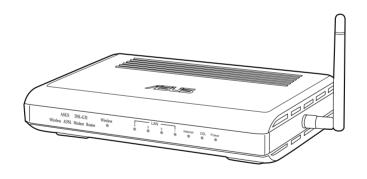


# DSL-G31 ADSL 2/2+ Wireless Modem Router (For ASUS EZ User Interface)



**User Manual** 

E4862 First Edition June 2009

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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: Setting up the hardware

This chapter provides instructions on setting up, accessing, and configuring the ASUS Wireless Router.

#### 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 using its web graphics user interface (web GUI).

#### · 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.

# Knowing your wireless router

# **Package contents**

Check the following items in your ASUS Wireless Router package.

- ☑ DSL-G31 11g WiFi ADSL Router
- ☑ AC Power adapter (type varies by region)
- ☑ Category 5 (CAT5) Ethernet cable
- ☑ RJ-11 cable
- ✓ Support CD (manual)
- ✓ Splitter (type varies by region)
- Quick Start Guide



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.

# Before you proceed

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

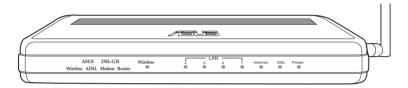
- The length of the Ethernet cable that connects the device to the network (hub, ADSL/cable modem, router, wall patch) must not exceed 100 meters.
- Place the device on a flat, stable surface as far from the ground as possible.
- Keep the device clear from metal obstructions and away from direct sunlight.
- 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 20cms from a person to ensure that the product is operated in accordance with the RF Guidelines for Human Exposure adopted by the Federal Communications Commission.

# Hardware features

# Front panel

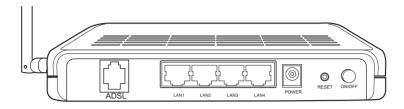
The DSL-G31 11g WiFi ADSL Router front panel contains LED indicators which shows the status of DSL-G31.



#### Status indicators

LED	Status	Indication
Wireless	Solid Green	Wireless is enabled.
	Off	Wireless is disabled.
	Flashing	Sending or receiving data.
DSL	Solid Green	ADSL link is established
	Flashing (Green)	Unable to establish an ADSL link
	Off	No ADSL link
Internet	Flashing (Green)	Sending or receiving data
	Off	No data transfer
LAN1-LAN4	Solid Green	Has physical connection to a network via Ethernet cables
	Flashing (Green)	Sending or receiving data
	Off	No power or no physical connection
Power	Solid Green	Power on, normal operation
	Flashing (Green)	Press the Restore button at the rear panel for more than five seconds until the power LED flashes.
	Off	Power off or failure

# Rear panel



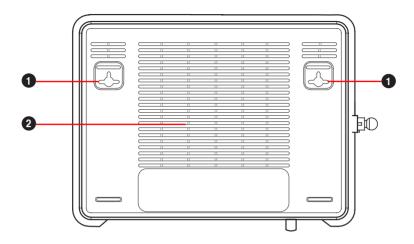
Item	Description	
ON/OFF	Press this button to turn the power on/off	
POWER	Insert the AC adapter into this port to connect your router to a power source	
RESET	This button restores the system to its factory default settings.	
LAN1-LAN4	Connect RJ-45 Ethernet cables to these ports to establish LAN connection.	
ADSL	Connects to the splitter provided with the bundled RJ-11 cable.	

# **Product features**

The Wireless Router provides the following features:

- · Built-in ADSI modem
- · Built-in firewall
- IEEE802.11g standard-based wireless network, backward compatible with 802.11b devices
- ASUS New UI An objective & task-oriented web-based configuration interface.
- Quick Internet Setup (QIS) for ADSL connection, wireless, and security configurations.
- · Network Map for straight-forward network information & management
- EZQoS for application-based bandwidth management, with intuitive control interface.

# **Bottom panel**



Item	Description	
0	Mounting hooks Use the mounting hooks to mount your router on concrete or wooden surfaces using two roundhead screws.	
2	Air vents These vents provide ventilation to your router.	



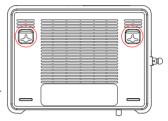
**Note**: For details on mounting your router on a wall or ceiling, refer to the section **Mounting options** on the next page of this user manual.

# **Mounting options**

Out of the box, 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:

- Look on the underside for the two mounting hooks.
- 2. Mark two upper holes in a flat surface.
- 3. Tighten two screws until only 1/4" is showing.
- 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 the screws or if it is too loose.



# Setting up the wireless router

The ASUS Wireless Router meets various working scenarios with proper configurations. You may need to change the wireless router's default settings so as to meet the requirements in your wireless environment.



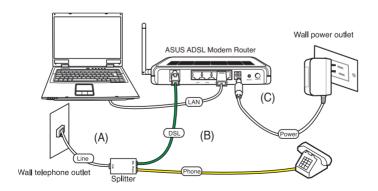
**Notes:** We recommend that you use wired connection for initial configuration to avoid possible setup problems due to wireless uncertainty.

# Setting up a wired connection

The ASUS Wireless Router is supplied with an RJ11 cable, an RJ45 LAN cable, and a splitter in the package. The wireless router has integrated auto-crossover function, so use either straight-through or crossover cable for wired connection.

#### To set up the wired connection:

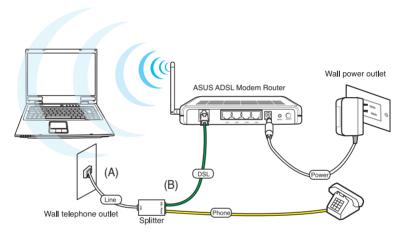
- 1. Insert the splitter's line connector to the phone outlet and connect your phone into the phone port (A).
- 2. Connect your wireless router's ADSL port to the splitter's DSL port (B).
- 3. Using the bundled RJ45 LAN cable, connect your computer to the wireless router's LAN port (C).



# Setting up a wireless connection

#### To set up the wired connection:

- 1. Insert the splitter's line connector to the phone outlet and connect your phone into the phone port (A).
- 2. Connect your wireless router's ADSL port to the splitter's DSL port (B).
- 3. Turn on your computer and double-click the wireless network icon on the Windows® task bar to view available networks. Select your wireless router. By default, there is no security key for the wireless router. Click **Connect** and the connection is completed within seconds.





To protect your network from malicious attacks or unauthorized access, click **Advanced Setting** > **Wireless** on the web GUI.



# Accessing the wireless router Setting an IP address for wired or wireless client

To access the ASUS Wireless Router, you must have the correct TCP/IP settings on your wired or wireless clients. 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, which automatically assigns IP addresses to the clients in your network.

But in some instances, you may want to manually assign static IP addresses on some of the clients or computers in your network rather than automatically getting IP addresses from your wireless router.

Follow the instructions below that correspond to the operating system installed on your client or computer.



Note: If you want to manually assign an IP address to your client, we recommend that you use the following settings:

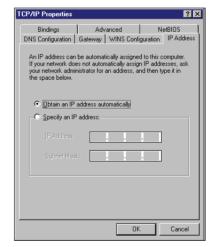
- IP address: 192.168.1.xxx (xxx can be any number between 2 and 254. Ensure that the IP address is not used by another device)
- · Subnet Mask: 255.255.255.0 (same as the ASUS Wireless Router)
- · Gateway: 192.168.1.1 (IP address of the ASUS Wireless Router)
- · DNS: 192.168.1.1 (ASUS Wireless Router)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

#### Windows® 9x/ME

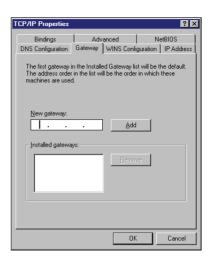
- Click Start > Control Panel > Network to display the Network setup window.
- 2. Select **TCP/IP** then click **Properties**.



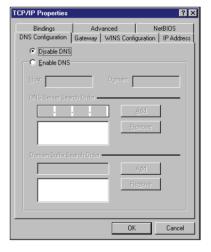
 If you want your computer to automatically obtain an IP address, click Obtain an IP address automatically then click OK. Otherwise, click Specify an IP address, then key in the IP address and Subnet Mask.



4. Select the **Gateway** tab, and key in **New gateway** then click **Add**.

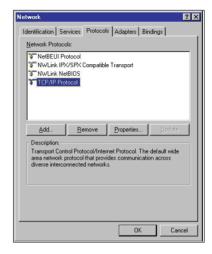


- Select the DNS configuration tab and click Enable DNS. Key in Host, Domain, and DNS Server Search Order, then click Add.
- 6. Click OK.

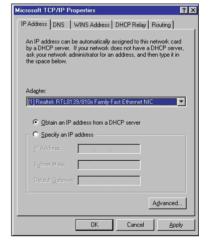


#### Windows® NT4.0

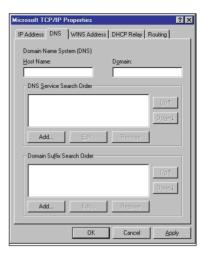
- Go to Control Panel > Network to display the Network setup window then select the Protocols tab.
- Select TCP/IP Protocol from the Network Protocols list then click Properties.



- From the IP Address tab of the Microsoft TCP/IP Properties window, you can:
  - Select the type of network adapter installed in your system.
  - Set the router to assign IP address automatically.
  - Manually set up the IP address, subnet mask, and default gateway.



 Select the DNS tab then click Add under the DNS Service Search Order and key in DNS.

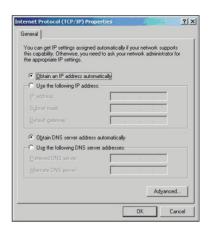


#### Windows® 2000

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



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



#### Windows® XP

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



- Select Internet Protocol (TCP/IP), then click Properties.
- 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.
- 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

 Click Start, select Control Panel > Network and Sharing Center. Rightclick Local Area Connection then select Properties.



2. Select Internet Protocol Version 4(TCP/IPv4), then click Properties.



- 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.
- 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.
- Click **OK** when done.



We recommend that you set the router's IP address as the default gateway.

# Configuring via the web GUI

# Configuring via the web GUI

The router's web graphics user interface (web GUI) allows you to configure these features: **Network Map**, **EZQoS Bandwidth Management** and other **Advanced Setting**.

#### To configure via the web GUI:

 After setting up a wired or wireless connection, launch a web browser. The login page automatically launches.



Note: You may also manually key in the router's default IP address (192.168.1.1) to launch the router's web interface.

On the login page, key in the default user name (admin) and password (admin).



3. From the main page, click the navigation menu or links to configure the various features of the ASUS Wireless Router.



# **Using the Network Map**

Network Map allows you to view the status and configure the connection settings of the Internet, system, and clients in your network. It enables you to quickly set up your Wide Area Network (WAN) using the Quick Internet Setup (QIS) feature, or to quickly set up your Local Area Network (LAN).

To view the status or configure the settings, click on any of these icons displayed on the main page:

Icon	Description
<b>2</b>	Internet status Click this icon to display information on the Internet connection status, WAN IP address, DNS, connection type, and gateway address. From the Internet status screen, use the Quick Internet Setup (QIS) feature to quickly set up your WAN.  Note: For more details on the QIS feature, refer to the section Setting up WAN using the Quick Internet Setup
	(QIS) on the next page.
	System status Click this icon to display information on the SSID, authentication method, WEP encryption, LAN IP, MAC address, or turn the wireless radio on/off.
	Client status Click this icon to display information about the clients or computers in the network, and allows you to block/unblock a client.

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# **Setting up WAN using the Quick Internet Setup (QIS)**

The ASUS Quick Internet Setup (QIS) function automatically detects your Internet connection settings. If the ASUS Wireless Router cannot automatically detect your Internet connection type, you may need to manually set up your Internet connection settings.

To use the ASUS Quick Internet Setup (QIS):

- 1. Launch the web browser. Wait for about 20 seconds for QIS to automatically detect your Internet connection type.
- 2. Key in your connection type's username and password, then click Apply.
- After the Internet connection type setup is completed, select any of these options:
  - Going to Internet: Click to surf the Internet.
  - Simply Wireless Security Setting: Click to configure the wireless security settings.

# Manually setting up your Internet connection

To manually set up your Internet connection:

 If ASUS QIS cannot automatically detect your Internet connection type, click Skip to manual settings.



- Select your Country and ISP, then click Next. If your country and ISP are not on the list, select Not list and key in your VPI and VCI then click Next. You may ask your ISP for VPI/VCI values.
- 3. On the login page, key in the default user name (admin) and password (admin).
- The router supports these connection types: PPP over ATM (PPPoA), PPP over Ethernet (PPPoE), MAC Encapsulation Routing (MER), IP over ATM (IPoA), and Bridging. Select your connection type and follow the onscreen instructions.



Obtain the required information about your Internet connection type from your Internet Service Provider (ISP).

5. When done, click Save/Reboot.

# Managing EzQoS bandwidth

EzQoS Bandwidth Management enables you to set the bandwidth priority and manage the network traffic.

#### To set up the bandwidth priority:

 Click EzQoS Bandwidth Management from the navigation menu at the left side of your screen.



2. Click each of these four applications to set the bandwidth priority:

lcon	Description	
<b>#3</b>	Gaming Blaster The router handles gaming traffic at first priority.	
	Internet Application The router handles the e-mail, web browsing and other Internet applications traffic at first priority.	
	FTP The router handles at first priority the traffic of downliading/uploading data to/from the FTP server.	
·D.	Voip/Video Streaming The router handles the audio/video traffic at first priority.	

3. Click **Save** to save the configuration settings.

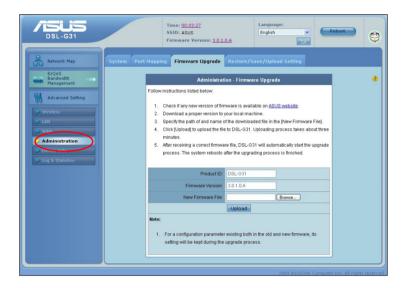
# **Upgrading the firmware**



Note: Download the latest firmware from the ASUS website at http://www.asus.com

#### To upgrade the firmware:

 Click Advanced Setting from the navigation menu at the left side of your screen.



- 2. Under the **Administration** menu, click **Firmware Upgrade**.
- In the New Firmware File field, click Browse to locate the new firmware on your computer.
- 4. Click **Upload**. The uploading process takes about three minutes.

# Restoring/Saving/Uploading settings

#### To restore/save/upload the settings:

- Click Advanced Setting from the navigation menu at the left side of your screen.
- 2. Under the Administration menu, click Restore/Save/Upload Setting.



- 3. Select the tasks that you want to do:
  - To restore to the default factory settings, click Restore, and click OK in the confirmation message.
  - To save the current system settings, click Save, and click Save in the file download window to save the system file in your preferred path.
  - To restore previous system settings, click Browse to locate the system file that you want to restore, then click Upload.



# **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
I cannot access a web browser for configuring the router.	Launch a web browser, then click Tools > Internet Options      Under Temporary Internet files, click Delete Cookies and Delete Files
The client cannot establish a wireless connection with the router.	Out of Range:  Put the router closer to the wireless client.  Try to change the channel settings.
	Authentication:     Use wired connection to connect to the router.
	<ul> <li>Check the wireless security settings.</li> <li>Press the Restore button at the rear panel for more than five seconds until the power LED flashes.</li> </ul>
	Cannot find the router:
	Press the Restore button at the rear panel for more than five seconds until the power LED flashes.
	Check the setting in the wireless adapter such as SSID and encryption settings.

Problem	Action
Cannot access the Internet via wireless LAN adapter	Move the router closer to the wireless client.
·	Check whether the wireless adapter is connected to the correct wireless router.
	Check whether the wireless channel in use conforms to the channels available in your country/ area.
	Check the encryption settings.
	Check if the ADSL or Cable connection is correct.
	Retry using another Ethernet cable.
Internet is not accessible	Check the status indicators on the ADSL modern router.
	Check if the DSL LED on the wireless router is ON. If the LED is not ON, change the cable and try again.
When ADSL Modem "DSL" light is ON (not blinking),	Restart your computer.
this means Internet Access is possible.	Refer to the Quick Start Guide of the wireless router and re-configure the settings.
	Check if the DSL LED on the wireless router is ON.
	Check the wireless encryption settings.
	Check if the computer can get the IP address (via both wired network and wireless network).
	Ensure that your web browser is configured to use the local LAN, and is not configured to use a proxy server.

Problem	Action	
If the DSL-G31 "DSL" light blinks continuously or stays off. Internet access	Ensure that all your cables are all properly connected .	
stays off, Internet access is not possible - the Router is unable to establish a connection with the ADSL network.	Disconnect the power cord from the DSL- G31, wait a few minutes, then reconnect the cord.	
	If the DSL light continues to blink or stays OFF, contact your ADSL service provider.	
Network name or encryption keys are forgotten	Try setting up the wired connection and configuring the wireless encryption again.	
	Press the Reset button at the rear panel of the wireless router for more than five seconds until the power LED flashes.	
How to restore the system to its default settings	Press the Reset button at the rear panel of the wireless router for more than five seconds until the power LED flashes.	
	The following are the factory default settings:  User Name: admin	
	Password: admin	
	Enable DHCP: Yes (if WAN cable is plugged i	
	IP address: 192.168.1.1 Domain Name: (Blank)	
	Subnet Mask: 255.255.255.0	
	DNS Server 1: 192.168.1.1	
	DNS Server 2: (Blank) SSID: ASUS	

# **Appendices**

#### **Notices**

#### **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.



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

#### 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://green.asus.com/english/REACH.htm

#### **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

Appendices DSL-G31 31

# **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.

# **FCC Radiation Exposure Statement**

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. 2.4GHz operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.



DSL-G31 Wireless Router Quick Start Guide DSL-G31 ADSL POWER DSL Internet 1 2 3 4 R LAN Wireless.

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#### **FCC Part 68 REQUIREMENTS**

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US: ASUDL01BDSLG31. If requested, this number must be provided to the telephone company.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US: ASUDL01BDSLG31. The digits represented by 01are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

If your equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC. Your telephone company may make changes in it is facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, Please contact the following address and phone number for information on obtaining service or repairs.

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

COMPANY: ASUS Computer International

ADDRESS: 44370 Nobel Drive, Fremount, CA 94536 USA

TEL NO: 510-739-3777 ext.4530



DSL-G31 Wireless Router Quick Start Guide DSL-G31 ADSL POWER DSL Internet 1 2 3 4 R LAN Wireless.

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# IC (Canada)

1. 2.4GHz Mobile device (ex. 11b/g/n AP/Router) with fixed antenna:

(Industry Canada Statement)

This device complies with RSS-210 of the Industry Canada Rules.

Operation is subject to the following two conditions:

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

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numerique de la class A est conforme a la norme NMB-003 du Canada.

# **IC Radiation Exposure Statement**

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

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

2.4GHz operation of this product in Canada is firmware-limited to channels 1 through

11

# CE (Europe)

WLAN 2.4GHz device:

This device can be operated in the EU without restrictions indoor.

However, operated outdoors in France is restricted to 2400  $\sim$  2454 MHz (Channel 1  $\sim$  7).

# Safety

1. For apply CSA not control power adapter:

This unit is to be used with an external power adaptor of a Class 2 or level 3 type and Approved type suitable for use in the North America of equipment installation, having an output voltage rating of 12 V dc, and output current rating of 1 A or equivalent.

The external AC adapter must be complied with the requirements of LPS (Limited Power Sources).

Power Supply

OEM

EU: AA-151ABN UK: AA-151AD AU: AA-151AE

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		RATINGEN, GERMANY
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# **EEE Yönetmeliğine Uygundur**

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