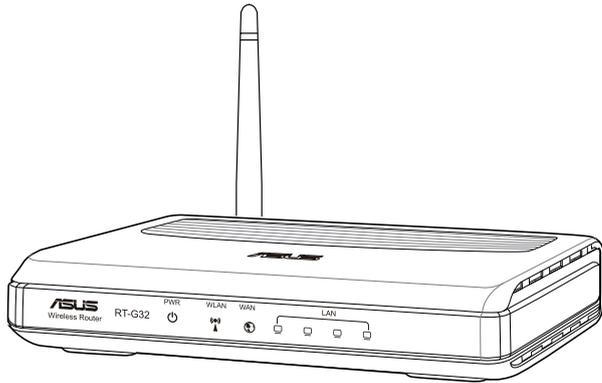




RT-G32 Wireless Router



User Manual

E4503

Second Edition

January 2009

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About this user manual

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

How this user manual is organized

This user manual 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: Installing the utilities**

This chapter provides information on the utilities that are available from the support CD.

- **Chapter 6: 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.

- RT-G32 Wireless Router
- Power adapter
- Support CD (manual, utilities)
- RJ45 cable
- 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 device with wireless capability
- An installed TCP/IP and Internet browser
- This utility supports Internet Explorer 6.0 or later version.

Before you proceed

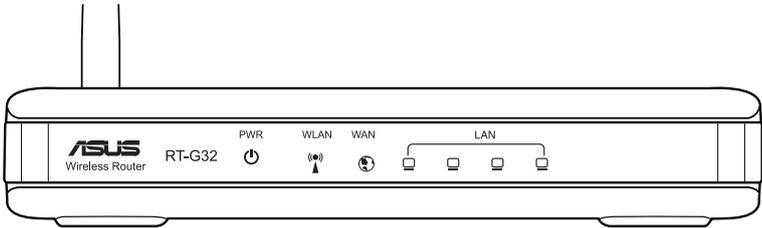
Take note of the following guidelines before installing the ASUS Wireless Router:

- 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 insure that the product is operated in accordance with the RF Guidelines for Human Exposure adopted by the Federal Communications Commission.

Hardware features

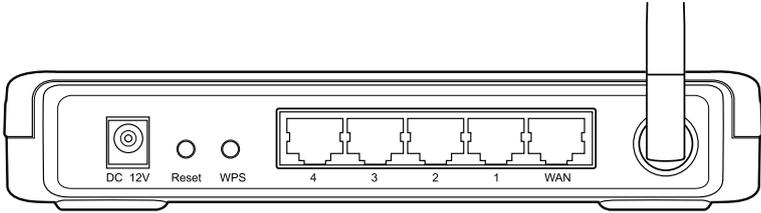
Front panel



Status indicators

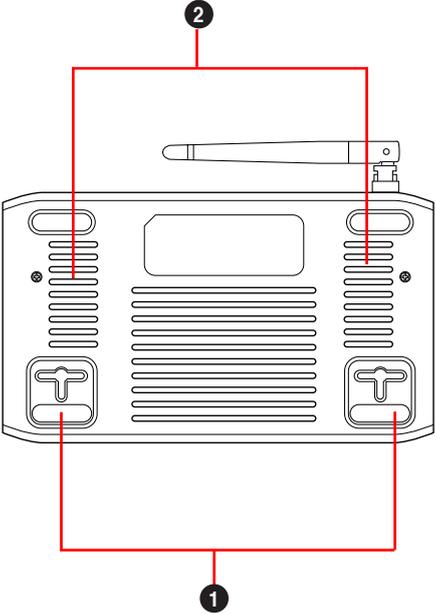
LED	Status	Indication
 (Power)	Off	No power
	On	System ready
WLAN (Wireless LAN)	Off	No power
	On	Wireless system ready
	Flashing	Transmitting or receiving data (wireless)
LAN 1-4 (Local Area Network)	Off	No power or no physical connection
	On	Has physical connection to an Ethernet network
	Flashing	Transmitting or receiving data (through Ethernet cable)
WAN (Wide Area Network)	Off	No power or no physical connection
	On	Has physical connection to an Ethernet network
	Flashing	Transmitting or receiving data (through Ethernet cable)

Rear panel



Label	Description
ANTENNA	Adjust the antenna manually to get a better signal reception
WPS	Press this button to launch the Wi-Fi Protected Setup (WPS).
Reset	Press for three seconds to restore to the factory default settings.
WAN	Connect an RJ-45 Ethernet cable to this port to establish WAN connection.
LAN1-LAN4	Connect RJ-45 Ethernet cables to these ports to establish LAN connection.
DC 12V	Insert the DC adapter into this port to connect your router to a power source.

Back panel



Item	Description
1	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.



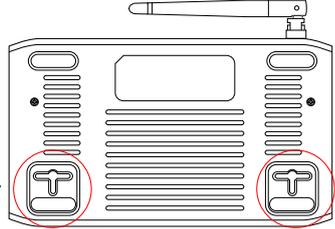
Note: For details on mounting your router on a wall or ceiling, refer to the section **Mounting options** on the next page of this user manual.

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:

1. 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.
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 the screws or if it is too loose.

2 Setting up the hardware

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. It also provides you with EZSetup, a utility that enables you to easily set up a secure wireless network.



Notes:

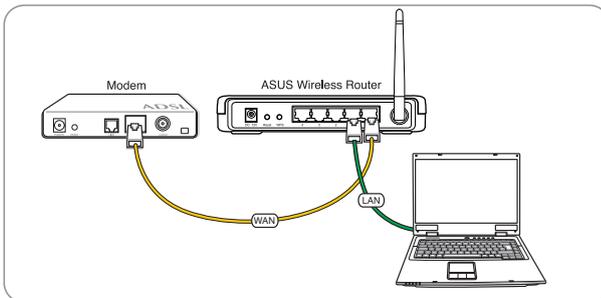
- For more details on EZSetup, refer to the section **EZSetup** in Chapter 5 of this user manual.

Setting up a wired connection

The ASUS Wireless Router is supplied with an Ethernet cable 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:

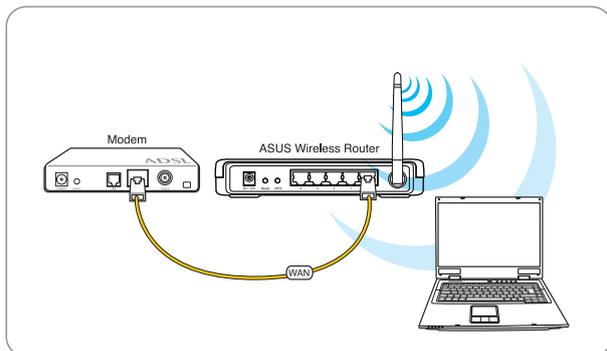
1. Turn on your router and the modem.
2. Using an Ethernet cable, connect the router's WAN port to the modem.
3. Using another Ethernet cable, connect the router's LAN port to your PC's LAN port.



Setting up a wireless connection

To set up a wireless connection:

1. Turn on your router and the modem.
2. Using an Ethernet cable, connect the modem to the router's WAN port.
3. Connect an IEEE 802.11b/g compatible WLAN card. Refer to your wireless adapter user manual for wireless connection procedures. By default, the SSID of ASUS Wireless Router is "default" (in lower case), encryption is disabled and open system authentication is used.



Configuring the wireless router

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

Using the web GUI

If your PC connects to the router using a cable, launch a web browser and the login page of the router's web GUI is automatically launched.

If your PC connects to the router wirelessly, you have to select the network first.

To select the network:

1. Click **Start > Control Panel > Network Connections > Wireless Network Connection**.
2. Select a network from the **Choose a wireless network** window. Wait for it to connect.



Note: By default, the SSID of wireless router is **default**. Connect to this default SSID.

3. After establishing a wireless connection, launch a web browser.



Notes:

- You may also manually key in the router's default IP address (**192.168.1.1**) to launch the router's web interface.
 - For more details on configuring your wireless router using the web GUI, refer to **Chapter 4: Configuring via the web GUI**.
-

3 Configuring the network clients

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 functions, which automatically assign 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.

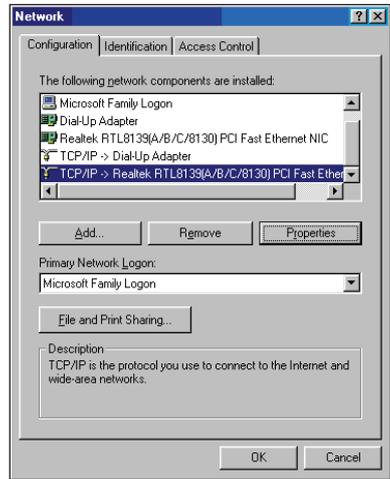


Note: If you want to manually assign an IP address to your client, we recommend that you use the following settings:

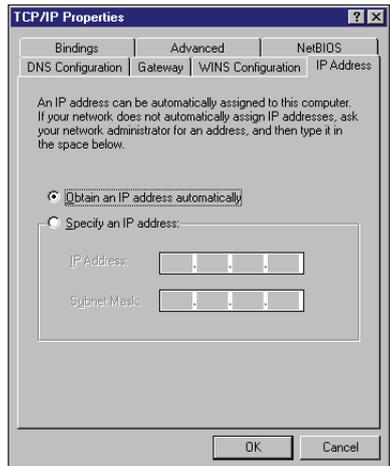
- **IP address:** 192.168.1.xxx (xxx can be any number between 2 and 254. Ensure that the IP address is not used by another device)
 - **Subnet Mask:** 255.255.255.0 (same as the ASUS Wireless Router)
 - **Gateway:** 192.168.1.1 (IP address of the ASUS Wireless Router)
 - **DNS:** 192.168.1.1 (ASUS Wireless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

Windows® 9x/ME

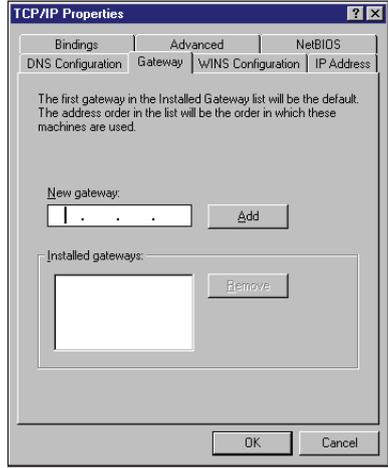
1. Click **Start > Control Panel > Network** to display the Network setup window.
2. Select **TCP/IP** then click **Properties**.



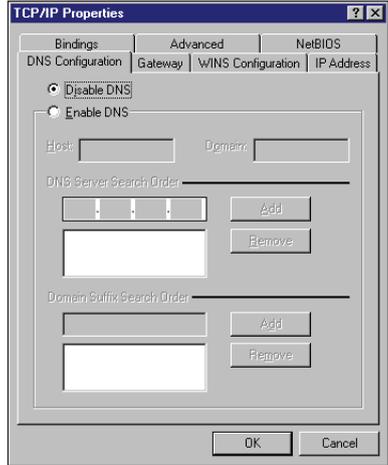
3. If you want your computer to automatically obtain an IP address, click **Obtain an IP address automatically** then click **OK**. Otherwise, click **Specify an IP address**, then key in the **IP address** and **Subnet Mask**.



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

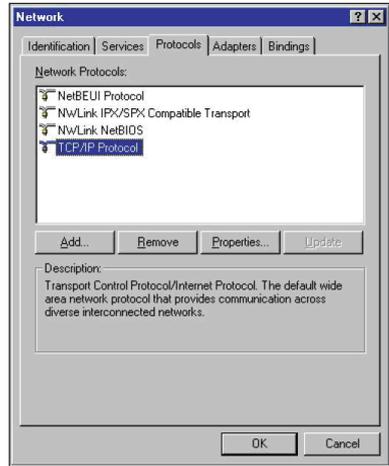


- 5. Select the **DNS configuration** tab and click **Enable DNS**. Key in **Host**, **Domain**, and **DNS Server Search Order**, then click **Add**.
- 6. Click **OK**.

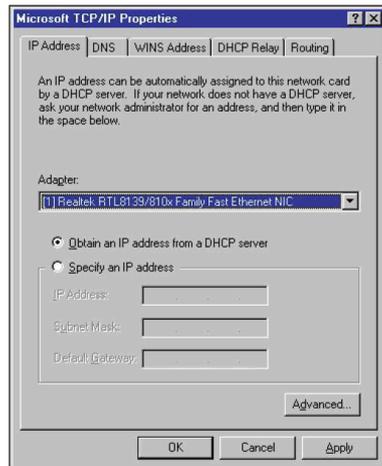


Windows® NT4.0

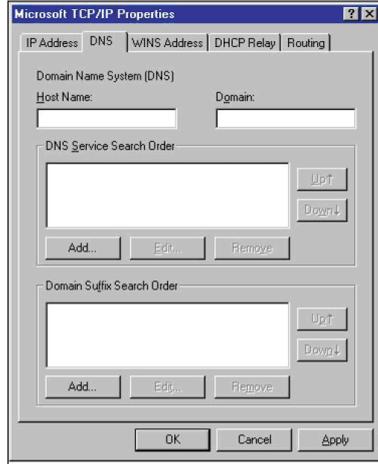
1. Go to **Control Panel > Network** to display the Network setup window then select the **Protocols** tab.
2. Select **TCP/IP Protocol** from the Network Protocols list then click **Properties**.



3. From the IP Address tab of the Microsoft TCP/IP Properties windows, 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.



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

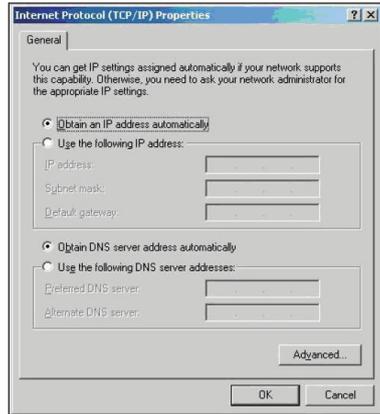


Windows® 2000

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

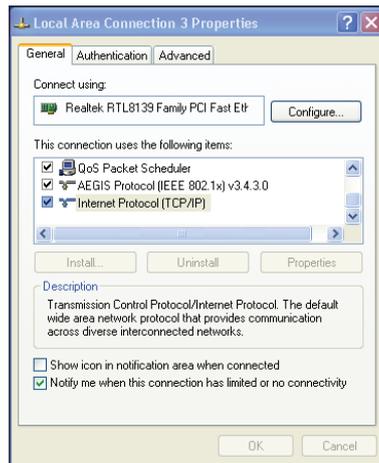


2. Select **Internet Protocol (TCP/IP)**, then click **Properties**.
3. Select **Obtain an IP address automatically** if you want the IP settings to be assigned automatically. Otherwise, select **Use the following IP address:** and key in **IP address**, **Subnet mask**, and **Default gateway**.
4. Select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

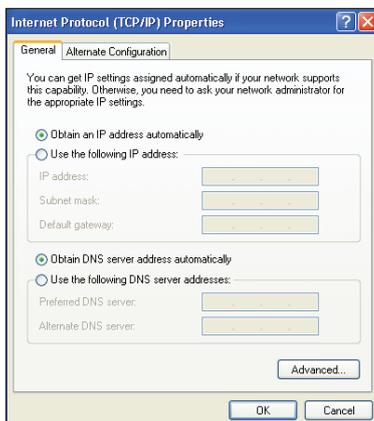


Windows® XP

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.



4 Configuring via the web GUI

Configuring via the web GUI

The router's web graphics user interface (web GUI) allows you to configure the feature: **Setting**.

To configure via the web GUI:

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



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

2. 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.



Configuring the Setting

This page allows you to configure setting for the router and your network. It enables you to configure the setting for: **Wireless, LAN, WAN, Firewall, Administration, and System Log.**

To launch the **Setting** page:

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



Upgrading the firmware



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

To upgrade the firmware:

1. Click **Setting** from the navigation menu at the left side of your screen.
2. Under the **Administration** menu, click **Firmware Upgrade**.
3. 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.

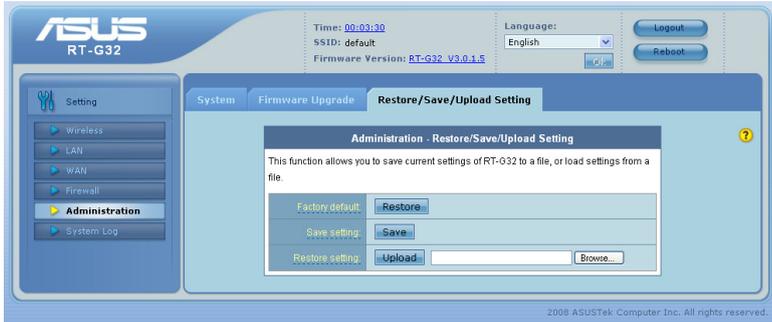


Note: If the upgrade process fails, the wireless router automatically enters the emergency or failure mode and the power LED indicator at the front panel flashes slowly. To recover or restore the system, use the Firmware Restoration utility. For more details on this utility, refer to the section **Firmware Restoration** in Chapter 5 of this user manual.

Restoring/Saving/Uploading settings

To restore/save/upload the settings:

1. Click **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**.

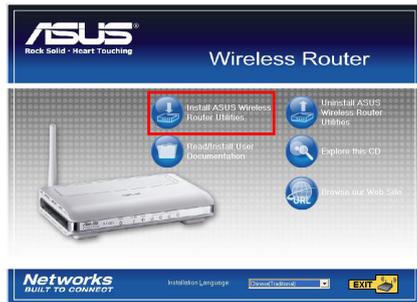
5 Installing the utilities

Installing the utilities

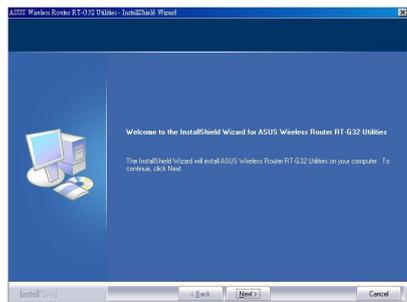
The support CD contains the utilities for configuring the ASUS Wireless Router. To install the ASUS WLAN Utilities in Microsoft® Windows, insert the support CD in the CD drive. If autorun is disabled, run **setup.exe** from the root directory of the support CD.

To install the utilities:

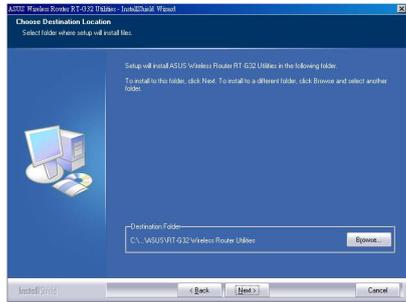
1. Click **Install ASUS Wireless Router Utilities**.



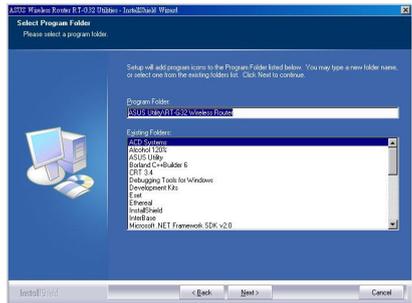
2. Click **Next**.



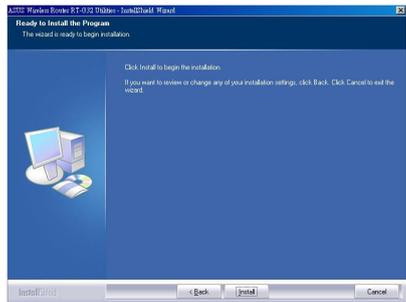
3. Click **Next** to accept the default destination folder or click **Browse** to specify another path.



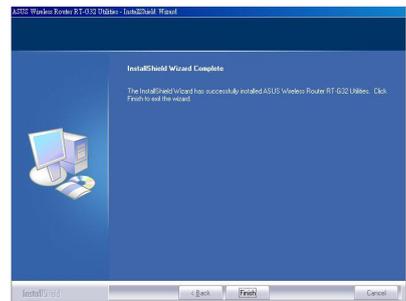
4. Click **Next**.



5. Click **Install** to install the utility.



6. Click **Finish** when setup is complete.



Device Discovery

Device Discovery is an ASUS WLAN utility which detects an ASUS Wireless Router device, and enables you to configure the device.

To launch the Device Discovery utility:

- From your computer's desktop, click **Start > All Programs > ASUS Utility > RT-G32 Wireless Router > Device Discovery**.



Firmware Restoration

Firmware Restoration is a utility that searches for an ASUS Wireless Router that failed during its firmware upgrading process, then restores or re-uploads the firmware that you specify. The process takes about three to four minutes.



DO NOT use this utility unless you encounter abnormal situations such as a corrupt firmware, upgrading failure, or system crash.

1. Download the latest firmware version and utility from our website at (<http://support.asus.com/download/download.aspx?SLanguage=en-us>).
2. Decompress the utility file, then run **Setup.exe**. Click **Next** to finish the installation.

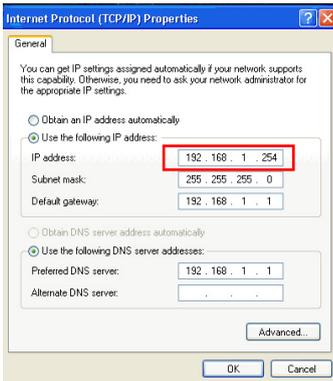
Set IP address manually

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

Set the IP address manually (192.168.1.254).



- We suggest you use wired connection and set the IP address manually in order to gain an ideal environment for transmission.
- Make sure firewall on PC is disabled.

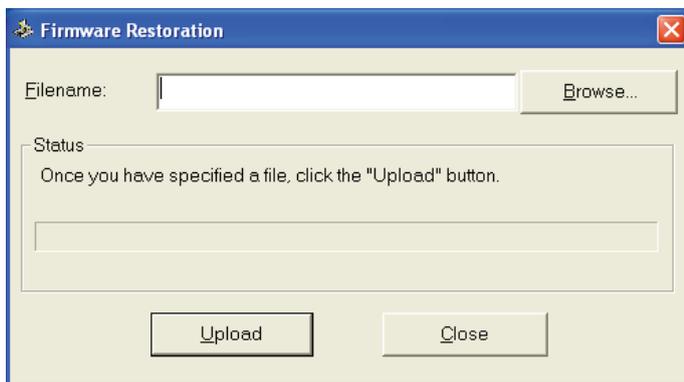


3. Power off the wireless router, press and hold the reset button and then power on the device again. The wireless device enters the rescue mode after the WLAN LED flashes.



DO NOT shut down or reset the device while updating the firmware! Doing so can cause system boot failure!

- From your Windows® desktop, click > **Start > All programs > ASUS Utility > RT-G32 Wireless Router > Firmware Restoration**.
- Click **Browse** to choose the firmware file and then click **Upload**.



- After uploading the firmware successfully, the device automatically reboots.

EZSetup

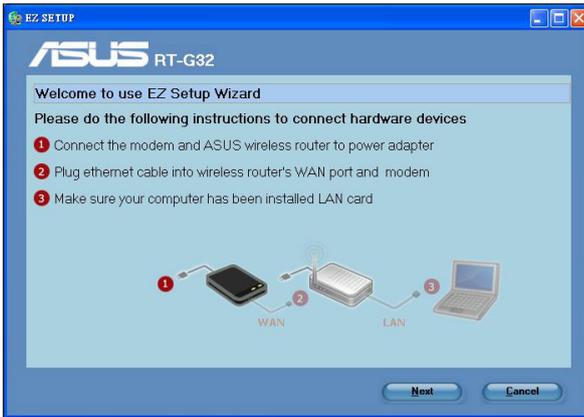
EZSetup is a utility that allows you to easily set up your wireless network



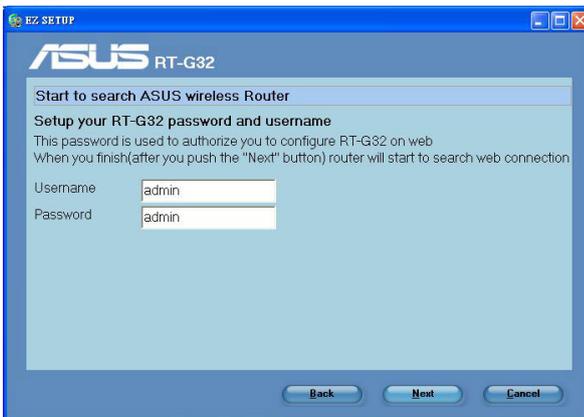
Before you install the EZSetup, ensure that your RT-G32 is connected the modem or PC by RJ45 cable..

To use EZSetup:

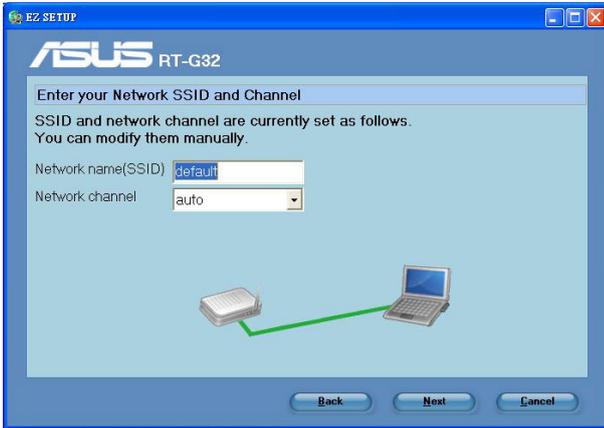
1. Follow the instructions to connect the hardware device. When done, click **Next**.



2. Key in the user name and password to configure the wireless router on the web. When done, click **Next**.



3. After setting up the network SSID and channel are connected, click **Next** to continue.



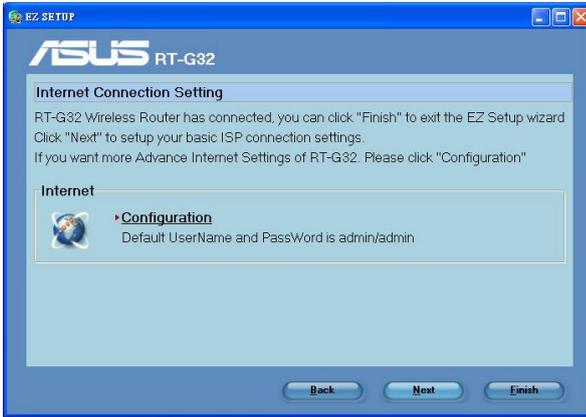
(Connecting)

If the connection failed, ensure that the hardware environment is connected appropriate and click **Re-search** to search again.

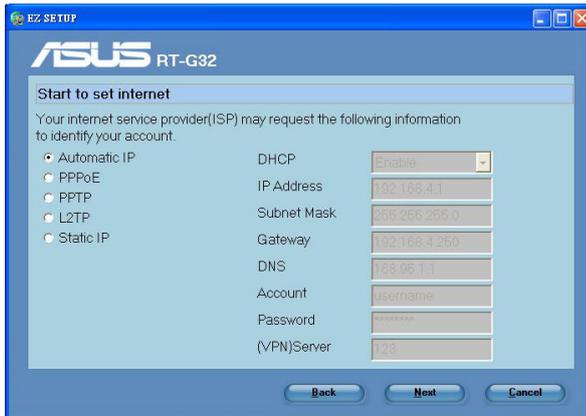


(Connection failed)

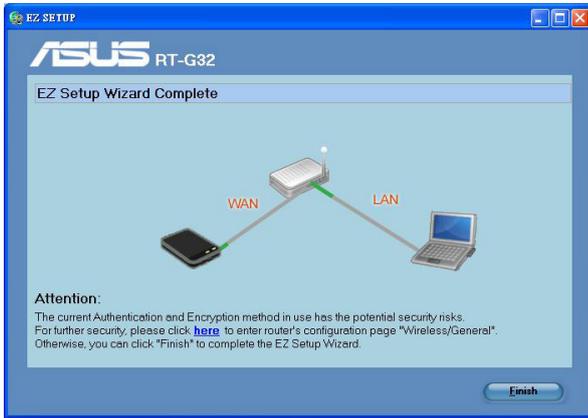
- Click **Next** to configure the basic ISP connection settings. Click **Finish** to finish the internal networks settings.



- Select your connection type from these types of ISP services: **Automatic IP**, **PPPoE**, **PPTP**, **L2TP**, and **Static IP**. Key in the necessary information for your ISP connection type. When done, click **Next**.



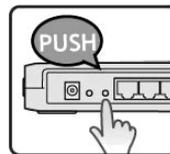
- When done, click **Finish**.



WPS Quick Button Setup

When you connect a PC or wireless adapter (such as ASUS USB-N11 and PCI-G31 adapter) with WPS function, please follow the instructions below to enable the WPS Quick setup.

- In order to use WPS, ensure that both RT-G32 wireless router and another computer's wireless software WPS function are enabled.
- Push the WPS button at the rear panel of RT-G32 wireless router.
- RT-G32 WLAN LED can light up and slow flash after the WPS connection established.



Troubleshooting 6

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.	<ol style="list-style-type: none">1. Launch a web browser, then click Tools > Internet Options...2. Under Temporary Internet files, click Delete Cookies... and Delete Files...
The client cannot establish a wireless connection with the router.	<p>Out of Range:</p> <ul style="list-style-type: none">• Put the router closer to the wireless client.• Try to change the channel settings. <p>Authentication:</p> <ul style="list-style-type: none">• Use wired connection to connect to the router.• Check the wireless security settings.• Press the Reset button at the rear panel for more than five seconds. <p>Cannot find the router:</p> <ul style="list-style-type: none">• Press the Reset button at the rear panel for more than five seconds.• Check the setting in the wireless adapter such as SSID and encryption settings.

Problem	Action
Cannot access the Internet via wireless LAN adapter	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Check the status indicators on the ADSL modem and the wireless router. • Check if the WAN LED on the wireless router is ON. If the LED is not ON, change the cable and try again.
When ADSL Modem "Link" light is ON (not blinking), this means Internet Access is impossible.	<ul style="list-style-type: none"> • Restart your computer. • Refer to the Quick Start Guide of the wireless router and re-configure the settings. • Check if the WAN 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.
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"> • Ensure that all your cables are all correctly connected . • Disconnect the power cord from the ADSL or cable modem, wait a few minutes, then reconnect the cord. • If the ADSL light continues to blink or stays OFF, contact your ADSL service provider.

Problem	Action
Network name or encryption keys are forgotten	<ul style="list-style-type: none"> • Try setting up the wired connection and configuring the wireless encryption again. • Press the Restore button at the rear panel of the wireless router for more than five seconds.
How to restore the system to its default settings	<ul style="list-style-type: none"> • Press the Restore button at the rear panel of the wireless router for more than five seconds. • Refer to the section Restoring to the default settings in Chapter 4 of this user manual. <p>The following are the factory default settings:</p> <p>User Name: admin Password: admin Enable DHCP: Yes 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: default</p>

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.

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.

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