



MIMO XR™ Wireless Broadband Router

Model # AR525W

User's Manual

Ver. 1B

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1. Introduction

Congratulations on your purchase of this MIMO XR™ Wireless Broadband Router. The MIMO XR™ Wireless Broadband Router allows Internet sharing and creates a dynamic wireless network for you to access your network with greater mobility. When used with other Airlink101™ MIMO XR™ wireless products, the wireless signal range extends farther than standard 802.11g products. Best of all the MIMO XR™ Wireless Broadband Router is backwards-compatible with existing 802.11g and 802.11b network devices.

This product is specifically designed for Small Office and Home Office needs. It provides a complete SOHO solution for Internet surfing and is easy to configure and operate even for non-technical users. Instructions for installing and configuring this product can be found in this manual. Before you install and use this product, please read this manual carefully for proper operation of this product.

Package Contents

Before you begin the installation, please check the items of your package:

- One MIMO XR™ Wireless Broadband Router
- One RJ-45 cable
- Three Detachable Antennas
- One Power Adapter
- One Quick Installation Guide
- One Manual CD

If any item contained is damaged or missing, please contact your local dealer immediately. Also, keep the box and packaging materials in case you need to ship the unit in the future.

2. Connecting the Router

Note: Prior to connecting the router, be sure to power off your computer, DSL/Cable modem, and the router. To achieve maximum wireless coverage, tilt the router's antennas outward at 45° angle.

Step 1 Connect one end of a network cable to the **WAN** port of the router and connect the other end of the cable to the DSL/Cable modem.

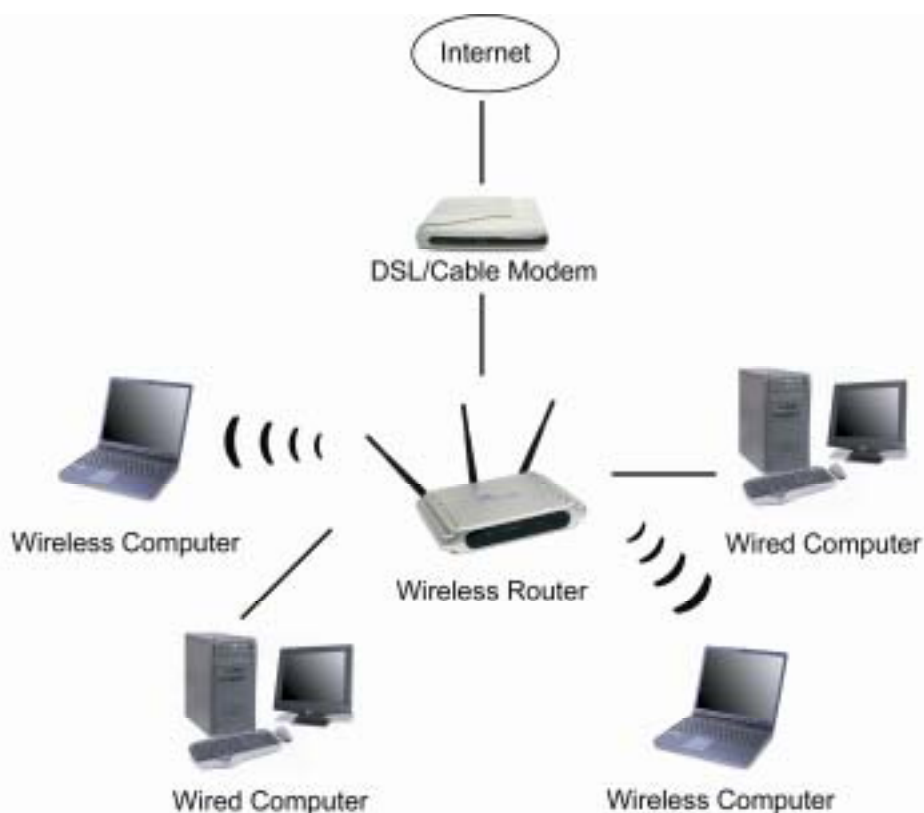
Step 2 With another network cable, connect one end of the cable to your computer's network card and connect the other end to one of the **LAN** ports of the router.

Step 3 Power on the DSL/Cable modem and wait for the lights on the modem to settle down.

Step 4 Power on the router by connecting one end of the supplied power adapter to the power jack of the router and connecting the other end to an electrical outlet.

Step 5 Power on your computer.

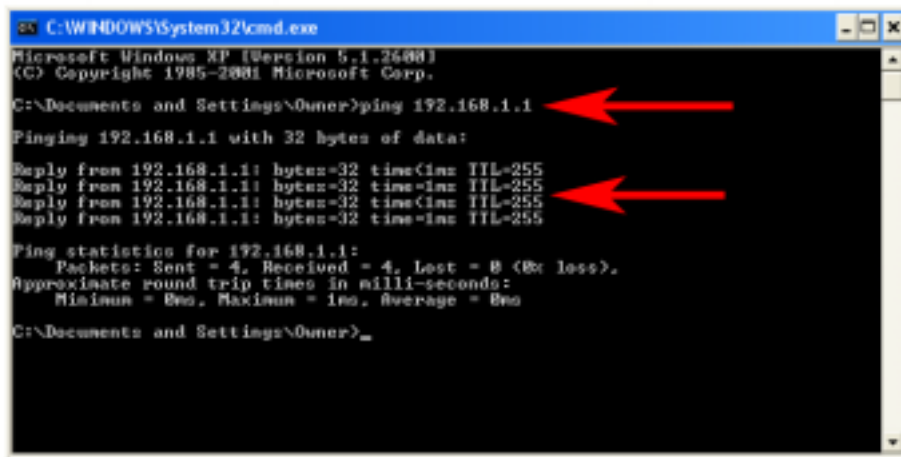
Step 6 Make sure the **WAN**, **WLAN**, and the **LAN** ports that the computer is connected to are lit. If not, try the above steps again.



3. Verifying Connection to the Router

Step 1 Go to **Start, Run**, type **command** (for Windows 95/98/ME) or **cmd** (for Windows 2000/XP) and click **OK**. You will see the command prompt as below.

Step 2 Type **ping 192.168.1.1** and press **Enter**. You should get four reply responses back.



```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

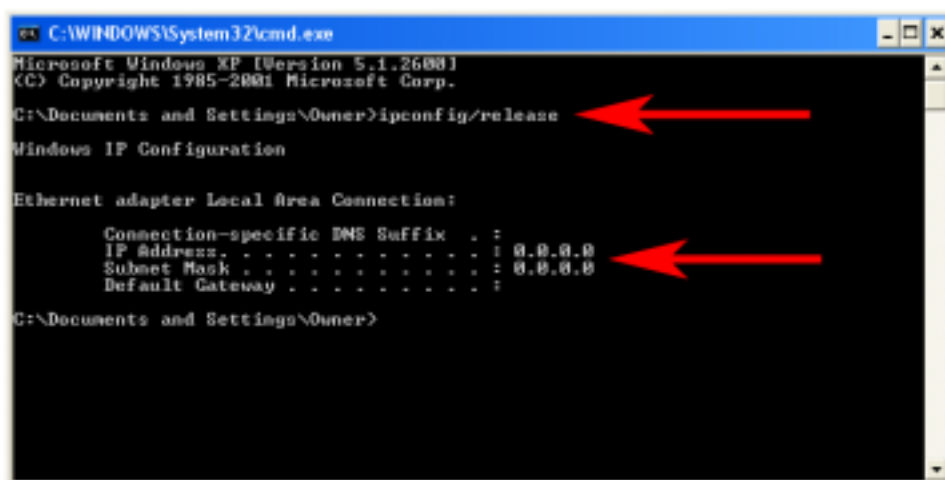
C:\Documents and Settings\Owner>ping 192.168.1.1
Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Documents and Settings\Owner>
```

Step 3 If you get **Request timed out**, or **Destination host unreachable**, double-check the network cable connection between the computer and the router and try **Step 2** again. If you still encounter problem, go to the next step; otherwise proceed to **Section 3, Configure the Router**.

Step 4 For Windows 2000/XP, type **ipconfig/release** and press **Enter**.



```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

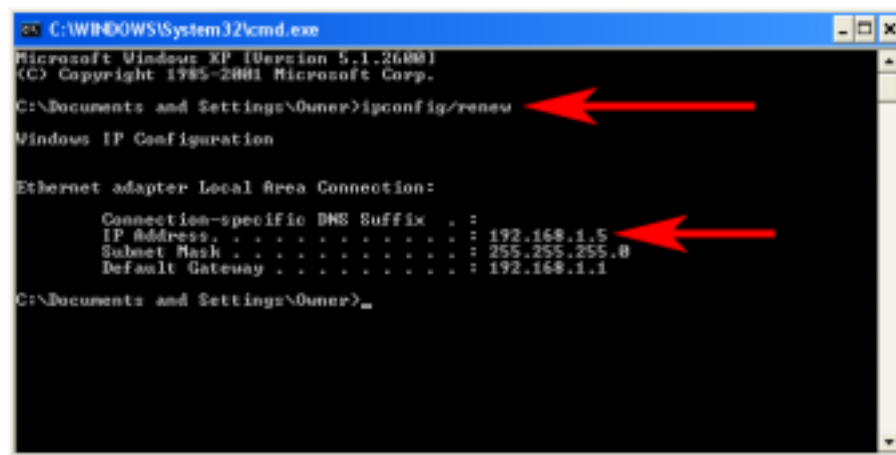
C:\Documents and Settings\Owner>ipconfig/release
Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    IP Address. . . . . : 0.0.0.0
    Subnet Mask . . . . . : 0.0.0.0
    Default Gateway . . . . . : 

C:\Documents and Settings\Owner>
```

Step 5 Type **ipconfig/renew** and press **Enter**. You should get an IP address of **192.168.1.x** (where x is a number between 2 - 254). Proceed to **Section 3, Configure the Router**. If you don't get an IP address, reset the router by holding in the reset button at the back of the router for 10 seconds while it is ON and try **ipconfig/renew** again.



```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Owner>ipconfig/renew

Windows IP Configuration

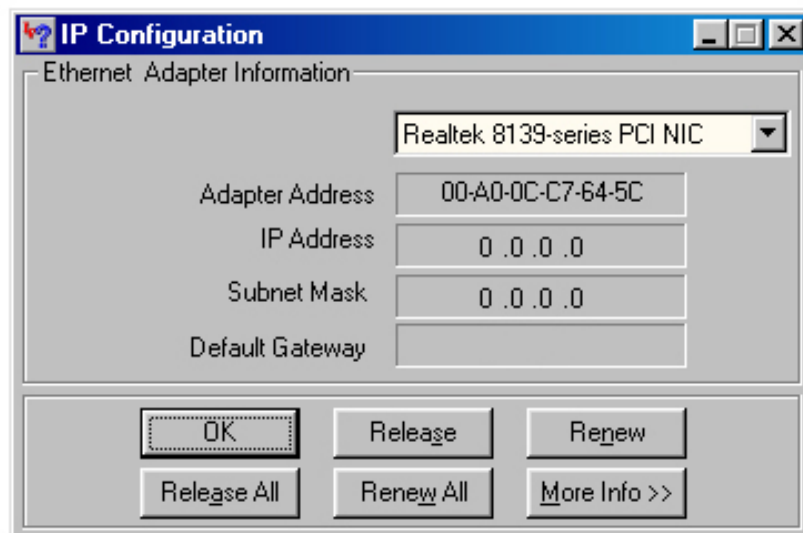
Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : 
    IP Address . . . . . : 192.168.1.5
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

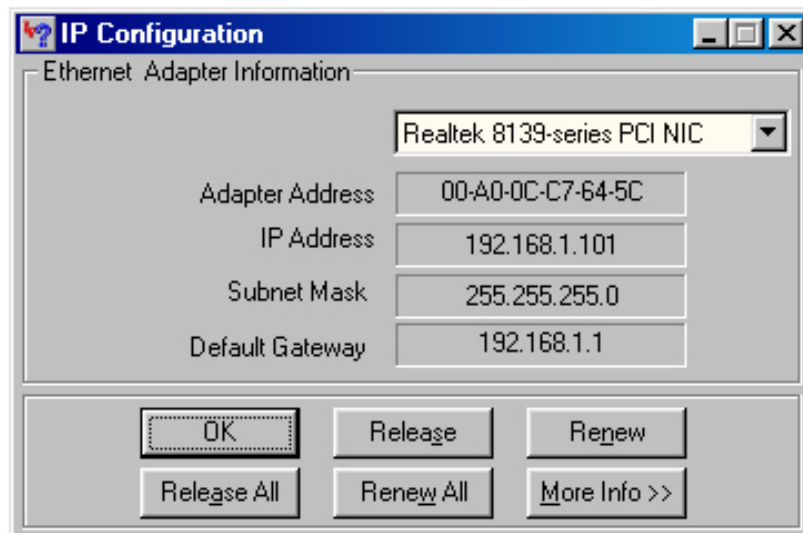
C:\Documents and Settings\Owner>
```

Step 6 For Windows 95/98/ME go to **Start, Run**, type **winipcfg** and click **OK**.

Step 7 Select your network card from the drop-down menu and click **Release**.

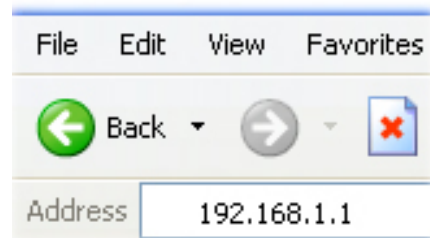


Step 8 After your IP address is released, click **Renew**. You should get an IP address of **192.168.1.x** (where **x** is a number between 2 - 254). If you don't get an IP address, reset the router by holding in the reset button at the back of the router for 10 seconds while it is ON and try **Renew** again.



4. Configuring the Router

Step 1 Open the web browser and type **192.168.1.1** in the URL Address field and press **Enter**.



Step 2 Enter **admin** for both the username and password fields and click **OK**.



Cable Modem

For most cable modem users, you should be able to connect to the Internet without any configuration. If your ISP has provided you with a host name, enter it in the optional **Host Name** field. Click **Apply** to save the setting.

The screenshot shows the AIRLINK 101 web interface. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Applications Gaming, Administration, and Status. The 'Setup' tab is active, and the 'Basic Setup' sub-tab is selected. The 'Internet Setup' section is visible on the left. The 'Internet Connection Type' is set to 'Automatic Configuration - DHCP'. The 'Optional Settings (required by some Internet Service Providers)' section is expanded, showing the 'Host Name' field highlighted with a red box. The 'Domain Name' is set to 'airlink101', and the 'MTU' is set to 'Auto' with a size of '1500'.

If your ISP requires a registered MAC Address, click on the **MAC Address Clone** tab, select **Enabled**, and click on the **Clone My PC's MAC** button. Click **Apply** to save the setting.

The screenshot shows the AIRLINK 101 web interface with the 'MAC Address Clone' tab selected. The 'MAC Address Clone' section is visible on the left. The 'Enabled' radio button is selected and highlighted with a red box. The 'MAC Clone Address' field shows a default value of '00 . 00 . 00 . 00 . 00 . 00'. The 'Clone My PC's Mac' button is highlighted with a red box. The 'Apply' and 'Cancel' buttons are at the bottom, with 'Apply' highlighted by a red box.

If you have trouble connecting to the Internet, please refer to the **Troubleshooting** section at the end of this guide.

DSL

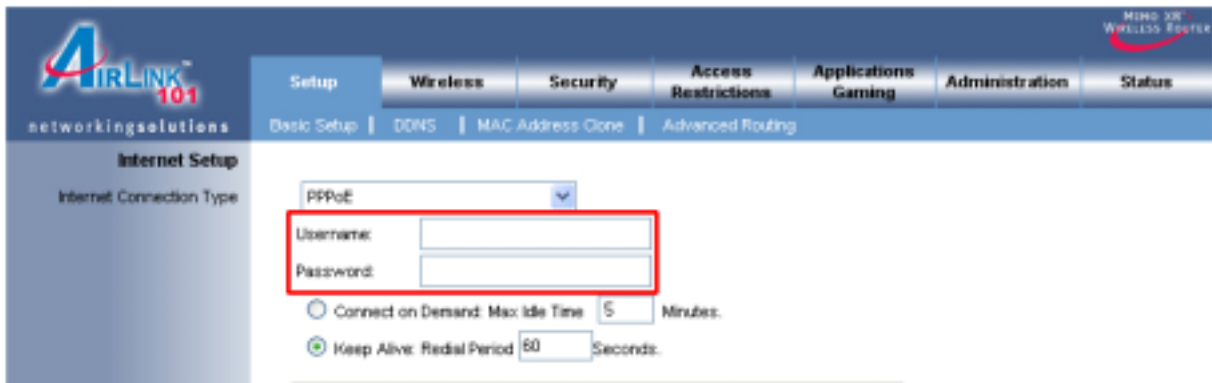
For DSL users, follow the steps below to configure the router.

Step 1 Select **PPPoE** from the drop-down menu.



The screenshot shows the 'Internet Setup' page of the AIRLINK 101 router. The 'Internet Connection Type' dropdown menu is open, displaying the following options: Automatic Configuration - DHCP, Automatic Configuration - DHCP, Static IP, PPPoE (highlighted), PPTP, and Heart Beat Signal. The MTU is set to Auto and the Size is 1500.

Step 2 Enter your username and password provided by your ISP.



The screenshot shows the 'Internet Setup' page of the AIRLINK 101 router. The 'Internet Connection Type' is set to PPPoE. The 'Username' and 'Password' fields are highlighted with a red box. Below these fields are options for 'Connect on Demand' and 'Keep Alive'.

Note: Depending on the ISP, you may need to include the domain name with your username.

Example: username@sbcglobal.net

Step 3 Click **Apply** to save the setting.

If you have trouble connecting to the Internet, please refer to the **Troubleshooting** section at the end of this manual.

5. Connecting to the Router Wirelessly

Below are the default wireless settings of the router. You must configure your wireless network card to the same settings in order to establish a wireless connection to the router. Please refer to your wireless network card's manual on how to configure these settings.

SSID (Network Name): **default**

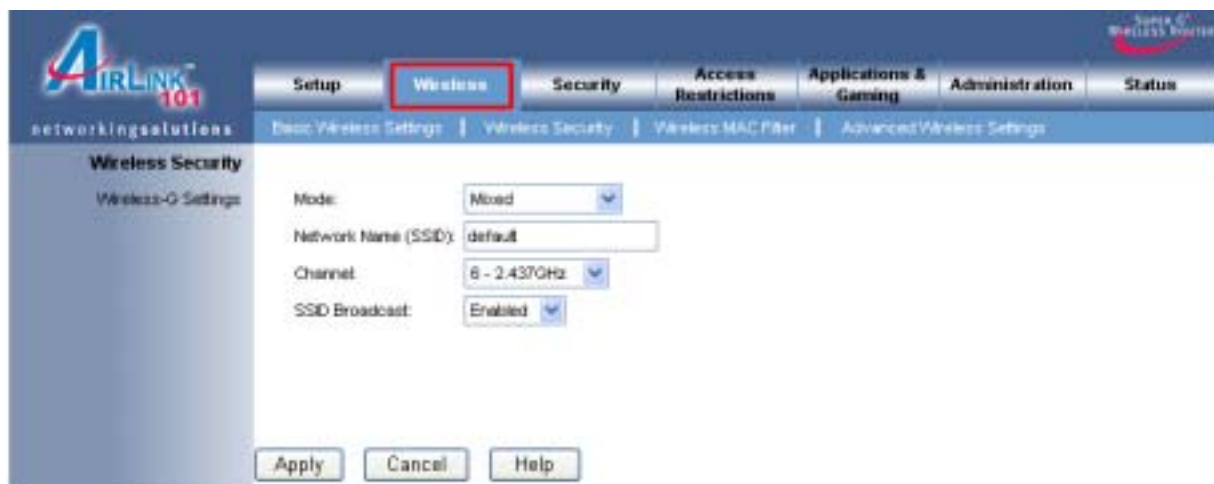
Operating Mode: **Infrastructure**

Authentication: **Auto**

Channel #: **6**

Encryption: **Disabled**

If you want to change the router's wireless settings, log in to the router and select the **Wireless** tab. Be sure to click **Apply** to save the setting.



6. Web Configuration Utility

This router has a built-in web configuration utility that you can use to configure the router's settings. Simply log in to the router using your computer's web browser.

6.1 Setup

6.1.1 Basic Setup

This is the default screen when you log in to the router's web configuration utility. You can setup your Internet connection here as well as configuring the DHCP settings and selecting your Time Zone.

The screenshot shows the 'Basic Setup' page of the Airtlink 101 web configuration utility. The page has a blue header with the 'Airtlink 101' logo and navigation tabs for Setup, Wireless, Security, Access Restrictions, Applications, Administration, and Status. The 'Setup' tab is active, and the 'Basic Setup' sub-tab is selected. The page is divided into three main sections: Internet Setup, Network Setup, and Time Settings. The Internet Setup section includes 'Internet Connection Type' (set to 'Automatic Configuration - DHCP'), 'Host Name', 'Domain Name' (set to 'Airtlink101'), and 'MTU' (set to 'Auto'). The Network Setup section includes 'Router IP' (set to '192.168.1.1') and 'Subnet Mask' (set to '255.255.255.0'). The DHCP Server Setting section includes 'DHCP Server' (set to 'Enabled'), 'Start IP Address' (set to '192.168.1.100'), 'Maximum Number of Users' (set to '60'), 'IP Address Range' (set to '192.168.1.100-140'), 'Client Lease Time' (set to '0 minutes'), and 'Static DNS' (set to '0.0.0.0'). The Time Settings section includes 'Time Zone' (set to '(GMT-08:00) Pacific Time (USA & Canada)') and a checkbox for 'Automatically adjust clock for daylight saving changes'. At the bottom of the page are 'Apply' and 'Cancel' buttons.

Internet Setup

Internet Connection Type: Automatic Configuration - DHCP

Optional Settings (required by some Internet Service Providers)

Host Name:

Domain Name: Airtlink101

MTU: Auto Size: 1500

Network Setup

Router IP

Local IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

DHCP Server Setting

DHCP Server: ☒ Enabled ☐ Disabled Static DHCP

Start IP Address: 192.168.1.100

Maximum Number of Users: 60

IP Address Range: 192.168.1.100-140

Client Lease Time: 0 minutes (0 means one day)

Static DNS 1: 0.0.0.0

Static DNS 2: 0.0.0.0

Static DNS 3: 0.0.0.0

WINS: 0.0.0.0

Time Settings

Time Zone: (GMT-08:00) Pacific Time (USA & Canada)

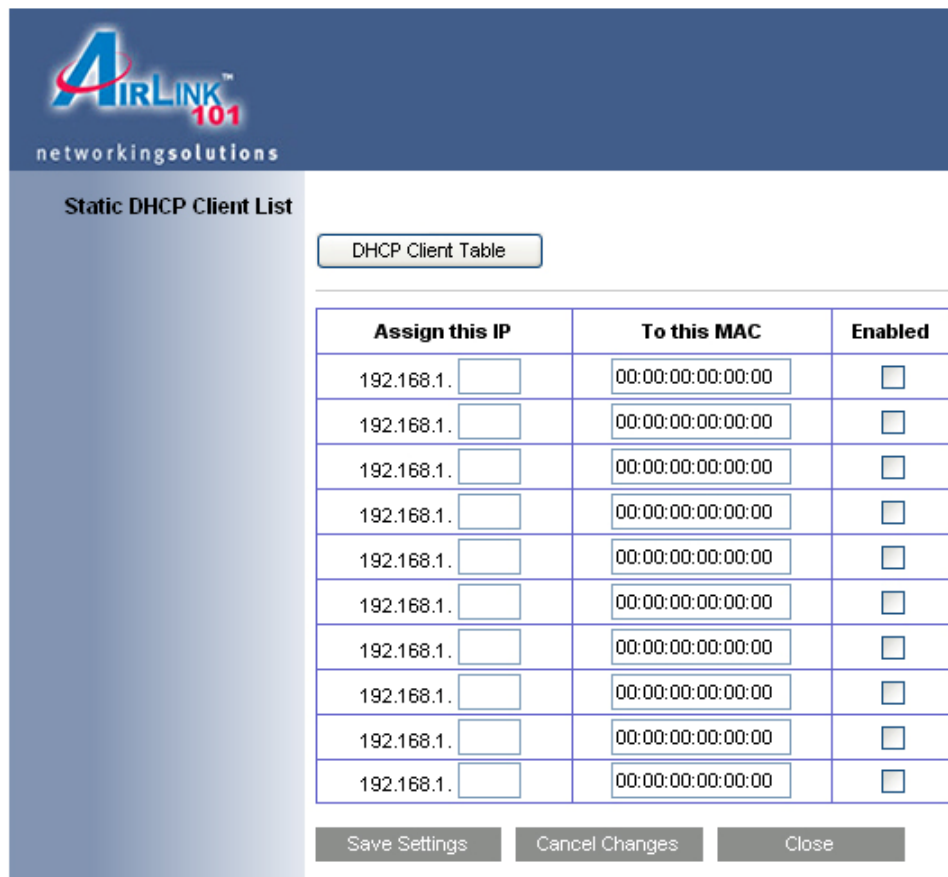
☐ Automatically adjust clock for daylight saving changes

Apply Cancel

Remember to click **Apply** to save your changes.

Assigning Static IP Address

If you want to assign a static IP Address to one of the computers in your network, click on the **Static DHCP** button.



AIRLINK 101
networkingsolutions

Static DHCP Client List

DHCP Client Table

Assign this IP	To this MAC	Enabled
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐
192.168.1.	00:00:00:00:00:00	☐

Step 1 Enter the Static IP Address in the **Assign this IP** field.

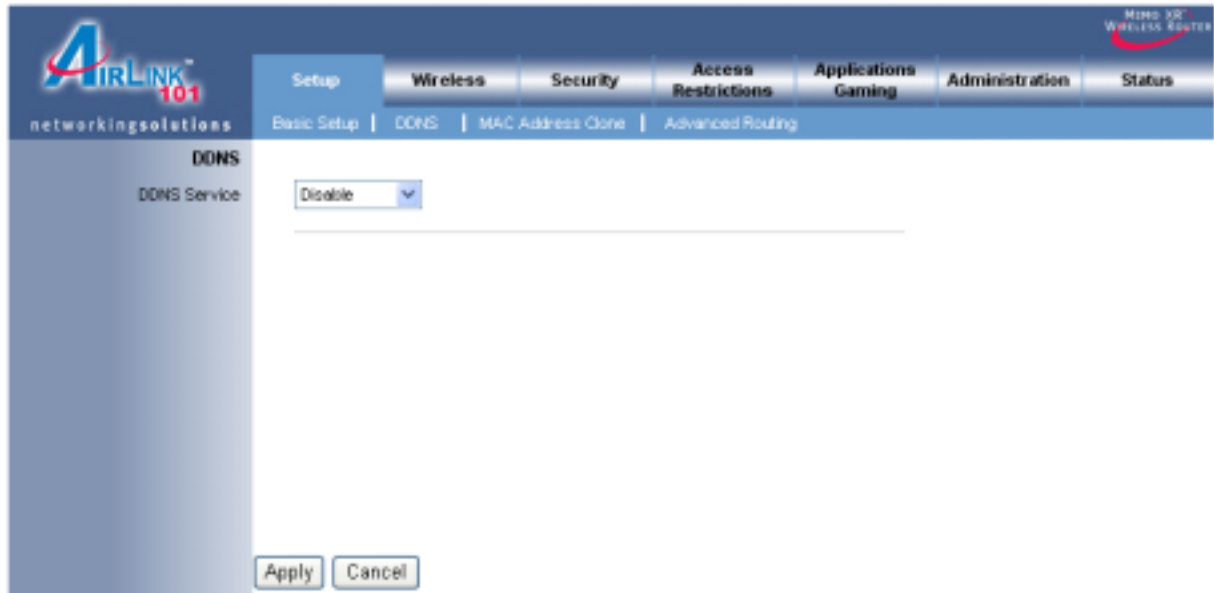
Step 2 Enter the MAC address of the corresponding computer in the **To this MAC** field.

Step 3 Check the **Enabled** box.

Step 4 Click **Save Settings**.

6.1.2 DDNS

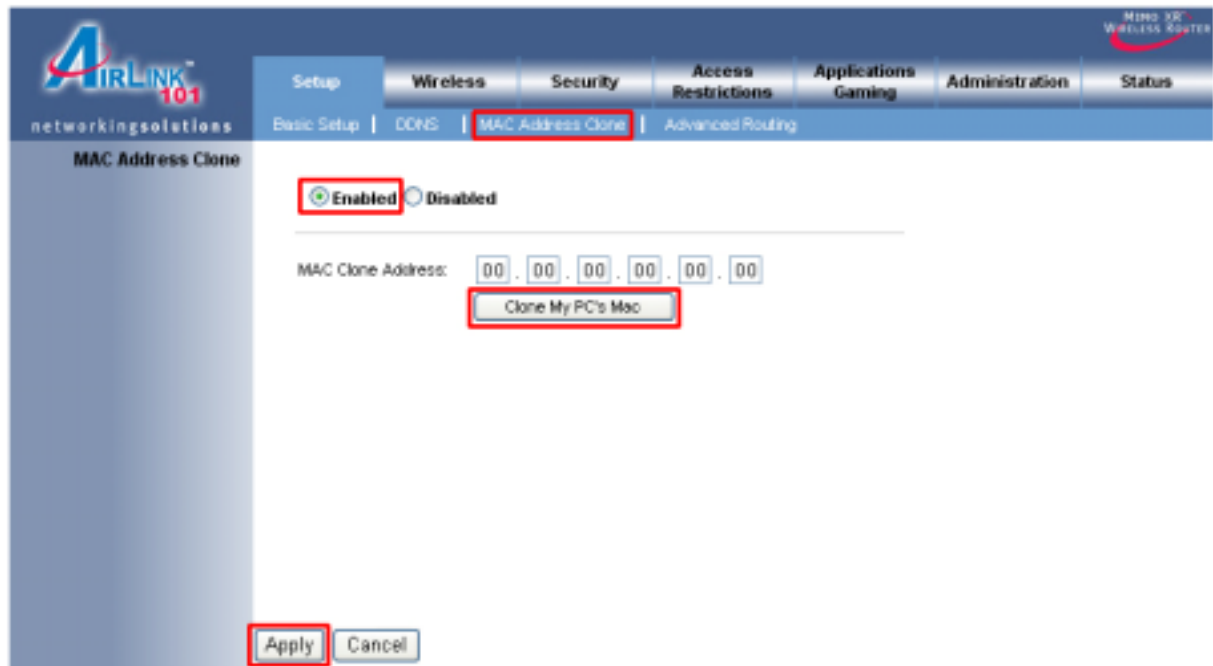
Dynamic DNS (DDNS) allows any user who wishes to access your server to reach it by a registered DNS name instead of an IP address. Before you enable **DDNS**, you need to register an account with one of the DDNS providers listed in the drop-down menu.



To Enable DDNS, select the DDNS provider you have registered with and enter the required fields. Click **Apply** to save the setting.

6.1.3 MAC Address Clone

Some ISPs require a registered MAC address to access the Internet. You can use the following steps to clone your PC's registered MAC address to access the Internet.



Step 1 Select **Enabled** from the drop-down menu.

Step 2 Click the **Clone My PC's MAC** button.

Step 3 Click **Apply** to save the setting.

6.1.4 Advanced Routing

You can configure your own static routing table using the Advanced Routing function.

The screenshot shows the 'Advanced Routing' configuration page for the AIRLINK 101 router. The page has a blue header with the 'AIRLINK 101' logo and 'networkingsolutions' text. A navigation bar at the top includes 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications Gaming', 'Administration', and 'Status'. Below this, a sub-navigation bar shows 'Basic Setup', 'DNS', 'MAC Address Clone', and 'Advanced Routing'. The left sidebar lists 'Advanced Routing', 'NAT', 'Dynamic Routing (RIP)', and 'Static Routing'. The main content area is for 'Static Routing' and includes radio buttons for 'Enabled' and 'Disabled' (both are disabled), a section for 'Route Entries' with a dropdown menu (set to '1'), a 'Delete This Entry' button, and input fields for 'Enter Route Name:', 'Destination LAN IP:', 'Subnet Mask:', and 'Gateway:'. Each of these fields is a 4-digit input box. The 'Interface:' dropdown is set to 'LAN & Wireless'. A 'Show Routing Table' button is located below the interface dropdown. At the bottom of the page are 'Apply' and 'Cancel' buttons.

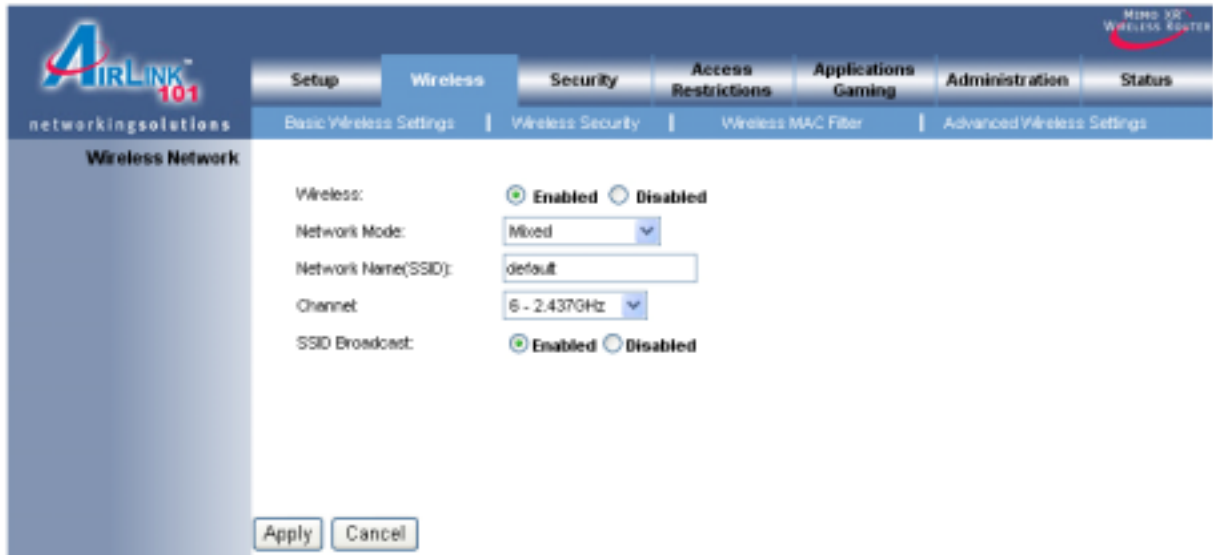
To see the current routing table, click on **Show Routing Table** button.

Be sure to click **Apply** to save each entry.

6.2. Wireless

6.2.1 Basic Wireless Settings

You can configure the router's basic wireless settings on this screen.



The screenshot shows the 'Basic Wireless Settings' page of the AIRLINK 101 router's web interface. The page has a blue header with the 'AIRLINK 101' logo and a navigation bar with tabs: Setup, Wireless (selected), Security, Access Restrictions, Applications Gaming, Administration, and Status. Below the navigation bar, there are sub-tabs: Basic Wireless Settings, Wireless Security, Wireless MAC Filter, and Advanced Wireless Settings. The main content area is titled 'Wireless Network' and contains the following settings:

- Wireless:** A radio button group with 'Enabled' selected and 'Disabled' unselected.
- Network Mode:** A dropdown menu set to 'Mixed'.
- Network Name(SSID):** A text input field containing 'default'.
- Channel:** A dropdown menu set to '6 - 2.437GHz'.
- SSID Broadcast:** A radio button group with 'Enabled' selected and 'Disabled' unselected.

At the bottom of the settings area are 'Apply' and 'Cancel' buttons.

Wireless: Select to Enable or Disable the wireless feature of the router.

Network Mode: Choose from Mixed (B & G), Wireless-B only, and Wireless-G only.

Network Name (SSID): You can change the router's SSID in this field. Once you have changed the SSID, your network clients need to re-connect themselves using the new SSID.

Channel: Select the desired channel. All the network clients need to use the same channel.

SSID Broadcast: Choose to enable or disable the broadcast of your SSID.

6.2.2 Wireless Security

You can configure wireless security such as WEP or WPA encryption on this screen.

Note: It is recommended that you use WPA encryption over WEP if your wireless clients support WPA. All of the wireless clients must use the same security settings in order to connect to the router.

WEP

To enable WEP, select **WEP** from the **Security Mode**.

Encryption: Choose from **64 bits** or **128 bits**

Passphrase: You can enter a passphrase and click on the **Generate** button and the router will automatically generate four WEP keys for you.

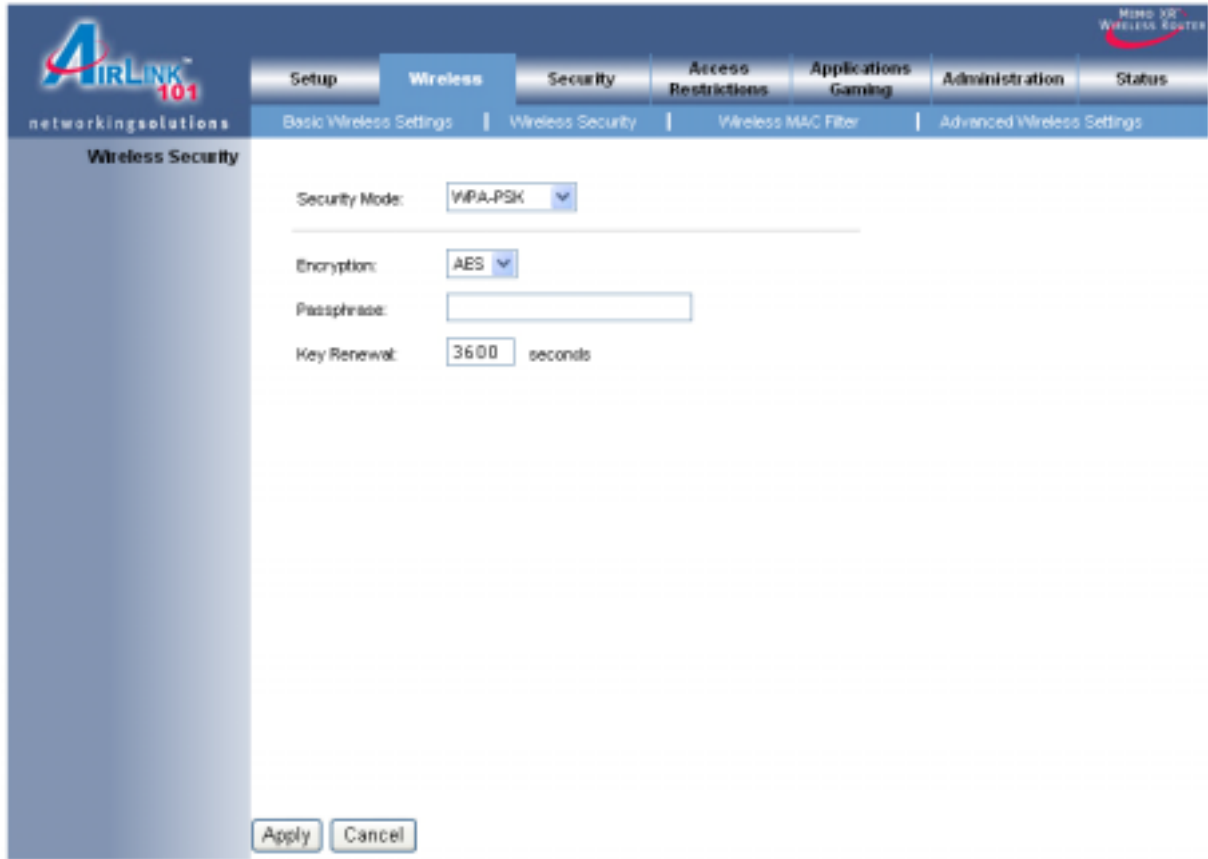
WEP Key 1 – 4: Manually assign a passphrase for each key. If you selected **64 bits** encryption, enter **10** HEX characters (0-F) for each key. If you selected **128 bits** encryption, enter **26** HEX characters (0-F) for each key.

TX Key: Select a key to be the active key.

Click **Apply** to save the setting.

WPA

To enable WPA, select **WPA-PSK** or **WPA2-PSK** from the **Security Mode**.



The screenshot shows the 'Wireless Security' configuration page for an AirLink 101 router. The page has a blue header with the 'AIRLINK 101' logo and navigation tabs for 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications Gaming', 'Administration', and 'Status'. Below the tabs are sub-tabs for 'Basic Wireless Settings', 'Wireless Security', 'Wireless MAC Filter', and 'Advanced Wireless Settings'. The 'Wireless Security' sub-tab is active. The main content area is titled 'Wireless Security' and contains the following settings:

- Security Mode:** A dropdown menu set to 'WPA-PSK'.
- Encryption:** A dropdown menu set to 'AES'.
- Passphrase:** An empty text input field.
- Key Renewal:** A text input field containing '3600' followed by the text 'seconds'.

At the bottom of the page are two buttons: 'Apply' and 'Cancel'.

Encryption: Select either **TKIP** or **AES** as the encryption method.

Passphrase: Enter a passphrase between 8 to 63 characters long.

Key Renewal: Enter the desired key renewal time in seconds.

Click **Apply** to save the setting.

WPA with RADIUS

If you are using a RADIUS server in your network for authentication, you may choose **WPA** or **WPA2** from the **Security Mode**.

The screenshot shows the 'Wireless Security' configuration page for an AIRLINK 101 router. The page has a blue header with the AIRLINK 101 logo and navigation tabs: Setup, Wireless, Security, Access Restrictions, Applications Gaming, Administration, and Status. Below the tabs are sub-tabs: Basic Wireless Settings, Wireless Security, Wireless MAC Filter, and Advanced Wireless Settings. The main content area is titled 'Wireless Security' and contains the following fields:

- Security Mode: WPA2 (dropdown menu)
- Encryption: AES
- RADIUS Server: 0 . 0 . 0 . 0 (IP address input)
- RADIUS Port: 1812 (port input)
- Shared Secret: (empty text input)
- Key Renewal: 3600 seconds (time input)

At the bottom of the page are 'Apply' and 'Cancel' buttons.

Encryption Methods: Select either **TKIP** or **AES** as the encryption method. (WPA2 uses AES only).

RADIUS Server: Enter the IP Address of your RADIUS server.

RADIUS Port: Enter the port number of your RADIUS server.

Shared Secret: Enter the shared key.

Key Renewal: Enter the desired key renewal time in seconds.

Click **Apply** to save the setting.

6.2.3 Wireless MAC Filter

You can restrict certain wireless clients from accessing the router by specifying their MAC address and enabling access restriction.

The screenshot shows the 'Wireless MAC Filter' configuration page. The interface has a top navigation bar with tabs: Setup, Wireless (selected), Security, Access Restrictions, Applications Gaming, Administration, and Status. Below this is a sub-navigation bar with links: Basic Wireless Settings, Wireless Security, Wireless MAC Filter (selected), and Advanced Wireless Settings. The main content area is titled 'Wireless MAC Filter' and includes a sidebar with 'Access Restriction' and 'MAC Address Filter List'. The 'Access Restriction' section has two radio buttons: 'Enabled' (selected) and 'Disabled'. Below this, there are two options: 'Prevent PCs listed below from accessing the wireless network.' (selected) and 'Permit PCs listed below to access the wireless network.'. The 'MAC Address Filter List' section contains a 'Wireless Client Table' with 16 rows, each with a MAC address field (e.g., MAC 1: 00:00:00:00:00:00). At the bottom, there are 'Apply' and 'Cancel' buttons.

Wireless Client Table	
MAC 1:	00:00:00:00:00:00
MAC 2:	00:00:00:00:00:00
MAC 3:	00:00:00:00:00:00
MAC 4:	00:00:00:00:00:00
MAC 5:	00:00:00:00:00:00
MAC 6:	00:00:00:00:00:00
MAC 7:	00:00:00:00:00:00
MAC 8:	00:00:00:00:00:00
MAC 9:	00:00:00:00:00:00
MAC 10:	00:00:00:00:00:00
MAC 11:	00:00:00:00:00:00
MAC 12:	00:00:00:00:00:00
MAC 13:	00:00:00:00:00:00
MAC 14:	00:00:00:00:00:00
MAC 15:	00:00:00:00:00:00
MAC 16:	00:00:00:00:00:00

Select **Enabled** and choose whether the specified wireless clients will be prevented or permitted to access the wireless network. Enter their MAC address in the fields below and click **Apply** to save the setting.

6.2.4 Advanced Wireless Settings

You can configure various advanced wireless settings on this screen.

The screenshot shows the 'Advanced Wireless' configuration page for an AIRLINK 101 wireless router. The page has a blue header with the 'AIRLINK 101' logo and 'networkingsolutions' text. A navigation bar at the top includes tabs for 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications Gaming', 'Administration', and 'Status'. Below this, a sub-navigation bar highlights 'Basic Wireless Settings', 'Wireless Security', 'Wireless MAC Filter', and 'Advanced Wireless Settings'. The main content area is titled 'Advanced Wireless' and contains the following settings:

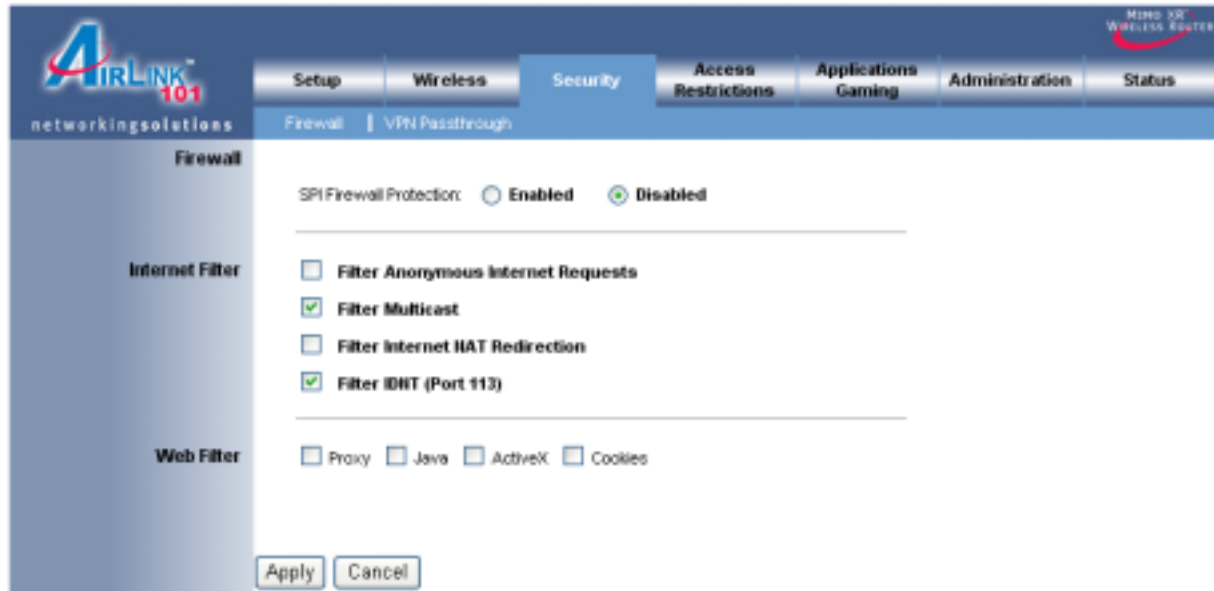
- Frame Burst Mode: ☒ Enabled ☐ Disabled (Default: Enabled)
- AP Isolation: ☐ Enabled ☒ Disabled (Default: Disabled)
- Authentication Type: Auto (Default: Auto)
- Basic Rate: Default (Default: Default)
- Transmission Rate: Auto (Default: Auto)
- Transmission Power: Full (Default: Full)
- CTS Protection Mode: Auto (Default: Auto)
- Beacon Interval: 100 (Default: 100, Milliseconds, Range: 20~1000)
- DTIM Interval: 1 (Default: 1, Range: 1 - 255)
- Fragmentation Threshold: 2346 (Default: 2346, Range: 256 - 2346)
- RTS Threshold: 2346 (Default: 2346, Range: 256 - 2346)

At the bottom of the settings area are 'Apply' and 'Cancel' buttons.

Click **Apply** to save the setting.

6.3 Security

6.3.1 Firewall



SPI Firewall Protection: Select to enable or disable Stateful Packet Inspection.

Internet Filter: Place a check to enable various Internet filter including Anonymous Internet Requests, Multicast packets, NAT Redirection, and IDNT port.

Web Filters: You can select to filter Proxy, Java, ActiveX, and/or Cookies.

Click **Apply** to save the setting.

6.3.2 VPN Passthrough

You can select to enable or disable the passthrough of **IPSec**, **PPTP**, and/or **L2TP**.



Click **Apply** to save the setting.

6.4 Access Restrictions

6.4.1 Internet Access Policy

You can setup policies that deny or allow specific clients to access the Internet.

The screenshot shows the 'Internet Access Policy' configuration page in the ARLINK 101 web interface. The page has a sidebar on the left with navigation links: Setup, Wireless, Security, Access Restrictions (selected), Applications, Administration, and Status. The main content area is titled 'Internet Access Policy' and contains the following sections:

- Access Policy:** A dropdown menu showing '1 ()', with buttons for 'Delete This Policy' and 'Save Policy'.
- Enter Policy Name:** A text input field.
- Status:** Radio buttons for 'Enabled' (selected) and 'Disabled'.
- Applied PCs:** A 'Get List' button with the note '(This Policy applies only to PCs on the LAN.)'.
- Access restriction:** Radio buttons for 'Deny' (selected) and 'Allow'. A description reads: 'Internet access during selected days and hours.'
- Schedule:** A section for selecting days and times. Days: ☒ Everyday, ☐ Sun, ☐ Mon, ☐ Tue, ☐ Wed, ☐ Thu, ☐ Fri, ☐ Sat. Times: ☒ 24 hours, ☐ 00, ☐ 00, ☐ 00, ☐ 00.
- Website Blocking by URL Address:** Four input fields labeled URL 1, URL 2, URL 3, and URL 4.
- Website Blocking by Keyword:** Four input fields labeled Keyword 1, Keyword 2, Keyword 3, and Keyword 4.
- Blocked Applications:** A section with a note 'Note: only three applications can be blocked per policy.' It contains a table with two columns: 'Applications' and 'Blocked List'.

Applications	Blocked List
HTTP (80-80)	☐
HTTPS (443-443)	☐
FTP (21-21)	☐
POP3 (110-110)	☐
SMTP (25-25)	☐
IMAP (143-143)	☐
SMTP (110-110)	☐
SMTP (143-143)	☐
- Application Name:** A text input field.
- Port Range:** A text input field with a '+' button.
- Protocol:** A dropdown menu showing 'TCP/UDP'.
- Buttons:** 'Add', 'Delete', 'Cancel' buttons at the bottom.

Enter Policy Name: Enter a name for the policy.

Status: Choose to enable or disable the selected policy.

PCs: Click on the **Edit List** button to specify the network clients. Policy only applies to the PCs that are in the list.

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List of PCs

MAC Address

01	00:00:00:00:00:00	06	00:00:00:00:00:00
02	00:00:00:00:00:00	07	00:00:00:00:00:00
03	00:00:00:00:00:00	08	00:00:00:00:00:00
04	00:00:00:00:00:00	09	00:00:00:00:00:00
05	00:00:00:00:00:00	10	00:00:00:00:00:00

IP Address

01	192.168.1.0	04	192.168.1.0
02	192.168.1.0	05	192.168.1.0
03	192.168.1.0	06	192.168.1.0

IP Address Range

01	192.168.1.0 - 0	03	192.168.1.0 - 0
02	192.168.1.0 - 0	04	192.168.1.0 - 0

Save Settings Cancel Changes Close

You can specify each client by its MAC Address or IP Address. You can also specify a group of clients by entering their IP Address Range. Once you have specified all the clients, click **Save Settings**.

Access Restrictions: Select to **Deny** or **Allow** the specified clients to access the Internet by **Day** and **Time**.

Access restriction

☒ **Deny** Internet access during selected days and hours.

☐ **Allow**

Schedule

Days: ☒ Everyday ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

Times: ☒ 24 Hours ☐ 00 : 00 ~ 00 : 00

Blocked Application Port

Select which application port to block, if any, when the specified PCs have Internet access.

For your convenience, 10 preset applications and their ports are listed. If you have a custom application, manually enter its name, port range, protocol and click **Add**.

Blocked Applications

Note: only three applications can be blocked per policy.

Applications		Blocked List
DNS [53~53]		
HTTP [80~80]		
HTTPS [443~443]		
FTP [21~21]		
POP3 [110~110]	>>	
IMAP [143~143]	<<	
SMTP [25~25]		
NNTP [119~119]		
SNMP [161~161]		

Application Name	
Port Range	~
Protocol	TCP v

Website Blocking

You can block the specified clients from accessing certain websites by URL or Keyword.

Website Blocking
by URL Address

URL 1: URL 2:

URL 3: URL 4:

Website Blocking
by Keyword

Keyword 1: Keyword 2:

Keyword 3: Keyword 4:

Enter the URL or the Keyword you wish to block.

Click **Apply** to save the setting.

To view all the policies, click the **Summary** button.

6.5 Applications & Gaming

6.5.1 Single Port Forwarding

If you want to host ftp server or online gaming, you must open up ports on the router. This page allows you to setup single port forwarding for the specified applications.

Before using forwarding, you should assign static IP addresses to the designated PCs.

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Setup | Wireless | Security | Access Restrictions | **Applications Gaming** | Administration | Status

Single Port Forwarding | Port Range Forwarding | Port Range Triggering | DMZ | Qos

Single Port Forwarding

Application Name
None
None
None
None
None

External Port	Internal Port	Protocol	To IP address	Enable
---	---	---	192 . 168 . 1 . 0	☐
---	---	---	192 . 168 . 1 . 0	☐
---	---	---	192 . 168 . 1 . 0	☐
---	---	---	192 . 168 . 1 . 0	☐
---	---	---	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐
		TCP	192 . 168 . 1 . 0	☐

Apply Cancel

Click **Apply** to save the setting.

6.5.2 Port Range Forwarding

If you want to host ftp server or online gaming, you must open up ports on the router. This page allows you to setup port range forwarding for the specified applications.

Before using forwarding, you should assign static IP addresses to the designated PCs.

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Setup | Wireless | Security | Access Restrictions | **Applications** | Administration | Status

Single Port Forwarding | **Port Range Forwarding** | Port Range Triggering | DMZ | QoS

Port Range Forwarding

Application Name

Start - End Port	Protocol	To IP address	Enable
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐
~	TCP	192.168.1.	☐

Apply Cancel

Click **Apply** to save the setting.

6.5.3 Port Range Triggering

Port triggering allows the router to keep track of outgoing data for specific port numbers. The router remembers which computer sends out what data, so when the requested data returns through the router, the data is sent back to the proper computer by way of IP address and port mapping rules.

Application Name	Triggered Range	Forwarded Range	Enabled
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐
	-	-	☐

Apply Cancel

Click **Apply** to save the setting.

6.5.4 DMZ

DMZ (De-Militarized Zone) Host is a host without the protection of the router's firewall. It allows a computer to be exposed to unrestricted two-way communication with the Internet. You should only use this feature when the Port Forwarding function fails to make an application work.

Warning: Setting your computer as a DMZ host exposes it to various security vulnerabilities. This feature should be used only when needed.

The screenshot shows the Airlink 101 router's web interface. The 'DMZ' configuration page is active, showing options to enable or disable the DMZ feature. The 'Source IP Address' section allows selecting 'Any IP Address' or a specific IP address. The 'Destination' section allows selecting an 'IP Address' (currently showing 192.168.1.0) or a 'MAC Address' (currently showing 00:00:00:00:00:00). The 'Apply' and 'Cancel' buttons are at the bottom.

DMZ: Select to enable or disable DMZ.

Source IP Address: Select any source IP address or specify a source IP address.

Destination: Specify the Destination by its IP Address or MAC Address.

Note: Any DMZ host should have a new static IP address assigned to it because its IP address may change when using the DHCP function.

Click **Apply** to save the setting.

6.5.5 QoS

QoS (Quality of Service) manages information as it is transmitted and received. It ensures better service to those applications with a higher priority.

The screenshot shows the AIRLINK 101 web interface. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Applications Gaming (selected), Administration, and Status. Below the navigation bar, there are sub-tabs for Single Port Forwarding, Port Range Forwarding, Port Range Triggering, DMZ, and QoS. The QoS (Quality of Service) section is active, showing the following configuration options:

- Wireless: WMM Support: ☒ Enabled ☐ Disabled (Default: Enabled)
- No Acknowledgement: ☒ Enabled ☐ Disabled (Default: Enabled)
- Internet Access Priority: ☐ Enabled ☒ Disabled
- Category: Applications
- Applications: MSN Messenger
- Priority: Medium (Recommend)
- Add button

At the bottom of the page, there is a Summary table with columns for Priority, Name, and Information. The table is currently empty. Below the table are Apply and Cancel buttons.

Click **Apply** to save the setting.

6.6 Administration

6.6.1 Management

The Management screen allows you to change the router's log in password as well as other administrative settings.

Router Password
Local Router Access: Router Password: [password field], Reenter to confirm: [password field]

Web Access
Use HTTPs: ☐ Enabled ☒ Disabled
Web Utility Access via Wireless: ☒ Enabled ☐ Disabled

Remote Access
Remote Management: ☐ Enabled ☒ Disabled
Use HTTPs: ☐ Enabled ☒ Disabled
Remote Upgrade: ☐ Enabled ☒ Disabled
Allow Remote IP Address: Any IP Address
Remote Management Port: 8080

Backup and Restore
Backup Configurations Restore Configurations

IPoP
☒ Enabled ☐ Disabled
Allow Users to Configure: ☐ Enabled ☒ Disabled
Allow Users to Disable Internet Access: ☐ Enabled ☒ Disabled

Apply Cancel

Router Password: Set the router's log in password.

Web Access: Select to enable or disable HTTPs and Wireless access for the Web Configuration Utility.

Remote Router Access: Select to enable or disable remote management/upgrade of the router. You can allow remote management from any IP Address or a specified IP Address as well as the port number.

Backup and Restore: You can choose to backup the router's settings so that you don't have to manually configure the settings again if you reset the router to factory default.

UPnP: Universal Plug and Play (UPnP) allows Windows Me and XP to automatically configure the router for various Internet applications, such as gaming and videoconferencing.

6.6.2 Log

You can choose to enable or disable logging of your network activity on this screen.



The screenshot shows the web interface of an AIRLINK 101 router. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Applications Gaming, Administration (which is currently selected), and Status. Below the navigation bar, there are links for Management, Log, Diagnostics, Factory Default, and Firmware Upgrade. The main content area is titled 'System Log' and features two radio buttons: 'Enabled' (which is selected) and 'Disabled'. Below these buttons, there is a text field for 'Logviewer IP Address' with the value '192 . 168 . 1 .' and a small input box for the last octet. A 'View Log' button is positioned below the IP address field. At the bottom of the configuration area, there are 'Apply' and 'Cancel' buttons.

Click **Apply** and to save the setting.

6.6.3 Diagnostics

The Diagnostics screen allows you to perform Ping and Traceroute tests.

The screenshot shows the Airlink 101 web interface. The top navigation bar includes links for Setup, Wireless, Security, Access Restrictions, Applications Gaming, Administration, and Status. Below this, a secondary bar contains links for Management, Log, Diagnostics (which is highlighted), Factory Default, and Firmware Upgrade. The left sidebar shows 'Diagnostics' as the selected menu item, with 'Ping Test' and 'Traceroute Test' as sub-options. The main content area is divided into two sections. The 'Ping Test' section has a text input for 'IP or URL Address', a 'Packet Size' dropdown set to '64' with the text 'bytes (32~65500)', a 'Times to Ping' dropdown set to '5', and a 'Start to Ping' button. The 'Traceroute Test' section has a text input for 'IP or URL Address' and a 'Start to Traceroute' button.

Ping Test: Enter the IP or URL Address you wish to ping and click **Start to Ping**.

Traceroute: Enter the IP or URL Address you wish to trace and click **Start to Traceroute**.

6.6.4 Factory Defaults

The Factory Defaults screen allows you to set all the router's settings to the factory default.



Click on the **Restore Factory Defaults** button to restore all the settings to default.

6.6.5 Firmware Upgrade

The Firmware Upgrade screen allows you to upgrade the router's firmware.

The screenshot shows the AirLink 101 web interface for firmware upgrade. The top navigation bar includes links for Setup, Wireless, Security, Access Restrictions, Applications Gaming, Administration, and Status. Below this, a secondary bar contains links for Management, Log, Diagnostics, Factory Default, and Firmware Upgrade. The main content area is titled 'Firmware Upgrade' and features a 'Please Select a File to Upgrade:' label, a text input field, and a 'Browse...' button. A 'Start to Upgrade' button is positioned below the input field. A red warning message states: 'Warnings: Upgrading firmware may take a few minutes, please don't turn off the power or press the reset button.' Below the warning is a progress bar showing 0% completion. At the bottom, a red message reads: 'Upgrade must NOT be interrupted !!'.

You must download and unzip the new firmware first from www.airlink101.com

Click on **Browse** to browse to the new firmware, and click **Start to Upgrade**.

6.7 Status

6.7.1 Router

The Router screen displays various status of the router including the firmware version.



The screenshot displays the Airlink101 router's status page. The interface includes a top navigation bar with tabs for Setup, Wireless, Security, Access Restrictions, Applications Gaming, Administration, and Status. The Status tab is selected, and the Router section is active. The page is divided into two main sections: Router Information and Internet Connections.

Router Information

Firmware Version:	v1.0.18
Current Time:	Thu Jul 21 22:01:53 2006 (GMT -08:00)
Internet MAC Address:	00:14:8A:50:4F:41
Host Name:	
Domain Name:	Airlink101

Internet Connections

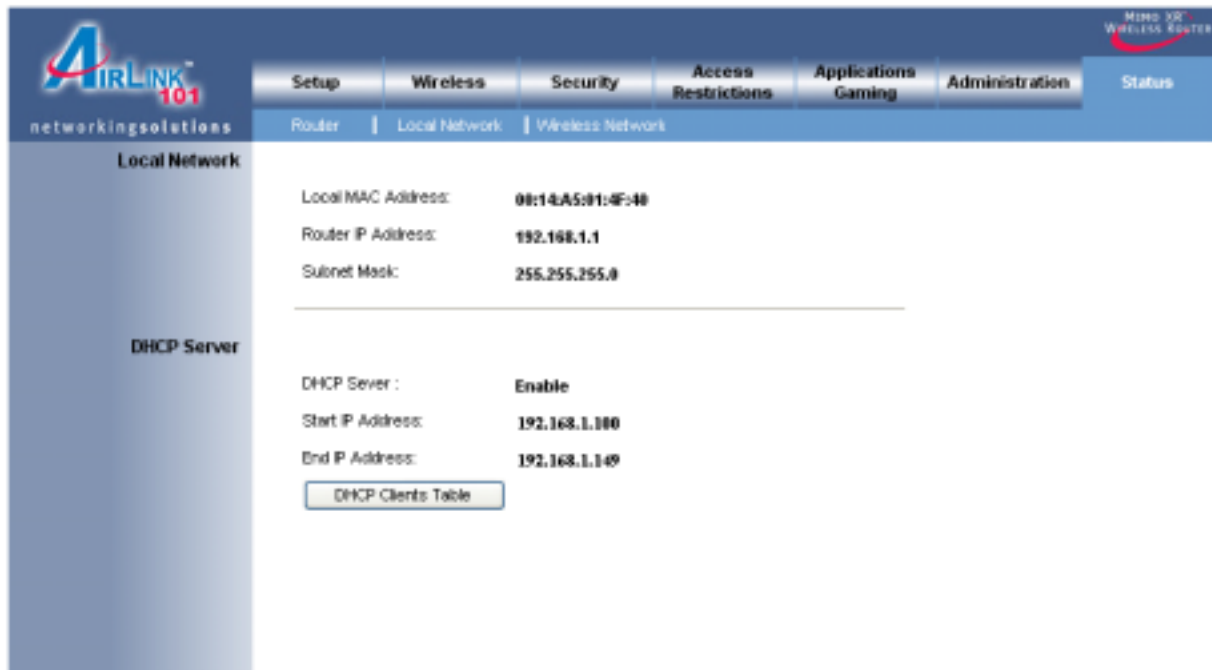
Connection Type:	Automatic Configuration - DHCP
Internet IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.1.1
DNS 1:	192.168.1.1
DNS 2:	0.0.0.0
DNS 3:	0.0.0.0
MTU:	Auto

Buttons: IP Address Release, IP Address Renew, Refresh

Click on the **Refresh** button to reload the screen.

6.7.2 Local Network

The Local Network screen displays various status about your Local Area Network.



Click on the **DHCP Client Table** to display a list of all the DHCP clients in your network.

6.7.3 Wireless Network

The Wireless Network screen displays various status about your wireless network.



7. Troubleshooting

If you have trouble connecting to the Internet, try the following steps.

Step 1 Power off the Cable/DSL modem, router, and computer and wait for **5 minutes**.

Step 2 Turn on the Cable/DSL modem and wait for the lights on the modem to settle down.

Step 3 Turn on the router and wait for the lights on the router to settle down.

Step 4 Turn on the computer.

Step 5 Reconfigure the router as described in **Section 3**.

Step 6 Log in to the router and select the **Status** tab.

Step 7 Verify that the **IP Address**, **Default Gateway**, and at least one of the **DNS** fields have valid numbers assigned to them (instead of all 0's).



If you see all 0's, click on the **IP Renew** button (for Cable Modem users) or the **Connect** button (for DSL users).

If each field has a valid number assigned, the router is connected to the Internet.

Technical Support

E-mail: support@airlink101.com

Toll Free: 1-888-746-3238

Web Site: www.airlink101.com

*Theoretical maximum wireless signal rate based on IEEE standard 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, mix of wireless products used, radio frequency interference (e.g., cordless telephones and microwaves) as well as network overhead lower actual data throughput rate.

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Federal Communication Commission Interference Statement

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

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

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

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

Gemtek declares that WRTR-142G (FCC ID: MXF-R940711G) is limited in CH1~CH11 for 2.4GHz by specified firmware controlled in U.S.A.