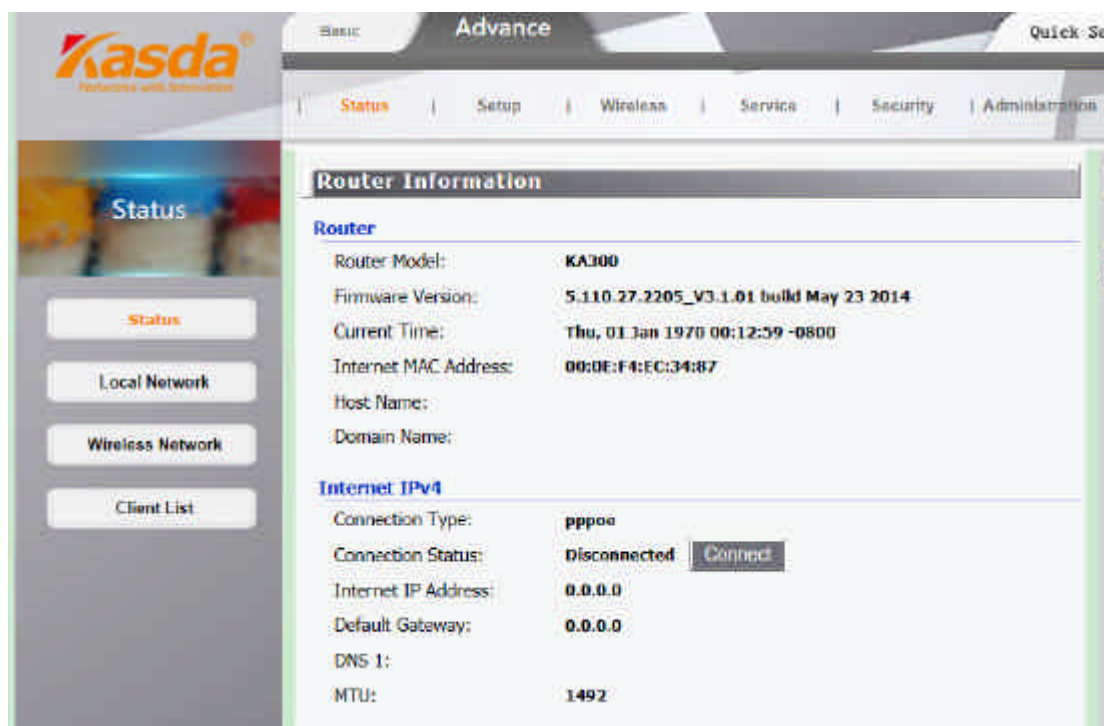
Warning: Upgrading firmware may take a few minutes; please don't turn off the power or press the reset button.

Upgrade must not be interrupted!!

7 Web-based Advance Management Guide

This chapter will introduce how to configure your router advanced , behind the advanced menu,there are six options :status , setup , wireless , service , security , administration.

The Status page displays the Router's current status and wan configuration.



7.1 Setup

Click advanced menu , and then click setup , you can set up WAN, LAN, IPV6, Advanced Routing

7.1.1 WAN setup

Some Internet Service Providers (ISPs) will require that you enter specific information, such as User Name, Password, IP Address, Default Gateway Address, or DNS IP Address. This information can be obtained from your ISP, if required.

✧ WAN Connection Type

(1) Automatic Configuration – DHCP

If you connect using a dynamic IP address or cable modem, keep the default: Automatic Configuration - DHCP.

(2) Static IP .

To use a fixed IP address to connect to the Internet, select Static IP.

Internet IP Address – Enter the IP address provided by your ISP.

Subnet Mask – Enter the subnet mask provided by your ISP.

Default Gateway – Enter the gateway IP address provided by your ISP.

DNS 1-3 – Enter the DNS (Domain Name System) server IP address(es) provided by your ISP.

(3) PPPoE

If you use a DSL or PPPoE connection, select PPPoE.

Username – Enter the username provided by your ISP. **Password** – Enter the password provided by your ISP.

Service Name (Optional) – Enter the Service Name, if required by your ISP.

Connect on Demand: Max Idle Time – You can configure the router to disconnect your Internet connection after a specified period of inactivity (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the router to automatically re-establish your connection as soon as you attempt to access the Internet again. If you want your Internet connection to remain active at all times, enter 0 in the Max Idle Time field. Otherwise, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default is 15 minutes.

Keep Alive: Redial Period – This option keeps you connected to the Internet indefinitely, even when your connection sits idle. To use this option, click the radio button next to Keep Alive. The default Redial Period is 30 seconds (in other words, the router will check the Internet connection every 30 seconds).

Host Name (Optional) – Enter a host name for the Router, if required by your ISP.

Domain Name (Optional) – Enter a domain name for the Router, if required by your ISP.

MTU – MTU is the Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Keep the default setting, Auto, to have the router select the best MTU for your Internet connection. To specify a MTU size, select Manual, and enter the value desired (default is 1400). You should leave this value in the 1200 to 1500 range.

✧ MAC Address Clone

The router's MAC address is a 12-digit code assigned to a unique piece of hardware for identification. Some ISPs require that you register the MAC address of your network card/adaptor, which was connected to your cable or DSL modem during installation.

MAC Address Clone

Enable: Enabled Disabled

MAC Address: 00 : DE : F4 : EC : 34 : 87

Clone My PC's MAC

Save Cancel

To clone your network adapter's MAC address onto the router, select Enable and enter your adapter's MAC address in the Clone WAN MAC field or click Get My PC's MAC to fill in the MAC address of your PC you are using. Then save your changes by clicking on the Apply button.

7.1.2 LAN setup

The screenshot shows the 'Network Setup' page of the router. The 'Router IP' section has 'Local IP Address' set to 192.168.1.1 and 'Subnet Mask' set to 255.255.255.0. The 'Network Address Server Settings (DHCP)' section has 'DHCP Server' set to 'Enabled', 'Start IP Address' set to 192.168.1.100, 'Maximum Number of Users' set to 51, 'IP Address Range' set to 192.168.1.100 to 150, and 'Client Lease Time' set to 0 minutes. A 'DHCP Reservation' button is visible next to the 'DHCP Server' options. 'Save' and 'Cancel' buttons are at the bottom.

✧ Router IP

Local IP Address / Subnet Mask: This is the router IP Address and Subnet Mask as seen on the internal LAN. The default value is 192.168.1.1 for IP Address and 255.255.255.0 for Subnet Mask.

✧ Network Address Server setting(DHCP)

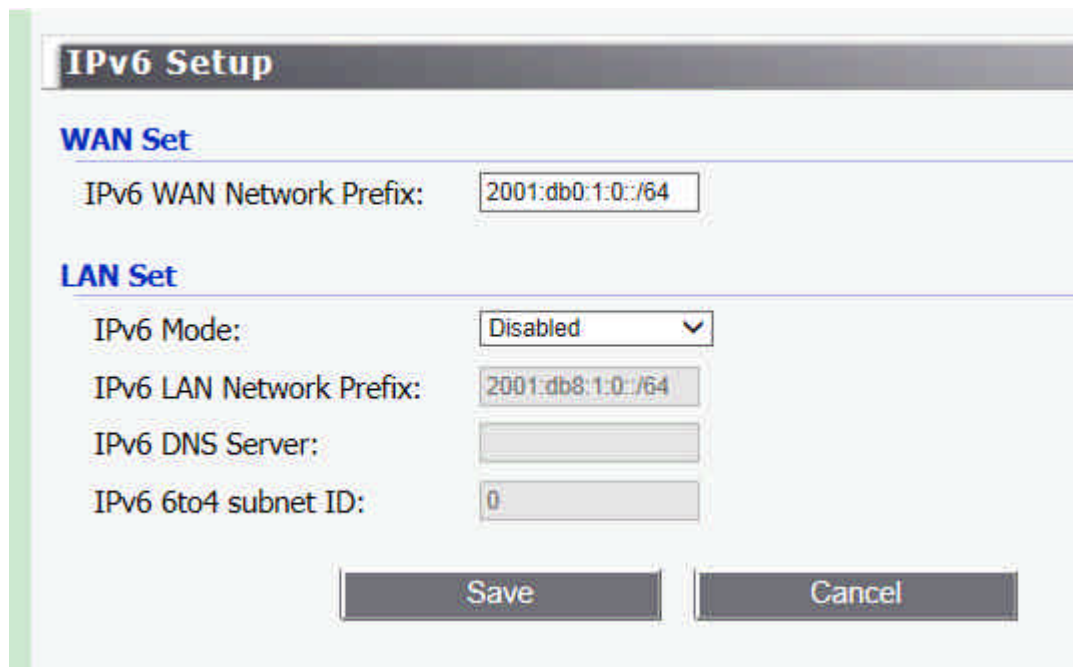
DHCP Server – Keep the default, Enable, to enable the router's DHCP server option. If you already have a DHCP server on your network or you do not want a DHCP server, then select Disable.

Maximum DHCP Users – Enter the maximum number of PCs that you want the DHCP server to assign IP addresses to. The absolute maximum is 253, possible if 192.168.1.2 is your starting IP address.

Client Lease Time – Enter the length of time, in minutes, that a DHCP client will be allowed to use a dynamic IP address. The default is 0 minutes, which means one day. After this time is up, the client will be automatically assigned a new dynamic IP address, or the lease will be renewed.

DHCP Reservation: DHCP Reservation is useful for controlling access of specific computers in the LAN.

7.1.3 IPV6



IPv6 Setup

WAN Set

IPv6 WAN Network Prefix:

LAN Set

IPv6 Mode:

IPv6 LAN Network Prefix:

IPv6 DNS Server:

IPv6 6to4 subnet ID:

✧ WAN Set

IPv6 WAN Network Prefix – Sets the IPv6 Network Prefix for WAN.

✧ LAN Set

IPv6 LAN Network Prefix – Sets the IPv6 Network Prefix for LAN.

IPv6 DNS Server – Sets the IP addresses of the DNS servers to use for resolving host names.

IPv6 6to4 subnet ID – Sets the 6to4 subnet ID(0-65535).

7.1.4 Advanced Routing Setup

Static Routing

A static route is a pre-determined pathway that network information must travel to reach a specific host or network.

To set up a static route between the router and another network:

1. Select a number from the Static Routing drop-down list.
2. Enter the following data:
 - Destination IP Address – The Destination IP Address is the address of the network or host to which you want to assign a static route.
 - Subnet Mask – The Subnet Mask determines which portion of an IP address is the network portion, and which portion is the host portion.
 - Gateway – This is the IP address of the gateway device that allows for contact between the router and the network or host.
3. Depending on where the Destination IP Address is located, select LAN & WLAN or WAN from the Interface drop-down menu.
4. Click the Apply button to save your changes. To cancel your unsaved changes, click the Cancel button. For additional static routes, repeat steps 1-4.

To delete a static route entry:

1. From the Static Routing drop-down list, select the entry number of the static route.
2. Click the Delete This Entry button.
3. To save a deletion, click the Apply button. To cancel a deletion, click the Cancel button.

7.2 Wireless Setup

7.2.1 Wireless Basic Settings

Wireless Basic Settings

Physical Interface

Network Mode:

Network Name(SSID):

Country:

Channel:

Bandwidth:

SSID Broadcast: Enabled Disabled

- **Network Mode** – If you have Wireless-G and 802.11b devices in your network, then keep the default setting, Mixed. If you have only Wireless-G devices, select G-Only. If you would like to limit your network to only 802.11b devices, then select B-Only. If you want to disable wireless networking, select Disable. Note that B-Only mode is not supported under WDS.

- **Network Name(SSID)** – Enter the name of your wireless network.

- **Country** – Select your Country from the pull-down list. This field specifies the Country where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

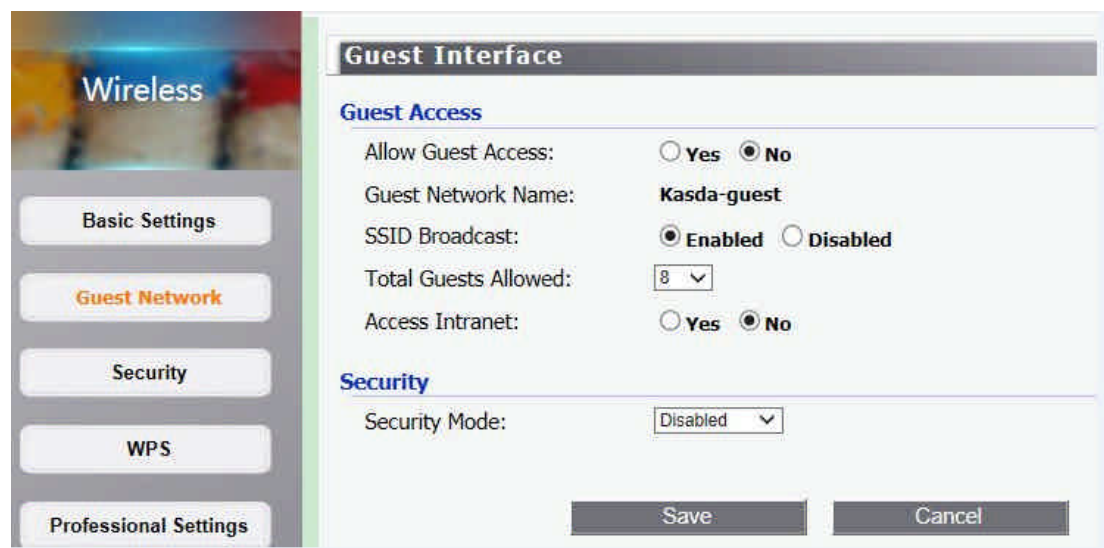
- **Channel** – This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point. If you select auto, then AP will choose the best channel automatically.

- **Bandwidth** – The bandwidth of the wireless channel.

- **SSID Broadcast** – When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the router. To broadcast the router SSID, keep the default setting, Enable. If you do not want to broadcast the router SSID, then select Disable

7.2.2 Guest Access

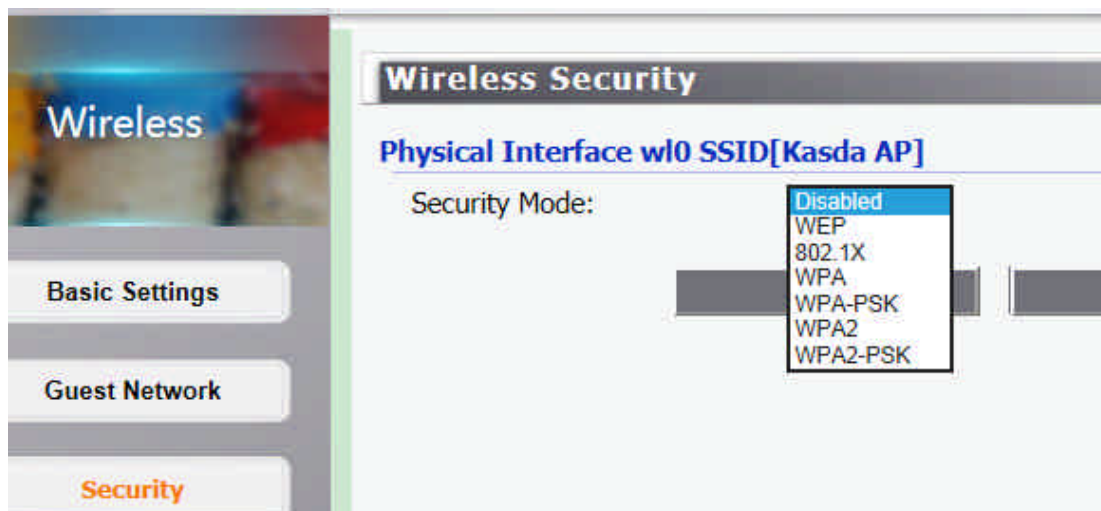
Use the Guest Access feature to provide guests visiting your home with Internet access only. The guest network is a wireless network separate from your local network.



The screenshot shows the 'Guest Interface' configuration page. On the left is a sidebar with navigation buttons: 'Basic Settings', 'Guest Network' (highlighted in orange), 'Security', 'WPS', and 'Professional Settings'. The main content area is titled 'Guest Interface' and contains two sections: 'Guest Access' and 'Security'. In the 'Guest Access' section, 'Allow Guest Access' is set to 'No', 'Guest Network Name' is 'Kasda-guest', 'SSID Broadcast' is 'Enabled', and 'Total Guests Allowed' is set to 8. In the 'Security' section, 'Access Intranet' is set to 'No' and 'Security Mode' is set to 'Disabled'. At the bottom right are 'Save' and 'Cancel' buttons.

- **Allow Guest Access** – To allow Internet access through a guest network, select yes.
- **Guest Network Name** – The name of the guest network is displayed.
- **Total Guests Allowed** – Select the number of guests you want to allow on your guest network.
- **SSID Broadcast** – When wireless devices survey the local area for wireless networks to associate with, they will detect the SSID (wireless network name) broadcast by the Router. To broadcast the SSID of the guest network, keep the default, Enabled.

7.2.3 Security



You can select one of the following security options:

- Disabled – The wireless security function can be enabled or disabled. If disabled, the wireless stations will be able to connect the Router without encryption. It is recommended strongly that you choose one of following options to enable security.

- WEP – Select 802.11 WEP security.
- WPA/WPA2 - Personal – Select WPA based on pre-shared passphrase.
- WPA/WPA2 - Enterprise – Select WPA based on Radius Server.

Each security option has its own settings as described follows.

✧ WEP

Select a level of WEP encryption.

- Passphrase – Enter a passphrase to automatically generate WEP keys. Then click Generate.

- Key 1 – If you did not enter a passphrase, enter the WEP key(s) manually.
- Key 2 – If you did not enter a passphrase, enter the WEP key(s) manually.

WPA/WPA2 - Enterprise

Version - You can select one of following versions,

- WPA – Wi-Fi Protected Access.
- WPA2 – WPA version 2.

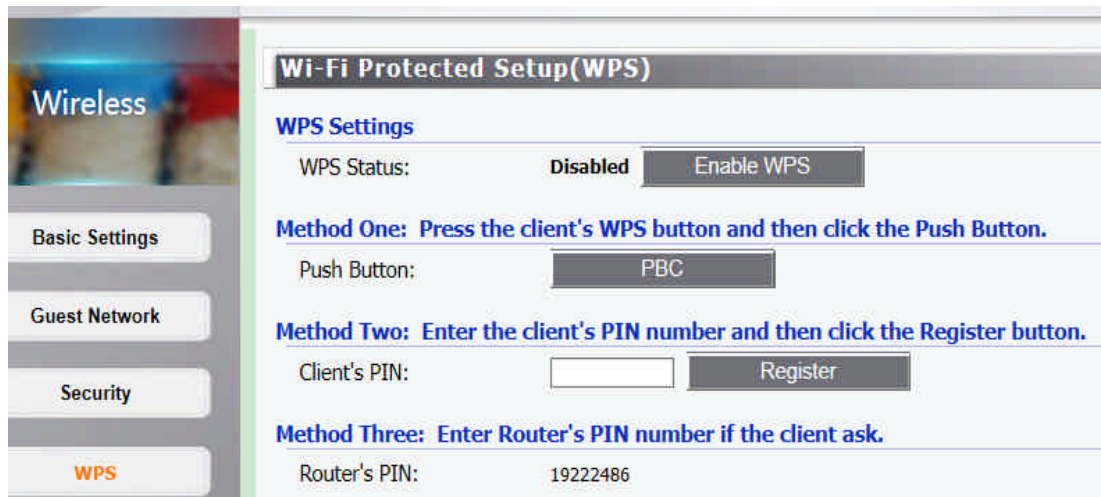
- RADIUS Server – Enter the IP address of the RADIUS server.
- RADIUS Port – Enter the port number of the RADIUS server. The default is 1812.
- Shared Key – Enter the key shared between the Router and the server.

✧ WPA/WPA2 - Personal(WPA-PSK/WPA2-PSK)

Version - You can select one of following versions,

- WPA-PSK – Pre-shared key of WPA.
- WPA2-PSK – Pre-shared key of WPA2.
- PSK Password – You can enter ASCII or Hexadecimal characters. For Hexadecimal, the length should be between 8 and 64 characters; for ASCII, the length should be between 8 and 63 characters.

7.2.4 WPS Setup



Wi-Fi Protected Setup(WPS)

WPS function will help you add a new device to the network quickly. If the new device supports Wi-Fi Protected Setup and is equipped with a configuration button, you can add it to the network by pressing the configuration button on the device and then press the button on the Router within two minutes. The status LED on the Router will light blue for five minutes if the device has been successfully added to the network. If the new device supports Wi-Fi Protected Setup and the connection way using PIN, you can add it to the network by entering the Router's PIN.

- WPS Status – Enable or disable the WPS function here.

- Push Button – This button's function is same to the physical button on the router.
- Client's PIN – If the client supports the connection way by entering its PIN. Enter the Client's PIN. Click Register button to connect the client.
- Router's PIN – The current value of the Router's PIN displayed here.

7.2.5 Wireless Access Setup

Wireless Access Control

Wireless MAC Filter

MAC Restrict Mode:

MAC filter list (Max Limit : 32)

MAC Address List	Add / Delete
<input type="text"/>	<input type="button" value="+"/>
No data in table.	

✧ MAC Filter

The Wireless MAC Address Filtering feature allows you to control the wireless stations accessing the AP, which depend on the station's MAC addresses.

- **MAC Restrict Mode** – To disable the Wireless MAC Address Filters feature, keep the default setting, Disable.

– First, you must decide whether the specified wireless stations can or cannot access the AP. If you desire that the specified wireless stations can access the AP, please select Allow, otherwise, select Deny

- ✧ **MAC Address List** – The wireless station's MAC address that you want to access.

7.2.6 WDS Setup

Wireless Distribution System

WDS Settings

Mode:

Bridge Restriction:

Bridges:	Peer MAC Address	Link Status
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	

WDS (Wireless Distribution System) is a Wireless Access Point mode that enables wireless bridging in which WDS APs communicate only with each other only (without allowing for wireless clients or stations to access them), and/or wireless repeating in which APs communicate both with each other and with wireless stations (at the expense of half the throughput).

- **Mode** – Selecting Wireless Bridge disables access point functionality. Only wireless bridge (also known as Wireless Distribution System or WDS) functionality will be available. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP.

- **Bridge Restriction** – Selecting Disabled disables wireless bridge restriction. Any wireless bridge (including the ones listed in Remote Bridges) will be granted access. Selecting Enabled enables wireless bridge restriction. Only those bridges listed in Remote Bridges will be granted access.

- **Bridges** – Enter the peer wireless MAC addresses of any wireless bridges that should be part of the wireless distribution system (WDS).

We will describe how to configure WDS to connect 2 ROUTERS.

1. Make these 2 routers same channel (not Auto) and security mode and passphrase in Wireless – Basic Settings & wireless security.

Physical Interface

Network Mode:

Network Name(SSID):

Country:

Channel:

Bandwidth:

SSID Broadcast: Enabled Disabled

Wireless Security

Physical Interface w/o SSID[Kasda AP]

Security Mode:

Passphrase:

2. ROUTER1 can use default IP address 192.168.1.1, and ROUTER2 should change the IP address to other IP address but in same segment like 192.168.1.2. And user should disable ROUTER2's DHCP function in Setup– LAN page.

Network Setup

Router IP

Local IP Address: . . .

Subnet Mask:

Network Address Server Settings(DHCP)

DHCP Server: Enabled Disabled

Start IP Address:

Maximum Number of Users:

IP Address Range:

Client Lease Time: minutes (0 means one day)

3. ROUTER 1 : Go to advance=>wireless=>WDS page, Select Access Point in Mode. Add ROUTER 2's wireless interface MAC address (BSSID) to ROUTER 1's Bridges:. And then Click save button.

WDS Settings

Mode:

Bridge Restriction:

Bridges:

Peer MAC Address	Link Status
<input type="text"/>	
<input type="text"/>	
<input type="text"/>	
<input type="text"/>	

4. ROUTER 2 : Go to Setup=>WLAN=>WDS page, Select Wireless Bridge in Mode. Add ROUTER 1's wireless interface MAC address (BSSID) to ROUTER 2's AP MAC Address. And then Click save.

Wireless Distribution System

WDS Settings

Mode:

Bridge Restriction:

Bridges:

Peer MAC Address	Link Status
<input type="text"/>	
<input type="text"/>	
<input type="text"/>	
<input type="text"/>	

If you can access the Internet from ROUTER 1, then you can set the PC which connect with ROUTER 2 as this: **IP Address: 192.168.1.x Subnet mask: 255.255.255.0 Gateway: 192.168.1.1 DNS: 192.168.1.1** So you can access the Internet from ROUTER 2.

7.3 Service – QoS Setup

QoS (Quality of Service)

Wireless

WMM Support: **Enabled** **Disabled** (Default: Enabled)

No Acknowledgement: **Enabled** **Disabled** (Default: Disabled)

Internet Access Priority

Enabled **Disabled**

Bandwidth

Upstream Bandwidth: Kbit/s

Downstream Bandwidth: kbit/s

Category

Applications

Applications	<input type="text" value="MSN Messenger"/> <input type="button" value="v"/>
Priority	<input type="text" value="Medium (Recommended)"/> <input type="button" value="v"/>

Summary

Priority	Name	Information

QoS (Quality of Service)

QoS assigns different levels of priority to specific types of network traffic, so it helps to ensure optimal performance for demanding, real-time applications, such as online gaming, VoIP calls, and video streaming.

Wireless

No Acknowledgement – No Acknowledgement – If you want the Router to re-send data if an error occurs, keep the default, Disabled. If you do not want the Router to re-send data if an error occurs, select Enabled.

Internet Access Priority

QoS is only applied to traffic streams that are uploaded to the Internet.

- Enabled/Disabled – To use the QoS policies you set, select Enabled.

Upstream Bandwidth

This option sets the maximum upstream bandwidth of your Internet connection. To allow the Router to detect the maximum, keep the default, Auto. To specify the maximum, select Manual. Then enter the appropriate bandwidth and select Kbps or Mbps.

Category

Select the appropriate category. Go to the instructions for your selection.

- Applications – Select the appropriate application. If you select Add a New Application, follow the instructions in the Add a New Application section.
- Priority – Select the appropriate priority.

Click Apply to save your changes.

Summary

This lists the QoS entries you have created for your applications and devices.

7.4 Security Setup

7.4.1 Firewall setup

The screenshot shows the 'Firewall' configuration page. On the left is a sidebar with navigation options: Security, Firewall (selected), IPv6 Firewall, Internet Access Policy, URL Filter, Remote Access, and DoS. The main content area is titled 'Firewall' and contains the following sections:

- Firewall Protection:**
 - IPv6 SPI Firewall Protection: Enabled Disabled
 - IPv4 SPI Firewall Protection: Enabled Disabled
- Internet Filter:**
 - Filter Anonymous Internet Requests(ping)
 - Filter Multicast
 - Filter Internet NAT Redirection for IPv4 Internet Only
 - Filter IDENT (Port 113)
- Web Filter:**
 - Proxy
 - java
 - ActiveX
 - Cookies

At the bottom right, there are two buttons: 'Save' and 'Cancel'.

Internet Filter

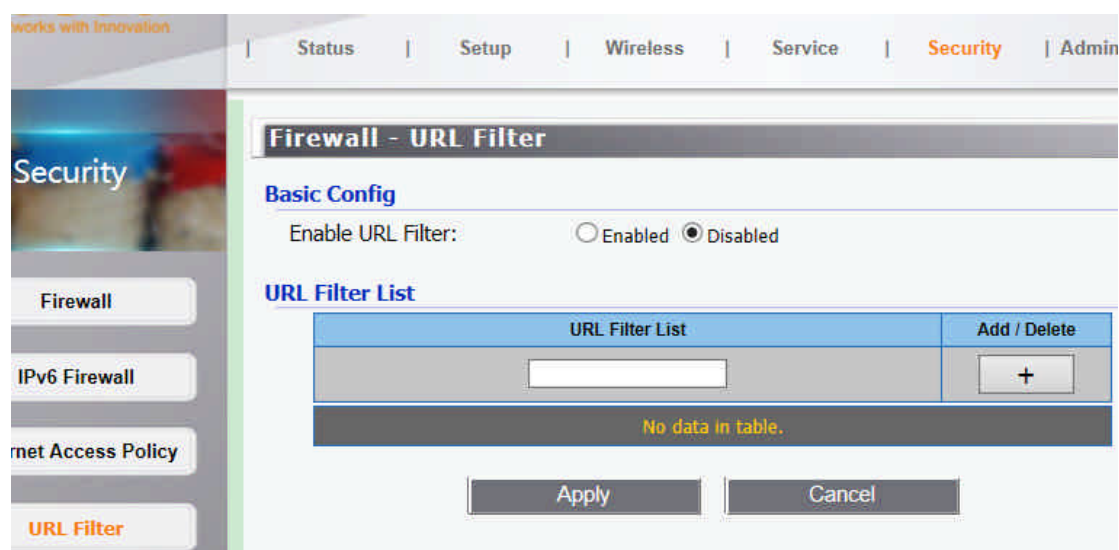
- Filter Anonymous Internet Requests – Stops the router from responding to "pings" from the WAN.

- Filter Multicast – Prevents multicast packets from reaching the LAN.
- Filter Internet NAT Redirection for IPv4 Internet Only – Prevents hosts on LAN from using WAN address of router to contact servers on the LAN (which have been configured using port redirection).
- Filter IDENT (Port 113) – Prevents WAN access to port 113.

Web Filter

- Proxy – Blocks HTTP requests containing the "Host:" string.
- Java – Blocks HTTP requests containing a URL ending in ".js" or ".class".
- ActiveX – Blocks HTTP requests containing a URL ending in ".ocx" or ".cab".
- Cookies – Identifies HTTP requests that contain the "Cookie:" string and mangle the cookie. Attempts to stop cookies from being used.

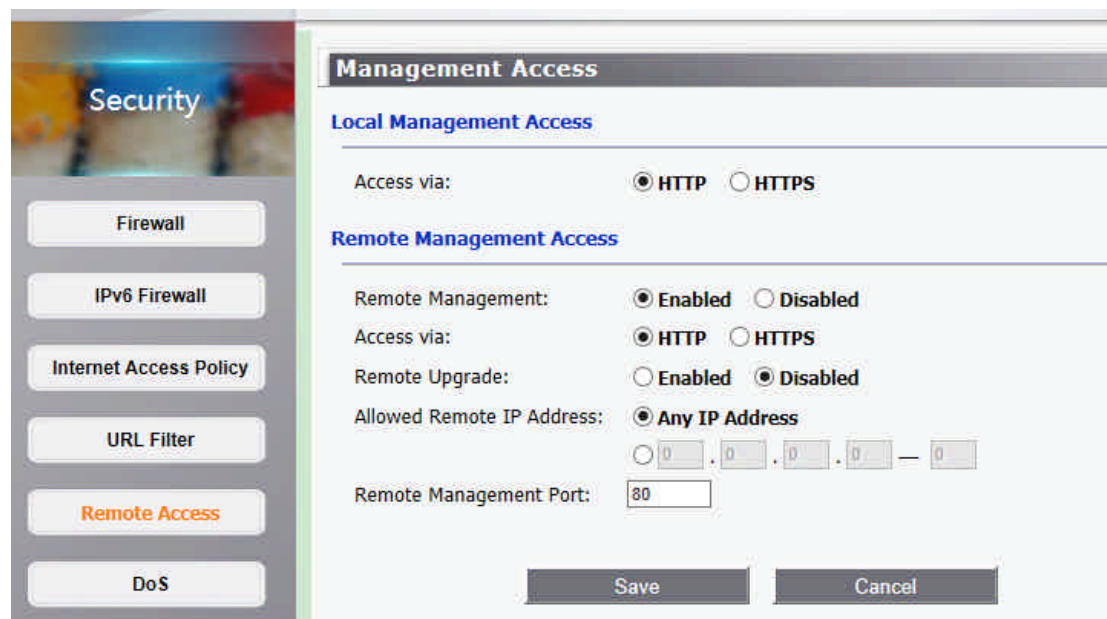
7.4.2 URL Setup



Enter the keywords for the sites that you want to block. For example, enter "XXX" in the list. The URL filter will block the <http://www.abcXXX.com>, <http://www.XXXbbb.com> and so on.

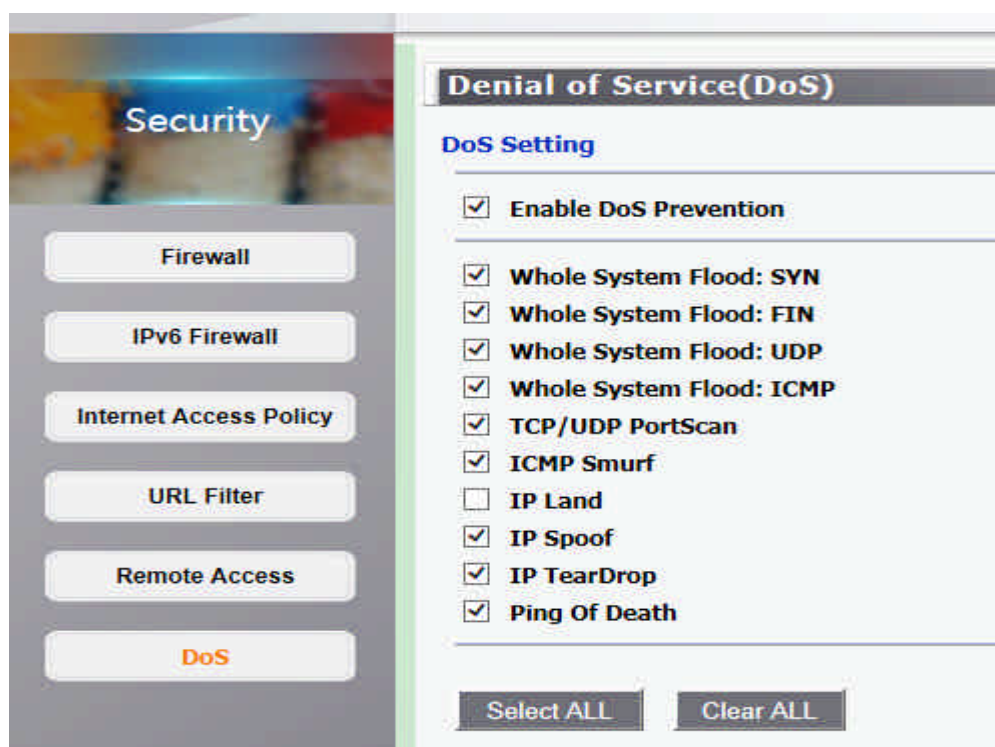
7.4.3 Remote Access Setup

This feature allows you to manage your Router from a remote location via the Internet or Internat.



7.4.4 DoS

A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.



- Enable DoS Prevention – Enable or disable DoS Prevention. And choose what you want.

Appendix: Frequent Asked Questions

Q: None of the LEDs are on when user power on the router?

A: Please make sure what user use is the power adaptor attached with the router package , and check the connection between the AC power and router.

Q: LAN LED does not turn on after connect Ethernet cable?

A: Please make sure Ethernet cable is connected hub/PC and router correctly. Then please make sure the PC/hub have been power on.

Please make sure that user use parallel network cable to connect UpLink port of hub, or use parallel network cable to connect PC. If connect normal port of hub (not UpLink port), user must use cross-cable. Please make sure that user's network cables meet the networking requirements above.

Q: PC cannot access the Router?

A: Please make sure that all devices communicating with the device must use the same channel (and use the same SSID). Otherwise user's PC will not find the wireless Router.

Q: PC cannot access the Internet?

A: First check whether PC can ping the interface Ethernet IP address of this product successfully (default value is 192.168.1.1) by using ping application. If ping application fails, please check the connection of Ethernet cable and check whether the states of LEDs are in gear.

If the PC uses private IP address that is set manually (non-registered legal IP address), please check:

1. Whether IP address of the PC gateway is legal IP address. Otherwise please use the right gateway, or set the PC to Obtain an IP address automatically.
2. Please confirm the validity of DNS server appointed to the PC with ADSL operator. Otherwise please use the right DNS, or set the PC to Obtain an IP address automatically.
3. Please make sure user have set the NAT rules and convert private IP address to legal IP address. IP address range of the PC that user specify should meet the setting range in NAT rules.
4. Central Office equipment may have problem.
5. The country or the wireless network type user selected is wrong.

Q: PC cannot browse Internet web page?

A: Please make sure DNS server appointed to the PC is correct. User can use ping application program to test whether the PC can connect to the DNS server of the ADSL operator.

If the cause is not above given , please contact user's local service provider!