

**ASUS<sup>®</sup>**

**DSL-N12E**  
**11n Wireless Router**



**User Manual**

E7256

Second Edition

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# About this guide

This user guide contains information that you need to install and configure the ASUS Wireless Router.

## How this guide is organized

This guide contains the following parts:

- **Chapter 1: Knowing your wireless router**

This chapter provides information on the package contents, system requirements, hardware features, and LED indicators of the ASUS Wireless Router.

- **Chapter 2: Getting started**

This chapter provides instructions on accessing the router's web GUI and quickly setting up the Internet connection via the Quick Internet Setup (QIS) function.

- **Chapter 3: Configuring the network clients**

This chapter provides instructions on setting up the clients in your network to work with your ASUS Wireless Router.

- **Chapter 4: Configuring via the web GUI**

This chapter provides instructions on configuring the ASUS Wireless Router's Internet service settings, advanced settings, administration settings, diagnostic settings, and your router's working status.

- **Chapter 5: Troubleshooting**

This chapter provides you with a troubleshooting guide for solving common problems you may encounter when using the ASUS Wireless Router.

- **Appendices**

This chapter provides you with the regulatory Notices and Safety Statements.

# Conventions used in this guide



**WARNING:** Information to prevent injury to yourself when trying to complete a task.



**CAUTION:** Information to prevent damage to the components when trying to complete a task.



**IMPORTANT:** Instructions that you **MUST** follow to complete a task.



**NOTE:** Tips and additional information to aid in completing a task.

# 1

## Knowing your wireless router

### Package contents

Check the following items in your ASUS Wireless Router package.

- DSL-N12E Wireless Router x1
- External splitter x1
- Power adapter x1
- RJ11 cable x2
- Support CD x1
- RJ45 cable x1
- Quick Start Guide x1



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**Note:** If any of the items is damaged or missing, contact your retailer.

---

### System requirements

Before installing the ASUS Wireless Router, ensure that your system/network meets the following requirements:

- An Ethernet RJ-45 port (10Base-T/100Base-TX)
- At least one IEEE 802.11b/g/n device with wireless capability
- An installed TCP/IP and Internet browser
- Operating system: Windows98®SE and higher

### Before you proceed

Take note of the following guidelines before installing the ASUS Wireless Router:

- The length of the Ethernet cable that connects the device to the network (hub, ADSL/cable modem, router, wall patch) must not exceed 100 meters.
- Place the device on a flat and stable surface as far from the ground as possible.
- Keep the device clear from metal obstructions and away from direct sunlight.

- Keep the device away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, and other industrial equipment to prevent signal loss.
- Install the device in a central area to provide ideal coverage for all wireless mobile devices.
- Install the device at least 20cm from a person to insure that the product is operated in accordance with the RF Guidelines for Human Exposure adopted by the Federal Communications Commission.

# Hardware features

## Top panel

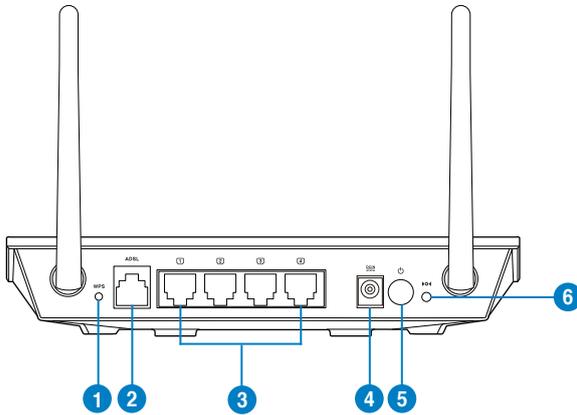


LED	Status	Indication
	Off	No power
	On	Power on
<b>ADSL</b>	Slow Flash	No signal detected
	Fast Flash	The device is synchronizing with the DSL device
	On	The device is connected to the DSL device.

## Status indicators

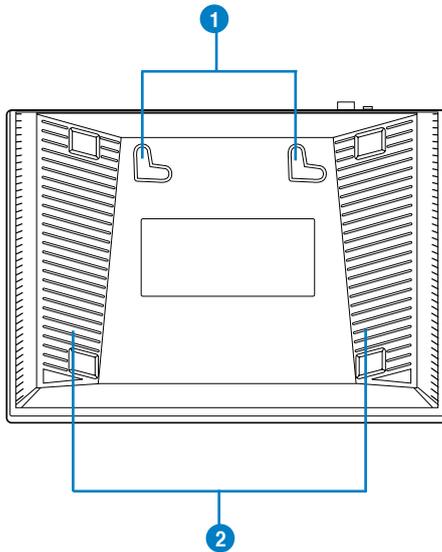
LED	Status	Indication
	Off	No connection or in bridge mode.
	Flashing	Internet data is transmitted in the routing mode.
	On	The Internet connection is normal in the routing mode and no Internet data is being transmitted.
	Off	No power or no physical connection
	On	Has physical connection to an Ethernet network.
	Flashing	Transmitting or receiving data (through Ethernet cable)
	Off	Inactive WLAN connection
	On	Active WLAN connection
	Flashing	Transmitting data through the WLAN interface
<b>WPS</b>	Off	Inactive WPS connection
	On	WPS connection is successful
	Flashing	WPS is active and the wireless router is waiting for the client to successfully connect to it.

# Rear panel



Item	Description
1	<b>WPS button</b> Press this button for more than five seconds to enable the WPS function.  <b>Note:</b> If you press the button for one to five seconds, no function takes effect.
2	<b>ADSL port</b> Connect an RJ-11 telephone cable to this port or a splitter connected from this port.
3	<b>LAN 1 ~ 4 ports</b> Connect RJ-45 Ethernet cables to these ports to establish LAN connection.
4	<b>Power (DC-In) port</b> Insert the AC adapter into this port to connect your router to a power source.
5	<b>Power switch</b> Press this button to turn the power on/off.
6	<b>Reset button</b> Using a pointed blunt object, press this button for more than one second to reset the system to its factory default settings.

## Bottom panel



Item	Description
1	<b>Mounting hooks</b> Use the mounting hooks to mount your router on concrete or wooden surfaces using two round head screws.
2	<b>Air vents</b> These vents provide ventilation to your router.



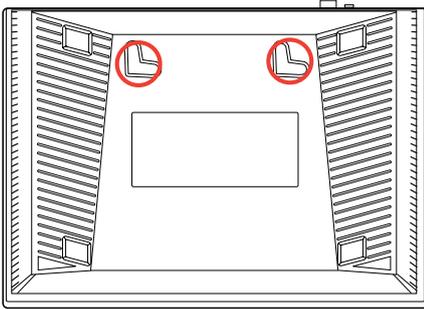
**Note:** For details on mounting your router on a wall or ceiling, refer to the section **Mounting options** on the next page of this user manual.

# Mounting options

The ASUS Wireless Router is designed to sit on a raised flat surface like a file cabinet or book shelf. The unit may also be converted for mounting to a wall or ceiling.

## To mount the ASUS Wireless Router:

1. Look on the underside for the two mounting hooks.
2. Mark two upper holes on a flat surface.
3. Tighten two screws until only 1/4" is showing.
4. Latch the hooks of the ASUS Wireless Router onto the screws.



---

**Note:** Re-adjust the screws if you cannot latch the ASUS Wireless Router onto it or if it is too loose.

---

# Getting started 2

## Setting up the wireless router

The ASUS Wireless Router includes a web graphics user interface (web GUI) that allows you to configure the wireless router using your web browser on your computer.



**Note:** For details on configuring your wireless router using the web GUI, refer to **Chapter 4: Configuring via the web GUI**.

## Accessing the router's web GUI

To access the router's web GUI:

1. In your web browser, key in <http://192.168.1.1>.
2. Key in the user name and password. You may choose to log in as administrator (user name/password: admin) or as an ordinary user (user name/password: user/user).

Connect to 192.168.1.1

User name: [User icon] | [Dropdown arrow]

Password: [Text input field]

Remember my password

OK Cancel



**Note:** When you log in as the administrator, the Quick Internet Setup (QIS) Wizard is displayed. For details about the QIS Wizard, refer to the next section **Using the Quick Internet Setup (QIS)**.

# Using the Quick Internet Setup (QIS)

The Quick Internet Setup (QIS) function guides you in quickly setting up your Internet connection.



**Important:** Obtain the necessary information about your Internet connection type from your ISP.

1. Click **Quick Internet Setup**.
2. In **Step 1: Web Account Setup** page, key in the necessary information and click **Next**.

The screenshot shows the 'Quick Internet Setup Wizard' interface. On the left is a navigation menu with options: Quick Internet Setup (selected), Network, Internet Service, Advanced Setting, Administration, Diagnostic, and Router Status. The main content area is titled 'Wizard' and contains the following text: 'The Wizard page guides you to configure the device step by step. After finishing the following steps, you will be online and free to enjoy high-speed Internet access.' Below this, a list of steps is shown: Step 1: Web Account Setup (highlighted), Step 2: Time Zone Setup, Step 3: WAN Interface Setup, Step 4: WLAN Interface Setup, and Step 5: Configuration Saving. Under 'Step 1: Web Account Setup', the instruction is 'Set a new account for accessing the Web server of the device.' The form includes fields for 'User Name' (with a dropdown menu showing 'admin'), 'New Password' (with a '(MaxLength: 15)' label), and 'Confirmed Password' (with a '(MaxLength: 15)' label). A 'Next' button is located at the bottom right of the form.

3. In **Step 2: Time Zone Setup** page, tick **Enable** to enable the NTP function, and key in the necessary information. Click **Next**.

The screenshot shows the 'Quick Internet Setup Wizard' interface at 'Step 2: Time Zone Setup'. The navigation menu on the left is the same as in the previous screenshot. The main content area is titled 'Step 2: Time Zone Setup' and contains the instruction: 'Set up the system time and the Network Time Protocol (NTP) server.' Under 'NTP Configuration', there is a 'State' section with radio buttons for 'Disable' and 'Enable' (which is selected). Below this is a 'Server' text input field containing 'pool.ntp.org'. An 'Interval' section has a dropdown menu set to 'Every 1 hours'. A 'Time Zone' dropdown menu is set to '(GMT) Gambia, Liberia, Morocco, England'. The 'GMT time' is displayed as 'Thu Jan 1 0:29:42 1970'. 'Back' and 'Next' buttons are located at the bottom of the form.

4. In **Step 3: WAN Interface Setup** page, fill in the necessary information, and click **Next**.

**Step 3: WAN Interface Setup**

This page allows you to configure the ADSL settings of the device. A predefined list of country and Internet service provider (ISP) is available for easy configuration.

(1) Select the country.

(2) Select the ISP.

Note: If the country and ISP are not available in the drop-down list, you can select Others. In this case, you need to select the protocol and connection type, manually enter the VPI and VCI. For the correct values, please contact your ISP.

(3) Enter the correct values.

(4) Click "Next" to continue.

Country: Australia  
ISP: ASUS  
Protocol: PPPoE  
Connection Type: LLC  
VPI: 0 (0-255)  
VCI: 35 (32-65535)  
User Name: \_\_\_\_\_  
Password: \_\_\_\_\_  
Confirmed Password: \_\_\_\_\_

[Back](#) [Next](#)

5. In **Step 4: WLAN Interface Setup** page, set up the parameter for your WLAN network.

**Step 4: WLAN Interface Setup**

Set up the parameters of WLAN interface.

WLAN Interface:  Enable  Disable

Band: 2.4 GHz(B+G+N)

SSID: ASUS

Encryption: None

[Back](#) [Next](#)



**Notes:**

- Do not include quotation marks (" or ') in your SSID or use spaces as the start of your SSID.
- For WPA pre-shared key and WEP key settings, neither use quotation marks (" or '), angle brackets (>), square brackets (]) and spaces as the start of your key nor use two spaces in between.

6. In **Step 5: Configuration Saving** page, click **Finish** to save the configuration settings. Click **Back** to modify the settings. Click **Reset** to cancel the settings.



# 3 Configuring the network clients

## Managing your network clients

To manage your network clients to your ASUS Wireless Router, you must have the correct parameters for wireless, LAN, and WAN connection types. Ensure that the clients' IP addresses are within the same subnet as the ASUS Wireless Router.

By default, the ASUS Wireless Router integrates the DHCP server function that automatically assigns the IP addresses to the clients in your network. You may also manually assign the static IP addresses to selected clients in your network.



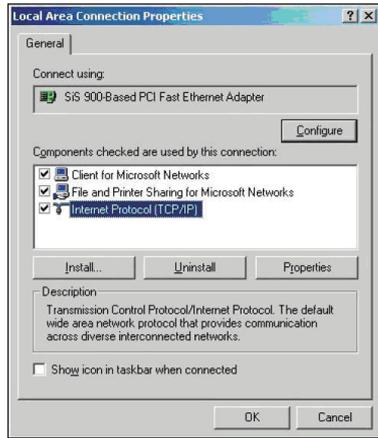
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**Note:** ASUS recommends the following settings in establishing a manually assigned IP addresses to your client in the Router mode:

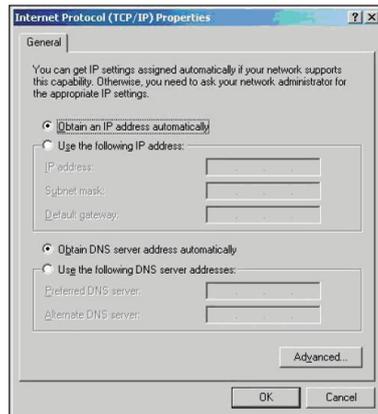
- **IP address:** 192.168.1.xxx (xxx can be any number between 2 and 254. Ensure that the IP address is not used by another device)
  - **Subnet Mask:** 255.255.255.0 (same as the ASUS Wireless Router)
  - **Gateway:** 192.168.1.1 (IP address of the ASUS Wireless Router)
  - **DNS:** 192.168.1.1 (ASUS Wireless Router) or assign a known DNS server in your network
-

# Windows® 2000

1. Click **Start > Control Panel > Network and Dial-up Connection**. Right-click **Local Area Connection**, then click **Properties**.

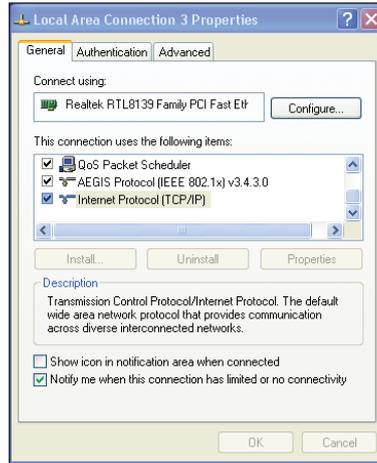


2. Select **Internet Protocol (TCP/IP)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address**, **Subnet mask**, and **Default gateway**.
4. Select **Obtain DNS server address automatically** if you want the DNS server settings to be assigned automatically. Otherwise, select **Use the following DNS server addresses:** and key in the **Preferred and Alternate DNS server**.
5. Click **OK** when done.

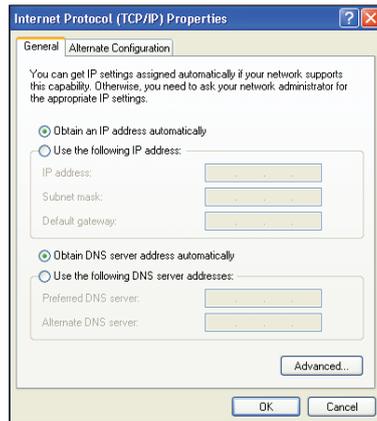


## Windows® XP

1. Click **Start > Control Panel > Network Connection**. Right-click **Local Area Connection**, then select **Properties**.

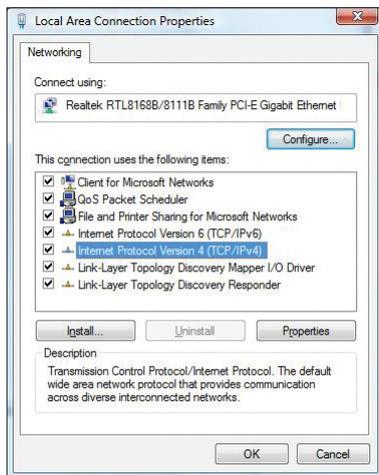


2. Select **Internet Protocol (TCP/IP)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address**, **Subnet mask**, and **Default gateway**.
4. Select **Obtain DNS server address automatically** if you want the DNS server settings to be assigned automatically. Otherwise, select **Use the following DNS server addresses:** and key in the **Preferred and Alternate DNS server**.
5. Click **OK** when done.

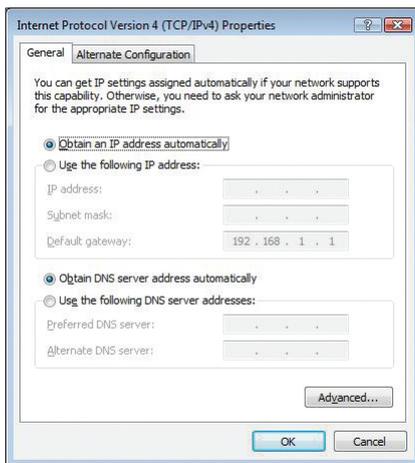


## Windows® Vista/7

1. Click **Start > Control Panel > Network and Internet > Network and Sharing Center**. Click **View status > Properties > Continue**.



2. Select **Internet Protocol Version 4 (TCP/IPv4)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address** and **Subnet mask**.
4. Select **Obtain DNS server address automatically** if you want the DNS server settings to be assigned automatically. Otherwise, select **Use the following DNS server addresses:** and key in the **Preferred and Alternate DNS server**.
5. Click **OK** when done.



# 4 Configuring via the web GUI

## Configuring the network settings

The Network page allows you to configure the settings of these three network types: **Wireless**, **LAN**, and **WAN**.

## Configuring the wireless network settings

The Wireless page allows you to configure the wireless settings.

## Configuring the basic wireless network settings

The screenshot displays the 'Wireless Basic Settings' page in a web browser. The left sidebar contains a navigation menu with 'Network' highlighted. The main content area has a blue header with tabs for 'Basic Setting', 'Security', 'LAN', 'WAN', 'Access Control', 'Multi-SSID', 'Advanced Setting', and 'WPS'. The 'Basic Setting' tab is selected, showing a title 'Wireless Basic Settings' and a subtitle 'This page is used to configure the parameters for your wireless network.' Below this is a checkbox labeled 'Disable Wireless LAN Interface' which is checked. The configuration fields include: 'Band' set to '2.4 GHz (B+G+N)', 'Mode' set to 'AP', 'SSID' set to 'ASUS', 'Channel Width' set to '20MHz', 'Control Sideband' set to 'Upper', 'Channel Number' set to 'Auto', 'Current Channel' set to '6', and 'Radio Power (Percent)' set to '100%'. There is a 'Show Active Clients' button and an 'Apply Changes' button at the bottom of the form.

### To configure the wireless network settings:

1. Click **Network > Wireless** tab.
2. In the **Basic Setting** page, key in the necessary information to configure the parameters for your wireless network. Tick **Disable Wireless LAN Interface** to disable the WLAN interface.
3. Click **Apply Changes** to apply the settings made.



#### Notes:

- To display the active clients connected to your wireless network, click **Show Active Clients**.
- Do not include quotation marks (" or ') in your SSID or use spaces as the start of your SSID.
- Clicking the Refresh button of your browser will direct you to the QIS page.

## Configuring the security settings

The Security page allows you to configure the security settings to protect your wireless network from unauthorized access.



### To configure the security settings:

1. Click **Network > Wireless tab > Security**.
2. In the **Wireless Security Setup** screen, select a SSID, its encryption method and fill in its authentication settings.
3. Click **Apply Changes** to apply the settings made.



---

**Note:** For WPA pre-shared key and WEP key settings, neither use quotation marks (" or "), angle brackets (>), square brackets (]) and spaces as the start of your key nor use two spaces in between.

---

## Controlling access to your wireless network

The Access Control page allows you to allow or deny specific clients from accessing your wireless network.



### To control access to your wireless network:

1. Click **Network > Wireless tab > Access Control**.
2. In the **Wireless Access Control Mode** field, select the access control type.
3. In the **MAC Address** field, key in the client's MAC address and click **Add** to add it to the control list.
4. Click **Apply Changes** to apply the settings made.

## Configuring the multi-SSID settings

The Multi-SSID page allows you to enable or disable a virtual access point (VAP) and set up its SSID and authentication type.

Wireless LAN WAN Multi-SSID Advanced Setting WPS

### Wireless Multiple BSSID Setup

This page allows you to set virtual access points(VAP). Here you can enable/disable virtual AP, and set its SSID and authentication type. click "Apply Changes" to take it effect.

Enable VAP0  
SSID: WLAN-0000  
Broadcast SSID:  Enable  Disable  
Relay Blocking:  Enable  Disable  
Authentication Type:  Open System  Shared Key  Auto

Enable VAP1  
SSID: WLAN-1111  
Broadcast SSID:  Enable  Disable  
Relay Blocking:  Enable  Disable  
Authentication Type:  Open System  Shared Key  Auto

Enable VAP2  
SSID: WLAN-2222  
Broadcast SSID:  Enable  Disable  
Relay Blocking:  Enable  Disable  
Authentication Type:  Open System  Shared Key  Auto

Enable VAP3  
SSID: WLAN-3333  
Broadcast SSID:  Enable  Disable  
Relay Blocking:  Enable  Disable  
Authentication Type:  Open System  Shared Key  Auto

[Apply Changes](#)

### To configure the multi-SSID settings:

1. Click **Network > Wireless tab > Multi-SSID**.
2. Tick **Enable VAPX** to enable a VAP.
3. In the **SSID** field, key in the SSID you want to use.
4. Select the Authentication type, and select **Enable** or **Disable** to enable or disable SSID broadcast and Relay Blocking.
5. Click **Apply Changes** to apply the settings made.



**Note:** To change the authentication configuration for each SSID, go to the **Security** tab for details.

## Configuring the wireless advanced settings

The Advanced Setting page allows you to configure the advanced settings for your wireless network.



**Important:** Configure the advanced settings only if you have sufficient knowledge about wireless networking. If you are not an experienced or knowledgeable user, we recommend that you keep the default values.

The screenshot displays the 'Wireless Advanced Settings' page. The left sidebar contains navigation options: Quick Internet Setup, Network, Internet Services, Advanced Settings, Administration, and Router Status. The main content area is titled 'Wireless Advance Settings' and includes a warning: 'These settings can only be configured by technically advanced users who have sufficient knowledge about wireless LAN. These settings should remain unchanged unless you know the effects from the changes you have made to your access point (AP)'. The settings are as follows:

Setting	Value	Range/Options
Authentication Type	<input checked="" type="radio"/> Open System <input type="radio"/> Shared Key <input type="radio"/> Auto	
Fragment Threshold	2346	(256-2346)
RTS Threshold	2347	(0-2347)
Beacon Interval	100	(20-1024 ms)
DTM Interval	1	(1-255)
Data Rate	Auto	
Preamble Type	<input checked="" type="radio"/> Long Preamble <input type="radio"/> Short Preamble	
Broadcast S-SID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Relay Blocking	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Ethernet to Wireless Blocking	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
WMM Multicast to Unicast	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Aggregation	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Short GI	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	

An 'Apply Changes' button is located at the bottom of the settings area.

### To configure the wireless advanced settings:

1. Click **Network > Wireless tab > Advanced Setting**.
2. In the **Wireless Advanced Settings** screen, select the Authentication type, fill in the threshold and interval settings, select the data rate and preamble type, and select **Enable** or **Disable** to enable or disable certain wireless functions.
3. Click **Apply Changes** to apply the settings made.

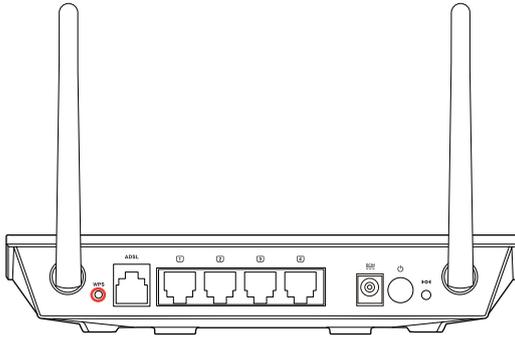
## Setting up the Wi-Fi Protected Setup (WPS)

WPS (Wi-Fi Protected Setup) allows you to set up a secure and protected wireless network easily.

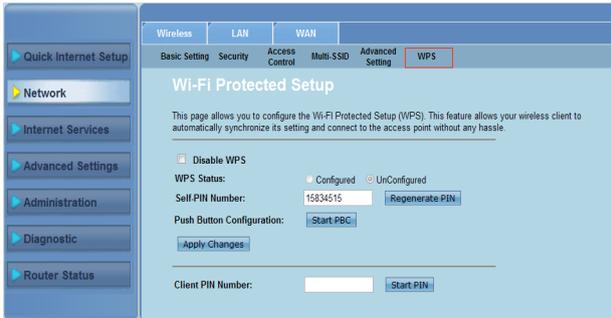


**Notes:** Ensure that you use a wireless LAN adapter with WPS function.

### To set up the WPS:



1. Press the WPS button on your router.



2. Click **Network > Wireless tab >WPS**.
3. Press the WPS button on the wireless LAN card and click **Start PBC**.  
You may also choose to key in the wireless LAN card's PIN code, then click **Start PIN**.



**Note:** Refer to the documentation that came with the wireless LAN card for the wireless LAN card's PIN code.

# Configuring the local area network (LAN) settings

The LAN page allows you to configure your local area network (LAN) settings.

## Configuring the LAN IP settings

The LAN IP Interface Setup page allows you to configure the interface of your local area network.

Wireless LAN WAN

LAN IP DHCP DHCP Static IP

### LAN Interface Setup

This page is used to configure the LAN interface of your ADSL Router. Here you may change the setting for IP address, subnet mask, etc.

Interface Name: e1

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Secondary IP

IGMP Snooping:  Disable  Enable

[Apply Changes](#)

LAN Port: [v]

Link Speed/Duplex Mode: [v]

[Modify](#)

Select	Port	Link Mode
<input type="radio"/>	LAN1	Auto Negotiation
<input type="radio"/>	LAN2	Auto Negotiation
<input type="radio"/>	LAN3	Auto Negotiation
<input type="radio"/>	LAN4	Auto Negotiation

MAC Address Control:  LAN1  LAN2  LAN3  LAN4  WLAN

[Apply Changes](#)

New MAC Address: [ ] [Add](#)

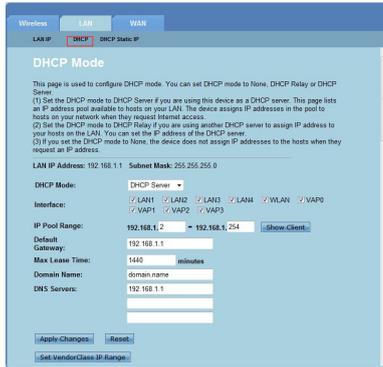
Current Allowed MAC Address Table:	
MAC Addr	Action

### To configure the LAN settings:

1. Click **Network** > **LAN** tab > **LAN IP**. In the LAN Interface Setup screen, key in the Interface Name, IP Address, and Subnet Mask.
2. Click **Apply Changes** to apply the settings made.

## Configuring the DHCP settings

The DHCP Mode page allows you to configure the DHCP settings.



### To configure the DHCP settings:

1. Click **Network > LAN tab > DHCP**.
2. In the **DHCP Mode** dropdown list, select None, DHCP Relay, or DHCP Server.
3. In the **Interface** field, select the port you want to use.
4. In the **IP Pool Range** field, key in the range of IP addresses that you want to use.
5. Key in the **Default Gateway**, **Max Lease Time**, **Domain Name**, and **DNS Server** address.
6. Click **Apply Changes** to apply the settings made.

## Configuring the DHCP static IP settings

The DHCP Static IP Configuration page allows you to assign the IP addresses on the LAN to a specific individual PCs based on the MAC addresses.

Wireless LAN WAN

LAN IP DHCP DHCP Static IP

### DHCP Static IP Configuration

This page lists the static IP address and MAC address on your LAN.  
The device assigns the IP addresses to hosts on your network when they request Internet access.

IP Address:

MAC Address:  (ex. 00E086710502)

DHCP Static IP Table:

Select	IP Address	MAC Address
--------	------------	-------------

### To configure the DHCP Static IP settings:

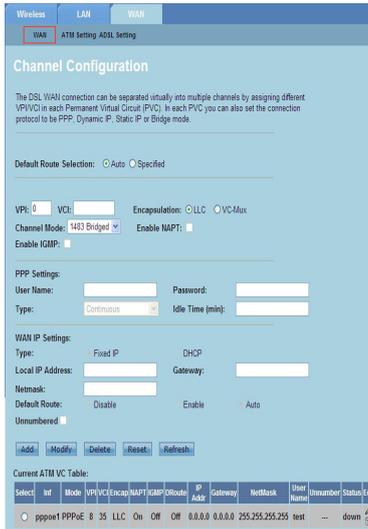
1. Click **Network > LAN tab > DHCP Static IP**.
2. In the **IP Address** field, key in the specified IP address within the IP pool range which is assigned to the host.
3. In the **MAC Address** field, key in the MAC address of the host on the LAN.
4. Click **Add** to add the IP address and MAC address to the **DHCP Static IP Table**.
5. To delete an entry of MAC address and IP address, tick the selected entry from the **DHCP Static IP Table**, and click **Delete Selected**.

# Configuring the wide area network (WAN) settings

The WAN page allows you to configure your wide area network (WAN) settings.

## Configuring the WAN channel

The Channel Configuration page allows you to configure the Internet settings in WAN channel.



### To configure the WAN settings:

1. Click **Network > WAN tab > WAN**.
2. In the **Default Route Selection** field, select **Auto** or **Specified**.
3. In the **VPI** field, key in the virtual path values for the asynchronous transfer mode ranging from 0 to 255.
4. In the **VCI** field, key in the virtual channel values for the asynchronous transfer mode ranging from 32 to 65535.
5. In the **Encapsulation** dropdown list, select **LLC** or **VC-Mux**.
6. In the **Channel Mode** dropdown list, select 1483 Bridged, 1483 MER, PPPoE, PPPoA, 1483 Routed, or IPoA.
7. Tick **Enable NAPT** to enable Network Address Port Translation function. Tick **Enable IGMP** to enable Internet Group Management Protocol function.

### To configure the PPP settings:

1. In the **User Name** and **Password** fields, key in a user name and password provided by your ISP.
2. In the **Type** dropdown list, you can select **Continuous**, **Connect on Demand**, or **Manual**.
3. In selecting the **Connect on Demand** type, key in the idle amount time in **Idle Time (min)** field to automatically disconnect the PPPoE connection.

### To configure the WAN IP settings:

1. In the **Type** dropdown list, you can select **Fixed IP or DHCP**.
2. In the **Local IP Address** field, key in the IP address of the WAN interface provided by your ISP.
3. In the **Netmask** field, key in the subnet mask of the local IP address. Tick **Unnumbered** to enable the IP unnumbered function.
4. Click **Add** to add the configured parameters into the **Current ATM VC Table**.
5. To modify the parameters on this page, select from the **Current ATM VC Table**, and modify the parameters. After modifying, click **Modify** to apply the settings to the PVC.

## Configuring the ADSL Settings

The ADSL Settings page allows you to configure the ADSL settings.

Wireless LAN WAN

WAN ATM Setting ADSL Setting

### ADSL Settings

This page is used to configure ADSL settings of the device.

**ADSL Modulation:**

- G.Lite
- G.Dmt
- T1.413
- ADSL2
- ADSL2+

**AnnexL Option:**

- Enable

**AnnexM Option:**

- Enable

**ADSL Capability:**

- Bitswap Enable
- SRA Enable

[Apply Changes](#)

### To configure the ADSL settings:

1. Click **Network > WAN tab > ADSL Setting**.
2. Select the options that you want to apply.
3. Click **Apply Changes** to apply the settings made.

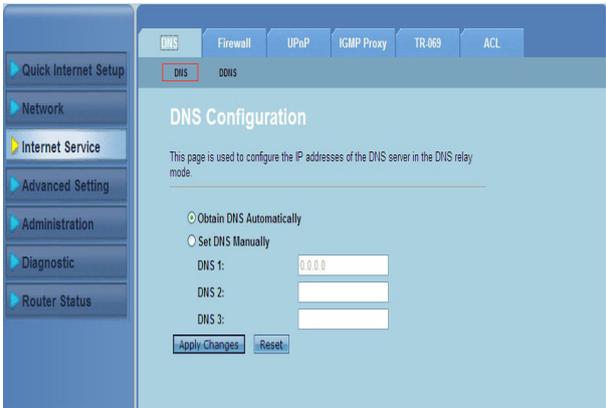
# Configuring the Internet service settings

The Internet Service function allows you to configure the following Internet service settings: DNS, Firewall, UPnP, IGMP, Proxy, TR-069, and ACL.

1. Click **Internet Service**.
2. Click the tabs of the following Internet service configuration: **DNS**, **Firewall**, **UPnP**, **IGMP Proxy**, **TR-069** and **ACL**.

## Configuring the DNS settings

The DNS (Domain Name System) page allows you to automatically obtain the DNS server address from the DHCP server or manually assign an IP address for the DNS server.



### To configure the DNS settings:

1. Click **Internet Service > DNS tab > DNS**.
2. Select **Obtain DNS Automatically** or **Set DNS Manually**, key in the IP address that you want to assign to the DNS server.
3. Click **Apply Changes** to save the settings made.

## Configuring the DDNS Settings

The DDNS (Dynamic DNS) page allows you to configure the DDNS settings from DDNS providers DynDNS or TZO.

The screenshot shows the 'Dynamic DNS Configuration' page in a web GUI. At the top, there are navigation tabs: DNS, Firewall, DDNS (highlighted), UPnP, IGMP Proxy, TR-069, and ACL. Below the tabs, the page title is 'Dynamic DNS Configuration'. A sub-header reads: 'This page is used to configure the Dynamic DNS address from DynDNS.org or TZO. Here you can Add/Remove to configure Dynamic DNS.' The form contains several sections: 'DDNS provider:' with a dropdown menu set to 'DynDNS.org'; 'Host Name:' with a text input field; 'Interface:' with a dropdown menu set to 'pppoe1'; and 'Enable:' with a checked checkbox. Below this is the 'DynDns Settings:' section with 'User Name:' and 'Password:' text input fields. The 'TZO Settings:' section has 'Email:' and 'Key:' text input fields. At the bottom of the form are 'Add' and 'Remove' buttons. Below the form is a table header for the 'Dynamic DDNS Table' with columns: Select, State, Service, Host Name, User Name, and Interface.

### To configure the DDNS settings:

1. Click **Internet Service > DNS tab > DDNS**.
2. In the **DDNS provider** dropdown list, select the DDNS provider.
3. In the **Host Name** field, assign the DDNS host name.
4. In the **Interface** dropdown list, select the Internet connection type.
5. Key in the user name and password for the DDNS provider.
6. Click **Add** to add the DDNS settings to the DNS table.

# Configure the firewall settings

The Firewall page allows you to configure the security settings for your wireless network.

## Configure the IP/Port filter settings

The IP/Port Filter page allows you to restrict certain types of outgoing or incoming Internet data packets from or to your network.



### To configure the IP/port filter settings:

1. Click **Internet Service > Firewall tab > IP/Port Filter**.
2. Select the **Rule Action** as **Permit** or **Deny**.
3. In the **Protocol** dropdown list, select the protocol type.
4. In the **Direction** field, select **Upstream** (outgoing data packets) or **Downstream** (incoming data packets).
5. In the **Source IP Address** field, key in the IP address where the data packets will be coming from.
6. In the **Destination IP Address** field, key in the IP addresses where the data packages will be transferred to.
7. In the **Subnet Mask** fields, key in the subnet mask addresses for both the source and destination IP addresses.
8. Key in the source and destination ports.
9. Tick **Enable**.
10. Click **Apply Changes** to apply the settings made. Click **Reset** to cancel the filter settings. Click **Help** for more information on configuring the filter settings.



**Note:** If you want to restrict access to all outgoing or incoming Internet data packets, select **Permit** or **Deny** in the **Outgoing Action** or **Incoming Default Action** fields.

## Configure the MAC filter settings

The MAC Filter page allows you to restrict certain types of outgoing or incoming data packets from or to network clients based on their MAC addresses.

**MAC Filter**

Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Outgoing Default Policy  Deny  Allow

Incoming Default Policy  Deny  Allow

Direction:

Action:  Deny  Allow

Source MAC Address:  (ex. 00E086710502)

Destination MAC Address:  (ex. 00E086710502)

Current MAC Filter Table:

Select	Direction	Source MAC Address	Destination MAC Address	Action
<input type="button" value="Delete"/>				<input type="button" value="Delete All"/>

### To configure the MAC filter settings:

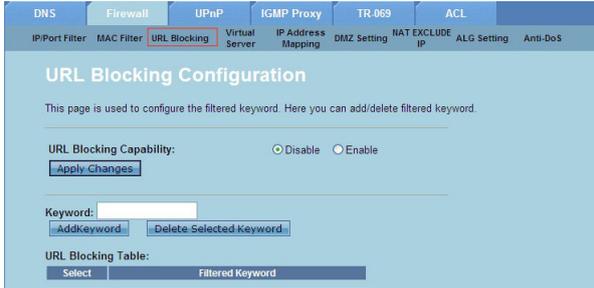
1. Click **Internet Service > Firewall tab > MAC Filter**.
2. In the **Direction** field, select **Outgoing** or **Incoming**.
3. In the **Source MAC address** field, key in the MAC address of the network client where the data packets will be coming from.
4. In the **Destination MAC address** field, key in the MAC address of the network client where the data packets will be going to.
5. Click **Add** to add the MAC filter settings to the **Current MAC Filter table**.



**Note:** If you want to restrict access to all outgoing or incoming data packets from or to network clients, select **Deny** or **Allow** in the **Outgoing Default Policy** or **Incoming Default Policy** field.

## Configure the URL Blocking settings

The URL Blocking page allows you to block certain websites or online contents based on specific keywords.

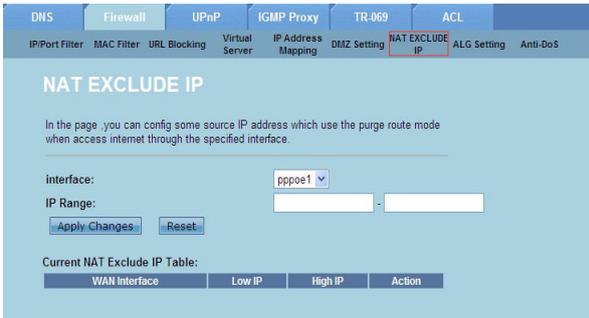


### To configure the keyword filter settings:

1. Click **Internet Service > Firewall tab > URL Blocking**.
2. In the **URL Blocking Capacity** field, click **Disable** or **Enable**.
3. In the **Keyword** field, enter the keyword that you want to block.
4. Click **Add Keyword** to add the keyword to the **URL Blocking Table**.

## Configuring the NAT Exclude IP settings

The NAT Exclude IP page allows you to configure the IP range to be excluded from your router's NAT pool.

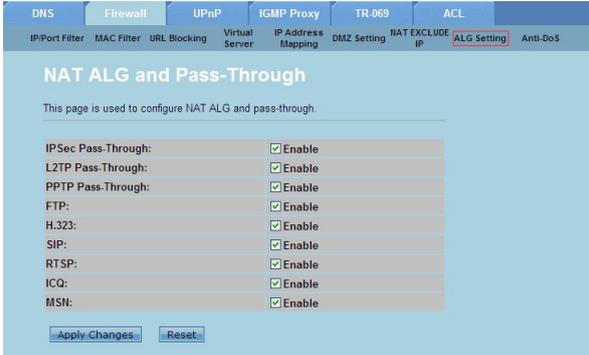


### To configure the NAT Exclude IP settings:

1. Click **Internet Service > Firewall tab > NAT EXCLUDE IP**.
2. In the **IP Range** field, key in the IP range that you want to exclude from your router's NAT pool.
3. Click **Apply Changes** to save the settings made.

## Configuring the ALG settings

The NAT ALG and Passthrough page allows you to allow certain protocols or applications to pass through your network's firewall.

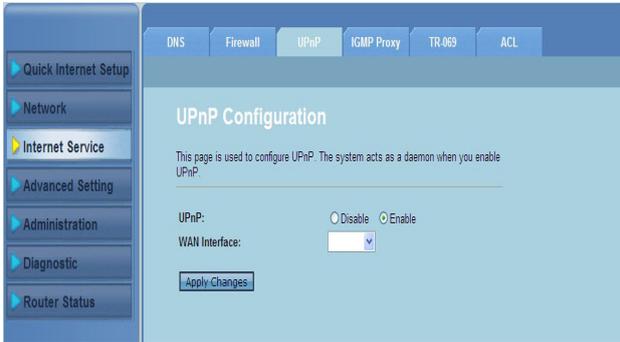


### To configure the ALG settings:

1. Click **Internet Service > Firewall tab > ALG Setting**.
2. Select the protocols or applications that you want to enable.
3. Click **Apply Changes** to save the settings made.

# Configuring the UPnP settings

The UPnP (Universal Plug and Play) Configuration page allows you to access the media of the UPnP devices found in your network.

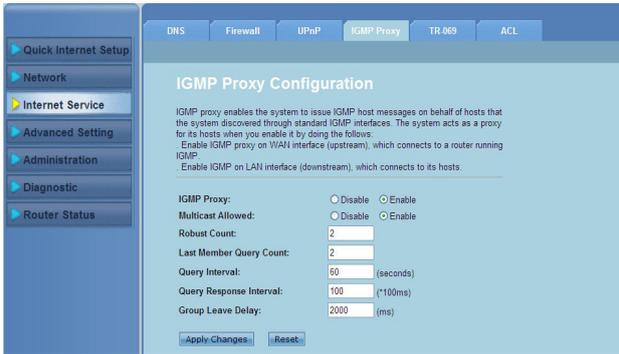


## To configure the UPnP settings:

1. Click **Internet Service** > **UPnP** tab.
2. In the **UPnP** field, tick **Enable** to enable UPnP connection.
3. In the **WAN Interface** dropdown list, choose a network protocol group to enable the UPnP connection.
4. Click **Apply Changes** to save the settings.

# Configuring the IGMP Configuration settings

The IGMP (Internet Group Management Protocol) Proxy Configuration page allows you to configure the amount of IPTV packets that can be received through a proxy.



## To configure the IGMP settings:

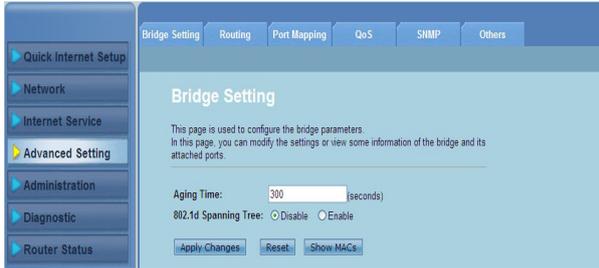
1. Click **Internet Service > IGMP Proxy** tab.
2. Tick **Enable** in **IGMP Proxy** and **Multicast Allowed** options.
3. In the **Robust Count** and **Last Member Query Count** fields, key in their variables. The default values are 2 and 1 respectively.
4. In the **Query Interval** field, key in the amount of time in seconds between IGMP general query messages sent by the router. The default value is 125 seconds.
5. In the **Query Response Interval** field, key in the maximum time value that the IGMP waits to receive a response to a general query message. The default value is 10 seconds.
6. In the **Group Leave Delay** field, key in the time value in milliseconds.
7. Click **Apply Changes** to save the settings.

# Configuring the advanced settings

The Advanced Setting page allows you to configure your ASUS Wireless Router's advanced settings such as Bridge Setting, Routing, Port Mapping, QoS, SNMP, and other miscellaneous settings.



**NOTE:** Configure the Advanced settings only if you are an experienced user and has vast knowledge about networking.



# Configuring the administration settings

The Administration page allows you to restore the wireless router to its default or to its saved configuration settings, upgrade the firmware, view the system logs, create, edit, or delete user accounts, and configure the system settings.

## Restoring the wireless router's settings

The Commit/Reboot page allows you to restore the wireless router to its default settings or to a previously saved configuration settings.



### To configure the Commit/Reboot settings:

1. Click **Administration > Commit/Reboot** tab.
2. In the **Reboot from** dropdown list, you can save the current configuration or restore back to its default setting by selecting from the options **Save the current configuration** or **Restore to the factory default configuration**.
3. Click **Reboot** to load the selected configuration and reboot the router's system.

# Upgrading the firmware

The Upgrade Firmware page allows you to upgrade the wireless router's firmware version.



**NOTE:** Download the latest firmware from the ASUS Support site at <http://support.asus.com>.



## To upgrade the firmware:

1. Click **Administration > Upgrade tab > Upgrade Firmware**.
2. In the **Select File** field, click **Browse** to locate the new firmware file on your computer.
3. Click **Upload**. Wait for a few minutes for the uploading process to complete.

## Backing up/Restoring the settings

The Backup/Restore Settings page allows you to backup or save the configuration settings to a file in your preferred path and to restore the wireless router's settings using the saved configuration file.



### To backup the settings:

1. Click **Administration > Upgrade tab > Backup/Restore**.
2. In the **Save Settings to File** field, click **Save** to save the configuration settings to your preferred path.

### To restore the settings:

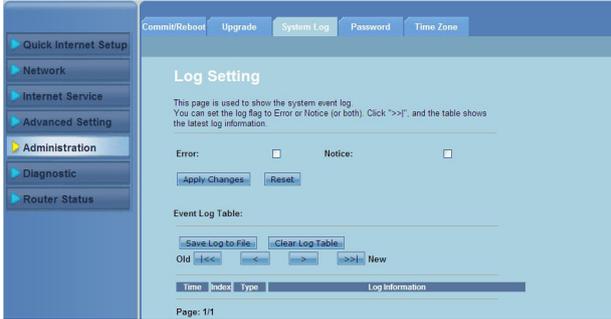
1. Click **Administration > Upgrade tab > Backup/Restore**.
2. In the **Load Settings from File** field, click **Browse** to locate the saved configuration file.

# Configuring the System Logs

The Log Setting page allows you to enable or disable the system log function and view the system logs.



**Note:** You can tick both boxes to view the system logs in the Events Log Table.



### To configure the system log settings:

1. Click **Administration > System Log** tab.
2. Check the **Error** and **Notice** boxes to view the system event logs.
3. Click **Apply Changes**. The log information (Error and Notice logs) will be shown in the **Events Log Table**.
4. Click **Save Log to File** to save a copy of logs information to your local drive.
5. Click **Clear Log Table** to clear the system logs from the table.

# Configuring the user account settings

The User Account Configuration page allows you to create, modify, or delete user accounts.



## To add a user account:

1. Click **Administration > Password** tab.
2. In the **User Name** field, key in the desired user name.
3. In the **Privilege** dropdown list, select the privilege type: **Root** or **User**.
4. Key in your password to the **New Password** and **Confirm Password** fields.
5. Click **Add** to add your new account to the **User Account Table**.

## To modify a user account:

1. Click **Administration > Password** tab.
2. In the **User Account Table**, tick the user account to be modified.
3. Key in your old password in the **Old Password** field.
4. Key in your password to the **New Password** and **Confirm Password** fields.
5. Click **Modify** to modify the selected user account.



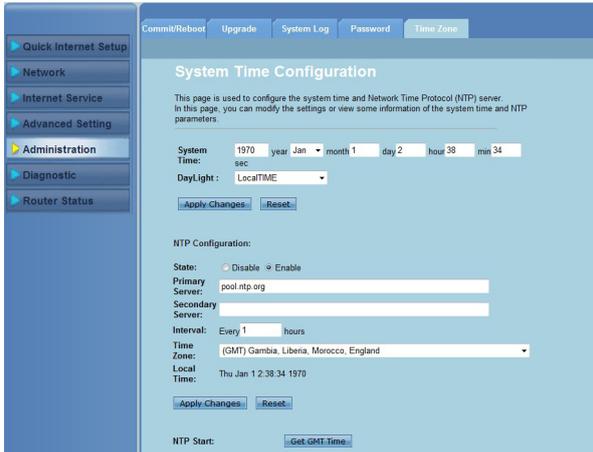
**NOTE:** You can only modify the user account's new password.

## To delete a user account:

1. Click **Administration > Password** tab.
2. In the **User Account Table**, tick the user account to be deleted.
3. Click **Delete** to delete the user account from the **User Account Table**.

# Configuring the system time settings

The System Time Configuration page allows you to configure the system time manually or obtain the system time automatically from the time server.



## To configure the system time manually:

1. Click **Administration > Time Zone** tab.
2. In the **System Time** field, key in the necessary information.
3. Click **Apply Changes** to save the settings made.

## To obtain the system time automatically:

1. Click **Administration > Time Zone** tab.
2. In the **State** field under **NTP Configuration**, tick **Enable** to enable the Network Time Protocol (NTP) function.
3. Key in the necessary information.
4. Click **Apply Changes** to save the settings made.

# Configuring the diagnostic settings

The Diagnostic page allows you to detect, isolate, and troubleshoot problems with your network.



# Checking your wireless router's status and basic settings

The Router Status page allows you to view the current status of your wireless router, the connection status, and the system logs.

Click the tabs to view these information:

- **System** tab  
The **System Status** page displays the current status and some basic settings of the wireless router such as software version, DSP version, uptime, upstream speed, and downstream speed.
- **LAN** tab  
The **LAN Status** page displays some basic LAN settings of the wireless router, the LAN IP address, DHCP server status, MAC address and DHCP table.
- **Wireless** tab  
The **WLAN Status** page displays the basic settings and status of wireless LAN (WLAN).
- **WAN** tab  
The **WAN** page displays the basic status of WAN and DNS server of the router.
- **Port Mapping** tab  
The **Port Mapping** page displays the relationship and status of port mapping.
- **Statistics** tab  
The **ADSL Statistics** page shows the status of ADSL line, upstream rate, downstream rate, and other information.
- **ARP Table** tab  
The **ARP Table** page shows the IP addresses and their corresponding MAC addresses.

# Troubleshooting 5

## Troubleshooting

This troubleshooting guide provides solutions to some common problems that you may encounter while installing or using the ASUS Wireless Router. These problems require simple troubleshooting that you can perform by yourself. Contact the ASUS Technical Support if you encounter problems not mentioned in this chapter.

Problem	Action
The client cannot establish a wireless connection with the router.	<p><b>Out of Range:</b></p> <ul style="list-style-type: none"><li>• Put the router closer to the wireless client.</li><li>• Try to change the channel settings.</li></ul> <p><b>Authentication:</b></p> <ul style="list-style-type: none"><li>• Use wired connection to connect to the router.</li><li>• Check the wireless security settings.</li><li>• Press the Restore button at the rear panel for more than five seconds.</li></ul> <p><b>Cannot find the router:</b></p> <ul style="list-style-type: none"><li>• Insert a needle inside the Reset hole at the rear panel for more than five seconds.</li><li>• Check the setting in the wireless adapter such as SSID and encryption settings.</li></ul>

Problem	Action
Cannot access the Internet via wireless LAN adapter.	<ul style="list-style-type: none"> <li>• Move the router closer to the wireless client.</li> <li>• Check whether the wireless adapter is connected to the correct wireless router.</li> <li>• Check whether the wireless channel in use conforms to the channels available in your country/area.</li> <li>• Check the encryption settings.</li> <li>• Check if the ADSL or Cable connection is correct.</li> <li>• Retry using another Ethernet cable.</li> </ul>
Internet is not accessible.	<ul style="list-style-type: none"> <li>• Check the status indicators on the ADSL modem and the wireless router.</li> <li>• Check if the WAN LED on the wireless router is ON. If the LED is not ON, change the cable and try again.</li> </ul>
When ADSL Modem “Link” light is ON (not blinking), this means Internet Access is possible.	<ul style="list-style-type: none"> <li>• Restart your computer.</li> <li>• Refer to the Quick Start Guide of the wireless router and re-configure the settings.</li> <li>• Check if the WAN LED on the wireless router is ON.</li> <li>• Check the wireless encryption settings.</li> <li>• Check if the computer can get the IP address (via both wired network and wireless network).</li> <li>• Ensure that your web browser is configured to use the local LAN, and is not configured to use a proxy server.</li> </ul>
If the ADSL “LINK” light blinks continuously or stays off, Internet access is not possible - the Router is unable to establish a connection with the ADSL network.	<ul style="list-style-type: none"> <li>• Ensure that all your cables are all properly connected .</li> <li>• Disconnect the power cord from the ADSL or cable modem, wait a few minutes, then reconnect the cord.</li> <li>• If the ADSL light continues to blink or stays OFF, contact your ADSL service provider.</li> </ul>
Network name or encryption keys are forgotten.	<ul style="list-style-type: none"> <li>• Try setting up the wired connection and configuring the wireless encryption again.</li> <li>• Insert a needle in the Reset hole at the rear panel of the wireless router for more than five seconds.</li> </ul>

Problem	Action
<p>How to restore the system to its default settings?</p>	<ul style="list-style-type: none"> <li>• Insert a needle into the Reset hole at the rear panel of the wireless router for more than five seconds.</li> <li>• Refer to the section <b>Backing up/Restoring the settings</b> in Chapter 4 of this user manual.</li> </ul> <p>The following are the factory default settings:</p> <p><b>User Name:</b> admin  <b>Password:</b> admin  <b>Enable DHCP:</b> Yes (if WAN cable is plugged in)  <b>IP address:</b> 192.168.1.1  <b>Domain Name:</b> (Blank)  <b>Subnet Mask:</b> 255.255.255.0  <b>DNS Server 1:</b> 192.168.1.1  <b>DNS Server 2:</b> (Blank)  <b>SSID:</b> ASUS</p>

## Notices

For the following equipment: DSL-N12E



Is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (2004/108/EC), Low-voltage Directive (2006/95/EC) and R&TTE (1999/5/EC). The equipment was passed. The test was performed according to the following European standards:

ETSI EN 301 489-17 V2.1.1: 2009  
ETSI EN 301 489-1 V1.8.1: 2008  
ETSI EN 300 328 V1.7.1: 2006  
EN 62311: 2008  
EN 60950-1:2006/A11:2009/A1:2010

## ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components, as well as the packaging materials. Please go to <http://csr.asus.com/english/Takeback.htm> for the detailed recycling information in different regions.

## REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at <http://csr.asus.com/english/REACH.htm>

## Federal Communications Commission Statement

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

- This device may not cause harmful interference.
- 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 or more 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.



---

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

---

## Prohibition of Co-location

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

## Safety Information

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna.

## Declaration of Conformity for R&TTE directive 1999/5/EC

Essential requirements – Article 3

Protection requirements for health and safety – Article 3.1a

Testing for electric safety according to EN 60950-1 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility – Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1 and EN 301 489-17 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum – Article 3.2

Testing for radio test suites according to EN 300 328- 2 has been conducted. These are considered relevant and sufficient.

## 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.

Operation Channels: Ch1~11 for N. America, Ch1~14 Japan, Ch1~13 Europe (ETSI)

## IC Warning

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

Cet appareil numérique de la class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## GNU General Public License

### Licensing information

This product includes copyrighted third-party software licensed under the terms of the GNU General Public License. Please see The GNU General Public License for the exact terms and conditions of this license. We include a copy of the GPL with every CD shipped with our product. All future firmware updates will also be accompanied with their respective source code. Please visit our web site for updated information. Note that we do not offer direct support for the distribution.

### GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

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SAFE TEMP: This wireless router should be only used in environments with ambient temperatures between 5°C(41°F) and 40°C(104°F).

DO NOT expose to or use near liquids, rain, or moisture. DO NOT use the modem during electrical storms.

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