



802.11g Wireless Broadband Router

Model # AR335W

User's Manual

Ver. 1A

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1. Introduction

Congratulations on your purchase of this 802.11g Wireless Broadband Router. 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.

Basic Functions

- **Compliant to IEEE 802.11g and 802.11b**
Supports up to 54Mbps* data rate
- **NAT Routing**
Connects multiple computers with wire or wirelessly to a broadband (cable or DSL) modem to surf the Internet.
- **Auto-Sensing Ethernet Switch**
Equipped with a 4-port auto-sensing Ethernet switch.
- **Firewall**
All unwanted packets from outside intruders are blocked to protect your Intranet.
- **DHCP Server Supported**
All of the networked computers can retrieve TCP/IP settings automatically from this product.
- **Web-Based Configuration**
Configurable through any networked computer's web browser using Netscape or Internet Explorer.

Security Functions

- **VPN Pass-Through**
Support VPN pass-through.
- **SPI Mode Supported**
When SPI Mode is enabled, the router will check every incoming packet to determine if the packet is valid.
- **Wireless Security**
WEP, WPA, WPA2, and Wireless MAC Filter

Advanced Functions

- **Multiple administrators**
- **Detailed logging**
- **UPNP (Universal Plug-and-Play) Supported**
- **WMM**
- **DDNS**

2. Connecting the Router

Note: Prior to connecting the router, be sure to power off your computer, DSL/Cable modem, and the router. You should setup the router with a wired connection first before attempting to setup any wireless connection.

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.

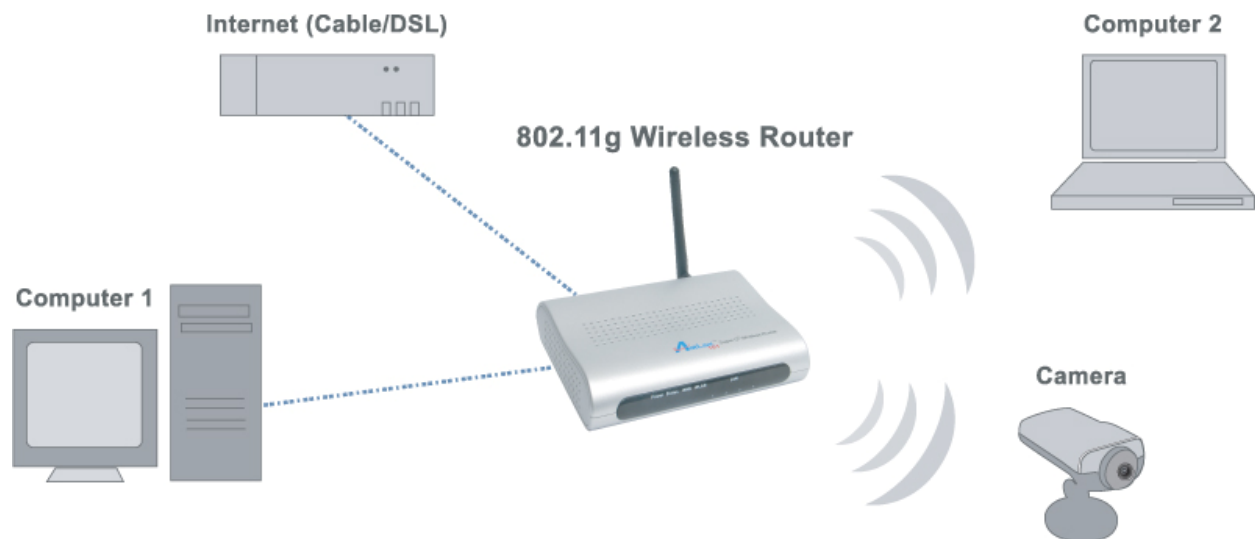
Step 2 With another network cable, connect one end of the cable to your computer's network card and connect the other end to one of the **LAN (Ethernet)** ports of the router.

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.

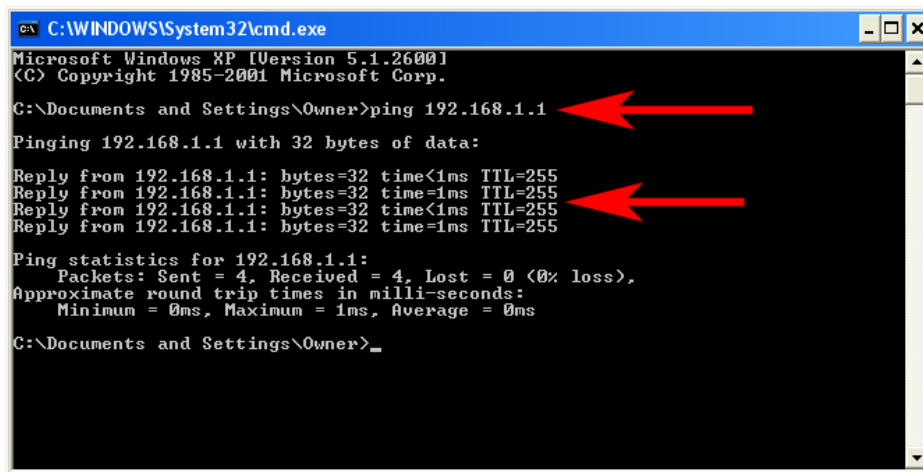
Step 6 Make sure the **WAN**, **WLAN**, and the **LAN** port that the computer is connected to are lit. If not, try the above steps again.



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:

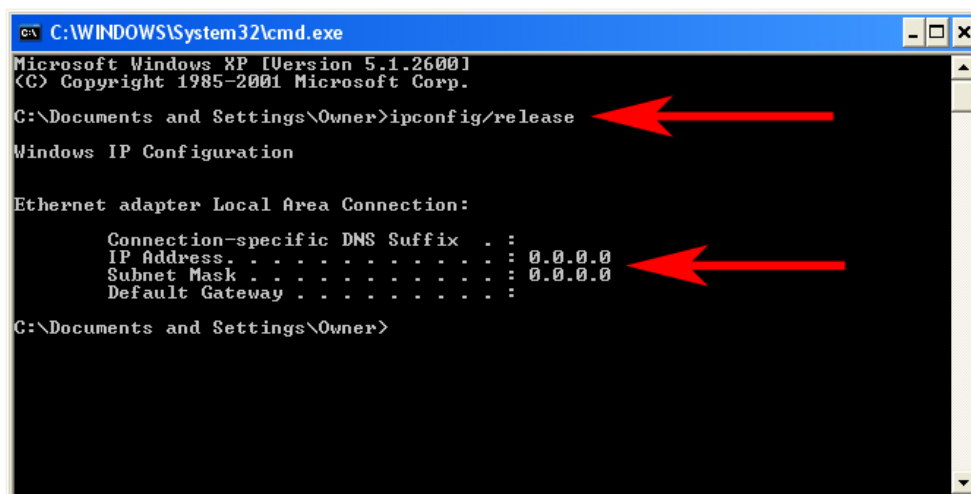
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time=1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time=1ms TTL=255

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 4, Configuring 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.

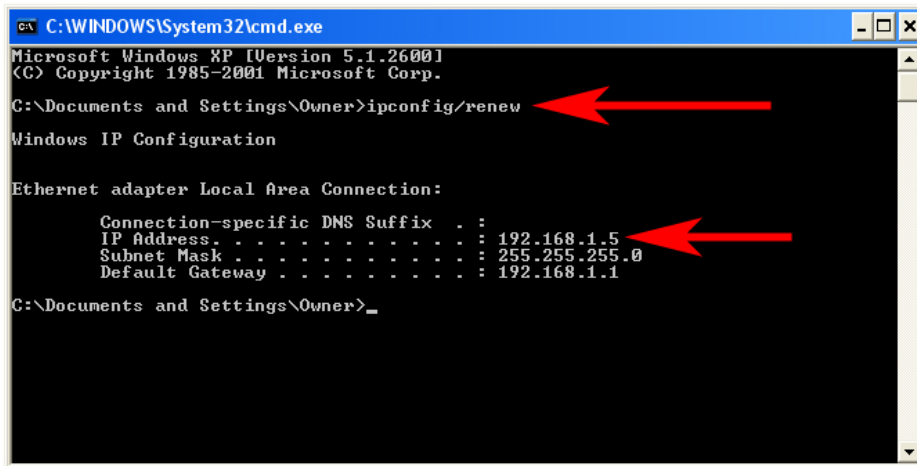
C:\Documents and Settings\Owner>ipconfig/release
Windows IP Configuration

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 4, Configure the Router**. If you don't get an IP address, reset the router by holding in the reset button on 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

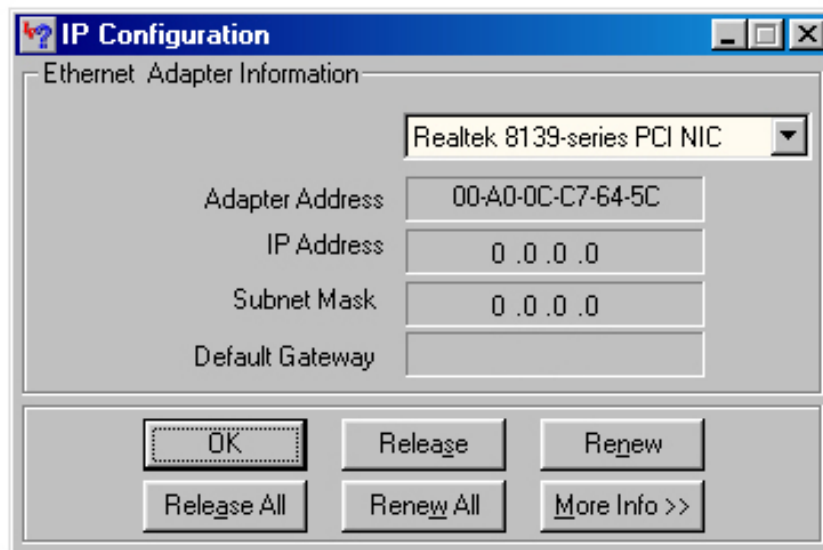
Ethernet adapter Local Area Connection:

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

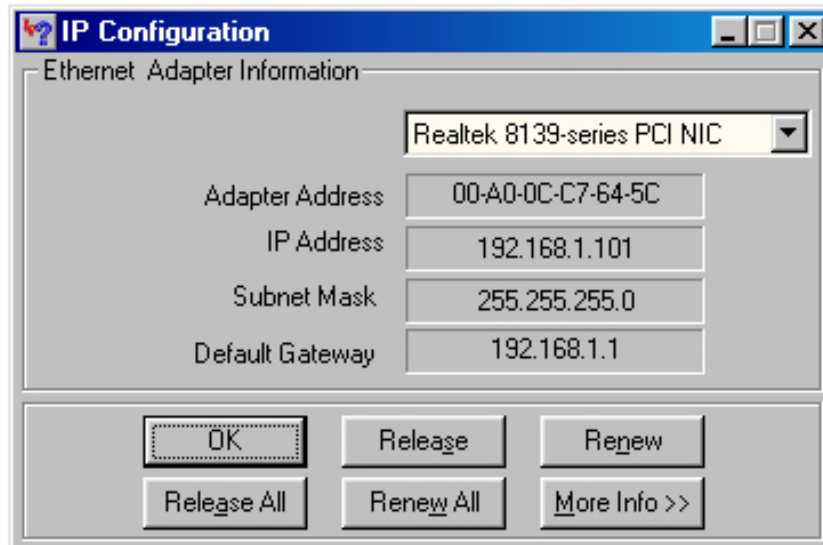
C:\Documents and Settings\Owner>_
```

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**.

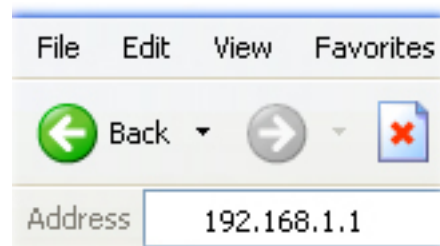


Step 8 After your IP address is released, click **Renew**. You should get an IP address of **192.168.1.x** (where **x** is a number between 2 - 254). If you don't get an IP address, reset the router by holding in the reset button on the back of the router for 10 seconds while it is ON and try **Renew**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

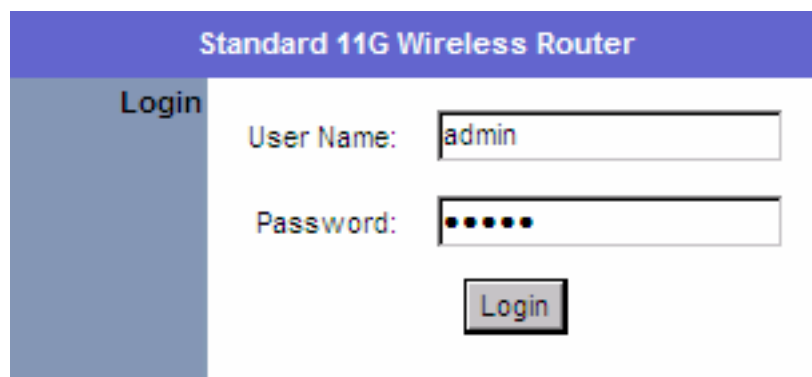


4. Configuring the Router

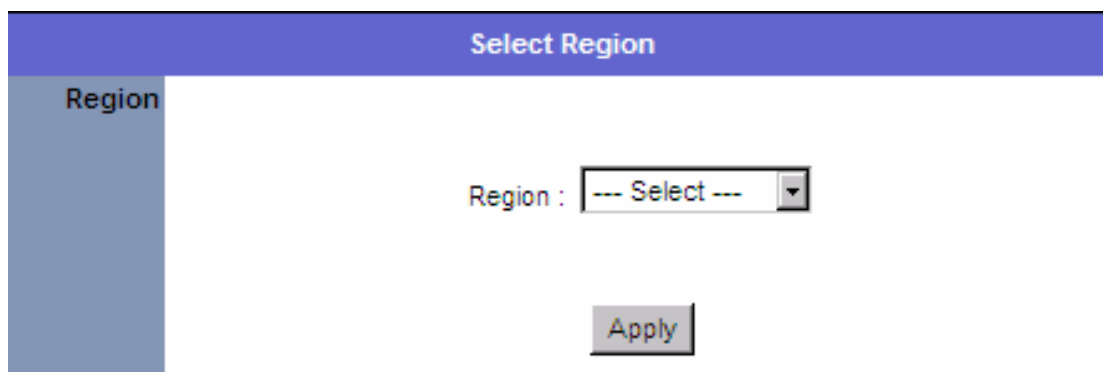
Step 1 Open the web browser and type **192.168.1.1** in the URL Address field and press **Enter**.



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

A screenshot of the router's login page. The page has a blue header with the text "Standard 11G Wireless Router". On the left side, there is a vertical blue bar with the word "Login" in white. The main content area contains two text input fields. The first field is labeled "User Name:" and contains the text "admin". The second field is labeled "Password:" and contains five black dots. Below the password field is a grey button labeled "Login".

Step 3 Select the proper region, **North America** or **South America**, and click **Apply**.

A screenshot of the router's region selection page. The page has a blue header with the text "Select Region". On the left side, there is a vertical blue bar with the word "Region" in white. The main content area contains a dropdown menu labeled "Region :". The dropdown menu is currently set to "--- Select ---". Below the dropdown menu is a grey button labeled "Apply".

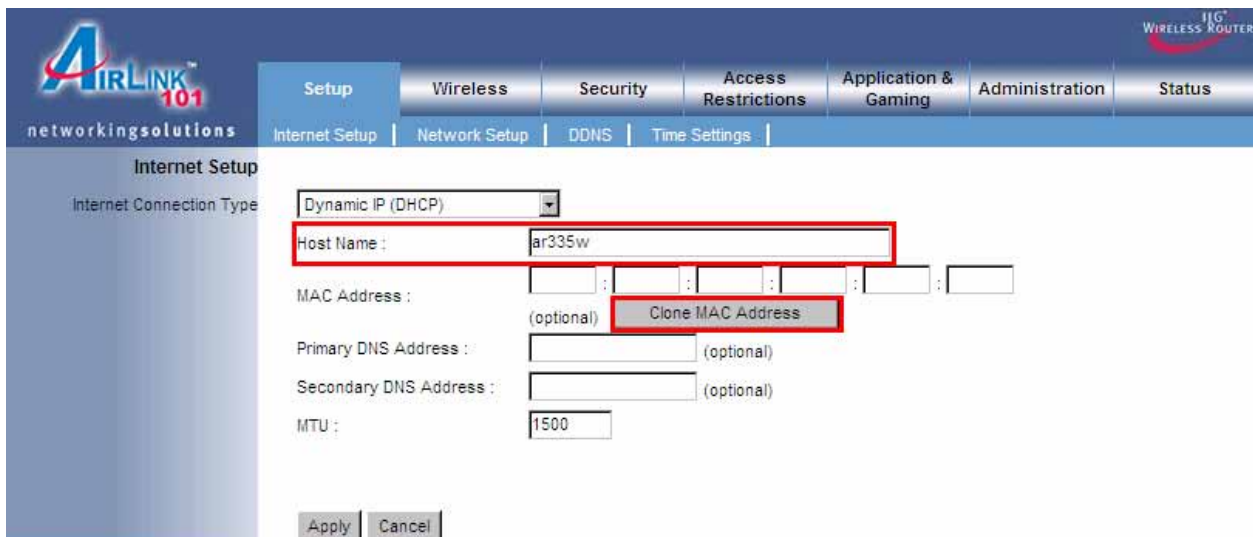
Warning: This device requires that the user or installer properly selects the current region of operation before using this device. This device will automatically limit the allowable channels determined by the current region of operation.

Incorrectly selecting the current region of operation may result in illegal operation and may cause harmful interference to other systems. The user is obligated to ensure the device is operating according to the channel limitations, indoor/outdoor restrictions and license requirements for the current country of operation.

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.

If your ISP requires a registered MAC Address, click on the **Clone MAC Address** button. Click **Apply** and **OK** to save the settings.



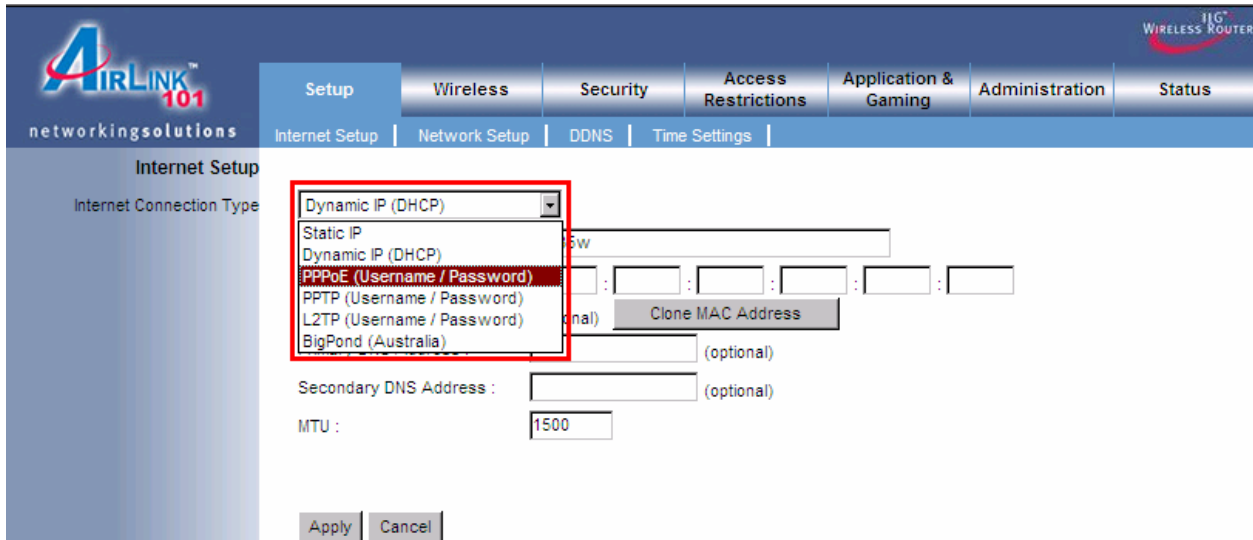
The screenshot shows the 'Internet Setup' page of an Airlink 101 wireless router. The 'Internet Connection Type' is set to 'Dynamic IP (DHCP)'. The 'Host Name' field is filled with 'ar335w'. The 'MAC Address' field is empty, and the 'Clone MAC Address' button is highlighted with a red box. The 'Apply' and 'Cancel' buttons are at the bottom.

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

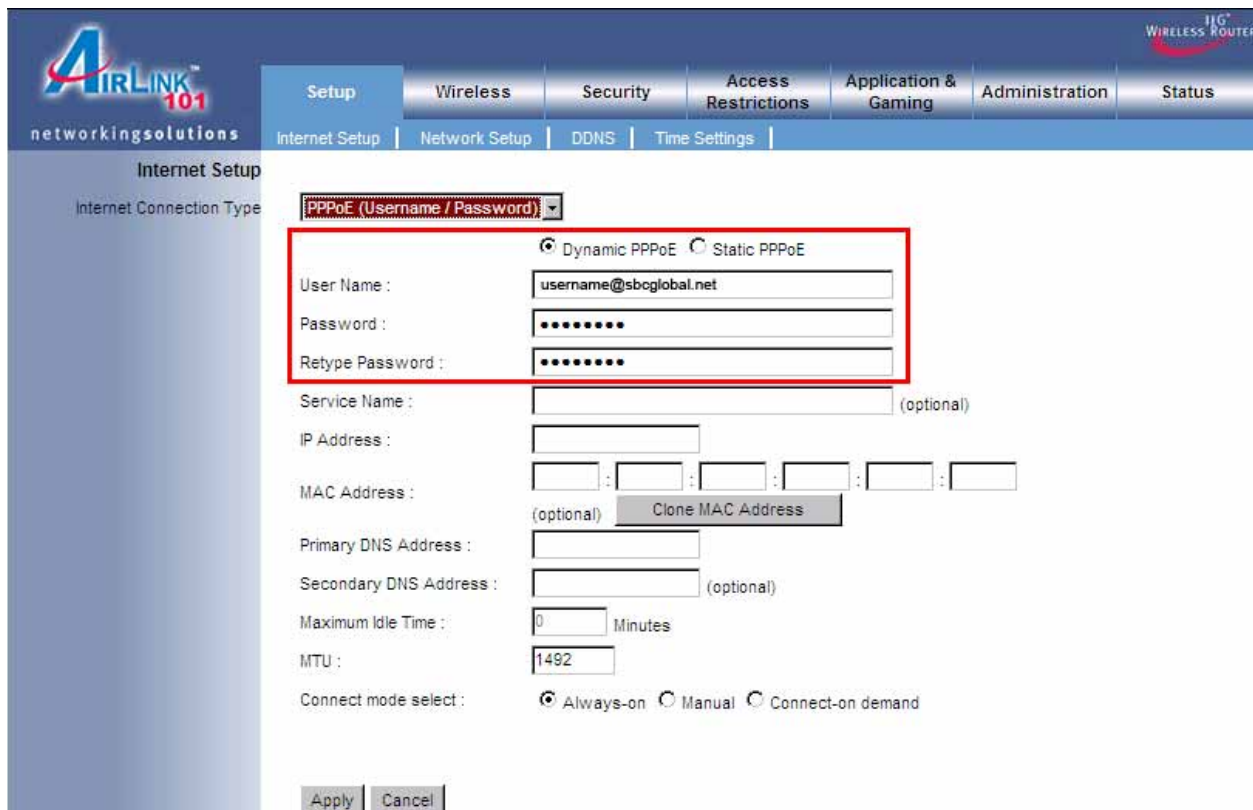
DSL

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

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



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



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

Example: **username@sbcglobal.net**

Step 3 Click **Apply** and **OK** to save the settings.

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: **default**

Operating Mode: **Infrastructure**

Authentication: **Open System**

Channel #: **6**

WEP: **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** and **OK** to save the settings.



The screenshot shows the web interface of an Airlink 101 wireless router. The top navigation bar includes tabs for Setup, **Wireless** (highlighted with a red box), Security, Access Restrictions, Application & Gaming, Administration, and Status. Below this, there are sub-tabs for Basic Wireless Settings, Wireless Security, Wireless MAC Filter, and Advanced Wireless Settings. The main content area is titled 'Wireless Network' and 'Wireless-G Settings'. It contains the following settings:

Mode:	Mixed(g/b)
Network Name (SSID):	default
Channel:	6-2.437GHz
SSID Broadcast:	Enable

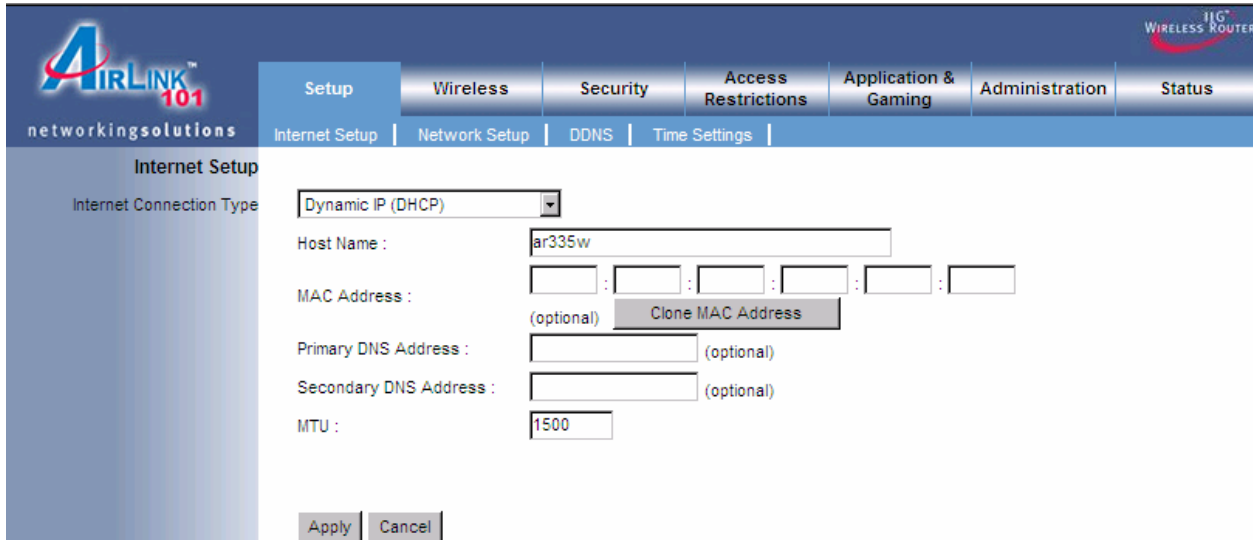
At the bottom of the settings area, there are two buttons: 'Apply' and 'Cancel'.

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 Internet Setup



The screenshot displays the web configuration utility interface for the AIRLINK 101 router. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The 'Setup' tab is active, and the 'Internet Setup' sub-tab is selected. The main content area is titled 'Internet Setup' and shows the 'Internet Connection Type' set to 'Dynamic IP (DHCP)'. Below this, there are input fields for 'Host Name' (containing 'ar335w'), 'MAC Address' (with a 'Clone MAC Address' button), 'Primary DNS Address' (optional), 'Secondary DNS Address' (optional), and 'MTU' (set to 1500). 'Apply' and 'Cancel' buttons are located at the bottom of the form.

This is the default screen when you log in to the router's web configuration utility. You can setup your Internet connection here.

6.1.2 Network Setup

Network Setup allows manually configuring TCP/IP and DHCP settings.

The screenshot shows the AIRLINK 101 network setup interface. The top navigation bar includes 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Application & Gaming', 'Administration', and 'Status'. The 'Setup' tab is active, and the 'Network Setup' sub-tab is selected. The interface is divided into three main sections: Router IP, DHCP Server Settings, and Static DHCP Settings. The Router IP section includes fields for IP Address (192.168.1.1), Subnet Mask (255.255.255.0), Local Domain Name (optional), and Enable DNS Relay (Enabled). The DHCP Server Settings section includes a DHCP Server dropdown (Enabled), Starting IP Address (192.168.1.100), Ending IP Address (192.168.1.199), and Lease Time (10080 minutes). The Static DHCP Settings section is highlighted with a red box and includes a DHCP Entries dropdown (1), a Delete This Entry button, a Static DHCP List button, an Enable dropdown (Disabled), a Name field with a Computer Name dropdown, an IP Address field (192.168.1.), and a MAC Address field with a Copy Your PC's MAC Address button. At the bottom, there are Apply and Cancel buttons.

Assigning Static DHCP Settings

Step 1 Select **Enabled** in the DHCP Server drop-down menu

Step 2 Select a computer name from the drop-down menu or enter a name associated with this Static IP Address

Step 3 Enter the Static IP Address in the **IP Address** field

Step 4 Enter the MAC address of the corresponding computer in the **MAC Address** field

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

6.1.3 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.



The screenshot shows the DDNS configuration page in the Airlink 101 router interface. The page has a blue header with the Airlink 101 logo and navigation tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The DDNS section is active, showing the following fields:

Enable DDNS:	Disabled
Server Address:	DynDns.org
Host Name:	
Username:	
Password:	

At the bottom of the form are two buttons: **Apply** and **Cancel**.

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

6.1.4 Time Settings

Time Settings allow you to configure the router clock.

The screenshot displays the 'Time Settings' page of the AIRLINK 101 wireless router. The page is divided into several sections:

- Device Time:** Shows the current time as 'Jan 01, 2000 00:07:09'.
- Synchronize the device's clock:** Three radio buttons are present:
 - Automatic (Simple Network Time Protocol)
 - Your computer's clock
 - Manual (Enter your own settings)
- Time Zone:** A dropdown menu is set to '(GMT-08:00) Pacific Time (US & Canada); Tijuana'.
- Daylight Saving:** An unchecked checkbox labeled 'Daylight Saving'.
- Get the time automatically via Network Time Protocol(NTP):**
 - NTP Server:** A text box containing 'clock.isc.org'.
 - Interval:** A dropdown menu set to '24 hrs'.
- Time:** A series of dropdown menus for Year (2005), Month (01), Day (01), Hour (00), Minute (07), and Second (09).

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

Click **Apply** and **OK** to save the settings.

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 web interface for an Airlink 101 wireless router. The top navigation bar includes 'Setup', 'Wireless' (highlighted with a red box), 'Security', 'Access Restrictions', 'Application & Gaming', 'Administration', and 'Status'. Below this, there are sub-tabs for 'Basic Wireless Settings', 'Wireless Security', 'Wireless MAC Filter', and 'Advanced Wireless Settings'. The main content area is titled 'Wireless Network' and 'Wireless-G Settings'. It contains four configuration fields: 'Mode' (set to 'Mixed(g/b)'), 'Network Name (SSID)' (set to 'default'), 'Channel' (set to '6-2.437GHz'), and 'SSID Broadcast' (set to 'Enable'). At the bottom of the form are 'Apply' and 'Cancel' buttons.

Mode: Choose from Mixed (g/b), Wireless-11g Only, Wireless 11b Only, or Disabled to stop wireless function.

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 be using the same channel.

SSID Broadcast: Choose to enable or disable the broadcasting 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-PSK or WPA2-PSK encryption over WEP if your wireless clients support it. 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**.

The screenshot shows the configuration interface for an Airlink 101 wireless router. The page is titled "Wireless Security" and is part of the "Wireless" settings section. The "Security Mode" is set to "WEP". The "Authentication Type" is "Open System", "Encrypt Length" is "64Bits", and "Key Type" is "HEX". There are four input fields for WEP keys (Key 1, Key 2, Key 3, Key 4) and a "Default Key" dropdown set to "1". Below the WEP settings, there is a section for "Wi-Fi Protected Setup" which is currently disabled. The "Current PIN" is 40892506. There are buttons for "Generate New PIN", "Reset PIN to Default", "Reset to Unconfigured", and "Add Wireless Device Wizard". At the bottom, there are "Apply" and "Cancel" buttons.

Authentication Type: Choose Open System or Shared Key.

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

Key Type: Choose HEX or ASCII

WEP Key 1 – 4: Manually assign a password 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.

Note: HEX number is a number from 0 to 9 and a letter from A to F. ASCII is any number or letter.

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

Click **Apply** and **OK** to save the settings.

WPA-PSK/WP2-PSK

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

The screenshot shows the configuration interface for an AIRLINK 101 wireless router. The main navigation bar includes 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Application & Gaming', 'Administration', and 'Status'. The 'Wireless' section is active, with sub-tabs for 'Basic Wireless Settings', 'Wireless Security', 'Wireless MAC Filter', and 'Advanced Wireless Settings'. The 'Wireless Security' sub-tab is selected, displaying the following settings:

- Security Mode:** WPA-PSK (selected)
- Encryption Methods:** TKIP (selected)
- Passphrase Format:** ASCII (selected)
- Passphrase:** (empty text field)
- Key Renewal:** 1500 Seconds

Wi-Fi Protected Setup:

- Enable:**
- Current PIN:** 40892506
- Buttons:** Generate New PIN, Reset PIN to Default
- Wi-Fi Protected Status:** Enabled / Not Configured
- Buttons:** Reset to Unconfigured, Add Wireless Device Wizard

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

Encryption Methods: 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** and **OK** to save the settings.

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 configuration interface for an AIRLINK 101 wireless router. The 'Wireless' tab is selected, and the 'Wireless Security' sub-tab is active. The 'Security Mode' is set to 'WPA' and the 'Encryption Methods' is set to 'TKIP'. The 'RADIUS Server' field is empty, 'RADIUS Port' is set to '1812', and 'Key Renewal' is set to '1500' seconds. The 'Wi-Fi Protected Setup' section is also visible, with 'Enable' checked and 'Current PIN' set to '40892506'. There are buttons for 'Generate New PIN', 'Reset PIN to Default', 'Reset to Unconfigured', and 'Add Wireless Device Wizard'. 'Apply' and 'Cancel' buttons are at the bottom.

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

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

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

Shared Key: Enter the shared key.

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

Click **Apply** and **OK** to save the settings.

WiFi Protected Setup

This is an easier way to setup the wireless security for all your wireless clients. This security feature only works when your wireless adapter supports this WPS PIN feature. You will have to enter the **Current PIN** at your wireless client side to connect to this router.

Check/Uncheck the **Enable** box to enable or disable this function

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.

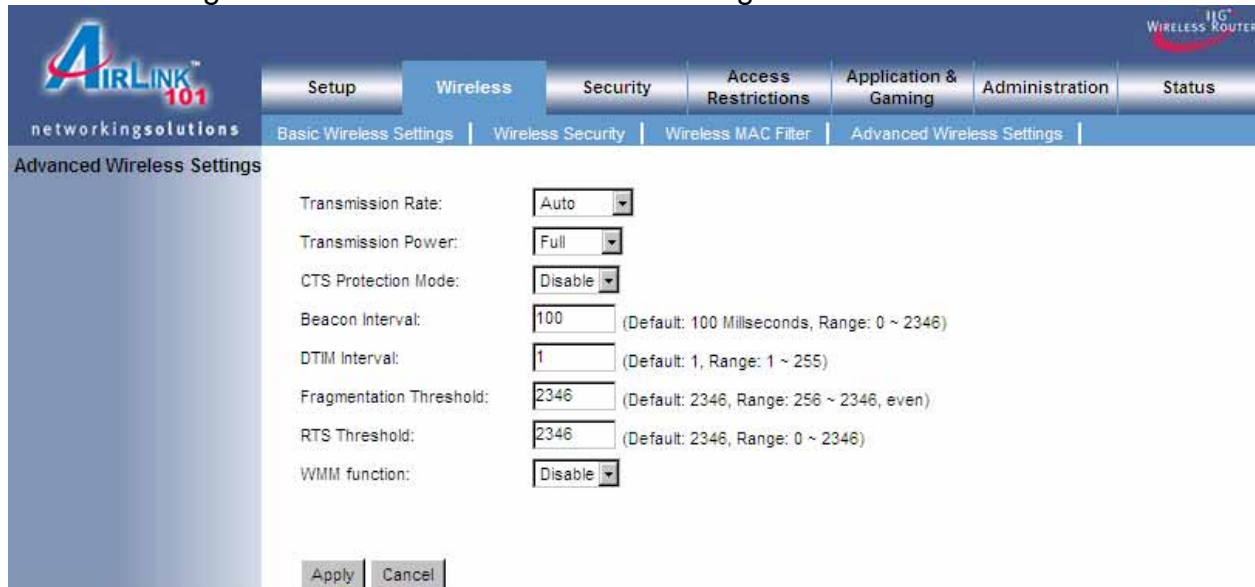
The screenshot displays the configuration interface for the Wireless MAC Filter. The top navigation bar includes 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Application & Gaming', 'Administration', and 'Status'. The 'Wireless' menu is expanded to show 'Basic Wireless Settings', 'Wireless Security', 'Wireless MAC Filter', and 'Advanced Wireless Settings'. The 'Wireless MAC Filter' section is selected, showing a dropdown menu currently set to 'Disabled'. Below this is a 'Wireless Client List' table with 20 rows, each containing a MAC address label (e.g., MAC 01) and an empty input field. At the bottom are 'Apply' and 'Cancel' buttons.

Wireless Client List	
MAC 01:	<input type="text"/>
MAC 02:	<input type="text"/>
MAC 03:	<input type="text"/>
MAC 04:	<input type="text"/>
MAC 05:	<input type="text"/>
MAC 06:	<input type="text"/>
MAC 07:	<input type="text"/>
MAC 08:	<input type="text"/>
MAC 09:	<input type="text"/>
MAC 10:	<input type="text"/>
MAC 11:	<input type="text"/>
MAC 12:	<input type="text"/>
MAC 13:	<input type="text"/>
MAC 14:	<input type="text"/>
MAC 15:	<input type="text"/>
MAC 16:	<input type="text"/>
MAC 17:	<input type="text"/>
MAC 18:	<input type="text"/>
MAC 19:	<input type="text"/>
MAC 20:	<input type="text"/>

Select **Enabled** from the drop-down menu 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** and **OK** to save the settings.

6.2.4 Advanced Wireless Settings

You can configure various advanced wireless settings on this screen.



The screenshot shows the configuration interface for an Airlink 101 wireless router. The top navigation bar includes 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Application & Gaming', 'Administration', and 'Status'. The 'Wireless' section is active, and the 'Advanced Wireless Settings' tab is selected. The settings are as follows:

Setting	Value	Default / Range
Transmission Rate	Auto	
Transmission Power	Full	
CTS Protection Mode	Disable	
Beacon Interval	100	(Default: 100 Milliseconds, Range: 0 ~ 2346)
DTIM Interval	1	(Default: 1, Range: 1 ~ 255)
Fragmentation Threshold	2346	(Default: 2346, Range: 256 ~ 2346, even)
RTS Threshold	2346	(Default: 2346, Range: 0 ~ 2346)
WMM function	Disable	

Buttons for 'Apply' and 'Cancel' are located at the bottom of the settings area.

Transmission Rate: Select from Auto, 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps.

Transmission Power: Select from full, half, quarter, eighth, min.

CTS Protection Mode: Select from disable, enable, auto.

Beacon Interval: Enter a value from the valid range of 0 to 2346. The default value is 100 Milliseconds

DTIM Interval: Enter a value from the valid range of 0 to 255. The default value is 1.

Fragmentation Threshold: Enter an even number from 256 to 2346. The default value is 2346.

RTS Threshold: Enter a value from the valid range of 0 to 2346. The default value is 2346.

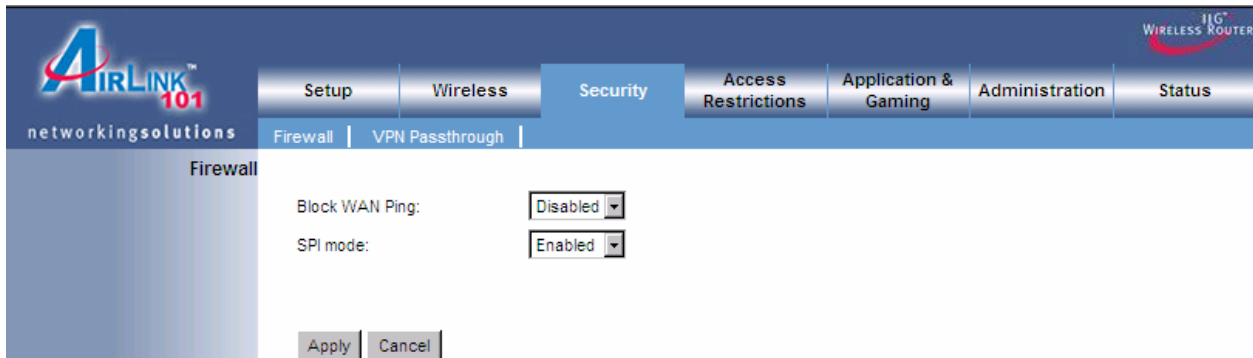
WMM Function: WMM keeps the priority of audio, video and voice applications in a Wi-Fi network so that other applications or network traffic (i.e. downloading large files) are less likely to cause delay to them.

Select disable or enable the WMM function.

Click **Apply** and **OK** to save the settings.

6.3 Security

6.3.1 Firewall



Block WAN Ping: Enable or Disable.

SPI Mode: Select to enable or disable Stateful Packet Inspection.

Click **Apply** and **OK** to save the settings.

6.3.2 VPN Passthrough

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



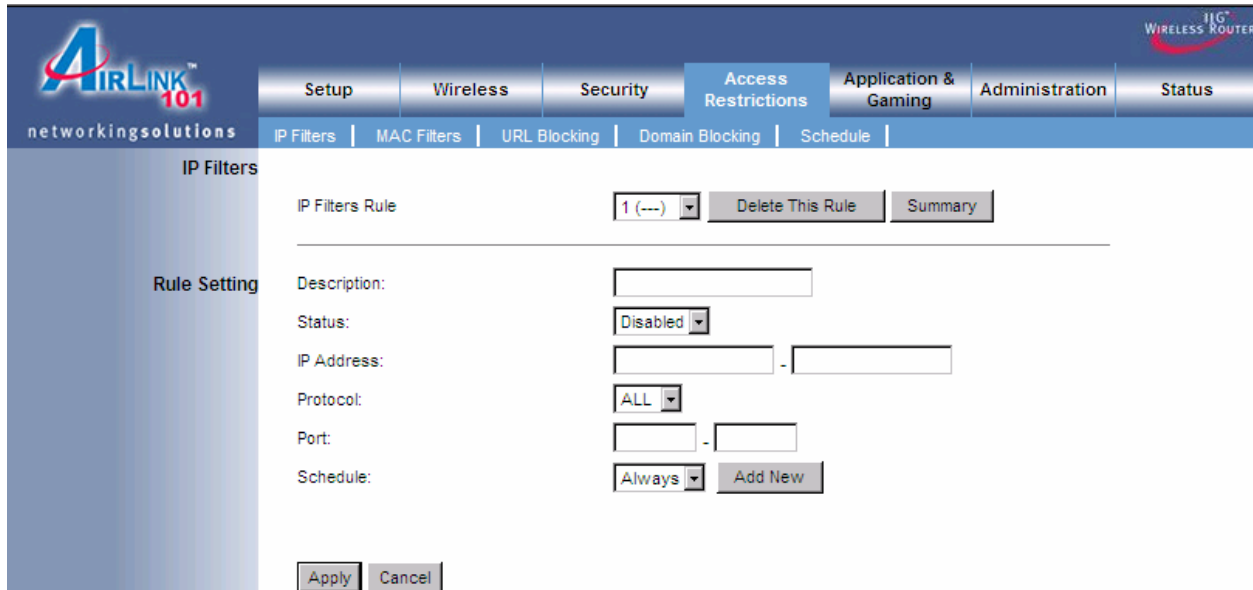
Click **Apply** and **OK** to save the settings.

6.4 Access Restrictions

You can setup policies that deny or allow specific clients to access the Internet based on IP address, MAC address, URL, Domain or a specified time.

6.4.1 IP Filters

Set up router filter policies based on IP addresses.



The screenshot shows the configuration interface for IP Filters on an Airlink 101 router. The page has a blue header with the Airlink 101 logo and navigation tabs for Setup, Wireless, Security, Access Restrictions (selected), Application & Gaming, Administration, and Status. Below the header, there are sub-tabs for IP Filters, MAC Filters, URL Blocking, Domain Blocking, and Schedule. The main content area is titled 'IP Filters' and shows a list of rules. The first rule is selected, and its settings are displayed in a 'Rule Setting' section. The settings include: Description (text input), Status (dropdown menu set to 'Disabled'), IP Address (two text input fields separated by a hyphen), Protocol (dropdown menu set to 'ALL'), Port (two text input fields separated by a hyphen), and Schedule (dropdown menu set to 'Always'). There are 'Delete This Rule' and 'Summary' buttons next to the rule list, and 'Apply' and 'Cancel' buttons at the bottom of the rule setting section.

Description: Enter a name for the policy.

Status: Choose to enable or disable the selected policy.

IP Addresses: Specify client by a range of IP addresses

Protocol: Select protocol from All, TCP, UDP or ICMP

Port: Enter a range of ports.

Schedule: Enter a schedule time

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

6.4.2 MAC Filters

Setup policies that deny or allow specific clients to access the Internet based on MAC addresses.

The screenshot shows the configuration interface for MAC Filters. At the top, there is a navigation bar with the AIRLINK 101 logo and several menu items: Setup, Wireless, Security, Access Restrictions (highlighted), Application & Gaming, Administration, and Status. Below this, there is a sub-menu with IP Filters, MAC Filters (highlighted), URL Blocking, Domain Blocking, and Schedule. The main content area is titled 'MAC Filters' and contains a dropdown menu set to 'Disabled'. Below this, there is a table with one row for a MAC Filter Rule, with a '1 (---)' dropdown and 'Delete This Rule' and 'Summary' buttons. The form includes fields for 'Enter Description Name', 'MAC Address' (with six input boxes separated by colons), 'DHCP Client' (with a '--Select Client--' dropdown and a 'Clone' button), and 'Schedule' (with an 'Always' dropdown and an 'Add New' button). At the bottom, there are 'Apply' and 'Cancel' buttons.

Enter Description Name: Enter a name for the policy.

MAC Address: Enter a MAC address

DHCP Client: Select DHCP client on your network.

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

6.4.3 URL Blocking

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

Enter the URL or the Keyword you wish to block.

Click **Apply** and **OK** to save the settings.

The screenshot shows the web interface for an AIRLINK 101 wireless router. The navigation menu at the top includes Setup, Wireless, Security, Access Restrictions (selected), Application & Gaming, Administration, and Status. Under 'Access Restrictions', there are sub-menus for IP Filters, MAC Filters, URL Blocking (selected), Domain Blocking, and Schedule. The main content area is titled 'URL Blocking' and contains the text 'Website Blocking by URL Address'. Below this, it says 'Configure URL Blocking below:'. A dropdown menu is set to 'Disabled'. There are 10 rows for URL configuration, each with a text input field, a dropdown menu set to 'Always', and an 'Add New' button. At the bottom, there are 'Apply' and 'Cancel' buttons.

URL	Action	Add New
URL 01 :	Always	Add New
URL 02 :	Always	Add New
URL 03 :	Always	Add New
URL 04 :	Always	Add New
URL 05 :	Always	Add New
URL 06 :	Always	Add New
URL 07 :	Always	Add New
URL 08 :	Always	Add New
URL 09 :	Always	Add New
URL 10 :	Always	Add New

6.4.4 Domain Blocking

Specify the domains to deny or allow internet access.

AIRLINK 101
networkingsolutions

Setup | Wireless | Security | **Access Restrictions** | Application & Gaming | Administration | Status

IP Filters | MAC Filters | URL Blocking | **Domain Blocking** | Schedule

Domain Blocking

Configure Domain Blocking below:

Disabled

Domain 01:	<input type="text"/>	Always	Add New
Domain 02:	<input type="text"/>	Always	Add New
Domain 03:	<input type="text"/>	Always	Add New
Domain 04:	<input type="text"/>	Always	Add New
Domain 05:	<input type="text"/>	Always	Add New
Domain 06:	<input type="text"/>	Always	Add New
Domain 07:	<input type="text"/>	Always	Add New
Domain 08:	<input type="text"/>	Always	Add New
Domain 09:	<input type="text"/>	Always	Add New
Domain 10:	<input type="text"/>	Always	Add New

Apply Cancel

6.4.5 Schedule

Select a time range in which the specified clients can access the Internet by **Day** and **Time**.

The screenshot shows the configuration interface for a wireless router. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions (selected), Application & Gaming, Administration, and Status. Below this, a sub-menu contains IP Filters, MAC Filters, URL Blocking, Domain Blocking, and Schedule (selected). The main content area is titled "Schedule" and features a dropdown menu showing "1 (---)" with a "Delete This Schedule" button and a "Summary" button. The configuration fields include: "Name:" with an empty text box; "Day(s):" with radio buttons for "All Week" and "Select Day(s)" (selected), and checkboxes for Sun, Mon, Tue, Wed, Thu, Fri, and Sat; "All Day - 24 hrs:" with an unchecked checkbox; "Start Time:" with two input boxes for hour and minute, and a dropdown for AM/PM, with a note "(hour:minute, 12 hour time)"; "End Time:" with similar input boxes and a note "(hour:minute, 12 hour time)"; and "Apply" and "Cancel" buttons at the bottom.

6.5 Applications & Gaming

6.5.1 Port Range Forwarding

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

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

The screenshot shows the 'Port Range Forwarding' configuration page in the AIRLINK 101 router's web interface. The page has a navigation bar with tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming (selected), Administration, and Status. Below the navigation bar, there are sub-tabs for Port Range Forwarding, Port Range Triggering, and DMZ. The main content area is titled 'Port Range Forwarding' and includes a section for 'Application Name' with five 'None' dropdown menus and several empty text input fields. To the right is a table with the following columns: Start ~ End Port, Protocol, To IP Address, Enabled, and Schedule. The table contains 15 empty rows. At the bottom of the page are 'Apply' and 'Cancel' buttons.

Start ~ End Port	Protocol	To IP Address	Enabled	Schedule
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always
<input type="text"/> ~ <input type="text"/>	Both	192.168.1. <input type="text"/>	<input type="checkbox"/>	Always

Click **Apply** and **OK** to save the settings.

6.5.2 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.

networkingsolutions AIRLINK 101 WIRELESS ROUTER

Setup Wireless Security Access Restrictions **Application & Gaming** Administration Status

Port Range Forwarding | **Port Range Triggering** | DMZ

Port Range Triggering

Application Name	Triggered Port Range	Trigger Protocol	Public Port	Public Protocol	Enabled
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>
<input type="text"/>	<input type="text"/> - <input type="text"/>	Both ▾	<input type="text"/>	Both ▾	<input type="checkbox"/>

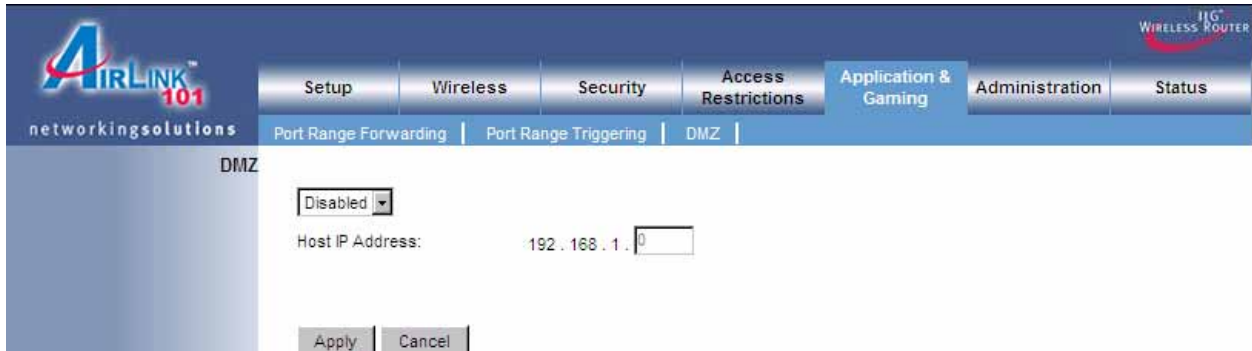
Apply Cancel

Click **Apply** and **OK** to save the settings.

6.5.3 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.



DMZ: Select to enable or disable DMZ.

Host IP Address: Specify the host IP 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** and **OK** to save the settings.

6.6 Administration

6.6.1 Management

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

The screenshot shows the 'Administration' section of the Airlink 101 router's web interface. The 'Management' tab is selected. The interface includes a navigation menu with options like Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The main content area is divided into sections: 'Router Password' with two password input fields; 'Remote Router Access' with a 'Remote Management' dropdown set to 'Disabled', an 'IP Address' field with a note '(***) means any IP Address.)', and a 'Port' dropdown set to '8080'; 'UPnP' with a dropdown set to 'Enabled'; and 'Backup and Restore' with a 'Backup' button and a 'File Path' field with 'Browse...' and 'Restore' buttons. 'Apply' and 'Cancel' buttons are at the bottom.

Router Password: Set the router's login password.

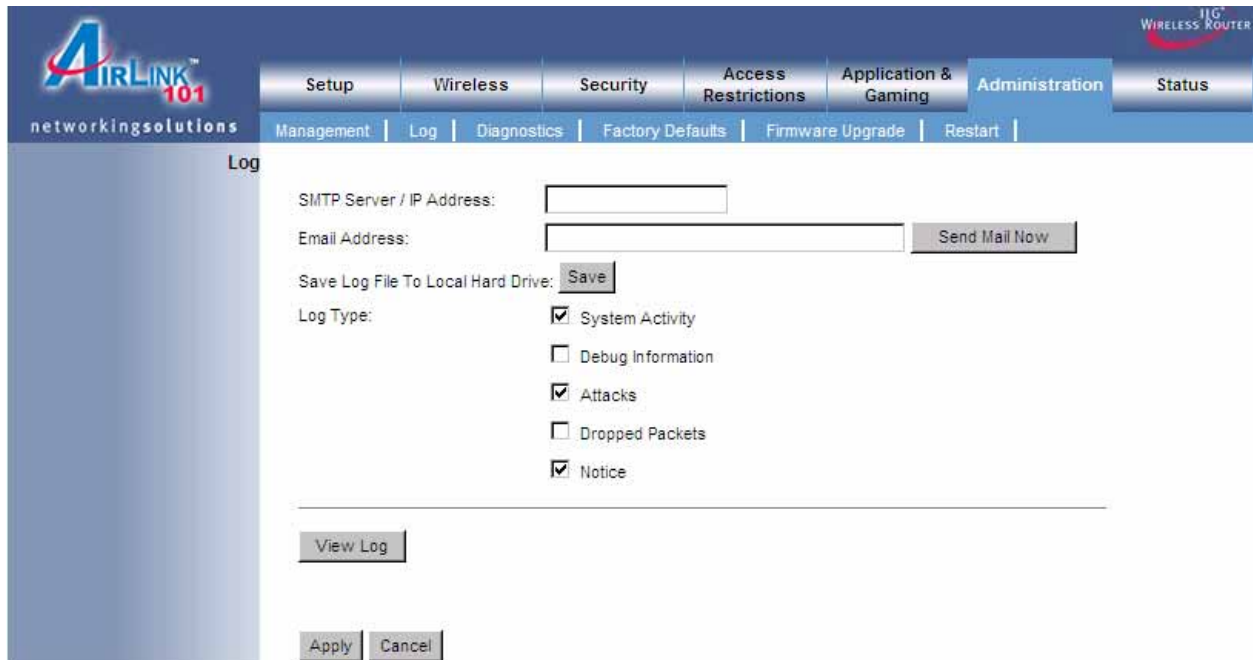
Remote Router Access: Select to enable or disable remote management/upgrade of the router. You can allow remote management from any IP Address or a specified IP Address as well as the port number.

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.

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.

6.6.2 Log

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



The screenshot shows the 'Log' configuration page in the Airlink 101 router's web interface. The page has a blue header with the 'Airlink 101' logo and 'networkingsolutions' text. A navigation menu includes 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Application & Gaming', 'Administration' (selected), and 'Status'. Below the menu, there are sub-menus: 'Management', 'Log' (selected), 'Diagnostics', 'Factory Defaults', 'Firmware Upgrade', and 'Restart'. The main content area is titled 'Log' and contains the following fields and controls:

- 'SMTP Server / IP Address:' with an empty text input field.
- 'Email Address:' with an empty text input field and a 'Send Mail Now' button to its right.
- 'Save Log File To Local Hard Drive:' with a 'Save' button to its right.
- 'Log Type:' with four checked checkboxes: 'System Activity', 'Attacks', and 'Notice', and two unchecked checkboxes: 'Debug Information' and 'Dropped Packets'.
- A horizontal line separating the configuration from the 'View Log' button.
- 'Apply' and 'Cancel' buttons at the bottom.

Email Address: Specify an email address to send the log file.

Send Mail Now: Send the log file to the specified the email address.

Save Log File to Local Hard Drive: Take the log in router memory and store it into a log file.

Log Type: Specify the information you want to capture. They include System Activity, Debug Information, Attacks, Dropped Packets, and Notice.

View Log: Allow you to see logged information related to System Activity, Debug Information, Attacks, Dropped Packets, and Notice.

Click **Apply** and **OK** to save the settings.

6.6.3 Diagnostics

The Diagnostics screen allows you to perform **Ping** tests.



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

6.6.4 Factory Defaults

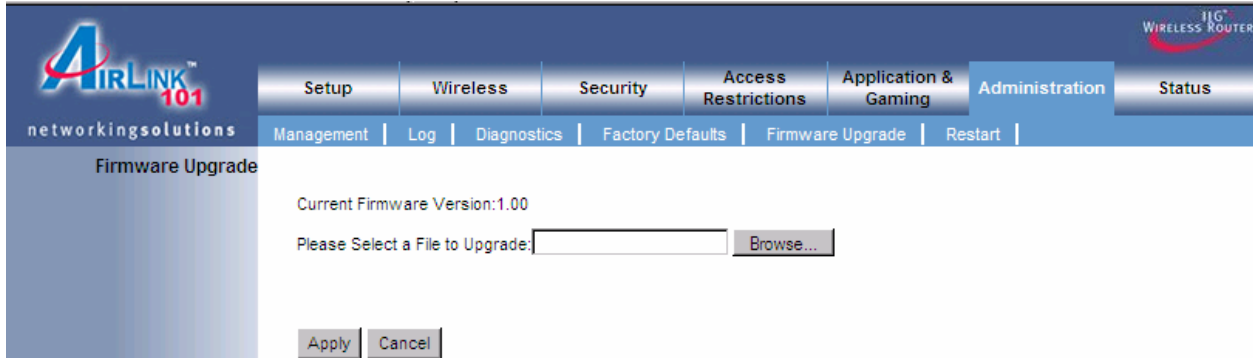
The Factory Defaults screen allows you to set all the router's settings to the factory default.



Click on the **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.



You may download the updated firmware from the Airlink101 website www.airlink101.com

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

Note: Do not power off the router during the firmware upgrading, otherwise your router may be damaged permanently. Do not upgrade firmware from a wireless computer.

6.6.6 Restart

The Restart page allows you to restart the router without restoring the settings to factory default.

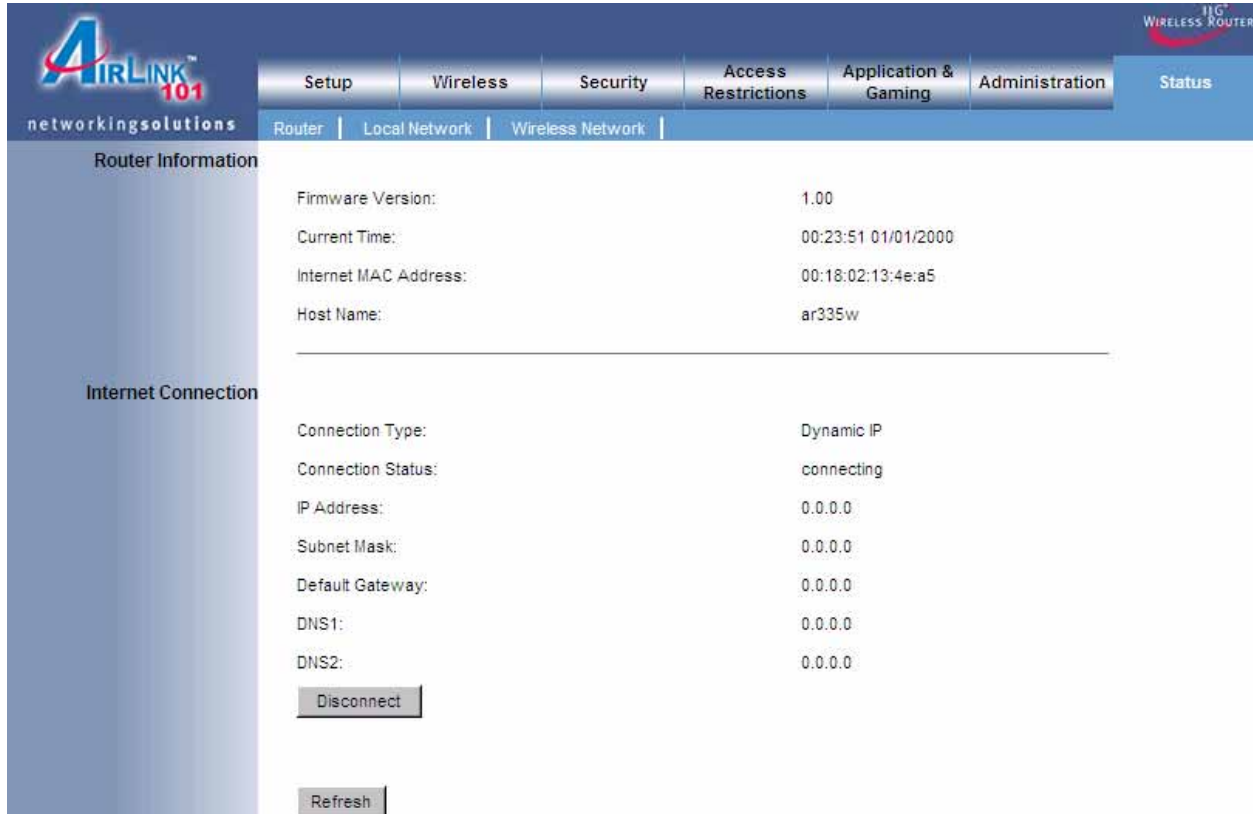


Click on the **Restart** button to restart the router.

6.7 Status

6.7.1 Router

The Router screen displays the router status information including the firmware version.



The screenshot displays the web interface for an AIRLINK 101 wireless router. The interface includes a navigation menu with tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The Status tab is active, showing Router Information and Internet Connection details.

Router Information	
Firmware Version:	1.00
Current Time:	00:23:51 01/01/2000
Internet MAC Address:	00:18:02:13:4e:a5
Host Name:	ar335w

Internet Connection	
Connection Type:	Dynamic IP
Connection Status:	connecting
IP Address:	0.0.0.0
Subnet Mask:	0.0.0.0
Default Gateway:	0.0.0.0
DNS1:	0.0.0.0
DNS2:	0.0.0.0

Buttons: Disconnect, Refresh

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

6.7.2 Local Network

The Local Network screen displays the local area network status information.



The screenshot shows the web interface for an AIRLINK 101 wireless router. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The 'Local Network' tab is selected, and the 'Local Network' sub-tab is active. The page displays the following information:

Local Network	Value
Local MAC Address:	00:18:02:13:4e:a4
IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0

DHCP Server	Value
DHCP Server:	Enabled
Start IP Address:	192.168.1.100
End IP Address:	192.168.1.199

At the bottom of the DHCP Server section, there is a button labeled "DHCP Client Table".

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

6.7.3 Wireless Network

The Wireless Network screen displays the wireless network status information.

The screenshot shows the configuration interface for an AIRLINK 101 wireless router. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The 'Wireless' tab is selected, and the 'Wireless Network' sub-tab is active. The main content area displays the following information:

Wireless-G Information	MAC Address:	00:18:02:13:4e:a4
	Mode:	Mixed(g/b)
	Network Name (SSID):	default
	Channel:	6
	Security:	Disabled
	SSID Broadcast:	Enabled

Below the information is a button labeled 'Wireless Client List'.

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.

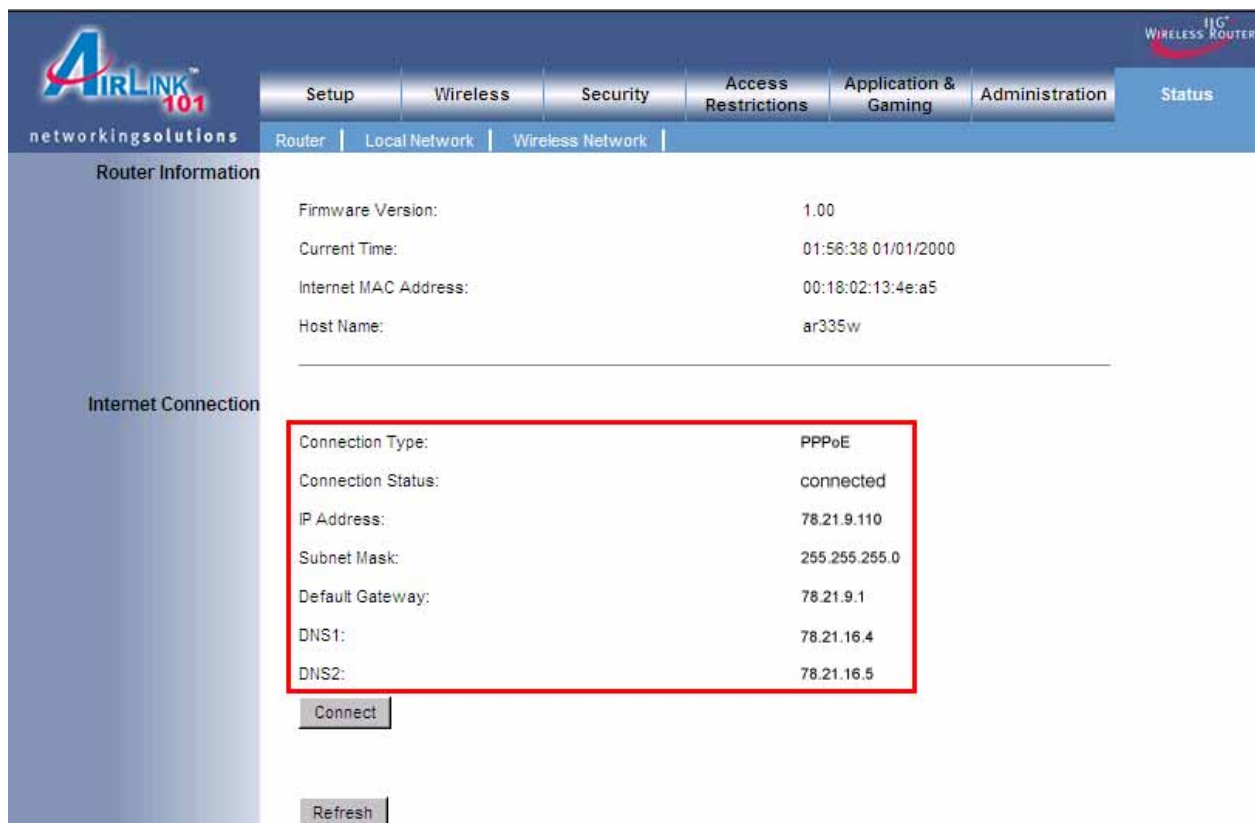
Step 3 Turn on the router and wait for the lights on the router to settle down.

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).



The screenshot shows the Airlink 101 router's status page. The interface includes a navigation menu with tabs for Setup, Wireless, Security, Access Restrictions, Application & Gaming, Administration, and Status. The Status tab is selected, and the 'Wireless Network' sub-tab is active. The page displays 'Router Information' and 'Internet Connection' sections. The 'Internet Connection' section is highlighted with a red box, showing the following details:

Connection Type:	PPPoE
Connection Status:	connected
IP Address:	78.21.9.110
Subnet Mask:	255.255.255.0
Default Gateway:	78.21.9.1
DNS1:	78.21.16.4
DNS2:	78.21.16.5

Below the table are 'Connect' and 'Refresh' buttons.

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

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.

Industry Canada Statement

This device complies with **RSS-210** of the Industry Canada Rules. Operation is subject to the following two conditions:

- 1) this device may not cause interference and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device

This device has been designed to operate with an antenna having a maximum gain of **2dBi**.

Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC 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.

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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