



11N Wireless Broadband Router

(LHN300R)

User Manual

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Chapter 1 Product Introduction

1.1 Overview of the product

At first, Thank you for choosing LHN300R.

LHN300R 11n Wireless Router integrates 4- port Switch Firewall ,NAT-router and Wireless AP, the Wireless N Router delivers exceptional range and speed, which is fully meet the need of Small Office/ Home Office(SOHO) networks and the users demanding higher networking performance.

LHN300R complies with IEEE 802.11n(Draft 2.0),expand the wireless covering range, the transmission speeds of up to 300M,supports 802.11b/g.The transmission adaptability is improved that it's easy to be mutually managed with the other network devices. Large-scale wireless covering space offer a free and comfortable network. Steady data transmission and the broadband support your surfing, downloading MP3, IP telephone, file sharing, network games...

LHN300R 11n Wireless Broadband Router offer muliple security setting, that protects users in the wireless network. It supports SSID broadcast stealth mode to effectively prevent the SSID telling; supports WEP wireless data encryption to make sure the data transfers safely; installs special firewall to prevent the Anti-attack.

LHN300R11n Wireless Broadband Router offers extensive managing feature, supports DHCP Server, DMZ host computer, dummy server; It is enable to establish interior LAN, allows many computers share the single broadband line and ISP account access internet; Supports accessing control to manage the user purview in the LAN.

LHN300R 11n Wireless Broadband Router is easy to be installed and collocated. For full using its functions, please read the user manual carefully.

1.2 Main Feature

- Integrates 4-port switch, supports four 10/100 Ethernet (LAN) Ports.
- Supports wireless transmission speeds up to 300Mbps,possesses the transmission adaptability.
- Supports encryption and security WEP/WPA2,WPA-PSK/WPA2-PSK.
- Supports SSID broadcasting control
- Supports WPS quick installation security to encrypt quickly.
- Supports DHCP server, and supports static IP Address Change
- Integrates firewall feature, supports MAC/IP address Filtering.
- Supports dynamic DNS, offer Domain name service for the dynamic IP address.
- Integrates static routing and RIP routing to construct the special network topology.
- Supports WEB software upgrade to renew the router's software expediently.
- Supports WEB management to setup the interface easily.

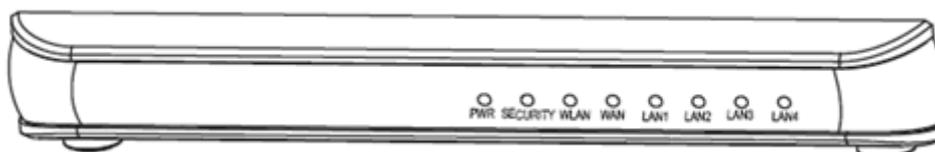
Chapter 2 Hardware description

This chapter will introduce how to install the wireless broadband router, for example installing it under Windows XP.

2.1 Panel dispose

2.1.1 Front panel

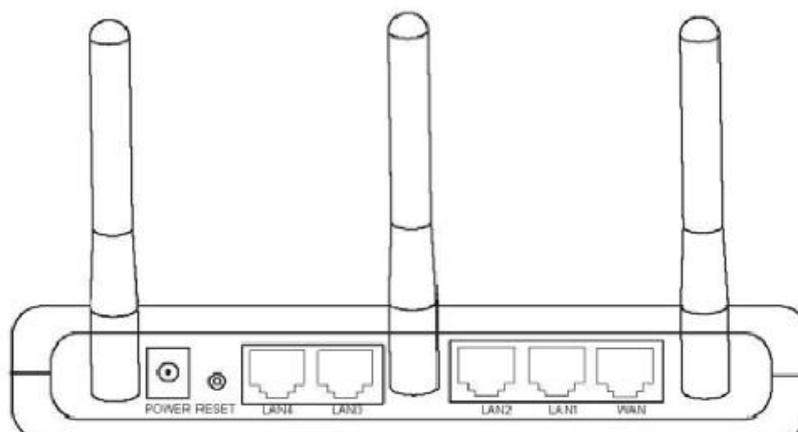
There are eight state indicator lights, show the states below:



Sketch Map of LHN300R front panel

LED	Mode	Indication
Power	Off	The router is not powered. Check if the router is plugged in and if the power switch is turned on.
	On	The router is powered on.
System	Blinking	The router is working property
	Off	The router has a system error
WLAN	Off	The Wireless function is disabled
	Blinking	The Wireless function is enabled
WAN	On	connecting
	Off	Not connected
	Blinking	Transfers the data
LAN(1-4)	On	connecting
	Off	Not connecting
	Blinking	Transfers the data

Back panel



Sketch Map of LHN300R back panel

➤ POWER: Port for power

☛ **Note:** Power Supply Unit: Input: Localized to Country of Sale, Output: 12VDC / 1A Switching PSU. Using the in-coordinate power maybe shatter the router

➤ RESET: Button for replacing, uses for coming back to the default setting

➤ LAN(1-4): Port for LAN, the port connects with LAN hub, switch and computers with adapter.

➤ WAN: Port for WAN, uses for connecting with WAN cable or the Ethernet port of ADSL modem.

➤ Antenna: uses for dispatching and receiving the wireless data.

➤ **Reset:**

Pressing the reset button for 5 seconds, the router will start again and resume to factory default setting.

2.2 System requirements

➤ Broadband Internet Service (Connect ways : with Ethernet broadband, or with ADSL).

➤ The modem with Ethernet ports(needn't it when connecting with Ethernet broadband.)

➤ Every device need Ethernet connecting devices(wireless adapter, wired adapter or cable.)

➤ Internet Explorer 6.0 or higher edition (through WEB page to set up the router)

2.3 Install environment

The Router should be installed levelly, keeps dryness dustless, ventilation, far away from the heaters/ dirty places /moist.

Working temperature: 0°C ~40°C

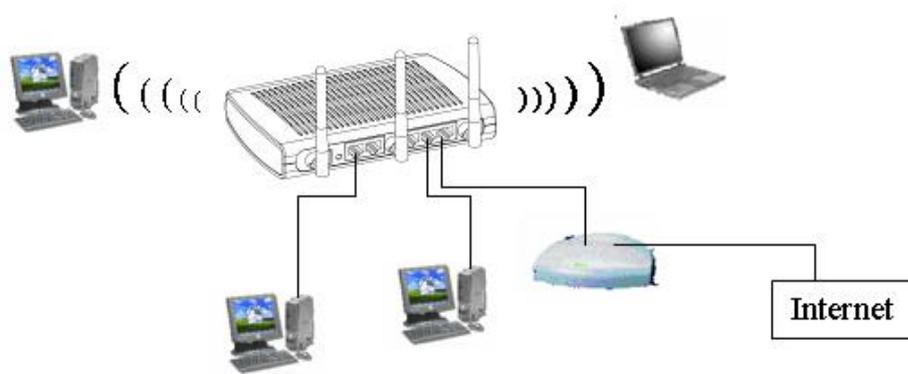
Working humidity: 10%~90% non-condensing;

Power: AC power adapter: 5V~2A

Chapter 3 Collocate Guide

Introduce how to install the router in this chapter, make installing under windows XP as example.

3.1 Hardware link



Sketch map of the hardware link

Note: LHN300R 11N Wireless Broadband Router allows to be connected by wireless and wired ways, we recommend to connect it by wired way for the first time.

3.2 Computer Setting

- 1) Find out the icon network Places on your desktop, click it by right key , choose attributes.

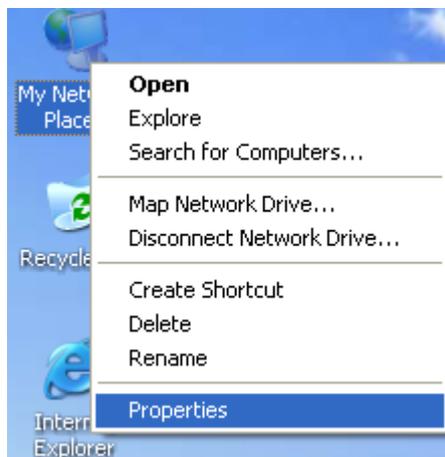


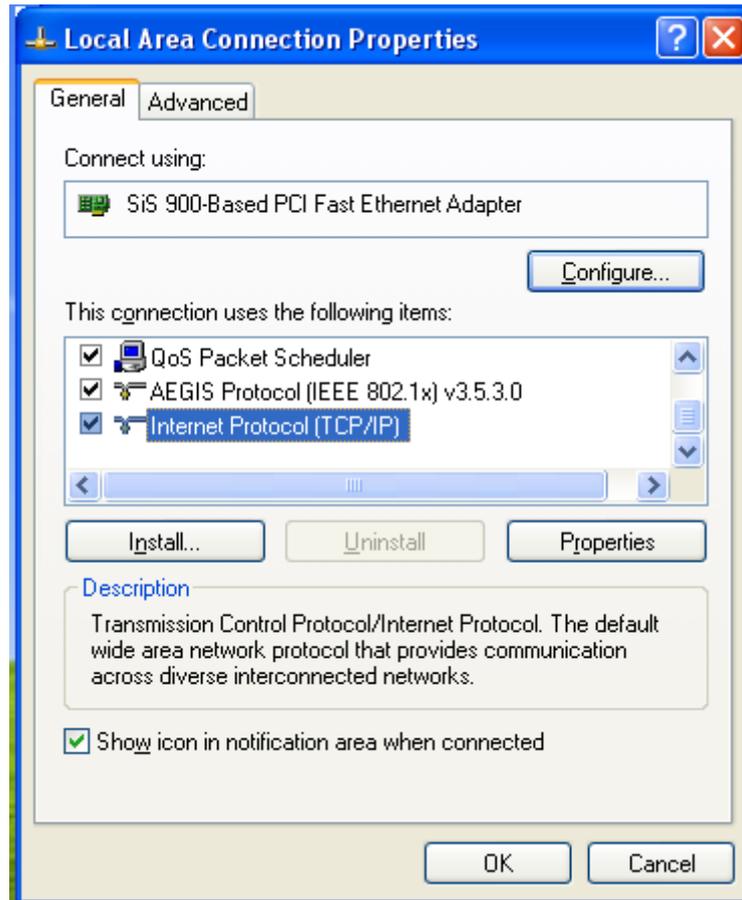
Figure 1-1

2) Click **properties** option, pop-up a new page. In the new page, click the right key of the mouse and joins Local chaining, click “**properties**” button.

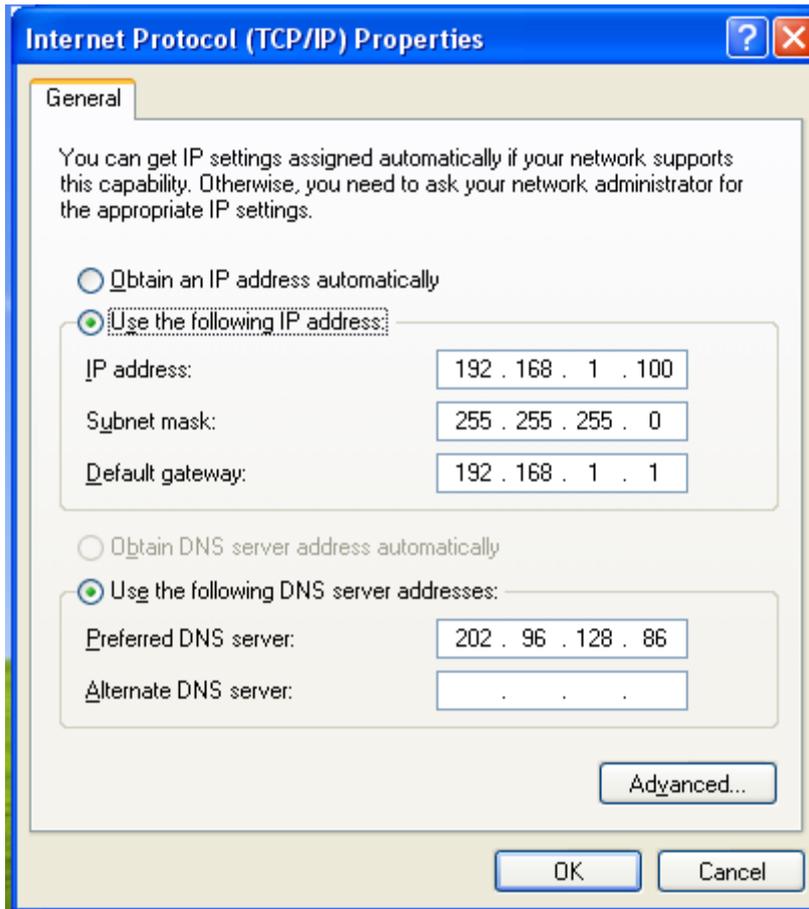


☞ **Prompt:** “control panel→ network and internet connect→ network connection” to find local connection.

3) Choose and double click the left key internet agreement (TCP/IP) in the following dialog box.



- 4) Choose and use the following IP address in the new dialogue box.



Note IP address: 192.168.1.X ($2 \leq X \leq 254$) Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS server address, please inquire the ISP.

Note Be able to choose “Obtain an IP address automatically”, however we recommend you input the IP address by hand.

5) Click “confirm”, then come back to last dialogue box. Click “confirm” by left key.



3.3 Wireless Broadband Router Login

- 1) Login WEB manage interface, and open IE browser, input <http://192.168.1.1> on the address blank. Click “OK”, pop-up a new dialogue box, input user name and password, click “OK” by left key.



Note:

System default username: admin, password: admin.

After successfully login into the router’s management interface, the browser will show you the administrator’s mode ,as the following picture. In left of menu bar: Status、System、WAN、LAN、NAT、Firewall、Route、UPnP、DDN、Wireless Settings. Click one of the buttons to setup the feature. Later the picture shows the details of how to use each button.

The screenshot shows the Lohuis Networks web interface. On the left is a navigation menu with the following items: Status, System, WAN, LAN, NAT, Firewall, Route, UPnP, DDNS, and Wireless Settings. The main content area displays three sections:

System Info

SDK Version	2.4.0.0 (Sep 12 2008)
System Time	1 min, 58 secs
System Platform	RT2880 with IC+ MACPHY
Operation Mode	Gateway Mode

Internet Configurations

Connected Type	PPPOE
WAN IP Address	116.30.193.116
Subnet Mask	255.255.255.255
Default Gateway	116.30.192.1
Primary Domain Name Server	192.168.1.1
Secondary Domain Name Server	202.96.134.133
MAC Address	00:0C:43:28:80:01

Local Network

Local IP Address	192.168.1.1
Local Netmask	255.255.255.0
MAC Address	00:0C:43:28:80:01

3.4 Status

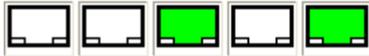
Click **Status** menu to examine the current status messages of the wireless router, including System Info, Internet configuration, Local Network, Ethernet Ports status, as the pictures:

System Info	
SDK Version	2.4.0.0 (Sep 12 2008)
System Time	1 min, 58 secs
System Platform	RT2880 with IC+ MACPHY
Operation Mode	Gateway Mode

Internet Configurations	
Connected Type	PPPOE
WAN IP Address	116.30.193.116
Subnet Mask	255.255.255.255
Default Gateway	116.30.192.1
Primary Domain Name Server	192.168.1.1
Secondary Domain Name Server	202.96.134.133
MAC Address	00:0C:43:28:80:01

Local Network	
Local IP Address	192.168.1.1
Local Netmask	255.255.255.0
MAC Address	00:0C:43:28:80:01

Ethernet Port Status



- System Info: display the router's current software edition, working hours, chip and project, handling mode...
- Internet Configuration: display the router's how to connect with internet, IP address of WAN port, Subnet Mask, gateway , main DNS, standby DNS and MAC address...
- Local Network: display the router's IP address of LAN, subnet mask, MAC address.
- Ethernet Port Status: display the state of router's ports.

3.5 System

Choose menu **System** to setup and examine system information, including Management、Upload Firmware、Settings Management、System Log. Later introduce each of them:

3.5.1 Management

Open the menu by left key to show the following interface, this part shows the system management information

Administrator Settings	
Account	<input type="text" value="admin"/>
Password	<input type="password" value="•••••"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

- If you want to amend the user name and password, input the new ones in the **Account**, **Password**, then click the button **Apply** to finish it, or click **Cancel**.

👉 **Note:** System default account and password are **admin**.

NTP Settings	
Current Time	Wed Sep 24 22:14:23 GMT 2011 <input type="button" value="Sync with host"/>
Time Zone:	(GMT+08:00) China Coast, Hong Kong <input type="button" value="v"/>
NTP Server	time.stdtime.gov.tw ex: time.nist.gov ntp0.broad.mit.edu time.stdtime.gov.tw
NTP synchronization(hours)	100

- Current Time: display the current date and time of the router, click button **Sync with host** to make it synchronization as the computer who connects with it.
- Time Zone: display the zone, please choose the local zone of user.
- NTP Server: input NTP server address, such as: time.windows.com. click **Apply** to make the router's time synchronization as NTP server' time.
- NTP synchronization(hours): display the NTP synchronization time.

3.5.2 Upload Firmware

Choose **Upload Firmware** to show the following interface.

Upgrade Firmware

Upgrade the RT2880 firmware to obtain new functionality. **It takes about 1 minute to upload upgrade flash and be patient please. Caution! A corrupted image will hang up the system.**

Update Firmware	
Location:	<input type="text"/> <input type="button" value="Browse..."/>
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

Click **browse** to appoint the upgrading Firmware program, then click Apply to finish.

☞ **Note:** Present to power off during upgrading the Firmware, or the device is unable to startup.

3.5.3 Settings Management

Choose menu **Settings Management** to pop-up the following interface.

Settings Management

You might save system settings by exporting them to a configuration file, restore them by importing the file, or reset them to factory default.

System Reboot
 Load Factory Defaults
 Export Settings
 Import Settings

- System Reboot: Restart the system
- Load Factory Defaults: resume factory default setting.
- Export Settings: Export configuration files.
- Import Settings: Import configuration files.
- For setup expediently, be able to save the setting and import, resume the saving setting. Click **Apply** to confirm the feature, or click **Cancel**.

3.5.4 System Log

Choose menu **System Log** to display the following interface, this menu is for showing

The router's log. If click button **Refresh** to refurbish the log file. If clicking the button **Clear** to eliminate the current log file.

System Log

Syslog:

Refresh

Clear

System Log

```
Sep 24 14:18:35 ralink syslog.info syslogd started: BusyBox v1.8.2  
Sep 24 14:18:35 ralink user.notice kernel: klogd started: BusyBox v1.8.2 (2008-0
```

3.6 WAN

Choose Menu **WAN**, which includes **WAN** and **DNS** submenus ,you can setup the WAN port's

Network data in the following interface.

3.6.1 WAN

WAN is English abbreviation of "wide area network", there are five connecting ways: PPPOE、DHCP、Static、L2TP、PPTP. During the setting, please make sure what is your connect way.

1) PPPoE (ADSL)

If you are provided the ADSL dial-up service, please choose **PPPoE**(point-to-point protocol over Ethernet),and you will see following page shown. If you are provided PPPoE, the ISP should provide the account and password. After the setting, click button **Apply** to finish.

Wide Area Network (WAN) Settings

You may choose different connection type suitable for your environment. Besides, you may also configure parameters according to the selected connection type.

WAN Connection Type: PPPoE (ADSL) ▼

PPPoE Mode

User Name	<input type="text"/>
Password	<input type="text"/>
Verify Password	<input type="text"/>

MAC Clone

Enabled	Disable ▼
---------	-----------

Apply Cancel

After Using PPPOE dial-up, you can check whether it is successful or not in the menu Internet Configurations. If it shows the IP address in WAN IP address, that means PPPOE dial-up successfully as the following picture shown.

Internet Configurations	
Connected Type	PPPOE
WAN IP Address	116.30.193.116
Subnet Mask	255.255.255.255
Default Gateway	116.30.192.1
Primary Domain Name Server	192.168.1.1
Secondary Domain Name Server	202.96.134.133
MAC Address	00:0C:43:28:80:01
DISConnect	

2) DHCP (Auto config)

DHCP means Dynamic Host Control Protocol, which bases on server/client server mode. WAN port can be as the DHCP client server to obtain IP address from the connecting DHCP clients server. After setting, please click **Apply** to finish it.

 **Note:** **Hostname** is optional, it can be blank without any content.

Wide Area Network (WAN) Settings

You may choose different connection type suitable for your environment. Besides, you may also configure parameters according to the selected connection type.

WAN Connection Type: DHCP (Auto config) ▾

DHCP Mode

Hostname (optional)

MAC Clone

Enabled Disable ▾

3) STATIC (fixed IP)

STATIC(fixed IP) is static IP address connecting way. Finish the setting as the interface

Requirement, then click button **Apply** to finish it. If you want to connect with internet network, please fill the blank as the information ISP provides.

Wide Area Network (WAN) Settings

You may choose different connection type suitable for your environment. Besides, you may also configure parameters according to the selected connection type.

WAN Connection Type: STATIC (fixed IP) ▾

Static Mode

IP Address

Subnet Mask

Default Gateway

MAC Clone

Enabled Disable ▾

4) L2TP

L2TP is Layer Two Tunnel Protocol, users can connect with remote VPN server through

The **L2TP**. Finished the setting to pop-up the following picture, click button **Apply** to finish

it. If you need to connect with internet, please fill up as the information as the ISP provided.

Wide Area Network (WAN) Settings

You may choose different connection type suitable for your environment. Besides, you may also configure parameters according to the selected connection type.

WAN Connection Type:		L2TP <input type="button" value="v"/>
L2TP Mode		
Server IP	<input type="text" value="58.163.23.56"/>	
User Name	<input type="text" value="l2tp_user"/>	
Password	<input type="password" value="●●●●●●●●"/>	
Address Mode	Static <input type="button" value="v"/>	
IP Address	<input type="text" value="10.0.0.13"/>	
Subnet Mask	<input type="text" value="255.255.255.0"/>	
Default Gateway	<input type="text" value="10.0.0.1"/>	
MAC Clone		
Enabled	Disable <input type="button" value="v"/>	
<input type="button" value="Apply"/>		<input type="button" value="Cancel"/>

- Server IP: Import the VPN server's IP address.
- User Name: The user name connect with VPN server.
- Password: Password to connect with VPN server.
- Address Mode: Static/ Dynamic

Static: after import and dial-up VPN server, connected with the other LAN's IP address, subnet mask, default gateway.

Dynamic: Dial-up VPN server, can dynamic obtain IP address from the other's interior network DHCP server.

5) PPTP

PPTP is point-to-point Tunnel Protocol, users can connect with remote VPN server

Though **PPTP** protocol. Finished the setting as the following interface, click button

Apply to finish it.

Wide Area Network (WAN) Settings

You may choose different connection type suitable for your environment. Besides, you may also configure parameters according to the selected connection type.

WAN Connection Type:		PPTP <input type="button" value="v"/>
PPTP Mode		
Server IP	<input type="text" value="58.163.23.56"/>	
User Name	<input type="text" value="pptp_user"/>	
Password	<input type="password" value="••••••••"/>	
Address Mode	Static <input type="button" value="v"/>	
IP Address	<input type="text" value="10.0.0.12"/>	
Subnet Mask	<input type="text" value="255.255.255.0"/>	
Default Gateway	<input type="text" value="10.0.0.1"/>	
MAC Clone		
Enabled	Disable <input type="button" value="v"/>	
<input type="button" value="Apply"/>		<input type="button" value="Cancel"/>

- Server IP: Import the VPN server's IP address.
- User Name: The user name connect with VPN server.
- Password: Password to connect with VPN server.
- Address Mode: Static/ Dynamic

Static: after import and dial-up VPN server, connected with the other LAN's IP address, subnet mask, default gateway.

Dynamic: Dial-up VPN server, can dynamic obtain IP address from the other's interior network DHCP server.

6) MAC Clone

MAC Clone means cloning the MAC address. MAC address (Media Access Control) is a physical address of the network devices. You can clone the MAC address of the current computer adapter to the WAN port of the router, to breach the confine of Multi Computers.

MAC Clone	
Enabled	Enable <input type="button" value="v"/>
MAC Address	<input type="text"/> <input type="button" value="Fill my MAC"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

- Enabled: Open/ close the feature of MAC address clone.
- MAC Address: Import the MAC address that the internet ISP binding and allowing.

3.6.2 DNS

DNS is Domain Name Service system, after finished the setting as the following picture, then click button **Apply** to finish it. If you want to connect with Internet, please fill in the blank as the information that the ISP provided.

Domain Name Service (DNS) Configuration

You may adding and deleting DNS server ip addresses.

Primary DNS Server	<input type="text" value="202.96.134.133"/>
Secondary DNS Server	<input type="text" value="202.96.128.66"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

- Primary DNS Server: Main DNS server.
- Secondary DNS Server: Secondary DNS server.

When the primary DNS server stop , the device will switch DNS to the secondary server automatically. If the computer adapter connected with the router's LAN port was set as DNS automatically obtain, the appointed IP address will be the DNS server address of the computer adapter.

3.7 LAN

3.7.1 LAN Menu LAN, shown the interface as the following picture, you can setup the network data as the interface requirement. Finished, then click button **Apply** to take effect.

LAN Setup	
IP Address	<input type="text" value="192.168.1.1"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
MAC Address	<input type="text" value="00:0C:43:28:80:01"/>
DHCP Type	<input type="text" value="Server"/>
Start IP Address	<input type="text" value="192.168.1.2"/>
End IP Address	<input type="text" value="192.168.1.200"/>
Lease Time	<input type="text" value="86400"/>
DNS Proxy	<input type="text" value="Disable"/>

- IP Address: IP address of LAN port.
- Subnet Mask: Subnet Mask, immutable.
- MAC Address: MAC address of LAN port, immutable.
- DHCP Type: Server/Disable。

This router has DHCP Server feature, if DHCP Type chooses server, the network device connecting with router's LAN port will dynamic obtain IP address.

- Start IP Address: the incept IP address of IP address pool.
- End IP Address: the last IP address of IP address pool.
- Lease Time: time of dynamic IP address releasing.
- DNS Proxy: Disable/Enable。

If DNS proxy chooses Enable, the network device connecting with router's LAN port will setup IP address of DNS server to be router LAN port's address. The router will be the DNS fungible server.

 **Note:** The factory default of router LAN port address is 192.168.1.1 。

3.7.2 DHCP Clients

Open DHCP clients menu, you can see the host computer information through router's DHCP

server, such as MAC address, IP address and valid time of operating. As the following picture.

DHCP Client List

You could monitor DHCP clients here.

DHCP Clients		
MAC Address	IP Address	Expires in
00:11:2F:5F:53:3E	192.168.1.7	23:42:25

3.8 NAT

Choose NAT menu which includes two submenu DMZ and Port Forwarding ,Later let's introduce them individually.

3.8.1 DMZ

Click **DMZ** menu by left key, shown the following interface. During setting, input the **DMZ** host computer's IP address in LAN, then click **Apply**.

DMZ Settings

You may setup a De-militarized Zone(DMZ) to separate internal network and Internet.

DMZ Settings	
DMZ Settings	Disable <input type="button" value="v"/>
DMZ IP Address	<input type="text"/>

- DMZ Setting: Open /close DMZ host computer.
- DMZ IP Address: Input DMZ host computer's IP address in LAN.

Note: When the PC was set as DMZ host computer, it will be divulged to the LAN. That maybe unsafe , so please keep be cautious to this setting.

3.8.2 Port Forwarding

Choose **Port Forwarding** menu, you can see the following interface. After setting, click

Apply .This menu is used for setting virtual server. The Virtual server can define one server port, all requirements from outside will transmit to the appointed server in the LAN(appoint through IP address),so the user out of the LAN can visit the servers safely to present to effect the network safety in the LAN.

Virtual Server Settings

You may setup Virtual Servers to provide services on Internet.

Virtual Server Settings	
Virtual Server Settings	Enable <input type="button" value="v"/>
IP Address	<input type="text"/>
Port Range	<input type="text"/> - <input type="text"/>
Protocol	TCP&UDP <input type="button" value="v"/>
Comment	<input type="text"/>

(The maximum rule count is 32.)

- Virtual Server Settings: Open / close virtual server
- IP Address: The PC'S address which was appointed as the virtual server in LAN
- Port Range: Range of opening port, WAN user transmit requirement from this port to getparms.
- Protocol: virtual server uses the optional protocol-- TCP&UDP、TCP、UDP.
- Comment: description of offering service.

3.9 Firewall

Choose menu Firewall, shown the following interface to setup the router' s firewall feature, including IP address, MAC address, Port, Starting and setting filtration of content filtration .

3.9.1 Basic Settings

After opening the Firewall, MAC/IP/Port filtration setting will be operated.

MAC/IP/Port Filtering Settings

You may setup firewall rules to protect your network from virus, worm and malicious activity on the Internet.

Basic Settings	
MAC/IP/Port Filtering	Disable ▾
Default Policy -- The packet that don't match with any rules would be:	Dropped. ▾
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

- MAC/IP/Port Filtering: Open and close the Firewall.
- Default Policy: Default Formula, defines the incoordinate data message will be discarded or accepted.

3.9.2 MAC/IP/Port Filtering

Import the **MAC/IP/Port** which need filtrate, then choose the protocol and transmit codex, at last click **Apply**.

MAC/IP/Port Filter Settings	
MAC address	<input type="text"/>
Dest IP Address	<input type="text"/>
Source IP Address	<input type="text"/>
Protocol	None ▾
Dest Port Range	<input type="text"/> - <input type="text"/>
Source Port Range	<input type="text"/> - <input type="text"/>
Action	Accept ▾
Comment	<input type="text"/>

(The maximum rule count is 32.)

- MAC Address: MAC address of the computer.
- Dest IP Address: Aim IP address.

- Resource IP Address: Resource IP Address.
- Protocol: 4 Protocol options-- NONE、TCP、UDP、ICMP.,
- Dest Port Range : Dest Port Range
- Resource Port Range: Resource Port Range.
- Action: Choose discarding or accepting the suited data.
- Comment: Description of filtering protocol.

3.9.3 Content Filter

Click Menu **Content Filter** by left key, shown the following interface, this menu includes three features: Webs content Filter、URL Filter、Host(Keyword) Filter.

1) Webs Content Filter

Can choose to filter **Proxy**、**Java**、**ActiveX**.

Content Filter Settings

You can setup Content Filter to restrict the improper content access.

Webs Content Filter	
Filters:	<input checked="" type="checkbox"/> Proxy <input checked="" type="checkbox"/> Java <input checked="" type="checkbox"/> ActiveX
<input type="button" value="Apply"/>	<input type="button" value="Reset"/>

2) Current Webs URL Filter

Import the webs need filter, that can confine the visitation of the appointed URL webs.

Webs URL Filter Settings

Current Webs URL Filters:	
No	URL
1 <input type="checkbox"/>	www.163.com
<input type="button" value="Delete"/> <input type="button" value="Reset"/>	

Add a URL filter:	
URL:	<input type="text"/>
<input type="button" value="Add"/> <input type="button" value="Reset"/>	

3) Current Website Host Filters

Import the keywords need filter, that can confine the visitation of the URL webs included with the keywords.

Webs Host Filter Settings

Current Website Host Filters:	
No	Host(Keyword)
1 <input type="checkbox"/>	sina
<input type="button" value="Delete"/> <input type="button" value="Reset"/>	

Add a Host(keyword) Filter:	
Keyword	<input type="text"/>
<input type="button" value="Add"/> <input type="button" value="Reset"/>	

3.10 Routing

Choose Menu Routing, which includes two submenu **Static Route** and **Dynamic Route**. You can setup Static Route and Dynamic Route.

3.13.1 Static Route Click menu **Static Routing Settings** to be shown the following interface, that setup **Static Route** .

Static Routing Settings

You may add and remote custom Internet routing rules, and/or enable dynamic routing exchange protocol here.

Add a routing rule	
Destination	<input type="text"/>
Range	Net <input type="button" value="v"/>
Netmask	<input type="text"/>
Gateway	<input type="text"/>
Interface	LAN <input type="button" value="v"/> <input type="text"/>
Comment	<input type="text"/>

- Destination: Import Aim IP address.
- Range: Mainframe / network, to setup the corresponding subnet mask.
- Net mask: Import subnet mask.
- Gateway: Import the gateway's IP address.
- Interface: LAN/WAN/Custom, to choose routing port.
- Comment: Description of Routing codex.

3.13.2 Dynamic Route

Click menu **Dynamic Route Settings** by left key, shown the following interface. Through RIP dynamic route protocol to connect two routers.

Dynamic Routing Settings

You may enable/disable Dynamic Routing functions here.

Dynamic Routing Protocol	
RIP	Disable <input type="button" value="v"/>

- Enable: Open RIP routing.
- Disable: Close RIP routing.

3.11 UPNP

Click menu **UPnP Settings**, **UPnP** is an English abbreviation of Universal Plug and Play. Opening feature **UPnP** can improve the loading speed of **UPnP** loading software. In Widows operating system, only Windows XP supports **UPnP** feature.

UPNP Settings

You may enable/disable UPNP functions here.

UPNP configure	
UPNP	Enable ▾

- 4 Enable: Open **UPnP**
- 5 Disable: Close **UPnP**

5.1 DDNS

Choose menu **DDNS Settings**, show you the following interface. **DDNS** is abbreviation of Dynamic Domain Name Serve. DDNS can map the dynamic IP address to a fixed domain name resolving server.

DDNS Settings	
Dynamic DNS Provider	None ▾
Account	<input type="text"/>
Password	<input type="text"/>
DDNS	<input type="text"/>

- Dynamic DNS Provider: Dynamic DNS Provider
- Account: Import the account that that dynamic DNS provider supports.

- Password: Import the password that that dynamic DNS provider supports.
- DDNS: Import the domain name that that dynamic DNS provider appoints

5.2 Wireless Settings

Choose menu **Wireless Settings**, which includes Basic、Advanced、Security、WPS、Station List .

3.13.1 Basic

1) Wireless Network

Wireless Network	
Radio On/Off	<input type="button" value="RADIO OFF"/>
Network Mode	11b/g/n mixed mode ▾
Network Name(SSID)	RT2880_AP
Multiple SSID1	<input type="text"/>
Multiple SSID2	<input type="text"/>
Multiple SSID3	<input type="text"/>
Multiple SSID4	<input type="text"/>
Multiple SSID5	<input type="text"/>
Multiple SSID6	<input type="text"/>
Multiple SSID7	<input type="text"/>
Broadcast Network Name (SSID)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
BSSID	00:E0:4C:12:34:6D
Frequency (Channel)	2437MHz (Channel 6) ▾

- Radio On/Off: Open/ close wireless function.

- Network Mode: 11b/g mixed mode、11b only、11g only、11b/g/n mixed mode.
- Network Name(SSID): Name of wireless network.

Multiple SSID(1-7): Multiple SSID。

Wireless end can connect a router' s different SSID

- Broadcast Network Name (SSID): Allow /forbid SSID broadcast.
- BSSID: unique mark of wireless device, namely MAC of wireless device.
- Frequency(channel): Channel

2) WDS

WDS (Wireless Distribution System) can connect more to four AP by bridge or relay, to expand wireless network's coverage range.

Wireless Distribution System(WDS)	
WDS Mode	Bridge Mode <input type="button" value="v"/>
Phy Mode	CCK <input type="button" value="v"/>
EncrypType	NONE <input type="button" value="v"/>
AP MAC Address	<input type="text"/>

- WDS Mode: WDS Mode, includes Disable/Lazy Mode/Bridge Mode/Repeater Mode

Disable: don't start **WDS** function.

Lazy Mode: needn't import the AP's MAC address under this mode,

Bridge Mode: Needn't import AP's MAC address.

Under this mode, connecting with tow different LANs, the two wireless routers won't accept any other wireless router's connecting.

Repeater Mode: For expanding the wireless network coverage, the two connecting wireless routers which are set as ends of relay accept the other wireless devices.

- Physical Mode: CCK, one confection mode the wireless devices used.
- Encrypt Type: including NONE/WEP/TKIP/AES
- Encrypt Key: Key of encryption.
- AP MAC Address: Import the MAC address that connecting AP needs.
- MAC importing format: : XX:XX:XX:XX:XX

Advanced Wireless

Click **Advanced Wireless** by left key, show the following interface, at last click button **Apply**.

Advanced Wireless	
BG Protection Mode	Auto <input type="button" value="v"/>
Basic Data Rates	Default(1-2-5.5-11 Mbps) <input type="button" value="v"/>
Beacon Interval	100 <input type="text"/> ms (range 20 - 999, default 100)
Data Beacon Rate (DTIM)	1 <input type="text"/> ms (range 1 - 255, default 1)
Fragment Threshold	2346 <input type="text"/> (range 256 - 2346, default 2346)
RTS Threshold	2347 <input type="text"/> (range 1 - 2347, default 2347)
TX Power	100 <input type="text"/> (range 1 - 100, default 100)
Short Preamble	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Short Slot	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Tx Burst	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Pkt_Aggregate	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
IEEE 802.11H Support	<input type="radio"/> Enable <input checked="" type="radio"/> Disable(only in A band)
Country Code	None <input type="button" value="v"/>

This router provides some advanced data to setup the wireless network. If you are not clear for the following data, please keep on the factory default.

Wi-Fi Multimedia	
WMM Capable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
APSD Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
WMM Parameters	<input type="button" value="WMM Configuration"/>
Multicast-to-Unicast Converter	
Multicast-to-Unicast	<input type="radio"/> Enable <input checked="" type="radio"/> Disable

- WMM Capable: WMM is a basic application of QOS, which makes media devices use network broadband firstly, to reduce network delay and advance the communication quality.
- APSD Capable: APSD (Automatic Power Save Delivery) to save power of WiFi devices.

3.13.2 Security

Click menu Security by left key. You can see the following interface. This part can setup the wireless broadband Router' s security to confine illegal user's visitation.

1) Select SSID

If you setup multiple SSID, you can choose SSID to setup each of them,

Select SSID	
SSID choice	RT2880_AP ▾

2) Security Mode

Choosing the encryption ways of security mode is quite important. It can confine the illegal user's visitation to improve the network's safety and reliability, Including the following modes:Disable/OPEN/SHARED/WEPAUTO/WPA/WPA-PSK/WPA2/WPA2-PSK/WPAPSKWPA2PSK/WPA1WPA2/802.1X。

Choosing Disable, it won't use any encryption ways. Choosing the other modes, all the user ends of wireless network need security validate.

For example, setting wireless security with WPA-PSK. After setting, click button **Apply** to finish it,. The wireless user end can setup as this mode,

"RT2880_AP"	
Security Mode	WPA-PSK <input type="button" value="v"/>
WPA	
WPA Algorithms	<input checked="" type="radio"/> TKIP <input type="radio"/> AES <input type="radio"/> TKIPAES
Pass Phrase	<input type="text" value="12345678"/>
Key Renewal Interval	<input type="text" value="3600"/> seconds

- Security Mode: Choose WPA-PSK
- WPA Algorithms: WPA encrypt arithmetic, can choose TKIP or AES.
- Pass Phrase: import the password. At least 8 letters longest is 63 letters.
- Key Renewal Interval: pass phrase' s renewing period, default is 3600 seconds.

3) Access Policy

Choose Access Policy to allow and forbid the MAC address PC access the wireless network resources.

Access Policy	
Capable	Allow <input type="button" value="v"/>
Del	<input type="text" value="00:11:12:13:00:01"/>
New:	<input type="text"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

- Capable: Disable/ALLOW/REJECT
- New: Import the MAC address of wireless end.

Import format: XX:XX:XX:XX:XX

3.13.3 WPS

WPS (Wi-Fi Protected Setup) offers a quick wireless encryption. During connecting the encrypted network, you needn' t import security mode and pass phrase, that make wireless security setting be more easier and ensure the network' s security. Click menu WPS by left key, show the following interface,

1) WPS Config:

WPS Config	
WPS:	Enable <input type="button" value="v"/>
<input type="button" value="Apply"/>	

- Enable: Start WPS function..
- Disable: Close WPS function.

2) WPS Summary

This segment shows the information with WPS, such as WPS status, WPS' s SSID, security mode, encryption, pass phrase, AP PIN code...

WPS Summary	
WPS Current Status:	Idle
WPS Configured:	Yes
WPS SSID:	RT2880_AP
WPS Auth Mode:	WPA-PSK
WPS Encryp Type:	TKIP
WPS Default Key Index:	2
WPS Key(ASCII)	12345678
AP PIN:	11930693
<input type="button" value="Reset OOB"/>	

3) WPS Progress

This segment shows how to use WPS feature, this wireless broadband router provides two WPS attestation ways: PBC (Push Button Config) and PIN (PIN Input Config) .The user can click button PBC or fill the PIN code into the user end, to access the wireless devices by the side of clients easily.

WPS Progress	
WPS mode	<input checked="" type="radio"/> PIN <input type="radio"/> PBC
PIN	<input type="text"/>
<input type="button" value="Apply"/>	

WPS Status
WSC:Start WSC Process

- PIN: Through PIN code collocate way.

WPS Mode chooses PIN way. There are two ways of connecting WPS: as register, as enter

Register way: Make the wireless broadband router as register and the wireless end device as Enter. Import the end's PIN code, then click Apply button, Then the wireless broadband router is waiting for the connect requirement from the end, “**Security**” lamp lights. Click button on wireless end device to connect with the wireless broadband router.

Enter way: Make the wireless broadband router as enter, the wireless end device as register. Import the PIN code of wireless Broadband router to the wireless end device—WPS Summary to obtain. Then click PIN button. Connected.

- PBC: Through button setting way. WPS mode choose PBC way, click button Apply, await for WPS connecting requirement(Start WSC Process), “Security” lamp lights, connected.

3.13.4 Station List

Click menu **Station List** by left key, can see the following interface, which shows the wireless ends list connected with the wireless broadband router.

Station List

You could monitor stations which associated to this AP here.

Wireless Network							
MAC Address	Aid	PSM	MimoPS	MCS	BW	SGI	STBC

