

WR-5930 AC750 Dual-Band Wireless Router

User Manual



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This manual provides information related to the installation and operation of this AC750 Dual-Band Wireless Router. The individual reading this manual is presumed to have a basic understanding of home networking terminology and concepts.

If you find the product to be inoperable or malfunctioning, please contact technical support for immediate service by email at <u>homesupport@comtrend.com</u>

For product updates, new product release, manual revision, or software upgrades, please visit our website at <u>http://www.comtrend.com</u>

Important Safety Instructions

With reference to unpacking, installation, use, and maintenance of your electronic AC750 Dual-Band Wireless Router, the following basic guidelines are recommended:

Do not use or install this product near water, to avoid fire or shock hazard. For example, near a bathtub, kitchen sink or laundry tub, or near a swimming pool. Also, do not expose the equipment to rain or damp areas (e.g. a wet basement).

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Protect Our Environment

This symbol indicates that when the equipment has reached the end of its useful life, it must be taken to a recycling center and processed separately from domestic waste.

The cardboard box, the plastic contained in the packaging, and the parts that make up this wireless router can be recycled in accordance with regionally established regulations. Never dispose of this electronic equipment along with your household waste; you may be subject to penalties or sanctions under the law. Instead, please be responsible and ask for disposal instructions from your local government.



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Chapter 1 Product Information

1-1 Introduction and Feature Overview

This Comtrend AC750 Dual-Band Wireless Router is an excellent choice for *Small* office / Home office users, allowing computers and network devices to easily share a single xDSL / cable modem Internet connection. Easy installation procedures allow any computer user to setup a network environment in a very short time. And when the number of computers and network-enabled devices increase, you can expand the number of network ports by simply attaching a Comtrend switch to extend the scope of your network.

In addition all computers and wireless-enabled network devices (including PDA, cellular phone, game console...etc.) can connect to this wireless router without additional cabling.



Other features of this router include:

- Supports 2.4GHz and 5GHz wireless devices simultaneously.
- High wireless access throughput, up to 300Mbps+433Mbps (transfer data rate).
- Allows multiple users to share a single Internet line.
- Share a single Cable or xDSL Internet connection.
- Access private LAN servers from the Internet.
- Four wired LAN ports (10/100M) and one WAN port (10/100M).
- Works with IEEE 802.11a/b/g/n/ac wireless LAN devices.
- Supports DHCP (Server/Client) for easy IP-address setup.
- Supports multiple wireless modes like: AP, Station-Infrastructure, Wireless Bridge and Universal Repeater.
- Advanced network and security features like: Special Applications, QoS, DMZ, Virtual Servers, Access Control, Firewall.
- Easily monitor the router's status with built-in functions such as: DHCP Client Log, System Log, Security Log and Device/Connection Status.
- Easy to use Web-based GUI for network configuration and management purposes.
- Remote management function allows configuration and upgrades from a remote computer (over the Internet).
- Auto MDI / MDI-X function for all wired Ethernet ports.



1-2 System Requirements

- An Internet connection, provided by xDSL or cable modem with an RJ-45 Ethernet port.
- Computer or network devices with wired or wireless network interface card.
- Web browser (*Microsoft Internet Explorer, Google Chrome or Safari web browser*).
- An available AC power socket (100 240V, 50/60Hz).



1-3 Package Contents

Before starting to use this AC750 Dual-Band Wireless Router, please check if there's anything missing in the package, and contact your place of purchase to claim for missing items:

- Wireless Router (1 pcs)
- Quick Installation Guide (1 pcs)
- Power Adapter (Output: DC 5V/1.5A) (1 pcs)
- Ethernet (RJ-45) cable



1-4 Get familiar with your new wireless router

Front Panel

WR-5930								
AC750 Wireless Router	POWER	5G	2.4G	WAN	1	2	3	4

LED Name	Light Status	Description				
PWR	On	Router is switched on and correctly powered.				
	On	5GHz Wireless WPS function is enabled.				
50	Off	5GHz Wireless network is switched off.				
5G	Flashing	5GHz Wireless LAN activity (transferring or				
		receiving data).				
	On	2.4GHz Wireless WPS function is enabled.				
	Off	2.4GHz Wireless network is switched off.				
2.4G	Flashing	2.4GHz Wireless LAN activity (transferring or				
		receiving data).				
	On	WAN port is connected.				
WAN	Off	WAN port is not connected.				
LNK/ACT	Flashing	WAN activity (transferring or receiving data).				
	On	LAN port is connected.				
LAN 1-4	Off	LAN port is not connected.				
LNK/ACT	Flashing	LAN activity (transferring or receiving data).				



Back Panel



Item Name	Description			
Antenna	External dipole antenna x 2.			
LAN 1 – 4	Local Area Network (LAN) ports 1 to 4.			
WAN	Wide Area Network (WAN / Internet) port.			
Power Jack	Power connector, connects to A/C power adapter.			
Reset / WPS	Reset the router to factory default settings (clear all settings) or			
	start WPS function. Press this button and hold for 10 seconds to			
	restore all settings to factory defaults; press this button for less			
	than 5 seconds once to start the 2.4GHz & 5GHz wireless WPS			
	function.			



Chapter 2 System and Network Setup

2-1 Connecting the Components

Follow the instructions below to build the network connection between your new wireless router and your computers, network devices:

1. Insert the A/C power adapter into the wall socket, and then connect it to the 'Power socket' of the router.



2. Connect your xDSL / cable modem to the WAN port of the router by Ethernet cable.



 Connect your computers and network devices (network-enabled consumer devices other than computers, like game consoles, or a switch / hub) to an available LAN port of the router.





4. Check all LEDs on the front panel. The 'Power' LED should be steadily on, WAN and LAN LEDs should be on if the computer / network devices connected to the respective port of the router are powered on and correctly connected. If the Power LED is not on, or any LED you expected to be on is not on, check the cabling, or jump to '4-2 Troubleshooting' for possible reasons and solutions.



2-2 Connecting to your router using the web browser

Before you can connect to the router and start configuration procedures, your computer must be able to get an IP address automatically (using a dynamic IP address). If it's set to use a static IP address, or you're unsure, follow the instructions below to configure your computer to use dynamic IP address:

If the operating system of your computer is....

Windows XP	- Go to section 2-2-1
Windows Vista/Windows 7	- Go to section 2-2-2
Windows 8	- Go to section 2-2-3



2-2-1 Windows XP IP address setup

1. Click the 'Start' button (it should be located at the lower-left corner of your computer screen), then click control panel. Double-click the *Network and Internet Connections* icon, click *Network Connections*, then double-click *Local Area Connection*, the *Local Area Connection Status* window will appear, and then click the 'Properties' button.

🕹 Local Area Connection Properties 🛛 🔹 💽					
General Authentication Advanced					
Connect using:					
B AMD PCNET Family PCI Ethernet Ad					
This connection uses the following items:					
Client for Microsoft Networks					
🗹 👵 File and Brinter Sharing for Microsoft Networks					
🗹 🛃 QoS Packet Scheduler 🔹					
Internet Protocol (TCP/IP)					

Install Uninstall Properties					
Description					
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.					
Sho <u>w</u> icon in notification area when connected Notify <u>m</u> e when this connection has limited or no connectivity					
OK Cancel					

2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click the 'OK' button.



General Alternate Configuration	
You can get IP settings assigne this capability. Otherwise, you n the appropriate IP settings.	d automatically if your network support eed to ask your network administrator f
⊙ @btain an IP address auto	matically
IP address	35:
Subnet mask:	
 Default gateway:	
⊙ 0 <u>b</u> tain DNS server addres	s automatically
Use the following DNS ser	ver addresses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	
	Advanced



2-2-2 Windows Vista/Windows 7 IP address setup

1. Click the 'Start' button (it should be located at the lower-left corner of your computer screen), then click control panel. Click *View Network Status and Tasks*, and then click *Manage Network Connections*. Right-click *Local Area Network*, then select *'Properties'*. The *Local Area Connection Properties* window will appear, select 'Internet Protocol Version 4 (TCP / IPv4), and then click the 'Properties' button.

Connect	using:					
🔮 Re	altek PCIe G	BE Fa	mily Contr	oller		-
This con	nection uses	the foll	owina iter	ns:	Configure	
V 📑	Client for Mic	rosoft	Networks			
	Trend Micro	NDIS (5.0 Filter D)river		
	Gos Packet	er Sha	uier ring for M	icrosoft Ne	tworks	
	Internet Proto	ocol Ve	rsion 6 (T	CP/IPv6)		
	Internet Proto	ocol Ve	ersion 4 (T	CP/IPv4)		
	Link-Layer To Link-Layer To	opolog	y Discove v Discove	ry Mapper	VO Driver	
		opolog,	, 5,00010			
Ins	stall		Uninstall		Properties	
Descrip	tion					
Transr	nission Contro	ol Proto	col/Inten	net Protoc	ol. The default	t
	rea network	protoco	of that pro	vides com	munication	
wide a across	diverse inter	conne				

2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click the 'OK button'.







2-2-3 Windows 8 IP address setup

1. Click the 'Start' button (it should be located at the lower-left corner of your computer screen), then click control panel. Double-click the *Network and Internet Connections* icon, click *Network Connections*, then double-click *Local Area Connection*, the *Local Area Connection Status* window will appear, and then click the 'Properties' button.

2. Click the 'Start' button (it should be located at lower-left corner of your computer screen), then click control panel. Click **Network and Sharing Center**, and then click **Change adapter settings.** Right-click **Ethernet**, then select '**Properties**'. *the* **Ethernet Properties** window will appear, select 'Internet Protocol Version 4 (TCP / IPv4), and then click the 'Properties' button.

Q	Ethernet Properties	×			
Networking]				
Connect us	sing:				
🔮 Man	vell Yukon 88E8071 PCI-E Gigabit Ethemet Controller				
	Configure				
This conne	ection uses the following items:				
 ♥ ♥ ● M ♥ ↓ W ↓ Insta 	ile and Printer Sharing for Microsoft Networks licrosoft Network Adapter Multiplexor Protocol licrosoft LLDP Protocol Driver ink-Layer Topology Discovery Mapper I/O Driver ink-Layer Topology Discovery Responder itemet Protocol Version 6 (TCP/IPv6) itemet Protocol Version 4 (TCP/IPv4)				
Descripti	on				
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.					
	OK Cancel				



3. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click the 'OK' button.

Internet Protocol Version 4 (TCP/IF	Pv4) Properties ? ×
General Alternate Configuration	
You can get IP settings assigned automatication this capability. Otherwise, you need to ask for the appropriate IP settings.	ally if your network supports your network administrator
Obtain an IP address automatically	
Use the following IP address:	
IP address:	1. Contract (1997)
Subnet mask:	
Default gateway:	
Obtain DNS server address automatication	ally
Use the following DNS server address	es:
Preferred DNS server:	1
Alternate DNS server:	
Validate settings upon exit	Advanced
	OK Cancel
•	**************************************



2-2-4 Router IP address lookup

1. After the IP address setup is complete, click 'start' -> 'run' at the bottom-lower corner of your desktop:

home user	
Internet Internet Explorer E-mail Outlook Express	My Documents My Recent Documents My Pictures
C:	My Music
MSN	Control Panel
🔏 Windows Messenger	Defaults Printers and Faxes
Tour Windows XP	🕐 Help and Support
Files and Settings Transfer Wizard	Search
All <u>P</u> rograms 🕨	
	Log Off 🚺 Turn Off Computer
🚑 start 🔹	

2. Input 'cmd', then click the 'OK' button.

Run	? 🔀
-	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:	cmd 🗸 🗸
	OK Cancel Browse

3. Input 'ipconfig', and then press the 'Enter' key. Check the IP address followed by 'Default Gateway' (In this example, the IP address of the router is 192.168.2.1)



📧 C:\WINDOWS\system32\cmd.exe	- 🗆 🗙
C:\>ipconfig	^
Windows IP Configuration	
Ethernet adapter Local Area Connection:	
Connection-specific DNS Suffix .: IP Address: 192.168.2.3 Subnet Mask: 255.255.255.0 Default Gateway: 192.168.2.1	
C:\>_	
	-

NOTE: If the IP address of Gateway is not displayed, or the address followed by 'IP Address' begins with '169', please recheck network connection between your computer and router, and / or go to the beginning of this chapter, to recheck every step of network setup procedure.

2-2-5 Connect to the router's management interface by web browser

After your computer has obtained an IP address from the router, start your web browser, and input the IP address of the router in the address bar. The following should be shown:

The server 192 password.	.168.2.1 at Default:admin/1234 requires a username and
Warning: This sent in an inse connection).	server is requesting that your username and password be cure manner (basic authentication without a secure
	User name Password Remember my credentials

Leading the Communication Trend



Input the user name and password in their respective fields, the default user name is **'admin'**, and the default password is **'1234'**, then press the 'OK' button, and you can see the web management interface of this router:



NOTE: If you can't see the web management interface, and you're being prompted to input user name and password again, it means you didn't input username and password correctly. Please retype user name and password again. If you're certain about the user name and password you type are correct, please go to '4-2 Troubleshooting' to perform a factory reset, to set the password back to its default value.

TIP: This page shows the four major setting categories: Quick Setup, General Setup, Status, and Tools. You can find the shortcut which leads to these setting categories at the upper-right side of every page, and you can jump to another category directly by clicking the link.



2-3 Using 'Quick Setup'

This router provides a 'Quick Setup' procedure, which will help you to complete all the required settings you need to access the Internet in a very short time. Follow these instructions to complete the 'Quick Setup':

Go to Quick Setup menu by clicking the 'Quick Setup' button.



The following will be displayed:



1. Set Time Zone

Time Zone _U		
Set the time zone of the Wireless Ro	uter. This information is used for log entries and firewall settings.	
Time Zone :	(GMT+00:00)Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London 💌	1
Time Server Address :	59.124.196.83	2
Daylight Savings :	Enable Time From January V 1 V To January V 1 V	3
	NEXT	
		4

Here are descriptions of every setup item:

Time Zone (1):	Press the volution, a drop-down list will be shown, and you can choose the time zone of the location in which you live.
Time Server Address (2):	Input the IP address / host name of the time server you use if you do want to use the default one.
Daylight Savings (3):	If the country you live in uses daylight savings, check the 'Enable Function' box, and choose the duration of daylight savings.

After you complete all settings, click the 'NEXT' (4) button.

NOTE: There are several time servers available on Internet:

129.6.15.28 (time-a.nist.gov) 132.163.4.101 (time-a.timefreq.bldrdoc.gov) 131.107.1.10 (time-nw.nist.gov)

If you found that the time of the router is incorrect, try another time server.



2. WAN Type

O <u>Cable Modem</u>

A connection through a cable modem requires minimal configuration. When you set up an account with your Cable provider, the Cable provider and your Wireless Router will automatically establish a connection, so you probably do not need to enter anything more.

O Fixed-IP xDSL

Some xDSL Internet Service Providers may assign a Fixed IP Address for your Wireless Router. If you have been provided with this information, choose this option and enter the assigned IP Address, Subnet Mask, Gateway IP Address and DNS IP Address for your Wireless Router.

O PPPoE xDSL

If you connect to the Internet using an xDSL Modem and your ISP has provided you with a Password and a Service Name, then your ISP uses PPPoE to establish a connection. You must choose this option and enter the required information.

O PPTP xDSL

If you connect to the Internet using an xDSL Modem and your ISP has provided you with a Password, Local IP Address, Remote IP Address and a Connection ID, then your ISP uses PPTP to establish a connection. You must choose this option and enter the required information.

O L2TP xDSL

Layer Two Tunneling Protocol is a common connection method used in xDSL connections.

O Telstra Big Pond

If your Internet service is provided by Telstra Big Pond in Australia, you will need to enter your information below, This information is provided by Teistra BigPond.

BACK

Choose the WAN (Internet connection) type you're using on this page. There are six options for the type of Internet connection:

Cable Modem	- Go to section 2-3-1
Fixed-IP xDSL	- Go to section 2-3-2
PPPoE xDSL	- Go to section 2-3-3
PPTP xDSL	- Go to section 2-3-4
L2TP xDSL	- Go to section 2-3-5
Telstra Big Pond	- Go to section 2-3-6

If you're not sure, contact your Internet service provider. A wrong Internet connection type will cause a connection problem, and you will not be able to connect to the Internet.

If you want to go back to the previous step, press the 'Back' button on the bottom of this page.



NOTE: Some service providers use 'DHCP' (Dynamic Host Configuration Protocol) to assign IP address to you. In this case, you can choose 'Cable Modem' as Internet connection type, even you're using another connection type, like xDSL.



2-3-1 Setup procedure for 'Cable Modem' (Dynamic IP):

Host Name :			1	
MAC Address :	00000000000	Clone MAC 2		
		BACK	OK	

Here are descriptions of every setup item:

Host Name (1):	Input the host name of your computer, this is	
	optional, and only required if your service provider	
	asks you to do so.	
MAC Address (2):	Input the MAC address of your computer, if your service	
	provider only permits computers with a certain MAC	
	address to access the Internet. If you're using the	
	computer which was used to connect to the Internet via	
	cable modem, you can simply press the 'Clone Mac address'	
	button to fill the MAC address field with the MAC address of	
	your computer.	

After you complete all settings, click the 'OK' (3) button; if you want to go back to previous menu, click the 'Back' button.



2-3-2 Setup procedure for 'Fixed-IP xDSL':

Static IP

Enter the IP Address, Subnet Mask, Gateway IP Address and DNS IP Address provided to you by your ISP in the appropriate fields.



Here are descriptions of every setup item:

IP Address (1):	Input the IP address assigned by your service provider.
Subnet Mask (2):	Input the subnet mask assigned by your service provider
DNS Address (3):	Input the IP address of the DNS server provided by your service provider.
Default Gateway (4):	Input the IP address of the DNS server gateway address provided by your service provider.

You must use the addresses provided by your Internet service provider. Incorrect setting values will cause connection problems.

When you complete all settings, press the 'OK' button (5); if you want to go back to previous menu, click the 'Back' button.

NOTE: You can choose this Internet connection method if your service provider assigns a fixed IP address (also known as static address) to you, and not using DHCP or PPPoE protocol. Please contact your service provider for further information.



2-3-3	Setup	procedure	for	'PPPoE	xDSL':
	occup	pi cocaai c			ADOL .

PPPoE

Enter the User Name and Password required by your ISP in the appropriate fields. If your ISP has provided you with a "Service Name" enter it in the Service Name field, otherwise, leave it blank.

User Name :		1
Password :		2
Service Name :		3
MTU :	1392 (512<=MTU Value<=1492)	4
Connection Type :	Connect on Demand 💌 Connect Disconnect	5
Idle Time Out :	10 (1-1000minutes)	6
	Back	ок 7
		7

Here are descriptions of every setup item:

User Name (1):	Input the user name assigned by your Internet service provider.
Password (2):	Input the password assigned by your Internet service provider.
Service Name (3):	Give a name to this Internet service. This is optional.
MTU (4):	Input the MTU value of your network connection. If you don't know, you can use the default value.
Connection Type (5):	Select the Internet connection type you wish to use (detailed explanation listed below).
Idle Time Out (6):	Input the idle time out, (detailed explanation listed below).

When you complete all settings, click the 'OK' button (7); if you want to go back to the previous menu, click the 'Back' button.



MTU - Please use the default value if you don't know what it is, or ask your service provider for a proper value.

Connection Type - There are 4 options:

'Continuous' - keep the Internet connection alive, do not disconnect.

Connect on Demand - only connects to the Internet when there's a connection attempt,

'Manual' - only connects to the Internet when the 'Connect' button on this page is pressed, and disconnects when the 'Disconnect' button is pressed.

Idle Time Out: Specify the time to shutdown the Internet connection after no Internet activity is detected by minute. This option is only available when connection type is 'Connect on Demand'.



2-3-4 Setup procedure for 'PPTP xDSL':

PPTP xDSL requires two kinds of settings: WAN interface setting (setup IP address) and PPTP setting (PPTP user name and password). Here we start from the WAN interface setting:

s automatically	
00000000000	Clone Mac address
address	
0.0.0.0	
0.0.0.0	
0.0.0.0	
	s automatically 000000000000 address 0.0.0.0 0.0.0.0

Select how you obtain an IP address from your service provider. You can choose 'Obtain an IP address automatically' (equal to DHCP, refer to 'Cable Modem' section above), or 'Use the following IP address' (i.e. static IP address).

WAN interface settings must be correctly set, or the Internet connection will fail even though the PPTP settings are correct. Contact your Internet service provider if you don't know how to fill in these fields.

 PPTP Settings 		
User Name :		1
Password :		2
PPTP Gateway :	0.0.0.0	3
Connection ID :	(Optional)	4
MTU :	1392 (512<=MTU<=1492)	5
BEZEQ-ISRAEL :	Enable (For BEZEQ network in ISRAEL use only)	6
Connection Type :	Continuous Connect Disconnect	7
Idle Time Out :	10 (1-1000 Minute)	8
	BACK	
	9	

Now go to the PPTP settings section:



Here are descriptions of every setup item:

User Name (1):	Input the user ID (user name) assigned by your Internet service provider.
Password (2):	Input the password assigned by your Internet service provider.
РРТР	Input the IP address of PPTP gateway
Gateway (3):	assigned by your Internet service provider.
Connection	Input the connection ID. This is
ID (4):	optional and you can leave it blank.
MTU (5):	Input the MTU value of your network connection. If you don't know, you can use the default value.
BEZEQ-ISRAEL (6):	Setting item 'BEZEQ-ISRAEL' is only required to Check if you're using the service provided by the BEZEQ network in Israel.
Connection	Select the type of Internet connection you wish to use,
type (7):	refer to the previous section for detailed descriptions.
Idle Time	Input the idle time out of the Internet connection
Out (8):	you wish to use, and refer to the previous section for detailed descriptions.

When you complete all settings, click the 'OK (9) button; if you want to go back to previous menu, click the 'Back' button.



2-3-5 Setup procedure for 'L2TP xDSL':

L2TP is another popular connection method for xDSL and other Internet connection types, and all required setting items are the same as a PPTP connection.

Like PPTP, there are two kinds of required settings, we'll start from 'WAN Interface Settings':

 WAN Interface Settings Obtain an IP address 	s automatically	
Host Name :		
MAC address :	00000000000	Clone Mac address
○ Use the following IP	address	
IP address :	0.0.0.0	
Subnet Mask :	0.0.0.0	
Default Gateway :	0.0.0.0	

Select how you obtain IP address from your service provider. You can choose 'Obtain an IP address automatically' (equal to DHCP, refer to the 'Cable Modem' section above), or 'Use the following IP address' (equal to static IP address, refer to the 'PPPoE xDSL' section above).

WAN interface settings must be correctly set, or the Internet connection will fail even though the PPTP settings are correct. Contact your Internet service provider if you don't know how to fill in these fields.

Now go to the L2TP settings section:

L2TP Settings		
User Name :		1
Password :		2
L2TP Gateway :		3
MTU :	1392 (512<=MTU<=1492)	4
Connection Type :	Continuous Connect Disconnect	5
Idle Time Out :	10 (1-1000 Minute)	6
	BACK OK	
	7	,

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Here are descriptions of every setup item:

User Name (1):	Input the user ID (user name) assigned by your Internet service provider.
5 ((0)	·
Password (2):	Input the password assigned by your Internet service provider.
L2TP Gateway (3):	Input the IP address of L2TP gateway assigned by your Internet service provider.
MTU (4):	Input the MTU value of your network connection. If you don't know, you can use the default value.
Connection	Select the type of Internet connection you wish to use.
Туре (5):	Refer to the previous section for detailed descriptions.
Idle Time	Input the idle time out of Internet connection
Out (6):	you wish to use, and refer to the previous section for
	detailed descriptions.

When you complete all settings, click the 'OK (7) button; if you want to go back to previous menu, click the 'Back' button.



2-3-6 Setup procedure for 'Telstra Big Pond':

Telstra Big Pond

If your Internet service is provided by Telstra Big Pond in Australia, you will need to enter your information below, This information is provided by Teistra BigPond.

User Name :		1
Password :		2
3□ Assign login server manually		
Server IP Address :	0.0.0.0	4
BACK	ок 5	

This setting only works when you're using Telstra big pond's network service in Australia. You need to input:

User Name (1):	Input the user name assigned by Telstra.
Password (2):	Input the password assigned by Telstra.
Assign login server manually (3):	Check this box to choose the login server by yourself.

Server IP Address (4): Input the IP address of the login server.

When you complete all settings, click the 'OK (5) button; if you want to go back to the previous menu, click the 'Back' button.

When all settings are complete, you'll see the following displayed on your web browser:


Save settings successfully!
Please press APPLY button to restart the system to make the changes take effect.
CONTINUE

Click the 'Apply' button to prepare to restart the router, and you'll see this message:

System Restarting! Please wait for a while !
OKI

After the countdown click the 'OK!' button. You'll be brought back to the router management interface again, and the router is ready with new settings.



2-4 Basic Setup

In this chapter, you'll learn how to change the time zone, password, and remote management settings. Start your web browser and log into the router's web management interface, and then click the 'General Setup' link at the upper-right side of the web management interface.





2-4-1 Time zone and time auto-synchronization

Click the 'General Setup' menu on the left of the web management interface, then click 'Time Zone', and the following will be displayed on your web browser:

Time Zone	
Set the time zone of the Wireless Ro	uter. This information is used for log entries and firewall settings.
Time Zone :	(GMT+00:00)Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London 💌
Time Server Address :	59.124.196.83
Daylight Savings :	Enable Time From January V 1 V To January V 1 V
	NEXT

Select the time zone from the 'Set time zone' drop-down list, and input the IP address or host name of the time server. If you want to enable the daylight savings setting, check the 'Enable Function' box, and set the duration of daylight setting. When you finish, click the 'Apply' button. You'll see the following displayed on the web browser:



Press the 'Continue' button to save the settings and go back to the web management interface; press the 'Apply' button to save the settings made and restart the router so the settings will take effect after it reboots.

NOTE: You can refer to the instructions given in the last chapter: 'Using Quick Setup', for detailed descriptions on time zone settings.



2-4-2 Change management password

The default password of this router is 1234, and it's displayed on the login prompt when accessed from the web browser.

To change the password, follow the instructions below:

Click the 'System' menu on the left of the web management interface, then click 'Password Settings', and the following will be displayed on your web browser:

Current Password :	1		
New Password :	2		
Confirmed Password :	3		
		Apply	Cancel

Here are descriptions of every setup item:

Current	Input the current password.
Password (1):	
New Password (2):	Input the new password.
Confirmed	Input the new password again.
Password (3):	

When you finish, click the 'Apply' button. If you want to keep the original password unchanged, click the 'Cancel' button.

If the password you typed in 'New Password' (2) and 'Confirmed Password' (3) field are not the same, you'll see the following message:



Microso	ft Internet Explorer 🛛 🔀
⚠	Password is not matched. Please type the same password between 'new' and 'confirmed' box.
	ОК

Retype the new password again when you see the above message.

If you see the following message:

ERROR: Pass	word is not matched !
ОК	

It means the content in the 'Current Password' field is wrong, click the 'OK' button to go back to previous menu, and try to input the current password again.

If the current and new passwords are correctly inputted, after you click the 'Apply' button, you'll be prompted to input your new password:

Connect to 192.168.2.1
Default: admin/1234
User name:
Password:
Remember my password
OK Cancel

Use the new password to enter the web management interface again.



2-4-3 Remote Management

This router does not allow remote management access from the Internet by default. However, you can still manage this router from a specific IP address by enabling the 'Remote Management' Function.

To do so, follow the instructions below:

Click the 'System' menu on the left of the web management interface, then click 'Remote Management', and the following will be displayed on your web browser:

Host Address	Port	Enable
0.0.0.0 1	8080 2	□ 3
	APPLY	CANCEL

Here are descriptions of every setup item:

Host Address (1): Input the IP address of the remote host you wish to initiate management access with.

Port (2): You can define the port number this router should expect an incoming request from. If you're providing a web service (default port number is 80), you should try to use another port number. You can use the default port setting '8080', or something like '32245' or '1429'. (Any integer between 1 and 65534)

Enable (3): Select the field to enable the configuration.

When you complete all settings, click the 'Apply' button, and you'll see the following displayed on the web browser:



Save setting successfully!

You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect

Continue	Apply	
----------	-------	--

Press the 'Continue' button to save the settings made and go back to the web management interface; press 'Apply' to save the settings made and restart the router so the settings will take effect after it reboots.

NOTE: When you want to manage this router from another computer on the Internet, you have to input the IP address and port number of this router. If your Internet service provider assigns you with a static IP address, it will not be a problem; but if the IP address your service provider assigns to you will vary every time you establish an Internet connection, this will be a problem.

Please either ask your service provider to give you a static IP address, or use dynamic IP to host name mapping services like DDNS. Please refer to chapter 2-5-8 'DDNS client' for details.

NOTE: The default port number the web browser will use is '80'. If the 'Port' setting in this page is not '80', you have to assign the port number in the address bar of the web browser manually. For example, if the IP address of this router is 1.2.3.4, and the port number you set is 8888, you have to input following address in the address bar of web browser:

http://1.2.3.4:8888



2-5 Setup Internet Connection (WAN Setup)

The Internet connection setup can be completed by using the 'Quick Setup' procedure as described in section 2-3. However, you can setup WAN connections by using the WAN configuration menu. You can also set advanced functions like DDNS (Dynamic DNS) here.

For WAN setup, follow these instructions:

Click the 'WAN' menu on the left of the web management interface:

Select an Internet connection method depending on the type of connection you're using. You can either click the connection method on the left (1) or right (2). If you select the connection method on the right, click the 'More Configuration' button after a method is selected.



Dynamic IP	- Go to section 2-5-1
Static IP	- Go to section 2-5-2
PPPoE	- Go to section 2-5-3
РРТР	- Go to section 2-5-4
L2TP	- Go to section 2-5-5
Telstra Big Pond	- Go to section 2-5-6
DNS	- Go to section 2-5-7
DDNS	- Go to section 2-5-8
WISP	- Go to section 2-5-9



2-5-1 Setup procedure for 'Dynamic IP':

Dynamic IP η

The Host Name is optional, but may be required by some Service Providers. The default MAC Address is set to the WAN physical interface on the Wireless Router. If required by your Service Provider, you can use the 'Clone MAC Address' button to copy the MAC Address of the Network Interface Card installed in your PC and replace the WAN MAC Address with this MAC Address.

Host Name :		1
MAC Address :	000000000000	2 Clone MAC
		3 APPLY CANCEL

Here are descriptions of every setup item:

Host Name (1):	Input the host name of your computer, this is optional, and
	only required if your service provider asks you to do so.
MAC Address (2):	Input the MAC address of your computer, if your service
	provider only permits computers with certain MAC
	addresses to access the Internet. If you're using a
	computer which is used to connect to Internet via cable
	modem, you can simply press the 'Clone Mac address'
	button to fill the MAC address field with the MAC address of
	your computer.

After you complete all settings, click the 'Apply' button (3); if you want to remove and values you inputted, click the 'Cancel' button.

After you click the 'Apply' button, the following will be displayed on your web browser:



Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on router setup, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).



2-5-2 Setup procedure for 'Static IP':

Static IP 1

If your Service Provider has assigned a Fixed IP address; enter the assigned IP Address, Subnet Mask and the Gateway IP Address provided.

IP Address :	172.1.1.1	1
Subnet Mask :	255.255.0.0	2
Default Gateway :	172.1.1.254	3
		_

Here are descriptions of every setup item:

	your service provider.
Default Gateway (3):	Input the IP address of the DNS server provided by
Subnet Mask (2):	Input the subnet mask assigned by your service
IP Address (1):	Input the IP address assigned by your service provider.

After you complete all settings, click the 'Apply' (4) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-3 Setup procedure for 'PPPoE':

PPPoE 🕖

Enter the PPPoE User Name and Password assigned by your Service Provider. The Service Name is normally optional, but may be required by some Service Providers. Enter a Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the Maximum Idle Time, then the connection will be dropped. You can enable the Connect on Demand option to automatically re-establish the connection as soon as you attempt to access the Internet again. If your Internet Service Provider requires the use of PPPoE, enter the information below.

User Name :				1	
Password :				2	
Service Name :				3	
MTU :	1392	(512<=MTU Value<=1492))	4	
Connection Type :	Continuous	🖌 Connect	Disconnect	5	
Idle Time Out :	10	(1-1000minutes)		6	
			Apply		Cancel
				7	

Here are descriptions of every setup item:

User Name (1):	Input the user name assigned by your Internet service provider.
Password (2):	Input the password assigned by your Internet service provider.
Service Name (3):	Give a name to this Internet service. This is optional.
MTU (4):	Input the MTU value of your network connection. If you don't know, you can use the default value.
Connection Type (5):	Select the type of Internet connection you wish to use.
	Continuous – The connection will always be kept on. If the connection is interrupted, the router will re-connect automatically.
	Connect On-Demand – Only connect when you want to surf the Internet. "Idle Time Out" is set to stop the connection when the network traffic is not sending or receiving after an idle time.
	4 /

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Manual – After you have selected this option, you will see the "Connect" button and "Disconnect" button, click "Connect" and the router will connect to the ISP. If you want to stop the connection, click the "Disconnect" button.

Idle Time Out (6): If you have selected the connection type to "Connect-On-Demand", input the idle time out.

After you complete all settings, click the 'Apply' (7) button and the following will be displayed on your web browser:

Save setting successfully!			
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect			
Continue Apply			

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-4 Setup procedure for 'PPTP':

PPTP requires two kinds of settings: WAN interface setting (setup IP address) and PPTP setting (PPTP user name and password). Here we start from the WAN interface setting:

 WAN Interface Settings Obtain an IP Address Automatically 				
Host Name :]		
MAC Address :	00000000000	Clone MAC		
O Use The Following IP Address				
IP Address :	0.0.0.0]		
Subnet Mask :	0.0.0.0]		
Default Gateway :	0.0.0.0			

Select how you obtain an IP address from your service provider. You can choose 'Obtain an IP address automatically' (equal to DHCP, refer to 'Cable Modem' section above), or 'Use the following IP address' (i.e. static IP address)

The WAN interface settings must be correctly set, or the Internet connection will fail even though the PPTP settings are correct. Contact your Internet service provider if you don't know what you should put in these fields.

 PPTP Settings 1 User Name : Password : 2 PPTP Gateway : 0.0.0.0 3 Connection ID : (Optional) 4 MTU : 1392 (512<=MTU<=1492) 5 BEZEQ-ISRAEL : Enable (For BEZEQ network in ISRAEL use only) 6 Connection Type : Connect Disconnect 7 Continuous ¥ Idle Time Out : 8 10 (1-1000 Minute) APPLY CANCEL 9 49

Now go to the PPTP settings section:

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Here are descriptions of every setup item:

User Name (1):	Input the user ID (user name) assigned by your Internet service provider.
Password (2):	Input the password assigned by your Internet service provider.
PPTP Gateway (3):	Input the IP address of PPTP gateway assigned by your Internet service provider.
Connection ID (4):	Input the connection ID, this is optional and you can leave it blank.
MTU (5):	Input the MTU value of your network connection. If you don't know, you can use the default value.
BEZEQ-ISRAEL (6):	If you are connecting to the BEZEQ network in Israel. Enable this function.
Connection Type (7):	Select the type of Internet connection you wish to use, refer to section 2-5-3 for detailed descriptions.
Idle Time Out (8):	Input the idle time out of Internet connection you wish to use, and refer to section 2-5-3 for detailed descriptions.

When you complete all settings, click the 'Apply' (9) button and the following will be displayed on your web browser:

Save setting s	uccessfully!
----------------	--------------

You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect

Continue Apply

Click 'Continue' to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-5 Setup procedure for 'L2TP':

L2TP Settings		
User Name :	· · · · · · · · · · · · · · · · · · ·	1
Password :		2
L2TP Gateway :		3
MTU :	1392 (512<=MTU<=1492)	4
Connection Type :	Continuous Connect Disconnect	5
Idle Time Out :	10 (1-1000 Minute)	6
	1	

Here are descriptions of every setup item:

User ID (1):	Input the user ID (user name) assigned by your Internet service
	provider.
Password (2):	Input the password assigned by your Internet service provider.
L2TP	Input the IP address of L2TP gateway assigned by
Gateway (3):	your Internet service provider.
MTU (4):	Input the MTU value of your network connection. If you don't know, you can use the default value.
Connection	Select the type of Internet connection
Туре (5):	you wish to use, refer to section 2-5-3 for detailed descriptions.
Idle Time	Input the idle time out of Internet connection
Out (6):	you wish to use, and refer to section 2-5-3 for detailed descriptions.

When you complete all settings, click the 'Apply' (7) button and the following will be displayed on your web browser:



Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-6 Setup procedure for 'Telstra Big Pond':

Telstra Big Pond 🕖	
If your Internet service is provided by Telstra Big Pond in Australia, you will need to enter your information below, This information is provided by Teistra BigPond.	
User Name : 1	
Password : 2	
3 🔲 Assign login server manually	
Server IP Address : 0.0.0.0 4	
APPLY CANCEL 5	

This setting only works when you're using Telstra big pond's network service in Australia. You need to input:

User Name (1):	Input the user name assigned by Telstra.
Password (2):	Input the password assigned by Telstra.
Assign login server manually (3):	Check this box to choose the login server by yourself.

Server IP Address (4): Input the IP address of login server.

When you complete all settings, click the 'Apply' (5) button and the following will be displayed on your web browser:

Save setting successfully!	
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect	
Continue Apply	



Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-7 Setup procedure for 'DNS':

If you select '*Dynamic IP*' or '*PPPoE*' as the Internet connection method, at least one DNS server's IP address should be assigned automatically. However, if you have a preferred DNS server, or your service provider didn't assign the IP address of the DNS server for any reason, you can input the IP address of the DNS server here.

DNS 2	
A DNS (Domain Name System) server is like an in into your browser, such as www.broadbandrouter. address. Most ISPs provide a DNS server for spee Internet through dynamic IP settings, it is likely th there is a DNS server that you would rather use, y will be used for domain name access first, in case	ndex of IP Addresses and Web Addresses. If you type a Web address com, a DNS server will find that name in its index and find the matching IP ed and convenience. Since your Service Provider may connect you to the the DNS server IP Address is also provided dynamically. However, if you need to specify the IP Address of that DNS server. The primary DNS as the primary DNS access failures, the secondary DNS will be used.
Primary DNS :	1
Secondary DNS :	2
APPLY CANCEL	3

Here are descriptions of every setup item:

Primary DNS (1): Input the IP address of the DNS server provided by your service provider.

Secondary DNS (2): Input the IP address of another DNS server provided your service provider. This is optional.



After you complete all settings, click the 'Apply' (3) button and the following will be displayed on your web browser:



Save setting successfully!	
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect	
Continue Apply	

Click the 'Continue' button to go back to previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-8 Setup procedure for 'DDNS':

DDNS (Dynamic DNS) is an IP-to-Hostname mapping service for Internet users who don't have a static (fixed) IP address. Problems will occur when user(s) want to provide services to other users on the Internet, as their IP address will vary every time when connected to the Internet.

This router supports the DDNS service of several service providers, for example:

DynDNS (<u>http://www.dyndns.org</u>) TZO (<u>http://www.tzo.com</u>)

Go to one of the DDNS service provider's WebPages listed above, and get a free DDNS account by following the instructions given on their webpage.

DDNS 2			
DDNS allows users to map the static domain name to a dynamic IP address. You must get a account, password and your static domain name from the DDNS service providers. Our products have DDNS support for www.dyndns.org and www.tzo.com now.			
Dynamic DNS :	○Enabled ⊙Disabled	1	
Provider :	DynDNS 😽	2	
Domain Name :		3	
Account / E-Mail :		4	
Password / Key :		5	
		Apply Cancel	
		6	

Here are descriptions of every setup item:

Dynamic DNS (1):	If you want to enable the DDNS function, select 'Enabled';
	otherwise select 'Disabled'.
Provider (2):	Select your DDNS service provider.
Domain Name (3):	Input the domain name you've obtained from the DDNS service provider.

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Account / Input account or email of DDNS registration.

E-Mail (4):

Password / Key (5): Input the DDNS service password or key.

After you complete all settings, click the 'Apply' (6) button and the following will be displayed on your web browser:

Save setting successfully!	
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect	
Continue Apply	

Click the 'Continue' to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-5-9 Setup procedure for 'WISP':

If the network service provided by your service provider is through a wireless network, select this mode. After you have connected the router to the access point of the service provider wirelessly, set up the WAN connection type in the WAN page.

WISP		
In this mode, all ethernet ports are bridged together and the wireless client will connect to ISP access point. The NAT is enabled and PCs in ethernet ports share the same IP to ISP through wireless LAN. You must set the wireless to client mode first and connect to the ISP AP in Site-Survey page. The connection type can be setup in WAN page by using PPPOE, DHCP client, PPTP client or static IP.		
⊙Disable ⊙Enable 1		
Basic Settings		
ssid: 2		
Site Survey : 3 • 2.46 • 56 Site Survey 4		
Security Settings		
Encryption : Disable 💽 5		
6 APPLY CANCEL		
Here are descriptions of every setup item:		

Disable/Enable/	There are two selections for disable or enable
Enable (Station	wireless ISP functions.
Mode Only) (1):	
	Disable: disables this function.
	Enable: enables this function and the router can connect to
	the access points installed by your wireless service provider
	Any clients associated with the router can access the
	Internet service through the wireless network.
	Note: In this mode, if you are informed by your
	wireless ISP that the wireless settings of the access
	point have changed, configure the router in this page
	to match the settings.
	Enable this function and the router can only allow
	connection through wired Ethernet cable for WAN access
	service.



SSID (2):	This is the name of the wireless network. Input the SSID
	name that your ISP provided to you.

- Wireless Band (3): Check with your ISP service provider either 2.4GHz or 5GHz wireless band is used for the network and then select the wireless band.
- Site Survey (4): Click the 'Select Site Survey' button, then a "Wireless Site Survey Table" will pop up. It will list all available access points nearby. Select the access point designated by your wireless ISP in the table and the router will join the wireless network through this access point.
- Security Settings (5): If the access point enables wireless security, you have to follow the same settings in order to access the access point. Click to set security settings for this connection (go to section '2-7-3 Wireless Security' for detailed instructions).

After you complete all settings, click the 'Apply' (6) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page go back to the previously-saved values, click the 'Cancel' button.



2-6 Wired LAN Configurations

Before all computers using wired Ethernet connections (i.e. those computers that connect to this router's LAN port 1 to 4 by Ethernet cable) can communicate with each other and access the Internet, they must have a valid IP address.

There are two ways to assign IP addresses to computers: static IP address (set the IP address for every computer manually), and dynamic IP address (IP addresses of computers will be assigned by the router automatically.



Recommended setup values will be provided below for your convenience.



Follow the instructions below to set wired LAN parameters:

Click the 'LAN' menu on the left of the web management interface, there are three setup groups here: 'LAN IP', 'DHCP Server', and 'Static DHCP Leases Table'. Here are the setup instructions for each of them:

2-6-1 LAN IP section:

LAN IP		
IP address	192.168.2.1	1
Subnet Mask	255.255.255.0	2
802.1d Spanning Tree	Disabled 💌	3
DHCP Server	Enabled 💌	4

Here are descriptions of every setup item:

IP address (1):	Input the IP address of this router.
Subnet Mask (2):	Input the subnet mask for this network.
802.1d	If you wish to activate the 802.1d spanning tree
Spanning Tree (3):	function, select 'Enabled' for setup item '802.1d Spanning
	Tree', or set it to 'Disabled'.
DHCP Server (4):	If you want to activate the DHCP server function of this
	router, select 'Enabled', or set it to 'Disabled'.

Recommended Value if you don't know what to put:

IP Address: 192.168.2.1 Subnet Mask: 255.255.255.0 802.1d Spanning Tree: Disabled DHCP Server: Enabled



2-6-2 DHCP Server:

DHCP Server		
Lease Time :	Forever 💌	1
DHCP Client Start IP :	192.168.2.100	2
DHCP Client End IP :	192.168.2.200	3
Domain Name :		4

These settings are only available when the 'DHCP Server' in the 'LAN IP' section is 'Enabled', and here are descriptions of every setup item:

Lease Time (1):	Choose a lease time (the duration that every computer can		
	keep a specific IP address) of every IP address assigned by		
	this router from the drop-down menu.		
Start ID (2)	Innut the start ID address of the ID range		
Start IP (2):	input the start ip address of the ip range.		
End IP (3):	Input the end IP address of the IP range.		
Domain Name (4):	If you wish, you can also optionally input the domain name		
	for your network. This is optional.		

Recommended Value if you don't know what to put:

Lease Time: Two Weeks (or 'Forever', if you have less than 20 computers) Start IP: 192.168.2.100 End IP: 192.168.2.200

Domain Name: (leave it blank)

NOTE:

1. The number of the last field (mentioned 'd' field) of 'End IP' must be greater than the 'Start IP', and cannot be the same as the router's IP address.

2. The former three fields of IP address of 'Start IP', 'End IP', and 'IP Address of 'LAN IP' section (mentioned 'a', 'b', and 'c' field) should be the same.



2-6-3 Static DHCP Leases Table:

This function allows you to assign a static IP address to a specific computer forever and still enjoy the benefit of using a DHCP server. A maximum of 16 static IP addresses can be assigned here.

(If you set 'Lease Time' to 'forever' in the 'DHCP Server' section, you can also assign an IP address to a specific computer permanently, however, you will not be able to assign a certain IP address to a specific computer, since IP addresses will be assigned in random order by this way).



Here are descriptions of every setup item:

Enable Static	Check this box to enable this function,
DHCP Leases (1):	otherwise uncheck it to disable this function.
MAC Address (2):	Input the MAC address of the computer or network
	device (total 12 characters, with characters from 0 to 9,
	and from a to f, like '001122aabbcc')
IP address (3):	Input the IP address you want to assign to this computer
	or network device
'Add' (4):	After you inputted the MAC address and IP address pair,
	click this button to add the pair to the static DHCP leases
	table.

If you want to remove all the characters you just inputted, click the 'Clear' button.

After you clicked the 'Add' button, the MAC address and IP address mapping will be added to the 'Static DHCP Leases Table' section.



Static DH	CP Lease Table It allows 16 entrie	es only.	
NO.	MAC Address	IP Address	Select
1	00:11:22:33:44:55	192.168.2.100	1
		2 Delete De	lete All 3

If you want to delete a specific item, check the 'Select' box of a MAC address and IP address mapping (1), then click the 'Delete' button (2); if you want to delete all mappings, click the 'Delete All' (3) button.

After you complete all LAN settings, click the 'Apply' button on the bottom of this page. After you click 'Apply', the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on router setup, or click the 'Apply' button to reboot the router so the settings will take effect (wait for about 40 seconds while the router is rebooting).



2-7 Wireless LAN Configurations

If your computer, PDA, game console, or other network devices are equipped with a wireless network interface, you can use the wireless function of this router to allow them connect to the Internet and share resources with other computers with a wired-LAN connection. You can also use the built-in security functions to protect your network from being attacked by malicious intruders.

This router supports both 2.4GHz and 5GHz wireless bands simultaneously; the wireless settings for both wireless bands are almost the same. The following sections will only highlight the different descriptions between these two selections.

Enter into 'General Setup' page, select '2.4GHz Wireless' or '5GHz Wireless' to configure the wireless settings for the different wireless signals.



Follow these instructions to set wireless parameters:

Click the 'Wireless' menu at the top of the web management interface, and the following will be displayed on your web browser. You must enable the wireless function of this router, or the wireless interface of this router will not function. Select 'Enable' (1), then click the 'Apply' (2) button.

If you're coming here because you want to disable the wireless function, select 'Disable' (3), then click the 'Apply' (2) button.



Wireless 1		
The Wireless Router can be quickly configured as a wireless access point for roaming clients by setting the access identifier and channel number. It also supports data encryption and client filtering.		
Wireless Module :	APPLY 2	

After you click the 'Apply' button (2), the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).



2-7-1 Basic Wireless Settings

Click '2.4GHz Wireless' or '5GHz Wireless' menu on the left of the web management interface, then click 'Basic Settings', and the following will be displayed on your web browser:

2.4GHz Wireless

Basic Settings 👔

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

Mode:	Access Point	×
Band :	2.4 GHz (B+G+N) 💌	
SSID :	default	
Channel Number :	7 💌	
Associated Clients :	Show Active Clients	
	ſ	
		APPLY CANCEL

5GHz Wireless

Basic Settings v

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

Mode:	Access Point	▼
Band :	5 GHz (A+N+AC) 💌	
SSID :	default	
Channel Number :	36 💌	
Associated Clients :	Show Active Clients	
		APPLY CANCEL



This wireless router can work in 6 modes:

a. Access Point: Standard wireless AP.

b. *Station-Infrastructure*: Configure the router to an Ethernet device such as TV, Game player, HDD&DVD to enable the Ethernet device to be a wireless station.

c. *AP Bridge-Point to Point*: Connect this router with another wireless router, to expand the scope of the network.

d. *AP Bridge-Point to Multi-Point*: Connect this router with up to four other wireless routers, to expand the scope of the network.

e. *AP Bridge-WDS*: Connect this router with up to four WDS-capable wireless routers, to expand the scope of the network.

f. *Universal Repeater*: The router can act as Station and an AP at the same time. It can use the Station function to connect to a Root AP and use the AP function to service all wireless stations within its coverage.

NOTE: For 'AP Bridge-Point to Point' and 'AP Bridge-Point to Multi-Point' mode, the wireless router operates in wireless bridge dedicated mode – the wireless router is only used to expand the scope of the network, and no wireless clients will be accepted. If you want to use your wireless router to expand the scope of the network, and also accept wireless clients, please select 'AP Bridge-WDS' or 'Universal Repeater' mode.

Select a proper operation mode you want to use from 'Mode' drop-down menu (1), and continue on other operation mode specific settings:

Access Point	- Go to section 2-7-1-1		
Station-Infrastructure	- Go to section 2-7-1-2		
AP Bridge-Point to Point	- Go to section 2-7-1-3		
AP Bridge-Point to Multi-Point	- Go to section 2-7-1-4		
AP Bridge-WDS	- Go to section 2-7-1-5		
Universal Repeater	- Go to section 2-7-1-6		
	(0		

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2-7-1-1 Setup procedure for 'Access Point':

Select Access Point from the 'Mode' drop-down menu (1), and the following will be displayed:

2.4GHz Access Point Settings

Basic Settings

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

Mode : Access Point	≥ 1	
Band : 2.4 GHz (B+G+N) 💌	2	
SSID : default	3	
Channel Number : 🛛 💌	4	
Associated Clients : Show Active Clients	5	
	APPLY CA	NCEL

5GHz Access Point Settings

Basic Settings

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

Mode:	Access Point	~	1
Band :	5 GHz (A+N+AC) 💌		2
SSID :	default		3
Channel Number :	36 💌		4
Associated Clients :	Show Active Clients		5
		APF	

Here are descriptions of every setup item:

Band (2):

Select the radio band from one of following options:



2.4GHz Band

2.4 GHz (B): only allows 802.11b wireless network clients to connect to this router (maximum transfer rate 11Mbps).

2.4 GHz (N): only allows 802.11n wireless network clients to connect to this router (maximum transfer rate 300Mbps).

2.4 GHz (B+G): only allows 802.11b and 802.11g wireless network clients to connect to this router (maximum transfer rate 11Mbps for 802.11b clients, and maximum 54Mbps for 802.11g clients).

2.4 GHz (G): only allows 802.11g wireless network clients to connect to this router (maximum transfer rate 54Mbps).

2.4 GHz (B+G+N): only allows 802.11b, 802.11g, and 802.11n wireless network clients to connect to this router (maximum transfer rate 11Mbps for 802.11b clients, maximum 54Mbps for 802.11g clients, and maximum 300Mbps for 802.11n clients).

5GHz Band

5GHz (A): only allows 802.11a wireless network clients to connect to this router (maximum transfer rate 54Mbps for 802.11a clients).

5GHz (N): only allows 802.11n wireless network clients to connect to this router (maximum transfer rate 150Mbps for 802.11n clients).

5GHz (A+N): only allows 802.11a and 802.11n wireless network clients to connect to this router (maximum transfer rate 54Mbps for 802.11a clients, and maximum 150Mbps for 802.11n clients).


5GHz (AC): only allows 802.11ac wireless network clients to connect to this router (maximum transfer rate 433Mbps for 802.11ac clients).

5GHz (N+AC): only allows 802.11n and 802.11ac wireless network clients to connect to this router (maximum transfer rate 150Mbps for 802.11n clients, and maximum 433Mbps for 802.11ac clients).

5GHz (A+N+AC): only allows 802.11a, 802.11n and 802.11ac wireless network clients to connect to this router (maximum transfer rate 54Mbps for 802.11a clients, maximum 150Mbps for 802.11n clients, and maximum 433Mbps for 802.11ac clients).

NOTE: For 802.11n mode: The router is operating in a 2T2R Spatial Multiplexing MIMO configuration.

SSID (3): This is the name of the wireless router. You can type any alphanumerical characters here, maximum 32 characters. The SSID is used to identify your own wireless router from others when there are other wireless routers in the same area. The default SSID is 'default', it's recommended to change the default SSID value to the one which is meaningful to you, like myhome, office_room1, etc.

Channel Number (4): Select a channel from the drop-down list of 'Channel Number'. You can choose any channel number you want to use, and almost all wireless clients can locate the channel you're using automatically without any problem. However, it's still useful to remember the channel number you use, some wireless clients support manual channel number selection, and this would help in certain scenarios when there is some radio communication problem. The available channels numbers for the following band are:



2.4GHz Band

The available channel numbers are 1 to 13 for European countries, 1 to 11 for USA.

5GHz Band

The available channel numbers are 36 to 140 (36~ 48, 52~64, 100~ 140) for European countries, and 36 to 48 and 149 to 165 for USA.

Associated Clients (5): Click the 'Show Active Clients' button, then an "Active Wireless Client Table" will pop up. You can see the status of all active wireless stations that are connecting to the access point.

NOTE: If you don't have special reason to limit the type of allowed wireless client, it's recommended to choose '2.4GHz (B+G+N) and 5GHz (A+N+AC) to maximize wireless client compatibility.

TIPS: You can try to change the channel number to another one if you think the data transfer rate is too slow. There could be some other wireless routers using the same channel, which will disturb the radio communication between the wireless client and the wireless router.



2-7-1-2 Setup procedure for 'Station-Infrastructure':

In this mode, you can connect the router to an Ethernet device such as TV, Game player, HDD&DVD to enable the Ethernet device to be a wireless station and join a wireless network through an access point or AP router.

2.4GHz Station (Infrastructure) Settings

Mode :	Station (Infrastructure)	► 1	
Band :	2.4 GHz (B+G+N) 💌	2	
SSID :	default	3	}
Site Survey :	Site Survey	4	
	(APPLY	CANCEL

5GHz Station (Infrastructure) Settings

Mode :	Station (Infrastructure)	~	1
Band :	5 GHz (A) 🖌		2
SSID :	default]	3
Site Survey :	Site Survey		4
	(APPLY	CANCEL

Band (2):	Select the band you want to use.
SSID (3):	This is the name of the wireless network. You can type the SSID of the network you would like to connect to here.
Site Survey (4):	When you use this wireless router as a wireless station for an Ethernet network device to have wireless capability, you have to associate it with a working access point. Click the 'Select Site Survey' button, then a "Wireless Site Survey Table" will pop up. It will list all available access points nearby. You can select one access point in the table and it will join the wireless LAN through this access point.



2-7-1-3 Setup procedure for 'AP Bridge-Point to Point':

In this mode, you can connect your wireless router with another, to combine two access points and expand the scope of the wireless network, and all clients (wired only – AP will not accept wireless clients in this mode) of the two wireless routers will think they're on the same physical network. This function is very convenient when you need to connect two networks between two buildings.

2.4GHz AP Bridge (Point to Point) Settings

Mode :	AP Bridge (Point to Point)	~	1
Band :	2.4 GHz (B+G+N) 🔽		2
Channel Number :	11 💌		3
MAC Address 1 :	0000000000		4
Security Settings :	Security Settings		5
		APPLY	CANCEL

5GHz AP Bridge (Point to Point) Settings

Mode :	AP Bridge (Point to Point)	~	1
Band :	5 GHz (A) 🔽		2
Channel Number :	36 💌		3
MAC Address 1 :	0000000000		4
Security Settings :	Security Settings		5
		APPLY	CANCEL

NOTE: Two wireless routers must use the same mode, band, channel number, and security setting!

Here are descriptions of every setup item:

Band (2):

Select the band you want to use; the two wireless routers must use the same setting.

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Channel	Select the channel you want to use, the two wireless
Number (3):	routers must use the same setting.
MAC	
Address 1 (4):	Input the MAC address of another wireless router.
Security	Click the' security settings' button for this connection
Settings (5):	(Go to section '2-7-3 Wireless Security'
	for detailed instructions).



2-7-1-4 Setup procedure for 'AP Bridge-Point to Multi-Point':

In this mode, you can connect your wireless router with at least four wireless routers to expand the scope of wireless network, and all clients (wired only – AP will not accept wireless clients in this mode) of the wireless routers will think they're on the same physical network.

Mode :	AP Bridge (Point to Multi-F	² oint) 🔽 1
Band :	2.4 GHz (B+G+N) 🔽	2
Channel Number :	11 💌	3
MAC Address 1 :	0000000000	4
MAC Address 2 :	0000000000	5
MAC Address 3 :	0000000000	6
MAC Address 4 :	0000000000	7
Security Settings :	Security Settings	8
		APPLY CANCEL

2.4GHz AP Bridge (Point to Multi-Point) Settings

5GHz AP Bridge (Point to Multi-Point) Settings

Mode :	AP Bridge (Point to Multi-Po	pint) 🚩 🚺
Band :	5 GHz (A) 🖌	2
Channel Number :	36 💌	3
MAC Address 1 :	00000000000	4
MAC Address 2 :	0000000000	5
MAC Address 3 :	0000000000	6
MAC Address 4 :	0000000000	7
Security Settings :	Security Settings	8
		APPLY CANCEL



Band (2):	Select the band you want to use; all the wireless routers
	must use the same setting.
Channel	Select the channel you want to use, all the wireless
Number (3):	routers must use the same setting.
MAC address	Input the MAC address of the other wireless routers.
1 to 4 (4 - 7):	
Security	Click the' security settings' button for this connection
Settings (8):	(Go to section '2-7-3 Wireless Security'
	for detailed instructions).



2-7-1-5 Setup procedure for 'AP Bridge – WDS'

In this mode, you can expand the scope of the network by combining up to four other access points together, and every access point can still accept wireless clients.

Mode : AP Bridge (WDS) 4 1 2 Band : 2.4 GHz (B+G+N) 🗸 SSID : default 3 4 Channel Number : 11 💌 Associated Clients : Show Active Clients 5 MAC Address 1 : 00000000000 6 MAC Address 2 : 00000000000 7 MAC Address 3 : 00000000000 8 MAC Address 4 : 00000000000 9 Security Settings Security Settings : 10 APPLY CANCEL

2.4GHz AP Bridge (WDS) Settings

5GHz AP Bridge (WDS) Settings

Mode :	AP Bridge (WDS)	<u>▶</u> 1
Band :	5 GHz (A)	2
SSID :	default	3
Channel Number :	36 💌	4
Associated Clients :	Show Active Clients	5
MAC Address 1 :	0000000000	6
MAC Address 2 :	0000000000	7
MAC Address 3 :	0000000000	8
MAC Address 4 :	0000000000	9
Security Settings :	Security Settings	10
		APPLY CANCEL



Band (2):	Select the band you want to use; all the wireless routers
	must use the same setting.
SSID (3):	Input the SSID of your wireless router, the setting should be the same with other wireless routers for the convenience of roaming.
Channel	Select the channel you want to use, all the wireless
Number (4):	routers must use the same setting.
Associated Clients (5):	Click the 'Show Active Clients' button, then an "Active Wireless Client Table" will pop up. You can see the status of all active wireless stations that are connecting to the access point.
MAC address	Input the MAC address of other wireless routers.
1 to 4 (6 - 9):	
Security	Click to set the' security settings' button for this connection
Settings (10):	(Go to section '2-7-3 Wireless Security' for detailed instructions).



2-7-1-6 Setup procedure for 'Universal Repeater'

In this mode, the router can act as a wireless repeater; it can be a Station and an AP at the same time. It can use the Station function to connect to a Root AP and use the AP function to service all wireless stations within its coverage.

NOTE: For Repeater Mode, this router will demodulate the received signal, checking if this signal is noise for the operating network then have the signal modulated and amplified again. The output power of this mode is the same as that of WDS and normal AP mode.

2.4GHz Universal Repeater Settings

Mode :	Universal Repeater	×	1
Band :	2.4 GHz (B+G+N) 💌		2
SSID :	default		3
Channel Number :	11 💌		4
Associated Clients :	Show Active Clients		5
Root AP SSID :			6
Site Survey :	Site Survey		7
		APPLY	CANCEL

5GHz Universal Repeater Settings

Mode:	Universal Repeater	~	1
Band :	5 GHz (A+N+AC) 💌		2
SSID :	default		3
Channel Number :	36 💌		4
Associated Clients :	Show Active Clients		5
Root AP SSID :			6
Site Survey :	Site Survey		7
		APPLY	CANCEL

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Here are descriptions of every setup item:

Band (2):	Select the band you want to use; all the wireless routers
	must use the same setting.
SSID (3):	This is the name of the wireless router. You can type any alphanumerical characters here, maximum 32 characters. SSID is used to identify your own wireless router from others when there are other wireless routers in the same area. Default SSID is 'default', it's recommended to change the default ESSID value to the one which is meaningful to you, like myhome, office_room1, etc.
Channel	Select the channel you want to use, all the wireless
Number (4):	clients must use the same setting.
Associated Clients (5):	<i>Click the 'Show Active Clients' button, then an "Active Wireless Client Table" will pop up. You can see the status of all active wireless stations that are connecting to the access point.</i>
Root AP SSID (6):	In 'Universal Repeater' mode, this device can act as a station to connect to a Root AP. You should assign the SSID of the Root AP here or click 'Select Site Survey' button to choose a Root AP.
Site Survey (7):	Click the 'Select Site Survey' button, then a "Wireless Site Survey Table" will pop up. It will list all available access points nearby. You can select one access point in the table and the router will join the wireless LAN through this access point.

After you complete the wireless settings, click the 'Apply' button, after you click the 'Apply' button, the following will be displayed on your web browser:



Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on router setup, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).



2-7-2 Advanced Wireless Settings

This router provides some advanced control of wireless parameters, if you want to configure these settings, click '2.4GHz Wireless' or '5GHz Wireless' menu on the left of the web management interface, then click 'Advanced Settings', and the following will be displayed on your web browser:

2.4GHz Advanced Settings

Set the time zone of the Wireless Router. This information is used for log entries and firewall settings.

Fragment Threshold :	2346	(256-2346)	1
RTS Threshold :	2347	(0-2347)	2
Beacon Interval :	100	(20-1024 ms)	3
DTIM Period :	3	(1-10)	4
Data Rate :	Auto 💌		5
N Data Rate :	Auto 💌		6
Channel Width :	💿 Auto 20/40 N	IHZ O20 MHZ	7
Preamble Type :	 Short Pream 	ole 🗢 Long Preamble	8
Broadcast Essid :	⊙Enable O	Disable	9
CTS Protect :	⊙ Auto O Alv	vays 🔾 None	10
Tx Power:	100 % 💌		11
WMM :	⊙Enable O	Disable	12
			CANCEL



5GHz Advanced Settings

Set the time zone of the Wireless Router. This information is used for log entries and firewall settings.

Fragment Threshold :	2346	(256-2346)	
RTS Threshold :	2347	(0-2347)	
Beacon Interval :	100	(20-1024 ms)	
DTIM Period :	3	(1-10)	
Data Rate :	Auto 💌		
N Data Rate :	Auto	•	
Channel Width :	⊙ 20/40/80 MHZ ○ 20/40 MHZ ○ 20 MHZ		
Preamble Type :	Short Preamble ○ Long Preamble		
Broadcast Essid :	⊙ Enable O Disable		
CTS Protect :	⊙ Auto O Al	ways 🔿 None	
Tx Power:	100 % 🔽		
WMM :	⊙Enable O	Disable	
		APPLY CANCEL	

Fragment	Set the Fragment threshold of wireless radio.
Threshold (1):	Do not modify the default value if you don't know
	what it is, default value is 2346.
RTS Threshold (2):	The RTS (Request To Send) threshold parameter controls
	what size data packet (number of bytes) the low level RF
	protocol issues to an RTS packet. <i>Do not modify the</i>
	default value if you don't know what it is, default
	value is 2347.
Beacon Interval (3):	The Beacon Interval value indicates the frequency interval
	of the beacon. A beacon is a packet broadcast by the Router
	to synchronize the wireless network. Do not modify the
	default value if you don't know what it is, default
	value is 100.



- DTIM Period (4):Configures the DTIM (Delivery Traffic Indication Message)send period.Do not modify the default value if youdon't know what it is, default value is 3.
- Data Rate (5): Set the wireless data transfer rate to a certain value. Since most of the wireless devices will negotiate with each other and pick a proper data transfer rate automatically, **it's not necessary to change this value unless you know what will happen after modification**.
- N Data Rate (6): Same as above, but only for 802.11n & 802.11ac clients.
- Channel Width (7): Set channel width of wireless radio. You can modify the default value if you know what channel width is you need, default setting is '20 MHz'.
- Preamble Type (8): Set the type of preamble, **do not modify the default** value if you don't know what it is, the default setting is 'Short Preamble'.
- Broadcast ESSID (9): Decide if the wireless router will broadcast its own ESSID or not. You can hide the ESSID of your wireless router (set the option to 'Disable'), so only those people who know the ESSID of your wireless router can get connected.
- CTS Protect (10): Enabling this setting will reduce the chance of radio signal collisions between 802.11b and 802.11g/n wireless access points. It's recommended to set this option to 'Auto' or 'Always'. However, if you set to 'None', your wireless router should be able to work fine, too.
- Tx Power (11): You can set the output power of wireless radio. Unless you're using this wireless router in a really big space, you may not have to set output power to 100%. This will enhance security (malicious / unknown users in distance will not be able to reach your wireless router).



WMM (12): This stands for Wi-Fi MultiMedia, it will enhance the data transfer performance of multimedia contents when they're being transferred over wireless networks. If you don't know what it is / not sure if you need it, it's safe to set this option to 'Enable'.

After you complete these wireless settings, click the 'Apply' button, button, and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on router setup, or click the 'Apply' button (13), to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).



2-7-3 Wireless Security

It's very important to set wireless security settings properly! If you don't, hackers and malicious users can reach your network and access valuable data without your consent and this will cause serious security problems.

To set wireless security settings, click the 'Wireless' menu on the upper-left side of the web management interface, then click 'Security Settings', and follow the instructions to set wireless security settings.

Select an encryption method from the 'Encryption' drop-down menu, there are four options:

2-7-3-1 Disable wireless security

When you select this mode, data encryption is disabled, and every wireless device in proximity will be able to connect to your wireless router if no other security measure is enabled (like MAC address access control - see section 2-7-4, or disable ESSID broadcast).

Only use this option when you really want to allow everyone to use your wireless router, and you don't care if there's someone reads the data you transfer over the network without your consent.



2-7-3-2 WEP - Wired Equivalent Privacy

Encryption :	WEP 💌	1	
Key Length :	64-bit 💌	2	
Key Format :	Hex (10 Characters) 💌	3	
Default Tx Key :	Key 1 💌	4	
Encryption Key 1 :	*****	5	
 Enable 802.1x Authentication 6 	•		

When you select this mode, the wireless router will use WEP encryption, and the following setup menu will be shown on your web browser:

Key Length (2):	There are two types of WEP key length: 64-bit and 128-bit. Using '128-bit' is safer than '64-bit', but will reduce some data transfer performance.
Key Format (3):	There are two types of key format: ASCII and Hex. When you select a key format, the number of characters of key will be displayed. For example, if you select '64-bit' as key length, and 'Hex' as key format, you'll see the message at the right of 'Key Format' is 'Hex (10 characters), which means the length of WEP key is 10 characters.
Default Tx Key (4):	You can set up to four sets of WEP key, and you can decide which key is being used by default here. If you don't know which one you should use, select 'Key 1'.
Encryption Key 1 (5):	Input the WEP key characters here, the number of characters must be the same as the number displayed in the 'Key Format' field. You can use any alphanumerical characters (0-9, a-z, and A-Z) if you select 'ASCII' key format, and if you select 'Hex' as key format, you can use characters 0-9, a-f, and A-F. You must input at least one encryption key here, and if you inputted multiple WEP keys, they should not be same as each other.



Enable 802.1xIEEE 802.1x is an authentication protocol. EveryAuthentication (6):user must use a valid account to login to this wireless router
before accessing the wireless LAN. The authentication is
processed by a RADIUS server. This mode only
authenticates the user by IEEE 802.1x, but it does not
encrypt the data during communication. If there is a
RADIUS server in your environment, enable this function.
Check this box and another sub-menu will appear:

RADIUS Server IP address :8RADIUS Server Port :18129RADIUS Server Password :RADIUS ServerInput the IP address of the radiusIP address (8):server.RADIUS ServerInput the port number of the radiusPort (9):server.RADIUS ServerInput the port number of the radiusPort (9):server.	Enable 802.1x Authentication	on	
RADIUS Server Port :18129RADIUS Server Password :10RADIUS ServerInput the IP address of the radius server.IP address (8):server.RADIUS ServerInput the port number of the radius server.Port (9):server.RADIUS ServerInput the port number of the radius server.	RADIUS Server IP address :		8
RADIUS Server Password :10RADIUS ServerInput the IP address of the radiusIP address (8):server.RADIUS ServerInput the port number of the radiusPort (9):server.RADIUS ServerInput the port number of the radiusRADIUS ServerInput the port number of the radius	RADIUS Server Port :	1812	9
RADIUS ServerInput the IP address of the radiusIP address (8):server.RADIUS ServerInput the port number of the radiusPort (9):server.RADIUS ServerInput the port number of the radius	RADIUS Server Password :		10
IP address (8):server.RADIUS ServerInput the port number of the radiusPort (9):server.RADIUS ServerInput the port number of the radius	RADIUS Server	Input the IP address of the radius	
RADIUS ServerInput the port number of the radiusPort (9):server.RADIUS ServerInput the port number of the radius	IP address (8):	server.	
Port (9): server. RADIUS Server Input the port number of the radius	RADIUS Server	Input the port number of the radius	
RADIUS Server Input the port number of the radius	Port (9):	server.	
	RADIUS Server	Input the port number of the radius	
Password (10): password.	Password (10):	password.	

TIPS: Some examples of WEP key

(Don't use these examples; use the one of your own!):

ASCII (5 characters): pilot phone 23561 2Hyux #@xmL ASCII (13 characters): digitalFAMILY 82Jh26xHy3m&n Hex (10 characters): 287d2aa732 1152dabc85 Hex (26 characters): 9284bcda8427c9e036f7abcd84

To improve the security level, do not use words which can be found in a dictionary or words too easy to remember! ('pilot' and 'phone' listed above are bad examples; just intended to show you what a WEP key looks like). Wireless clients will remember the WEP key, so you only have to input the WEP key on the wireless client once, and it's worth using a complicated WEP key to improve the security level.



After you complete the WEP settings, click the 'Apply' button (7), and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

2-7-3-3 Wi-Fi Protected Access (WPA):

When you select this mode, the wireless router will use WPA encryption, and the following setup menu will be shown on your web browser:

Encryption :	WPA pre-share	d key 🔽		1	
WPA Unicast Cipher Suite :	⊙ WPA(TKIP)	OWPA2(AES)	OWPA2 Mixed	2	
Pre-shared Key Format :	Passphrase	×		3	
Pre-shared Key :				4	
				Apply	Cancel
				5	

Here are descriptions of every setup item:

WPA Unicast	Select a type of WPA cipher suite.		
Cipher Suite (2):	Available options are: WPA (TKIP), WPA2 (AES), and WPA2		
	Mixed. You can select any one of them, but you have to		
	make sure your wireless client supports the cipher you		
	selected.		
Pre-shared	Select the type of pre-shared key, you		
Key Format (3):	can select Passphrase (8 or more alphanumerical		
	characters, up to 63), or Hex (64 characters of 0-9, and		
	a-f).		

Leading the Communication Trend



Pre-sharedInput the WPA passphrase.Key (4):It's not recommended to use a word that can be found in a
dictionary due to security reasons.

After you complete the WPA Pre-shared key setting, click the 'Apply' button (5) and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

NOTE: Some wireless clients (especially those manufactured before year 2003) only support WEP or WPA (TKIP) cipher. A driver upgrade would be needed for those clients to use WPA and WPA2 encryption.



2-7-3-4 WPA RADIUS:

If you have a RADIUS server, this router can work with it and provide safer wireless authentication.

Encryption :	WPA RADIUS	▶ 1		
WPA Unicast Cipher Suite :	⊙ WPA(TKIP)	OWPA2(AES)	○WPA2 Mixed	2
RADIUS Server IP Address :		3		
RADIUS Server Port :	1812	4		
RADIUS Server Password :		5		
		6	APPLY	CANCEL

Here are descriptions of every setup item:

WPA Unicast	Select a type of WPA cipher suite.				
Cipher Suite (2):	Available options are: WPA (TKIP), WPA2 (AES), and WPA2				
	Mixed. You can select one of them, but you have to make				
	sure your wireless client supports the cipher you selected.				
RADIUS Server	Input the IP address of your Radius				
IP address (3):	authentication server.				
RADIUS Server	Input the port number of your Radius				
Port (4):	authentication server. Default setting is 1812.				
RADIUS Server	Input the password of your Radius				
Password (5):	authentication server.				

After you complete all settings, click the 'Apply' (6) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).



2-7-4 Wireless Access Control

This function will help you to prevent unauthorized users from connecting to your wireless router; only those wireless devices that have the MAC address you assigned here can gain access to your wireless router. You can use this function with other security measures described in previous sections, to create a safer wireless environment.

Up to 20 MAC addresses can be assigned by using this function. Click '2.4GHz Wireless' or '5GHz Wireless' menu on the left of the web management interface, then click 'Access Control', and the following will be displayed on your web browser:



All allowed MAC addresses will be displayed in the 'MAC Address Filtering Table' (1).

Here are descriptions of every setup item:

Delete Selected (2):	If you want to delete a specific MAC address entry, check
	the 'select' box of the MAC address you want to delete, then
	click the 'Delete' button. (You can select more than one
	MAC address).
Delete All (3):	If you want to delete all MAC addresses listed here, click the
	'Delete All' button.
	94

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Enable	To enforce MAC address filtering, you have to check			
Access Control (4):	'Enable Wireless Access Control'. When this item is			
	unchecked, the wireless router will not enforce MAC address			
	filtering of wireless clients.			
MAC Address (5):	Input the MAC address of your wireless devices here, dash			
	(-) or colon (:) are not required. (i.e. If the MAC address			
	label of your wireless device indicates 'aa-bb-cc-dd-ee-ff' or			
	'aa:bb:cc:dd:ee:ff', just input 'aabbccddeeff'.			
Comment (6):	You can input any text here as the comment of this			
	MAC address, like 'Room 2A' or anything. You can input up			
	to 16 alphanumerical characters.			
	This is optional and you can leave it blank, however,			
	it's recommended to use this field to write a comment			
	for every MAC addresses as a memory aid.			
Add (7):	Click the 'Add' button to add the MAC address and			
	associated comment to the MAC address filtering table.			
Clear (8):	Click the 'Clear' button to remove the value you inputted in			
	the MAC address and comment field.			

After you complete all settings, click the 'Apply' (9) button and the following will be displayed on your web browser:

You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect

Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



2-7-5 Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup (WPS) is the simplest way to build a connection between wireless network clients and this wireless router. You don't have to select the encryption mode and input a long encryption passphrase every time when you need to setup a wireless client, you only have to press a button on the wireless client and on this wireless router, and the WPS will do the rest for you.

This wireless router supports two types of WPS: Push-Button Configuration (PBC), and PIN code. If you want to use PBC, you have to push a specific button on the wireless client to start WPS mode, and switch this wireless router to WPS mode too. You can push the Reset/WPS button of this wireless router, or click the 'Start PBC' button in the web configuration interface to do this; if you want to use PIN code, you have to know the PIN code of wireless client and switch it to WPS mode, then provide the PIN code of the wireless client you wish to connect to this wireless router. The detailed instructions are listed as follows:

Click '2.4GHz Wireless' or '5GHz Wireless' menu on the left of the web management interface, then click 'WPS', and the following will be displayed on your web browser:

WPS

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). WPS can help your wireless client automatically connect to the Wireless Router.

 WPS Information 		2	
WPS Status :	Unconfigured		
PinCode Self :	35175483		
SSID :	default		
Authentication Mode :	Disable		
Passphrase Key :			
• Device Configure			
Config Mode :	Registrar 💌 3		
Configure by Push Button :	Start PBC 4		
Configure by Client PinCode :	Start PIN 5		

1 🗹 Enable WPS



Enable WPS (1):	Check this box to enable the WPS function, uncheck it to disable WPS.			
WPS Information (2):	WPS-related system information will be displayed here:			
	WPS Status: If the wireless security (encryption) function of this wireless router is properly set, you'll see the 'Configured' message here. If wireless security function has not been set, you'll see 'unConfigured'.			
	PinCode Self: This is the WPS PIN code of this wireless router. This code is useful when you need to build a wireless connection by WPS with other WPS-enabled wireless devices.			
	SSID: The SSID of this wireless router will be displayed here.			
	Authentication Mode: The wireless security authentication mode of this wireless router will be displayed here. If you don't enable the security function of the wireless router before WPS is activated, the router will auto set the security to WPA (AES) and generate a set of passphrase key for WPS connection.			
	Passphrase Key: The wireless security key of the router will be displayed here.			
Config Mode (3):	There are 'Registrar' and 'Enrollee' modes for the WPS connection. When 'Registrar' is enabled, the wireless clients will follow the router's wireless settings for WPS connection. When 'Enrollee' mode is enabled, the router will follow the wireless settings of wireless client for WPS connection.			



Configure	Click 'Start PBC' to start the Push-Button style WPS				
by Push Button (4):	setup procedure. This wireless router will wait for WPS				
	requests from wireless clients for 2 minutes. The 'WLAN'				
	LED on the wireless router will be steady on for 2 minutes				
when this wireless router is waiting for an incoming					
	request.				
Configure	Input the PIN code of the wireless client you				
by client	wish to connect, and click the 'Start PIN' button.				
PinCode (5):	The 'WLAN' LED on the wireless router will be steady on				
	when this wireless router is waiting for an incoming WPS				
	request.				



2-7-6 Security Tips for a Wireless Network

Here are some quick tips to help you improve the security level of your wireless network:

- 1. Never use simple words (like school, apple or computer) as the WEP encryption or WPA passphrase.
- 2. A complicated (combination of numbers, letters, even symbols, and long enough) WEP key and WPA passphrase is much safer than simple and short ones. Remember that the wireless client is capable of keeping the key or passphrase for you, so you only have to input the complicated key or passphrase once. It's not too troublesome but will greatly improve the security level.
- 3. You can hide the ESSID of this router by setting the 'Broadcast ESSID' option to 'Disable'. Your wireless router will not be found by other people in proximity if they're just using the AP scanning function of their wireless client, and this can reduce the chance of being intruded.
- 4. Use the 'Access Control' function described in section 2-7-4, so those people who are not in your list will not be able to connect to your network.



Chapter 3 Advanced Functions

3-1 Quality of Service (QoS)

Quality of service provides an efficient way for computers on the network to share the Internet bandwidth with a promised quality of Internet service. Without QoS, all computers and devices on the network will compete with each other to get Internet bandwidth, and some applications which require guaranteed bandwidth (like video streaming and network telephone) will be affected, therefore an unpleasing result will occur, like the interruption of video / audio transfer.

With this function, you can limit the maximum bandwidth or give a guaranteed bandwidth to a specific computer.



3-1-1 Basic QoS Settings

Follow the instructions below to set QoS parameters:

Click the 'QoS' menu on the left of the web management interface and the following will be displayed on your web browser:

🗹 Enable Q	₀s 1					
	Total Download B	andwidth : <mark></mark> S	elect 💌 >> 0	kbit	s 2	
	Total Upload B	andwidth : <mark></mark> S	elect 💌 > 0	kbit	₅ 3	Λ
						4
Current QoS	Table					
Priority	Rule Name		Upload Bandwidt	h Do	wnload Bandwidth	Select
1	FTP		0		100	
Add	5 6	Delete 7	Delete All	Move Up	9 Move Down 9 10	
					APPLY	CANCEL
					11	

Here are descriptions of every setting:

Enable QoS (1):	Check this box to enable the QoS function, unselect this box		
	if you don't want to enforce QoS bandwidth limitations.		
Total Download	You can set the limit of total download bandwidth		
Bandwidth (2):	in kbits. To disable download bandwidth limitation, input '0' here.		
Total Upload	You can set the limit of total upload bandwidth in		
Bandwidth (3):	kbits. To disable upload bandwidth limitation, input '0' here.		
Current QoS Table (4):	All existing QoS rules will be displayed here.		
Add (5):	Click the 'add' button to add a new QoS rule, see section 3-1-2 'Add a new QoS rule' below.		



Edit (6):	If you want to modify the content of a specific rule, check the 'select' box of the rule you want to edit, then click the 'Edit' button. Only one rule should be selected at a time! If you didn't select a rule before clicking the 'Edit'
	button, you'll be prompted to add a new rule.
Delete (7):	You can delete selected rules by clicking this button. You can select one or more rules to delete by checking the 'select' the box of the rule(s) you want to delete. If the QoS table is empty, this button will be grayed out and cannot be clicked.
Delete All (8):	By clicking this button, you can delete all rules currently in the QoS table. If the QoS table is empty, this button will be grayed out and cannot be clicked.
Move Up (9):	You can pull up the priority of the QoS rule you selected by clicking this button.
Move Down (10):	You can lower the priority of the QoS rule you selected by clicking this button.

After you complete all settings, click the 'Apply' (11) button and the following will be displayed on your web browser:

Save setting successfully!		
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect		
Continue Apply		

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



3-1-2 Add a new QoS rule

Rule Name :			а
Bandwidth :	Download 💌	Kbps Guarantee 💌	b
Local IP Address :		-	С
Local Port Range :			d
Remote IP Address :		-	е
Remote Port Range :			f
Traffic Type :	None 💌		g
Protocol :	TCP 🔽		h
		Save Reset	t
		i	

After you click the 'Add' button in the QoS menu, the following will appear:

Rule Name (a):	Give a name to this QoS rule (up to 15 alphanumerical characters)
Bandwidth (b):	Set the bandwidth limitation of this QoS rule. You have to select the data direction of this rule (Upload or Download), and the speed of bandwidth limitation in Kbps, then select the type of QoS: 'guarantee' (guaranteed usable bandwidth for this rule) or 'max' (set the maximum bandwidth for the application allowed by this rule).
Local IP Address (c):	Specify the local (source) IP address that will be affected by this rule. Input the starting IP address in the left field, and input the end IP address in the right field to define a range of IP addresses, or just input the IP address in the left field to define a single IP address.
Local Port Range (d):	Input the range of local (source) port number that will be affected by this rule. If you want to apply this rule on port 80 to 90, Input '80-90'; if you want to apply this rule on a single port, just input the port number, like '80'. 103



Remote IP	Specify the remote (destination) IP address
Address: (e):	that will be affected by this rule. Input the starting IP
	address in the left field, and input the end IP address in the
	right field to define a range of IP addresses, or just input
	the IP address in the left field to define a single IP address.
Remote Port	Input the range of remote (destination) port number
Range (f):	that will be affected by this rule. If you want to apply this
	rule on port 80 to 90, input '80-90'; if you want to apply this
	rule on a single port, just input the port number, like '80'. If
	the remote (destination) IP address and /or port number is
	universal, just leave it blank.
Traffic Type (g):	Select the traffic type of this rule, available options are
	None, SMTP, HTTP, POP3, and FTP. You can select a specific
	traffic type for this rule, if you want to make this rule as an
	IP address based rule (apply the limitation on all traffics
	from / to the specified IP address / port number), select
	'None'.
Protocol (h):	Select the protocol type of this rule, available options are
	TCP and UDP. If you don't know what protocol your
	application uses, try 'TCP' first, and switch to 'UDP' if this
	rule doesn't seem to work.

After you complete all settings, click the 'save' button (i), you'll be brought back to previous menu, and the rule you just set will appear in current QoS table; if you did anything wrong, you'll get an error message when you click 'Save' button, correct your input by the instructions given by the error message.

If you want to erase all the values you just inputted. Click the 'Reset' button.



3-2 Network Address Translation (NAT)

Network address translations solve the problem if sharing a single IP address to multiple computers. Without NAT, all computers must be assigned with a valid Internet IP address to get connected to the Internet, but Internet service providers only provide very few IP addresses to every user. Therefore it's necessary to use NAT technology to share a single Internet IP address to multiple computers on a local network, so everyone can get connected to the Internet.

Follow the instructions below to set NAT parameters:

3-2-1 Basic NAT Settings (Enable or disable NAT function)

Click the 'NAT' menu on the left of the web management interface, and the following will be displayed on your web browser:

NAT 2	
NAT (Network Address Translation) allows multipl Address or multiple Public IP Addresses. NAT pro allow you to map Private IP Addresses to Public I	e users at your local site to access the Internet through a single Public IP wides Firewall protection from hacker attacks and has the flexibility to P Addresses for key services such as the Web or FTP.
NAT Module : 💿 Enable 🔘 Disable	
1	APPLY 2

To enable the NAT function, select 'Enable' for 'Enable NAT module function' (1); to disable, select 'Disable'.

After you made the selection, click the 'Apply' button (2) and the following will be displayed on your web browser:



Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

3-2-2 Port Forwarding

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This function allows you to redirect a single port or consecutive ports of an Internet IP address to the same port of the IP address on the local network. The port number(s) of Internet IP address and private IP address (the IP address on local network) must be the same. If the port number of Internet IP address and private IP address are different, use the 'Virtual Server' function, described in the next section.

Click the 'NAT' menu on the left of the general setup interface, then click 'Port Forwarding', and the following will be displayed on your web browser:

🗌 Ena	able Port Forward	ling					
	Private IP	Computer Name	Туре	Port Ran	ge	Comment	
- Curr	2	< <select< th=""><th>Both V 3 4</th><th></th><th>Add 7</th><th>6 Reset 8</th><th></th></select<>	Both V 3 4		Add 7	6 Reset 8	
NO.	Computer Nam	e Private IP	Туре	Port Range	Comme	nt Select	9
			Del	ete (10	Delete All 11	Reset	
					APPLY	CANCEL	
					13		



Enable Port	Check this box to enable port mapping, and		
Forwarding (1):	uncheck this box to disable port forwarding.		
Private IP (2):	Input the IP address of the computer on local network		
	which provides the Internet service.		
Computer Name (3):	Pull down the menu and all the computers connected to the		
	router will be listed here. You can easily to select the		
	computer name without checking the IP address of the computer.		
Туре (4):	Select the type of connection, TCP or UDP. If you're not sure, select 'Both'.		
Port Range (5):	Input the starting port number in the left field, and input the ending port number in the right field. If you only want to redirect a single port number, just fill the port number in		
	the left field.		
Comment (6):	Input any text to describe this mapping, up to 16		
	alphanumerical characters.		
Add (7):	Add the mapping to port forwarding table.		
Reset (8):	Remove all inputted values.		
Port Forwarding	All existing port forwarding mappings will		
Table (9):	be displayed here.		
Delete (10):	Select a port forwarding mapping by clicking the		
	'Select' box of the mapping, then click the 'Delete' button		
	to remove the mapping. If there's no existing mapping, this		
	button will be grayed out.		


Delete All (11): Delete all mappings that exist in the virtual server table.

Reset (12): Unselect all mappings.

After you complete all settings, click the 'Apply' (13) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.

3-2-3 Virtual Server

This function allows you to redirect a port on an Internet IP address (on WAN port) to a specified port of an IP address on the local network, so you can setup an Internet service on the computer on the local network, without exposing it on the Internet directly. You can also build many sets of port redirection, to provide many different Internet services on different local computers via a single Internet IP address.

Click the 'NAT' menu on the left of the web management interface, then click 'Virtual Server', and the following will be displayed on your web browser:



1							
📋 Enable Vir	rtual Serve	r					
Private IF	2	Computer Name	Private P	ort Type	e Public	Port	Comment
	2 <	Select 3 🖪	4	Both	∽5	6	7
						Add	Reset
						8	9
Current Virt	ual Server	Table		•••••			
• Current Virt NO. Compu	tual Server ter Name	r Table Private IP F	Private Port	Туре	Public Port	Comi	nent Select
• Current Virt NO. Compu	tual Server ter Name	Table Private IP F	Private Port	Type Delete	Public Port	Comi lete All	nent Select
• Current Virt NO. Compu	tual Server ter Name	Table Private IP F	Private Port	Type Delete	Public Port	Comi lete All 12	nent Selec Reset
• Current Virt NO. Compu	tual Server ter Name	Table Private IP F	Private Port	Type Delete	Public Port	Comi lete All 12 APPLY	nent Select Reset 13 CANCEL

Here are descriptions of every setup item:

Enable Virtual	Check this box to enable the virtual server,
Server (1):	and uncheck this box to disable the virtual server.
Private IP (2):	Input the IP address of the computer which provides the Internet service.
Computer Name (3):	Pull down the menu and all the computers connected to the router will be listed here. You can easily select the computer name without checking the IP address of the computer.
Private Port (4):	Input the port number of the IP address which provides Internet service.
Туре (5):	Select the type of connection, TCP or UDP. If you're not sure, select 'Both'.
Public Port (6):	Select the port number of the Internet IP address which will be redirected to the port number of the local IP address defined above.
Comment (7):	Input any text to describe this mapping, up to 16 alphanumerical characters.
Add (8):	Add the mapping to the virtual server table.



Reset (9):	Remove all inputted values.
Virtual Server Table (10):	All existing virtual server mappings will be displayed here.
Delete (11):	Select a virtual server mapping by clicking the 'Select' box of the mapping, then click the 'Delete' button to remove the mapping. If there's no existing mapping, this button will be grayed out.
Delete All (12):	Delete all mappings existing in the virtual server table.
Reset (13):	Unselect all mappings.

After you complete all settings, click the 'Apply' (14) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



3-2-4 Port Mapping for Special Applications

Some applications require more than one connection at a time; these applications won't work with simple NAT rules. In order to make these applications work, you can use this function to let these applications work.

1							
🔲 Enable Special Ap	olications						
IP Address	Computer Nan	ne	TCP Port to	o Open	UDP Po	rt to Open	Comment
0.0.0.0 2	< <select< th=""><th><mark>∨</mark>3</th><th></th><th>4</th><th></th><th>5</th><th>6</th></select<>	<mark>∨</mark> 3		4		5	6
Popular Applications :	Select Game		V Ac	ld 7	7		
						Add	Reset
						8	9
Current Trigger-Port	Table						
NO. Computer Nam	e IP Address	TCP P	ort to Open	UDP Po	rt to Open	Comme	nt Select
				Delet	te 🗌 🗌	Delete All	Reset 0
i					<u>11</u>	<u>12</u>	13
						APPLY	CANCEL
						14	

Here are descriptions of every setup item:

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Enable (1):	Check this box to enable special applications and uncheck
	this box to disable the virtual server.
IP Address (2):	Input the IP address of the computer that you want to open
	the ports.
Computer Name (3):	Pull down the menu and all the computers connected to the
	router will be listed here. You can easily select the
	computer name without checking the IP address of the
	computer.
TCP Port to Open (4):	This is the out going (Outbound) range of TCP port numbers
	for this particular application.
UDP Port to Open (5):	This is the out going (Outbound) range of UDP port numbers
	for this particular application.
Comment (6):	The description of this setting.
	111



Popular Applications(7): This section lists the more popula	ar applications that
require multiple connections. Sel	ect an application
from the Popular Applications sele	ection and click the'Add'
button to save the setting to the	'Current Trigger-Port
Table.'	

Add (8): Add the setting to the 'Current Trigger-Port Table.'

- Reset (9): Clicking the 'Reset' button will clear all above settings and you can set up again.
- Current Trigger-Port All the settings for the special applications will be (10): listed here. If you want to remove some Special Application settings from the "Current Trigger-Port Table", select the Special Application settings you want to remove in the table and then click the 'Delete' button. If you want to remove all Special Application settings from the table, just click the "Delete All" button. Click the "Reset" button to clear your current selections.
- Delete (11): Select a special application by clicking the 'Select' box of the mapping, then click the 'Delete' button to remove the setting. If there's no setting here, this button will be grayed out.
- Delete All (12): Delete all settings that exist in the trigger port table.

Reset (13): Unselect all settings.

Note: Only one LAN client can use a particular special application at a time.

After you complete all settings, click the 'Apply' (14) button and the following will be displayed on your web browser:



Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.

3-2-5 UPnP Setting

This function enables network auto-configuration for peer-to-peer communications, with this function, network devices will be able to communicate with other devices directly, and learn about information about other devices. Many network devices and applications rely on the UPnP function nowadays.

Click the 'NAT' menu on the left of the web management interface, then click 'UPnP', and the following will be displayed on your web browser:

UPnP Module : 💿 Enable 🛛 D	isable
	APPLY CANCEL

Select 'Enable' or 'Disable' to enable or disable UPnP function, then click the 'Apply' button, and the following will be displayed on your web browser:



Save setting s	successfully!
You may press C system for chang	ONTINUE button to continue configuring other settings or press APPLY button to restart the es to take effect
Continue	Apply

Click 'Continue' to go back to previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.

3-2-6 ALG Settings

Application Layer Gateway (ALG) is a special function of this router. It includes many preset routing rules for numerous applications which require special support. With these supports, those applications which required special support will be able to work with the NAT architecture.

Click the 'NAT' menu on the left of the web management interface, then click 'ALG Settings', and the following will be displayed on your web browser:

ALG Settings 👔

Below are applications that need router's special support to make them work under the NAT. You can select applications that you are using.

Enable	Name	Comment
	FTP	Support for FTP.
	H323	Support for H323/netmeeting.
	IPsec	Support for IPsec passthrough
v	PPTP	Support for PPTP passthrough.
v	L2TP	Support for L2TP passthrough.
v	SIP	Support for SIP.
		APPLY CANCEL

There are many applications listed here. Check the box of the special support for applications you need, and then click the 'Apply' button and the following will be displayed on your web browser:



Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



3-3 Firewall

Apart from NAT, this router also provides a firewall function to block malicious intruders from accessing your computers on the local network. These functions include inbound attack prevention, and block outbound traffics, like block URLs which have pre-defined keywords.

Follow the instructions below to enable or disable the firewall function:

Click the 'Firewall' menu on the left of the web management interface, and the following will be displayed on your web browser:

Firewall 2
The Wireless Router provides extensive firewall protection by restricting connection parameters, thus limiting the risk of hacker attack, and defending against a wide array of common attacks. However, for applications that require unrestricted access to the Internet, you can configure a specific client/server as a Demilitarized Zone (DMZ).
Firewall Module : O Enable O Disable
APPLY

Select 'Enable' or 'Disable' to enable or disable firewall function of this router, then click the 'Apply' button, and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).



3-3-1 Access Control

This function allows or denies computers with a specific MAC address from connecting to the network; it can also allow or deny computers with a specific IP address, protocol, or port.

Click the 'Firewall' menu on the left of the general setup interface, then enable the Firewall module by selecting the radio button and click the Apply button.



Here are descriptions of every setup item:

Enable MAC	Check this box to enable MAC address based
Filtering (1):	filtering, and select 'Deny' or 'Allow' to decide the behavior
	of the MAC filtering table. If you select deny, all MAC
	addresses listed in the filtering table will be denied from
	connecting to the network; if you select allow, only MAC
	addresses listed in filtering table will be able to connect to
	the network, and all other network devices will be rejected.
Client PC	Input the MAC address of the computer or network
MAC address (2):	device here, dash (-) or colon (:) are not required. (i.e. If
	the MAC address label of your wireless device indicates
	'aa-bb-cc-dd-ee-ff' or 'aa:bb:cc:dd:ee:ff', just input
	'aabbccddeeff'
	117



- Computer Name (3): Pull down the menu and all the computers connected to the router will be listed here. You can easily select the computer name without checking the IP address of the computer.
- Comment (4): You can input any text here as the comment of this MAC address, like 'ROOM 2A Computer' or anything. You can input up to 16 alphanumerical characters here. This is optional and you can leave it blank, however, it's recommended to use this field to write a comment for every MAC addresses as a memory aid.
- Add (5):Click the 'Add' button to add the MAC address and the
associated comment to the MAC address filtering table.

Reset (6): Remove all inputted values.

- Current MACAll existing MAC addresses in the filtering tableFiltering Table (7):will be listed here.
- Delete (8): If you want to delete a specific MAC address entry, check the 'select' box of the MAC address you want to delete, then click the 'Delete' button. (You can select more than one MAC address).
- Delete All (9): If you want to delete all MAC addresses listed here, click the 'Delete All' button.
- Reset (10): You can also click the 'Reset' button to unselect all MAC addresses.
- Enable IPCheck this box to enable IP address based filtering,Filtering (11):and select 'Deny' or 'Allow' to decide the behavior of the IPfiltering table. If you select deny, all IP addresses listed in
the filtering table will be denied from connecting to the
network; if you select allow, only IP addresses listed in the
filtering table will be able to connect to the network, and all
other network devices will be rejected.



IP Filtering	All existing IP addresses in the filtering table will be
Table (12):	listed here.
Add PC (13):	Click this button to add a new IP address to the IP filtering
	table, up to 20 IP addresses can be added.
	Refer to section 3-3-1-1 'Add PC' below.
Delete (14):	If you want to delete a specific IP address entry,
	check the 'select' box of the IP address you want to delete,
	then click the 'Delete' button. (You can select more than
	one IP address).
Delete All (15):	If you want to delete all the IP addresses listed here, click
	the 'Delete All' button.

After you complete all settings, click the 'Apply' (16) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



3-3-1-1 Add PC

Client PC Description :		a	
Client PC	IP Address :		D
Client Service :			
Service Name		Detail Description	Selec
www	HTTP, TCF	P Port 80, 3128, 8000, 8080, 8081	
E-mail Sending	SMTP, TCP Port 25		
News Forums	NNTP, TCP Port 119		
E-mail Receiving	POP3, TC	P Port 110	
Secure HTTP	HTTPS, TCP Port 443		
File Transfer	FTP, TCP	FTP, TCP Port 21	
Telnet Service	TCP Port 3	23	
AIM	AOL Insta	AOL Instant Messenger, TCP Port 5190	
NetMeeting	H.323, TC	H.323, TCP Port 389,522,1503,1720,1731	
DNS	UDP Port	UDP Port 53	
SNMP	UDP Port 161, 162		
VPN-PPTP	TCP Port	1723	
VPN-L2TP	UDP Port	1701	
ТСР	All TCP P	ort	
UDP	All UDP P	ort	

After this button is clicked, the following will be displayed on your web browser:

		User Define Service		
Protocol :	Both 💌			d
Port Range :				е
			Add	Reset
			f	

Here are descriptions of every setup item:

Client PC	Input any text to describe this IP address,
Description (a):	up to 16 alphanumerical characters.
Client PC IP	Input the starting IP address in the left field, and input
Address (b):	the end IP address in the right field to define a range of
	IP addresses, or just input the IP address in the left field to
	define a single IP address.
	100



Client PC	Check all the services you want to allow or
Service (c):	services.
Protocol (d):	If the service you need is not listed above, you can create a
	new service on your own. Select TCP or UDP, if you're not
	sure, select 'Both'.
Port Range (e):	Input the port range of the new service here. If you want to specify port 80 to 90, input '80-90'; if you want to apply this rule on a single port, just input the port number, like '80'.
Add (f):	When you complete all settings, click the 'Add' button to save settings, you'll be brought back to the previous menu, and the rule you just set will appear in the current IP
	filtering table.

If you want to remove all settings in this page, click the 'Reset' button.

3-3-2 URL Blocking

If you want to prevent computers in local network from accessing certain websites (like pornography, violence, or anything you want to block), you can use this function to stop computers in the local network from accessing the site you defined here.

This function is useful for parents and company managers.

Follow the instructions below to set URL blocking parameters: Click the 'Firewall' menu on the left of the web management interface, then click 'URL Blocking', and the following will be displayed on your web browser:





Here are descriptions of every setup item:

Enable URL	Check this box to enforce URL Blocking, uncheck
Blocking (1):	it to disable URL Blocking.
URL/Keyword (2):	Input the URL (host name or IP address of the website, like <u>http://www.blocked-site.com</u> or <u>http://11.22.33.44</u>), or the keyword which is contained in URL (like pornography, cartoon, stock, or anything).
Add (3):	Click the 'Add' button to add the URL / keyword to the URL / Keyword filtering table.
Reset (4):	Click the 'Reset' button to remove the value you inputted in the URL/Keyword field.
Current URL Blocking Table (5):	All existing URL/Keywords in the filtering table will be listed here.
Delete (6):	If you want to delete a specific URL/Keyword entry, check the 'select' box of the MAC address you want to delete, and then click the 'Delete' button. (You can select more than one MAC address).
Delete All (7):	If you want to delete all URL/Keywords listed here, click the 'Delete All' button. 122



Reset (8): You can also click the 'Reset' button to unselect all URL/Keywords.

After you complete all settings, click the 'Apply' (9) button, and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.

3-3-3 DoS Attack Prevention

Denial of Service (DoS) is a common attack measure, by transmitting a great amount of data or request to your Internet IP address and server, the Internet connection will become very slow, and the server may stop responding because it is not capable of handling too much traffic.

This router has a built-in DoS attack prevention mechanism; when you activate it, the router will stop the DoS attack for you.

Follow the instructions below to set DoS prevention parameters:

Click the 'Firewall' menu on the left of the web management interface, then click 'DoS', and the following will be displayed on your web browser:





Here are descriptions of every setup item:

Ping of Death (1):	Ping of Death is a special packet, and it will cause certain computers to stop responding. Check the Ping of Death box and the router will filter this kind of packet out.
Discard Ping From WAN (2):	Check the box to activate this DoS prevention mechanism.
Port Scan (3):	Some malicious intruders will try to use a 'port scanner' to know how many ports of your Internet IP address are open, and they can collect a lot of valuable information by doing so. Check this box and the router will block all traffics that are trying to scan your Internet IP address.
Sync Flood (4):	This is another kind of attack, which uses a lot of fake connection requests to consume the memory of your server, and tries to make your server become unusable. Check this box and the router will filter this kind of traffic out.
Advanced Settings (5):	Click this button and you can set advanced settings of the DoS prevention methods listed above, see section 3-3-3-1 'DoS – Advanced Settings' below.



After you complete all settings, click the 'Apply' (6) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



3-3-3-1 DoS - Advanced Settings

When you click the 'Advanced' button in the DoS menu, the following will be displayed on your web browser:

DoS Mod	ule		
	Ping of Death	5 Packet(s) per Second 💌 Burst 5	а
	Discard Ping from WAN		b
	Port Scan	 NMAP FIN / URG / PSH Xmas tree Another Xmas tree Null scan SYN / RST SYN / FIN 	6
	Corres El se d	SYN (only unreachable port)	d
	Sync Flood	Packet(s) per Second Marst 30	u
		APPLY CANC	EL

Here are descriptions of every setup item:

Ping of Death (a):	Set the threshold of when this DoS prevention mechanism
	will be activated. Check the of Ping of Death box, and input
	the frequency of threshold (how many packets per second,
	minute, or hour), you can also input the 'Burst' value, which
	means when this number of 'Ping of Death' packet is
	received in a very short time, this DoS prevention
	mechanism will be activated.
Discard Ping	Check the box to activate this DoS prevention
From WAN (b):	mechanism.
Port Scan (c):	Many kinds of port scan methods are listed here, check one
	or more DoS attack methods you want to prevent.
Svnc Flood (d):	<i>Like Ping of Death, you can set the threshold when this DoS</i>
	prevention mechanism will be activated.



After you complete all settings, click the 'Apply' (e) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.

3-3-4 Demilitarized Zone (DMZ)

Demilitarized Zone (DMZ) refers to a special area in your local network. This area resides in the local network, and all computers in this area use a private IP address, too. But these private IP addresses are mapped to a certain Internet IP address, so other people on Internet can fully access those computers in DMZ.

Follow the instructions below to set DMZ parameters:

Click the 'Firewall' menu on the left of the web management interface, then click 'DMZ', and the following will be displayed on your web browser:



7

1		
✓ Enable DMZ		
Public IP	Client PC IP Addre	ss Computer Name
 O Dynamic IP Session 1 ▼ O Static IP 	2	3 4
		Add Reset 5 6
Current DMZ Table		
NO. Computer Name	Public IP	Client PC IP Address Select
	Delete 8	Delete All Reset 9 10
		APPLY CANCEL

Here are descriptions of every setup item:

Enable DMZ (1):	Check this box to enable the DMZ function, uncheck this
	box to disable DMZ function.
Public IP	You can select 'Dynamic IP' or 'Static IP'.
address (2):	If you select 'Dynamic IP', you have to select an Internet connection session from the drop-down menu; if you select
	'Static IP', input the IP address that you want to map to a specific private IP address.
Client PC IP	Input the private IP address that the Internet
Address (3):	IP address will be mapped to.
<i>Computer Name (4):</i>	Pull down the menu and all the computers connected to the router will be listed here. You can easily select the computer name without checking the IP address of the computer.
Add (5):	Click the 'Add' button to add the public IP address and associated private IP address to the DMZ table.
Reset (6):	<i>Click the 'Reset' button to remove the values you inputted in Public IP address and Client PC IP address field.</i> 128



Current	All existing public IP address and private IP address
DMZ Table (7):	mapping will be displayed here.
Delete (8):	If you want to delete a specific DMZ entry, check
	the 'select' box of the DMZ entry you want to delete, then
	click the 'Delete' button. (You can select more than one
	DMZ entry).
Delete All (9):	If you want to delete all DMZ entries listed here, click the
	'Delete All' button.
Reset (10):	You can also click the 'Reset' button to unselect all DMZ
	entries.

After you complete all settings, click the 'Apply' (11) button and the following will be displayed on your web browser:

Save setting successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system for changes to take effect
Continue Apply

Click the 'Continue' button to go back to the previous setup menu; to continue on other setup procedures, or click the 'Apply' button to reboot the router so the settings will take effect (Wait for about 40 seconds while the router is rebooting).

If you want to reset all the settings in this page back to previously-saved values, click the 'Cancel' button.



3-4 System Status

The functions described here will provide you with system related information. To enter the system status menu, click the 'Status' link located at the upper-right side of the web management interface.





3-4-1 System information and firmware version

You can use this function to view the system information and firmware version of this router.

Click the 'Status' link located at the upper-right side of the web management interface, and the following will be displayed on your web browser.



The Wireless Router's status information provides the following information about your Wireless Router: Hardware/Firmware version, Serial Number, and its current operating status.

System

Model :	Wireless Router
Up Time :	Oday:Oh:10m:27s
Hardware Version :	Rev. A
Boot Code Version :	1.0
Runtime Code Version :	1.01

NOTE: Information displayed here may vary.



3-4-2 Internet Connection Status

You can use this function to view the status of the current Internet connection.

Click the 'Internet Connection' menu on the left of the web management interface, and the following will be displayed on your web browser:

Internet Connection v

View the current internet connection status and related information.

Attain IP Protocol :	Dynamic IP connect
IP Address :	192.168.10.127
Subnet Mask :	255.255.255.0
Default Gateway :	192.168.10.254
MAC Address :	00:E0:4C:81:96:C9
Primary DNS :	192.168.1.12
Secondary DNS :	192.168.1.2

This information will vary depending on the connection status.



3-4-3 Device Status

You can use this function to know the status of your router.

Click the 'Device Status' menu on the left of the web management interface, and the following will be displayed on your web browser:

Device Status

View the current setting status of this device.

Wireless Configuration	
2.4GHz Wireless :	Enable
Mode:	Access Point
ESSID :	default
Channel Number :	7
Security :	Disable
MAC Address :	80:1F:02:FD:D2:AA
5GHz Wireless :	Enable
Mode:	Access Point
ESSID :	default
Channel Number :	36
Channel Number : Security :	36 Disable
Channel Number : Security : MAC Address :	36 Disable 80:1F:02:FD:D2:AB
Channel Number : Security : MAC Address :	36 Disable 80:1F:02:FD:D2:AB
Channel Number : Security : MAC Address : LAN Configuration	36 Disable 80:1F:02:FD:D2:AB
Channel Number : Security : MAC Address : LAN Configuration IP Address :	36 Disable 80:1F:02:FD:D2:AB 192.168.2.1
Channel Number : Security : MAC Address : LAN Configuration IP Address : Subnet Mask :	36 Disable 80:1F:02:FD:D2:AB 192.168.2.1 255.255.255.0
Channel Number : Security : MAC Address : LAN Configuration IP Address : Subnet Mask : DHCP Server :	36 Disable 80:1F:02:FD:D2:AB 192.168.2.1 255.255.255.0 Enable

This information will vary depending on the device status.



3-4-4 System Log

All important system events are logged. You can use this function to check the event log of your router.

Click the 'System Log' menu on the left of the web management interface, and the following will be displayed on your web browser:

System Log U				
View the system operation infor	mation. You can s	ee the system start u	up time, connection proce	ss and etc., here.
Jan 1 00:00:16 (none) syslog.i	nfo syslogd starter	d: BusyBox v1.11.1	~	
4	1	2	3	
	Save	Clear	Refresh	

The system events will be displayed in this page, and here are descriptions of every button:

Save (1):	Save current event log to a text file.
Clear (2):	Delete all event logs displayed here.
Refresh (3):	Refresh the event log display.



3-4-5 Security Log

All information about the network and system security is kept here, and you can use this function to check the security event log of your router.

Click the 'Security Log' menu on the left of the web management interface, and the following will be displayed on your web browser:

Security	Log	2
----------	-----	---

View any attempts that have been made to illegally gain access to your network.

[2013-01-30 03:09:22]: [SNTP]: connect success!	*
[2013-01-30-03:09:22]: [SNTP]: set time to 2013-01-30-03:09:22 [2013-01-30-03:09:22]: [SNTP]: connect to TimeServer 59-124-196-83	
[2013-01-30 03:09:23]: [SNTP]: connect success!	
[2013-01-30 03:09:23]: [SNTP]: set time to 2013-01-30 03:09:23	=
[2013-01-30 03:09:23]: [Firewall]: WAN1 IP is 192.168.10.127 [2013-01-30 03:09:23]: [Firewall]: WAN2 IP is 0 0 0 0	
[2013-01-30 03:09:23]: [Firewall]: WAN3 IP is 0.0.0.0	
[2013-01-30 03:09:23]: [Firewall]: setting firewall	-
<	•
1 2	3
Save Clear	Refresh

The system events will be displayed in this page, and here are descriptions of every buttons:

Save (1):	Save current event log to a text file.
Clear (2):	Delete all event logs displayed here.
Refresh (3):	Refresh the event log display.



3-4-6 Active DHCP client list

If you're using the DHCP server function of this router, you can use this function to check all active DHCP leases issued by this router.

Click the 'Active DHCP client' menu on the left of the web management interface, and the following will be displayed on your web browser:

Active DHCP Client 1

This table shows the assigned IP address, MAC address and time expired for each DHCP leased client.

IP Address	MAC Address	Time Expired (Second)		
192.168.2.100	50:cc:f8:b6:fc:ce	forever		
192.168.2.101	f8:d0:bd:18:13:10	forever		
192.168.2.102	78:2b:cb:e9:58:35	forever		
Refresh				

All information about active DHCP leases issued by this router will be displayed here. You can click the 'Refresh' button to display the latest information.



3-4-7 Statistics

Statistics U

You can use this function to check the statistics of wireless, LAN, and WAN interfaces of this router.

Click the 'Statistics' menu on the left of the web management interface, and the following will be displayed on your web browser:

This page shows the packet counters for transmission and reception regarding to networks.			
2 ACHa Wireless I AN	Packets Sent	9185	
2.4GHZ WIFEIESS LAN	Packets Received	910976	
5GHz Wireless LAN	Packets Sent	1426	
	Packets Received	1685275	
Ethernet I AN	Packets Sent	56046	
Ethernet LAN	Packets Received	51426	
	Packets Sent	45597	
Ethernet wan	Packets Received	106251	
	Refresh		

You can click the 'Refresh' button to display the latest information.



3-5 System Tools

These tools will allow you to backup/restore, perform a firmware upgrade and reset the router to default settings. Either click the 'Tools' link located at the upper-right corner of the web management interface, or click the 'Tools' button in the main menu.





3-5-1 Configuration Backup and Restore

You can backup all configurations of this router to a file, so you can make several copies of router configuration for security reasons.

To backup or restore the router configuration, follow the instructions below:

Click 'Tools' located at the upper-right side of the web management interface, then click 'Configuration Tools' on the left of the web management interface, then the following will be displayed on your web browser:

Backup Settings :	Save 1	
Restore Settings :	Browse No file selected.	Upload 2
Restore to Factory Default :	Reset 3	

Here are descriptions of every button:

Backup	Press the 'Save' button, and you'll be prompted to
Settings (1):	download the configuration as a file, default filename is
	'config.bin', you can save it as another filename for
	different versions, and keep it in a safe place.
Restore	Press 'Browse' to pick a previously-saved
Settings (2):	configuration file from your computer, and then click the
	'Upload' button to transfer the configuration file to the
	router. After the configuration is uploaded, the router's
	configuration will be replaced by the file you just uploaded.
Restore to	Click this button to remove all the settings
Factory Default (3):	you made, and restore the configuration of this
	router back to factory default settings.



3-5-2 Firmware Upgrade

The system software used by this router is called 'firmware', just like any application on your computer, when you replace the old application with a new one; your computer will be equipped with new functions. You can also use this firmware upgrade function to add new functions to your router, even fix the bugs of this router.

To upgrade firmware, follow the instructions below:

Click 'Tools' located at the upper-right side of the web management interface, then click 'Firmware Upgrade' on the left of the web management interface, then the following will be displayed on your web browser:

This tool allows you to upgrade the Wireless Router's system firmware. Enter the path and name of the upgrade file and then click the APPLY button below. You will be prompted to confirm the upgrade.

The system will automatically reboot the router after you finished the firmware upgrade process. If you don't complete the firmware upgrade process in the "next" step, you have to reboot the router.

Click the 'Next' button, and the following will be displayed:

This tool allows you to upgrade the Wireless Router's system firmware. Enter the path and name of the upgrade file and then click the APPLY button below. You will be prompted to confirm the upgrade.



APPLY CANCEL

NEXT

Click the 'Browse' button first, you'll be prompted to provide the filename of firmware upgrade file. Download the latest firmware file from our website, and use it to upgrade your router.

After a firmware upgrade file is selected, click the 'Apply' button, and the router will start the firmware upgrade procedure automatically. The procedure may take several minutes, please be patient.



NOTE: Never interrupt the upgrade procedure by closing the web browser or physically disconnect your computer from router. If the firmware you uploaded is corrupt, the firmware upgrade will fail, and you may have to return this router to the dealer of purchase to ask for help. (Warranty voids if you interrupted the upgrade procedure).

3-5-3 System Reset

If you think the network performance is bad, or you found the behavior of the router is strange, you can perform a router reset.

To do so, click 'Tool' located at the upper-right side of the web management interface, then click 'Reset' on the left of the web management interface, then the following will be displayed on your web browser:

Reset 2
In the event that the system stops responding correctly or stops functioning, you can perform a Reboot. Your settings will not be changed. To perform the reboot, click on the APPLY button below. You will be asked to confirm your decision. The Reboot will be complete when the LED Power light stops blinking.
APPLY

Click the 'Apply' button to reset your router, and it will be available again after a few moments.



Chapter 4 Appendix

4-1 Troubleshooting

If you found the router is working improperly or stops responding, please read this troubleshooting section first.

Scenario	So	Solution	
Router is not	a.	Check the connection of the power cord and network	
responding to me when		cable of this router. All cords and cables should be	
I want to access it by		correctly and firmly inserted into the router.	
web browser	b.	If all LEDs on this router are off, check the status of	
		the A/C power adapter, and make sure it's correctly	
		powered.	
	c.	You must use the same IP address range which the	
		router uses.	
	d.	Are you using MAC or IP address filter? Try to connect	
		the router by another computer and see if it works; if	
		not, restore your router to factory default settings	
		(pressing the 'reset' button for over 10 seconds).	
	e.	Set your computer to obtain an IP address	
		automatically (DHCP), and see if your computer can	
		get an IP address.	
	f.	If you did a firmware upgrade and this happens,	
		contact your place of purchase for help.	
	g.	If all above solutions don't work, contact the place of	
		purchase for help.	
Can't get connected to	a.	Go to 'Status' -> 'Internet Connection' menu, and	
the Internet		check the Internet connection status.	
	b.	If you connected a computer to the Internet directly	
		before, try to do that again, and check if you can get	
		connected to the Internet with your computer	
		directly attached to the device provided by your	
		Internet service provider.	



	C.	Check PPPoE / L2TP / PPTP user ID and passwords
		again.
	d.	Call your Internet service provider and check if
		there's something wrong with their service.
	e.	If you just can't connect to one or more websites, but
		you can still use other Internet services, check the
		URL/Keyword filter.
	f.	Try to reset the router and try again later.
	g.	Reset or reboot the device provided by your Internet
		service provider.
I can't locate my router	a.	Is 'Broadcast ESSID' set to off?
with my wireless client	b.	Are you within range of your wireless router? Try to
		get closer.
	c.	Remember that you have to input the ESSID on your
		wireless client manually, if ESSID broadcast is
		disabled.
File download is very	а.	Are you using the QoS function? Try to disable it and
slow or breaks		try again.
frequently	b.	Internet is slow sometimes, be patient.
	c.	Try to reset or reboot the router and see if it's better
		after that.
	d.	If this never happened before, call your Internet
		service provider to know if there is something wrong
		with their network.
I can't log onto the web	a.	Make sure you're connecting to the correct IP
management		address of the router!
interface: password is	b.	The password is case-sensitive. Make sure the 'Caps
wrong		Lock' light is not illuminated.
	C.	If you forget the password, do a hard reset
		(Press the Reset / WPS button and hold for 10
		seconds to restore all settings to factory defaults).
The date and time of all		Adjust the internal shak of the restar
The date and time of all	а.	Aujust the internal clock of the fouter.
event logs are wrong		


4-2 Where to get additional help

If you find the product to be inoperable or malfunctioning, please contact technical support for immediate service by email at <u>homesupport@comtrend.com</u> or call 1-877-COMTREND (1-877-266-8736)

For product updates, new product release, manual revision, or software upgrades, please visit our website at <u>http://us.comtrend.com/</u>

You can also visit our Facebook page: https://facebook.com/Comtrend