Gemtek Technology Co., Ltd.

WX-6215G 11Mbps Wireless Router

User's Manual

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Introduction

Thank you for purchasing your Wireless SOHO AP (Router).

This manual will assist you with the installation procedure.

The package you have received should contain the following items:

- Wireless SOHO AP Router
- User's Manual
- Power Adapter
- Ethernet cable

Note: if anything is missing, please contact your vendor

Safety Notification

Your Wireless SOHO AP Router should be placed in a safe and secure location. To ensure proper operation, please keep the unit away from water and other damaging elements.

- Please read the user manual thoroughly before you install the device.
- The device should only be repaired by authorized and qualified personnel.
- Please do not try to open or repair the device yourself.
- Do not place the device in a damp or humid location, i.e. a bathroom.
- The device should be placed in a sheltered and non-slip location within a temperature range of +5 to +40 Celsius degree.
- Please do not expose the device to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.

Hardware Installation

Front Panel

The front panel provides LED's for device status. Refer to the following table for the meaning of each feature.

PWR	Power status of the SOHO AP Router. A steady
	LED indicates the power is applied to the unit.
WLAN	The WLAN LED will be ON when AP function
	enable, at this time Wireless clients are able to
	connect to the AP.
WAN	Wide Area Network status. WAN LED is
	illuminated when there is a good connection to
	the 10 BaseT mode Ethernet port.
LAN	Local Area Network status. LED will be on when
1,2,3,4	Ethernet port is connected.

Rear Panel

The rear panel features 4 LAN ports, 1 WAN port and Factory Reset button. Refer to the following table for the meaning of each feature.

Power	Used to connect to the power outlet. Only use the
(DC 5v)	power adapter provided with the device. Use of an
	unauthorized power adapter may cause damage to
	your device and violate your warranty.
Internet	The RJ-45 Ethernet port is used to connect your
(WAN)	SOHO AP Router to your x DSL.
Reset	Resets the configuration to default settings.
LAN	The RJ-45 Ethernet ports used to connect your PC
(1,2,3,4)	or HUB. The Ethernet Cable used can be normal
	Ethernet cables or even Crossover Cable.
	The device has internal Auto - Crossover detection
	circuits to automatic identify them.

General System Connection

Default Settings

By default settings, the SOHO AP is regarded as an "AP Router". The default settings are shown following.

Note:

In Web configuration mode setup system, only one user allows to access setup program at one time i.e. setup system will decline when other users to connect setup system.

User Name	admin	
Password	gemtek	
AP Router Name	Wireless AP	SOHO Wireless LAN
AP Router IP Address	192.168.0.10	
AP Router Subnet Mask	255.255.255.0	
10/100 Ethernet LAN IP	192.168.0.10	
10 Mbps Ethernet WAN IP	Obtain from ISP via	Can be manually
	DHCP	configure
WAN DHCP Client	Enabled	After 20 sec. Go to blank
RF ESSID	Wireless Gateway	
RF Channel	11	
RF Roaming	Enabled	
Encryption	Disabled	
DHCP Server	Enabled	
NAT Routing	Enabled	

Web Management Settings

TURN ON POWER SUPPLY

Quick power cycle can caused system corruption. When power on, be careful not to shut down in about 5 seconds, because data is writing to the flash.

START -UP & LOG IN

In order to configure the Wireless SOHO AP Router, you must use your web browser (Microsoft Internet Explorer or Netscape) and manually input **192.168.0.1** into the address box and press Enter. Then Main Page will appear.





In order to configure the Wireless SOHO AP Router, you must input the username into the **User Name** box. Enter the password into the **Password** box and press the **OK** button. The default User Name is "admin". There is no default password, leave the Password field blank.

Once you have logged-in as administrator, it is a good idea to change the administrator password to ensure a secure connection to the Wireless SOHO AP Router. The Advanced Settings section described later in this manual describes how to change the password.

Once you have input the correct password and logged-in, the screen will change to the Main Page screen.

MAKE CORRECT NETWORK SETTINGS OF YOUR COMPUTER

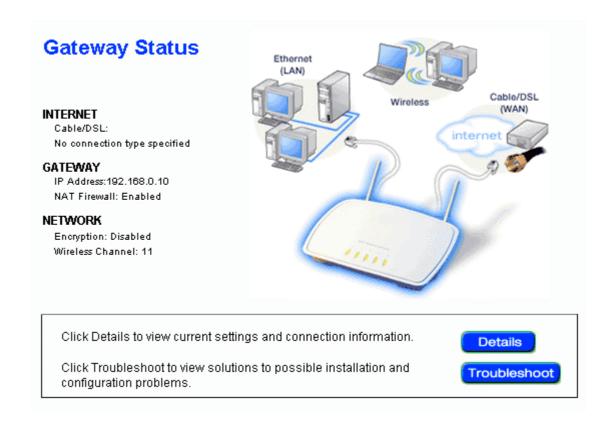
To change the configuration, use Internet Explorer (IE) or Netscape Communicator to connect the WEB management **192.168.0.10**.



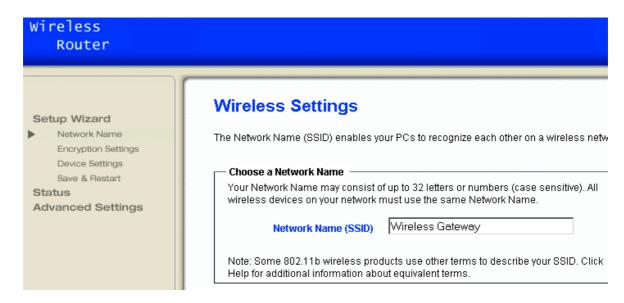
SETUP WIZARD

Click SETUP WIZARD. Here allow user to configure basic network settings with your ISP provider.

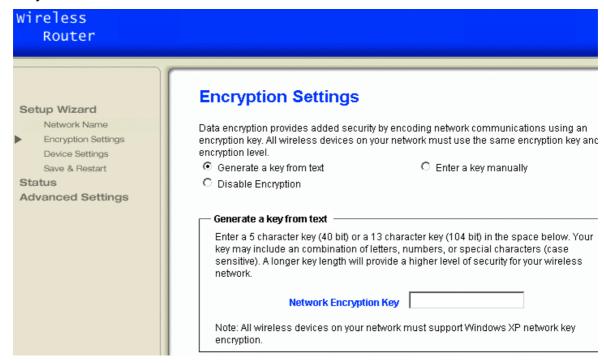
Gateway Status

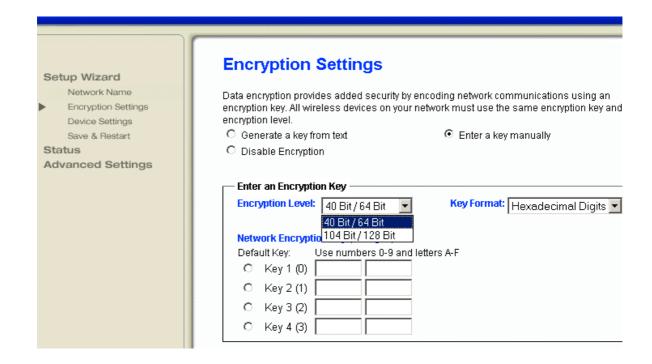


The Device Status screen displays a graphical representation of your current configuration.



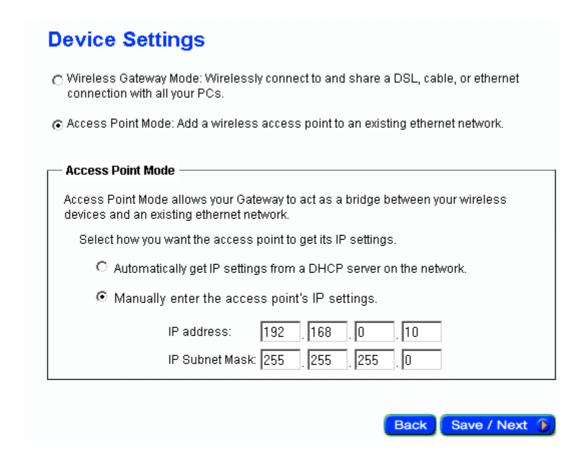
Enter the Network Name (SSID) for your network. All wireless client station devices on your network must use the same Network Name.





DEVICE SETTINGS

It's the LAN network domain settings. The default value is listed as following. (IP Address: 192.168.0.10, IP Subnet Mask: 255.255.255.0) After changing the settings, click NEXT to continue other network settings.



Device Settings

- Wireless Gateway Mode: Wirelessly connect to and share a DSL, cable, or ethernet connection with all your PCs.
- C Access Point Mode: Add a wireless access point to an existing ethernet network.

Wireless Gateway Mode

Wireless Gateway Mode creates a wireless network that can share a broadband modem. In addition, you can use your gateway to share the same internet connection with a wired network (refer to your User's Guide for details).

Some Internet Service Providers (ISPs) may require you to enter configuration information.

Click the Cable/DSL Settings button and enter the configuration information provided by your ISP. If none is required, click Next.

Cable / DSL Settings



After changing the settings, click **NEXT** to continue other network settings.

Cable / DSL Settings

Select the checkbox beside the settings information required by your Internet Service Provider enter it in the space provided. If you did not receive any of the information listed below from yo leave it blank.

P Settings				
☐ IP Settings assigned by your ISP				
IP address assigned by your ISP:	0	. 0	. 0	. 0
IP Subnet Mask:	0	. 0	. 0	. 0
ISP Gateway Address:	0	. 0	. 0	. 0
Domain Name Server (DNS) IP Address:	0	. 0	. 0	. 0
Domain Name Server (DNS) IP Address:	0	. 0	. 0	. 0
Additional Cable/DSL Settings				
PPPoE Username / Password				
User Name (PPPoE):				
Password (PPPoE):		1		
Retype Password:				
Host Computer Name or Domain Name Host Name:				

DSL users:

If you are using a PPPoE client to connect to your DSL provider, then place a checkmark in the PPPOE Username/Password box, and enter the user name and password in the appropriate fields.

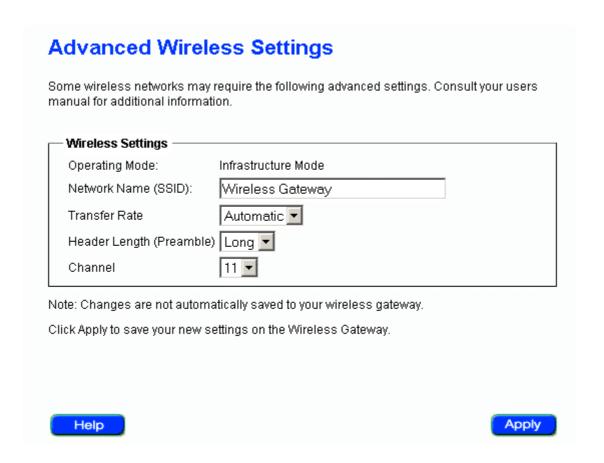
Cable modem users:

If you are using a cable modem, then place a checkmark in the Host Computer Name or Domain Name box and enter the host and domain name given by your cable provider.

ADVANCED SETTINGS

Here allow user to set SOHO AP wireless IP and operation channel. The default value for RF are as followed:

- 1. ESSID: Wireless Gateway, Channel: 11
- 2. The encryption panel allows the entry of four keys for 64-bit encryption and one set of 128-bit key according to WEP function select. To be written to the driver and registry, each key must consists of hex digits, which means that only digit 0-9 and letters A-F are valid entries. If entered incorrectly program will not write keys to a driver.
- 2. After changing the setting, click Apply to save and restart the system.



Click on the **Apply** button to save your settings.

DHCP SERVER SETTINGS

By default, the Wireless Router has DHCP server enabled to assign an IP address ranging from 192.168.0.1 to 192.168.0.100. In addition, the router is capable of reserving up to four sets of IP addresses within the local network for mail, web, or ftp server.

After changing the setting, clicks Apply to change the configuration.

DHCP Server Settings
✓ Enable DHCP Server Functions
IP Address Pool Range From: 192.168.0. 1
To: 192.168.0. 100
Reserve IP Addresses within the IP address pool range.
1. Computer MAC: 00 : 00 : 00 : 00 : 00 IP Address: 192.168.0. 0
2. Computer MAC: 00 : 00 : 00 : 00 : 00 IP Address: 192.168.0. 0
3. Computer MAC: 00 : 00 : 00 : 00 : 00 IP Address: 192.168.0. 0
4. Computer MAC: 00 : 00 : 00 : 00 : 00 IP Address: 192.168.0. 0
Note: Changes are not automatically saved to your wireless gateway.
Click Apply to save your new settings on the Wireless Gateway.
Apply

VIRTUAL SERVER SETTINGS

Here allow user to set several kinds of virtual service of the SOHO AP such as HTTP, SMTP, POP, FTP, TELNET services. After enter the settings, clicks Apply to save input data.

Virtual Server Settings		
Virtual Servers		
1. Internal IP 192.168.0. 0	Service 🔽	
2. Internal IP 192.168.0. 0	ALL(DMZ)	
3. Internal IP 192.168.0. 0	SMTP POP	
4. Internal IP 192.168.0. 0	FTP TELNET	
Custom Settings	[IRC [
5. Internal IP 192.168.0. 0 Service		Custom Settings
6. Internal IP 192.168.0. 0 Service		Custom Settings
7. Internal IP 192.168.0. 0 Service		Custom Settings
8. Internal IP 192.168.0. 0 Service	. ▼	Custom Settings
Click Apply to save your new settings on the	Wireless Gatewa	у.

Specific application support is enabled in Virtual Server Settings. The Wireless SOHO AP (Router) will detect and automatically open outgoing ports required by most applications and games. However, some games and applications such as Netmeeting will require that the computer be exposed in the DMZ zone to allow incoming ports required by the application. Click on the Apply button to save your settings.

DMZ

The Virtual Server Settings under Advanced Settings also enables one computer to have full access to the Internet without the protection of the firewall. This allows a computer to be exposed to unrestricted two-way communication outside of your network.

To enable DMZ, simply reserve an IP address for DMZ zone.

Click the "Submit" button to save your changes.

Only one computer can use DMZ at a time. Please note that enabling DMZ removes the protection of the firewall, which exposes the computer to intrusion.

Use DMZ only when needed and not for extended periods of time.

Note: Service Port Range : (For Administrator only) From 1~ 65535.

Access Control Settings

C Enable the Grant Access List

Disable Access Control -

Wireless Access Control is disabled.

Select an Access Control option listed above to control which users can access your wireless network.

Disable Access Control Any user with the correct wireless settings can

access your wireless network.

Enable the Grant Access List Any user who is on the Grant Access List and has

the correct wireless settings can access your

wireless network.

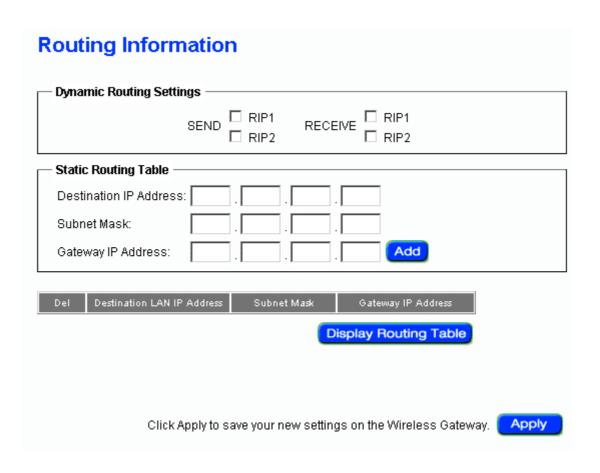
Enable the Deny Access List Any user who is on the Deny Access List is denied

access to your wireless network.

This function allow administrator to have access control by enter MAC address of client stations.

Enable the Deny Acces	s List C Disable Access Control
Enable the Grant Acces	s List
Deny Access List	
To prevent a user from a wireless adapter and clic	cessing your wireless network, enter the MAC address of thei k Add.
MAC Address	Add
Deny Access List	Delete MAC Address Delete □ 00:90:4b:08:02:76 □ Delete

ROUTING SETTINGS



In Static Routing, the user has the ability to add a static route to the routing table by simple entering the destination IP, subnet mask, and gateway. Clicking on "Add" and then "Apply" which requires a restart for the IP address to be incorporated into the routing table.

To delete a file from the list, just click the checkbox and click **Delete**.

By default, the Router will not send or receive any routing Internet protocols (RIP) to update the routing table. However, the user can enable the Router to automatically send and receive RIP packets to establish routes for commonly used paths.

Change the Gateway Password
The Wireless Gateway requires you to enter a password before accessing configuration options. This password is used to assure that unauthorized users can not change your network settings.
Gateway Password —
Enter a new password for the Wireless Gateway.
New Password:
Retype Password:
Important: Remember to write down your new password and keep it in a secure location.
Note: Changes are not automatically saved to your wireless gateway.
Click Apply to save your new settings on the Wireless Gateway.
Apply

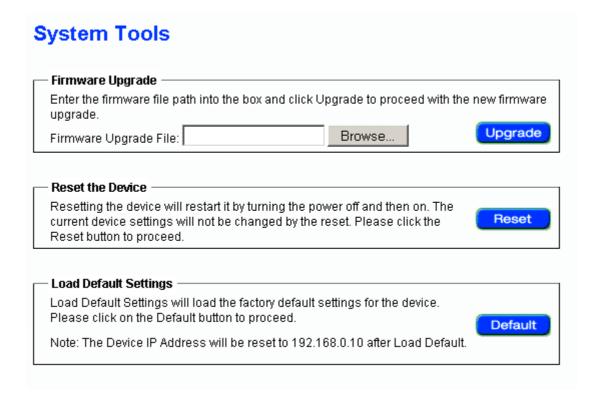
SYSTEM TOOLS

The System Tools section enables you to manage your Wireless SOHO AP and view information related to unit functions. The following functions are described in this chapter.

Load Default Settings: Restore settings to factory default.

Firmware Upgrade: Upgrade the firmware with a latest version.

Reset the Device: Reboot the Wireless SOHO AP.



Troubleshooting

Basic Functions

My Wireless SOHO AP Router will not turn on. No LED's light up.

Cause:

The power is not connected.

Resolution:

 Connect the power adapter to your SOHO AP Router and plug it into the power outlet.

Note: Only use the power adapter provided with your SOHO AP Router. Using any other adapter may damage your SOHO AP Router.

LAN Connection Problems

I can't access my SOHO AP Router.

Cause:

- The unit is not powered on.
- There is not a network connection.
- The computer you are using does not have a compatible IP Address.

Resolution:

- Make sure your SOHO AP Router is powered on.
- Use the WINIPCFG utility described in the appendix to make sure that your computer has a compatible IP Address. If your IP Address is not set correctly and you are using DHCP, use WINIPCFG to renew your IP Address. Otherwise, make correct changes to your Windows network settings. Make sure that the IP Address used on your computer is set to the same subnet as the Router. For example, if the Router is set to 192.168.2.1, change the IP address of your computer to 192.168.2.15 or another unique IP Address that corresponds to the 192.168.2.X subnet.

Use the Reset button located on the front of your Router to revert to the default settings.

I can't connect to other computers on my LAN.

Cause:

- The IP Addresses of the computers are not set correctly.
- Network cables are not connected properly.
- Windows network settings are not set correctly.

Resolution:

- Make sure that each computer has a unique IP Address. If using DHCP through the SOHO AP Router, makes sure that each computer is set to "Obtain an IP Address automatically" and restart the computer. Use the WINIPCFG and PING utilities described in the appendix to make sure that you can connect to each computer.
- Make sure that the Link LED is on. If it is not, try a different network cable.
- Check each computer for correct network settings.

ISP Connection Problems

I can access the Wireless SOHO AP Router, but I can't connect to my ISP.

Cause:

- Your DSL or Cable modem is not functioning correctly.
- The cable is connected from the WAN port of the Wireless SOHO AP Router to your DSL or Cable modem.
- The wrong connection type is used in Setup.
- The username and password is not input correctly.

Resolution:

- Make sure that your DSL or Cable modem is running correctly and connected to the WAN port of the Broadband Router.
- Make sure that the right connection type is used in the web configuration.
- Make sure that the username and password used in the connection type is correct.
- Some ISP's do not care if you share your broadband connection among multiple users. Other ISP's will explicitly restrict this type of activity in your service contract. It is important that you verify that you are in accordance with your service agreement before sharing Internet access.

Wireless Troubleshooting

I can't access the Wireless SOHO AP Router from a wireless network card Cause:

- Settings are not the same among each wireless adapter.
- Out of range.
- IP Address is not set correctly.

Resolution:

- Make sure that the Mode, SSID, Channel and encryption settings are set the same on each wireless adapter.
- Make sure that your computer is within range and free from any strong electrical devices that may cause interference.
- Check your IP Address to make sure that it is compatible with the Wireless SOHO Router.

Performing a Factory Reset

Follow these steps to perform a Factory Reset using the Reset button on the back of the Wireless SOHO AP.

- 1. With the unit on, press and hold the Reset button with a pen or paper clip.
- 2. Hold the reset button for about 5 or 6 seconds until the Power/Test LED on the front panel blinks very quickly and then release.
- 3. Wait a few seconds for the Broadband Router to reboot using default settings.

A Factory Reset can also be performed through the web configuration interface. Follow these steps to perform a factory reset using the web configuration interface.

- 1. Log-in to the Wireless SOHO AP Router web configuration interface.
- 2. Click on the System Management link at the bottom of the screen.
- 3. Click on Restore Default Settings.
- 4. You will be asked if you want to restore to default settings. Click OK to restore
 - settings to default configuration or click Cancel to discard any changes.

Technical Specifications

Standards:

IEEE 802.3 10BASE-T Ethernet

IEEE 802.3u 100BASE-TX Fast Ethernet

ANSI/IEEE 802.3 NWay auto-negotiation

Protocols Supported:

TCP

IΡ

NAT

UDP

PPPoE

DHCP (Client and Server)

Management:

Web-Based

Ports:

LAN: 10BASE-T/100BASE-TX Fast Ethernet

WAN: 10BASE-T

Wireless SOHO AP Router Specifications

General Wireless Specifications:

IEEE 802.11b Wireless LAN, Wi-Fi Compatible

Access Point Frequency Band:

2.4 ~ 2.4835 GHz (subject to local regulation)

Access Point Number of Channel:

USA & Canada: 11 (1- 11)

Most European: 13 (1-13)

France : 4 (10-13)

Japan : 14 (1-14)

Access Point Frequency Range:

5 Mbps

Access Point Data Rate:

11 Mbps

- 5.5 Mbps
- 2 Mbps
- 1 Mbps

Data encryption:

40/128 bit WEP and ESSID for Security

LED:

Power: Indicate power is ON

Status: Indicate Firmware loading under proceeding

WAN: Indicate WAN port connection

LAN: Indicate LAN port TX/RX operation

WLAN: Indicate Wireless been connected and operation

Power Specifications:

DC power supply

Input: AC 100-240V, 50-60 Hz, 1A

Output: DC 5V/2A

Physical Dimensions

195mm(L) * 160mm (W) * 27mm (H)

Weight:

680 g (without power adaptor)

Copyright statement

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transmitted in any form or by any means, whether electronic, mechanical, photocopying, recording, or otherwise without the prior writing of the publisher.

Printed in Taiwan, 2002/06/20

Federal Communication Commission Interference Statement

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 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.

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

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.

IMPORTANT NOTE:

FCC RF Radiation Exposure Statement:

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

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

R&TTE Compliance Statement

This equipment complies with all the requirements of the DIRECTIVE 1999/5/EC

OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 9 March 1999 on

radio equipment and telecommunication terminal Equipment and the mutual

recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC

(Telecommunications Terminal Equipment and Satellite Earth Station Equipment)

As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install

and use it. However, special attention must be paid to the dangers of electric shock

and static electricity when working with electrical equipment. All guidelines of this

manual and of the computer manufacturer must therefore be allowed at all times to

ensure the safe use of the equipment.

EU Countries intended for use

The ETSI version of this device is intended for home and office use in Austria,

Belgium, Denmark, Finland, France (with Frequency channel restrictions),

Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain,

Sweden and United Kingdom.

The ETSI version of this device is also authorized for use in EFTA member states.

Iceland, Liechtenstein, Norway and Switzerland.

EU Countries Not intended for use

None.

Potential restrictive use

France: Only channels 10,11,12, and13

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