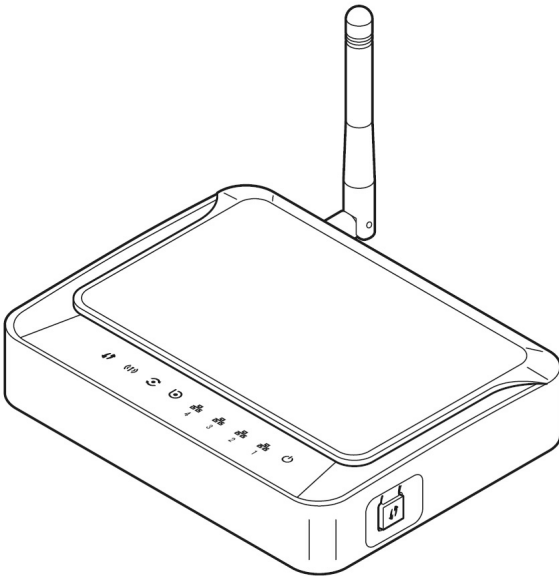


**NEC**

Wireless N ADSL2+ Modem Router

# RG-A100L

Instruction Manual



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# Important Product Information

## **Important safety information regarding radio frequency (RF) exposure and use when worn**

To ensure compliance at all times with the Radio Equipment and Telecommunications Terminal Equipment Directive 1999/5/EC\* (R&TTE Directive) the equipment when in operation requires a minimum of 7cm separation from the body. Failure to observe these instructions could result in your RF exposure exceeding the compliance with Annex II of Council Recommendation 1999/519/EC.

\* The General Public RF exposure limits referenced in the R&TTE Directive are consistent with the guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP) published in 1998.

ICNIRP is the formally recognized non-governmental organization in Non-Ionizing Radiation Protection for the World Health Organization (WHO), the International Labour Organization (ILO) and the European Union (EU).

**R&TTE Directive**



We, NEC AccessTechnica, Ltd. hereby, declare that the residential gateway model RG-A100L is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

A copy of the 1999/5/EC Declaration of Conformity can be perused in this Web address:

[http://www.necat.co.jp/en/ce/RG-A100L\\_DoC.pdf](http://www.necat.co.jp/en/ce/RG-A100L_DoC.pdf)

# FCC Regulatory Statements

## FCC part 68

This equipment complies with Part 68 of the FCC Rules. On the bottom of this equipment is a label that contains the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. You must provide this information to the telephone company upon request. The REN is useful to determine the quantity of devices you may connect to the telephone line and still have those entire devices ring when your number is called. In most, but not all areas, the sum of the REN of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If the modem 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 isn't practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation 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 modem, please contact your dealer for repair/warranty information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected or 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.

**Installation:** This device is equipped with a USOC RJ-11C connector.

## FCC part 15

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC regulations. These limits are designed to provide reasonable protection against harmful interface 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 interface will not occur in a particular installation. If this equipment does cause harmful interface 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 interface 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 this equipment.

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

- (1) This device may not cause harmful interface.
- (2) This device must accept any interface received, including interface that may cause undesired operation.

# Safety Instructions

Please read these Safety Instructions carefully before using this product. These Safety Instructions show items that must be followed to prevent danger to any person and damage to property. Alert symbols below are important to fully understand these Safety Instructions.

## Alert symbols in this instruction manual



**Warning** : Indicates a hazardous situation which could result in death or serious injury.



**Caution** : Indicates a situation which could result in minor injury or physical damage.

### Other alert symbols

---

#### ■ Warnings and cautions



Flammable



Electric shock



High Temperature

#### ■ Prohibited actions



General



No disassembly



No water



No wet hands



No naked flames

#### ■ Instructions



Remove plug from outlet



## Warning

## Power

- Only use household power 100V-240V (50/60Hz). Do not use any other power sources. Doing so may cause fire or electric shock or malfunction.

Do not plug this product in a wall outlet where other products are already plugged in and there is a risk of exceeding the current rating of the outlet. Otherwise, a fire, electric shock or malfunction may occur.





## Warning

- Do not scratch, damage, or modify the power cord. Also, do not forcibly bend, pull, twist or tie the cord. Otherwise, a fire or electric shock may occur. If the power cord is excessively pressed or heated up, the cord may be damaged and a fire and electric shock may occur.
- Do not use an overloaded multi-plug adaptor. Otherwise, the multi-plug adaptor may heat up and be degraded, and then a fire may occur.
- For this product, only use the provided AC adaptor. Also, do not use the AC adaptor of this product for other products. Otherwise, a fire, electric shock or malfunction may occur.
- Do not put anything on the AC adaptor or cover it with cloth. Otherwise, the adaptor may heat up, the case and cord may melt, and then a fire or electric shock may occur.
- Do not place the AC adaptor in a poorly ventilated, or confined area such as in storage rack or behind a bookshelf. The AC adaptor may overheat and cause a fire or damage. Also, place the AC adaptor near the power outlet and ensure that you can easily plug in and remove the AC adaptor.





## Warning

### In these cases

- Do not use this product if it smokes or has an abnormal odor. Otherwise, a fire or electric shock may occur. Remove the AC adapter from the outlet immediately. Make sure that this product stops smoking, and call the repair center or customer service shown in the attached form. Never try to repair this product on your own.



- If water has entered inside of this product, remove the AC adaptor from the outlet immediately and call the repair center or customer service shown in the attached form. If you continue using this product without having it repaired, a fire, electric shock or malfunction may occur.



- Do not insert or drop metals or combustible materials into the gaps. If those objects get inside this product, remove the AC adaptor from the outlet immediately and call the repair center or customer service shown in the attached form. If you continue using this product without having it repaired, a fire, electric shock or malfunction may occur. Be cautious if you have any children in your family.







## Warning







- Do not use this product with the power cord damaged, for example with the core exposed or cut. Otherwise, a fire or electric shock may occur. Immediately remove the AC adaptor from the outlet and call the repair center or customer service shown in the attached form.
- If this product is dropped or damaged, remove the AC adaptor from the outlet immediately and call the repair center or customer service shown in the attached form. If you continue to use this product without having it repaired, a fire or electric shock may occur.
- This product is an appliance designed for domestic use. It must not be used in life-supporting medical equipment or in any other system requiring extremely high reliability (trunk-line communications equipment, calculation systems etc.). Otherwise, death or serious injury may be caused, and also huge social confusion may occur.
- Do not disassemble or convert this product. Otherwise, a fire, electric shock or malfunction may occur.
- Do not operate or connect this product with wet hands. Otherwise, an electric shock may occur.
- Do not use flammable gases such as an air duster or dust spray inside or around this product. The gases may ignite, causing a fire or explosion.





## Warning

### Other warnings

- Turn off this product in any place where use of a wireless device is prohibited, for example in an airplane or hospital. Otherwise, it may influence electronics and medical devices, and cause an incident. 
- Do not place or use this product near high-precision electronics or devices which handle weak signals, for example pacemakers. Otherwise, electronics such as pacemakers may malfunction. Do not use this product near medical electronics, or in any place where you are prohibited from using this product, for example in a hospital. 
- Do not place this product near vases, pots, cups, cosmetics, vessels with chemicals or water, or near any small metal objects (staples etc.) which could fall through the ventilation slots. If this product gets wet or a short circuit occurs, it may cause a fire, electric shock or malfunction.   

- Do not place or use this product in a humid location such as a bathroom and humidifier. Otherwise, a fire, electric shock or malfunction may occur.   




This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with RFCC radiation exposure limits set forth for an uncontrolled environment .

This equipment should be installed and operated at least 20cm between the radiator and your body.



## Caution

### Where you should place this product

- Do not place this product in an area exposed to direct sunlight, near a heat generating appliance such as a stove or a heater, or in a highly hot place. Otherwise, the internal parts of this product may heat up, and a fire may occur.



- Do not place this product in a place where the temperatures change dramatically, for example near an air conditioner or a heater. Otherwise, the internal parts of this product may be wetted by condensation, and a fire, electric shock or malfunction may occur.



- Do not place this product in a location exposed to cooking oil or steam, for example near a cooker. Also, do not place this product in a dusty place. Otherwise, a fire, electric shock or malfunction may occur.



- Do not place this product in an unstable location such as on an unstable table or inclined surface. Do not place any heavy object on this product. Otherwise, this product may lose balance and collapse, or the heavy object may drop and an injury may occur.



- Do not place this product in a poorly ventilated space. This product may heat up, and then a fire may occur. Avoid the following.

- Placing this product inside a storage rack, bookshelf, box, etc.
- Placing this product on a carpet and a mat
- Covering this product with a tablecloth, etc.












- Do not stack this product. Stacking this product may cause a fire because of overheating inside product. Also, ensure that there is enough space at either side of the product.







## Caution

### Power

- When using this product, ensure that the power plug is securely inserted into the outlet. Remove the power plug from the outlet by pulling on the plug. Do not pull the power cord. Otherwise, it may be damaged, and a fire or electric shock may occur.   

- Do not use in a state in which there is an accumulation of dust between the power plug and outlet. Regularly, or once every six months, remove dust. Otherwise, a fire may occur. 
- Before cleaning this product, pull out the AC power cord from the outlet. Otherwise, an electric shock may occur. 
- Before moving this product, remove the AC adaptor from the outlet and disconnect all cords. Otherwise, the cords may be damaged, and a fire or electric shock may occur.   
  

- If this product will not be used for a long time, remove the AC adaptor from the outlet for safety reasons. 
- When or after using this product, the AC adaptor can reach high temperatures. Be careful of burn injuries. 

### What you must not do

- During thunderstorms, do not touch the power cord or connect to any surrounding product. Otherwise, an electric shock caused by a thunderbolt may occur. 
- Be careful not to stick the eyes into the antenna by mistake. 

# Notice

Indicates a situation which could result in this product performing poorly or malfunctioning.

## **Where you should place this product**

- Do not place this product in any of the following locations:
  - a place affected by vibration,
  - a place where volatile chemicals are filled or where chemicals are close by,
  - a place affected by magnetism from an electric product or AV/OA device, or a place where electromagnetic waves are emitted (microwave ovens, speakers, TV sets, radios, fluorescent lamps, air conditioners, electric cooking equipment, etc.), or
  - a place near a high-frequency noise generating high-frequency sewing machine or welding machine.
  
- If you use this product near a cordless phone or a radio, you may hear noises. If you use it near a TV set, you may hear noises and the screen may be unclear. Also, you may have poor reception. Keep this product a few meters away from those devices.
  
- You may cause a data communication error if this product and the wireless LAN terminal [client] are very close to each other. Keep this product at least a meter away from other devices.
  
- Do not place this product in the vertical position. Otherwise this product will be toppled over and then malfunction or damage may occur. Do not use this product down on the ramp surface. Otherwise it may cause malfunction or degrade communication features because of inside overheating.

## **What you must not do**

- Do not drop or hit this product. Otherwise, it may malfunction.
- Do not leave this product in a cold place such as an ice warehouse. Otherwise, this product may operate abnormally.
- Disconnect all cords before moving this product. Otherwise, it may malfunction.
- This product may operate abnormally if the connecting cords are disconnected when it is on, or if the connection is unstable. When this product is on, do not touch the connecting parts.
- Do not turn on this product immediately after you turn it off. Wait at least 10 seconds to restart. It may not turn on if you attempt to turn it back on immediately.

## **Other warnings**

- If you turn off or disconnect this product during data communication, communication may fail or data may be damaged. If your data are important, check them against the original.

## **Notes on wireless LAN**

- The standard values of wireless LAN are the maximum theoretical values when communication is carried out with other products with the same configuration as this product. The standard values may not indicate the actual data transfer rate.
- The interconnectivity of this product with other products is not guaranteed.
- Wireless LAN transmission distance and transmission speed varies greatly depending on objects in the surrounding environment such as walls and furniture.

## **Security notes on wireless LAN products**

Wireless LAN has the advantage of a LAN connection without the use of LAN cables if the device is placed within the reach of radio waves. You can send and receive information between devices that use radio waves such as a computer and the wireless LAN access point (base unit). On the other hand, you may encounter the following problems if you do not complete the settings related to security because the radio waves reach beyond all obstacles such as walls if within a certain range.

- **Interception of information:** Some malicious computer users may intercept radio waves intentionally to discover your IDs, passwords, credit card numbers, e-mails, etc.
- **Unauthorized intrusion:** Some malicious computer users may access personal or office networks to gain personal or confidential information and send out false data. Also, they may intercept communication content, rewrite it, and then send it out. Furthermore, they may send out computer viruses to destroy data and systems.

Wireless LAN products already have security systems so there is a low probability that any of the above problems will occur if you use the product with these settings.

You should be fully aware of problems which may happen to you if you do not do your security configuration. We recommend that you use this product only after making the security setting you judge to be necessary based on a proper understanding of the problems which may occur if security settings are not configured.

We, NEC AccessTechnica, Ltd., do not take responsibility for any damage caused by a security problem occurring because of a lack of a security measure or an unavoidable issue with the wireless LAN specifications.

In addition, we recommend changing the encryption key and PIN code of the wireless LAN access point (base unit) on a regular basis to ensure safe use of the wireless LAN.

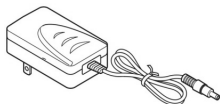
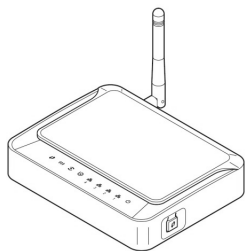
# 1. Package Contents

This product package contains the following items.

RG-A100L

AC adaptor

Line cable (1)

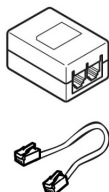
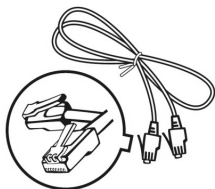


\*The antenna and the main unit are packaged separately.

Ethernet cable (1)

Splitter  
(With short line cable)

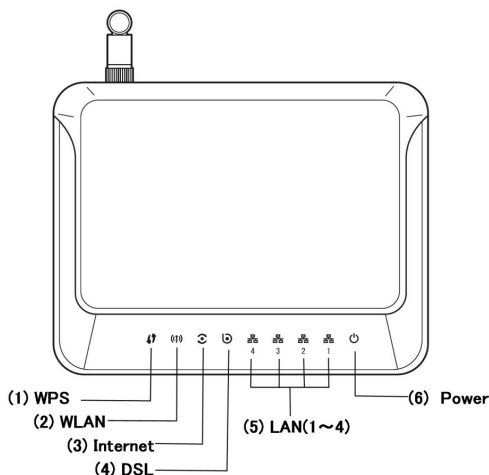
Instruction manual





## 2. Part Names and Functions


Top



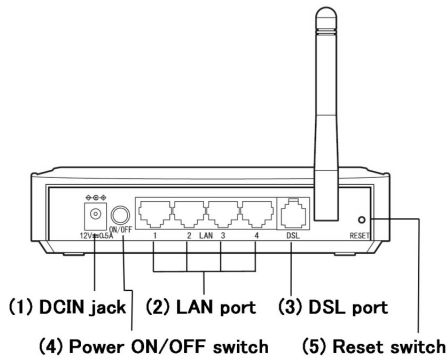
### Indicators

Name	Display	Color of lamp	Condition
(1) WPS		Illuminating in green.	WPS setting succeeded.
		Blinking in green.	WPS is starting up.
		OFF	WPS is ready to start up.
(2) WLAN		Illuminating in green.	Wireless connection is established.
		Blinking in green.	Wireless connection is activated.
		OFF	Wireless function is off.
(3) Internet		Illuminating in green.	The Internet is available/without traffic.
		Blinking in green.	The Internet is available/with traffic.
		Illuminating in red.	The Internet is unavailable. (The IP address could not be acquired)
		OFF	No DSL connection.
(4) DSL		Illuminating in green.	The DSL link is established.
		Blinking in green.	The DSL link is having a trial.
		OFF	No signal.
(5) LAN(1~4)		Illuminating in green.	The LAN port link is established.
		Blinking in green.	The LAN port is activated.
		OFF	The LAN port link is not established.


## Indicators

Name	Display	Color of lamp	Condition
(6) Power		Illuminating in green.	Power is on. (normal)
		Illuminating in red.	Device startup failed.
		OFF	Power is off.

# Back



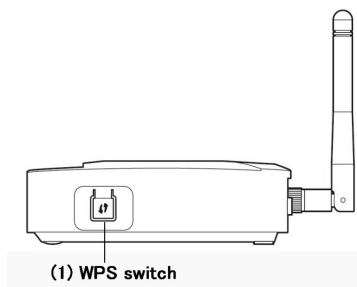
## Ports and others

Name	Display	Description
(1) DCIN jack	 12V=0.5A	Connect the AC adaptor to this jack.
(2) LAN port	LAN(1~4)	Connect the Ethernet cable to this port.
(3) DSL port	DSL	Connect the Line cable to this port.

## Configuration switch

Name	Display	Description
(4) Power ON/OFF switch	ON/OFF	This switch is for turning this product on or off.
(5) Reset switch	RESET	This switch is for initialization. Please use a non-conductive stick such as toothpick to push the recessed reset switch.

## Side



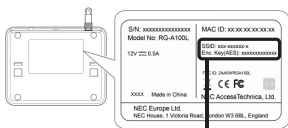
### Switch

Name	Display	Description
(1) WPS switch	WPS	This switch is for activation of the WPS configurations.

## Product label

Look at the product label on the bottom of this product to configure a wireless LAN terminal [client].

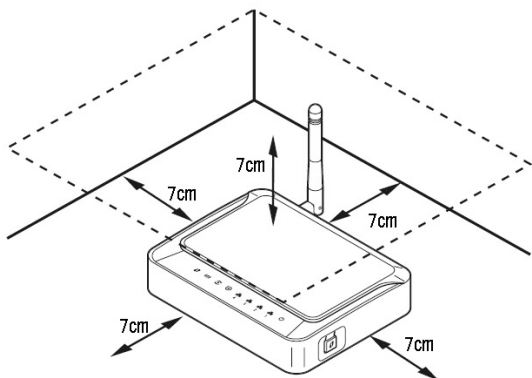
\*The label is an example.



Network name (SSID) of initial state and coded key

### 3. Installation Space

This product should be installed and operated with a minimum separation of 7 cm from any nearby walls (on all sides except the bottom).



**⚠ Caution**

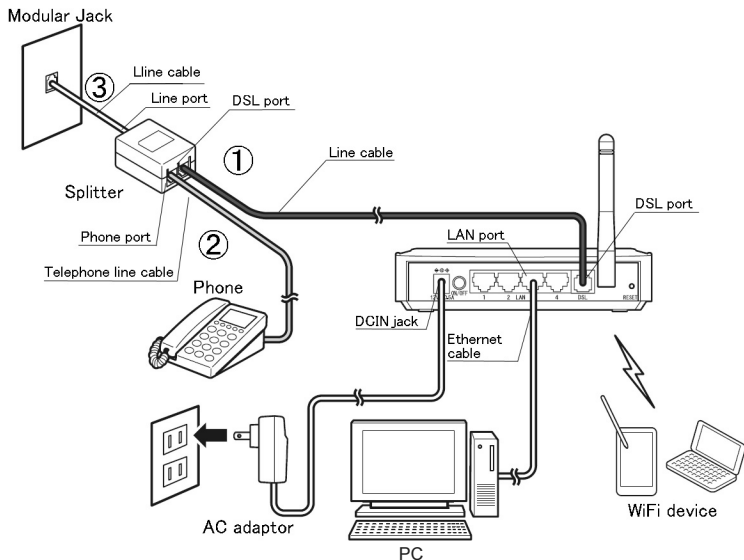
This product heats up excessively if it is installed in a poorly ventilated area. It may cause a malfunction.

Keep this product away from refrigerators, TV sets and other noise sources.

# 4. Network Setup

## (1) Access the ADSL line.

- ① Connect the Splitter's DSL port and this product's DSL port using the Line cable.
- ② Connect the Splitter's Phone port and the Phone's Line port using the Telephone line cable.
- ③ Connect the Splitter's Line port into the modular jack.



## (2) Connect the PC.

Turn off the PC beforehand. Connect the LAN port of this product and your PC using an Ethernet cable.

## (3) Connect the AC adaptor to the DCIN jack.

## (4) Plug the AC adaptor into an outlet.

**(5) Turn on this product by pushing the power ON/OFF switch.**

**(6) Make sure that the power lamp illuminates in green.**



### Caution

Ensure that you make connections in accordance with the instruction manual. Any connection mistakes may cause a malfunction in the connected devices or connection equipment.



# 5. Web Setting

- (1) Start the PC and others.
- (2) Start a WWW browser, enter "http://192.168.1.1/" and open the page for Web configurations.
- (3) Enter the user name and password. The user name is "admin" and the password is "1234" (default value).



- (4) Select the menu you want to modify, and proceed.

## 6. Products Specifications

Item		Condition	
DSL port	Physical interface	6 PIN modular jacks (RJ-11)	
	Port	1 port	
	Type	Type ITU-T G.992.1/2/3/5 Annex A/L/M ANSI T1.413	
LAN port	Physical interface	8 PIN modular jacks (RJ-45)	
	Port	4 ports (switching hub built in)	
	Type	100BASE-TX/10BASE-T (IEEE802.3u/IEEE802.3) Auto MDI/MDI-X	
Wireless LAN	Antenna	External Antenna	
	IEEE802.11b	Frequency band/CH	2.4GHz (2412-2472MHz)/1-13ch
		Bit rate	1/2/5.5/11Mbps
	IEEE802.11g	Frequency band/CH	2.4GHz (2412-2472MHz)/1-13ch
		Bit rate	6/9/12/18/24/36/48/54Mbps
	IEEE802.11n	Frequency band/CH	2.4GHz (2412-2472MHz)/1-13ch
		Bit rate	6.5 Mbps to 150 Mbps (HT20/40)
Operating conditions		Temperature: 0 to 40 °C Humidity: 10 to 90%	
Dimensions		Approx. 147.5 (W) x 114.5 (D) x 35.5 (H) mm (Not including the projection portion)	
Power source		AC100V-240V 50/60Hz	
Power consumption		Up to 4.5W	
Weight		Approx. 0.25 kg (excluding the AC adaptor)	

## Notice

- (1) All rights reserved. No part of this manual may be copied or reproduced without prior permission.
- (2) Contents of this manual may change without notice.
- (3) We take every possible precaution to ensure the accuracy of this manual, but if anything is unclear or erroneous in the content, please contact us. (<http://www.necat.co.jp/>)
- (4) We assume no responsibility whatsoever for any failure, malfunction, accident, trouble or damage resulting from external causes such as erroneous operation, natural disasters, faults power cuts, etc.
- (5) Please note that we shall not be responsible for any damage resulting from security problems if no security measures are in place or the wireless LAN specification is insecure.
- (6) If the product is damaged in accidentally through inappropriate use or unpredictable circumstances (e.g. thunderstorms or electric current leakage), the product may not operate properly. Please read this manual and follow the instructions carefully.



### Disposing of your used NEC product

#### In the European Union

EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. *This includes the residential gateway or electrical accessories, such as the AC Adaptor.*

When you dispose of such products, please follow the guidance of your local authority and/or ask the shop where you purchased the product.

The mark on the electrical and electronic products only applies to the current European Union Member States.

#### Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority and ask for the correct method of disposal.

# Customer Information

FCC 68

## Customer Information

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On bottom of this equipment is a label that contains, among other information, a product identifier of [US: 7S4DL03BRG-A100L]. If requested, this number must be provided to the telephone company. If this equipment [Wireles N ADSL2+ Modem Router] causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service. If you experience trouble with this equipment, you disconnect it from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning. Please follow instructions for repairing if any (e.g. battery replacement section); otherwise do not alternate or repair any parts of device except specified.

If the telephone company requests information on what equipment is connected to their lines, inform them of:

- (a) The telephone number that this unit is connected to,
- (b) The ringer equivalence number [03]
- (c) The USOC jack required [RJ11C], and
- (d) The FCC Registration Number [7S4]

Items (b) and (d) are indicated on the label. The ringer equivalence number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

### Service Requirements

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our Company or to one of our authorized agents. Service can be facilitated through our office at:

Company name: NEC Corporation of America Company

Company address: 6535 N.State Hwy 161 Irving, TX 75039-2402

Tel: +01-214-262-3789





**NEC AccessTechnica, Ltd.**  
RG-A100L Instruction Manual 1st Edition

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