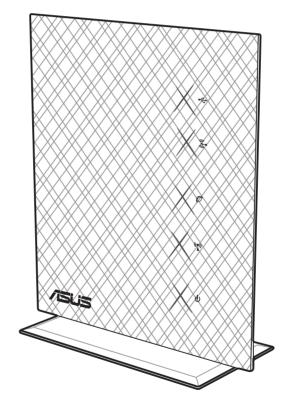


# **RT-N15U** Gigabit Wireless-N Router



**User Manual** 

E6826 First Edition August 2011

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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 setting up the Router and Access Point modes of 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.


# Knowing your wireless router

# Package contents

Check the following items in your ASUS Wireless Router package.

- RT-N15U Wireless Router x1
- Power adapter x1
- Support CD (manual, utilities) x1
- RJ45 cable x1
- Quick Start Guide x1

d	D
X	

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

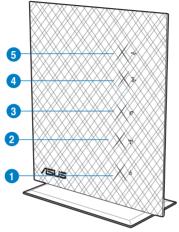
Take note of the following guidelines before installing the ASUS Wireless Router:

- 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 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

**Front panel** 

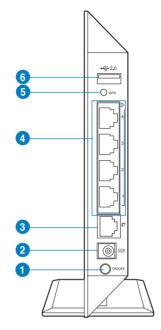


### Status indicators

Item	LED	Status	Indication
		Off	No power
1	Power	On	System ready
		Flashing	Rescue mode
		Off	No power
2	WLAN	On	Wireless system ready
		Flashing	Transmitting or receiving data (wireless)
		Off	No power or no physical connection
3	WAN (Wide	On	Has physical connection to an Ethernet network
	Area Network)	Flashing	Transmitting or receiving data (through Ethernet cable)
		Off	No power or no physical connection
4	LAN (Local	On	Has physical connection to an Ethernet network
	Area Network)	Flashing	Transmitting or receiving data (through Ethernet cable)
	LICP	Off	No power or no physical connection
5	USB	On	External USB device is installed.

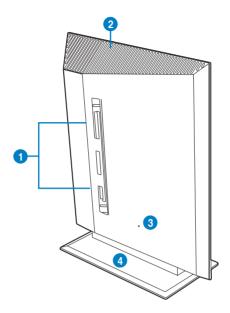
8

# **Rear panel**



Item	Description
1	Power switch
	Press this button to turn the power on/off.
2	Power (DC-In) port
	Insert the AC adapter into this port to connect your router to a power source.
3	WAN port
	Connect an RJ-45 Ethernet cable to this port to establish WAN connection.
4	LAN 1 ~ 4 ports
	Connect RJ-45 Ethernet cables to these ports to establish LAN connection.
5	WPS button
	Press this button to establish wireless connection.
6	USB 2.0 port
	Insert a USB device into this port.

# **Back panel**



Item	Description
1	Mounting hooks
	Use the mounting hooks to mount your router on concrete or wooden surfaces using two round head screws.
2	Air vents
	These vents provide ventilation to your router.
3	Reset Button
	Press this button for more than five seconds to reset the system to its factory default settings.
4	Stand
	Allows you to place the wireless router to an upright position.



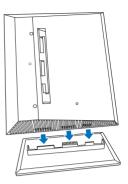
Note: For details on mounting your router on a wall or ceiling, refer to the section Mounting options on the next page of this user manual.

# **Mounting options**

# Mounting to the stand

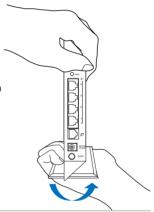
#### To mount the wireless router into its stand:

- 1. Locate the mounting holes at the bottom of the wireless router.
- 2. Align and insert the stand's mounting hooks to the wireless router's mounting holes.



#### Dismount from the stand

- 1. Hold the wireless router with one hand on the upside and the other hand under the stand, ensuring that the I/O ports facing you.
- 2. Follow the direction of the arrow shown below to apply force and remove the stand.





#### NOTE:

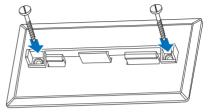
It's normal if you hear squeaking while dismounting the RT-N15U from the stand.

11

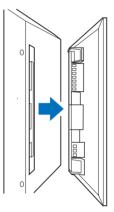
# Mounting on the wall

#### To mount the wireless router on the wall:

1. Locate the two holes on the stand and secure the stand to the wall with screws.

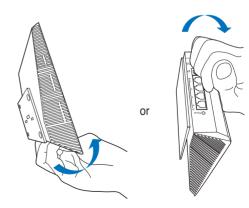


- 2. Locate the mounting holes at the back of the wireless router.
- 3. Align and insert the stand's mounting hooks to the wireless router's mounting holes.



#### Dismount from the wall

- 1. Hold the edge of the front cover (near the I/O ports).
- Follow the direction of the arrow shown below to apply force and dismount the RT-N15U.





# 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.



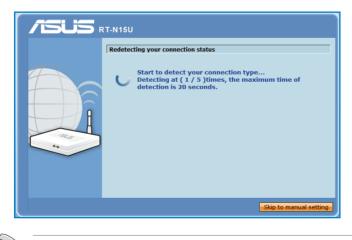
Note: For details on configuring your wireless router using the web GUI, refer to Chapter 4: Configuring via the web GUI.

# Using the Quick Internet Setup (QIS) Using QIS with auto-detection

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

#### To use QIS with auto-detection:

1. Launch a web browser. The wireless router automatically detects if your ISP connection type is **Dynamic IP**, **PPPoE**, **PPTP**, **L2TP**, and **Static IP**. Key in the necessary information for your ISP connection type.



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



#### Notes:

- If QIS does not detect your Internet connection type, click Skip to manual setting and manually configure your connection settings.
- If QIS does not automatically launch, key in <a href="http://192.168.1.1">http://192.168.1.1</a> in your web browser, and manually launch QIS. For more details, refer to the next section Using QIS without autodetection.
- 2. Assign the **network name** and **network key** for a secure wireless network. Click **Finish** when done.

T-N15U		
Wireless Setting		
Network Name (SSID) Network key	ASUS	
numbers or a combinati set the network securit	y between 8 and 63 characters on) or 64 hex digits. If you do r y, leave the network key field y is WPA-Auto-Personal TKIP+A	ot want to blank. The
		Finish

3. Internet connection setup is done.

<b>/isus</b> ,	RT-N15U You have finished configuring th	e wireless security settings.
	Network Name(SSID): ASUS Wireless Security: Open System Router Admin account: admin Router Admin password: admin 1. <u>Going to Internet</u> 2. <u>Advanced Setting page</u> 3. <u>Add to Favorites</u>	MAC: 00 91:4C:22:F7:C9 WAN type: PPPOE WAN IP: 125:225:100:219 LAN IP: 192:168:1.1

Select your next preferred task from any of these options:

- 1. **Going to Internet**: Click to start surfing the Internet or do Internetrelated activities such as chat, or read/write e-mail messages.
- Advanced Setting page: Click to go to the wireless router's Advanced Setting page and configure more advanced wireless settings.
- 3. Add to Favorites: Click to add the router's web interface to your Favorites.



Note: If you choose options 2 and 3, you will need to log into the web GUI. For more details, refer to the section **Configuring via the web GUI** in this user manual.

# Using QIS without auto-detection

#### To use QIS without auto-detection:

- 1. In your web browser, key in http://192.168.1.1
- 2. Under Internet status, click GO in the Quick Internet Setup field.



- 3. Select your connection type from these types of ISP services: **Dynamic IP**, **PPPoE**, **PPTP**, **L2TP**, and **Static IP**. Key in the necessary information for your ISP connection type.
- 4. Click Apply all settings to save the settings.

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



# Accessing the wireless router

## Setting an IP address for wired or wireless clients

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: In the Router mode, 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® 2000

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

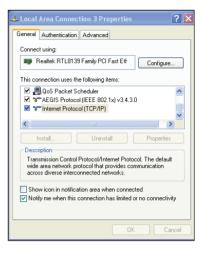
mponents checked are used by this connection:  C. Client for Microsoft Networks  File and Pinter Sharing for Microsoft Networks  Tritemet Protocol (TCP/IF)  Install Uninstall Properties	😰 SiS 900-Based F	PCI Fast Ethernet Ada	oter	
Clent for Microsoft Networks     File and Pinter Sharing for Microsoft Networks     File and Pinter Sharing for Microsoft Networks     InstealL     Lininstall     Properties Description Transmission Control Protocol/Internet Protocol. The default				Configure
File and Pinter Sharing for Microsoft Networks     Tritemet Protocol (TCP/IP)      Install      Uninstall      Properties  Description  Transmission Control Protocol/Internet Protocol. The default	omponents checked	are used by this conn	ection:	
Internet Protocol (TCP/IP)  Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default	2 ml at 11	soft Networks		
Internet Protocol (TCP/IP)  Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default	🗹 🛲 Client for Micro			
Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default			Networks	
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Description Transmission Control Protocol/Internet Protocol. The default	🗹 👼 File and Printer	Sharing for Microsoft	Networks	
Transmission Control Protocol/Internet Protocol. The default	🗹 👼 File and Printer	Sharing for Microsoft	Networks	
	File and Printer     File and Printer     File and Protoc	r Sharing for Microsoft ol (TCP/IP)		operties
across diverse interconnected networks.	File and Printer     File and Printer     File and Protoc	r Sharing for Microsoft ol (TCP/IP)		operties

- 2. 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.

	d automatically if your network supports eed to ask your network administrator for
Obtain an IP address auto	matically
C Use the following IP addre	\$8:
[P address:	and the second second
Default gateway:	
Obtain DNS server addres	s automatically
C Use the following DNS ser	ver addresses:
Preferred DNS server.	
Alternate DNS server:	An an a

#### 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.
- 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.

Internet Protocol (TCP/IP) Prop	erties 🛛 🛛 🔀				
General Alternate Configuration					
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.					
Obtain an IP address automatica	lly				
O Use the following IP address: —					
IP address;	and the second				
Subnet mask:					
Default gateway:					
<ul> <li>Obtain DNS server address auto</li> </ul>	matically				
OUse the following DNS server ac	dresses:				
Preferred DNS server:	and the second second				
Alternate DNS server:					
	Advanced				
	OK Cancel				

#### Windows® Vista/7

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

	168B/8111B Family PCI-	
Hedilek HTLS	1688/81118 Family PCI	E Gigabit Ethemet
		Configure
This connection uses	the following items:	
Client for Mic	crosoft Networks	
QoS Packet	Scheduler	
File and Prin	ter Sharing for Microsoft	Networks
V Internet Prot	ocol Version 6 (TCP/IP)	/6)
V A Internet Prot	ocol Version 4 (TCP/IP)	(A)
internet mot	OCOL VEISION 4 (TCF/IF)	(4)
	opology Discovery Map	
🗹 🔺 Link-Layer T		per I/O Driver
🗹 🔺 Link-Layer T	opology Discovery Map	per I/O Driver
🗹 🔺 Link-Layer T	opology Discovery Map	per I/O Driver
<ul> <li>✓ Link-Layer T</li> <li>✓ Link-Layer T</li> </ul>	opology Discovery Map opology Discovery Res	per I/O Driver bonder
✓	opology Discovery Map opology Discovery Res	per I/O Driver bonder Properties

- 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.

General	Alternate Configuration					
this cap	n get IP settings assigned bability. Otherwise, you n appropriate IP settings.					
0	otain an IP address autor	natically				
O U	e the following IP addres	s:				
IP ac	ddress:					
Sybr	iet mask:				2	
Defa	ult gateway:	192 .	168	1	. 1	
0	otain DNS server address	automatically				
	e the following DNS serve					
Pref	erred DNS server:	1			3	
alter	nate DNS server:					

# 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** and **EZQOS Bandwidth Management**.

#### To access the web GUI:

1. Launch a web browser, then key in the router's IP address. The login page of the router's web GUI appears.



Note:

- In the Router mode, the router's IP address is 192.168.1.1.
- In the AP mode, use Device Discovery included in the support CD to find the router's IP address.
- 2. On the login page, key in the default user name (**admin**) and password (**admin**).

Connect to 192	.168.1.1 ? 🔀
	GE
RT-N10	
User name:	2
Password:	
	Remember my password
	OK Cancel

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) using the WPS Wizard.



Note: For more details on the WPS Wizard, refer to the section WPS Wizard in Chapter 5 of this user manual.

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

lcon	Description
	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.
	System status
	Click this icon to display information on the SSID, authentication and encryption methods, LAN IP, MAC address, or turn the wireless radio on/off. Enable the WPS mode from the System status screen.
	Client status
	Click this icon to display information about the clients or computers in the network, and allows you to block/unblock a client.

# Creating multiple SSID profiles

The wireless router allows you to create multiple SSID profiles that meet various working scenarios.

#### To create an SSID profile:

1. Click Add in the SSID field.



2. Configure the profile settings, then click Add.

	SSID: ASU	5 ersion: <u>2.1.1.1</u> Operation	Language: English	Logout Reboot
	Add SSID		×	
Network Map	SSID Profile SSID	⊙ Guest ⊙ VIP ⊛ Custom	ize	ASUS RT-N15U
Operation Mode			bbA a	
	Authentication Method	Open System 💌	twork Key	
AiDisk	WEP Encryption	None	reless Speed	Up to 144 Mbps 💌
EzQoS Bandwidth Management	Enable SSID	@ Yes 💿 No	reless radio	⊚ on ⊙ off
	Network access	Both •		Sava
	Bandwidth Priority	Normal 🔻	N IP	192.168.1.1
	Hide SSID	⊖Yes @ No	t code	
	-	Add Can	C address	00:91:4C:22:F7:C9
	Clients: 1		WPS	Click the button to enable WPS mode.
				More Config

# Managing bandwidth with EzQoS

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

#### To set up the bandwidth priority:

1. 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>F</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 downloading/ uploading data to/from the FTP server.
	Voip/Video Streaming The router handles the audio/video traffic at first priority.

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

# Setting up the operation mode

The Operation Mode page allows you to set up your wireless router into any of these three operation modes: **Router mode**, **Repeater mode**, or **Access Point mode**.

# Setting up the wireless router in Router mode

In the Router mode, the wireless router connects to the Internet via PPPoE, Automatic IP, PPTP, L2TP, or Static IP, and provides you with wireless radio signals. The NAT, firewall, and IP sharing services for LAN clients are enabled.

#### To set up the wireless router in Router mode:

1. From the navigation menu, click **Operation Mode** and select **Router Mode**.

RT-N15U	SSID: 4205 Firmmare Version: 2111 Operation Node: Com	9
	Parter Rode Repeater mode Access Plant mode The Roder mode Repeater mode Access Plant mode The Roder mode Repeater mode Access Plant mode the web webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled. Fremal webses rade spall. The NAT. Frewalt and P aharng services for LAN cleans are enabled.	

- 2. Select your connection type from these types of ISP services: Dynamic IP, PPPoE, PPTP, L2TP, and Static IP.
- 3. Key in the required information provided by your ISP.
- 4. Click Apply all settings to save the settings.

# Setting up the wireless router in Repeater mode

In the Repeart mode, the wireless router extends your wireless network coverage and provides you with higher wireless signal. NAT, firewall, and IP sharing are disabled.

#### To set up the wireless router in Repeater mode:

1. From the navigation menu, click **Operation Mode**, select **Repeater mode**, and click **Save**.

RT-N15U	SSID: ASUS Firmware Version: <u>2.1.1.1</u> Operation Mode: <u>Bouter</u>	Language: English Q:2
AiDisk In th	System Salay: Open Roder mode (a) Repeater mode () Access Polial mode Specials mode, RTA1500 stants) open visities metodo es radio signal. The IAAT, frewall, and IP sharing service stratio signal. The IAAT, frewall, and IP sharing service region of the strategy of the strategy of the strategy region of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the strategy of the region of the strategy of the strategy of the strategy of the strategy of the region of the strategy of the region of the strategy of th	e coverage and provides you with higher quality

2. From the network list, select the network that you want to connect to, then click **Connect**.

	ork and click [Co	nnect]		_
Wireless name		nannel¢	Security ¢ R	adio ≎
ASUS	bg	4	Open System (NONE)	Ŧ
e-box	bg	4	Unknown (WEP) 🔒	<b>?</b>
3G station	bgn	4	WPA2-PSK (AES) 🔒	<b>?</b>
WL-HW3	bg	2	Open System (NONE)	1
eurospot_N16	bgn	7	WPA2-PSK (AES) 🔒	<b></b>
WTF-2G	bgn	1	WPA2-PSK (TKIP+AES)	<b></b>
X-ray	bgn	8	WPA2-PSK (AES) 🔒	<b></b>
VIC_GW2	bg	7	WPA-PSK (TKIP) 💼	<b>.</b>
нотѕроооооот	TT bgn	3	Open System (NONE)	8

# Setting up the wireless router in AP mode

In the AP mode, the wireless router receives the WAN IP address from the router connected to the WAN port and provides you with wireless radio signals. The NAT, firewall, and IP sharing services are disabled.

#### To set up the wireless router in AP mode:

1. From the navigation menu, click **Operation Mode**, select **AP mode**, and click **Save**.

RT-N15U	SSID: ASUS Firmware Version: 21.11 Operation Node: Boat	9
Network Mag     Operation Mode     Actuation     Actuation     Coss     Coss	Indee tage: System Sature - Operation Mode A Contast Point of the AP mode, RF411(5)) recovers the WAN point and provides you with near AP mode, RF411(5)) recovers the WAN IP address from the moder commanded to the WAN point and provides you with near AP mode, RF411(5)) recovers the WAN IP address from the moder commanded to the WAN point and provides you with near AP mode, RF411(5)) recovers the WAN IP address from the moder commanded to the WAN point and provides you with near AP mode, RF411(5)) recovers the WAN IP address from the moder commanded to the WAN point and provides you with the model of the model <b>Very Exercise Very Exercise V</b>	
	Save	

2. From the network list, select the network that you want to connect to, then click **Connect**.

	Wireless Setting				
	Network Name(SSID)	ASUS			
	Network key				
	numbers or a combination) set the network security, le	etween 8 and 63 characters(I or 64 hex digits. If you do n aye the network Key field buy WPA-Auto-Personal TKIP+AE	ot want to ank. The		
			Finish		

# Upgrading the firmware



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

#### To upgrade the firmware:

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

RT-N15U	Fir	ID: ASUS mware Version: <u>2.1.1.1</u> Operat de: <u>Router</u>	Language: English	Reboot
Network Map	Wireless	LAN	WAN	USB Application
Operation Mode	Configure your wireless connection, security, and other advanced parameters.	Configure LAN, dhcp, and route settings.	Configure the Internet connection, QoS, and Server setting.	Configure the USB device and share your files in LAN or WAN.
AiDisk EzQoS Bandwidth Managamant	<ul> <li>2.4G General</li> <li>WPS</li> <li>Wireless MAC Filter</li> <li>RADIUS Setting</li> <li>2.4G Professional</li> </ul>	LAN IP     DHCP Server     Route	Internet Connection QoS Port Trigger Virtual Server DM2 DDNS	Network Neighborhood Share     FTP Share     Miscellaneous setting
Wireless	Firewall	Administration Configure the system and upgrade the firmware of RT-	System Log	
WAN USB Application Firewall Administration System Log	your network: General URL Filter MAC Filter LAN to WAN Filter	NISU. System Firmware Upgrade Rastora/Sava/Upload Setting	various system logs. General Log DHCP leases Wiraless Log Port Forwarding Routing Table	

- 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, use the Firmware Restoration utility to restore the system. For 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 **Advanced Setting** from the navigation menu at the left side of your screen.
- 2. Under the Administration menu, click Restore/Save/Upload Setting.

RT-N15U	SSID: ASUS Firmware Version: 2.1.1. Operation Hode: Enter System Firmware Upgrade Restore/Save/Upload Setting	
Abraced Setting Abraced Setting Advaced Setting Advace	Administration - Restored SaveMplocal Setting This Endows you to ave communicating of IT-M150 to a file, or load settings from a file.	٢

- 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**.




# Installing the utilities

The support CD contains the utilities for configuring the ASUS Wireless Router. To install the ASUS WLAN Utilities in Microsoft<sup>®</sup> 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...Utilities.



2. Click Next.



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

- Click Next to accept the default program folder or enter another name.
- Description
   State of the state

Setup will add program icons to the Program Folder listed below. You may type a new fo or select one from the existing folders list. Click Next to continue.	
Program Folder ASUS UIIII/NRT NT 5U Wireless Router	
Enhing Falses 1750 Administrator Administrator Administrator Canon MCS0 assis Canon MCS0 assis	
DAEMON Tools Like FielZie Gamet Mantensroe	

5. Click **Finish** when setup is completed.

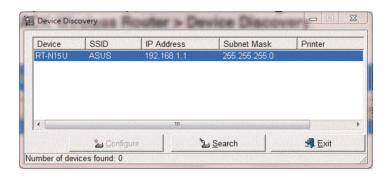


# **Device Discovery**

Device Discovery is an ASUS WLAN utility that detects an ASUS wireless router 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-N15U Wireless Router > Device Discovery.



- Click Configure to access the web GUI and configure the wireless router.
- Click Search to search for ASUS wireless routers within range.
- Click Exit to exit the application.

# **Firmware Restoration**

Firmware Restoration is used on an ASUS Wireless Router that failed during its firmware upgrading process. It uploads the firmware that you specify. The process takes about three to four minutes.

(IS)

Important: Launch the rescue mode before using the Firmware Restoration utility.

#### To launch the rescue mode and use the Firmware Restoration utility:

- 1. Unplug the wireless router from the power source.
- 2. Hold the Restore button at the rear panel and simultaneously re-plug the wireless router into the power source. Release the Restore button when the Power LED at the front panel flashes slowly, which indicates that the wireless router is in the rescue mode.
- 3. From your computer's desktop, click Start > All Programs > ASUS Utility > RT-N15U Wireless Router > Firmware Restoration.

🎄 Firmware Restoration	X
<u>F</u> ilename:	<u>B</u> rowse
Status Once you have specified a file, click the "Upload" button.	
Upload Close	
<u>Upload</u> <u>Close</u>	

4. Specify a firmware file, then click **Upload**.



Note: This is not a firmware upgrade utility and cannot be used on a working ASUS Wireless Router. Normal firmware upgrades must be done through the web interface. Refer to Chapter 4: Configuring via the web GUI for more details.

# **WPS Wizard**

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

# **Using WPS Wizard**

#### Note:

- · Ensure that you use a wireless LAN adapter with WPS function.
- · Windows® operating systems and wireless LAN cards/adapters that support WPS:

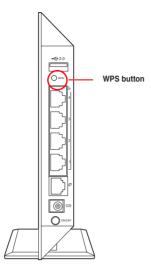
OS Support	Wireless Adapter Support
Vista 32/64	Intel wireless LAN card
	ASUS 167gv2 driver v3.0.6.0 or later
	ASUS 160N/130N driver v2.0.0.0 or later
	Intel wireless LAN card
XP SP2	ASUS 167gv2 driver v1.2.2.0 or later
	ASUS 160N/130N driver v1.0.4.0 or later
	ASUS LAN card with ASUS WLAN Utility
XP SP1 and 2000	ASUS 167gv2 driver v1.2.2.0 or later
	ASUS 160N/130N driver v1.0.4.0 or later

#### To use WPS Wizard:

1. Follow the onscreen instructions to set up your hardware. When done, click Next.



Note: Use the WPS Wizard with one wireless client at a time. If the wireless client cannot discover the wireless router, shorten the distance between the client and the router. 2. Press the WPS button on your router.



3. On the WPS Wizard, click Next to continue.





#### Notes:

- · When running WPS, the Internet connection pauses briefly then reestablishes the connection.
- If the WPS button is pushed without running the WPS Wizard, the PWR indicator flashes and Internet connection pauses briefly and then reestablishes the connection.

4. Key in desired network name or SSID (service set identifier). When done, click Next.

🗊 WPS Wizard	
WPS Wizard	
Assign a name for your network	
Choose a name that people who connect to your network will recognize	
Network Name (SSID):	SSID is a string used to identify a wireless LAN. Use the automatically generated string as your SSID or assign the SSID manually.
You can type up to 32 letters or numbers.	
	<u>Next</u>

5. Create and key in a passphrase consisting of 8-63 characters or use the automatically generated passphrase then click **Next**.

A passphrase is a sentence, phrase, or sequence of alpha-numeric characters used to generate a security key.

🗊 WPS Wizard	
<b>/SUS</b> WPS Wizard	
Make your network more secure with a passphrase	
This wizard will use the passphrase provided below to generate a WPA security key for you. <b>Basephrase:</b> Screm.VUCEIX:REGOUVERED The passphrase must be between 8 and 63 characters. If Display characters	Help A security key can prevent outsider form accessing your wireless network. Use the sutomatically generated stimg as your passphrase or assign the passphrase manually.
Create a different passphrase for me     Show advanced network security options	
Back	Next <u>Cancel</u>

 When finished, click Save or print settings for future reference or Save settings to a USB flash drive to add other devices to the network. Click Next to connect to the Internet.

WPS Wizard	
	WPS Wizard
This wizard finished s	uccessfully
Print or save wirele	ss settings
You will need to provi	de the following information to others to connect to this network.
Network Name:	TEST_ASUS
Passphrase:	O66FNVUGBKRE00IYF2FZ
Security:	TKIP (WPA-Personal)
Save	or print sattings or print the wireless sattings for future reference. sattings to a USB flash drive USB drive to add other devices to the network.
	Next Einish



Note: For more details on adding devices to the network using a USB flash drive, refer to the section Adding network devices using a USB flash drive on the next page.

7. You have connected to the wireless router. If you want to configure the Internet settings, click **Setup**. Click **Finish** to close the WPS Wizard.



#### Adding network devices using a USB flash drive

With the WPS utility, you can add devices to your network using a USB flash drive.

To add network devices using a USB flash drive:

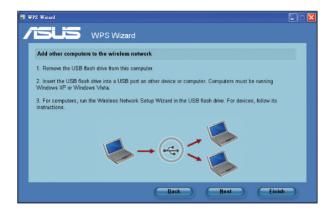
1. In the WPS Wizard, click Save settings to a USB flash drive.



2. Insert a USB flash drive into your computer's USB port, then select the drive from the dropdown list. When done, click **Next**.

<b>@</b> #	PS Wizard	🛛
Í		
	Insert the USB flash drive into this computer	
	Plug the USB flash drive into a USB port on your computer, and then select the drive from the list below.	
	Save settings to:	
	<u>6</u>	
	Back Next Cance	

3. Unplug the USB flash drive from your computer then insert it to the other computer that you want to add to your wireless network.



4. Locate **SetupWireless.exe** from the USB drive, and double-click to run it. Click **Yes** to add the computer to the wireless network.

Wireless	s Network Setup Wizard 🛛 🕅
2	Do you want to add this computer to the wireless network Default
	Yes No

5. Click OK to exit the Wireless Network Setup Wizard.



## Setting up your network printer

Use the Network Printer Setup utility to set up a USB printer on your wireless router and allow network clients to access the USB printer.



Note: To check if your USB printer is compatible with your ASUS wireless router, visit the ASUS website at <u>ww.asus.com</u> and click Products > Networks > Printer Support List.

#### To set up your USB Printer:

1. Run the ASUS Wireless Utilities from the support CD, then click **Run Network Printer Setup Program**.

ASUS Wireless Router	
Install ASUS Wireless Router Utilities	
Run Network Printer Setup Program     Click to run the Wowork printer setup program	
Read/Install User Documentation	
Explore this CD	
Browse our Web Site	
Instellation Language: English	EXIT

2. Follow the onscreen instructions to set up your hardware, then click Next.



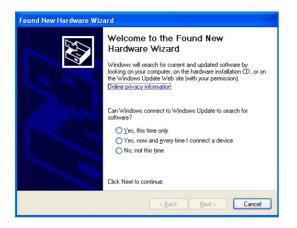
3. Wait for a few minutes for the initial setup to finish. Click Next.



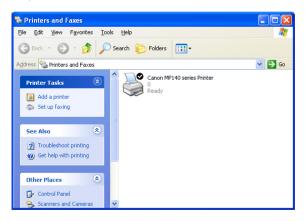
4. Click **Finish** to complete the installation.

ASUS Printer Setup
Printer Setup Utility
You have connected to the following wireless router. Please follow Windows direction to install printer driver now.
IP Address: 192.168.1.1
Wireless Router: RT-N15U
Please follow the Windows OS's directions to install printer driver.
Einish

5. Follow the Windows® OS instructions to install the printer driver.



6. After the printer's driver installation is completed, network clients can now use the printer.




# Troubleshooting

# 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 the web GUI for configuring the router.	<ol> <li>Launch a web browser, then click Tools &gt; Internet Options</li> <li>Under Temporary Internet files, click Delete Cookies and Delete Files</li> <li>Disable the proxy settings of the web browser.</li> </ol>
The client cannot establish a wireless connection with the router.	<ul> <li>Out of Range:</li> <li>Put the router closer to the wireless client.</li> <li>Try to change the channel settings.</li> <li>Authentication: <ul> <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> </li> </ul>
	Cannot find the router:
	<ul> <li>Press the Restore button at the rear panel for more than five seconds.</li> </ul>
	Check the setting in the wireless adapter such as SSID and encryption settings.

Problem	Action
Cannot access the Internet via wireless LAN adapter.	<ul> <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> <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> <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> <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> <li>Try setting up the wired connection and configuring the wireless encryption again.</li> <li>Press the Restore button at the rear panel of the wireless router for more than five seconds.</li> </ul>

Problem	Action
How to restore the system to its default settings?	<ul> <li>Press the Restore button at the rear panel of the wireless router for more than five seconds.</li> </ul>
	<ul> <li>Refer to the section Restoring/Saving/ Uploading settings in Chapter 4 of this user manual.</li> </ul>
	The following are the factory default settings:
	User Name: admin
	Password: admin
	Enable DHCP: Yes (if WAN cable is plugged in)
	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
I cannot use 192.168.1.1 to	Check the router's operation mode.
enter the web GUI.	• In the Router mode, the default IP address is 192.168.1.1.
	<ul> <li>In the AP mode, use Device Discovery to find the router's IP address.</li> </ul>

# **ASUS DDNS Service**

RT-N15U supports the ASUS DDNS service. When exchanging devices at the service center, if you have registered the ASUS DDNS service and want to keep the original domain name, data transfer is a must. Visit your local service center for more information.



Notes:

- If there is no activity in the domain such as reconfiguring the router or accessing the registered domain name - within 90 days, the system automatically deletes the registered information.
- · If you encounter any problem or difficulty in using your device, contact the service center.

## Frequently Asked Questions (FAQs)

1. Will the registered information be lost or registered by others?

If you have not updated the registered information in 90 days, the system automatically deletes the registered information and the domain name may be registered by others.

2. I did not register the ASUS DDNS for the router I bought six months ago. Can I still register it?

Yes, you can still register the ASUS DDNS service for your router. The DDNS service is embedded in your router, so you can register the ASUS DDNS service anytime. Before registering, click **Query** to check if the hostname has been registered or not. If not, the system registers the hostname automatically.

3. I have registered a domain name before and it has been working well until my friends told me that they could not access my domain name.

Check the following:

- 1. The internet is working well.
- 2. The DNS server is working well.
- 3. The last time you updated the domain name.

If there are still problems in accessing your domain name, contact the service center.

# 4. Can I register two domain names to separately access my http and ftp servers?

No, you cannot. You can only register one domain name for one router. Use port mapping to implement security in the network.

# 5. After restarting the router, why is it that I see different WAN IPs in MS DOS and in the router configuration page?

This is normal. The interval time between the ISP DNS server and ASUS DDNS results in different WAN IPs in MS DOS and in the router configuration page. Different ISPs may have different interval time for IP updating.

#### 6. Is the ASUS DDNS service free, or is it just a trial version?

The ASUS DDNS service is a free and embedded service in some ASUS routers. Check your ASUS router if it supports the ASUS DDNS service.


# Appendices

## Notices

## 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 <a href="http://csr.asus.com/english/Takeback.htm">http://csr.asus.com/english/Takeback.htm</a> 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 <a href="http://csr.asus.com/english/REACH.htm">http://csr.asus.com/english/REACH.htm</a>

## 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**

This device complies with Industry Canada licence-exempt RSS standard(s). 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."

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

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Version 2, June 1991

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## Safety Warning

SAFE TEMP: This wireless router should be only used in environments with ambient temperatures between  $5^{\circ}C(41^{\circ}F)$  and  $40^{\circ}C(104^{\circ}F)$ .

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

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