

# 802.11n Wireless Broadband Router

**WNRT-625** 

**User's Manual** 

### Copyright

Copyright © 2008 by PLANET Technology Corp. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of PLANET.

PLANET makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties, merchantability or fitness for any particular purpose. Any software described in this manual is sold or licensed "as is". Should the programs prove defective following their purchase, the buyer (and not this company, its distributor, or its dealer) assumes the entire cost of all necessary servicing, repair, and any incidental or consequential damages resulting from any defect in the software. Further, this company reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

All brand and product names mentioned in this manual are trademarks and/or registered trademarks of their respective holders.

### **Federal Communication Commission Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1. Reorient or relocate the receiving antenna.
- 2. Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4. Consult the dealer or an experienced radio technician for help.

### **FCC Caution:**

To assure continued compliance, (example-use only shielded interface cables when connecting to computer or peripheral devices) any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two

conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any

interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure

**Statement** 

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In

order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity

to the antenna shall not be less than 20 cm (8 inches) during normal operation.

**R&TTE Compliance Statement** 

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN

PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication

terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal

Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However,

special attention must be paid to the dangers of electric shock and static electricity when working with

electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed

at all times to ensure the safe use of the equipment.

**WEEE regulation** 

To avoid the potential effects on the environment and human health as a result of the

presence of hazardous substances in electrical and electronic equipment, end users of

electrical and electronic equipment should understand the meaning of the crossed-out

wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to

collect such WEEE separately.

Revision

User's Manual for PLANET 802.11N Wireless Router

Model: WNRT-625

Rev: 1.0 (Apr. 2008)

### **TABLE OF CONTENTS**

CHAPT	TER 1 INTRODUCTION	1
1.1	PACKAGE CONTENTS	1
1.2	FEATURES	1
1.3	SPECIFICATION	1
СНАРТ	ΓER 2 HARDWARE INSTALLATION	3
2.1	HARDWARE CONNECTION	3
2.2	LED Indicators	4
СНАРТ	TER 3 WEB LOGIN	5
СНАРТ	ΓER 4 QUICK SETUP	7
4.1	TIME ZONE	7
4.2	Broadband Type	8
СНАРТ	ΓER 5 GENERAL SETUP	18
5.1	System	19
5.2	WAN	21
5.3	LAN	28
5.4	Wireless	30
5.5	QoS	41
5.6	NAT	44
5.7	Firewall	53
СНАРТ	TER 6 WIRELESS CONFIGURATION	61
6.1	AP Mode	61
6.2	STATION-INFRASTRUCTURE MODE	62
6.3	AP BRIDGE POINT TO POINT MODE	64
6.4	AP Bridge Point to Multi-point Mode	65
6.5	AP Bridge-WDS Mode	66
6.6	Universal Repeater Mode	68
6.7	SECURITY SETTING OF BRIDGE MODE	70
СНАРТ	TER 7 STATUS	73
7.1	Internet Connection	73
7.2	DEVICE STATUS	73
7.3	System Log	74
7.4	SECURITY LOG	75
75	ACTIVE DHCDCI IENT	75

7.6	STATISTICS	76
CHAPTI	ER 8 TOOLS	77
8.1	Configuration Tools	77
8.2	Firmware Upgrade	78
8.3	RESET	79

## **Chapter 1 Introduction**

Thank you for purchasing WNRT-625. This manual guides you on how to install and properly use the WNRT-625 in order to take full advantage of its features.

### 1.1 Package Contents

Make sure that you have the following items:

- One WNRT-625
- One Power Adapter
- One CD Disk
- One Quick Installation Guide
- One Ethernet Cable

**Note:** If any of the above items are missing, please contact your supplier for support.

### 1.2 Features

- Compliant with IEEE 802.11n (Draft 2.0) wireless technology
- Provides up to 150Mbps transmit and 300Mbps receive data rate
- Support Wi-Fi Protected Setup (WPS)
- Backward compatible with 802.11g / 802.11b standard
- Farther coverage, less dead spaces and higher throughput with 802.11n technology
- Supports 64/128-bit WEP, WPA (TKIP with IEEE 802.1x), WPA2 (AES with IEEE 802.1x) functions for high level of security
- AP/Station-Infrastructure/Bridge/WDS/Repeater modes supported
- IP/Protocol based QoS
- Equipped with four LAN ports (10/100M) and one WAN port (10/100M), Auto-MDI/MDI-X support
- Supports DHCP Server
- Easy to use Web-based GUI for configuration and management purposes
- Remotes Management allows configuration and upgrades from a remote site
- Dynamic/Static/PPPoE/PPTP/L2TP/Telstra Big Pond IP allocation
- MAC/IP filter access control, URL blocking
- SPI firewall + DoS prevention protection
- Supports UPnP function

### 1.3 Specification

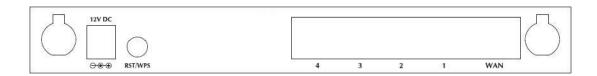
Standard	IEEE 802.11b/g, 802.11n Draft 2.0
Signal Type	11b mode: DSSS 11g mode: OFDM

	11n mode: OFDM, MIMO
Modulation	11b mode: CCK, DQPSK, DBPSK 11g mode: 64 QAM, 16 QAM, QPSK, BPSK 11n mode: 64 QAM, 16 QAM, QPSK, BPSK
WAN Port	1 x 100Base-TX, Auto-MDI/MDI-X
LAN Port	4 x 100Base-TX, Auto-MDI/MDI-X
Antenna connector	2 x Fixed Omni Antenna
Data Encryption	64 bit / 128 bit WEP, WPA-PSK, WPA, WPA2
Frequency	2.4GHz - 2.484GHz
Output Power	11b mode: 16~18dBm 11g mode: 14~16dBm 11n mode: 11~13dBm
Data Rate	IEEE 802.11b: 11/5.5/2/1M IEEE 802.11g: 54/48/36/24/18/12/9/6 IEEE 802.11n: 300/270/243/240/216/180/162/120/108Mbps in 40Mhz mode 145/130/117/104/ 78Mbps in 20Mhz mode
LED Indicators	PWR, WLAN LAN: LNK/ACT * 4, 100Mbps * 4 WAN: LNK/ACT * 1, 100Mbps * 1
Power Requirement	12V DC, 1A
Temperature	Operating :0 ~ 40 degree C Storage: -20 ~ 70 degree C
Humidity	Operating: 0 ~ 85% Storage: 0 ~ 95% Non-Condensing
Dimensions	190 x 98 x 31 mm
Weight	355g

## **Chapter 2 Hardware Installation**

Before you proceed with the installation, it is necessary that you have enough information about the WNRT-625.

#### 2.1 Hardware Connection



- 1. Locate an optimum location for the WNRT-625. The best place for your WNRT-625 is usually at the center of your wireless network, with line of sight to all of your mobile stations.
- 2. Adjust the antennas of WNRT-625. Try to adjust them to a position that can best cover your wireless network. The antenna's position will enhance the receiving sensitivity.
- 3. Connect RJ-45 cable to WNRT-625 LAN port. Connect one of the LAN ports on WNRT-625 to your LAN switch/hub or a computer with a RJ-45 cable.
- **4. Connect RJ-45 cable to WNRT-625 WAN port.** Connect xDSL/Cable Modem to the WAN port on WNRT-625. Usually, this cable would be provided with your modem. If no cable was supplied with your modem, please use a RJ-45 Ethernet cable
- **5. Plug in power adapter and connect to power source**. After power on, WNRT-625 will start to operate.

### Note:

- 1. ONLY use the power adapter supplied with the WNRT-625. Otherwise, the product may be damaged.
- If you want to reset WNRT-625 to default settings, press and hold the RST(reset) button over 30 seconds and release. And then wait for WNRT-625 restart.

### **RST / WPS Button**

This button has two functions:

#### To Clear All Data and restore the factory default values:

Press the RST (reset) button for longer than 30 seconds until the LED of power flash, and then the router will reset itself to the factory default settings. (warning: your original configurations will be replaced with the factory default settings)

#### To make Wi-Fi Protected Setup (WPS) simple and easier:

Press the WPS button (for less than 20 seconds), machine will start WPS function to build connection between wireless network clients and this wireless router.

### 2.2 LED Indicators

O OI ONET	The same was to be a second or a second			WAN	LAN				
Hetwarking & Communication	802.11n Wireless Router			0	0	0	0	0	100M
WNRT-625		O	O WIAN	0	0	0	0	0	LNK/ACT

LED		Color	STATE	MEANING		
PWR			On	Device power on		
		Green	Off	Device power off		
			Blinking	During boot up procedure		
WLAN		Orange	Blinking	Transmitting or receiving data through the Wire LAN		
			Off	Wireless LAN is no function		
	100M	Green	On	WAN port is connected at 100Mbps		
			Off	WAN port is disconnected at 100Mbps		
WAN	LNK/ACT	Green	On	Link is established		
			Blinking	Packets are transmitting or receiving		
	100M	Green	On	LAN is connected to 100Mbps device		
	TOOW		Off	LAN is disconnected to 100Mbps device		
LAN	LNK/ACT	Green	On	Link is established		
			Blinking	Packets are transmitting or receiving		
			Off	LAN port is not connected		

## **Chapter 3 Web Login**

A WNRT-625 with an assigned IP address allows you to monitor and configure via web browser (e.g., MS Internet Explorer or Netscape).

- 1. Open your web browser.
- 2. Enter the IP address of your WNRT-625 in the address field (default IP address is <a href="http://192.168.0.1">http://192.168.0.1</a>).
- 3. Please enter your User Name and Password in the dialog box. Default User Name and Password are both "admin". Click OK.



4. Then you will see the WNRT-625 HOME screen as below.



The left panel provides four options,  $\mathbf{Quick\ Setup}$ ,  $\mathbf{General\ Setup}$ ,  $\mathbf{Status\ Information}$  and  $\mathbf{Tools}$ .

Section	Description				
Quiek Setup	Select your Internet connection type and then input the configurations needed				
Quick Setup	to connect to your Internet Service Provider (ISP).				
	This section contains configurations for the Broadband router's advance				
	functions such as: Port Forwarding, Virtual Server, Access Control, Hacker				
General Setup	Attack Prevention, DMZ, Special applications and other functions to meet your				
	LAN requirements. You can also configure the wireless detail settings here.				
Ctatus Info	This option provides you the system information, Internet Connection, Device				
Status Info	Status, Security Log and DHCP client Log information.				
Toolo	This option contains Configuration tools, Firmware Upgrade and Reset				
Tools	functions.				

## **Chapter 4 Quick Setup**

This section describes the basic configuration of the WNRT-625 and allows you to connect to Internet easily.

### 4.1 Time Zone

The time information is used for Log entries and Firewall settings. You can keep the default Time Server address or set a new IP address for your router to synchronize its time. Click "Next" to continue.

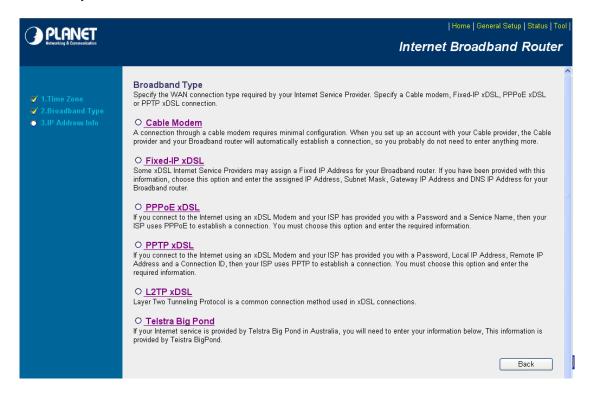


Parameter	Description
Set Time Zone	Select the time zone of the country you are currently in. The router will
Set Time Zone	set its time based on your selection.
	Remain it as default or, you can manually assign an IP address of the
Time Server Address	Time Server. The information of Timer Server can be found in the
Time Server Address	following URL link: http://www.eecis.udel.edu/~mills/ntp/servers.html or
	http://www.ntp.org.
	The router can also take Daylight savings into account. To enable this
Enable Daylight Savings	function, check/tick the "Enable Function" box and select which days this
	function will work.

Click "Next" button to proceed to the next step.

### 4.2 Broadband Type

Before establishing the Internet connection, please be sure to check with your ISP, and obtain all necessary information from them.

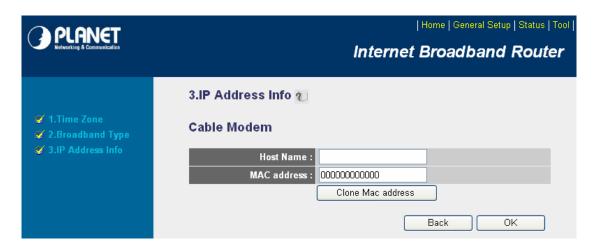


Broadband	Description			
Cable Modem	ISP will automatically give you an IP address. Please refer to section			
Cable Modern	4.2.1 for details.			
Fixed-IP XdsI	ISP has given you a fixed IP address already. Please refer to section			
FIXEU-IF AUSI	4.2.2 for details.			
PPPoE xDSL	ISP requires you to use a Point-to-Point Protocol over Ethernet (PPPoE)			
PPPOE XDSL	connection. Please refer to section 4.2.3 for details.			
PPTP xDSL	ISP requires you to use a Point-to-Point Tunneling Protocol (PPTP)			
PP IP XDSL	connection. Please refer to section 4.2.4 for details.			
	This is not widely used. You need to know the PPTP Server address as			
L2TP XDSL	well as your name and password. Please refer to section 4.2.5 for			
	details.			
Telstra Big Pond	This option is for Australia only. Please refer to section 4.2.6 for details.			

### 4.2.1 Cable Modem

With Cable Modern connection, the ISP will automatically give you an IP address. Some ISP may also require you to fill in additional information such as Host Name and MAC address (see screen below).

**Note**: The Host Name and MAC address section is **optional** and you can skip this section if your ISP does not require these settings for you to connect to the Internet.

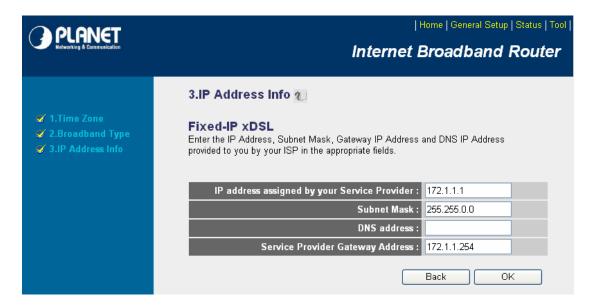


Parameters	Description
Host Name	Type in the host name provided by your ISP if any; otherwise, just leave it blank.
	To connect to Internet, your ISP will require a MAC address from your PC. Type in this
MAC Address	MAC address in this section or use the "Clone MAC Address" button to replace the
	WAN port MAC address with the your PC's.

When the configuration finished, click "OK" to next step or click "Back" to previous step. After press "OK", you will see a web screen to prompt you the configurations save successfully. You may press "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more information about this screen.

### 4.2.2 Fixed-IP xDSL

Select Fixed-IP xDSL if you're ISP has given you a specified IP address. Your ISP should provide all the information required in this section.

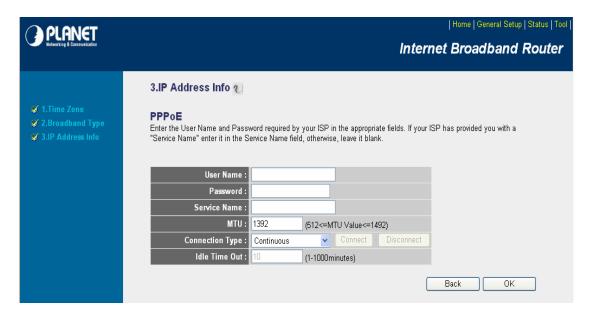


Parameters	Description	
IP address assigned by your	The ID address that you're ISD should provide you	
Service Provider	The IP address that you're ISP should provide you.	
Subnet Mask	Enter the Subnet Mask provided by your ISP (e.g. 255.255.255.0).	
DNS Address	The IP address of ISP's DNS (Domain Name Service) Server.	
Service Provider Gateway	The ICD's ID address actions:	
Address	The ISP's IP address gateway.	

Please consult your local ISP about the information above. When the configuration finished please click "OK" to next step or click "Back" to previous step. After press "OK", you will see a web screen to prompt you the configurations save successfully. Please refer to section 4.2.7 for the information of this screen.

### 4.2.3 PPPoE xDSL

Select PPPoE if your ISP requires the PPPoE protocol for Internet connectivity. Your ISP should provide all the information like user name, password required in this section.



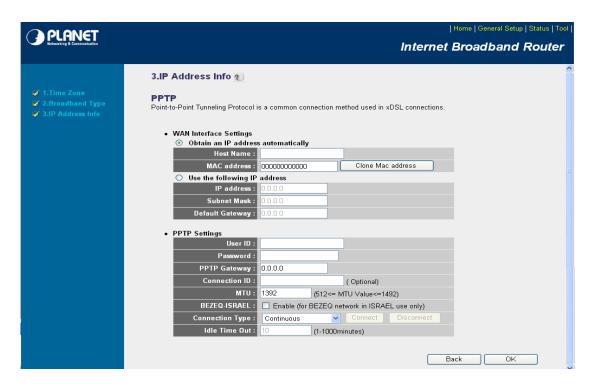
Parameters	Description			
User Name	Enter the User Name provided by your ISP for the PPPoE connection.			
Password	Enter the Password provided by your ISP for the PPPoE connection.			
Service Name	This is an optional parameter. Leave it blank unless your ISP requires it.			
	This is an optional parameter. You can specify the maximum size of transmission			
мти	packet to the Internet. The range of the MTU will be from 512 to 1492. You can also			
	consult you ISP for the optimal MTU as well. Default: 1392.			
	If you select "Continuous", the router will always connect to the ISP. If the WAN line			
	breaks down and links again, the router wills auto-reconnect to the ISP.			
	If you select "Connect On Demand", the router will auto-connect to the ISP when a			
	client in LAN want to use the Internet and keep connected until the WAN idle			
Connection Type	timeout. The router will close the WAN connection if the time period that no one is			
Connection Type	using the Internet exceeds the "Idle Time".			
	If you select "Manual", the router will connect to ISP only when you click "Connect"			
	manually from the Web user interface. The WAN connection will not disconnected			
	due to the idle timeout. If the WAN line breaks down and latter links again, the router			
	will not auto-connect to the ISP. Default: Continuous.			
	You can specify an idle time threshold (minutes) for the WAN port. This means if no			
Idle Time	packets have been sent (no one using the Internet) during this specified period, the			
idie IIIIe	router will automatically disconnect the connection from your ISP.			
	Note: This "idle timeout" function may not work due to abnormal activities of some			

network application software, computer virus or hacker attacks from the Internet. For example, some software sends network packets to the Internet in the background, even when you are not using the Internet. So please turn off your computer when you are not using it. This function also may not work with some ISP. So please make sure this function can work properly, especially when your ISP charges you by time used.

When the configuration finished, click "Apply" to next step or click "Cancel" to previous step. After press "Apply", you will see a web screen to prompt you the configurations save successfully. Please refer to section 4.2.7 for the information of this screen.

### 4.2.4 PPTP xDSL

Select PPTP if your ISP requires the PPTP protocol to connect to the Internet. Your ISP should provide all the information required in this section.



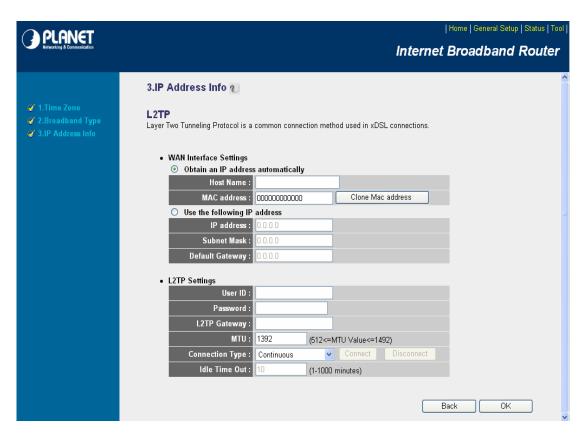
Parameter	Description
Obtain an IP address	Select it if the ISP requires you to obtain an IP address by DHCP automatically.
Host Name	Type in the host name provided by your ISP if any; otherwise, just leave it blank.
MAC Address	To connect to the Internet, your ISP will require a MAC address from your PC.
	Type in this MAC address in this section or use the "Clone MAC Address"
	button to replace the WAN port MAC address with the MAC address of that PC.
Use the following IP	Select it if the ISP provides you a static IP to connect to the PPTP server.

address	
IP Address	This is the IP address that your ISP has given you to establish a PPTP
	connection.
Subnet Mask	Enter the Subnet Mask provided by your ISP (e.g. 255.255.255.0)
Gateway	Enter the IP address of the ISP's Gateway.
Heer ID	Enter the User Name provided by your ISP for the PPTP connection.
User ID	Sometimes called a Connection ID.
Password	Enter the Password provided by your ISP for the PPTP connection
DDTD Catavian	If your LAN has a PPTP gateway, enter that PPTP gateway's IP address here. If
PPTP Gateway	you do not have a PPTP gateway, enter the ISP's Gateway IP address above.
Connection ID	This is the ID given by ISP. This is an optional parameter.
	This is an optional parameter. You can specify the maximum size of
мти	transmission packet to the Internet. The range of the MTU will be from 512 to
	1492. You can also consult you ISP for the optimal MTU as well. Default: 1392
BEZEQ-ISRAEL	Select this item if you are using the service provided by BEZEQ in Israel.
	If you select "Continuous", the router will always connect to the ISP. If the WAN
	line breaks down and links again, the router shall auto- reconnect to the ISP.
	If you select "Connect On Demand", the router will auto-connect to the ISP
	when a client in LAN wants to use the Internet and keep connected until the
Connection Type	WAN idle timeout. The router will close the WAN connection if the time period
Connection Type	that no one is using the Internet exceeds the "Idle Time".
	If you select "Manual", the router will connect to ISP only when you click
	"Connect" manually from the Web user interface. The WAN connection will not
	disconnect due to the idle timeout. If the WAN line breaks down and latter links
	again, the router will not auto-connect to the ISP. Default: Continuous.
	You can specify an idle time threshold (minutes) for the WAN port. This means
	if no packets have been sent (no one using the Internet) throughout this
	specified period, the router will automatically disconnect to with your ISP.
	Note: This "idle timeout" function may not work due to abnormal activities of
Idle Time	some network application software, computer virus or hacker attacks from the
nule Time	Internet. For example, some software sends network packets to the Internet in
	the background, even when you are not using the Internet. So please turn off
	your computer when you are not using it. This function also may not work with
	some ISP. So please make sure this function can work properly, especially
	when your ISP charges you by time used.

When the configuration finished please click "OK" to next step or click "Back" to previous step. After press "OK", you will see a web screen to prompt you the configurations save successfully. Please refer to section 4.2.7 for the information of this screen.

### 4.2.5 **L2TP xDSL**

Select L2TP if your ISP requires the L2TP protocol to connect to the Internet. Your ISP should provide all the information required in this section.



Parameter	Description
Obtain an IP address	Select it if the ISP requires you to obtain an IP address by DHCP automatically.
Llast Nama	If your ISP requires a Host Name, type in the host name provided by your ISP;
Host Name	otherwise, just leave it blank.
	To connect to the Internet, your ISP will require a MAC address from your PC.
MAC Address	Type in this MAC address in this section or use the "Clone MAC Address"
	button to replace the WAN port MAC address with the MAC address of that PC.
Use the following IP	Select it if the ISP provides you a static IP to connect to the L2TP server.
address	
IP Address	This is the IP address that your ISP has given you to establish a L2TP
IF Address	connection.
Subnet Mask	Enter the Subnet Mask provided by your ISP (e.g. 255.255.255.0)
Gateway	Enter the IP address of the ISP's Gateway.
Heer ID	Enter the User Name provided by your ISP for the L2TP connection.
User ID	Sometimes called a Connection ID.
Password	Enter the Password provided by your ISP for the L2TP connection

L2TP Gateway	If your LAN has a L2TP gateway, enter that L2TP gateway's IP address here. If
	you do not have a L2TP gateway, enter the ISP's Gateway IP address above.
	This is an optional parameter. You can specify the maximum size of
мти	transmission packet to the Internet. The range of the MTU will be from 1492 to
	512. You can also consult you ISP for the optimal MTU as well. Default: 1392
	If you select "Continuous", the router will always connect to the ISP. If the WAN
	line breaks down and links again, the router shall auto- reconnect to the ISP.
	If you select "Connect On Demand", the router will auto-connect to the ISP
	when someone wants to use the Internet and keep connected until the WAN
Connection Type	idle timeout. The router will close the WAN connection if the time period that no
Connection Type	one is using the Internet exceeds the "Idle Time".
	If you select "Manual", the router will connect to ISP only when you click
	"Connect" manually from the Web user interface. The WAN connection will not
	disconnect due to the idle timeout. If the WAN line breaks down and latter links
	again, the router will not auto-connect to the ISP. Default: Continuous.
	You can specify an idle time threshold (minutes) for the WAN port. This means
	if no packets have been sent (no one using the Internet) throughout this
	specified period, then the router will automatically disconnect the connection
	with your ISP.
	Note: This "idle timeout" function may not work due to abnormal activities of
Idle Time	some network application software, computer virus or hacker attacks from the
	Internet. For example, some software sends network packets to the Internet in
	the background, even when you are not using the Internet. So please turn off
	your computer when you are not using it. This function also may not work with
	some ISP. So please make sure this function can work properly, especially
	when your ISP charges you by time used.

When the configuration finished please click "OK" to next step or click "Back" to previous step. After press "OK", you will see a web screen to prompt you the configurations save successfully. Please refer to section 4.2.7 for the information of this screen.

### 4.2.6 Telstra Big Pond

Select Telstra Big Pond if you are live in Australia and your ISP requires this protocol to connect to the Internet. Your ISP should provide all the information required in this section.

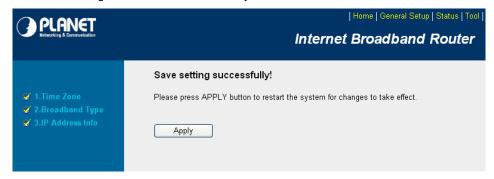


Parameters	Description
User Name	Enter the User Name provided by your ISP for the connection.
Password	Enter the Password provided by your ISP for the connection.
User Decide login	If you ISP has provide the login server IP address to you, please check this box and
server manually	enter the Login Server IP address below.
Login Server	Please enter the Login Server IP address here.

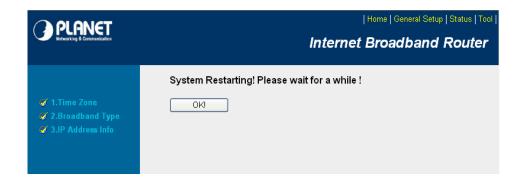
When the configuration finished please click "OK" to next step or click "Back" to previous step. After press "OK", you will see a web screen to prompt you the configurations save successfully. Please refer to section 4.2.7 for the information of this screen.

### 4.2.7 Save Settings Successfully

When you press "OK" in above configuration, the settings will be saved and the screen appears as below. Before WNRT-625 restart, the settings are saved, but not function yet. Press "Apply" to restart the WNRT-625 for the change to take effect immediately.

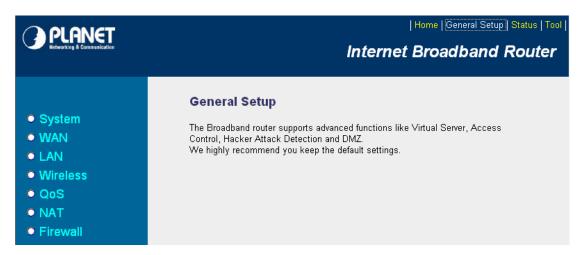


Please wait for 30 seconds for WNRT-625 restart. After restart procedure finished, please click "OK" to return to HOME screen.



## **Chapter 5 General Setup**

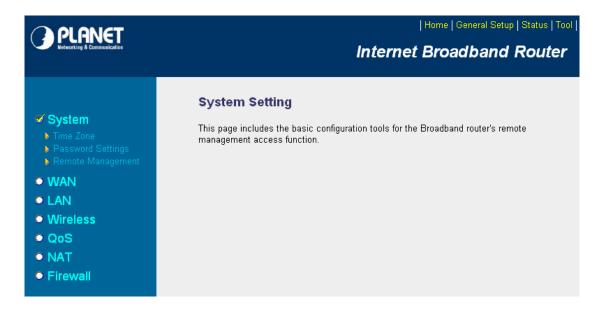
After click on the "General Setup" button at the main Page, you should see the screen below.



The General Setup contains advanced features that allow you to configure the router to meet the network's needs such as: Wireless, Port Forwarding, Virtual Server, Access Control, URL Blocking, Special Applications, DMZ and other functions.

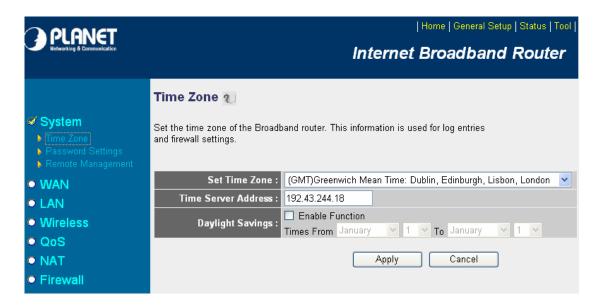
### 5.1 System

This section shows how to setup the Broadband router's system Time Zone, Password and Remote Management Administrator.



### 5.1.1 Time Zone

The Time Zone allows WNRT-625 to allocate its time on the settings configured here; it will affect log display functions such as Security Log and Firewall settings.



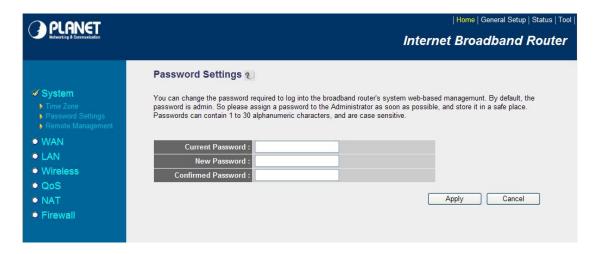
Parameter	Description
Set Time Zone	Select the time zone of the country you are currently in. The router will set its time
	based on your selection.

	You can keep the default IP address or enter a new Time Server Address for this
	device to synchronize its time. You can also refer to the web site
	http://www.ntp.org to find a nearest time server.
Daylight Savings	The router can also take Daylight savings into account. Select the check box to
	enable your daylight saving configuration. You can set the days that you wish to
	start and stop daylight Savings Time.

After the setup completed, please click "Apply" to save the settings. After press "Apply", you will see a web screen to prompt you the configurations save successfully. You may refer to section 4.2.7 for the information of this screen.

### 5.1.2 Password Setup

This screen allows you to change the management password.



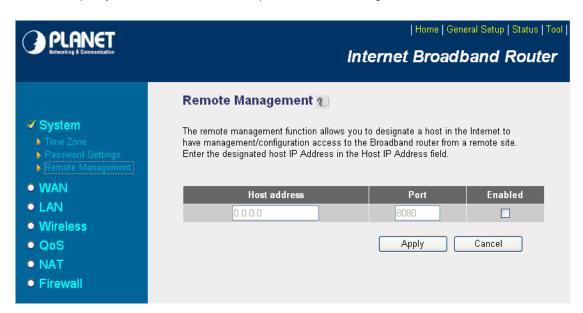
Parameters	Description
Current Password	Enter your current password for the remote management administrator to
	login to your Broadband router.
New Password	Enter your new password.
Confirmed Password	Enter your new password again for verification purposes.

After the setup completed, please click "Apply" to save the settings. After press "Apply", you will see a web screen to prompt you the configurations save successfully. You may refer to section 4.2.7 for the information of this screen.

**Note**: If you forget the password, please reset the WNRT-625 to the factory default by press **RST/WPS** button (on WNRT-625's rear panel) over 30 seconds.

### 5.1.3 Remote Management

You can specify a Host IP address that can perform remote management from Internet.

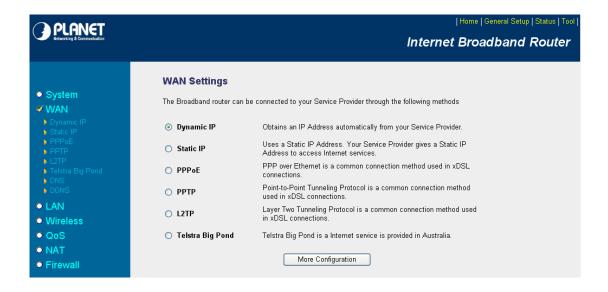


Parameters	Description
	The IP address of the host on Internet that will have management / configuration
	access to the Broadband router. Leave it to 0.0.0.0 means anyone can access the
	router's web-based configuration from any remote location.
	Click the <b>Enabled</b> box to enable the Remote Management function.
Host Address	Note: When you want to access the web-based management from a remote site, you
	must enter the router's WAN IP address (e.g. 10.0.0.1) into your web-browser followed
	by port number 8080, e.g. 10.0.0.1:8080 (see below). You'll also need to know the
	password set in the Password Setting screen in order to access the management
	pages.

After the setup completed, please click "Apply" to save the settings. After press "Apply", you will see a web screen to prompt you the configurations save successfully. You may refer to section 4.2.7 for the information of this screen.

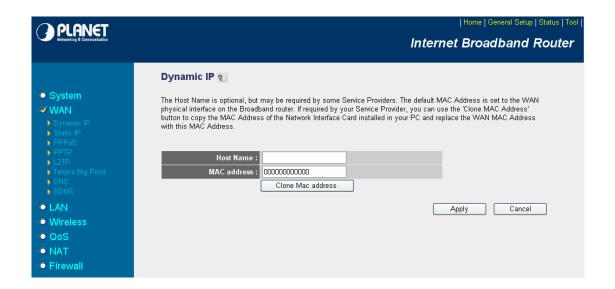
### 5.2 WAN

The WAN Settings screen allows you to specify the type of Internet connection. The WAN settings offer the following selections for the router's WAN port, **Dynamic IP**, **Static IP**, **PPPoE**, **PPTP**, **L2TP**, and **Telstra Big Pond**. Please select one of the connection types and click "More Configuration" button or select the option on the left window for configuration.



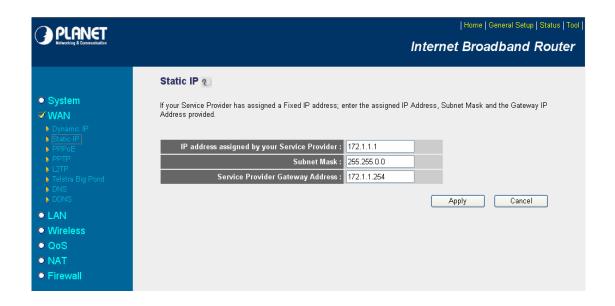
### 5.2.1 Dynamic IP

If Dynamic IP is selected, your ISP will automatically give you an IP address. Some ISP's may also require that you fill in additional information such as Host Name, Domain Name and MAC address. Please refer to the section 4.2.1 for more settings of this option.



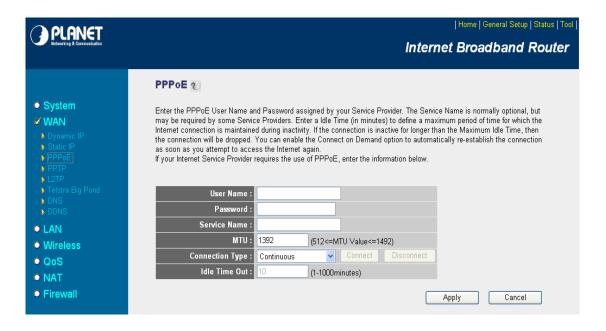
### 5.2.2 Static IP

If Static IP is selected, your ISP should provide all the information required in this screen. Please refer to the section 4.2.2 for more settings of this option.



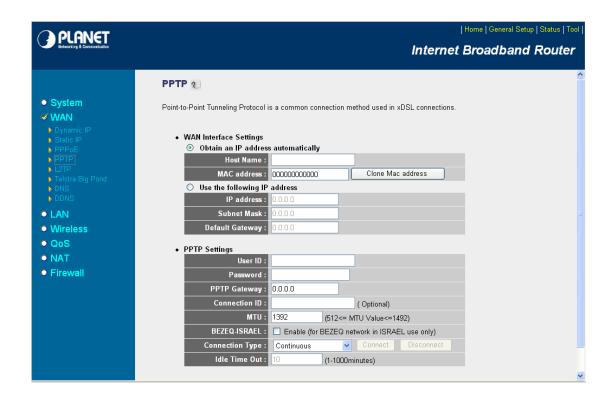
### 5.2.3 **PPPoE**

Select PPPoE if your ISP requires PPPoE protocol to connect to the Internet. Your ISP should provide all the information required in this section. Please refer to the section 4.2.3 to know the detail settings of this option.



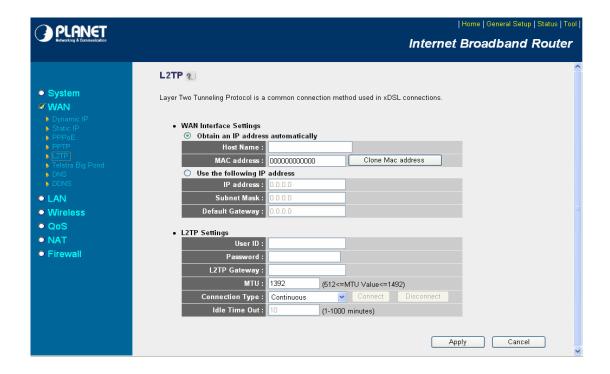
### 5.2.4 PPTP

Select PPTP if your ISP requires the PPTP protocol to connect to the Internet. Your ISP should provide all the information required in this section. Please refer to section 4.2.4 for more settings of this option.



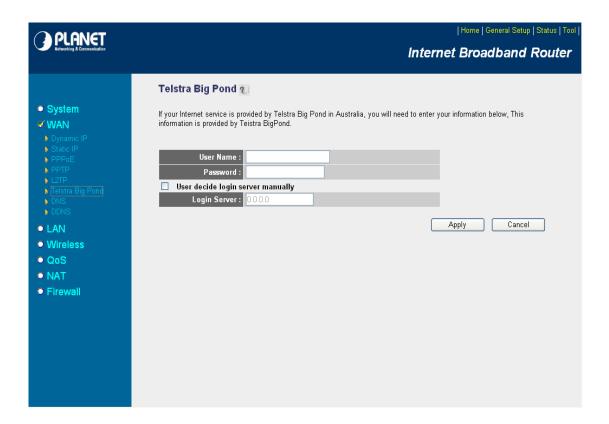
### 5.2.5 L2TP

Select L2TP if your ISP requires the L2TP protocol to connect to the Internet. Your ISP should provide all the information required in this section. Please refer to section 4.2.5 for more settings of this option.



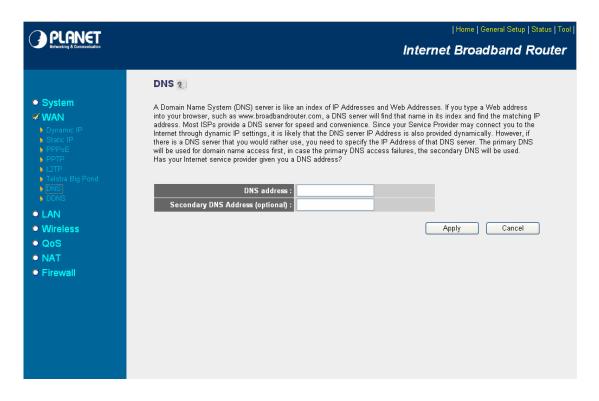
### 5.2.6 Telstra Big Pond

Select Telstra Big Pond if your ISP requires the Telstra Big Pond protocol to connect you to the Internet. Telstra Big Pond protocol is used by the ISP in Australia. Your ISP should provide all the information required in this section. Please refer to section 4.2.6 for more settings of this option.



### 5.2.7 DNS

A Domain Name System (DNS) server is like an index of IP addresses and Web addresses. If you type a Web address into your browser, such as www.router.com, a DNS server will find that name in its index and the matching IP address. Most ISPs provide a DNS server for efficiency and convenience. If your Service Provider connects you to the Internet with dynamic IP settings, it is likely that the DNS server IP address is provided automatically. However, if there is a DNS server that you would rather to use, please specify the IP address of that DNS server here.

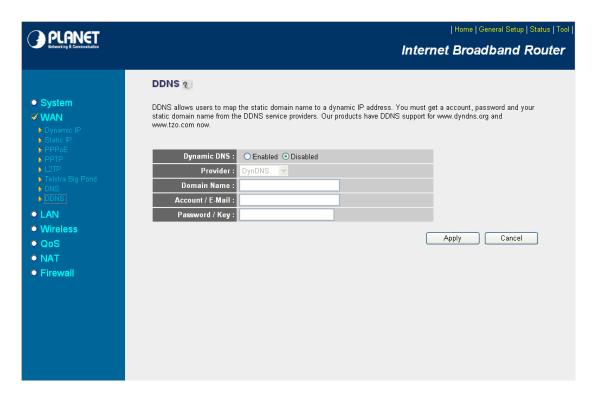


Parameters	Description
DNS address	This is the ISP's DNS server IP address that they gave you; or you can specify your own preferred DNS server IP address.
Secondary DNS Address (optional)	This is optional. You can enter another DNS server's IP address as a backup. The secondary DNS will be used when the above primary DNS fails.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. You may refer to section 4.2.7 for the information of this screen.

### 5.2.8 **DDNS**

DDNS allows you to map the static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service providers. This router supports DynDNS and TZO.

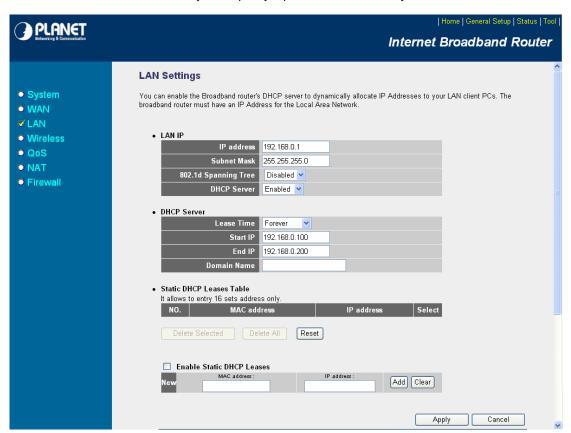


Parameters	Description
Dynamic DNS	Enable/Disable the DDNS function of this router.
Provider	Select a DDNS service provider. The default setting is "DynDNS".
Domain name	Your static domain name that use DDNS.
Account / E-mail	The account that your DDNS service provider assigned to you.
Password / Key	The password you set for the DDNS service account above.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more information about this screen.

### 5.3 LAN

The LAN Port screen below allows you to specify a private IP address for your router's LAN interface.



Parameters	Description
LAN IP	Please input the IP address of this router.
IP Address	Designate the Access Point's IP Address. This IP Address should be unique in
	your network. The default IP Address is <b>192.168.0.1</b> .
Subnet Mask	Specify a Subnet Mask for your LAN segment. The Subnet Mask of the Access
	Point is fixed and the value is 255.255.25.0.
802.1d Spanning Tree	If it is enabled, this router will use the spanning tree protocol to prevent from
	network loop happened in the LAN ports.
DHCP Server	Enable or disable the DHCP Server.

DHCP Server	These settings are only available when 'DHCP Server' in 'LAN IP' section is
	'Enabled'
Lease Time	The DHCP Server will temporarily assign IP addresses to LAN clients. In the
	Lease Time setting you can specify the time period that the DHCP Server lends
	an IP address to your LAN client. The DHCP Server will change your LAN client's
	IP address when this time threshold period is reached.

Start IP/End IP	You can designate a particular IP address range for your DHCP server to issue IP
	addresses to your LAN Clients. By default the IP range is from: Start IP
	<b>192.168.0.100</b> to End IP <b>192.168.0.200</b> .
Domain Name	You can specify the Domain Name for your Access Point.

	This function allows you to assign a static IP address to a specific computer
Static DHCP Leases	forever, so you don't have to set the IP address for a computer, and still enjoy the
Table	benefit of using DHCP server. Maximum 16 static IP addresses can be assigned
	here.
Enable Static DHCP	Check this box to enable this function, otherwise uncheck it to disable this
Leases	function.
MAC Address	Input the MAC address of the computer or network device (total 12 characters,
	with character from 0 to 9, and from a to f, like '001122aabbcc')
IP address	Input the IP address you want to assign to this computer or network device.
Add	After you inputted MAC address and IP address pair, click this button to add the
	pair to static DHCP leases table.
Clear	If you want to remove all characters you just entered, please click it.

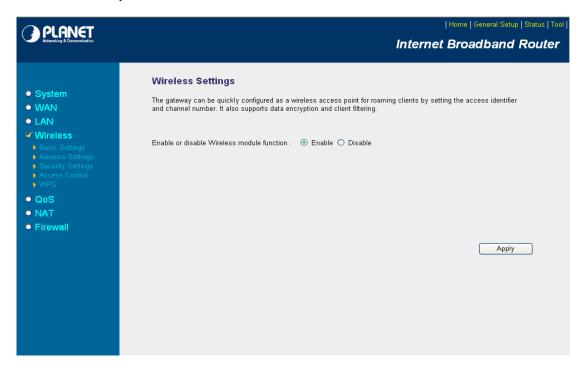
#### Note: After you clicked 'Add', the MAC address and IP address mapping will be added to 'Static DHCP Leases Table' section as below. • Static DHCP Leases Table It allows to entry 16 sets address only. NO. MAC address IP address Select 00:11:22:33:44:55 192.168.2.100 1 Delete Selected Delete All Reset If you want to delete a specific item, please check the "Select" box of a MAC address and IP address mapping, then click "Delete Selected" button; if you want to delete all mappings, click

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more information about this screen.

"Delete All" button. If you want to deselect all mappings, click "Reset" button.

### 5.4 Wireless

This screen allows you to Enable/Disable WNRT-625 wireless function.

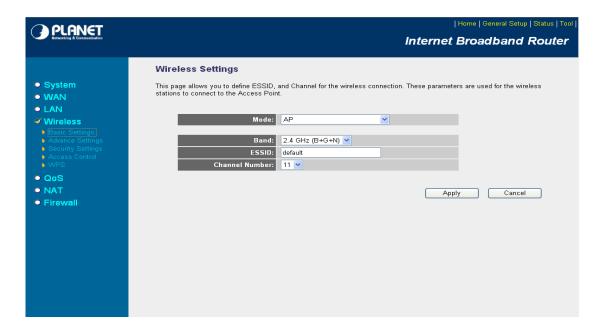


Parameters	Description
Enable/Disable	You can select to "Enable" or "Disable" the Wireless interface. After
	selected, please click "Apply" to make the settings effect.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more information about this screen.

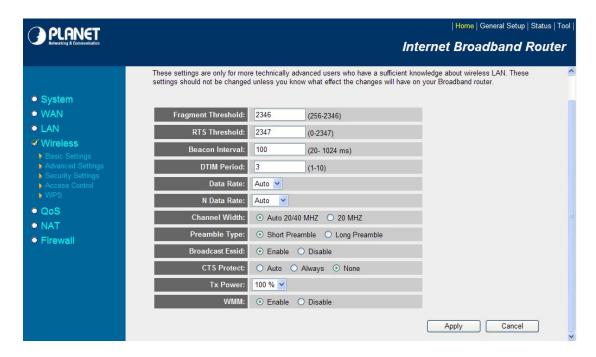
### 5.4.1 Basic Settings

WNRT-625 supports not only Access Point function, but also provides Bridge and WDS mode. Please Refer to "Chapter 6 Wireless Configuration" know the details settings of wireless Basic Settings. In Default, WNRT-625 will work with AP mode.



### 5.4.2 Advance Settings

You should not change the parameters in this screen unless you know what effect the changes will have on WNRT-625. Please click "Apply" to save the settings when configuration finished.



Parameters	Description
	"Fragment Threshold" specifies the maximum size of packet during the
Fragment Threshold	fragmentation of data to be transmitted. If you set this value too low, it will result
	in bad performance.
RTS Threshold	When the packet size is smaller the RTS threshold, the access point will not use
K15 Threshold	the RTS/CTS mechanism to send this packet.
Beacon Interval	The interval of time that this access point broadcast a beacon. Beacon is used to
Deacon interval	synchronize the wireless network.
DTIM Period	Set the DTIM period of wireless radio. Do not modify default value if you don't
D TIM Pellod	know what it is, default value is 3.
	The Data Rate is the rate of data transmission for 802.11b/g clients. The
Data Rate	WNRT-625 will use the highest possible selected transmission rate to transmit
	the data packets.
	Set the wireless data transfer rate to a certain value for 802.11n clients. Since
N Data Rate	most of wireless devices will negotiate with each other and pick a proper data
	transfer rate automatically. Please refer to "N Data Rate Table" as below.
Channel Width	Set channel width of wireless radio. Do not modify default value if you don't know
Charmer Width	what it is, default setting is 'Auto 20/40 MHz'.
	Preamble type defines the length of CRC block in the frames during the wireless
Preamble Type	communication. "Short Preamble" is suitable for high traffic wireless network.
	"Long Preamble" can provide more reliable communication.
	If you enable "Broadcast ESSID", every wireless station located within the
Broadcast ESSID	coverage of this access point can discover this WNRT-625 easily. If you are
Bioaucast E33ib	building a public wireless network, enabling this feature is recommended. In
	private network, disabling "Broadcast ESSID" can provide better security.
	It is recommended to enable the protection mechanism. This mechanism can
CTS Protection	decrease the rate of data collision between 802.11b and 802.11g wireless
C131 lotection	stations. When the protection mode is enabled, the throughput of the AP will be a
	little lower due to many of frame traffic should be transmitted.
TV Dower	Users can adjust the WNRT-625 output power to 100%, 90%, 75% 50% 25% and
TX Power	10%. In default, WNRT-625 will work with 100% output power.
WMM	The short of Wi-Fi Multi-Media, it will enhance the data transfer performance of
VVIVIIVI	multimedia contents when they're being transferred over wireless network.

#### **N Data Rate Table**

MCS Index	HT20	HT40
WCS muex	Data rate (Mbps)	@ 400ns GI
0	7.2	15.0
1	14.4	30.0
2	21.7	45.0
3	28.9	60.0
4	43.3	90.0
5	57.8	120.0
6	65.0	135.0
7	72.2	150.0
8	14.444	30.0
9	28.889	60.0
10	43.333	90.0
11	57.778	120.0
12	86.667	180.0
13	115.556	240.0
14	130.000	270.0
15	144.444	300.0

# 5.4.3 Security

WNRT-625 provides complete wireless LAN security functions, includes WEP, 802.1x, 802.1x with WEP, WPA-PSK and WPA RADIUS. With these security functions, you can prevent your wireless LAN from illegal access. Please make sure your wireless stations use the same security function. In default, the security function is "Disable".



## 5.4.3.1 WEP

When you select 64-bit or 128-bit WEP key, you have to enter WEP keys to encrypt data. You can generate the key by yourself. You can enter four WEP keys and select one of them as default key.

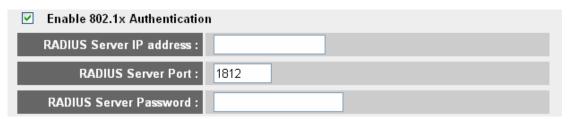
Then the access point will just allow the clients that with the same encryption keys connected. You can use WEP encryption in "AP mode", "Station-Ad Hoc mode", "Station-Infrastructure mode" and "AP Bridge-WDS mode". If you would like to enable 802.1x Authentication also, please check the "Enable 802.1x Authentication" and refer to section 5.4.3.2 for the detail of 802.1x settings.



Parameter	Description
Encryption	Please select "WEP" in this option.
	You can select the 64 or 128-bit key to encrypt transmitted data. Larger
Key Length	WEP key length will provide higher level of security, but the throughput
	will be lower.
	You may select to select ASCII Characters (alphanumeric format) or
Key Format	Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the WEP
	Key.
Default Ty Koy	Select one of the four keys to encrypt your data. Only the key you select
Default Tx Key	it in the "Default key" will take effect.
	The WEP keys are used to encrypt data transmitted in the wireless
	network. Fill the text box by following the rules below.
Engraption Koy 1 - Koy 4	64-bit WEP: input 10-digit Hex values (in the "A-F", "a-f" and "0-9"
Encryption Key 1 - Key 4	range) or 5-digit ASCII character as the encryption keys.
	128-bit WEP: input 26-digit Hex values (in the "A-F", "a-f" and "0-9"
	range) or 10-digit ASCII characters as the encryption keys.
	Check this box and another sub-menu will appear if you want to enable
Enable 802.1x Authentication	802.1X authentications with WEP encryption. You may refer to section
	5.4.3.2 to enter the correct setting of the fields.

#### 5.4.3.2 802.1X

IEEE 802.1x is an authentication protocol. Every user must use a valid account to login to this Access Point before accessing the wireless LAN. The authentication is processed by a RADIUS server. This mode only authenticates user by IEEE 802.1x, but it does not encryption the data during communication. It is suggested to enable 802.1x and WEP at the same time.



Parameter	Description
RADIUS Server IP address	Please input the IP address of radius server here.
RADIUS Server Port	Please input the port number of radius server here. Leave the default
	port setting or assign a new port number for this option.
RADIUS Server Password	Please input the port number of radius password here.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are save successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more information about this screen.

## 5.4.3.3 WPA - PSK

Wi-Fi Protected Access (WPA) is an advanced security standard. You can use a pre-shared key to authenticate wireless stations and encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently. So the encryption key is not easy to be broken by hackers. This can improve security very much.



Parameter		Description
Encryption		Please select "WPA pre-shared key" in this option.
	WPA (TKIP)	TKIP can change the encryption key frequently to enhance the wireless
		LAN security.
WPA Unicast		This use CCMP protocol to change encryption key frequently. AES can
Cipher Suite	WPA2 (AES)	provide high-level encryption to enhance the wireless LAN security.
	M/DAO Missa d	This will use TKIP or AES based on the other communication peer
	WPA2 Mixed	automatically.
		You may select to select Passphrase (alphanumeric format) or
Pre-shared Key	/ Format	Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the
		Pre-shared Key.
Pre-shared Key		The Pre-shared key is used to authenticate and encrypt data
		transmitted in the wireless network. Fill the text box by following the
		rules below.
		Hex: input 64-digit Hex values (in the "A-F", "a-f" and "0-9" range) or at
		least 8 character pass phrase as the pre-shared keys.

## 5.4.3.4 WPA - RADIUS

You can use a RADIUS server to authenticate wireless stations and provide the session key to encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently.



Parameter		Description
Encryption		Please select "WPA RADIUS" in this option.
WPA Unicast Cipher Suite	WPA (TKIP)	TKIP can change the encryption key frequently to enhance the wireless LAN security.
	WPA2 (AES)	This use CCMP protocol to change encryption key frequently. AES can provide high-level encryption to enhance the wireless LAN security.
	WPA2 Mixed	This will use TKIP or AES based on the other communication peer automatically.
RADIUS Server IP Address		Enter RADIUS Serer IP address.
RADIUS Server Port		Leave the default port setting or assign a new port number for this option.
RADIUS Server Password		Please enter the password that is assigned in RADIUS Server.

#### 5.4.4 Access Control

WNRT-625 provides MAC Address Filtering, which prevents the unauthorized users from accessing your wireless network.



Parameters	Description
Enable Wireless	Enable or disable the MAC Address Filtering function.
Access Control	Enable of disable the MAC Address Filtering function.
Add MAC Address	In the bottom "New" area, fill in the "MAC Address" and "Comment" of the wireless
to the control table	station and then click "Add". Then this wireless station will be added into the "MAC
	Address Filtering Table" above.
Remove MAC	If you want to remove some MAC address from the "Current Access Control List",
address from the	select the MAC addresses you want to remove in the list and then click "Delete
table	Selected".
Delete All	If you want remove all MAC addresses from the list, just click this button.
Reset	Click "Reset" will clear your current selections.

#### 5.4.5 WPS

Wi-Fi Protected Setup (WPS) is the simplest way to build connection between wireless network clients and this wireless router. You don't have to select encryption mode and input a long encryption pass phrase every time when you need to setup a wireless client, you only have to press a button on wireless client and 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 RET/WPS button of this wireless router, or click 'Start PBC' button in the web configuration interface to do this. If you want to use PIN code, you can see the setup as below.



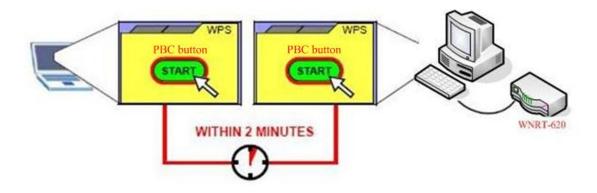
Parameters	Description
Enable WPS	Check this box to enable WPS function, uncheck it to disable WPS.
Wi-Fi Protected	WDS related austom information will be displayed here
Setup Information	WPS-related system information will be displayed here.
WPS Status	If the wireless security (encryption) function of this wireless router is properly set,
	you'll see 'Configured' message here. If wireless security function has not been set,
	you'll see 'unConfigured'.
	This is the WPS PIN code of this wireless router. This code is useful when
	WNRT-625 router sets as Enrollee, you need to fill this number into the web page of
	the other device.
SSID	The SSID of this wireless router will be displayed here.

Authentication	The wireless security authentication mode of this wireless router will be displayed
Mode	here.
	Confirming your Identity Key Store Pass-phrase. It is allowed you to easily
	remember the key what you may want to remember is that if the passphrase is
	used,

Device Configure	
Config Mode:	"Registrar", "Enrollee", please see the setup step as below.
	Click 'Start PBC' to start Push-Button style WPS setup procedure. This wireless
Configure via Push	router will wait for WPS requests from wireless clients for 2 minutes. The 'WLAN'
Button	LED on the wireless router will be steady on when this wireless router is waiting for
	incoming WPS request.
	Please input the PIN code of the other device you wish to connect, and click 'Start
Configure via	PIN' button. The 'WLAN' led on the wireless router will be steady on when this
PinCode	wireless router is waiting for incoming WPS request.(please see the detail as
	below.)

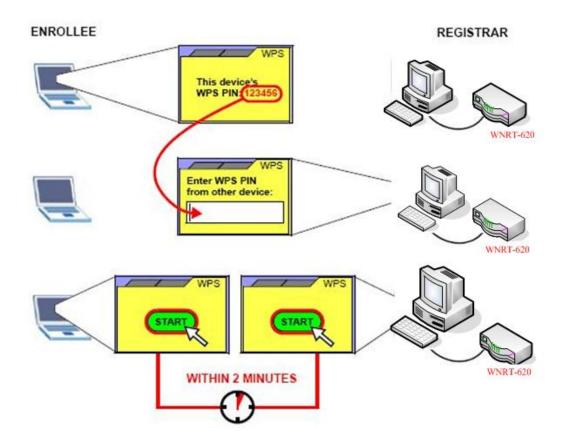
# PBC setup step:

- 1. Ensure you have set the security setting on WNRT-625 (as Registrar).
- 2. Click the WPS button on WNRT-625 (or the "Start PBC" button on the web interface of WNRT-625) and the other device (supports PBC function) in 2 minutes.
- 3. WNRT-625 (Registrar) would send SSID and security key to the other device (Enrollee) through tunnel to connect.
- 4. If you see the wireless client in the list, WPS-PBC setting is successful.



## PIN (as Registrar) setup step:

- 1. Select Config Mode: "Registrar" on WNRT-625.
- Fill the PIN code of the other device (as Enrollee that support WPS-PIN setting) into the "configure via Client Pincode" of WNRT-625.
- 3. Click the PIN buttons on WNRT-625 and the other device in 2 minutes.
- 4. If you see the wireless client in the list, WPS-PIN setting is successful.



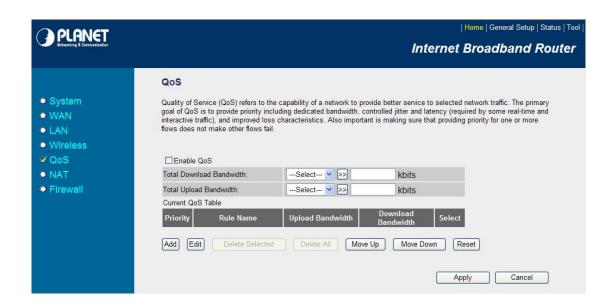
## PIN (as Enrollee) setup step:

- 1. Select Config Mode: "Enrollee" on WNRT-625.
- 2. Fill the PIN code of WNRT-625 into the other device (as Registrar).
- 3. Click the PIN buttons on WNRT-625 and the other device in 2 minutes.
- 4. If you see the wireless client in the list, WPS-PIN setting is successful.
- \*\* As the figure as above, just change two roles.

## 5.5 QoS

Quality of Service (QoS) refers to the capability of providing better service to selected network traffic. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency

(required by some real-time and interactive traffic), and improved loss characteristics. When using this feature, it is important to make sure the rules are not conflicted with each other.

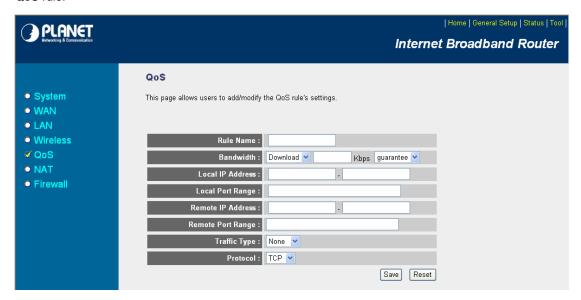


Parameters	Description
Enable QoS	Check this box to enable QoS function, unselect this box if you don't want to
	enforce QoS bandwidth limitations.
Total Download Bandwidth	You can set the limit of total download bandwidth in kbits. To disable
Total Download Bandwidth	download bandwidth limitation.
Total Upload Bandwidth	You can set the limit of total upload bandwidth in kbits. To disable upload
Total Opioad Baridwidth	bandwidth limitation.
Add	When you want to add a new QoS rule, press this button and refer to
Add	instructions below to add a new QoS rule.
Edit	When you want to edit the existing QoS rule, press this button and refer to
Luit	instructions below to edit QoS rule.
Delete Selected	Select the QoS rule which you would like to delete, press this button to
Delete Selected	delete.
Delete All	When you want to delete all the QoS rules, you just need to press this
Delete All	button.
Move Up	Select a QoS rule and press this button to assign higher priority.
Remove Down	Select a QoS rule and press this button to assign lower priority.
Reset	Click "Reset" to clear your current selections.

#### Add/Edit QoS Rule

You can assign packet classification criteria by its source IP range, destination IP range, traffic type, protocol, and source port range and destination port range parameters. The parameters that you leave as blank will be ignored. The priority of this rule will be applied to packets that match classification criteria of this rule. You can limit bandwidth consumed by packets that match this rule or guarantee bandwidth required by packets that match this rule.

After press Add or Edit button in QoS screen, you will see the web screen below for user to setup their QoS rule.



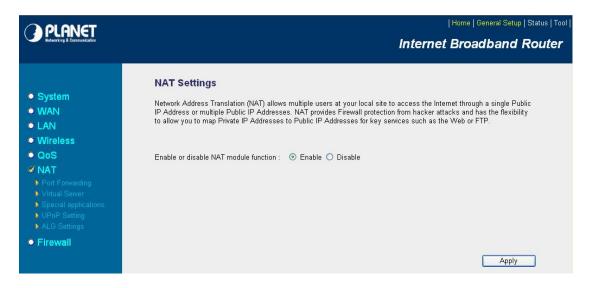
Parameters	Description
Rule Name	Please give a name to the QoS Rule
	You can limit the maximum bandwidth consumed by this rule by selecting
	"Maximum". You also can reserve enough bandwidth for this rule by
	selecting "Guarantee". The unit of bandwidth is Kbps. When we download
Bandwidth	data from Internet, the unit of download screen shows is KBps. 1KBps is
Danawidin	equal to 8Kbps. When you enter the bandwidth, please make sure the
	number you enter is correct. For example, if you want to limit users
	download speed to 50KBps from Internet, you will need to enter 400Kbps in
	the configuration.
Local IP Address	Please enter the IP address of the local PC. If there is only one IP address
Local IF Address	you want to assign, please fill IP address in these two spaces.
	Please input the range of local (source) port number that will be affected by
Local Port Range	this rule. If you want to apply this rule on port 80 to 90, please input '80-90'; if
	you want to apply this rule on a single port, just input the port number, like

	'80'; if you want to apply this rule none assigned port, must input the port	
	<u>number '2-65535'</u> .	
Domata ID Address	Please enter the IP address of the PC from remote site. If you don't assign,	
Remote IP Address	please let it blank.	
	Please 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, please input '80-90'; if	
Remote Port Range	you want to apply this rule on a single port, just input the port number, like	
	'80'; if you want to apply this rule none assigned port, must input the port	
	number '2-65535'.	
	Select the traffic type of the packets that this rule will apply to. We list some	
Traffic Type	popular applications here to ease the configuration. You also can get the	
	same result by using other parameters, for example source or destination	
	port number, if you are familiar with the application protocol.	
Protocol	Please select the protocol TCP or UDP in the list.	

After configuration complete, please click "Save" to save the settings. Or you may press "Reset" to clear the settings to enter again.

## 5.6 NAT

Network Address Translation (NAT) allows multiple users at your local site to access the Internet via a single legal IP Address. NAT provides Firewall protection from hacker attacks and has the flexibility to allow you to map Private IP Addresses to Public IP Addresses for key services such as Websites and FTP. If NAT is disabled, all LAN side workstations must have legal IP addresses for Internet access. If the router is used for routing application, not for Internet access, the NAT function can be disabled.

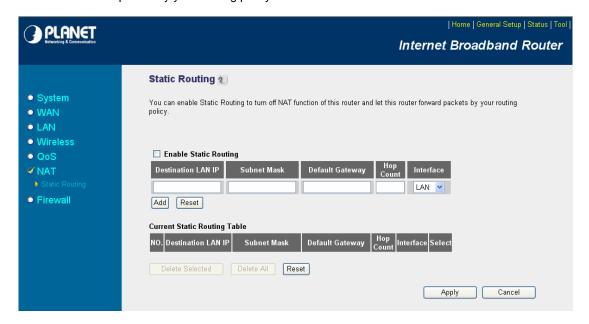


Parameters	Description
Enable or Disable NAT	You can select to enable or disable the NAT function. If you choose the

module function	disable, the NAT sub-function will just let you to use the function of Static		
	Routing setting as well as the fast NAT mode also cannot be used even it is		
	in the status of enable. After selected, please click "Apply" to make the		
	settings effect.		

# 5.6.1 Static Routing

After you disable NAT mode, you can enable Static Routing to turn off NAT function of this router and let this router forward packet by your routing policy.

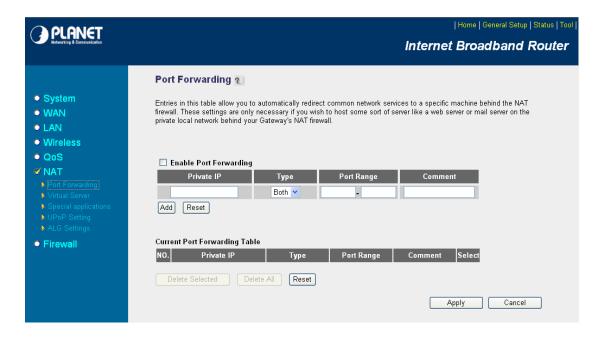


Parameters	Description			
Enable Static Routing	Check this box to enable Static Routing function, unselect this box if you			
	don't want to turn off NAT function of this router.			
Destination LAN IP	Type the Destination LAN IP address you use to access the Internet. Your			
Destination LAN IF	ISP or network administrator provides you with this information.			
Subnet Meek	Type the subnet mask for your network. If you do not type a value here, your			
Subnet Mask	ISP or network administrator provides you with this information.			
Default Cateway	Type the gateway address of your network. Your ISP or network			
Default Gateway	administrator provides you with this information.			
Hop Count	Input which hop count you want to apply to this configuration.			
Interface	Select the interface which you would like to use (LAN / WAN).			

Add	Click to add a configuration to the Current Static Routing Table at the bottom		
	of this page.		
Reset	Click "Reset" will clear your current settings to allow you to enter again.		
Current Static Routing Table			
	If you want to remove some Destination LAN IP address from the "Current		
Delete Selected	Static Routing Table", select the Destination LAN IP addresses you want to		
	remove in the table and then click "Delete Selected".		
Delete All	If you want remove all Destination LAN IP addresses from the table, just click		
	this button.		
Reset	Click "Reset" will clear your current selections.		

# 5.6.2 Port Forwarding

The Port Forwarding allows you to re-direct a particular range of service port numbers (from the Internet/WAN Ports) to a particular LAN IP address. It helps you to host some servers behind the firewall.



Parameters	Description		
Enable Port Forwarding	Enable Port Forwarding.		
Private IP	This is the private IP of the server in LAN.		
	Note: You need to give your LAN PC clients a fixed/static IP address for Port		

	Forwarding to work properly.			
	This is the protocol type to be forwarded. You can choose to forward "TCP"			
Туре	or "UDP" packets only or select "both" to forward both "TCP" and "UDP"			
	packets.			
Port Range	The range of ports to be forward to the private IP.			
Comment	The description of this setting.			
	Fill in the "Private IP", "Type", "Port Range" and "Comment" of the setting to			
	be added and then click "Add". Then this Port Forwarding setting will be			
Add	added into the "Current Port Forwarding Table" below. If you find any typo			
	before adding it and want to retype again, just click "Clear" and the fields will			
	be cleared.			
Reset	Click "Reset" will clear your current settings to allows you to enter again.			
Current Port Forwarding Table				
	If you want to remove some MAC address from the "Current Access Control			
Delete Selected	List", select the MAC addresses you want to remove in the table and then			
	click "Delete Selected".			
Delete All	If you want remove all MAC addresses from the table, just click this button.			
Reset	Click "Reset" will clear your current selections.			

## 5.6.3 Virtual Server

Use the Virtual Server function when you need to have different servers in your LAN to handle many services and Internet applications (e.g. Email, FTP, Web server etc.) to the Internet. Computers use numbers called port numbers to recognize a particular service/Internet application type. The Virtual Server allows you to re-direct a particular service port number (from the WAN Port) to a particular LAN private IP address as its service port number.

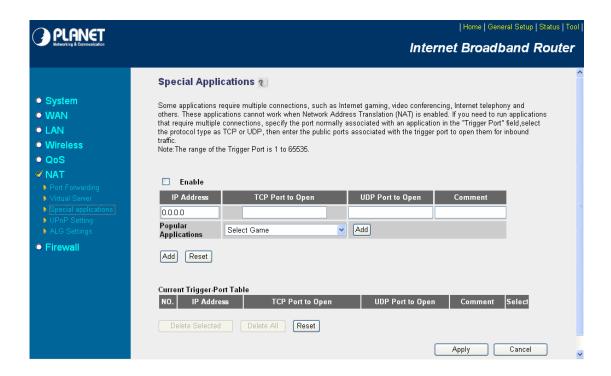


Parameters	Description		
Enable Virtual Server	Enable Virtual Server.		
	This is the LAN client/host IP address that the Public Port number packet will		
Private IP	be sent to.		
Private IP	Note: You need to give your LAN PC clients a fixed/static IP address for		
	Virtual Server to work properly.		
	This is the port number (of the above Private IP host) that the below Public		
Private Port	Port number will be changed to when the packet enters your LAN (to the		
	LAN Server/Client IP).		
_	Select the port number protocol type (TCP, UDP or Both). If you are unsure,		
Туре	then leave it to the default both protocols.		
	Enter the service (service/Internet application) port number from the Internet		
Public Port	that will be re-directed to the above Private IP address host in your LAN.		
Public Port	Note: Virtual Server function will have priority over the DMZ function if there		
	is a conflict between the Virtual Server and the DMZ settings.		
	Fill in the "Private IP", "Private Port", "Type", "Public Port" and "Comment" of		
	the setting to be added and then click "Add". Then this Virtual Server setting		
Add	will be added into the "Current Virtual Server Table" below. If you find any		
	typo before adding it and want to retype again, just click "Clear" and the		
	fields will be cleared.		
Reset	Click "Reset" will clear your current settings to allows you to enter again.		
Current Virtual Server Table			
Delete Selected	If you want to remove some items from the "Current Virtual Server Table",		

	select the MAC addresses you want to remove in the table and then click	
	"Delete Selected".	
Delete All	If you want remove all items of the table, just click this button.	
Click "Reset" will clear your current selections.		

# 5.6.4 Special Applications

Some applications require multiple connections, such as Internet games, video conferencing, Internet telephony and others. In this section you can configure the router to support multiple connections for these types of applications.



Parameters	Description			
Enable	Enable the Special Application function.			
ID A LI	Type IP Address for the Popular Application. The computer with this IP			
IP Address	address acts as a host IP with unlimited Internet access.			
TCP Port to Open	Enter the In-coming (Inbound) port for this type of application (e.g.			
TOP FOIL to Open	2300-2400, 47624).			
UDP Port to Open	Note: Individual port numbers are separated by a comma (e.g. 47624, 5775,			
ODP Port to Open	and 6541 etc.).			
Comment	The description of this setting.			
	This section lists the more popular applications that require multiple			
	connections. Select an application from the Popular Applications selection.			
Popular Applications	Once you have selected an application, click the "Add" button in right side of			
	this setting. This will automatically copy the Port Trigger information required			
	for this popular application into the input fields.			
Add	Add the settings into the "Current Trigger Port Table".			
Reset	Click "Reset" will clear your current settings to allow you to enter again.			
Current Trigger Port Table				

	If you want to remove some items from the "Current Trigger Port Table",	
Delete Selected	select the MAC addresses you want to remove in the table and then click	
	"Delete Selected".	
Delete All	If you want to remove all items from the table, just click this button.	
Reset	Click "Reset" will clear your current selections.	

#### **Example: Special Applications**

If you need to run applications that require multiple connections, specify the port (outbound) normally associated with that application in the "Trigger Port" field. Then select the protocol type (TCP or UDP) and enter the public ports associated with the trigger port to open them up for inbound traffic.

#### Example:

No.	IP Address	TCP Port to Open	UDP Port to Open	Comment
1	28800	1100-3400, 24689	2300-2400, 47624	MSN Game Zone
2	6112	5413	6112	Battle.net

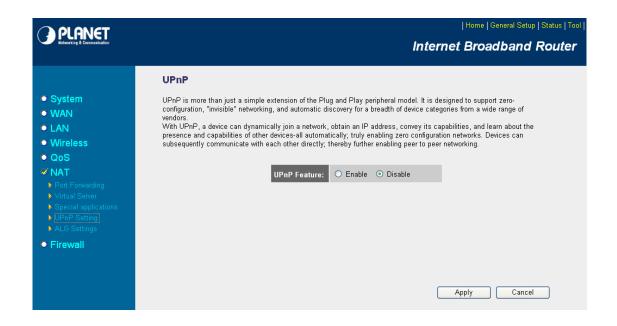
In the example above, when a user trigger's port 28800 (outbound) for MSN Game Zone then the router will allow incoming packets for ports 2300-2400 and 47624 to be directed to that user.

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

# 5.6.5 UPnP

UPnP is more than just a simple extension of the Plug and Play peripheral model. It is designed to support zero-configuration, "invisible" networking, and automatic discovery for a breadth of device categories from a wide range of vendors.

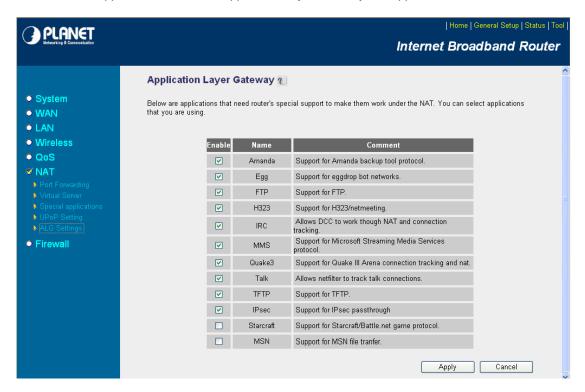
With UPnP, a device can dynamically join a network, obtain an IP address, convey its capabilities, and learn about the presence and capabilities of other devices-all automatically; truly enabling zero configuration networks. Devices can subsequently communicate with each other directly; thereby further enabling peer to peer networking.



Parameters	Description
UPnP Feature	Enable or Disable UPnP function.

# 5.6.6 ALG Settings

You can select applications that need "Application Layer Gateway" to support.

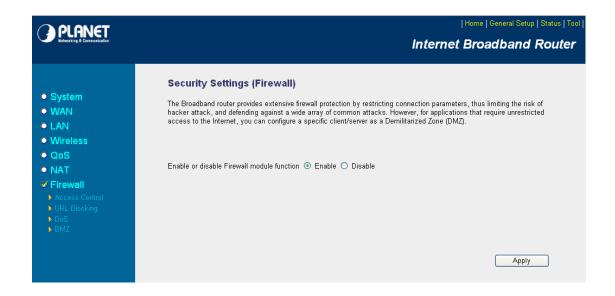


Parameters	Description
	You can select to enable "Application Layer Gateway" of an application and
Enable	then the router will let that application correctly pass though the NAT
	gateway.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more information about this screen.

## 5.7 Firewall

WNRT-625 provides extensive firewall protection by restricting connection parameters, thus limiting the risk of hacker attack, and defending against a wide array of common Internet attacks. However, for applications that require unrestricted access to the Internet, you can configure a specific client/server in a Demillitarized Zone (DMZ).



Parameters	Description
Enable/Disable	You can select to enable or disable the firewall function. After selected,
Enable/Disable	please click "Apply" to make the settings effect.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully.

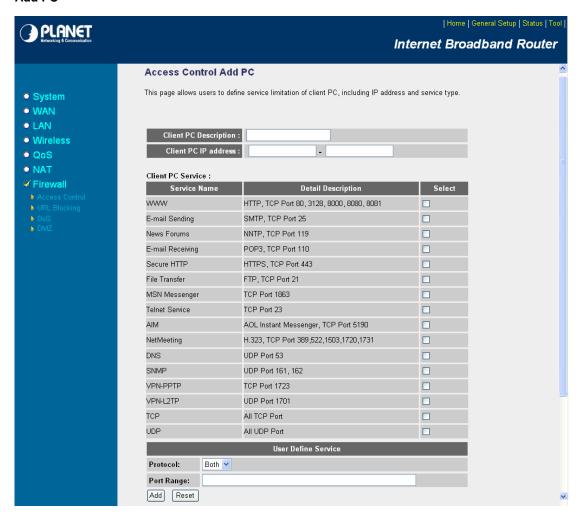
## 5.7.1 Access Control

This screen allows you to restrict users from accessing certain Internet applications/services (e.g. Internet websites, email, FTP etc.). Network administrator can define the traffic type permitted in your LAN and control which PC client can have access to these services.



Parameters	Description
	Check "Enable MAC Filtering" to enable MAC Filtering.
	If select "Deny", all PCs will be allowed to access Internet accept for the PCs
Enable MAC Filtering	in the list below.
	If select "Allow", all PCs will be denied to access Internet accept for the PCs
	in the list below.
	Fill in "Client PC MAC Address" and "Comment" of the PC that is allowed to
Add PC	access the Internet, and then click "Add". If you find any typo before adding it
	and want to retype again, just click "Reset" and the fields will be cleared.
	If you want to remove some PC from the "MAC Filtering Table", select the
Remove PC	PC you want to remove in the table and then click "Delete Selected". If you
Remove FC	want remove all PCs from the table, just click "Delete All" button. If you want
	to clear the selection and re-select again, just click "Reset".
	Check "Enable IP Filtering Table" to enable IP filter.
	If select "Deny", all PCs will be allowed to access Internet accept for the PCs
Enable IP Filtering Table	in the list below.
	If select "Allow", all PCs will be denied to access Internet accept for the PCs
	in the list below.
Add PC	You can click "Add PC" to add an access control rule for users by IP
Add PC	addresses.
Remove PC	If you want to remove some PCs from the "IP Filtering Table", select the PC
Tremove i O	you want to remove in the table and then click "Delete Selected".
Delete All	If you want to delete all PCs. Please click this button.

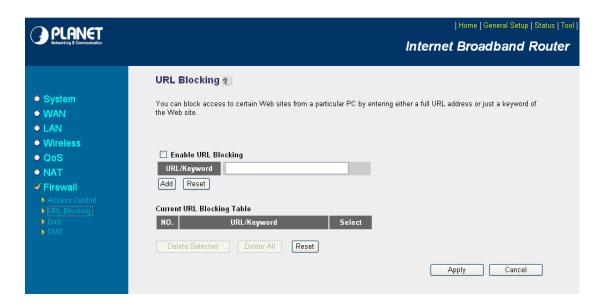
#### Add PC



Parameters	Description
Client PC Description	Please input any text to describe this IP address, up to 16 alphanumerical
	characters.
	Please 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
Client PC IP Addresses	IP address in the left field to define a single IP address.
	Note: You need to give your LAN PC clients a fixed/static IP address for the
	Access Control rule to work properly.
Client PC Service	You can block the clients from accessing some Internet services by checking
Client PC Service	the services you want to block.
Protocol	This allows you to select <b>UDP</b> , <b>TCP</b> or <b>Both</b> protocol types.
Dort Dange	You can assign up to five port ranges. The router will block clients from
Port Range	accessing Internet services that use these ports.
Add	Click "Add" to save the settings.
Reset	Click "Reset" to clear all fields.

# 5.7.2 URL Blocking

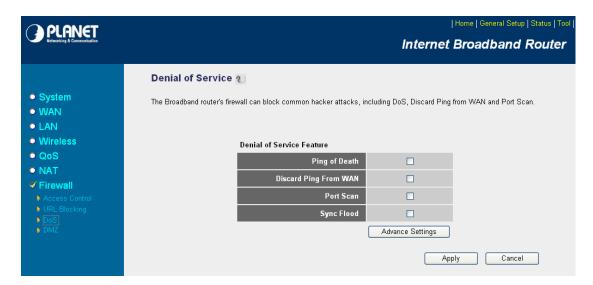
You can block users to access to some web sites by entering a full URL address or just keyword of the web site.



Parameters	Description
Enable URL Blocking	Enable/disable URL Blocking.
Add URL / Keyword	Fill in "URL / Keyword" and then click "Add". You can enter the full URL
	address or the keyword of the web site you want to block. If you find any typo
	before adding it and want to retype again, just click "Reset" and the field will
	be cleared.
Remove URL / Keyword	If you want to remove some URL keyword from the "Current URL Blocking
	Table", select the URL keyword you want to remove in the table and then
	click "Delete Selected". If you want remove all URL keyword from the table,
	just click "Delete All" button. If you want to clear the selection and re-select
	again, just click "Reset".

## 5.7.3 DoS

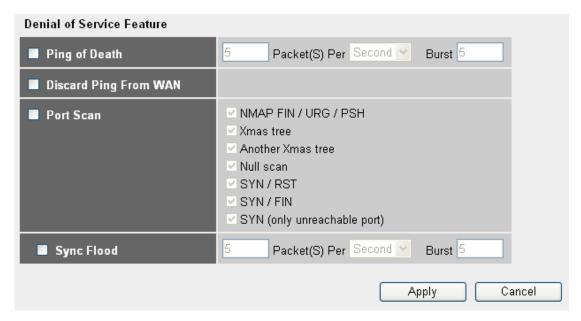
WNRT-625's firewall can block common hacker attacks, including Denial of Service, Ping of Death, Port Scan and Sync Flood. If Internet attacks occur, the router can log the events.



Parameters	Description
Ping of Death	Protections from Ping of Death attack.
Discard Ping From WAN	The router's WAN port will not respond to any Ping requests.
Port Scan	Protects the router from Port Scan.
Sync Flood	Protects the router from Sync Flood attack.
Advance Settings	If you want to configure the details of each setting above, click this button,
	and you will see the detail configure screen. Please make sure what the
	effect of the settings will affect before your adjustment.

#### **DoS - Advanced Settings**

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

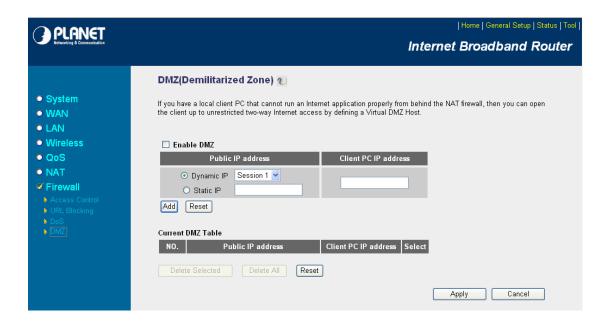


Parameters	Description
	Set the threshold of when this DoS prevention mechanism will be activated.
	Please check the box of Ping of Death, and input the frequency of threshold
Ping of Death	(how many packets per second, minute, or hour), you can also input the
	'Burst' value, which means when this number of 'Ping of Death' packet is
	received in very short time, this DoS prevention mechanism will be activated.
Discard Ping From WAN	Check the box to activate this DoS prevention mechanism.
Port Scan	Many kind of port scan methods are listed here, please check one or more
Port Scari	DoS attack methods you want to prevent.
Sync Flood	Like Ping of Death, you can set the threshold of when this DoS prevention
	mechanism will be activated.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to go back to "Denial of Service Feature" configuration setting.

#### 5.7.4 DMZ

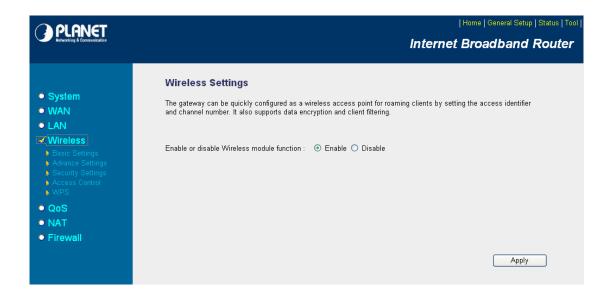
If you have a local client PC that cannot run an Internet application (e.g. Games) properly from behind the NAT firewall, you can open the client up to unrestricted two-way Internet access by defining a DMZ Host. The DMZ function allows you to re-direct all packets from your WAN port IP address to a particular IP address in your LAN. The difference between the virtual server and the DMZ function is that the virtual server re-directs a particular service/Internet application (e.g. FTP, websites) to a particular LAN client/server, whereas DMZ re-directs all packets (regardless of services) to one particular LAN client/server.



Parameters	Description
	Enable/disable DMZ.
Enable DMZ	Note: If there is a conflict between the Virtual Server and the DMZ setting,
	the Virtual Server function will have priority over the DMZ function.
Public IP Address	The IP address of the WAN port or any other Public IP addresses given to
	you by your ISP.
Client PC IP Address	Input the IP address of a particular host in your LAN that will receive all the
	packets originally going to the WAN port/Public IP address above.
	Note: You need to give your LAN PC clients a fixed/static IP address for
	DMZ to work properly.

# **Chapter 6 Wireless Configuration**

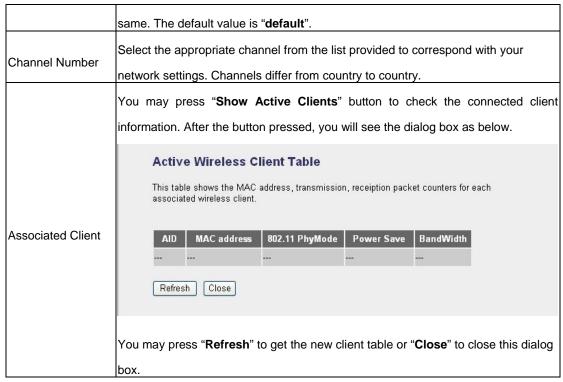
In this chapter, you can Enable/Disable wireless function and configure the WNRT-625 work in different operating mode. Please refer to below sections to know the details configuration of each operating mode.



## 6.1 AP Mode

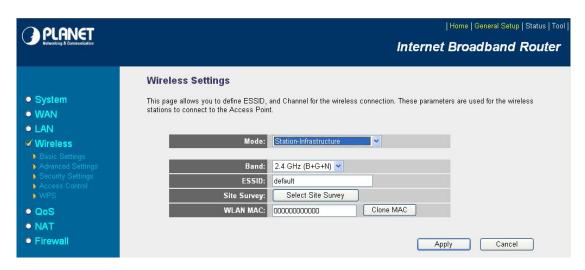
This mode is set to WNRT-625 by default. It served as a transparent Media Access Control (MAC) bridge between wired and wireless network.

Parameter	Description
Mode	Shows the current operation mode. You may set WNRT-625 to other operating
	mode by select other operating mode.
	2.4GHz (B): It forces the WNRT-625 to operate in 802.11b only.
	2.4GHz (G): It forces the WNRT-625 to operate in 802.11g only.
	2.4GHz (N): It forces the WNRT-625 to operate in 802.11n only.
Band	2.4GHz (B+G): It allows the WNRT-625 to operate in 802.11b and 802.11g
	simultaneously.
	2.4GHz (B+G+N): It allows the WNRT-625 to operate in 802.11b, 802.11g, and
	802.11n simultaneously.
	The ESSID (up to 32 printable ASCII characters) is the unique name identified in a
ESSID	WLAN. The ID prevents the unintentional merging of two co-located WLANs.
	Please make sure that the ESSID of all stations in the same WLAN network are the



#### 6.2 Station-Infrastructure Mode

WRT-625 serves as a wireless station (infrastructure). Connected to a PC or a small LAN (no more than 5 PCs), it allows the PC or small LAN able to access the wireless network via Access Point.

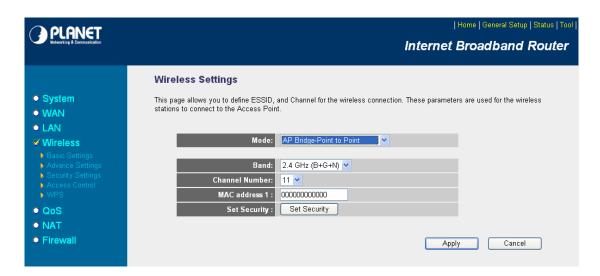


Parameter Description

Mode	Shows the current operation mode. You may set WRT-625 to other operating mode by select other operating mode.
	operating mode by scient office operating mode.
Band	2.4GHz (B): It forces the WNRT-625 to operate in 802.11b only.
	2.4GHz (G): It forces the WNRT-625 to operate in 802.11g only.
	2.4GHz (N): It forces the WNRT-625 to operate in 802.11n only.
	2.4GHz (B+G): It allows the WNRT-625 to operate in 802.11b and
	802.11g simultaneously.
	2.4GHz (B+G+N): It allows the WNRT-625 to operate in 802.11b,
	802.11g, and 802.11n simultaneously.
ESSID	Please make sure the ESSID of the wireless network that you will connect
	and enter the correct ESSID in this field. The default value is "default".
Site Survey	You also can press "Select Site Survey" button to choose wireless
	network that exists at the moment you will connect.
	Wireless Site Survey
	This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled.
	Select Channel SSID BSSID Encrypt Authentication Signal Mode Type
	O 1 PLANET2000 00:0B:6B:09:8F:6A WEP OPEN 96 11b/g in
	O 10 default 00:30:4F:3A:D4:30 NONE OPEN 100 11b/g In
	O 11 test2t2r 00:0E:2E:44:82:98 WEP OPEN 100 11b/g/n In
	Refresh
	You may press " <b>Refresh</b> " to get the new Access Point and select one of
	them to click " <b>Done</b> " to connect.
WLAN MAC	Keep default setting: WRT-625 will use it's own MAC address to access
	the wireless LAN.
	Press "MAC Clone" button: It will use PC's MAC address to access the
	wireless LAN.
	Williams D. M.

# 6.3 AP Bridge Point to Point Mode

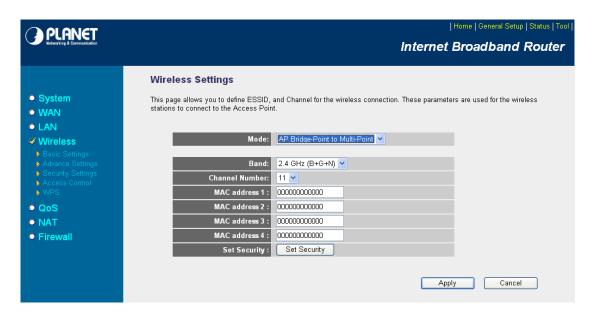
This function allows WNRT-625 to bridge 2 wired Ethernet networks wirelessly.



Parameter	Description
Mode	Shows the current operation mode. You may set WNRT-625 to other operating
	mode by select other operating mode.
	2.4GHz (B): It forces the WNRT-625 to operate in 802.11b only.
	2.4GHz (G): It forces the WNRT-625 to operate in 802.11g only.
	2.4GHz (N): It forces the WNRT-625 to operate in 802.11n only.
Band	2.4GHz (B+G): It allows the WNRT-625 to operate in 802.11b and 802.11g
	simultaneously.
	2.4GHz (B+G+N): It allows the WNRT-625 to operate in 802.11b, 802.11g, and
	802.11n simultaneously.
Channel Number	Select the appropriate channel from the list provided to correspond with your
	network settings. Channels differ from country to country.
MAC Address 1	Please enter the MAC Address of another WNRT-625 that this one will connect.
Set Security	IF you want to enable security to protect your wireless connection. Please press
	"Set Security" button and refer to section 6.7 "Security setting for bridge mode" to
	configure the detail settings.

# 6.4 AP Bridge Point to Multi-point Mode

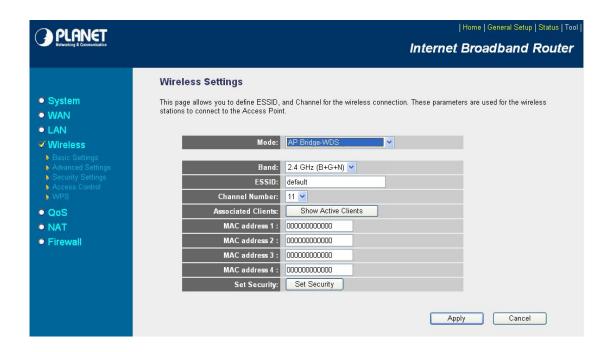
This function allows WNRT-625 to bridge more than 2 wired Ethernet networks together by wireless connection.



Parameter	Description
Mode	Shows the current operation mode. You may set WNRT-625 to other operating
	mode by select other operating mode.
Band	2.4GHz (B): It forces the WNRT-625 to operate in 802.11b only.
	2.4GHz (G): It forces the WNRT-625 to operate in 802.11g only.
	2.4GHz (N): It forces the WNRT-625 to operate in 802.11n only.
	2.4GHz (B+G): It allows the WNRT-625 to operate in 802.11b and 802.11g
	simultaneously.
	<b>2.4GHz (B+G+N)</b> : It allows the WNRT-625 to operate in 802.11b, 802.11g, and
	802.11n simultaneously.
Channel Number	Select the appropriate channel from the list provided to correspond with your
	network settings. Channels differ from country to country.
MAC Address 1-4	If you want to bridge multiple WNRT-625 in this mode, you have to enter the MAC
	addresses of other WNRT-625 into the fields.
Set Security	IF you want to enable security to protect your wireless connection. Please press
	"Set Security" button and refer to section 6.7 "Security setting for bridge mode" to
	configure the detail settings.

# 6.5 AP Bridge-WDS Mode

If you want WNRT-625 to bridge to other WNRT-625 and provide access for other wireless clients at the same time, you have to set the WNRT-625 to "AP Bridge - WDS". Simply speaking, "AP Bridge - WDS" function is the combination of "AP mode" and "AP Bridge-Point to Multi-Point mode".



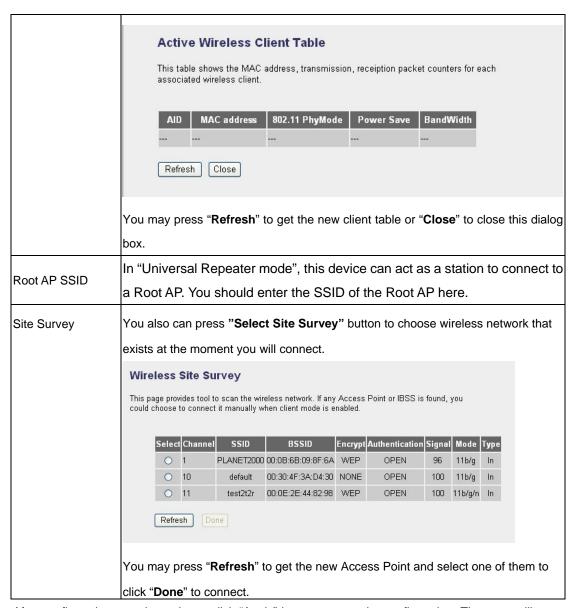
Parameter	Description
Mode	Shows the current operation mode. You may set WNRT-625 to other operating
	mode by select other operating mode.
Band	2.4GHz (B): It forces the WNRT-625 to operate in 802.11b only.
	2.4GHz (G): It forces the WNRT-625 to operate in 802.11g only.
	2.4GHz (N): It forces the WNRT-625 to operate in 802.11n only.
	2.4GHz (B+G): It allows the WNRT-625 to operate in 802.11b and 802.11g
	simultaneously.
	2.4GHz (B+G+N): It allows the WNRT-625 to operate in 802.11b, 802.11g, and
	802.11n simultaneously.
ESSID	The ESSID (up to 32 printable ASCII characters) is the unique name identified in a
	WLAN. The ID prevents the unintentional merging of two co-located WLANs.
	Please make sure that the ESSID of all stations in the same WLAN network are the
	same. The default value is "default".
Channel Number	Select the appropriate channel from the list provided to correspond with your
	network settings. Channels differ from country to country.
Associated Client	You may press "Show Active Clients" button to check the connected client

	information. After the button pressed, you will see the dialog box as below.
	Active Wireless Client Table
	This table shows the MAC address, transmission, receiption packet counters for each associated wireless client.
	AID MAC address 802.11 PhyMode Power Save BandWidth
	Refresh Close
	You may press " <b>Refresh</b> " to get the new client table or " <b>Close</b> " to close this dialog box.
MAC Address 1-4	If you want to bridge more than two wired Ethernet networks together with wireless
	connection, you have to enter the MAC addresses of otherWNRT-625s that with
	join the bridging work into the fields.
Set Security	IF you want to enable security to protect your wireless connection. Please press
	"Set Security" button and refer to section 6.7 "Security setting for bridge mode" to
	configure the detail settings.
	**When you set security, you must enable the same security setting of two AP
	router.

# 6.6 Universal Repeater Mode



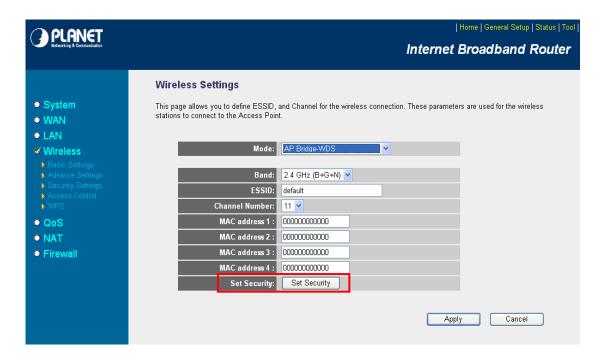
Parameter	Description
Mode	Shows the current operation mode. You may set WNRT-625 to other operating
lwode	mode by select other operating mode.
	2.4GHz (B): It forces the WNRT-625 to operate in 802.11b only.
	2.4GHz (G): It forces the WNRT-625 to operate in 802.11g only.
	2.4GHz (N): It forces the WNRT-625 to operate in 802.11n only.
Band	2.4GHz (B+G): It allows the WNRT-625 to operate in 802.11b and 802.11g
	simultaneously.
	2.4GHz (B+G+N): It allows the WNRT-625 to operate in 802.11b, 802.11g, and
	802.11n simultaneously.
	The ESSID (up to 32 printable ASCII characters) is the unique name identified in a
ESSID	WLAN. The ID prevents the unintentional merging of two co-located WLANs.
E33ID	Please make sure that the ESSID of all stations in the same WLAN network are the
	same. The default value is "default".
	Select the appropriate channel from the list provided to correspond with your
Channel Number	network settings. Channels differ from country to country.
	Channel 1-11 (North America)
Associated Client	You may press "Show Active Clients" button to check the connected client
	information. After the button pressed, you will see the dialog box as below.



After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration. Please refer to section 4.2.7 for more

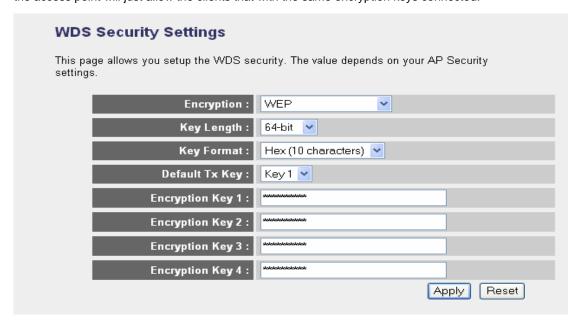
### 6.7 Security Setting of Bridge Mode

In "AP Bridge-Point to Point mode", "AP Bridge-Point to Multi-Point mode" and "AP Bridge-WDS mode", you can click "Set Security" to add encryption for the communication between the bridged access points. This can protect your wireless network.



#### 6.7.1 WEP

When you select 64-bit or 128-bit WEP key, you have to enter WEP keys to encrypt data. You can generate the key by yourself. You can enter four WEP keys and select one of them as default key. Then the access point will just allow the clients that with the same encryption keys connected.



Parameter	Description
	You can select the 64 or 128-bit key to encrypt transmitted data. Larger
Key Length	WEP key length will provide higher level of security, but the throughput
	will be lower.
	You may select to select ASCII Characters (alphanumeric format) or
Key Format	Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the WEP
	Key.
Default Ty Koy	Select one of the four keys to encrypt your data. Only the key you select
Default Tx Key	it in the "Default key" will take effect.
	The WEP keys are used to encrypt data transmitted in the wireless
	network. Fill the text box by following the rules below.
Engration Koy 1 - Koy 1	64-bit WEP: input 10-digit Hex values (in the "A-F", "a-f" and "0-9"
Encryption Key 1 - Key 4	range) or 5-digit ASCII character as the encryption keys.
	128-bit WEP: input 26-digit Hex values (in the "A-F", "a-f" and "0-9"
	range) or 10-digit ASCII characters as the encryption keys.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration.

### 6.7.2 WPA-PSK

Wi-Fi Protected Access (WPA) is an advanced security standard. You can use a pre-shared key to authenticate wireless stations and encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently. So the encryption key is not easy to be broken by hackers. This can improve security very much.



Parameter		Description
Encryption		Please select "WPA pre-shared key" in this option.
	\\/D\ /T//D\	TKIP can change the encryption key frequently to enhance the wireless
WPA Unicast	WPA (TKIP)	LAN security.
Cipher Suite	WPA2 (AES)	This use CCMP protocol to change encryption key frequently. AES can
		provide high-level encryption to enhance the wireless LAN security.
		You may select to select Passphrase (alphanumeric format) or
Pre-shared Key	Format	Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the
		Pre-shared Key.
		The Pre-shared key is used to authenticate and encrypt data
Pre-shared Key		transmitted in the wireless network. Fill the text box by following the
		rules below.
		Hex: input 64-digit Hex values (in the "A-F", "a-f" and "0-9" range) or at
		least 8 character pass phrase as the pre-shared keys.

# **Chapter 7 Status**

The Status screen allows you to monitor the current status of your router. You can use the Status page to monitor the connection status of WAN and LAN interfaces, the current firmware and hardware version numbers, any illegal attempts to access your network, and information on all DHCP client PCs currently connected to your network.



#### 7.1 Internet Connection

View WNRT-625's current Internet connection status and other related information.



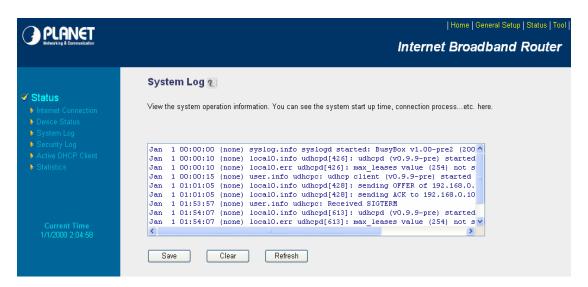
#### 7.2 Device Status

View WNRT-625's current configuration settings. The Device Status displays the configuration settings of WLAN and LAN.



## 7.3 System Log

This screen will show you the real-time information of WNRT-625.



Parameters	Description
	This page shows the current system log of WNRT-625. It displays the
	working information about WNRT-625.
	About the bottoms of the page, the system log can be saved to a local file by
System Log	press "Save" button. If there is too much message in this screen, please
	press "Clear" button to clear the system log. It can be refreshed to get the
	most updated situation by press "Refresh" button. When the system is
	powered down, the system log will be cleared.

## 7.4 Security Log

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



Parameters	Description
	This page shows the current security log of WNRT-625. It displays any illegal
	attempts to access your network.
	About the bottoms of the page, the security log can be saved to a local file by
Security Log	press "Save" button. If there is too much message in this screen, please
	press "Clear" button to clear the system log. It can be refreshed to get the
	most updated situation by press "Refresh" button. When the system is
	powered down, the security log will be cleared.

## 7.5 Active DHCP Client

View your client's information that is currently linked to WNRT-625's DHCP server.

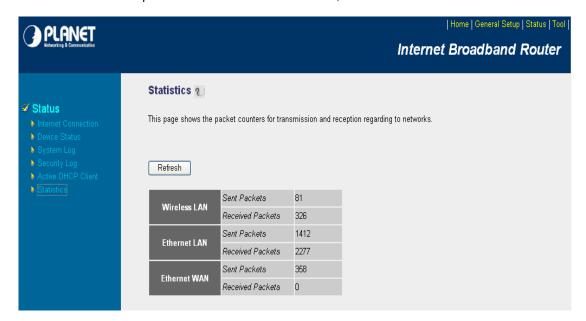


Parameters	Description
DHCP Client Table	This page shows all the DHCP clients currently connected to your network.
	The "Active DHCP Client Table" displays the IP address and the MAC

address and Time Expired of each Client. Use the Refresh button to get the most updated situation.

## 7.6 Statistics

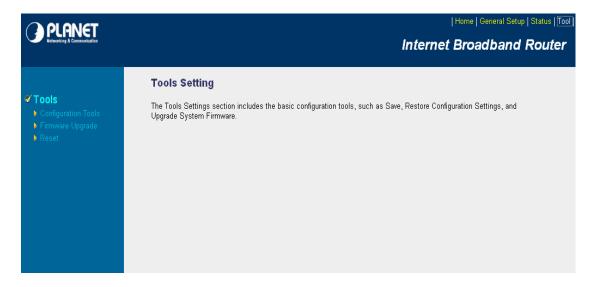
View the statistics of packets sent and received on WLAN, LAN and WAN.



Parameters	Description
Statistics	Shows the counters of packets sent and received on WLAN, LAN and WAN.

# **Chapter 8 Tools**

This page includes the basic configuration tools, such as Configuration Tools (save or restore configuration settings), Firmware Upgrade (upgrade system firmware) and Reset.



## 8.1 Configuration Tools

The Configuration Tools screen allows you to "Backup" the router's current configuration setting. Saving the configuration settings provides an added protection and convenience when problems occur and you have to reset to factory default. With the saved file, you can re-load the saved configuration into the router through the "Restore" function. If extreme problems occur you can use the "Restore to Factory Defaults" selection, this will set all configurations to its original default settings.



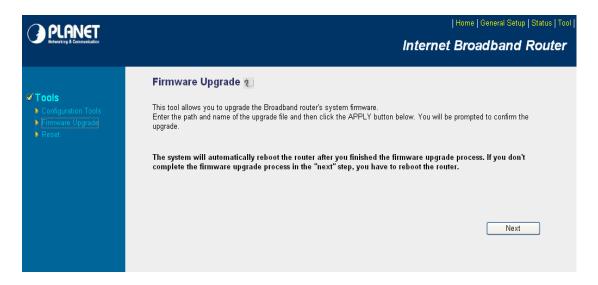
Parameters	Description
Configuration Tools	Use the "Backup" tool to save WNRT-625 current configuration to a file

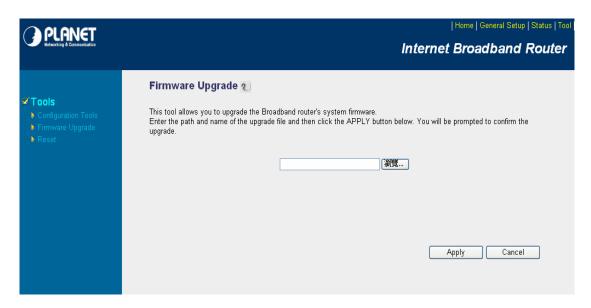
named "config.cfg" in your PC. You can then use the "Restore" tool to restore the saved configuration to WNRT-625. The "Restore to Factory Defaults" tool can force WNRT-625 to perform a power reset for restore it to original factory settings.

After configuration complete, please click "Apply" button to save the configuration. Then you will see a screen to prompt you the settings are saving successfully. You may press "Continue" for configure other settings or "Apply" to restart WNRT-625 with new configuration.

## 8.2 Firmware Upgrade

This page prompt you it allows you to upgrade the router's firmware. Please press "Next" to continue.





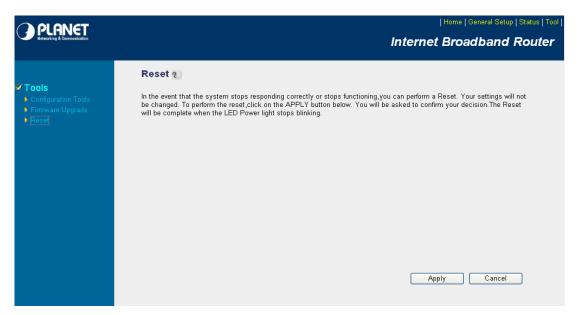
Parameters	Description
Firmware Upgrade	This tool allows you to upgrade WNRT-625's system firmware. To upgrade

the firmware of your Broadband router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also press the "Browse..." button to find out the firmware file on your PC.

Once you've selected the new firmware file, click "Apply" bottom to start the upgrade process. (You may have to wait a few minutes for the upgrade to complete and WNRT-625 restart). After the WNRT-625 restart, you can start using the router.

#### 8.3 Reset

You can reset the router's system should any problem exist. The reset function is essentially Re-boot your router.



Parameters	Description
Reset	In the event that the system stops responding correctly or in some way stops
	functioning, you can perform a reset. Your settings will not be changed. To
	perform the reset, click on the "Apply" button. You will be asked to confirm
	your decision. The reset will be complete when the power light stops
	blinking. Once the reset process is complete you may start using the router
	again.

After configuration complete, please click "Apply" button, please wait for a while for the WNRT-625 restart.