



**N3G002W**

3G Wireless Router

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## CHAPTER 1 OVERVIEW



**NetComm N3G002W 3G Wireless Router** is a high-performance router that supports wireless networking for home, office or public space usage. The NetComm N3G002W 3G Wireless Router supports the use of a 16-bit and 32-bit Type II PC Card, either WCDMS, EV-DO and Even HSDPA which enable you to distribute your 3G Broadband service among multiple computers. It also has a WAN uplink port to connect the N3G002W to an ADSL/Cable modem or existing gateway router. The inclusion of a Wireless Access Point feature will enable you to connect your computer or laptop wirelessly to the internet via the router.

Security is a key issue with Broadband users and NetComm's N3G002W 3G Wireless Router does not leave you exposed. Employing the latest Active Firewall technology, the N3G002W blocks every unauthorized packet of data that comes in ensuring your defenses are rock-solid against hackers, unauthorized entries and probes. What's more, the N3G002W 3G Wireless Router is equipped with a VPN pass-through feature allowing you to use a standard VPN client for Point-to-Point communication even while your firewall is active.

The N3G002W Port Forwarding and UPnP function have made it easier for today's Internet users to configure and setup the myriad of Network Port Rules needed by Internet applications such as On-Line Gaming, Peer-To-Peer file sharing and Messenger services to operate

## N3G002W Features

<b>3G Access</b>	1*PC card Type II Slot supports both 16-bit and 32-bit bus rate.
<b>Standards</b>	IEEE 802.11b/g IEEE 802.3 IEEE 802.3u
<b>Firewall</b>	IP Filtering NAT (Network Address Translation) with VPN Pass through MAC Filtering
<b>Supported WAN type</b>	Static IP, Dynamic IP, PPPoE, 3G
<b>Connection Scheme</b>	Connect-on-demand, Auto-Disconnect
<b>NAT function</b>	Class C ;One-to-Many; Max 253 Users; Virtual Server; DMZ Host
<b>VPN</b>	PPTP, L2TP and IPSec Pass Through
<b>Configuration and Management</b>	Web-Based and SNMP DHCP Server and Client
<b>Working Environment</b>	Temperature: 0~40oC, Humidity 10%~90% non-condensing
<b>OS supported</b>	Windows 95/98/ME/NT/2000/XP; Linux
<b>Power</b>	Switching 5V 3.0A
<b>Ports</b>	1 WAN port, 1 LAN port (2xRJ45, 10/100 Base T), 1 USB Port DC Power Port
<b>Wireless</b>	
<b>Standard</b>	IEEE 802.11b\g Turbo
<b>Data Rate</b>	54, 48, 36, 24, 18, 12, 9, and 6 Mbps per channel, Auto Fall-Back
<b>Frequency</b>	2.4 – 2.462 GHz, CCK / OFDM modulation
<b>Range Coverage</b>	Tx/Rx power 18dbm/Per Cell indoors approx. 35-100 meters; outdoors up to 100-300 meters
<b># of Channels</b>	1-11 for N. America (FCC);1-11 for Canada (DOC) 1-13 Europe/Australia (Except Spain and France) (ETSI) 1-14 Japan (TELEC);
<b>Security</b>	64-bit and 128-bit WEP Encryption; WPA Encryption, WPA2 Encryption
<b>Antenna</b>	Detachable Antenna 1.8dBI

## Package Contents

Your N3G002W Wireless Router Package contains the following items:

- N3G002W Wireless Router
- Quick Installation Guide
- User Guide on CD
- RJ-45 Straight-through Ethernet Cable
- Cradle Set
- 5V, 3.0A Power Supply Unit.

If any of the above items are damaged or missing, please contact your dealer immediately.

## Minimum System Requirements

Before continuing with the installation of your N3G002W Wireless Router, please confirm that you comply with the minimum system requirements.

- A compatible 16-bit or 32-bit PCMCIA 3G modem card with service for 3G Broadband access if you want to use 3G Broadband service.

*Note: Subject to term and condition from your 3G Broadband Internet Service.*

- Computer with Windows, Macintosh, or Linux-based operating systems with a working Ethernet adapter with TCP/IP Protocol installed.
- Internet Explorer version 6.0 or Netscape Navigator version 7.0 and above.

## Wireless Computer System Requirements

- Computer with a working 802.11b, or 802.11g wireless adapter

## LED Indicators



Label	Status	Indicates
3G	Flashing	Flashes when unit is ready
	Off	Power is off
LAN	Flashing	Flashes when data is being sent and received on the LAN connection
	On	Indicates a link to your LAN or Network card is active
	Off	Indicates no link to LAN
WAN	Flashing	Flashes when data is being sent and received on the WAN connection
	On	Indicates that the upstream link to your Modem or router via the WAN port is active
	Off	Indicates no link to WAN
WIFI	Flashing	Indicates that the Wireless link is enabled
	Off	Indicates that the Wireless link is disabled

### Back Panel Ports

Antenna	To connect to the supplied detachable antenna
WAN	10/100 Base T Ethernet port (RJ-45) uplink port to connect to a modem or router
LAN	10/100 Base T Ethernet port (RJ-45) to connect to Ethernet network card or Ethernet Hub/Switch
Reset	To reset your Wireless Router to factory default settings (All customized settings that you have saved will be lost!)
Power	Connect to the Power Adapter that comes with your package

## Restoring Factory Defaults

This feature will reset the Router to its factory default configuration. Occasions may present themselves where you need to restore the factory default settings on your router. Typical situations are:

- You have lost your password and unable to login to the router;
- You have purchased the router from someone else and need to reconfigure the device.
- You are asked to perform a factory reset by a member of the excellent NetComm Support Staff.

In order to restore your router to its factory default settings, please follow these steps:

- Ensure that the router is powered on (for at least 20 seconds).
- Use a paper clip or a pencil tip to depress the reset button for ten seconds and release. At this point, the reset is in progress. Do not power off the unit at this point.
- After the router reboots, the default settings are now restored. This entire process takes several minutes to complete.
- Once you have reset the router to its default settings you will be able to access the device's web configuration using <http://192.168.123.254> with password "admin".

## Default Settings

### LAN (Management)

Static IP Address:	192.168.123.254
Subnet Mask:	255.255.255.0
Default Gateway:	blank

### WAN (Internet)

WAN mode:	DHCP
-----------	------

### Wireless

SSID:	default
Channel:	11
Security:	none

### Modem Access

Username:	admin
Password:	admin



## CHAPTER 2 CONNECTING YOUR N3G002W WIRELESS ROUTER

Connect the N3G002W Wireless Router to Your Network

*Note: DO NOT connect N3G002W 3G Wireless Router to power before performing the installation steps below.*

### Step 1.

Attach the antenna.



1. Remove the antenna from its plastic wrapper.
2. Screw the antenna in a clockwise direction to the back panel of the unit.
3. Once secured, position the antenna upward at its connecting joint. This will ensure optimal reception.

### Step 2.

If using a 3G PC Card, remove the dust cover from the WAN PCMCIA Card Slot by inserting a fingernail under the grooved section of the dust cover and pulling to remove.

## Step 3.

Insert your wireless Type II 3G card (either 16-bit or 32-bit ) into the WAN PCMCIA Card Slot or plug the USB 3G modem to the USB port.



*Note: The N3G002W 3G Wireless Router is designed to work with either UMTS, EV-DO or HSDPA 3G cards that can be used as modems (support tethered data). Please refer to your service provider for detailed feature information.*

## Step 4.

Insert the Ethernet cable into LAN Port on the back panel of the N3G002W 3G Wireless Router, and an available Ethernet port on the network adapter in the computer you will use to configure the unit.



*Note: The N3G002W 3G Wireless Router LAN Port is "Auto-MDI/MDIX." This provides Ethernet cable LAN Port access.*

## Step 5.

1. Connect the power adapter to the port on the back panel of your N3G002W 3G Wireless Router.
2. Then plug the other end of the power adapter into a wall outlet or power strip.



- a. The 3G LED will turn ON to indicate that the unit is powered on.
- b. Other LEDs will flash ON and OFF as the N3G002W 3G Wireless Router performs initialization and Internet connection processes. This will take a few minutes.
- c. When complete, the following LEDs will illuminate green: 3G, LAN, and WiFi.

*Note: Please refer to the user guide for explanation of the use of the WAN Port*



## CHAPTER 3 SETTING UP YOUR COMPUTER

Having physically connected your N3G002W, the next step is to configure the router to establish a broadband connection. Depending on your computers current settings you may first need to reconfigure the TCP/IP (Network Settings) to access your 3G Wireless Router.

Follow the instructions for your operating system.

### Windows® XP PCs

1. In the Windows task bar, click the **Start** button, and then click **Control Panel**.
2. Click on **Network & Internet Connections** icon. (Category mode only).
3. Click the **Network Connections** icon.
4. In the **LAN** or **High-Speed Internet** window, right-click on the icon corresponding to your network interface card (NIC) and select **Properties**. (Often, this icon is labeled Local Area Connection).
5. The **Local Area Connection** dialog box displays with a list of currently installed network items. Ensure that the check box to the left of the item labeled **Internet Protocol (TCP/IP)** is checked. Select **Internet Protocol TCP/IP** and click on **Properties**.
6. In the **Internet Protocol (TCP/IP) Properties** dialog box, click the radio button labeled **Obtain an IP address automatically**. Also click the radio button labeled **Obtain DNS server address automatically**.
7. Click **OK** twice to confirm your changes, and close the **Control Panel**.

### Windows 2000 PCs

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Network and Dial-up Connections** icon.
3. In the **Network and Dial-up Connections** window, right-click the **Local Area Connection** icon, and then select **Properties**.
4. In the **Local Area Connection Properties** dialog box, select **Internet Protocol (TCP/IP)**, and then click **Properties**
5. In the **Internet Protocol (TCP/IP) Properties** dialog box, click the radio button labeled **Obtain an IP address automatically**. Also click the radio button labeled **Obtain DNS server address automatically**.
6. Click **OK** twice to confirm and save your changes, and then close the **Control Panel**.

## Windows Me PCs

1. In the Windows task bar, click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Click on **View All Control Panel Options**.
3. Double-click the **Network** icon.
4. The **Network Properties** dialog box displays with a list of currently installed network components. If the list includes **Internet Protocol (TCP/IP)**, then the protocol has already been enabled. Skip to step 10.
5. If **Internet Protocol (TCP/IP)** does not display as an installed component, click **Add...**
6. In the **Select Network Component Type** dialog box, select **Protocol**, and then click **Add...**
7. Select **Microsoft** in the **Manufacturers** box.
8. Select **Internet Protocol (TCP/IP)** in the **Network Protocols** list, and then click **OK**. You may be prompted to install files from your Windows ME installation CD or other media. Follow the instructions to install the files. If prompted, click **OK** to restart your computer with the new settings.

### Next, configure the PC to accept IP information assigned by the modem:

9. Follow steps 1 - 3 above.
10. In the **Network Properties** dialog box, select **TCP/IP**, and then click **Properties**. If you have multiple TCP/IP listings, select the listing associated with your network card or adapter.
11. In the **TCP/IP Settings** dialog box, click the radio button labeled **Obtain an IP address automatically**.
12. Click **OK** twice to confirm and save your changes, and then close the **Control Panel**.

## Windows 95, 98 PCs

First, check for the IP protocol and, if necessary, install it:

1. In the Windows task bar, click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Network** icon.
3. The **Network** dialog box displays with a list of currently installed network components. If the list includes **TCP/IP**, and then the protocol has already been enabled. Skip to step 9.
4. If **TCP/IP** does not display as an installed component, click **Add...** The **Select Network Component Type** dialog box displays.
5. Select **Protocol**, and then click **Add...** The **Select Network Protocol** dialog box displays.
6. Click on **Microsoft** in the **Manufacturers** list box, and then click **TCP/IP** in the **Network Protocols** list box.
7. Click **OK** to return to the **Network** dialog box, and then click **OK** again. You may be prompted to install files from your Windows 95/98 installation CD. Follow the instructions to install the files.
8. Click **OK** to restart the PC and complete the TCP/IP installation.

### Next, configure the PCs to accept IP information assigned by the Modem:

9. Follow steps 1 - 3 above.
10. Select the network component labeled **TCP/IP**, and then click **Properties**. If you have multiple TCP/IP listings, select the listing associated with your network card or adapter.
11. In the **TCP/IP Properties** dialog box, click the **IP Address** tab.

12. Click the radio button labeled **Obtain an IP address automatically**.
13. Click **OK** twice to confirm and save your changes. You will be prompted to restart Windows.
14. Click **Yes**.

## Windows Vista

1. In the Windows task bar, click on **Start** and then click **Control Panel**.
2. Click on **Network and Sharing Center**.
3. Click on **Manage Network Connection** on the left menu.
4. Right click on **Local Area Connection** and click on **Properties**
5. The **Local Area Connection** dialog box will display a list of currently installed network items. Ensure that the check box to the left of the item labeled **Internet Protocol Version 4 (TCP/IPv4)** is checked. Select **Internet Protocol Version 4 (TCP/IPv4)** and click on **Properties**.
6. In the **Internet Protocol Version 4 (TCP/IPv4) properties** dialog box, click the radio button labeled **Obtain an IP address automatically**. Also click the radio button labeled **Obtain DNS server address automatically**.
7. Click **OK** twice to confirm your changes and close the **Control Panel**.

## Mac OSX 10.4

1. Click the **Apple** icon and choose **System Preferences**.
2. Click on **Network** icon.
3. Set **Location** to **Automatic** and **Show** to **Built In Ethernet**.
4. Click on **TCP/IP** tab.
5. In the **Configure** option, choose **Use DHCP with automatic address**.
6. Click on **Apply Now**.

## CHAPTER 4 USING THE N3G002W CONFIGURATION WIZARD

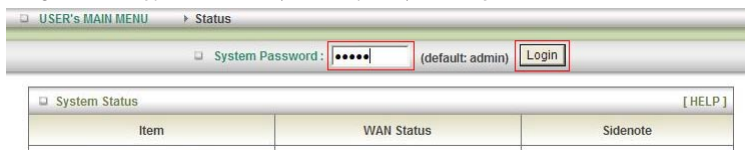
Having physically connected your N3G002W, the next step is to establish the broadband connection to the internet. Please follow the steps below to configure your N3G002W router via the web configuration wizard utility.



1. Open your web browser (e.g. Internet Explorer/Firefox/Safari) and navigate to <http://192.168.123.254/>

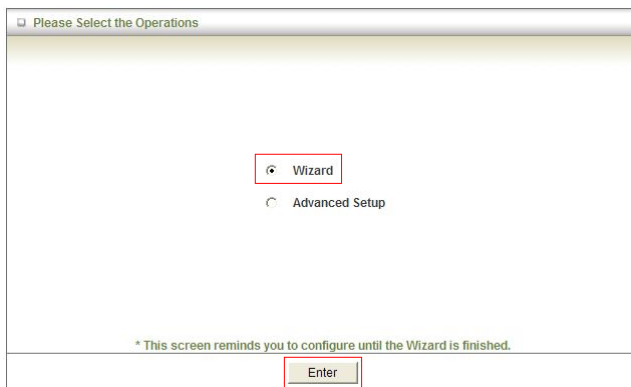


2. At the login screen, type in "admin" (without quotes) in the System Password field. Then click on Login.

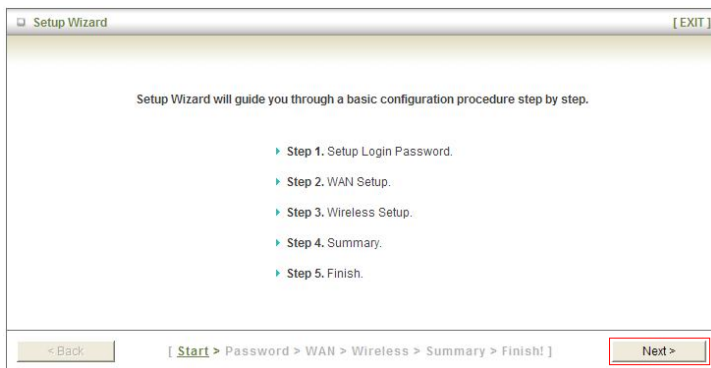


*Notes: admin is the default login password for the unit.*

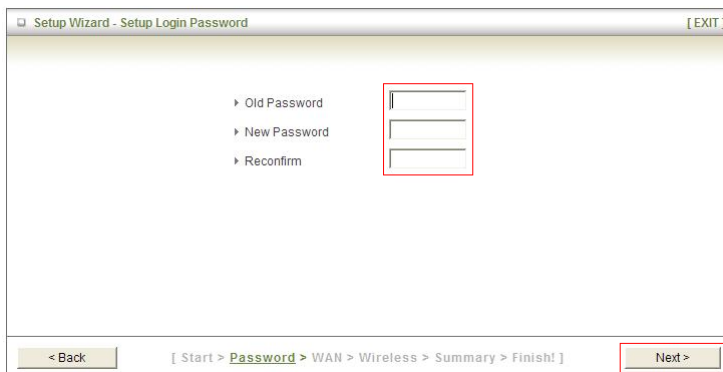
3. Click on **Wizard** and then on **Enter**.



4. This page shows you the steps needed to configure your N3G002W unit. Click **Next** to continue.



5. This page allows you to change the web configuration login password. To change the password, enter the old password (default is "admin") and enter the new password. You also need to enter the new password in the Reconfirm field. Then click **Next**. Or click **Next** without entering any details to keep the default password.



*Note: if you change the password, please make sure that you use the new password the next time you log into the web configuration.*



6. Select the type of WAN connection that you want to use and click on Next.



*Notes: To use a 3G card, please choose "3G card". For iBurst PCMCIA card, choose iBurst card. For connection to an existing modem/router choose "WAN Ethernet port", please refer to the user guide for more details.*

7. After choosing 3G, you need to enter the information below, this will have been provided to you by your 3G broadband service provider. Click Next once you finished.



*Notes: This example shows Bigpond Next G connection settings. Note that you do not have to change the LAN IP address.*

## APN (Access Point Name) for various providers

ISP	APN	Username/Password required
Telstra	telstra.internet	NO
Bigpond	telstra.bigpond	YES
Three	3netaccess	NO
Vodafone	vfinternet.au	NO
Optus	internet	NO

8. This page allows you to disable the wireless functionality, change the wireless network name (SSID) and change the wireless channel. Click Next once you finished.

Setup Wizard - Wireless settings [EXIT]

Wireless Radio  Enable  Disable

Network ID (SSID) default

Channel 11

Auto Select Channel  Enable  Disable

[ Start > Password > WAN > **Wireless** > Summary > Finish! ]

< Back Next >

9. It is strongly recommended that you now set up simple wireless security such as WEP 64bit or WPA (if your wireless client supports WPA). In order to secure your network. Select your required wireless security and click on Next.

Setup Wizard - Wireless Security [EXIT]

Security WEP

WEP Encryption  64 bit  128 bit

Key 1  HEX 1234567890

Key 2  HEX

Key 3  HEX

Key 4  HEX

5(64 bit) or 13(128 bit) ascii characters eg: passwd or thisisapasswd  
10(64 bit) or 26(128 bit) hexadecimal characters eg: 0123456789 or 01234567890123456789012345

[ Start > Password > WAN > **Wireless** > Summary > Finish! ]

< Back Next >

Notes: Please refer to the user guide for more information regarding wireless security and how to utilize wireless security on your network. This example shows WEP 64 bit encryption with key "1234567890"

10. Please review the settings and click on Apply Settings to save them. You can also click Back if there is a error.

Setup Wizard - Summary [EXIT]

Please confirm the information below

[ WAN Setting ]	
WAN Type	3G
APN	telstra.bigpond
Pin Code	-
Dialed Number	-
Account	@bigpond.com
Password	
[ Wireless Setting ]	
Wireless	Enable
SSID	default
Channel	11
Security	WEP (64 Bits)

Do you want to proceed the network testing?

< Back [ Start > Password > WAN > Wireless > Summary > Finish! ] Apply Settings

Notes: To let the wizard run a network testing please tick on Do you want to proceed the network testing?

11. After several minutes the N3G002W will save all the settings and the wizard is complete. Click Finish to go back to the Status page and the unit will now use the new settings.

Setup Wizard - Finish [EXIT]

**Configuration is Completed.**

Please click "Finish" to back to Status page.  
Or you can click "Configure Again" to setup the wizard again.

Configure Again [ Start > Password > WAN > Wireless > Finish! ] Finish

12. If everything is configured properly, the System Status page will show that your 3G service is online and the WAN IP address that has been assigned.

System Status [ HELP ]		
Item	WAN Status	Sidenote
IP Address	124.176.244.247	3G
Subnet Mask	255.255.255.255	
Gateway	10.64.64.64	
Domain Name Server	61.9.134.49, 61.9.226.33	

Wireless Status		
Item	WLAN Status	Sidenote
Wireless mode	Enable	(AP only mode)
SSID	default	
Channel	Auto	
Security	WEP	(64 Bits WEP)
MAC Address	00-60-64-17-F2-00	

3G/3.5G Modem Information		
Item	Status	Sidenote
Card Info	3.3V CardBus card	
Link Status	Connected	
Signal Strength	Excellent(22)	0~9:Bad 10~19:Good 20~31:Excellent

Statistics Information		
Statistics of WAN	Inbound	Outbound
Octects	136	124
Unicast Packets	7	7
Non-unicast Packets	0	0
Drops	0	0
Error	0	0

[View Log...](#)
[Clients List...](#)
[Refresh](#)

Display time: Tue Jul 10 21:06:42 2007

## CHAPTER 5 ADVANCED SETUP

To access the Advanced Setup option of your N3G002W, you need to access the unit's web configuration outline on page 15 and click on Advanced Setup menu at the top of the page.

The screenshot shows the 'ADMINISTRATOR'S MAIN MENU' with 'Status' selected. Below it, the 'Advanced Setup' menu is highlighted. The 'System Status' section contains the following table:

Item	WAN Status	Sidenote
Remaining Lease Time	00:00:00	Wait for traffic <input type="button" value="Renew"/>
IP Address	0.0.0.0	
Subnet Mask	0.0.0.0	
Gateway	0.0.0.0	
Domain Name Server	0.0.0.0	

Below the System Status table is the 'Wireless Status' section with the following table:

Item	WLAN Status	Sidenote
Wireless mode	Enable	( AP only mode )

For first time installation, you will be presented with the following page. Choose Advanced Setup and click Enter to access the Advanced Setup page.

The dialog box titled 'Please Select the Operations' contains two radio button options:

- Wizard
- Advanced Setup**

At the bottom, there is a note: '\* This screen reminds you to configure until the Wizard is finished.' and an  button.

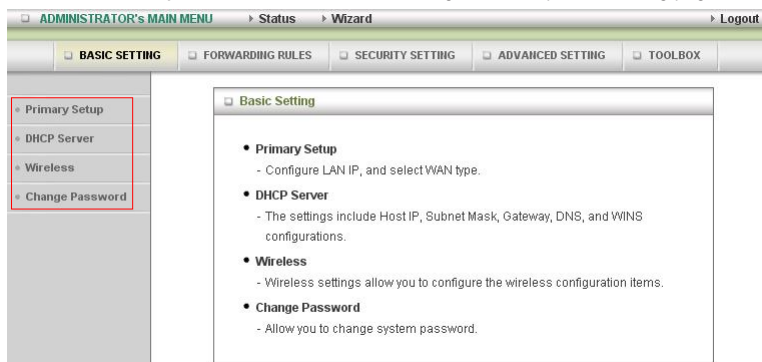
After that, click on any of the top menu to access the respective settings pages.

The screenshot shows the 'ADMINISTRATOR'S MAIN MENU' with 'Status' and 'Wizard' selected. Below it, the 'Advanced Setting' menu is highlighted. The 'System Status' section contains the following table:

Item	WAN Status	Sidenote
Remaining Lease Time	00:00:00	Wait for traffic <input type="button" value="Renew"/>
IP Address	0.0.0.0	

## Basic Setting

The Basic Setting page allows you to configure a number of basic settings on the unit. This section deals with these features. Click on any of the menu on the left to configure the respective setting page.



## Basic Setting > Primary Setup

This Page allows you to change the LAN (Local Area Network) settings on your N3G002W wireless router and the WAN (Wide Area Network) connection.

Primary Setup [ HELP ]	
Item	Setting
▶ LAN IP Address	192.168.123.254
▶ LAN NetMask	255.255.255.0
▶ WAN's MAC Address	00-50-18-21-C4-F1 <input type="button" value="Save"/> <input type="button" value="Clone MAC"/>
▶ Auto-Backup	<input type="checkbox"/> Enable checking wired-WAN alive Internet host: <input type="text"/>
▶ WAN Type	<input type="radio"/> Static IP Address      ISP assigns you a static IP address. <input type="radio"/> Dynamic IP Address      Obtain an IP address from ISP automatically. <input type="radio"/> Dynamic IP Address with Road Runner Session Management      Dynamic IP Address with Road Runner Session Management is a WAN connection used in Australia. (eg. Telstra BigPond) <input type="radio"/> PPP over Ethernet      Some ISPs require the use of PPPoE to connect to their services. <input type="radio"/> L2TP      Some ISPs require the use of L2TP to connect to their services. <input type="radio"/> PPTP      Some ISPs require the use of PPTP to connect to their services. <input checked="" type="radio"/> 3G      3G <input type="radio"/> iBurst      iBurst PC card connectivity
▶ APN	telstra.internet
▶ Pin Code	<input type="text"/>
▶ Dialed Number	<input type="text"/>
▶ Username	<input type="text"/>
▶ Password	<input type="text"/>
▶ Primary DNS	0.0.0.0
▶ Secondary DNS	0.0.0.0
▶ Maximum Idle Time	300 seconds <input checked="" type="checkbox"/> Auto-reconnect
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

*Note: This example shows WAN connection for Telstra Next G connection.*

1. LAN IP Address: the local IP address of this device.
2. LAN Netmask: the Netmask of the local IP address
3. WAN's MAC Address: The WAN's MAC of this device. If you want to clone the MAC address from your computer network card, just click the Clone MAC and click Save.
4. WAN Type: WAN connection type of your ISP. Each WAN type will give you the option to enter the required information. You can select one of the following options.
  - a. Static IP Address. For connection with static IP address.
  - b. Dynamic IP Address. For connection with dynamic IP address. Mostly used when the N3G002W unit is in use in conjunction with another modem/router.
  - c. Dynamic IP Address with Road Runner Session Management. When using the N3G002W with Telstra Bigpond Cable service.
  - d. PPP over Ethernet. For connection with PPPoE service. Mostly used when the N3G002W unit is

connected to a Bridge ADSL modem.

- e. Unnumbered PPPoE. For connection with unnumbered PPPoE service.
- f. Unnumbered PPPoE + NAPT. For connection with unnumbered PPPoE service with NAPT enabled.
- g. MultiSession PPPoE. For ISP with multi session PPPoE.
- h. L2TP. For connection with L2TP service.
- i. PPTP. For connection with PPTP service.
- j. 3G. For connection with 3G service.

*Notes: All of the connection types above are used in conjunction with a modem or another router connected to the WAN port except for 3G which needs a 3G PC Card installed. Static IP Address, Dynamic IP address, Dynamic IP Address with Road Runner Session Management and PPP over Ethernet has an Enable Backup option to set it as the primary connection and the 3G card as the backup connection.*

## Static IP Address

If your WAN connection uses a static IP address, please select Static IP Address and fill in the required information in the fields provided.

▶ WAN IP Address	<input type="text" value="0.0.0.0"/>
▶ WAN Subnet Mask	<input type="text" value="255.255.255.0"/>
▶ WAN Gateway	<input type="text" value="0.0.0.0"/>
▶ WAN MTU	<input type="text" value="1500"/>
▶ Primary DNS	<input type="text" value="0.0.0.0"/>
▶ Secondary DNS	<input type="text" value="0.0.0.0"/>
▶ NAT disable	<input type="checkbox"/> Enable
▶ Auto-backup	<input type="checkbox"/> Enable
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

- WAN IP Address. Type in the IP address assigned by your Internet Service Provider.
- Subnet Mask. Type in the Subnetmask assigned by your Internet Service Provider.
- WAN Gateway. Type in the WAN Gateway assigned by your Internet Service Provider.
- WAN MTU. Leave as default unless instructed by your Internet Service Provider.
- Primary DNS/Secondary DNS. Type in the DNS address assigned by your Internet Service Provider.
- NAT Disable. Tick Enable to disable NAT.
- Auto-backup. Tick Enable to make the 3G connection a backup connection.

## Dynamic IP Address

This connection will get the IP address from the internet service provider. Choose this connection if you are connecting the router to an Optus Cable Modem service.

▶ Host Name	<input type="text" value="ROUTER"/> (optional)
▶ MTU	<input type="text" value="1500"/>
▶ Auto-reconnect	<input checked="" type="checkbox"/> Enable
▶ Primary DNS	<input type="text" value="0.0.0.0"/>
▶ Secondary DNS	<input type="text" value="0.0.0.0"/>
▶ Auto-backup	<input type="checkbox"/> Enable
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

Leave everything as default unless instructed by your Internet Service Provider and tick Enable Auto-backup to enable the 3G auto back up function.



## Dynamic IP Address with Road Runner Session Management

This connection will get the IP address from the internet service provider. Choose this connection if you are connecting the router to a Telstra Bigpond Cable modem.

Account	<input type="text"/>
Password	<input type="password"/>
Login Server	<input type="text"/> (optional)
Auto-backup	<input type="checkbox"/> Enable

- Account. Type in your Account username.
- Password. Type in your account password.
- Login Server (Optional). Type in the login server of the Roadrunner service.
- Auto Backup. Tick Enable to make the 3G connection as a backup connection.

## PPP over Ethernet

Most ADSL service will use PPP over Ethernet protocol. Use this if you connect the router to a bridge ADSL modem.

PPPoE Account	<input type="text"/>
PPPoE Password	<input type="password"/>
MTU	<input type="text" value="1492"/>
Primary DNS	<input type="text" value="0.0.0.0"/>
Secondary DNS	<input type="text" value="0.0.0.0"/>
Maximum Idle Time	<input type="text" value="300"/> seconds <input checked="" type="checkbox"/> Auto-reconnect
PPPoE Service Name	<input type="text"/> (optional)
Assigned IP Address	<input type="text" value="0.0.0.0"/> (optional)
Auto-backup	<input checked="" type="checkbox"/> Enable

- PPPoE Account/ PPPoE Password. Type in your account username and password.
- MTU. Leave as default unless instructed by your Internet Service Provider.
- Primary DNS/Secondary DNS. Primary DNS/Secondary DNS. Type in the DNS address assigned by your Internet Service Provider. Optional.
- Maximum Idle Time. Enter the number of second you want to have elapsed without any activity before your Internet connection terminates automatically. Set to 0 to disable.
- Auto-reconnect- Tick to enable auto reconnect function.
- PPPoE Service Name (Optional). Type in the PPPoE service name assigned by your Internet Service Provider.
- Assigned IP Address (Optional). Type in the IP address assigned by your Internet Service Provider.
- Auto Backup. Tick Enable to make the 3G connection a backup connection.

## L2TP

For internet services using L2TP.

▶ My Tunnel Name	
▶ Server IP Address	
▶ My IP Address	<input type="radio"/> Get IP from DHCP Server <input checked="" type="radio"/> Use Static IP IP <input type="text" value="0.0.0.0"/> Netmask <input type="text" value="255.255.255.0"/> Gateway <input type="text" value="0.0.0.0"/>
▶ L2TP Account	
▶ L2TP Password	*****
▶ Maximum Idle Time	<input type="text" value="300"/> seconds
▶ Connect mode selection	<input checked="" type="radio"/> Always-on <input type="radio"/> Connect-on-demand
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

- My Tunnel Name. Type in the Tunnel Name assigned by your Internet Service Provider.
- Server IP address. Type in the server IP address assigned by your Internet Service Provider.
- My IP Address. Tick Get IP from theDHCP Server if your service uses a DHCP server. Or tick on Use Static IP and type in the IP address assign by your Internet Service Provider.
- L2TP Account / L2TP Password. Type in the username and password assigned by your provider.
- Maximum Idle Time. Enter the number of seconds you want to have elapsed without any activity before your Internet connection terminates automatically. Set to 0 to disable.
- Connect mode selection. Tick on Always-on for an always on connection.

## PPTP

For internet service using PPTP.

My Tunnel Name	
Server IP Address	
My IP Address	<input type="radio"/> Get IP from DHCP Server <input checked="" type="radio"/> Use Static IP IP: <input type="text" value="0.0.0.0"/> Netmask: <input type="text" value="255.255.255.0"/> Gateway: <input type="text" value="0.0.0.0"/>
PPTP Account	
PPTP Password	*****
Maximum Idle Time	<input type="text" value="300"/> seconds
Connect mode selection	<input checked="" type="radio"/> Always-on <input type="radio"/> Connect-on-demand
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

- My Tunnel Name. Type in the Tunnel Name assigned by your Internet Service Provider.
- Server IP address. Type in the server IP address assigned by your Internet Service Provider.
- My IP Address. Tick Get IP from the DHCP Server if your service uses a DHCP server. Or tick on Use Static IP and type in the IP address assigned by your Internet Service Provider.
- PPTP Account / PPTP Password. Type in the username and password assigned by your provider.
- Maximum Idle Time. Enter the number of seconds you want to have elapsed without any activity before your Internet connection terminates automatically. Set to 0 to disable.
- Connect mode selection. Tick on Always-on for an always on connection.

## 3G

For 3G service, you need to enter the following information, please refer to your 3G service provider for detailed information.

APN	<input type="text" value="Telstra.Bigpond"/>
Pin Code	<input type="text"/>
Dialed Number	<input type="text"/>
Username	<input type="text" value="@bigpond.com"/>
Password	*****
Maximum Idle Time	<input type="text" value="300"/> seconds <input checked="" type="checkbox"/> Auto-reconnect
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

- APN- Enter the APN for your PC card.
- Pin Code- Enter the Pin Code for your SIM card
- Dial-Number- This field should not be altered except when required by your service provider.
- User Name- Enter your 3G username.
- Password- Enter your 3G password.
- Maximum Idle Time- Enter the number of seconds you want to have elapsed without any activity before your Internet connection terminates automatically. Set to 0 to disable.
- Auto-reconnect- Tick to enable auto reconnect function.

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

Click Save to save the settings or Undo to cancel.

## iBurst

For iBurst services using the PCMCIA card, choose iBurst and enter the following information

▶ Username	<input type="text"/>
▶ Password	<input type="password"/>
▶ WAN MTU	<input type="text" value="1460"/>
▶ Primary DNS	<input type="text" value="0.0.0.0"/>
▶ Secondary DNS	<input type="text" value="0.0.0.0"/>
▶ Maximum Idle Time	<input type="text" value="300"/> seconds <input checked="" type="checkbox"/> Auto-reconnect
▶ Service Name	<input type="text"/> (optional)
▶ Assigned IP Address	<input type="text" value="0.0.0.0"/> (optional)
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Virtual Computers..."/>	

- Username / Password. Type in your account username and password.
- WAN MTU. Leave as default unless instructed by your Internet Service Provider.
- Primary DNS/Secondary DNS (Optional). Primary DNS/Secondary DNS. Type in the DNS address assigned by your Internet Service Provider.
- Maximum Idle Time. Enter the number of seconds you want to have elapsed without any activity before your Internet connection terminates automatically. Set to 0 to disable.
- Auto-reconnect. Tick to enable auto reconnect function.
- Service Name (Optional). Type in the service name assigned by your provider.
- Assigned IP Address (Optional). Type in the IP address assigned by your provider.

## Basic Setting > DHCP Server

This page allows you to configure the DHCP Server on the unit.

DHCP Server [ HELP ]	
Item	Setting
▶ DHCP Server	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
▶ Lease Time	<input type="text" value="1440"/> Minutes
▶ IP Pool Starting Address	<input type="text" value="50"/>
▶ IP Pool Ending Address	<input type="text" value="199"/>
▶ Domain Name	<input type="text"/>
▶ Primary DNS	<input type="text" value="0.0.0.0"/>
▶ Secondary DNS	<input type="text" value="0.0.0.0"/>
▶ Primary WINS Server	<input type="text" value="0.0.0.0"/>
▶ Secondary WINS Server	<input type="text" value="0.0.0.0"/>
▶ Gateway	<input type="text" value="0.0.0.0"/> (optional)
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Clients List..."/> <input type="button" value="Fixed Mapping..."/>	

For more settings click on More.

1. DHCP Server: Please leave this set to Enable unless you have another DHCP server on the same network.
2. Lease Time: DHCP lease time to the DHCP client.
3. IP Pool Starting/Ending Address: You must specify the starting / ending address of the IP address pool. Please leave as default unless necessary.
4. Domain: Optional.
5. Primary DNS/Secondary DNS: Optional, This feature allows you to manually assign a DNS Servers
6. Primary WINS/Secondary WINS: Optional, This feature allows you to manually assign a WINS Servers
7. Gateway: Optional. The IP Address of an alternate Gateway. This function enables you to assign another gateway to your PC from the DHCP server.

Click Save to save the settings or Undo to cancel. You can also check the DHCP client list by pressing the Client List button. Fixed Mapping button will bring you to the Security Setting > MAC Control page.

## Basic Setting > Wireless

This page allows you to configure the wireless feature of the unit such as SSID and security.

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	<input type="text" value="default"/>
Channel	<input type="text" value="11"/>
Auto Select Channel	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Security	<input type="text" value="None"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="WDS Setting"/>	

1. Wireless - Enable by default. Changing this option to Disable will turn off the wireless feature on the unit and you will not be able to connect wirelessly.
2. WMM Capable- Choose Enable or Disable WMM function. WMM stands for Wi-Fi Multimedia, this provides features that improve the user experience for audio, video and voice applications over Wi-Fi networks.
3. SSID- Service Set Identifier (SSID) is the name designated for the wireless network of the unit. The default SSID is default. This SSID can be easily changed to rename the wireless network. (Note: SSID names may contain up to 32 ASCII characters)
4. Channel- can be from 1 to 13 and 11 is the default channel. Devices on the network that want to connect to the unit must use the same channel. (Note: Most wireless adapters will automatically scan and match the wireless channel). Changing this option might improve the wireless signal quality. However, please only use channel 1 to 11 as certain wireless adapter does not work on channel 12 and 13.
5. Auto Select Channel – Choose Enable to let the router decides the best channel to use. Disable to choose manually.

6. Security- You may choose from the following option, No Encryption, WEP:802.1x, WPA-PSK, WPA, WPA2-PSK, or WPA2. By default the N3G002W uses No Encryption (as shown in the screen above). Other option that you can use are explained as follow:
- WEP (Wired Equivalent Privacy). Enabling this security will protect your data while it is transferred from the computer to the N3G002W router. Select the WEP Encryption (64bit or 128bit) and enter the WEP key in Key 1 field. Please note that WEP Encryption key can only use numbers from 0 to 9 and letters from A to F. 64 bit encryption needs 10 digits key and 128 bit encryption needs 26 digits key.

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	default
Channel	11
Auto Select Channel	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Security	WEP
WEP Encryption	<input checked="" type="radio"/> 64 bit <input type="radio"/> 128 bit
Key 1	<input checked="" type="radio"/> HEX <input type="text" value="1234567890"/>
Key 2	<input type="radio"/> HEX <input type="text"/>
Key 3	<input type="radio"/> HEX <input type="text"/>
Key 4	<input type="radio"/> HEX <input type="text"/>
<p>5(64 bit) or 13(128 bit) ascii characters eg: passwd or thisisapasswd            10(64 bit) or 26(128 bit) hexadecimal characters eg: 0123456789 or            01234567890123456789012345</p>	
<p><input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="WDS Setting"/></p>	

- 802.1X: In order to use 802.1X security, you need to have a RADIUS server on your network that will act as the authentication server. Please type in the details for your RADIUS server in the fields required.

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	default
Channel	11
Auto Select Channel	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Security	802.1X
Encryption Key length	<input checked="" type="radio"/> 64 bits <input type="radio"/> 128 bits
RADIUS Server IP	0.0.0.0
RADIUS port	1812
RADIUS Shared Key	
<p><input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="WDS Setting"/></p>	

- c) WPA-PSK/WPA2-PSK : A newer type of security is WPA-PSK-TKIP and WPA-PSK2-ADE. This type of security gives a more secure network compare to WEP. Use TKIP Encryption Type for WPA-PSK and AES for WPA2-PSK. After that, please enter the key in the Passphrase field. The key needs to be more then 8 characters and less then 63 characters and it can be any combination of letters and numbers. Please note that the configuration for WPA-PSK and WPA2-PSK is identical

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	default
Channel	11
Auto Select Channel	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Security	WPA-PSK
Encryption Type	<input type="radio"/> TKIP <input checked="" type="radio"/> AES
Passphrase	
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="WDS Setting"/>	

- d) WPA/WPA2 : Similar to 802.1X security but with TKIP or AES Encryption. You need to have a RADIUS server on the network to perform user authentication. Please type in the details for your RADIUS server in the fields required.

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	default
Channel	11
Auto Select Channel	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Security	WPA
Encryption Type	<input type="radio"/> TKIP <input checked="" type="radio"/> AES
RADIUS Server IP	0.0.0.0
RADIUS port	1812
RADIUS Shared Key	
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="WDS Setting"/>	

*Notes: After configuring wireless security, you also need to configure your wireless adapter to use the same security settings before you can connect wirelessly. Not all wireless adapter supports WPA-PSK/WPA2-PSK/WPA/WPA2 security, please refer to your wireless adapter user guide for more details.*

*It is strongly recommended to set up a simple wireless security such as WEP 64bit or WPA (when the wireless client supports WPA) in order to secure your network.*

Click Save to save the settings and Undo to cancel.



To Configure WDS (Wireless Distribution System) click on WDS Setting button and you will be presented with the following page.

WDS Setting		[ HELP ]																											
Item	Setting																												
Wireless Bridging	<input checked="" type="radio"/> Disable <input type="radio"/> Enable																												
Remote AP MAC	MAC 1	<input type="text"/>																											
	MAC 2	<input type="text"/>																											
	MAC 3	<input type="text"/>																											
	MAC 4	<input type="text"/>																											
	MAC 5	<input type="text"/>																											
	MAC 6	<input type="text"/>																											
Scanned AP's MAC		<input type="text" value="--- Select one ---"/> <input type="button" value="Copy to"/> Remote AP MAC																											
<table border="1"> <thead> <tr> <th>SSID</th> <th>Channel</th> <th>MAC Address</th> </tr> </thead> <tbody> <tr> <td>NETCOMM487sfus</td> <td>2</td> <td>00-60-64-15-7F-1F</td> </tr> <tr> <td>NetCommOfficeHotspot</td> <td>3</td> <td>00-60-64-14-49-B0</td> </tr> <tr> <td>Wireless</td> <td>6</td> <td>00-60-64-15-B6-24</td> </tr> <tr> <td>PDG_AP1</td> <td>6</td> <td>00-20-ED-0D-26-B1</td> </tr> <tr> <td>RT2561_6</td> <td>6</td> <td>00-13-33-06-CD-DC</td> </tr> <tr> <td>Router</td> <td>6</td> <td>00-03-54-01-A1-94</td> </tr> <tr> <td>nope</td> <td>8</td> <td>00-16-38-C6-EC-F2</td> </tr> <tr> <td>wireless</td> <td>11</td> <td>00-16-38-C8-F6-5F</td> </tr> </tbody> </table>			SSID	Channel	MAC Address	NETCOMM487sfus	2	00-60-64-15-7F-1F	NetCommOfficeHotspot	3	00-60-64-14-49-B0	Wireless	6	00-60-64-15-B6-24	PDG_AP1	6	00-20-ED-0D-26-B1	RT2561_6	6	00-13-33-06-CD-DC	Router	6	00-03-54-01-A1-94	nope	8	00-16-38-C6-EC-F2	wireless	11	00-16-38-C8-F6-5F
SSID	Channel	MAC Address																											
NETCOMM487sfus	2	00-60-64-15-7F-1F																											
NetCommOfficeHotspot	3	00-60-64-14-49-B0																											
Wireless	6	00-60-64-15-B6-24																											
PDG_AP1	6	00-20-ED-0D-26-B1																											
RT2561_6	6	00-13-33-06-CD-DC																											
Router	6	00-03-54-01-A1-94																											
nope	8	00-16-38-C6-EC-F2																											
wireless	11	00-16-38-C8-F6-5F																											
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Scan AP"/>																													

WDS is used to wirelessly connect multiple Access Points (in WDS mode), and in doing so extends the wireless infrastructure to locations where cabling is not possible or inefficient to implement.

*Notes: Be sure you understand the purpose of WDS mode before continuing with the configuration, and be aware that not all Access Points can be used in WDS mode.*

To enable WDS please make sure to tick the Enable tick box for Wireless Bridging.

And then type in the MAC address of the remote WDS unit in the Remote AP MAC list. Or you can copy the one from the Scanned AP's MAC list. This router can accommodate up to 6 remote MAC addresses.

Click Save to save the settings and Undo to cancel.

## Basic Setting > Change Password

On this page you can change the N3G002W web configuration password. Please type in your old password (factory default password is admin) and type in the new password. You also need to type in the new password in the Reconfirm field.

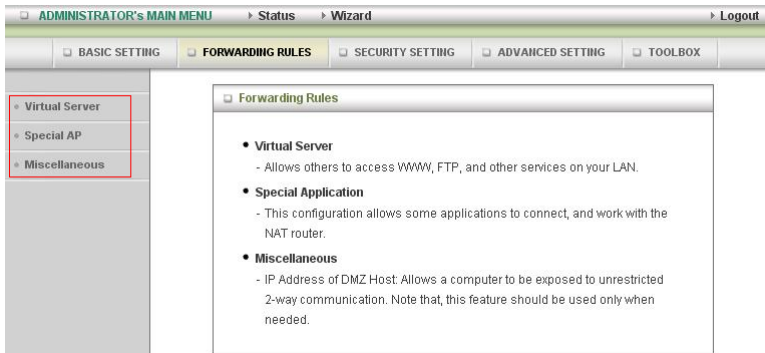
Change Password	
Item	Setting
▶ Old Password	<input type="text"/>
▶ New Password	<input type="text"/>
▶ Reconfirm	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

*Note: if you change the password, please make sure that you use the new password the next time you log into the web configuration.*

Click Save to save the settings and Undo to cancel.

## Forwarding Rules

The Forwarding Rules page allows you to configure the port forwarding management on the unit. Click on any of the menu on the left to access the respective setting page.



Forwarding rules are a necessary feature as by default NAT (Network Address Translation) will automatically block incoming traffic from the Internet to the LAN if a specific port mapping does not exist in the NAT translation table. Because of this, the NAT provides a level of protection for computers that are connected to your LAN. However, this also creates a connectivity problem when you want to make LAN resources available to Internet clients, which you may want to do to play network games or host network applications.

There are three ways to work around NAT and to enable certain LAN resources available from the Internet; Port Forwarding (in Virtual Server page), Port Triggering (in Special AP page) and DMZ Host (in Miscellaneous page).

## Forwarding Rules > Virtual Server

Virtual Server
[ HELP ]

Well known services: -- select one -- Copy to ID --

Use schedule rule: ---ALWAYS ON---

ID	Service Ports	Server IP	Enable	Schedule Rule#
1	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
2	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
3	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
4	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
5	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
6	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
7	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
8	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
9	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
10	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
11	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
12	<input type="text"/>	192.168.123. <input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>

Save Undo

A virtual server is defined as a Service Port, and all requests to this port will be redirected to the computer specified by the Server IP. Virtual Server can also work with Scheduling Rules, and give user more flexibility on Access control. For detail instructions on scheduling rules, please refer to Advanced Setting > Scheduling. For example, if you have an FTP server (default port is port 21) at 192.168.123.1, a Web server (default port is port 80) at 192.168.123.2, and a VPN server (default port is port 1723) at 192.168.123.6, then you need to specify the following virtual server mapping table:

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

*Note: At any given time, only one IP address can be bind to a particular Service Port.*

Click Save to save the settings and Undo to cancel.

## Forwarding Rules > Special AP

Special Applications
[ HELP ]

Popular applications: -- select one -- Copy to ID: --

ID	Trigger	Incoming Ports	Enable
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
9	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
10	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
11	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
12	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Some applications like On-line games, Video conferencing and Internet telephony require multiple connections to the internet. Because of that, these applications cannot work with a pure NAT router such as the N3G002W. The Special Applications feature allows some of these applications to work with this router. If this fails to make the application working, try to set up that computer as the DMZ host instead. Please refer to Forwarding Rules > Miscellaneous section.

The fields are explained as follow:

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

The N3G002W also provides predefined settings for some popular application. To use the predefined settings, select your application from the Popular application list, select an unused ID from the list and then click Copy to. After that the predefined settings will be added to the list.

Click Save to save the settings and Undo to cancel.

## Forwarding Rules > Miscellaneous

Miscellaneous Items		[ HELP ]
Item	Setting	Enable
▶ IP Address of DMZ Host	192.168.123. <input type="text"/>	<input type="checkbox"/>

DMZ (Demilitarized Zone) Host is a computer without the protection of firewall. It allows that particular computer to be exposed to unrestricted 2-way communication to the internet. It is mostly used for Internet games, Video conferencing, Internet telephony and other special applications.

To enable DMZ, enter the IP address of the PC and tick on Enable.

*Note: This feature should be used only when necessary.*

Click Save to save the settings and Undo to cancel.

## Security Setting

The Security Setting page allows you to configure the security management on the unit such as Packet filters and MAC Control. Click on any of the menu on the left to access the respective setting page.

The screenshot shows the NetComm router's administrative interface. At the top, there is a breadcrumb trail: ADMINISTRATOR'S MAIN MENU > Status > Wizard > Logout. Below this is a navigation bar with tabs for BASIC SETTING, FORWARDING RULES, SECURITY SETTING (which is active), ADVANCED SETTING, and TOOLBOX. On the left side, there is a vertical menu with expandable items: Packet Filters, Domain Filters, URL Blocking, MAC Control, and Miscellaneous. The main content area is titled 'Security Setting' and contains the following information:

- Packet Filters**
  - Allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.
- Domain Filters**
  - Let you prevent users under this device from accessing specific Domain names.
- URL Blocking**
  - Let you prevent users under this device from accessing specific URL strings.
- MAC Address Control**
  - MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.
- Miscellaneous**
  - Remote Administrator Host: In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host.
  - Administrator Time-out: The amount of time of inactivity before the device will automatically close the Administrator session. Set this to zero to disable it.
  - Discard PING from WAN side: When this feature is enabled, hosts on the WAN cannot ping the Device.

## Security Setting > Packet Filters

Packet Filter enables you to control what packets are allowed to pass through the router. There are two type of packet filter, Outbound Packet Filter which applies to all outbound packets and Inbound Packet Filter which only applies to packets that destined to Virtual Server or DMZ host only.

Outbound Packet Filter
[ HELP ]

Item	Setting			
Outbound Filter	<input type="checkbox"/> Enable			
<input checked="" type="radio"/> Allow all to pass except those match the following rules. <input type="radio"/> Deny all to pass except those match the following rules.				
Use schedule rule: <span>---ALWAYS ON---</span> <span>Copy to</span> <span>ID</span> <span>--</span>				
ID	Source IP:Ports	Destination IP:Ports	Enable	Schedule Rule#
1			<input type="checkbox"/>	0
2			<input type="checkbox"/>	0
3			<input type="checkbox"/>	0
4			<input type="checkbox"/>	0
5			<input type="checkbox"/>	0
6			<input type="checkbox"/>	0
7			<input type="checkbox"/>	0
8			<input type="checkbox"/>	0

Previous page
Next page
Save
Undo
Inbound Filter...
MAC Level...

To enable an Outbound Filter, please make sure to tick the Enable tick box on the top of the page.

There are two type of filtering policies:

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

For each direction, you can specify up to 48 rules. And for each rule you need to define the following:

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

For source or destination IP address, you can define a single IP address (192.168.123.1) or a range of IP addresses (192.168.123.100-192.168.123.200). Empty fields imply all IP addresses.

For source or destination port, you can also define a single port (80) or a range of ports (1000-1999). And you need to add prefix "T" or "U" to specify TCP or UDP protocol e.g. T80, U53, U2000-2999. No prefix indicates both TCP and UDP are defined. An empty implies all port addresses.

Packet Filter also works with Scheduling Rules, and gives user more flexibility on Access control. For detail instruction regarding scheduling rule, please refer to Advanced Setting > Scheduling.

Click Save to save the settings and Undo to cancel.



## Inbound Filter:

To access the Inbound Packet Filter page, click on Inbound Filter on the bottom of the Outbound Filter page. All the settings on this page are similar to the one for the Outbound Filter.

Inbound Packet Filter [ HELP ]				
Item		Setting		
Inbound Filter		<input type="checkbox"/> Enable		
<input checked="" type="radio"/> Allow all to pass except those match the following rules. <input type="radio"/> Deny all to pass except those match the following rules.				
Use schedule rule: ---ALWAYS ON--- <input type="button" value="Copy to"/> ID -- <input type="button" value="v"/>				
ID	Source IP:Ports	Destination IP:Ports	Enable	Schedule Rule#
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>
<input type="button" value="Previous page"/> <input type="button" value="Next page"/> <input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Outbound Filter..."/> <input type="button" value="MAC Level..."/>				

Click Save to save the settings and Undo to cancel.

## Security Setting > Domain Filters

Domain Filters enable you to prevent users from accessing specific domain addresses.

Domain Filter [ HELP ]			
Item	Setting		
Domain Filter	<input type="checkbox"/> Enable		
Log DNS Query	<input type="checkbox"/> Enable		
Privilege Host/NetMask	192.168.123.0 / 0		
ID	Domain Suffix	Action	Enable
1	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
6	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
7	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
8	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
9	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
10	*(all others)	<input type="checkbox"/> Drop <input type="checkbox"/> Log	-

To enable the Domain Filter please make sure to tick the Enable tick box on the top of the page.

Log DNS Query. Please tick the Enable tick box if you want to log the action when someone accesses the specific URLs.

Privilege Host/Netmask. To set a group of computer that has privilege to access the internet without any restriction.

To set a Domain Filter, you need to specify the following:

- Domain Suffix. Please type the suffix of the URL that needs to be restricted. For example, ".com", "xxx.com".
- Action. The router action that you want when someone is accessing a URL that met the domain suffix. Tick on Drop to block the access and/or tick on Log to log this access.
- Enable. Tick to enable the rule.

Click Save to save the settings and Undo to cancel.

## Security Setting > URL Blocking

URL Blocking will block LAN computers from connecting to a pre-defined website. The major difference between Domain Filter and URL Blocking is that Domain Filter require users to input a suffix (e.g. xxx.com, yyy.net) while URL Blocking only requires user to input a keyword.

Http URL Blocking [ HELP ]		
Item	Setting	
▶ URL Blocking	<input type="checkbox"/> Enable	
ID	URL	Enable
1	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>		

To enable URL Blocking please make sure to tick on Enable tick box on the top of the page.

To set a URL Blocking rule, you need to specify the following:

- URL. If any part of the Website's URL matches the pre-defined word then the connection will be blocked. For example, you can use pre-defined word "sex" to block all websites if their URLs contain the pre-defined word "sex".
- Enable. Tick to enable the rule.

Click Save to save the settings and Undo to cancel.

## Security Setting > MAC Control

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

MAC Address Control [ HELP ]					
Item	Setting				
▶ MAC Address Control	<input type="checkbox"/> Enable				
<input type="checkbox"/> Connection control	Wireless and wired clients with <b>C</b> checked can connect to this device; and <b>allow</b> unspecified MAC addresses to connect.				
<input type="checkbox"/> Association control	Wireless clients with <b>A</b> checked can associate to the wireless LAN; and <b>deny</b> unspecified MAC addresses to associate.				
DHCP clients -- select one -- Copy to ID --					
ID	MAC Address	IP Address	Wake On Lan	C	A
1	<input type="text"/>	192.168.123. <input type="text"/>	<input type="button" value="Trigger"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="text"/>	192.168.123. <input type="text"/>	<input type="button" value="Trigger"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="text"/>	192.168.123. <input type="text"/>	<input type="button" value="Trigger"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="text"/>	192.168.123. <input type="text"/>	<input type="button" value="Trigger"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="button" value="Previous page"/> <input type="button" value="Next page"/> <input type="button" value="Save"/> <input type="button" value="Undo"/>					

To enable MAC Address Control please make sure to tick the Enable tick box on the top of the page.

Two types of control are available:

- Connection control. Check Connection Control to control which clients (wired and wireless) can connect to the unit. If a client is denied to connect to this device, it means the client can not access to the Internet either. Choose allow or deny to allow or deny clients with MAC addresses that are not in the list to connect to this device.
- Association control. Check Association Control to control which wireless client can associate with the unit. If a client is denied to associate with the unit, it means the client can not send or receive any data via this device. Choose allow or deny to allow or deny the clients with MAC addresses that are not in the list to associate to the wireless LAN

Click Next Page or Previous Page to see the entire list.

Click Save to save the settings and Undo to cancel.

## Security Setting > Miscellaneous

This page allows you to change various miscellaneous security settings on the unit.

Miscellaneous Items		[ HELP ]
Item	Setting	Enable
▶ Remote Administrator Host / Port	0 0.0.0 / 80	<input type="checkbox"/>
▶ Administrator Time-out	600 seconds (0 to disable)	
▶ Discard PING from WAN side		<input type="checkbox"/>
▶ Disable UPnP		<input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>		

These settings are:

1. Remote Administrator Host/Port. By default, only users on the LAN side can browse the unit web configuration page to perform administration task. Enabling this feature will allow you to connect to the web configuration from the internet. If the specified Host address is 0.0.0.0, any computer on the internet can connect to the unit web configuration page. For better security, you can specify just one IP address or even use subnet mask bits "/nn" notation to specified a group of trusted IP addresses for example, "10.1.2.0/24".  
*Note: When Remote Administration is enabled, the web server port will be shifted to 80. However, you can also change web server port.*
2. Administrator Time-out. The amount of time with no activity before the unit logout automatically, you may set it to zero to disable this feature.
3. Discard PING from WAN side. When enabled, any host on the WAN port can not ping the unit.
4. Disable UPnP: When enable, the UPnP feature will be disabled. Some users will want to disable UPnP for security reasons.

Click Save to save the settings and Undo to cancel.

## Advanced Setting

The Advanced Setting page allows you to configure the advanced settings on the unit such as System log, Dynamic DNS and SNMP. Click on any of the menu on the left to configure the access the respective setting page.

The screenshot displays the NetComm Administrator's Main Menu. The top navigation bar includes 'ADMINISTRATOR'S MAIN MENU', 'Status', 'Wizard', and 'Logout'. Below this, a secondary menu contains 'BASIC SETTING', 'FORWARDING RULES', 'SECURITY SETTING', 'ADVANCED SETTING', and 'TOOLBOX'. The 'ADVANCED SETTING' menu item is selected and highlighted. On the left side, a vertical list of sub-menus is shown, with 'System Log' highlighted by a red box. The main content area displays the 'Advanced Setting' page, which contains a list of settings with brief descriptions:

- **System Log**
  - Send syslog to a dedicated host or send an email alert to specified email address via an SMTP server.
- **Dynamic DNS**
  - To host your server on a changing IP address, you have to use dynamic domain name service (DDNS).
- **QoS**
  - Gives a user the capability to control network traffic with different priority.
- **SNMP**
  - Gives a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.
- **Routing**
  - If you have more than one router on your network you may need to enable RIP to allow packets to find the proper rout to their destination.
- **System Time**
  - Let you set up the system time of this device through NTP, PC's timer, or manually.
- **Scheduling**
  - You can set the scheduling rules here, and select the rule number in Virtual Server and Packet Filter, the functions will be active with your scheduling rules.
- **Performance**
  - Allows you to tweak WLAN settings.

## Advanced Setting > System Log

The N3G002W Wireless router supports two types of System log. One is via syslog (using UDP packet) and the second is via email.

System Log		[ HELP ]
Item	Setting	Enable
▶ IP Address for Syslog	192.168.1.23	<input type="checkbox"/>
▶ E-mail Alert		<input type="checkbox"/>
▶ SMTP Server IP and Port		
▶ Send E-mail alert to		
▶ E-mail Subject		

For syslog, you need to enter the IP address of the host computer that will receive the syslog message and tick on the Enable tick box for IP Address for Syslog.

For email logging you need to define the following:

- Email Alert. Tick on the Enable tick box to enable this feature.
- SMTP Server IP and Port. Enter the IP address and port of the SMTP server separated by ":" (without quotes). If you do not specify the port number, the default value (25) will be used. For example, "mail.yoururl.com" or "mail.yoururl.com:26".
- Send E-mail alert to. Enter the recipients for the email logs. To assign more than one recipient, use ";" or "," (without quotes) to separate the email addresses. For example, recipient1@yoururl.com; recipient2@yoururl2.com.
- Email Subject (Optional). Enter the subject for the email.

Click Save to save the settings and Undo to cancel.

## Advanced Setting > Dynamic DNS

The Dynamic DNS feature enables users to have a static domain name for their internet connection even when their internet connection IP address is dynamic. By mapping the host name to the current public IP address of the router, users who want to connect to the router or any services behind the router from the internet can just use the Dynamic DNS hostname instead of the IP Address which might change every time the router connects to the Internet.

Dynamic DNS [HELP]	
Item	Setting
▶ DDNS	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
▶ Provider	DynDNS.org(Dynamic) ▼
▶ Host Name	<input type="text"/>
▶ Username / E-mail	<input type="text"/>
▶ Password / Key	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

Before you can use Dynamic DNS service, you need to register an account on one of the many supported Dynamic DNS provider such as DynDNS.org, TZO.com and dhs.org. After registering the account, the Dynamic DNS provider will provide you with the following details:

- Host Name
- Username/Email
- Password/Key.

To enable the Dynamic DNS feature on the unit, click the Enable check box, choose the respective Provider and enter the details from your provider.

Click Save to save the settings and Undo to cancel.



## Advanced Setting > QoS

To Enable QoS make sure the Enable Tick Box on the top of the page is ticked.

<b>Upstream bandwidth</b>	Total bandwidth of outgoing traffic.
<b>Downstream bandwidth</b>	Total bandwidth of incoming traffic. You can specify 8 QoS rules to control data flows through the Router. Local IP: IP address of LAN host Local Port: TCP or UDP port Remote IP: IP address of WAN host Remote Port: TCP or UDP port
<b>QoS Priority</b>	The QoS Packet Filter classifies data packets to three kinds of data flows (High,Normal,Low). The ratio of bandwidth division of each data flow is 6:3:1
<b>Enable</b>	Make sure you tick the Enable tick box so that the QoS Filter is active.

Click Save to save or Undo to cancel.

## Advanced Setting > SNMP

SNMP (Simple Network Management Protocol) is a protocol designed to give user the capability to remotely manage a computer or network device by polling and setting terminal values and monitoring network events.

SNMP Setting [HELP]	
Item	Setting
▶ Enable SNMP	<input type="checkbox"/> Local <input type="checkbox"/> Remote
▶ Get Community	<input type="text"/>
▶ Set Community	<input type="text"/>
▶ IP 1	<input type="text" value="0.0.0.0"/>
▶ IP 2	<input type="text" value="0.0.0.0"/>
▶ IP 3	<input type="text" value="0.0.0.0"/>
▶ IP 4	<input type="text" value="0.0.0.0"/>
▶ SNMP Version	<input checked="" type="radio"/> V1 <input type="radio"/> V2c
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

To Enable SNMP, you need to set the following:

- Enable SNMP. Check either Local or Remote or both to enable the function. If Local is ticked, the unit will respond to request from LAN and if Remote is ticked, the unit will respond to request from WAN.
- Get Community. Set the community for GetRequest. This will act as a password.
- Set Community. Set the community for SetRequest. This will act as a password.
- IP 1,IP 2,IP 3,IP 4. Input the IP addresses of your management PCs. The unit will send SNMP Trap message only to the IP address listed.
- SNMP Version. Select the SNMP version of your SNMP Management software.

Click Save to save the settings and Undo to cancel.

## Advanced Setting > Routing

When you have more than one router or subnet on your network, you need to enable routing function to allow different subnets to communicate with each other.

Routing Table [ HELP ]					
Item		Setting			
▶ RIP <input type="checkbox"/> Enable <input type="radio"/> RIPv1 <input type="radio"/> RIPv2					
ID	Destination	Subnet Mask	Gateway	Hop	Enable
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>					

There are two types of routing feature on the N3G002W Wireless Router, Dynamic routing and Static routing.

Dynamic Routing use RIP protocol to allow the N3G002W to adapt to changes in the network. RIP enables the device to determine the best route for each packet based on the “hop count” or number of hops between Source and Destination. Tick on Enable tick box to enable Dynamic Routing. Please select RIPv2 only if you have different subnet in your network. Otherwise, please select RIPv1 if you need this protocol.

Static Routing allows computers that are connected to the N3G002W to communicate with computers on another LAN segment which are connected to the N3G002W via another router. You can specify up to eight routing rules. To set a rule, you need to specify the following:

- IP address
- Subnet mask
- Gateway
- Hop, number of hop.
- And tick on Enable for each rule.

Click Save to save the settings and Undo to cancel.

## Advanced Setting > System Time

This page allows you to change the System time setting on the N3G002W Wireless Router.

System Time [ HELP ]	
Item	Setting
▶ <input checked="" type="radio"/> Get Date and Time by NTP Protocol <input type="button" value="Sync Now!"/>	
Time Server	<input type="text" value="time.nist.gov"/>
Time Zone	<input type="text" value="(GMT+10:00) Canberra, Guam, Port Moresby, Vladivostok"/>
▶ <input type="radio"/> Set Date and Time using PC's Date and Time	
PC Date and Time	<input type="text" value="Tuesday, 12 June 2007 4:09:24 PM"/>
▶ <input type="radio"/> Set Date and Time manually	
Date	Year: <input type="text" value="2002"/> Month: <input type="text" value="Jan"/> Day: <input type="text" value="1"/>
Time	Hour: <input type="text" value="0"/> (0-23) Minute: <input type="text" value="0"/> (0-59) Second: <input type="text" value="0"/> (0-59)
▶ Daylight Saving	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Start	<input type="text" value="Jan"/> <input type="text" value="1"/>
End	<input type="text" value="Jan"/> <input type="text" value="1"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

There are three ways to set up the System Time on the unit.

1. Get Date and Time by NTP Protocol. Select if you want to get the date and time from an NTP server. You also need to choose the Time Server and the Time Zone. Click on Sync Now! to sync the time with the Time Server.
2. Set Date and Time using PC's Date and Time. Select if you want to set the unit time using your computer date and time.
3. Set Date and Time manually. Select to set the date and time manually.

After that, you also need to set the Daylight Saving setting. Select either Enable or Disable and define the Start and End date for the daylight saving period.

Click Save to save the settings and Undo to cancel.

## Advanced Setting > Scheduling

This feature allows you to define a time schedule for Virtual Server and Packet Filter rules on the unit.

Schedule Rule		[ HELP ]
Item	Setting	
▶ Schedule	<input type="checkbox"/> Enable	
Rule#	Rule Name	Action
<input type="button" value="Save"/> <input type="button" value="Add New Rule..."/>		
Saved! The change will take effective immediately!		

To enable Scheduling please make sure to tick the Enable tick box at the top and click on Save. After that, create a new rule by pressing the Add New Rule button.

Schedule Rule Setting			[ HELP ]
Item	Setting		
▶ Name of Rule 1	<input type="text"/>		
Week Day	Start Time (hh:mm)	End Time (hh:mm)	
Sunday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Monday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Tuesday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Wednesday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Thursday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Friday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Saturday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
Every Day	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Back"/>			

Enter the Rule name and set the Start Time and End Time for each day. And then click Save to save the new rule. Once defined, you can use it for Virtual Server and Packet Filter by entering the rule number in Schedule Rule# Click Save to save the settings and Undo to cancel.

## Advanced Setting > Performance

This page give you option to change the wireless advance settings.

Wireless Performance Settings [ HELP ]	
Item	Setting
▶ Beacon Interval	<input type="text" value="100"/> (msec,range:1~1000,default 100)
▶ DTIM interval	<input type="text" value="3"/> (range: 1~65535,default 3)
▶ Wireless Mode	<input checked="" type="radio"/> mixed mode <input type="radio"/> G mode
▶ TX Rates	<input type="text" value="Auto"/> ▾
▶ SSID Broadcast	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
▶ Speed Enhanced Mode	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
▶ Antenna Transmit Power	<input type="text" value="100% (17dBm)"/> ▾
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

1. Beacon Interval. Beacons are packets sent by the unit to synchronize to wireless clients. The default value is set to 100 milliseconds and the acceptable value is 1 to 1000.
2. DTIM interval. The default value is set to 3 and the acceptable value is 1 to 65535. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages. When the unit has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. AP clients hear the beacons and awaken to receive the broadcast and multicast messages.
3. Wireless mode. Select wireless connection mode for wireless connection. G mode will only allows connection from wireless clients with 802.11g connection. Please use mixed mode unless you want to prevent older wireless (802.11b) adapter to connect.
4. TX Rates. Default rate is Auto and operates at 54Mbps data rate when possible but drop to lower rates when necessary, dependent on signal strength and the capacity of the wireless client station.
5. SSID Broadcast. Choose enable or disable the wireless SSID broadcast. By turning off the broadcast of the SSID, it is possible to make your wireless network nearly invisible.
6. Speed Enhanced Mode. This is Tx Burst function in only available for Ralink wireless solution.
7. Antenna Transmit Power: Default is 100% 17dbM. You can either increase or decreases the antenna transmit power.

Click Save to save the settings and Undo to cancel.

## Tool Box

The Tool Box page consists of various tools for the unit. Click on any of the menu on the left to access the respective page.

The screenshot displays the NetComm administrator interface. At the top, there is a navigation bar with 'ADMINISTRATOR'S MAIN MENU', 'Status', 'Wizard', and 'Logout'. Below this is a secondary menu with 'BASIC SETTING', 'FORWARDING RULES', 'SECURITY SETTING', 'ADVANCED SETTING', and 'TOOLBOX'. The 'TOOLBOX' menu is selected, and its contents are displayed in a central window. On the left side of the interface, a vertical menu lists various tools: 'System Info', 'Restore Setting', 'Firmware Upgrade', 'Backup Setting', 'Reset to Default', 'Reboot', and 'Miscellaneous'. A red box highlights the 'System Info' option in this menu.

**ADMINISTRATOR'S MAIN MENU**   Status   Wizard   Logout

BASIC SETTING   FORWARDING RULES   SECURITY SETTING   ADVANCED SETTING   **TOOLBOX**

**System Info**

Restore Setting

Firmware Upgrade

Backup Setting

Reset to Default

Reboot

Miscellaneous

**Toolbox**

- **System info**
  - View the system logs.
- **Restore Setting**
  - Prompt the administrator for a file and restore it to this device.
- **Firmware Upgrade**
  - Prompt the administrator for a file and upgrade it to this device.
- **Backup Setting**
  - Save the settings of this device to a file.
- **Reset to Default**
  - Reset the settings of this device to the default values.
- **Reboot**
  - Reboot this device.
- **Miscellaneous**
  - MAC Address for Wake-on-LAN: Let you to power up another network device remotely.

## Tool Box > System Info

From this page you can view the System log and the Routing Table of the unit.

System Information	
Item	Info
▶ Firmware Version	R7.00c2.071221
▶ Display Time	Tue Nov 30 17:55:24 1999
▶ Log Message	<input checked="" type="radio"/> System Log <input type="radio"/> Routing Table
System Log	
Time	Log
Nov 30 00:00:10	syslogd: syslogd started
Nov 30 00:00:10	boot: Machine restarting
Nov 30 00:00:11	cardmgr[706]: socket 0: ArrayComm ut02
Nov 30 00:00:11	cardmgr[706]: product info: 'Kyocera Corporation', 'Access Card'
Nov 30 00:00:11	cardmgr[706]: manfid: 0x02e3, 0x0002 function: 6 (network)
Nov 30 00:00:11	cardmgr[706]: executing: 'modprobe ib-pcmcia'

## Tool Box > Restore Setting

To restore the configuration from a file, browse the configuration file and then click the Restore button.

**Restore Setting**

**Config Filename**

Note! Do not power off the unit when it is being upgraded.  
 When the upgrade is done successfully, the unit will be restarted automatically.

*Notes: Please disable any anti virus or firewall program before doing restoring the settings.*



## Tool Box > Firmware Upgrade

To update your N3G002W firmware, browse the update image file or configuration file and then click the Upgrade button.

**Firmware Upgrade**

Firmware Filename

Current firmware version is R7.00a7 0710. The upgrade procedure takes about 140 seconds.

Note! Do not power off the unit when it is being upgraded.

When the upgrade is done successfully, the unit will be restarted automatically.

*Notes: Please disable any anti virus or firewall program before doing the firmware upgrade.*

## Tool Box > Backup Setting

To back up your settings to a file, click the Backup Setting button and save it as a bin file. When you want to restore those settings, please click Firmware Upgrade button and use the bin file.

## Tool Box > Reset to Default

To reset the unit back to factory default settings, click on the Reset to Default button and click OK. Please wait for a few minutes as the unit will reboot after resetting the configuration.

## Tool Box > Reboot

To reboot the unit manually, click the Reboot button and click OK.

## Tool Box > Miscellaneous

Wake-on-LAN is a technology that allows you to power up a network device remotely. In order to use this feature, the network device must be Wake-on-LAN enabled and you need to know the MAC address of the device. By entering the network device MAC address and click on Wake Up, the router will send a wake-up frame to the network device immediately.

Item	Setting
MAC Address for Wake-on-LAN	00-00-00-00-00-00 <input type="button" value="Wake up"/>

*Notes: This feature only works for local computer connected to the router.*

## TROUBLESHOOTING

This section provides an overview of common issues, and possible solutions for the installation and operation of the N3G002W Wireless Router.

### 1. Unable to access the Web Configuration when I use my computer to configure the router.

*Note: It is recommended that you use an Ethernet connection to configure the N3G002W.*

Ensure that the LAN light on the N3G002W Wireless router is ON.

If the light is NOT ON, check to see if the cable for the Ethernet connection is securely connected.

*Note: Ensure that the IP Address of the computer is in the same range and subnet as the N3G002W Wireless Router. The default IP Address of the N3G002Wireless Router is 192.168.123.254. All the computers on the local area network must have a unique IP Address within the same range (e.g., 192.168.123.x). All computers must also have the same subnet mask (e.g., 255.255.255.0).*

Do a Ping test to make sure that the N3G002W Wireless Router is responding.

- Click on Start > Run
- Type in CMD and press Enter.
- Type "ping 192.168.123.254" (without quotes). A successful ping will shows four replies.

*Note: If you have changed the default IP Address, ensure you ping the correct IP Address assigned to the N3G002Wireless Router.*

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

When the N3G002W Wireless Router unit is configured to use Wireless encryption (WEP, WPA/WPA2 or any encryption), you need to ensure that your wireless adapter settings matches the router settings. Please refer to your wireless adapter manual for additional information.

Ensure that the wireless client is associated and joined with the correct Access Point.

To check this connection (Windows XP), follow the steps below:

- Click on Start > Control Panel > Network Connection
- Right Click on Wireless Network connection
- Select View Available Wireless Networks. The Connect to Wireless Network screen appears. Ensure you have selected the correct wireless network.

Ensure the IP Address assigned to the wireless adapter is within the same subnet as the Access Point and gateway. The N3G002W Wireless Router has a default IP Address of 192.168.123.254. Wireless adapters must have an IP Address in the same range (e.g., 192.168.123.x). Although the subnet mask must be the same for all the computers on the network, no two devices may have the same IP Address. Therefore, each device must have a unique IP Address.

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

- Click on Start > Run
- Type in CMD and press Enter.
- Type in "ipconfig /all" and press Enter
- Type in "ping 192.168.123.254" to check if you can access the N3G002W

*Note: If you have changed the default IP Address, ensure you ping the correct IP Address assigned to the N3G002Wireless Router.*

### 3. Why does my wireless connection keep dropping?

Please try the following steps to improve the wireless signal quality.

- Antenna Orientation.
  - Try different antenna orientations for the N3G002W Wireless Router.
  - Try to keep the antenna at least 6 inches away from the wall or other objects.
- Try changing the channel on the N3G002W Wireless Router to a different channel to avoid interference. Please refer to Basic > Wireless section on page 27
- Keep your product away (at least 3-6 feet) from electrical devices that generate RF noise, like microwaves, monitors, electric motors, etc.

### 4. Can not establish a wireless connection?

*Note: An Ethernet connection is required to troubleshoot the N3G002W Wireless Router.*

When the N3G002W Wireless Router unit is configured to use Wireless encryption (WEP, WPA/WPA2 or any encryption), you need to ensure that your wireless adapter settings matches. Please refer to your wireless adapter manual for additional information.

- Move the N3G002W Wireless Router and the wireless client into the same room, and then test the wireless connection.
- Try to disable all security settings such as WEP, and MAC Address Control.
- Turn off the N3G002W and the client. And then turn the N3G002W back on again, and then turn on the client.
- Ensure that all devices are set to Infrastructure mode.
- Ensure that the LED indicators are indicating normal activity. If not, ensure that the AC power and Ethernet cables are firmly connected.
- Ensure that the IP Address, subnet mask, gateway and DNS settings are correctly entered on the computer.
- If you are using 2.4GHz cordless phones, X-10 equipment, or other home security systems, ceiling fans, or lights, your wireless connection may degrade dramatically, or drop altogether.
- To avoid interference, you can change the wireless Channel on the N3G002W Wireless Router.
- Keep your product at least 3-6 feet away from electrical devices that generate RF noise. Examples include: microwaves, monitors, electric motors, and so forth.

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

If you forgot your encryption key, the Wireless card will not be able to establish a connection to the N3G002W Wireless Router.

To reset the encryption key(s), login to the N3G002Wireless Router web configuration using an Ethernet connection. (Please refer to Basic > Wireless on page 27, for additional information).

## 6. How do I reset my N3G002W Wireless Router to its factory default settings?

To hard-reset the N3G002W Wireless Router its factory default settings, follow the steps listed below:

- Ensure that the router is powered on (for at least 20 seconds).
- Use a paper clip or a pencil tip to depress the reset button for ten seconds and release. At this point, the reset is in progress. Do not power off the unit at this point.
- After the router reboots, the default settings are now restored. This entire process takes several minutes to complete.
- Once you have reset the router to its default settings you will be able to access the device's web configuration using <http://192.168.123.254> with password "admin".

## 7. What is VPN?

- VPN stands for "Virtual Private Networking." VPN creates a "tunnel" through an existing Internet connection using PPTP (Point-to-Point Tunneling Protocol) or IPsec (IP Security) protocols with various encryption schemes including Microsoft Challenge Handshake Authentication Protocol (MS-CHAP).
- This feature allows you to use your existing Internet connection to connect to a remote site with added security.

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

- First, ensure that there is a solid cable connection between the Ethernet port on the N3G002W Wireless Router, and your NIC (Network Interface Card).
- Second, ensure that the settings on your NIC adapter are "Enabled," and set to accept an IP address from the DHCP (Please refer to Computer Hardware Configuration on page 9 for additional information).
- If all settings appear to be correct, ensure that you are not using a crossover Ethernet cable. Although the N3G002W Wireless Router is MDI/MDIX compatible, not all NIC are. Therefore, it is recommended that you use a straight through Ethernet cable when possible.

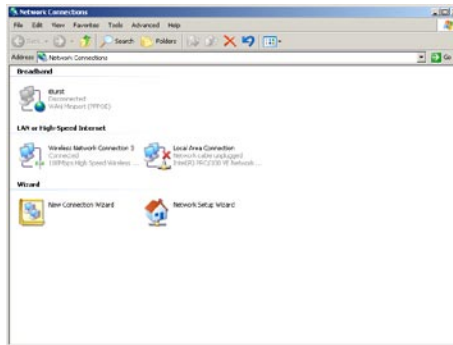
## APPENDIX A ESTABLISHING YOUR WIRELESS CONNECTION

The following examples use “wireless” as the SSID and 64bit WEP with “a1b2c3d4e5” as the encryption key.

### Windows XP service pack 2

Follow these steps:

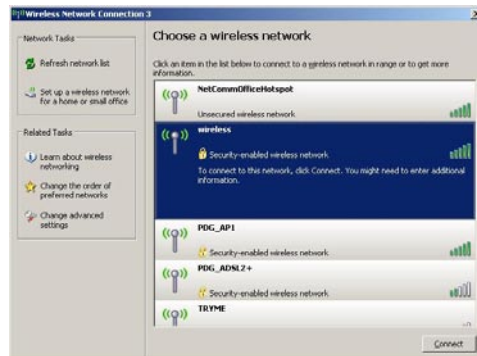
1. Open Network Connections (Start -> Control Panel -> Network Connections):



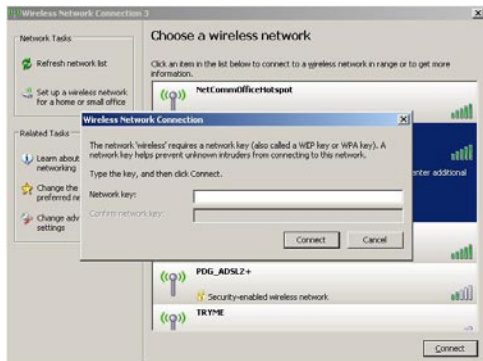
2. Right-click on your Wireless Network Connection and select View Available Wireless Networks:



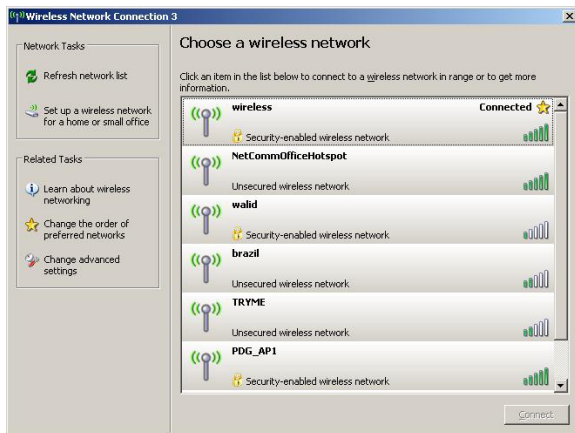
3. Select the wireless network you want to connect to and click Connect:



- Enter the network key ("a1b2b3d4e5") and click Connect:



- The connection will show Connected.



## Mac OSX 10.4

Follow these steps:

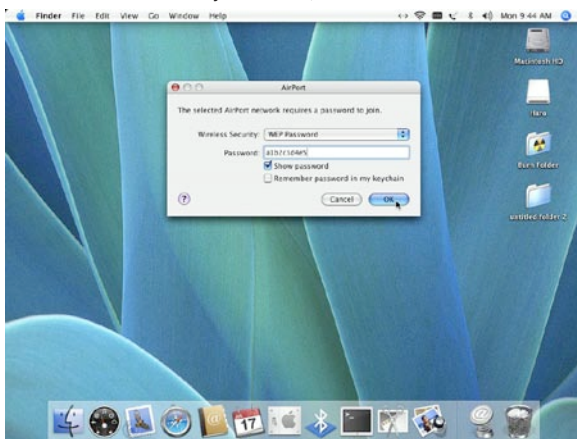
1. Click on the Airport icon on the top right menu.



2. Click on the network name that you want to connect. This example uses "wireless" as the network name.



3. On the new window, tick on Show Password and type in the network key in the Password field. This example uses "a1b2c3d4e5" as the key. After that, click on OK.



4. To check the connection, click on the Airport icon and there should be a tick on the wireless name.

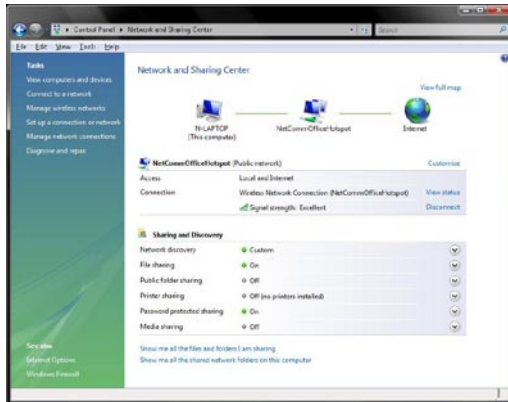




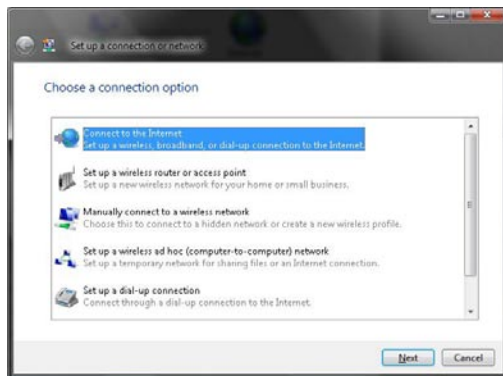
## Windows Vista

Follow these steps:

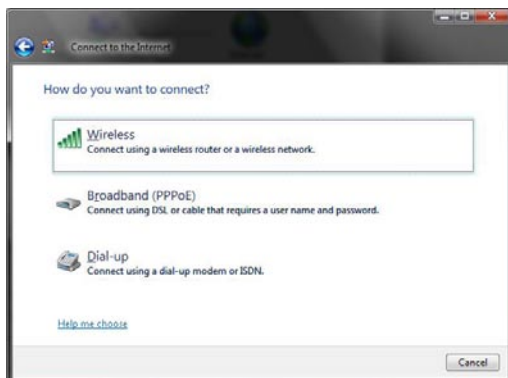
1. Open Network and Sharing Center (Start > Control Panel > Network and Sharing center).



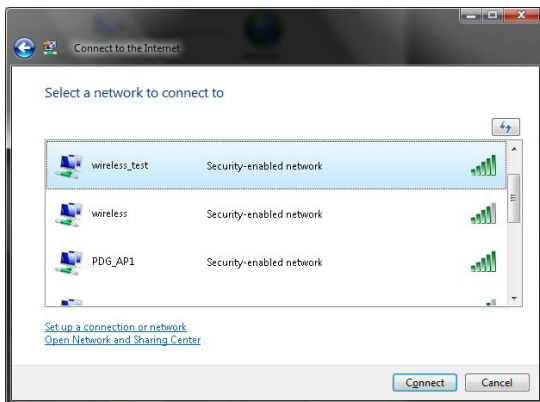
2. Click on "Connect to a network".



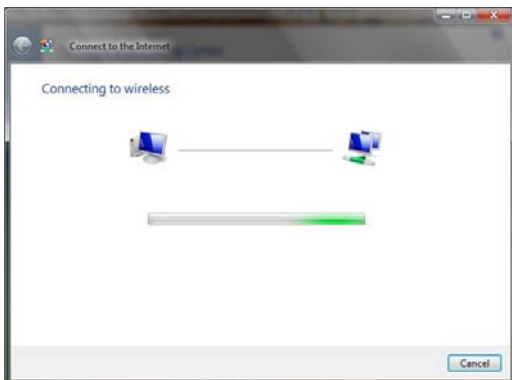
3. Choose "Connect to the Internet" and click on "Next".



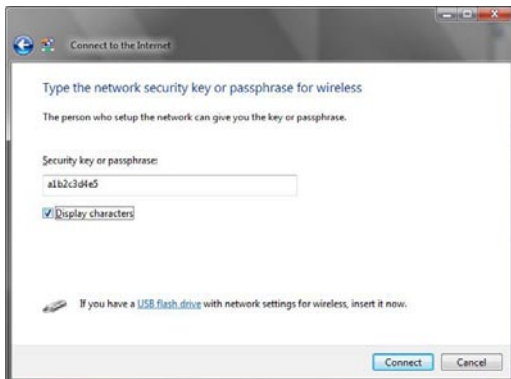
4. Choose "Wireless".



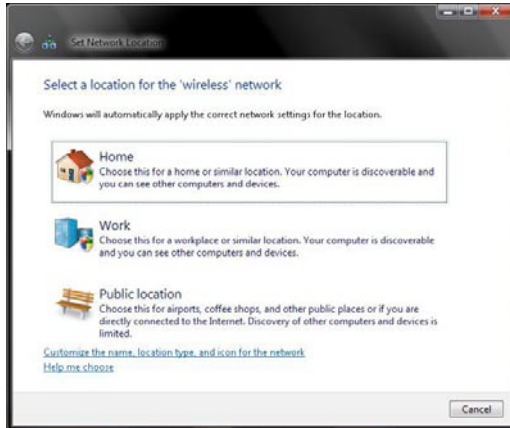
5. Click on the wireless network name. In this example, the wireless network name is "wireless" and click "Connect".



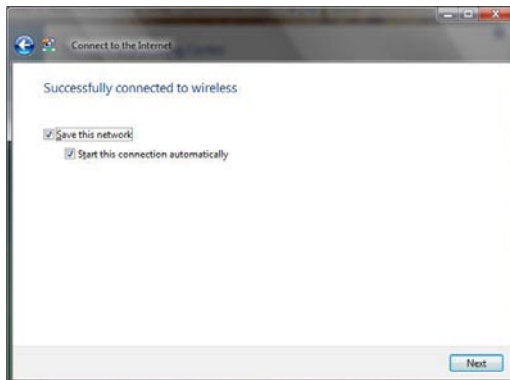
6. Tick on "Display Characters" and type in the network key. This example uses "a1b2c3d4e5" as key. Click "Next" after that.



7. Select the appropriate location. This will affect the firewall settings on the computer.



8. Tick on both "Save this network" and "Start this connection automatically" and click on "Next".



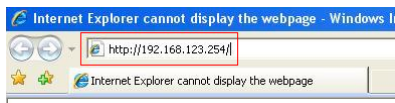
9. Now the connection is ready.



*Notes: For other operating system such as Windows 98SE, Windows ME and Windows 2000 or if you use the wireless adaptor utility to configure your wireless connection, please consult the wireless adapter documentation for additional information.*

## APPENDIX B HOW TO CONFIGURE WEP/WPA-PSK WIRELESS SECURITY

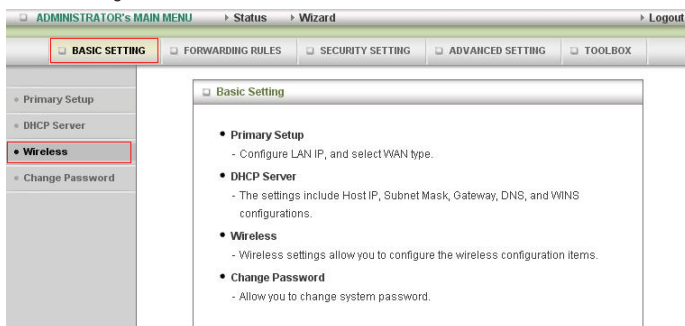
1. Open your web browser (i.e. Internet Explorer or Firefox) and navigate to <http://192.168.123.254/>.



2. At the login screen, type in admin in the System Password field. Then click on Login.



3. Click on Basic Setting and then click on Wireless.



4. After that you will be presented with the wireless setting page. On this page you can configure the wireless security.



5. To use WEP, please configure the following:

- Change Security to WEP
- Change WEP Encryption to 64bit or 128bit (This example uses 64bit)

*Notes: 64 bit needs 10 digits key and 128 bit needs 26 digits key.*

- Type in the key in Key 1 field (This example uses “a1b2c3d4e5” key)

*Notes: WEP key can only use numbers from 0 to 9 and letters from A to F.*

- Click on Save to save the settings

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	default
Channel	11
Security	WEP
WEP Encryption	<input checked="" type="radio"/> 64 bit <input type="radio"/> 128 bit
Key 1	<input checked="" type="radio"/> HEX <input type="radio"/> ASCII a1b2c3d4e5
Key 2	<input type="radio"/> HEX <input type="radio"/> ASCII
Key 3	<input type="radio"/> HEX <input type="radio"/> ASCII
Key 4	<input type="radio"/> HEX <input type="radio"/> ASCII

5 or 13 ascii characters eg: passd or thisisapasswd  
10 or 26 hexadecimal characters eg: 0123456789 or 01234567890123456789012345

6. To use WPA, please configure the following:

- Change Security to WPA-PSK
- Change Encryption Type to TKIP
- Enter the WPA key in the Passphrase field.

*Notes: The key needs to be more than 8 characters and less than 63 characters and it can be any combination of letters and numbers.*

- Click Save to save the settings

*Notes: Wireless client network cards must be WPA-compliant to connect to a WPA enable network, if in doubt check the wireless client network card documentation, or use WEP security.*

Wireless Settings [ HELP ]	
Item	Setting
Wireless	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WMM Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
SSID	default
Channel	11
Security	WPA-PSK
Encryption Type	<input checked="" type="radio"/> TKIP <input type="radio"/> AES
Passphrase	examplesecurity

*Notes: After changing the security settings, you might need to remove the current wireless settings on the computer and reconfigure the wireless computer according to the new settings.*

## APPENDIX C LEGAL & REGULATORY INFORMATION

This manual is copyright. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced, stored in a retrieval system or transmitted in any form, by any means, be it electronic, mechanical, recording or otherwise, without the prior written permission of NetComm Limited. NetComm Limited accepts no liability or responsibility, for consequences arising from the use of this product.

NetComm Limited reserves the right to change the specifications and operating details of this product without notice.

NetComm is a registered trademark of NetComm Limited.

All other trademarks are acknowledged the property of their respective owners.

### Customer Information

ACA (Australian Communications Authority) requires you to be aware of the following information and warnings:

- (1) This unit shall be connected to the Telecommunication Network through a line cord which meets the requirements of the ACA TS008 Standard.
- (2) This equipment has been tested and found to comply with the Standards for C-Tick and/or A-Tick as set by the ACA. These standards are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio noise and, if not installed and used in accordance with the instructions detailed within this manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur with the installation of this product in your home or office. If this equipment does cause some degree of interference to radio or television reception, which can be determined by turning the equipment off and on, we encourage the user to try to correct the interference by one or more of the following measures:
  - Change the direction or relocate the receiving antenna.
  - Increase the separation between this equipment and the receiver.
  - Connect the equipment to an alternate power outlet on a different power circuit from that to which the receiver/TV is connected.
  - Consult an experienced radio/TV technician for help.
- (3) The power supply that is provided with this unit is only intended for use with this product. Do not use this power supply with any other product or do not use any other power supply that is not approved for use with this product by NetComm. Failure to do so may cause damage to this product, fire or result in personal injury.

## Product Warranty

The warranty is granted on the following conditions:

1. This warranty extends to the original purchaser (you) and is not transferable;
2. This warranty shall not apply to software programs, batteries, power supplies, cables or other accessories supplied in or with the product;
3. The customer complies with all of the terms of any relevant agreement with NetComm and any other reasonable requirements of NetComm including producing such evidence of purchase as NetComm may require;
4. The cost of transporting product to and from NetComm's nominated premises is your responsibility; and,
5. NetComm does not have any liability or responsibility under this warranty where any cost, loss, injury or damage of any kind, whether direct, indirect, consequential, incidental or otherwise arises out of events beyond NetComm's reasonable control. This includes but is not limited to: acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, electricity outages, lightning, power surges, or shortages of materials or labour.
6. The customer is responsible for the security of their computer and network at all times. Security features may be disabled within the factory default settings. NetComm recommends that you enable these features to enhance your security.

The warranty is automatically voided if:

1. You, or someone else, use the product, or attempts to use it, other than as specified by NetComm;
2. The fault or defect in your product is the result of a voltage surge subjected to the product either by the way of power supply or communication line, whether caused by thunderstorm activity or any other cause(s);
3. The fault is the result of accidental damage or damage in transit, including but not limited to liquid spillage;
4. Your product has been used for any purposes other than that for which it is sold, or in any way other than in strict accordance with the user manual supplied;
5. Your product has been repaired or modified or attempted to be repaired or modified, other than by a qualified person at a service centre authorised by NetComm; and,
6. The serial number has been defaced or altered in any way or if the serial number plate has been removed.

## Limitations of Warranty

The Trade Practices Act 1974 and corresponding State and Territory Fair Trading Acts or legalisation of another Government ("the relevant acts") in certain circumstances imply mandatory conditions and warranties which cannot be excluded. This warranty is in addition to and not in replacement for such conditions and warranties.

To the extent permitted by the Relevant Acts, in relation to your product and any other materials provided with the product ("the Goods") the liability of NetComm under the Relevant Acts is limited at the option of NetComm to:

- Replacement of the Goods; or
- Repair of the Goods; or
- Payment of the cost of replacing the Goods; or
- Payment of the cost of having the Goods repaired.

All NetComm ACN 002 490 486 products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option (refer to packaging). To be eligible for the extended warranty you must supply the requested warranty information to NetComm within 30 days of the original purchase by registering on-line via the NetComm web site at

**[www.netcomm.com.au](http://www.netcomm.com.au)**

## Product Warranty

NetComm products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option, via registering your product online at the NetComm website [www.netcomm.com.au](http://www.netcomm.com.au). Refer to the User Guide for complete product warranty conditions, limitations of warranty and other legal and regulatory information.

## Contact Information

If you have any technical difficulties with your product, please do not hesitate to contact NetComm's Customer Support Department.

**Email:** [support@netcomm.com.au](mailto:support@netcomm.com.au)

## [www.netcomm.com.au](http://www.netcomm.com.au)

Note: NetComm Technical Support for this product only covers the basic installation and features outlined in the Quick Start Guide. For further information regarding the advanced features of this product, please refer to the configuring sections in the User Guide or contact a Network Specialist.

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