

MEDIALINK



300Mbps Wireless N Router User Guide

MODEL NO: MWN-WAPR300NE

Simple Setup

Simplified Steps To Install This Product
Quickly And With Ease

Enhanced Performance

Wireless Connection Speed Of Up To
300Mbps | 2.4 GHz Wireless Technology

Advanced Security

Effectively Protect Your Wireless Network
With WPA / WPA2 Encryption

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Chapter 1 Product Introduction

Thank you for purchasing the Medialink Wireless 300N Router!

This router is extremely easy to setup and easy to use. It supports 802.11n devices and is backwards compatible with 802.11b/g devices. The router can support various types simultaneously without slowing down your network.

The Medialink wireless router includes a router, wireless AP, four-port Fast Ethernet (10/100) switch and firewall. It provides powerful online monitor functions and supports URL filter and MAC filter. With WDS function, it can repeat and amplify wireless signals from compatible Access Points so as to enlarge network coverage area. It supports UPnP and WMM to make your audio and video streaming smooth. With QoS function, it can efficiently distribute the data downloading from your ISP to the clients in your network. The router also comes equipped with WISP (Wireless WAN) function to access an ISP's wireless hotspot or to create a new wireless network in addition to your existing wireless network by wirelessly connecting to any existing wireless router.

1.1 Package Contents

Please verify the following items after you open the package:

- One Wireless N Broadband Router
- One Quick Installation Guide
- One Power Adapter
- One CD

If any of the listed items are missing or damaged, please contact the Medialink reseller for immediate replacement.

1.2 LED Indicators and Port Description

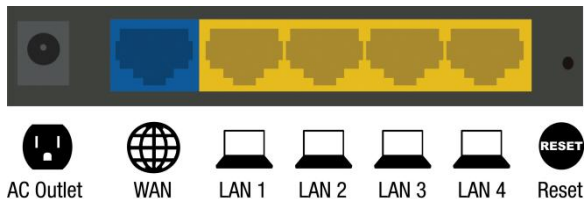
Panel and LED indicators show:



LED indicator description on the front panel

LED indicator	Status	Description
POWER	Continuously lit	Indicates the router is on and has power.
SYS	Flashing	Indicates the router is operating correctly.
WAN	Continuously lit	Indicates the router' s WAN port is connected to an Ethernet device.
	Flashing	Indicates the port is transmitting and/or receiving data packets.
WLAN	Continuously lit	Indicates the wireless function is enabled.
	Flashing	Indicates it is wirelessly transmitting data
LAN(1/2/3/4)	Continuously lit	Indicates the router' s LAN port is connected to an Ethernet device.
	Flashing	Indicates the port is transmitting and/or receiving data.
WPS	Flashing	Indicates the device is communicating with the client in WPS mode.

Back panel ports



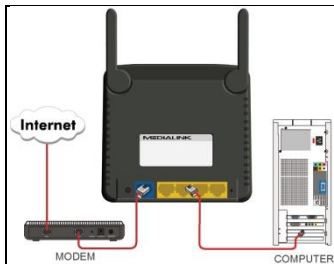
Back panel port description

Port/Button	Description
WAN	Can be connected to Ethernet devices such as MODEM, Switch, Router, etc.. Usually it is used to connect DSL MODEM or Cable MODEM, or ISP network cable for connecting to the Internet.
LAN (1/2/3/4)	Can be connected to an Ethernet switch, Ethernet router, or NIC card. Mostly they are used to connect to computers, Ethernet switches, etc.
RESET	The system reset button. Press and hold this button for 7 seconds and all of the settings will be deleted and router settings will be restored to factory default.
POWER	The jack is for power adapter connection. Please use the included standard power adapter.

Chapter 2 Product Installation

2.1 Modem to Router Installation (Most Common)

1. Please use only the included power adapter to power your router. (**NOTE:** Use of an unmatched power adapter could cause damage to this product).
2. Please connect the router's LAN port to your computer with an Ethernet cable and connect your broadband line provided by your ISP to the router's WAN port.



3. By default the Medialink router is set to use a Dynamic (DHCP) connection through the WAN port so unless you have a DSL Modem that requires the router to use a PPPoE type setup, then you will immediately have Internet access through the Medialink router. If you have a PPPoE setup that requires a DSL Username and Password to be entered into the router proceed to Step 4.

4. PPPoE Setup

- a. Open any Internet browser such as Internet Explorer or Firefox.
- b. In the address bar, type <http://192.168.8.1> , then hit "Enter" on your keyboard.
- c. At the prompt enter the default Username (admin) and Password (admin).
- d. Select "PPPoE", enter your DSL Username and DSL Password provided by your ISP and hit "Apply"

2.2 Router to Router (Access Point Setup)

1. Connect your computer directly to the Residential Gateway, Wireless Modem

or Original Router (will be referred to as “Original Router” in the remaining steps below) via an Ethernet cable.

2. Find the Default Gateway of the Original Router. It is typically 192.168.0.1 or 192.168.1.1. Here’s how to find the Default Gateway:
 - a. XP Users: Click on Start > Control Panel > Network Connections > Right Click Local Area Connection > Status > Support Tab > Write down the Default Gateway.
 - b. Vista: Click on Start > Control Panel > Network and Sharing Center > Manage Network Connections > Right Click Local Area Connection > Status > Details > Write down the Default Gateway
 - c. Windows 7: Click on Start > Control Panel > Network and Internet > Network and Sharing Center > Change Adapter Settings > Right Click Local Area Connection > Status > Details > Write down the Default Gateway
 - d. Windows 7: Click on Start > Control Panel > Network and Internet > Network and Sharing Center > Change Adapter Settings > Right Click Local Area Connection > Status > Details > Write down the Default Gateway

3. Once you have the Gateway, disconnect the original router from your computer. Next, connect the Medialink router directly to the computer via an Ethernet cable (plug one end of the Ethernet cable to one of the Yellow LAN Ports of the Medialink Router. Plug the other end into the network port of your computer). Then, connect the AC/DC Adapter to the router’s Power port. Connect the other end into an electrical outlet. Wait 30 seconds to allow the router to fully start.

4. Login to the Medialink router
 - a. Launch a web browser such as Internet Explorer or Firefox and enter the Router’s default IP address, <http://192.168.8.1>. Press “Enter”.
 - b. Input the “admin” in both User Name and Password.
 - c. Click “OK”.
 - d. Click any of the “Advanced Settings” links on the Basic Settings Screen to enter into the Router’s settings section.

5. Click on Advanced Settings > LAN Settings and change the IP address to be the same as the Default Gateway of the Original router except the last number (ie: if the Default Gateway is 192.168.0.1, make the Medialink 192.168.0.XXX where XXX can be any number between 2 - 254)

6. Click Apply, and then OK, and the Medialink router will reboot.
7. After rebooting, enter the Username and Password (default: admin for both) then click any of the “Advanced Settings” links on the Basic Settings Screen to enter into the Router’s settings section. If the connection is lost, change the Yellow Port that you are plugged into. Disconnect the Ethernet from the Yellow LAN Port it is plugged into and plug it into a different Yellow LAN Port.
8. Once you are logged back into the Medialink router, name your wireless network: Click Wireless Settings then click Basic Settings. Change the SSID name to a name that will identify your wireless network (For example: Smith or MyWireless.) Then, Click Apply. Click Ok.
9. Setup security for your wireless network: Click Wireless Settings, then click Wireless Security Settings. Here you can change your wireless password. Click Apply when finished. Record this case sensitive password for your records.
10. Disable the DHCP Server by clicking DHCP Server, uncheck Enable, click Apply.
11. Power down the Medialink router, and your original router by unplugging the power cord from the power outlet.
12. Connect an Ethernet cable from the Original Router to any of the YELLOW LAN ports (Not the Blue WAN port) of the Medialink router. (At this point the Medialink router will have 2 x yellow ports occupied – one to the computer and one to the original router)
13. Power up the Original Router, wait 30 seconds for it to fully restart, Power up the Medialink Router, wait 30 seconds for it to fully restart.
14. Test the internet connection through the computer that is currently hardwired to the Medialink Router:
 - a. If you do not have internet through the wired connection, you may need to power cycle all devices in the network and start them again slowly starting with the device closest to the ISP connection.
15. Test the internet connection to the Medialink router via a wireless device.

If you still cannot connect to the internet, please download the latest FAQ at medialinkproducts.com/support or please call technical support at 856-216-8222

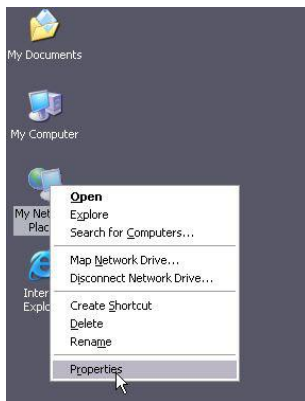
Chapter 3 How to configure your computer's Ethernet (LAN) connection.

(Please note that most computers are already configured correctly
and do not require this step.)

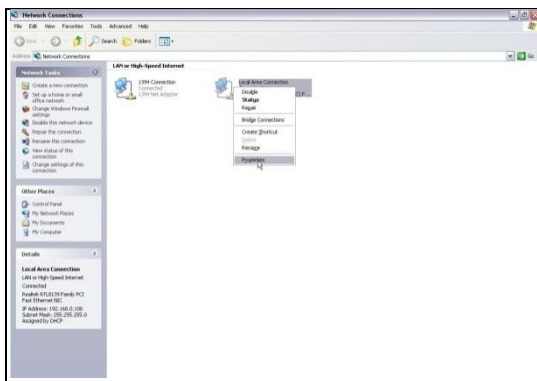
3.1 How to Set the Network Configurations

Network Configurations under Windows XP

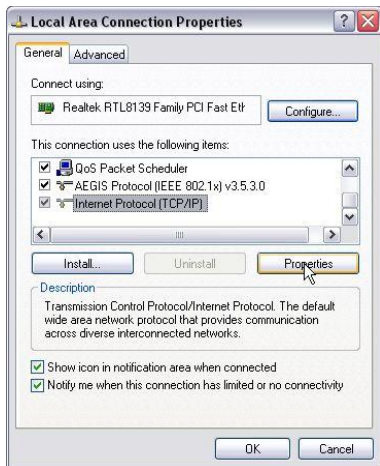
1. Right click "My Network Places" on your computer desktop and select "Properties".



2. Right click "Local Area Connection" and select "Properties".



3. Select "Internet Protocol (TCP/IP)" and click "Properties".



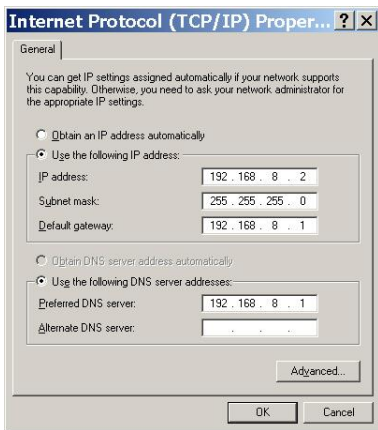
4. Select “**Obtain an IP address automatically**” and “**Obtain DNS server address automatically**”. Click “**OK**” to save the configurations.




Or if you want to specify a Static IP Address for your computer, select “**Use the following IP address**” and enter the IP address, Subnet mask, Default gateway as follows:

- **IP Address:** 192.168.8.XXX: (XXX is a number from 2~254)
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.8.1

- **DNS server:** You should input the DNS server address provided by your ISP. Otherwise, you can enter 192.168.8.1. Click “OK” to save the configurations.

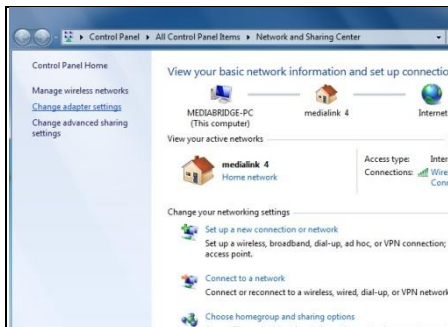


Network Configurations under Windows 7

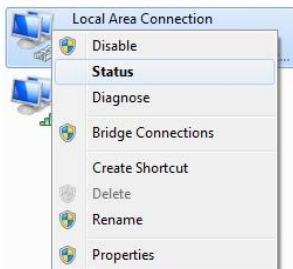
1. Click the network icon  on the lower right corner of your computer desktop, and then click “Open Network and Sharing Center”.



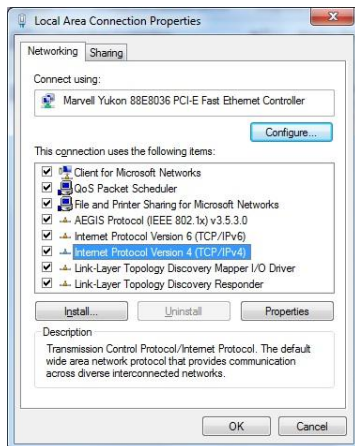
2. Click “Change adapter settings” on the left side of the window.



3. Right click "Local Area Connection" and select "Properties".

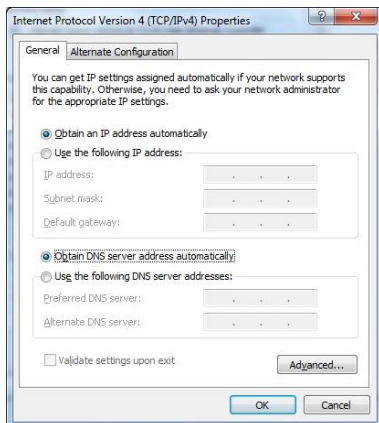


4. Double click" Internet Protocol Version 4(TCP/IPv4)".

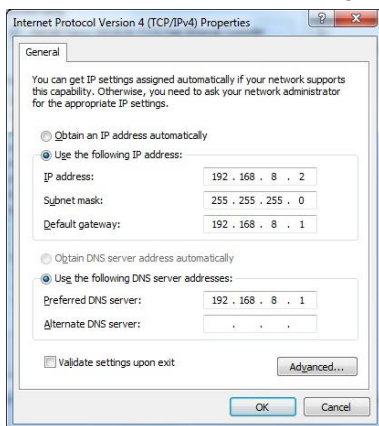


5. Select "Obtain an IP address automatically" and "Obtain DNS server address

automatically". Click "OK" to save the configurations.



Or if you want to specify a Static IP Address for your computer select "Use the following IP address" and enter the IP address, Subnet mask, Default gateway as follows:



- **IP Address:** 192.168.8.XXX: (XXX is a number from 2-254)
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.8.1
- **DNS server:** You should input the DNS server address provided by your ISP. Otherwise, you can enter 192.168.8.1. Click "OK" to save the configurations.

3.2 Log in to the Router

1. To access the Router's Web-based Utility, launch a web browser such as Internet Explorer or Firefox and enter `http://192.168.8.1` Press "Enter".

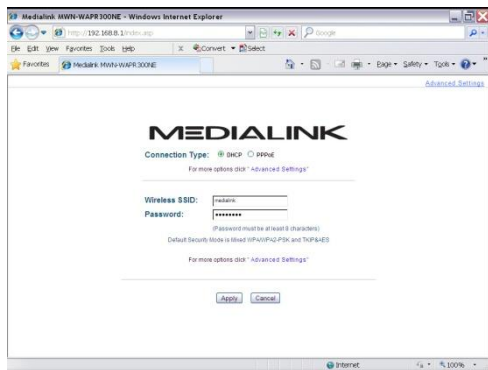


2. You will be prompted to Login. The Default Username is "admin" and the Default Password is "admin" as well. Click Apply to enter the router's GUI.



Note: To change the Login Credentials once you are logged in, go to "Advanced Settings" > "System Tools" > "Change Username/Password".

3. Once you have logged in, you will be directed to the Basic Settings Page where you can name your wireless network and set a password as well as configure your connection type. Click "Advanced Settings" to adjust any other settings within the router.



3.3 Fast Internet Access

Two kinds of fast access methods are provided on the router's web-based utility or GUI: DHCP and PPPoE (aDSL Virtual Dial-Up).

If you select DHCP, you can choose to change the Wireless SSID (name of network) and/or the Wireless Password if you want. Then click "Apply" to complete the settings.



If you select PPPoE, you only need to enter the DSL Username and DSL Password. If you are unsure of your DSL Username and Password, please contact your Internet Service Provider (ISP). If you want to change the Wireless SSID (name of network) and/or the Wireless Password you can do that here. Then click "Apply" to complete the settings.



The default access method is DHCP. For other access methods, please refer to WAN settings in Chapter 4. The wireless password must contain at least 8 characters. The

default is “password” and you can change it whenever you want.

3.4 Default Wireless Settings

Your Medialink router is set by default to have a Wireless SSID “medialink”. This is the name of your network that will appear in a list to choose from on any device in range of the router.

The default wireless security settings on your router are WPA-Personal using AES Algorithm for encryption. You can choose to you other security methods in the Advanced Settings. The password otherwise known as “Network Key” or “WPA Key” is set to “password” by default. This can be changed but please note it is case sensitive and must contain at least 8 characters.

(For advanced setting or to disable wireless security, please refer to Chapter 5.2).

Chapter 4 Advanced Settings

4.1 System Status

The System Status screen allows you to view the router's (blue) WAN port status and system status.



- **Connection Status:** This displays the router's WAN connection status.
Disconnected: indicates the router's WAN port has not been connected with a network cable.
Connecting: indicates the router's WAN port is obtaining an IP address.
Connected: indicates the Router is connected with your ISP or modem.
- **WAN IP :** IP address obtained from ISP, modem, or router.
- **Subnet Mask:** Obtained from ISP, modem, or router.

- **Gateway:** Obtained from ISP, modem, or router.
- **DNS Server:** Obtained from ISP, modem, or router.
- **Alternate DNS Server:** Obtained from ISP, modem, or router.
- **Connection Type:** displays your current access method.

System Status:	
LAN MAC Address	
WAN MAC Address	
Firewall	Enable
System Time	
Running Time	
Connected Client	
Firmware Version	V5.07.39_en_MDL01
Hardware Version	V3.0

- **LAN MAC Address :** displays the Router's LAN MAC Address.
- **WAN MAC Address :** displays the Router's WAN MAC Address.
- **System Time :** displays the system's updated time.
- **Connected Client :** displays the number of the connected computers whose IP addresses were obtained via DHCP server.
- **Firmware Version :** displays the Router's firmware version.
- **Hardware Version :** displays the Router's hardware version.

4.2 WAN Settings

Click “Advanced Settings” > “WAN Settings” to enter the following screen:

PPPoE (aDSL Virtual Dial-up)

The screenshot shows the MEDIALINK web interface for WAN Settings. The page title is "MEDIALINK". The navigation menu includes: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. The breadcrumb trail is: System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | Bandwidth Control | Traffic Statistics | Firewall | Range Extender Setup.

The main configuration area is titled "Mode" and is set to "PPPoE". The fields are as follows:

- ISP Username (or Email): jack@domain.net
- ISP Password: [Redacted]
- MTU: 1492 (Default Setting is 1492)
- Service Name: [Empty] (Only enter this information if instructed by ISP.)
- Server Name: [Empty] (Only enter this information if instructed by ISP.)

Under "Select your connection mode:", there are three radio button options:

- Connect Automatically: Connect automatically to the Internet after rebooting the system or connection failure. (Recommended)
- Connect On Demand: Re-establish connection to the Internet only when there is data transmitting.
- Connect Manually: Require the user to manually connect to the Internet before each session.

There is a sub-section for "Connect During Specified Time Period" with a note: "Note: To use the 'Connect During Specified Time Period' mode, you must first set the 'Time Settings' in 'System Tools'." Below this, there are input fields for "Connection Time: From [0] Hours [0] Minutes To [0] Hours [0] Minutes". At the bottom are "Apply" and "Cancel" buttons.

- **Mode:** Shows your current connection mode.
- **ISP Username (or Email):** Enter the Username provided by your ISP.
- **ISP Password:** Enter the password provided by your ISP.
- **MTU:** Maximum Transmission Unit is the size of the largest data packet that can be sent over the network. The default value is 1492. Do NOT modify it unless necessary, but if a specific website or web application software cannot open or be enabled, you might want to lower the MTU value to 1450, 1400, etc.
- **Service Name:** The connection name for your PPPoE must only be entered if instructed by your ISP. Otherwise leave it blank.
- **Server Name:** The server name must only be entered if instructed by your ISP. Otherwise leave it blank.
- **Connect Automatically:** Connect automatically to the Internet after rebooting the system or after connection failure.
- **Connect on Demand:** Re-establish your connection to the Internet after the specific time (Max Idle Time). Zero means you are connected to the Internet at all times. Otherwise, enter the minutes to be elapsed before you are disconnected

from the Internet.

- **Connect Manually:** Connect to the Internet by users manually.
- **Connect on Fixed Time:** Connect to the Internet during the time you fix automatically.
- **Click “Apply” when finished.**

 **NOTE:**

The “Connect on Fixed Time” goes into effect only when you have set the current time in “Time Settings” from “System Tools”.

Static IP

If you have a Static IP account with your ISP, please choose static IP. You will need to enter the IP Address, Subnet Mask, Gateway, DNS Server and Alternate DNS Server provided by your ISP or network administrator.



The screenshot shows the MEDIALINK web interface. At the top, there is a navigation menu with tabs: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below the menu, there are links for System Status, WAN Settings (which is highlighted), LAN Settings, MAC Clone, DNS Settings, WAN Speed, Bandwidth Control, Traffic Statistics, Firewall, and Range Extender Setup. The main content area is titled 'Mode: Static IP' and contains several input fields: IP Address (88.122.17.10), Subnet Mask (255.255.0.0), Gateway (88.122.17.1), DNS Server (113.3), Alternate DNS Server (113.4) with an '(Optional)' label, and MTU (1024) with '(Default Setting is 1500)'. At the bottom of the form are 'Apply' and 'Cancel' buttons.

- **Mode:** Shows your current connection mode.
- **IP Address:** Enter the WAN IP Address provided by your ISP. If you are not clear, please contact your ISP.
- **Subnet Mask:** Enter the WAN Subnet Mask provided by your ISP. Typically it is 255.255.255.0 or similar.
- **Gateway:** Enter the Default Gateway provided by your ISP. If you are not clear, please contact your ISP.
- **DNS Server:** Enter the DNS server provided by your ISP.
- **Alternate DNS Server:** Enter the second DNS address if your ISP provides one. (optional)
- **Click “Apply” when finished.**

Dynamic IP (Via DHCP)

If your connection mode is Dynamic IP, it means every time you access the Internet, you

will get a different IP Address. You do not need to enter any parameters in this mode, just Click “Apply” to apply the setting.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | Bandwidth Control | Traffic Statistics | Firewall | Range Extender Setup

Mode:

MTU: (Default Setting is 1500)

PPTP

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | Bandwidth Control | Traffic Statistics | Firewall | Range Extender Setup

Mode:

PPTP Server Address:

Username:

Password:

MTU:

Address Mode:

IP Address:

Subnet Mask:

Gateway:

- **Mode:** Show your current connection mode.
- **PPTP Server Address:** The IP address or domain name of the destination server is used to specify the destination address for the PPTP connection.
- **Username/Password:** Used to validate identity when connecting to the PPTP server.
- **Address Mode:** Set the router's IP address mode. You can select either “Dynamic” or “Static”. If your ISP doesn't provide the IP address, please select “Dynamic”.
- **IP Address:** Please enter the IP address provided by your ISP.
- **Subnet mask:** Please enter the subnet mask provided by your ISP, generally it is 255.255.255.0 or similar.
- **Gateway:** Please enter the gateway provided by your ISP.
- **Click “Apply” when finished.**

L2TP

- **Mode:** Shows your current connection mode.
- **L2TP Server Address:** The IP address or domain name of the destination server is used to specify the destination address for the L2TP connection.
- **Username/Password:** Used to validate identity when connecting to the L2TP server.
- **Address Mode:** Set the router's IP address mode. You can select either "Dynamic" or "Static". If your ISP does not provide the IP address, please select "Dynamic".
- **IP address:** Please enter the IP address provided by your ISP
- **Subnet mask:** Please enter the subnet mask provided by your ISP, generally it is 255.255.255.0 or similar.
- **Gateway:** Please enter the gateway provided by your ISP.
- **Click "Apply" when finished.**

4.3 LAN Settings

Click "Advanced settings" > "LAN settings" to enter the following screen:

- **LAN MAC Address:** The Router's LAN MAC Address, which is unchangeable.
- **IP Address:** The Router's LAN IP Address (not your PC's IP address and not the WAN IP Address that your router acquires from your modem/ISP). The default value is 192.168.8.1. You can change this when necessary.
- **Subnet Mask:** The Router's LAN Subnet Mask. The default value is 255.255.255.0
- **Click "Apply" when finished.**



NOTES:

- Once you modify the IP address, you need to remember it for next time you log in to the web-based utility. If your computer loses access to the router after you change the LAN IP Address, you will need to refresh the computer's connection to the router. Disabling/Enabling the Local Area Connection is one way to do that.
- If you wish to change the IP Address to a Class A (10.X.X.X) or Class B (172.16.X.X) address, then the Subnet Mask must be set accordingly:
 - Class A IP Addresses (10.X.X.X) require the Subnet Mask: 255.0.0.0
 - Class B IP Addresses (172.16.X.X) require the Subnet Mask: 255.255.0.0

4.4 MAC Clone

This page is for the Router's MAC Address that is registered to the WAN connection.

Some ISPs require the end-user's MAC Address to access their network. This page will allow your router to copy the MAC Address of your connected computer to the router so that your ISP connection will work properly.

- **MAC Address:** The MAC Address to be registered with your Internet Service



Provider.

- **Clone MAC Address:** Copies your PC's MAC Address. Make sure you are using a computer that does work properly when connected directly to your modem and that your computer is currently connected to your Medialink router via Ethernet.
- **Restore Default MAC Address:** Restores the MAC Address to the default factory MAC Address.
- **Click "Apply when finished."**



NOTE: After the settings are completed, reboot the device to activate the modified settings.


4.5 DNS Settings

DNS stands for Domain Name System (or Service).



- **Enable Manual DNS Assignment:** Select to enable the manual DNS settings.

- **Primary DNS Address:** Enter a valid DNS address.
- **Alternate DNS address:** Enter a valid DNS address or leave this field blank. (optional)
- **Click “Apply” when finished.**

 **NOTE:** After the settings are completed, reboot the device to activate the modified settings.

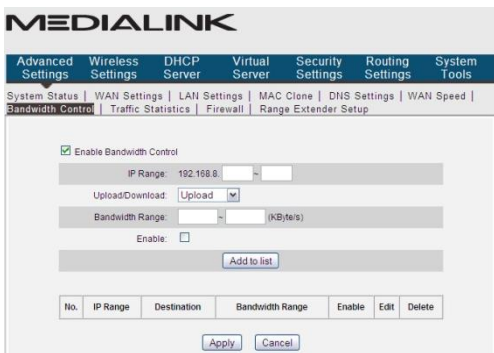


4.6 WAN Speed

This page allows you to set the connection speed of the WAN port. It is not recommended to adjust this setting.

4.7 Bandwidth Control

Bandwidth control is used to limit the data traffic of LAN computers when accessing the Internet. It can simultaneously control maximum of 254 PCs' traffic. In addition, IP address range configuration is supported.



- **Enable Bandwidth Control:** enables or disables the internal IP bandwidth control. The default is disabled.
- **IP Range:** The IP address range of the hosts whose traffic has been controlled. It can be a single IP address or IP address range. (For Single IP, enter the same IP in both fields).
- **Upload/Download:** specifies the traffic direction for the selected IP addresses.
- **Bandwidth Range:** The maximum and minimum upload/download data traffic of the hosts in specified IP range. The unit is KByte/sec. The uplink of upload and download cannot exceed the WAN port bandwidth limitation range (by default is 1500 or 1492).
- **Enable:** enables the current edited rule. Otherwise, the rule will not go into effect.
- **Add to list:** After you edit the rule, click the “Add to list” button to add the current rule to the rule list.

Here we take 2Mbps bandwidth as an example. Theoretically, the biggest downloading rate for 2Mbps bandwidth is $2\text{Mbps}=256\text{KByte/s}$, and the biggest uploading rate is $512\text{kpbs}=64\text{KByte/s}$

Example 1

If you want to set the download rate of the computer at the IP address of 192.168.8.2 as 80-90KByte/s, upload rate as 10-15KByte/s, first add one upload rule as shown in the picture below:

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed |
 Bandwidth Control | Traffic Statistics | Firewall | Range Extender Setup

Enable Bandwidth Control

IP Range: 192.168.8.2 ~ 2

Upload/Download: Upload

Bandwidth Range: 10 ~ 15 (KB/fe/s)

Enable:

Add to list

No.	IP Range	Destination	Bandwidth Range	Enable	Edit	Delete
-----	----------	-------------	-----------------	--------	------	--------

Apply Cancel

1. Enter 192.168.8.2 in the both IP address fields
2. Select upload in the Upload/Download field.
3. Enter 10-15 in the bandwidth range field
4. Select "Enable"
5. Click "Add to list"
6. Click "Apply" to finish the upload rule settings.

And then add a download rule as shown in the picture below.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed |
 Bandwidth Control | Traffic Statistics | Firewall | Range Extender Setup

Enable Bandwidth Control

IP Range: 192.168.8.2 ~ 2

Upload/Download: Download

Bandwidth Range: 80 ~ 90 (KB/fe/s)

Enable:

Add to list

No.	IP Range	Destination	Bandwidth Range	Enable	Edit	Delete
-----	----------	-------------	-----------------	--------	------	--------

Apply Cancel

1. Enter 192.168.8.2 in the both IP address fields
2. Select download in the Upload/Download field.
3. Enter 80-90 in the bandwidth range field
4. Select "Enable"
5. Click "Add to list"

6. Click “Apply” to finish the download rule settings.

Example 2 Set the download rate of all computers within the range of 192.168.8.2--192.168.8.254 as 100-120KByte/s, and the upload rate as 20-30KByte/s, as shown in the picture below.

Upload Rule:

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | **Bandwidth Control** | Traffic Statistics | Firewall | Range Extender Setup

Enable Bandwidth Control

IP Range: 192.168.8.2 ~ 254

Upload/Download: Upload

Bandwidth Range: 20 ~ 30 (KB/s)

Enable:

Add to list

No.	IP Range	Destination	Bandwidth Range	Enable	Edit	Delete
-----	----------	-------------	-----------------	--------	------	--------

Apply Cancel

Download Rule:

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | **Bandwidth Control** | Traffic Statistics | Firewall | Range Extender Setup

Enable Bandwidth Control

IP Range: 192.168.8.2 ~ 254

Upload/Download: Download

Bandwidth Range: 100 ~ 120 (KB/s)

Enable:

Add to list

No.	IP Range	Destination	Bandwidth Range	Enable	Edit	Delete
-----	----------	-------------	-----------------	--------	------	--------

Apply Cancel

4.8 Traffic Statistics

Traffic statistics is used to display the bandwidth that LAN devices have used.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | Bandwidth Control | **Traffic Statistics** | Firewall | WAN Medium Type

Enable traffic statistics

IP Address	Uplink Rate (KByte/s)	Downlink Rate (KByte/s)	Sent Message	Sent Bytes MByte	Received Message	Received Bytes MByte	Connection Type
192.168.8.100	0.00	0.00	2552	0.40	4264	6.00	Wired
192.168.8.102	0.00	0.00	5501	0.60	9750	12.20	Wireless
192.168.8.103	0.00	0.00	46643	3.50	117200	169.50	Wireless
192.168.8.104	0.00	0.00	50309	11.10	54963	29.50	Wireless
192.168.8.105	0.00	0.00	1259	0.20	1037	0.00	Wireless
192.168.8.106	0.00	0.00	895	0.00	1516	1.90	Wireless
192.168.8.224	0.00	0.00	10	0.00	25	0.00	Wireless

Apply Cancel

Enable Traffic Statistics: Enable the Medialink router to calculate the traffic used by the LAN devices. By default, Traffic Statistics is disabled to improve the router's data packet processing ability. When this function is enabled, the webpage will refresh automatically every five minutes, meanwhile, each computer's traffic value will refresh automatically.

- **IP Address:** The IP address of the device whose traffic is being calculated.
- **Uplink Rate:** The data speed of data sent from the device per second, the unit is KByte/s.
- **Downlink Rate:** The data speed of data received by the device per second, the unit is KByte/s.
- **Sent Message:** The number of the calculated data packets that are sent out through the router.
- **Sent Bytes:** The volume of the calculated device's statistics that is sent out through the router.
- **Received Message:** The number of the calculated data packets that are received through the router.
- **Received Bytes:** The volume of the calculated device's statistics that is received through the router.

4.9 Firewall

This page allows you to disable/enable the router's Firewall.



4.10 Range Extender Setup



Disable: In this mode, a network cable is directly connected to the WAN port. Disabled is the default mode.

Enable: This mode can be used if your ISP provides a wireless connection service or if you want to use it to amplify your existing wireless network.

SSID: SSID (Service Set Identifier) is the identity of the wireless device to which you wish to connect the Medialink router. Click the “Open Scan” button to let the router automatically search for an SSID.

MAC: To connect to the wireless device, the device’s MAC Address must be in this field. Click the “Find Your Existing Network” button to let the router automatically search for the wireless device’s MAC.

Channel: The wireless device’s communication channel. You must select the same channel as the connecting wireless device to enable their communications. Click the “Find Your Existing Network” button to see the channel of the connecting wireless

network.

Security Mode: This must be set to the same security mode that is used by the connecting device. The Medialink router must have the same Security Mode, Algorithm or Encryption Mode and Key as the wireless device. These will automatically adjust to your connecting network's settings.

How to use Range Extender Mode to create a Wireless Access Point and Bridge from your existing wireless network:

LAN IP Address: First make sure the LAN IP Address of your Medialink router is on a different network segment than your existing wireless network.

If the LAN IP Address of your existing wireless router or ISP's wireless device is 192.168.0.1 then the LAN IP Address of your Medialink router must be 192.168.XXX.YYY where XXX does not equal "0". YYY can be anything from 1-254.

For example:

If Existing Wireless Router's LAN IP – 192.168.0.1

Then Medialink Wireless Router's LAN IP – 192.168.8.1 will work.

And Medialink Wireless Router's LAN IP – 192.168.0.2 will not work.

The LAN IP of your Medialink Router can be set in "Advanced Settings" > "LAN Settings"

Using Two Medialink Routers: If your primary wireless network is another Medialink router you will need to change the IP Address of this second Medialink router to 192.168.XXX.1 where XXX does not equal 8. (ie: 192.168.2.1 would be an acceptable address since it is different than 192.168.8.1)

Scan for Networks: Click "Find Your Existing Network" to view the networks in your area as seen below:

MEDIALINK

Advanced Settings
Wireless Settings
DHCP Server
Virtual Server
Security Settings
Routing Settings
System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | Bandwidth Control | Traffic Statistics | Firewall | Range Extender Setup

Select	SSID	MAC address	Channel	Security	Signal strength
<input type="radio"/>	medialink	C8-3A:35:5C:0C:A0	11	WPA/WPA2_TKIP	46
<input type="radio"/>	ngHub_319437Nv05F01	28-C6:8E:D1:98:84	11	WPA2_AES	70
<input type="radio"/>	MBADMIN	C8-3A:35:5C:0C:78	11	WPA/WPA2_TKIP	32
<input type="radio"/>	VoIP_Guest	00:00:00:00:00:F2	11	WPA/WPA2_TKIP	71
<input type="radio"/>	OHH	98:FC:11:AB:5E:BE	11	WPA/WPA2_TKIP	72
<input type="radio"/>		00:0F:61:8F:C7:F0	11	WEP/Shared WEP	75
<input type="radio"/>		00:0F:61:8F:C7:F1	11	WEP/Shared WEP	73
<input type="radio"/>	VoIP_Guest	00:0F:61:8F:C7:F2	11	WPA/WPA2_TKIP	72
<input type="radio"/>	xcuthbert11_8x	14:35:8B:05:7D:A0	1	WPA_AES	47
<input type="radio"/>	CableWiFi	00:0D:67:35:05:76	1	NONE	68
<input type="radio"/>	xfinitywifi	00:0D:67:35:05:75	1	NONE	68
<input type="radio"/>	MWNWAPR300N	14:35:8B:02:F3:88	4	WPA/WPA2_TKIP	44

Note: The Signal Strength is displayed in dBm (-). It is not a percentage. Therefore the lowest number is the strongest signal.

Select Your Network: Select the SSID that you wish to have your Medialink router connect to in order to extend the signal. The SSID, corresponding MAC Address, Channel, Security Mode and Algorithm will be added to the fields above automatically. If your network's SSID is hidden you will have to manually enter it as seen below.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | MAC Clone | DNS Settings | WAN Speed | Bandwidth Control | Traffic Statistics | Firewall | **Range Extender Setup**

Range Extender Mode: Disable Enable

SSID:

Channel:

Security Mode:

WPA/WPA2 Algorithms: AES TKIP TKIP&AES

Key:

Select	SSID	MAC address	Channel	Security	Signal strength
<input checked="" type="radio"/>	medialink	C8:3A:35:5C:0C:A0	11	WPA/WPA2_TKIP	46

Security: Enter the Key (password for your existing wireless network). If you do not know the key (password) of your existing router, consult your existing router’s User Manual.

Apply: Scroll down and click “Apply” to finalize the settings.

Power Cycle: After you are finished, power down both devices. Then power up the first router (your existing wireless router) first and then power up the Medialink router second. You will now have a stronger signal to which you can connect.

Placement: You may now unplug the power from the Medialink router and move it wherever you have an open electrical outlet. Ideally, the Medialink router should be placed halfway between your existing router and the ultimate location you wish to have a stronger signal. The key to placement is that wherever you choose to place this Medialink router should be a place in which you can successfully connect to your primary wireless network.

Connectivity: You should now be able to access the internet by connecting a device to either router via Ethernet or wirelessly. If you cannot access the internet through the Medialink 300N router, make sure it is not too far from the primary router and make sure the security settings match on both routers.

Please note that when using this router as a Range Extender, devices that connect to your new Medialink 300N router will be able to access all devices within your network. However, devices that are connected to your primary router will not have access to the devices connected to the Medialink 300N router. For example:

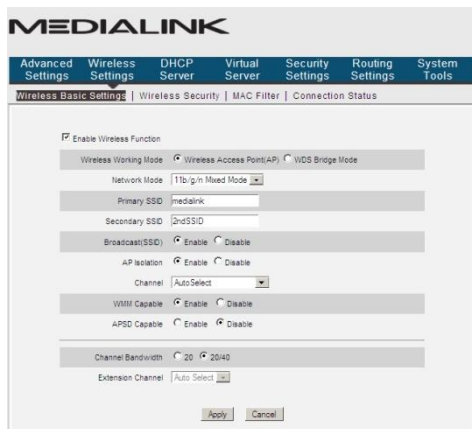
Items Connected to Primary Router
 Networked Printer
 Desktop 1
 Laptop 1

Items Connected to Medialink 300N Router in Range Extender Mode
 Desktop 2
 Laptop 2
 Media Server

In the example above, Laptop 2 and Desktop 2 will be able to access every other device on the network including the Networked Printer, Desktop 1, Laptop 1, the Media Server and each other.
 However, neither Desktop 1 nor Laptop 1 will be able to access Desktop 2, Laptop 2, or the Media Server.

Chapter 5 Wireless Settings

5.1 Wireless Basic Settings



- **Enable Wireless Function:** Select to enable the router's wireless features; deselect to disable it and all functions related with wireless will be disabled.
- **Wireless Working Mode:** This router provides two kinds of working modes: Wireless Access Point(AP) and WDS Bridge Mode

Wireless Access Point (AP)

- **Network Mode:** Select one mode from the drop-down list.

11b mode : Select it if you have only Wireless-B clients in your network.

11g mode : Select it if you have only Wireless-G clients in your network.

11b/g mixed mode: Select it if you have only Wireless-B and Wireless-G clients in your network.

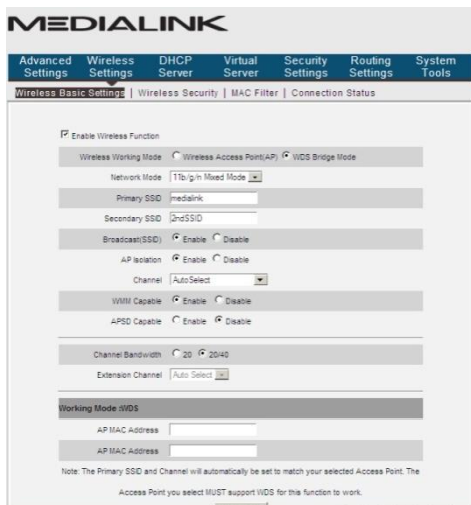
11b/g/n mixed mode: Select it if you have Wireless-B, Wireless-G and Wireless-N clients in your network. This mode is default is recommended since b/g/n clients will each connect at their respective top speeds.

- **Primary SSID**: The unique name of the wireless network which can be modified at any time.
- **Secondary SSID (Optional)**: You may choose to enter a Secondary name of your network. This SSID can have unique security settings.
- **AP Isolation**: When enabled, devices that connect wirelessly to the Secondary SSID will be isolated from other devices that wirelessly connect to the Secondary SSID. AP Isolation is enabled by default.
- **Broadcast (SSID)**: Select **"Enable"** to enable the router's SSID to be detected by wireless devices. The default is enabled. If you disable it, the wireless devices must know the SSID for communication for it will be hidden.
- **Channel**: The channel currently used by the router. Select an effective channel (from 1 to 11 or AutoSelect) of the wireless network. The best channel is the least used channel by your neighbors.
- **WMM Capable**: Enables the router to enhance the transfer performance of the wirelessly transferred multimedia data (such as video or gaming). We recommend enabling this option at all times.
- **APSD Capable**: Used for auto power-saved service. The default is disabled.
- **Channel Bandwidth**: Select an appropriate channel bandwidth to enhance the wireless performance. Select 20/40M when the network has 11b/g and 11n wireless clients. Select 20M when the network has only non-11n wireless clients. Select 20/40M to promote its throughput when the wireless network is in 11b/g/n mode.
- **Extension Channel**: This allows devices to connect at n speeds using a 40M bandwidth.

WDS Bridge Mode Settings

WDS (Wireless Distribution System) is used to expand wireless coverage area. This can only be used with some wireless routers that support WDS and you must have ability to

change the settings of both routers.



- **AP MAC Address:** Input the MAC address of another (opposing) wireless router that supports WDS that you want to connect.

Example: This example shows how to bridge two MWN-WAPR300NE routers.

First check the following settings:

First MWN-WAPR300NE (connected to your ISP)

LAN IP Address: <Your Choice. We will use the default 192.168.8.1 for the example>

SSID: <Your Choice>

Channel: <Your Choice 1~11>

Extension Channel: <Will be set automatically. Simply record it.>

Wireless Security: <Your Choice>

Wireless Working Mode: WDS Bridge Mode

DHCP Server: Enabled

Second MWN-WAPR300NE (used to extend your network)

LAN IP Address: 192.168.8.XXX where XXX is 2~254 (192.168.8.2 will be used in this example)

SSID: <MUST Match First MWN-WAPR300NE>

Channel: <MUST Match First MWN-WAPR300NE>

Extension Channel: <MUST Match First MWN-WAPR300NE>

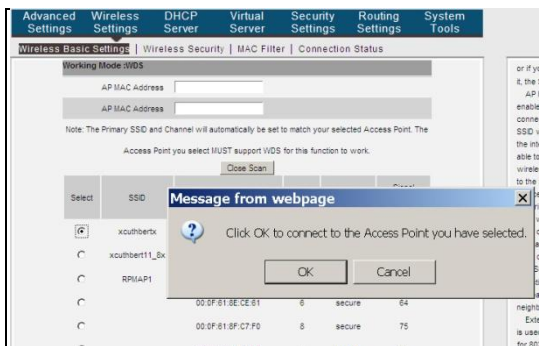
Wireless Security: <MUST Match First MWN-WAPR300NE>

Wireless Working Mode: WDS Bridge Mode

DHCP Server: Enabled (will be disabled as the last step of this configuration)

Connect the Second MWN-WAPR300NE to the First MWN-WAPR300NE wirelessly:

1. Click “Open Scan” and select the First MWN-WAPR300NE from the list and click the “OK” button on the dialog box and then the corresponding wireless MAC address will be added to the AP MAC address field automatically.



2. Scroll down to the bottom of the page and click “Apply” after the MAC address is added.

Connect the First MWN-WAPR300NE to Second MWN-WAPR300NE wirelessly:

Repeat the steps above on the First MWN-WAPR300NE to pair the two routers.

Disable DHCP on the Second MWN-WAPR300NE: Login to the Second MWN-WAPR300NE at <http://192.168.8.2> and disable the DHCP Server. Click “Apply”.

Power Cycle: After you are finished, power down both devices. Then power up the First MWN-WAPR300NE first and then power up the Second MWN-WAPR300NE. You will now have a stronger signal to which you can connect.

Placement: You may now unplug the power from the Second MWN-WAPR300NE and move it wherever you have an open electrical outlet. Ideally, the Medialink router should

be placed halfway between your existing router and the ultimate location you wish to have a stronger signal.

5.2 Wireless Security Settings

The Medialink router is secured by default using WPA-PSK with AES Algorithm for encryption. The default Key is "password". WPA-PSK is very secure and very compatible with most devices. For stronger security, choose WPA2-PSK with AES. For even more universal security that is still very strong choose Mixed WPA/WPA2-PSK with TKIP&AES. Older devices may only support WEP security.

The screenshot shows the Medialink router's web interface. At the top, the 'MEDIALINK' logo is displayed. Below it is a navigation menu with tabs for 'Advanced Settings', 'Wireless Settings', 'DHCP Server', 'Virtual Server', 'Security Settings', 'Routing Settings', and 'System Tools'. The 'Wireless Settings' tab is selected, and the sub-tab 'Wireless Security' is active. The main content area contains the following settings:

- Select SSID: medialink
- SSID: "medialink"
- Security Mode: WPA-PSK
- WPA Algorithms: AES TKIP TKIP&AES
- Key: password
- Key Renewal Interval: 3600 Seconds (Recommended setting is 3600.)
- WPS Settings: Disable Enable

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

5.2.1 WPS Settings (Not Recommended)

WPS (Wi-Fi Protected Setting) makes it quick and easy to establish a secure connection between the wireless clients and the router. The users only need to enter a PIN code or press the WPS button for 1 second on the back panel to configure it without manually selecting an encryption method or setting a Key.

The screenshot displays the MEDIALINK web interface for Wireless Security configuration. At the top, there is a navigation menu with tabs: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below this, a breadcrumb trail shows: Wireless Basic Settings | **Wireless Security** | MAC Filter | Connection Status. The main configuration area includes:

- Select SSID: A dropdown menu showing 'medialink'.
- SSID: A text field containing 'medialink'.
- Security Mode: A dropdown menu showing 'WPA-PSK'.
- WPA Algorithms: Radio buttons for AES (selected), TKIP, and TKIP&AES.
- Key: A text field containing 'password'.
- Key Renewal Interval: A text field containing '3600' with the note '(Recommended setting is 3600.)'.
- WPS Settings: Radio buttons for Disable and Enable (selected).
- WPS Mode: Radio buttons for PBC (selected) and PIN, followed by an empty text field.

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

- **WPS Settings:** To enable or disable WPS function. The default is “Enable”.
- **WPS Mode:** PBC (Push-Button Configuration) and PIN code.
- **PBC:** Select the PBC and click “Apply”, or press and hold the WPS button on the back panel of the device for about one second. The WPS LED indicator will be flashing for 2 minutes, which means the WPS is enabled. During this time (flashing WPS LED), you can enable the wireless client to implement the WPS/PBC negotiation between them. When the WPS connection is completed, the LED indicator will be continuously lit. To add more clients, repeat the above steps.)
- **PIN:** If this option is enabled, you need to enter a wireless client’s PIN code in the field and keep the same code in the WPS client.

 **NOTE:**

The use of WPS function requires the wireless client to support this function. If all devices do not support this function, then the devices that do not support it will not be able to connect. We do not recommend using WPS as it is not as secure as using other methods and creates compatibility issues in some networks.

5.2.2 WPA-PSK (WPA-Personal)

WPA authentication guarantees to protect wireless users’ data and only the authorized network users will have access to the WLAN via the specified Network Key.

The screenshot displays the 'Wireless Security' configuration page in the Medialink web interface. The page has a navigation bar with tabs for 'Advanced Settings', 'Wireless Settings', 'DHCP Server', 'Virtual Server', 'Security Settings', 'Routing Settings', and 'System Tools'. Below the navigation bar, there are sub-tabs for 'Wireless Basic Settings', 'Wireless Security', 'MAC Filter', and 'Connection Status'. The main configuration area includes a 'Select SSD' dropdown set to 'medialink', an 'SSID -- "medialink"' field, a 'Security Mode' dropdown set to 'WPA-PSK', 'WPA Algorithms' radio buttons for 'AES' (selected), 'TKIP', and 'TKIP/AES', a 'Key' text field containing 'password', a 'Key Renewal Interval' field set to '3600' with a note '(Recommended setting is 3600.)', and 'WPS Settings' radio buttons for 'Disable' (selected) and 'Enable'. At the bottom are 'Apply' and 'Cancel' buttons.

- **WPA Algorithms:** Provides TKIP [Temporal Key Integrity Protocol] or AES [Advanced Encryption Standard].
- **Key:** Enter the pass phrase that consists of 8-63 ASCII characters excluding these five characters \ , ' ; " .
- **Key Renewal Interval:** Set the key's renewal period, which tells the device how often it should change the dynamic keys. It is not recommended to change this setting.

5.2.3 WPA2-PSK (WPA2-Personal)

WPA2 (Wi-Fi Protected Access version 2) provides higher security than and WPA (Wi-Fi Protected Access).

This screenshot is identical to the one above, but the 'Security Mode' dropdown is set to 'WPA2-PSK'. The 'WPA Algorithms' radio buttons are also set to 'AES'.

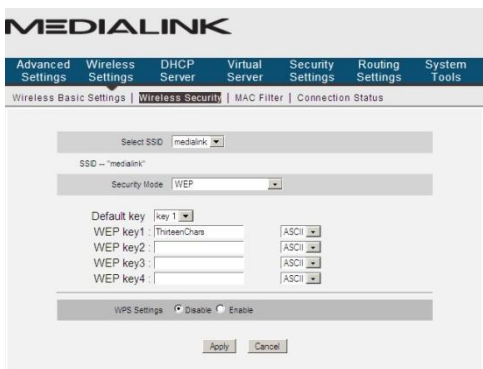
- **WPA Algorithms:** Provides TKIP [Temporal Key Integrity Protocol] or AES

[Advanced Encryption Standard].

- **Key:** Enter the pass phrase that consists of 8-63 ASCII characters excluding these five characters \ , ' ; " .
- **Key Renewal Interval:** Set the key's renewal period, which tells the device how often it should change the dynamic keys. It is not recommended to change this setting.

5.2.4 WEP

WEP (Wired Equivalent Privacy) provides 40-bit or 128-bit encryption to your wireless network.



- **Default Key:** Determines which Key will allow wireless clients to be accepted into the network.
- **WEP Key1~4:** These are keys that you can choose to make active. Only one key is used at a time.
- **ASCII/HEX:** Each Key can be entered as 5 OR 13 case sensitive ASCII characters excluding these five characters \ , ' ; " OR 10 OR 26 HEX characters including 0~9 and A~F only.

5.3 MAC Filter

MAC Filter is based on the client's wireless MAC address to permit or forbid specific clients access to the wireless network.



- **MAC Address Filter:** “Permit” allows the clients in the list to be the only clients to be able to access the wireless network, “Forbid” prevents the clients in the list from accessing the wireless network but allows everyone else.
- **MAC Address:** Input the MAC address of the each wireless client to implement the filter policy. Click “Add”. Repeat for additional clients.
- **MAC Address list:** Shows the added MAC addresses. You can add or delete them.
- Click “Apply” when finished.

5.4 Connection Status

This screen shows each wireless client’s connection status, including MAC Address, Channel Bandwidth.



- **Select SSID:** Toggle between the Primary and Secondary SSID to see the clients connected to each.
- **MAC Address:** Shows the MAC Addresses of the clients connected to the router.
- **Bandwidth:** Shows the channel bandwidth of the currently connected wireless clients.

Chapter 6 DHCP Server

6.1 DHCP Server

DHCP (Dynamic Host Control Protocol) is used to assign an IP address to the computers on the LAN/private network. When you enable the DHCP Server, the DHCP Server will allocate automatically an unused IP address from the IP address pool to the requesting computer when "Obtain an IP Address Automatically" is configured. You can specify the start and end address of the IP Address pool here:

The screenshot shows the Medialink web interface for DHCP Server configuration. The navigation menu includes: Advanced Settings, Wireless Settings, DHCP Server (selected), Virtual Server, Security Settings, Routing Settings, and System Tools. Below the menu, there are two tabs: 'DHCP Server' and 'DHCP Client List'. The 'DHCP Server' tab is active, showing the following configuration options:

- DHCP Server: Enable
- IP Pool Start Address: 192.168.8.100
- IP Pool End Address: 192.168.8.200
- Lease Time: One day

At the bottom of the configuration area, there are 'Apply' and 'Cancel' buttons.

- **DHCP Server:** Check "Enable" to enable DHCP server.
- **IP Pool Start/End Address:** Enter the range of IP addresses for the DHCP server to distribute.
- **Lease time:** The valid time of the Dynamic IP address which is distributed to the DHCP client's host computer by your Medialink router's DHCP server. During this time, the server will not distribute the IP address to any other connected device.

6.2 DHCP Client List

DHCP client list displays user device's IP Address, MAC address, host name and other information which are assigned by the DHCP server. You can manually enter the IP and MAC address and convert them to static assignment.

MEDIALINK

Advanced Settings | Wireless Settings | **DHCP Server** | Virtual Server | Security Settings | Routing Settings | System Tools

DHCP Server | **DHCP Client List**

Static Assignment

IP Address 192.168.0.

MAC Address

NO.	IP Address	MAC Address	Delete
<input type="button" value="Refresh"/>			

- **Host Name:** The name of the device whose IP is allocated by the DHCP server. This name is generated by the device itself.
- **IP Address:** Enter the IP address which needs static binding.
- **MAC Address:** Enter the MAC address of the device you want to bind. Click “Add” to add the entry in the list.
- **Lease time:** The remaining time length of the corresponding IP address lease.

Chapter 7 Virtual Server

7.1 Port Range Forwarding

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | **Virtual Server** | Security Settings | Routing Settings | System Tools

Port Range Forwarding | DMZ Host | UPNP Settings

Port range forwarding is useful for web servers, ftp servers, e-mail servers, gaming and other specialized internet applications. When you enable port forwarding, the communication requests from the Internet to your router's WAN port will be forwarded to the specified LAN IP address.

ID	Start Port-End Port	LAN IP	Protocol	Enable	Delete
1.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="text"/> - <input type="text"/>	192.168.0. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>

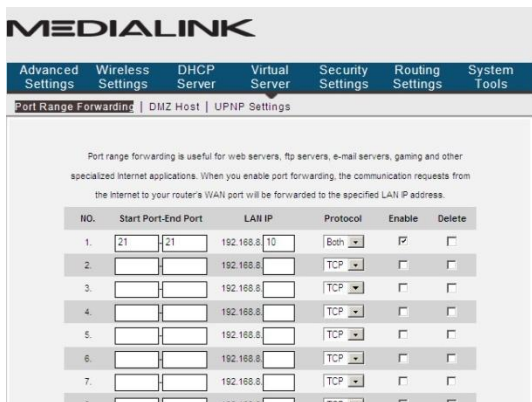
- **Start/End Port:** Enter the start/end port number which ranges the External ports used to set the server or Internet applications.
- **LAN IP:** Enter the IP address of the PC or device which you want to set as the server.
- **Protocol:** Select the protocol (TCP/UDP/Both) for the application. If you are not clear about the protocol you are using, you can select “Both”.
- **Enable:** Click the **Enable** checkbox to bring the rule into effect.
- **Delete:** Clear all settings of this item.
- **Well-known service port:** The well-known protocol ports are listed in the drop-down list. Select one and select a sequence number in the ID drop-down list and then click “Add”, this port will be added automatically to the ID list. For other well known service ports that are not listed, you can manually add them to the list.
- **Add to:** Add the selected well-known port to the policy ID.

For Example: You want to share some large files with your friends outside of your local area network, however, they are too big, and it's not convenient to transfer them. Then, you can build a FTP server on your computer and set the router's port range forwarding

to enable your friends to access to these files on your computer. Suppose that your FTP server or your computer's static IP address is 192.168.8.10, and you want your friends to access the server through the default FTP port: 21 and use TCP protocol.

Please follow the steps below to configure.

1. Enter 21 in both start port and end port fields, or you can also select FTP from the well-known service port and port 21 will be added to the corresponding fields automatically.
2. Enter 192.168.8.10 in the LAN IP column, and then select "Both" as the protocol and select "Enable" as shown below:



Then scroll all the way to the bottom of the page and click the "Apply" button to save the settings.

Now, when your friends want to visit the FTP server, they only need to enter ftp://xxx.xxx.xxx.xxx:21 in their browser address field. Here, xxx.xxx.xxx.xxx means your router's WAN IP address. For example, when your router's WAN IP address is 24.65.128.52; your friends need to enter <ftp://24.65.128.52:21> in the browser address field.

NOTE:

If you set the service port of the virtual server as 80, you must set the Web management port on Remote Web Management screen to be any value except 80 such as 8080. Otherwise, there will be a conflict which will disable the virtual server.

7.2 DMZ Settings

The DMZ Settings screen allows one local computer or device to be exposed to the Internet for use of a special-purpose service such as Gaming or VoIP. DMZ hosting forwards all ports to one device.



- **DMZ Host IP Address:** The IP address of the LAN device you want to set as the DMZ host.
- **Enable:** Check to enable the DMZ host.

For example:

Set your Game Console or VoIP device to the IP address 192.168.8.10 and then set that IP Address as the DMZ host to bypass the firewall of the router and allow for a smooth connection without interruption.

NOTE:

When the DMZ host is enabled, the firewall settings of the DMZ host will not function.

7.3 UPNP Settings

UPnP (Universal Plug and Play): The LAN device can request the router to process some special port switching so as to enable the external host to access the resources of the internal host.

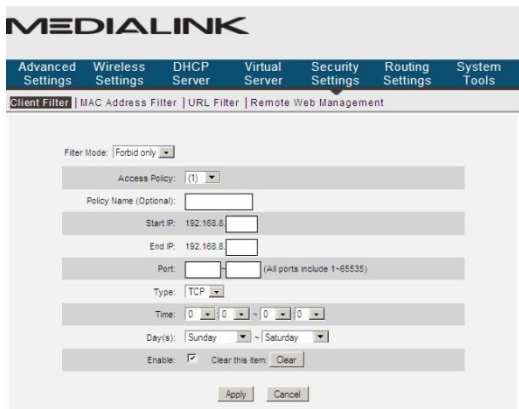


- **Enable UPnP:** Click the checkbox to enable the UPnP.

Chapter 8 Security Settings

8.1 Client Filter Settings

You can enable Client Filter to control LAN computers' access to some or all ports:



- **Filter Mode:** You can select either “Permit only” or “Forbid only”.
- **Access Policy:** Select a number from the drop-down list.
- **Policy Name (Optional):** A simple description of the policy. You can leave it blank if you want.
- **Start/End IP:** Enter the start/end IP address.
- **Port:** Enter the controlled TCP/UDP protocol port. You can specify a port or port range. For all ports enter 1 to 65535.
- **Type:** Select one protocol (TCP/UDP/Both) from the drop-down list.
- **Time:** Select the time range of client filter. The start time must be earlier than the

end time. The Time cannot cross over midnight.

- **Day(s):** Select the day(s) to run the access policy. The start day must be earlier than the end day.
- **Enable:** To enable/disable the access policy.

Example1 Forbid the Kids' computers at the IP addresses 192.168.8.100~192.168.8.120 to access the Internet from 9pm to 9am. The first policy forbids access from 9pm to 11:55pm. Click Apply.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

Client Filter | MAC Address Filter | URL Filter | Remote Web Management

Filter Mode: Forbid only

Access Policy: 1

Policy Name (Optional): Kids 1

Start IP: 192.168.8.100

End IP: 192.168.8.120

Port: 1 (All ports include 1-65535)

Type: Both

Time: 21:00 - 23:55

Day(s): Sunday - Saturday

Enable: Clear this item: Clear

Apply Cancel

The second policy forbids access from 12:00am to 9:00am. Note that “Access Policy 2” is chosen. Click Apply.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

Client Filter | MAC Address Filter | URL Filter | Remote Web Management

Filter Mode: Forbid only

Access Policy: 2

Policy Name (Optional): Kids 2

Start IP: 192.168.8.100

End IP: 192.168.8.120

Port: 1 (All ports include 1-65535)

Type: Both

Time: 0:00 - 9:00

Day(s): Sunday - Saturday

Enable: Clear this item: Clear

Apply Cancel

8.2 MAC Address Filter

You can limit certain computers' access to Internet by using MAC Address Filter.

- **Filter mode:** You can select “Forbid only” or “Permit Only”.
- **Access Policy:** Select a number from the drop-down list.
- **Policy Name (Optional):** A simple description of the policy. You can leave it blank if you want.
- **MAC Address:** Enter the MAC address you want the policy to apply to.
- **Time:** Select the time range. The start time must be earlier than the end time. The Time cannot crossover midnight.
- **Day(s):** Select the day(s) to run the access policy. The start day must be earlier than the end day.
- **Enable:** To enable/disable the access policy.

Example 1 Forbid an employee’s computer with the MAC address of 14:35:8B:17:02:10 to access Internet during 8:00am to 5:00pm from Monday to Friday.

The screenshot shows the MEDIALINK web interface with the 'Security Settings' menu item selected. The breadcrumb trail is 'Client Filter > MAC Address Filter > URL Filter > Remote Web Management'. The 'MAC Address Filter' configuration page is displayed with the following fields:

- Filter Mode: Forbid only (dropdown)
- Access Policy: (1) (dropdown)
- Policy Name (Optional): Employee (text input)
- MAC Address: 14 35 8B 17 02 10 (six individual input boxes)
- Time: 8 : 0 ~ 17 : 0 (time selection fields)
- Day(s): Monday ~ Friday (day selection dropdown)
- Enable: Clear this item: Clear (button)
- Apply (button) Cancel (button)

8.3 URL Filter Settings

You can use URL filtering to forbid access to certain websites at a specified time.

The screenshot shows the MEDIALINK web interface with the 'Security Settings' menu item selected. The breadcrumb trail is 'Client Filter > MAC Address Filter > URL Filter > Remote Web Management'. The 'URL Filter' configuration page is displayed with the following fields:

- Filter Mode: Forbid only (dropdown)
- Access Policy: (1) (dropdown)
- Policy Name (Optional): (text input)
- Start IP: 192.168.0 (text input)
- End IP: 192.168.0 (text input)
- URL character string: (text input)
- Time: 0 : 0 ~ 0 : 0 (time selection fields)
- Day(s): Sunday ~ Saturday (day selection dropdown)
- Enable: Clear this item: Clear (button)
- Apply (button) Cancel (button)

- **Filter Mode:** "Forbid only" is the only mode.
- **Access Policy:** Select a number from the drop-down list.
- **Policy Name (Optional):** A simple description of the policy. You can leave it blank if you want.
- **Start/End IP:** Enter the start/end IP address.
- **URL Character String:** Specify the URL. Note that https addresses cannot be blocked by any router.
- **Time:** Select the time range. The start time must be earlier than the end time. The

Time cannot crossover midnight.

- **Day(s):** Select the day(s) to run the access policy. The start day must be earlier than the end day.
- **Enable:** To enable/disable the access policy.

Example1 Forbid all computers on LAN to access facebook.com during 8:00 to 18:00 from Monday to Friday. (<https://www.facebook.com> will still be accessible as https addresses cannot be blocked since they are encrypted.)

The screenshot shows the MEDIALINK web management interface. At the top, there are navigation tabs: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below these is a breadcrumb trail: Client Filter | MAC Address Filter | **URL Filter** | Remote Web Management. The main configuration area is titled 'Filter Mode: Forbid only'. It contains several input fields: 'Access Policy' with a dropdown showing '(1)', 'Policy Name (Optional):' with a text box containing 'facebook', 'Start IP:' with a text box '192.168.8.2', 'End IP:' with a text box '192.168.8.254', 'URL character string:' with a text box 'facebook.com', 'Time:' with two time pickers '8:00' and '18:00', 'Days:' with two dropdowns 'Monday' and 'Friday', and an 'Enable:' checkbox which is checked. There is a 'Clear this item:' link next to the checkbox. At the bottom of the form are 'Apply' and 'Cancel' buttons.

NOTE:

Enter only one domain name or keyword for each access policy. So, if you want to filter multiple domain names or keywords, you need to set multiple access policies.

There is no way for any router to filter https:// addresses since they are encrypted so there is sometimes a way around this filtering process depending on the website and if the user knows this.

8.4 Remote Web Management

This section instructs how to allow the network administrator to manage the Router remotely.

MEDIALINK

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

Client Filter | MAC Address Filter | URL Filter | Remote Web Management

Enable IP

Port 8080

IP Address 124.88.97.17

Apply Cancel

- **Enable:** Check to enable remote web management.
- **Port:** The management port open to outside access. The default value is 8080.
- **IP Address:** Specify the range of the Public IP addresses of the computers on the Internet for remote management.

**NOTE:**

1. If you want to log into your Medialink router's Web-based Utility via port 8080, you need to use the format of WAN IP address: port (for example `http://220.135.211.56:8080`) to implement remote login.
2. If your WAN IP address starts and ends with 0.0.0.0, it means all hosts on the Internet can implement remote Web management. If you change the Internet IP address to be a range like this: 124.88.97.17-124.88.97.19, then only the computers at the IP addresses of 124.88.97.17, 124.88.97.18 and 124.88.97.19 can access the Router to implement remote web management.

For example:

If you want to configure the computer at the IP address of 124.88.97.17 to access the router's web-based utility via port 8080, please set the parameters as above.

Chapter 9 Routing Settings

9.1 Routing Table

This page shows the router's core routing table.

Destination IP	Subnet Mask	Gateway	Hops	Interface
0.0.0.0	0.0.0.0	10.1.10.1	1	vlan2
10.1.10.0	255.255.255.0	10.1.10.0	0	vlan2
192.168.0.0	255.255.255.0	192.168.0.0	0	br0

The main duty for a router is to look for the best path for every data packet, and transfer this data packet to a destination. In order to fulfill this function, many transferring paths, (i.e. routing table) are saved in the router, for use when needed.

9.2 Static Routing

This screen is used to set the router's static routing.

A static route is a pre-determined pathway that network information must travel to reach a specific host or network.

- **Destination Network IP Address:** The destination host or IP segment you visit.
- **Subnet Mask:** Enter the subnet mask, generally it is 255.255.255.0
- **Gateway:** The entry IP address of the next router.

NOTE:

1. The gateway must be at the same network segment as the router's LAN IP Address.
2. If the destination IP address is one host's address, then the subnet mask must be 255.255.255.255.
3. If the destination IP address is an IP segment, then it must match with the subnet mask. For example, if the destination IP is 10.0.0.0 then the subnet mask must be 255.0.0.0

Chapter 10 System Tools

10.1 Time Settings

This section is to configure the router's system time. You can set it manually or obtain the GMT time from the Internet.

- **Time Zone:** Select the time zone where you are operating the Router from the drop-down list.
- **Customized time:** Enter the time you wish to configure. This time is automatically acquired from your connected computer's time settings.

NOTE:

When the Router is powered off, the time settings will be lost. The router will obtain the GMT time automatically the next time you access the Internet. Only when you connect to the Internet and obtain the GMT time or set the time on this screen, can the time settings in other functions (e.g. security settings) take effect.

10.2 DDNS

DDNS (Dynamic Domain Name System) is used to assign a fixed host and domain name to a dynamic Internet IP address. Every time you access the Internet, the dynamic domain name software installed on your host will tell the ISP'S host server its dynamic IP address by sending messages. The server software is responsible for providing DNS service and implementing dynamic domain name resolution.



➤ **Main features:**

1. Most ISP connections provide a dynamic IP address and the DDNS is used to capture the changeable IP address and match it to a fixed domain. Then users can have access to the Internet to communicate with others outside the network.
 2. DDNS can help you to establish a virtual host in your home or company.
- **DDNS:** Click the radio button to enable or disable the DDNS service.
 - **Service provider:** Select one from the drop-down list and click **“Sign up”** for registration.
 - **Username:** Enter the username that you used to register from the DDNS provider
 - **Password:** Enter the password that you used to register from the DDNS provider
 - **Domain name:** Enter the effective registered domain name

For example:

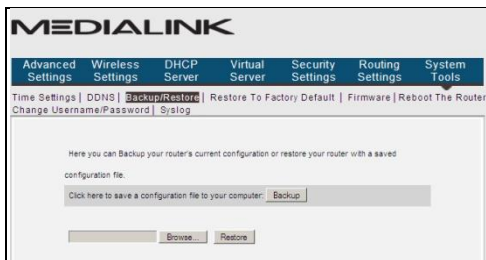
Establish a Web server in the local host 192.168.8.10 and register in no-ip.com as follows:

Username	medialink
Password	password
Domain Name	medialink.no-ip.com

After mapping the port in the virtual server, and setting account information in DDNS server, you can then access the web page by entering <http://medialink.no-ip.com> in any external PC's browser address field.

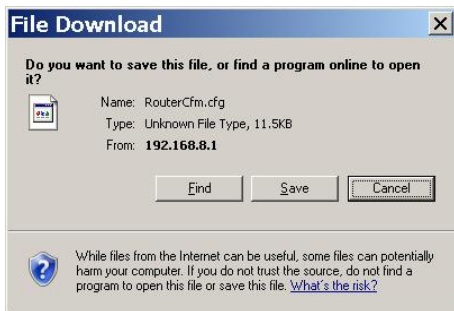
10.3 Backup/Restore

On this screen, you can back up the router's current settings or restore previous settings.



➤ **Backup Settings:**

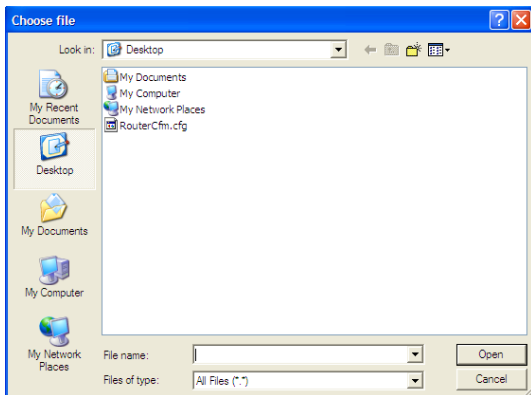
Click the **Backup** button to back up the router's settings and select a path to save them.



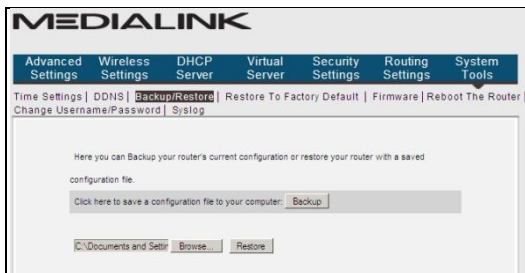
Click the **Save** button to save the configuration files.

➤ **Restore Setting:**

Click the **Browse** button to select the backup files.



Click the “Restore” button to restore previous settings.



10.4 Restore to Factory Default

This screen allows you to restore all settings to the factory default values.



- **Restore to factory default:** Click this button to restore to default settings.
- **Factory default settings:**
 - Username:** admin
 - Password:** admin
 - Wireless SSID:** medialink
 - Wireless Password:** password
 - Wireless Security:** WPA/WPA2-PSK and TKIP&AES
 - IP Address:** 192.168.8.1
 - Subnet Mask:** 255.255.255.0

10.5 Firmware

Here you can upgrade or rollback the router's Firmware. The latest Firmware can be downloaded at www.medialinkproducts.com/support.

WARNING: BE SURE TO USE A COMPUTER THAT IS CONNECTED TO THE ROUTER VIA ETHERNET TO ADJUST THE FIRMWARE.



- **Backup your settings:** First Backup a copy of your router's settings using the Backup/Restore section.
- **Browse:** Then in the Firmware screen, click Browse to select the upgrade file that you have downloaded and saved to your computer from www.medialinkproducts.com/support
- **Upgrade:** Click this button to start the upgrading process. After the upgrade is complete, the router will reboot automatically.
- **Empty your Internet Browser's Cache:** In order for the new Firmware to display properly, you must empty the Browser's Cache (Temporary Internet Files). For Internet Explorer: Tools > Delete Browser History > Check Temporary Internet Files > Click Delete. Once finished, hit F5 to refresh the screen.
- **Reset the Router to Factory Settings:** After changing the Firmware, you must reset the router to factory settings for the changes to take effect. After the reset, you can restore your router's settings using a file that you backed up prior to upgrading.

10.6 Reboot the Router

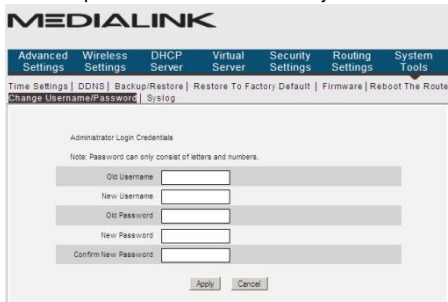
Reboot the router to make any configuration changes effective. The router will cut its WAN connection automatically after rebooting and then reestablish the WAN connection.



- **Reboot the router:** Click this button to reboot the router.

10.7 Change Username/Password

This section is to set a new password to better secure your router and network.



- **Old Username:** Enter the old username.
- **New Username:** Enter the new username.
- **Old password:** Enter the old password.
- **New password:** Enter a new password.
- **Confirm new password:** Re-enter to confirm the new password.

⚠ NOTE:

The default username and password is admin. To secure the router and your network, it is highly recommended that you change the initial password.

10.8 Syslog

This section is to view the system log. You can view various conditions appearing after system start, and also check whether there's an attack on the network. The log can record at most 150 entries.

MEDIALINK

Advanced Settings	Wireless Settings	DHCP Server	Virtual Server	Security Settings	Routing Settings	System Tools
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[Time Settings](#) | [DDNS](#) | [Backup/Restore](#) | [Restore To Factory Default](#) | [Firmware](#) | [Reboot The Router](#)
[Change Username/Password](#) | [Syslog](#)

1	2011-04-01 00:00:00	main	System start
2	2011-04-01 00:00:04	system	interface vlan2 int
3	2011-04-01 00:00:05	system	DHCP_DISCOVER sending
4	2011-04-01 00:00:11	system	DHCP_DISCOVER sending
5	2011-04-01 00:00:11	system	DHCP_DISCOVER received
6	2011-04-01 00:00:11	system	DHCP_STATE_REQUESTING int sending
7	2011-04-01 00:00:11	system	DHCP_STATE_REQUESTING received
8	2011-04-01 00:00:11	system	DHCP_STATE_REQUESTING lease = 604800
9	2011-04-01 00:00:11	system	get new lease time: 604800 secs
10	2011-04-01 00:00:11	system	get DHCP_T2: 94307 secs

1
2
3
4
5
6
7
8

Refresh
Clear

- **Refresh:** Click this button to update the log.
- **Clear:** Click this button to clear the currently shown log.

Appendix 1 Glossary

Channel:

A distinct frequency range within the 2.4 GHz wavelength. There are 11 available channels in North America ranging from 2412 MHz to 2462MHz.

SSID:

SSID (Service Set Identifier) is the network name shared by all devices in a wireless network. Your network's SSID should be unique to your network and identical for all devices within the network. It is case-sensitive and must not exceed 20 characters. Make sure this setting is the same for all devices in your wireless network.

WPA/WPA2 Encryption:

A security protocol for wireless networks that builds on the basic foundations of WEP. It secures wireless data transmission by using a key similar to WEP, but the added strength of WPA is that the key changes dynamically. The changing key makes it much more difficult for a hacker to learn the key and gain access to the network. WPA2 is the second generation of WPA security and provides a stronger encryption mechanism through Advanced Encryption Standard (AES), which is a requirement for some government users.

Appendix 2 Product Features

- Supports IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE 802.3 and IEEE 802.3u standards.
- High gain omni-directional antenna, with strong signals and long transmission distance.
- Wireless transmission rate up to 150Mbps or 300 Mbps
- Provides one 10/100Mbps auto-negotiation Ethernet WAN port to connect to the Wide Area Network
- Provides four 10/100Mbps auto-negotiation Ethernet LAN ports to connect to the Local Area Network
- Supports Auto MDI/MDIX
- Supports xDSL/Cable MODEM, static and dynamic IP in community broadband networking as well as PPTP and L2TP.
- Includes router, wireless access point, four-port switch and firewall all in one
- Supports WPA-PSK, WPA2-PSK, and WPA-PSK&WPA2-PSK mixed security modes
- Supports WPS button

- Supports hidden SSID function and MAC Address-based access control
- Supports WMM to make your audio and video smoother
- Supports SNTP
- Supports UPnP and DDNS
- Supports WDS to extend wireless network
- Supports Wireless WAN and allows access to ISP's wireless hotspots to share Internet access with multiple computers or the ability to extend an existing wireless network via a Wireless Bridge.
- Supports Virtual Server functions such as Port Forwarding and DMZ host.
- Provides Syslog to record the running status of the router

Appendix 3 FAQ

This section provides some solutions to the problems which may occur during the router's installation or usage. The instructions below may help you deal with the problems. If your problem is not in the list, please visit our website www.medialinkproducts.com or send an E-mail to support@medialinkproducts.com.

1. Cannot log in to the Web-based Utility of the router after you enter the IP address in the address field?

Step 1: Check if the router is working correctly, after the device is powered on for a few seconds, the SYS indicator on the front panel should light up. If it is not, please contact us.

Step 2: Check that the network cables are connected correctly and the corresponding LED indicator lights up. Sometimes, the indicator lights up, but it does not mean it is functioning.

Step 3: Run "Ping" command and check if it can ping the Router's LAN IP address 192.168.8.1 (open "Command Prompt" and type "Ping 192.168.8.1" and then enter). If it is OK, please make sure your browser does not access the Internet by proxy server. If the ping fails, you can press the "RESET" button for 7 seconds to restore to default settings. And then repeat the ping operation. If it still does not work, please contact us.

2. I forgot the login password and cannot enter the Web-based Utility.

Press the "RESET" button for 7 seconds to restore the Router to default settings.

(UN: admin PW: admin)

3. The device is telling me that the password I am entering is incorrect.

Make sure you are entering the password exactly how it is entered in the router. The password is case-sensitive. You can check to see how yours is set by logging into the router's web-based utility. Open an Internet Browser such as Internet Explorer or Firefox and enter the following IP address into the address bar: <http://192.168.8.1>
Log in using the default Username: admin and Password: admin. Then click Wireless Settings > Security Settings to see your password.

4. Windows is not asking me to enter the password but it just won't connect to my network.

Please see Appendix 4 below on how to clear your wireless configuration file.

Appendix 4 Clear Wireless Configuration

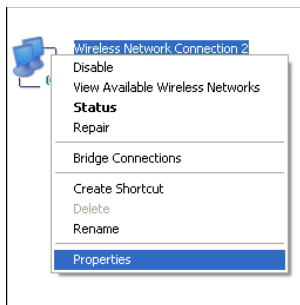
When trying to connect to your wireless network if you get an error message that says "The Security Settings Do Not Match the Requirements of the Network" or "Security Key Mismatch", then you will need to clear the saved settings in your wireless networks list.

Clear Wireless configuration file under windows XP

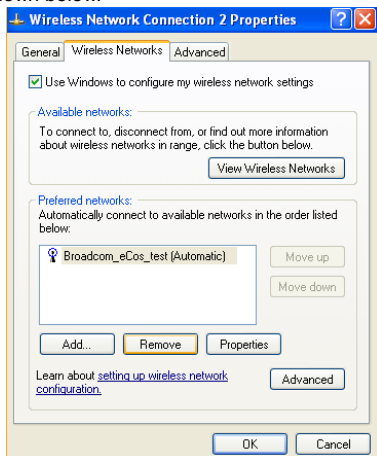
1. Right click "My Network Places" on your computer desktop and select "Properties".



2. Right click "Wireless Network Connections" and select "Properties".

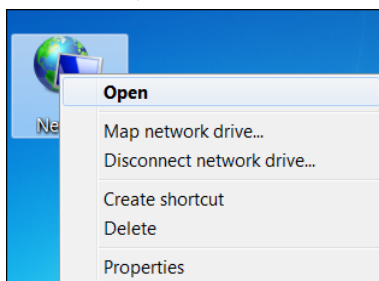


3. Click “Wireless Network Configuration” and clear the corresponding wireless configuration file as shown below.

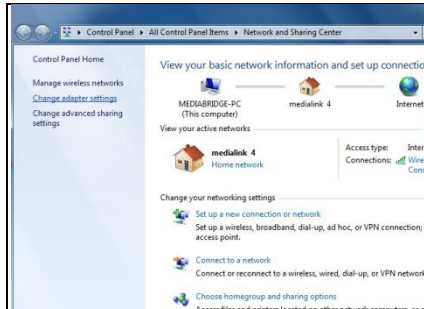


Clear Wireless configuration file under windows 7

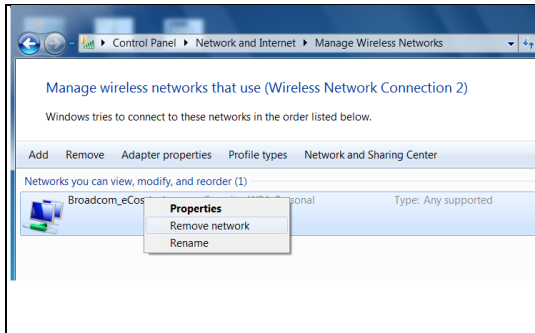
1. Right click “Network” and click “Properties”.



2. Click “Manage wireless networks” on the left side of the window.



3. Delete the corresponding configured file in the “Manage wireless networks”.



Appendix 5 Regulatory Information



CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures. This device complies with EU 1999/5/EC.

NOTE: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.



FCC Statement

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.

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. (Class B Type of Equipment)

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.

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

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.

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.

NOTE:(1)The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.(2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable

Caution!