

# 54g Wireless LAN (WLAN) User Manual

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# Introduction: 54g Wireless LAN (WLAN) User Manual

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## The 54g WLAN Solution

The **54g WLAN** solution accesses wireless local area networks (LANs), enables the sharing of a local printer and files with others in the network, accesses the Internet, and enables roaming about the office—wire-free. This wireless LAN solution is designed for both the home user and small businesses—and it is scalable so that users can be added and new network features can be enabled as networking needs grow.

WEP is a security protocol for wireless local area networks (defined in IEEE Std 802.11, 1999 Edition) that encrypts data sent over radio waves. The use of the WEP key is optional and can be enabled or disabled. If the network being connecting to has enabled WEP, WEP must also be enabled in the network profile and the WEP key must be set to match the WEP key used by the network. Otherwise, it is impossible to connect to the network.

## Enterprise Users

Obtain the following information from the network administrator:

- Network names (SSID) of the specific wireless networks to connect to
  - WEP (Wired Equivalent Privacy) key information (if any) for the networks to connect to
  - For Microsoft® Windows® networking, the customer name and workgroup name
  - For a network account, a user name and password
  - An IP address (if not using a DHCP server)
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## Using the *Company 54g WLAN*

The **54g** enabled device is an IEEE 802.11g based wireless LAN device. A LAN is composed of two or more computers that are connected to each other to share files or common equipment such as a printer or an Internet connection. A wireless LAN provides the same functionality of a wired network, but it eliminates the need to install networking cables and other networking equipment. Not only is a wireless LAN easier to deploy, but it also allows for roaming.

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## Features and Requirements

An IEEE 802.11 based wireless LAN includes the following features:

- Support for IEEE 802.11g draft specification
- Support for IEEE 802.11b standard
- 2.4-GHz band operation
- Network data rate of up to 54 Mbit/s
- Wired Equivalent Privacy (WEP) encryption

The Company 54g enabled notebook works with any Wi-Fi CERTIFIED® base station or wireless client adapter.

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# Completing the Setup: *Company 54g* Wireless LAN (WLAN) User Manual

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NOTE—Before starting, obtain the required network information from the network administrator or the wireless access point installer (see [The Company 54g WLAN Solution](#) in [Introduction](#)).

[Modes of Operation](#)

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## Modes of Operation

A wireless LAN can be configured for two different modes of operation: infrastructure network and computer-to-computer (ad hoc) network. Whereas each mode has its advantages, one mode may be more appropriate than the other, depending on the location and type of network connection.

### Infrastructure Mode

The key difference between the infrastructure type of network and an ad hoc network is that the infrastructure network includes a base station (host) computer that has a built-in wireless network adapter and is connected to a wireless access point (AP). This functionality allows computers on the infrastructure wireless LAN to access the resources and tools of the wired LAN, including Internet access, e-mail, file transfers, and printer sharing.

### Characteristics

Networked computers communicate with each other through a dedicated AP. All data transmitted between the computers on this wireless LAN passes through the AP.

### Advantages

- Extended range. The access point extends the range of the wireless LAN. Each computer can communicate with other computers equipped by wireless networks that are within the range of the access point.
- Roaming. As the user moves around the home or office, the **Company 54g** enabled notebook determines the best access point to use to ensure continuous communication with the network.
- Network connectivity. An access point can provide wireless LAN access to an existing wired network by bridging the two networks together. This gives users of the wireless LAN access to all the functions of a wired network—from file server access to e-mail and the Internet.

### Disadvantages

Because the infrastructure mode offers more features, it requires additional components and setup time to deploy.

## Requirements

A base station computer having a wired connection to the Internet, a wireless network adapter, and a connection to an AP.

## Computer-to-Computer Mode

A peer-to-peer (ad hoc) network is the easiest to deploy and is ideal for home use or in small offices. This mode allows the sharing of files with other employees, printing to a shared office printer, and access to the Internet through a shared modem. With ad hoc networking, however, the computer is only able to communicate with other wireless networks that are within a certain range and are in the same wireless workgroup.

## Characteristics

Networked computers send data directly to each other.

## Advantages

- Simple setup
- Cost efficiency

## Disadvantages

Communication is limited to those who are located within a certain range.

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# Utility Functions: *Company 54g* Wireless LAN (WLAN) User Manual

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[Running Utility Functions](#)

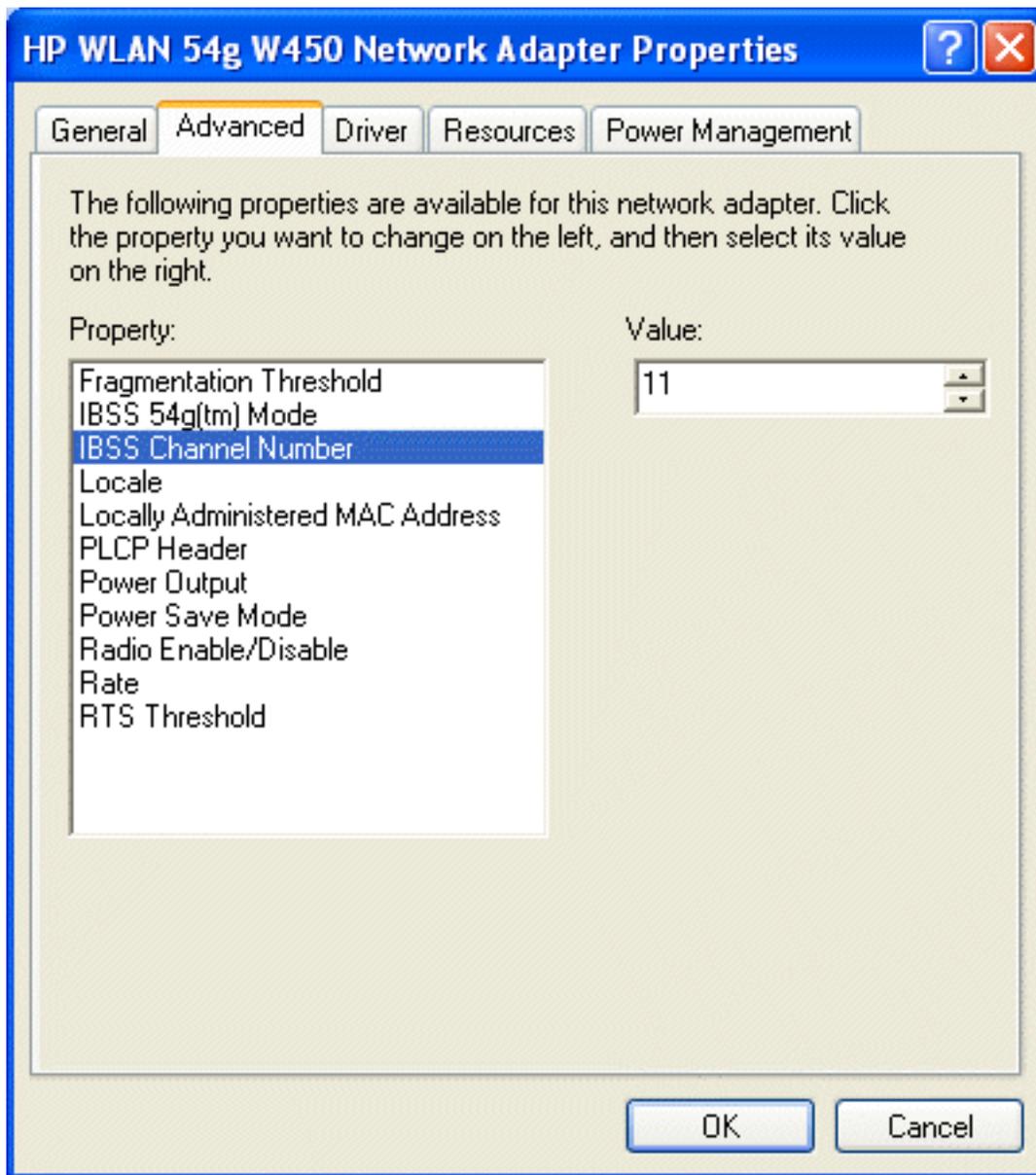
## Running Utility Functions

The utility functions and details for the wireless network connection are available in **Control Panel**. These functions include **Disabling the network device**, **Renaming the connection**, **View status of this connection**, and **Change settings of this connection**.

### Changing Settings

1. Click **Start**, then click **Control Panel**.
  2. Double-click **Network Connections**.
  3. Click **Wireless Network Connections**, and then click **Change settings of this connection**.
- Click the **Wireless Network** tab to configure available networks, add and remove networks, and change network properties.
  - Click the **General** tab, then click **Configure**
    - To change the properties of the network adapter, click the **Advanced** tab.
    - To view details about the driver files, update the driver for the device, roll back to the previous driver, or to uninstall the driver, click the **Driver** tab.
    - To view resource settings, click the **Resources** tab.
    - To change power management settings, click the **Power Management** tab.

The **Advanced** tab in **Network Adapter Properties** lists the properties for the ***Company 54g* Wireless LAN (WLAN)** adapter.



- **IBSS Channel Number** selects the independent basic service set (IBSS) channel number on which to operate. The **Company 54g** enabled notebook comes preset for use on channels 1—11. This setting is acceptable in most countries. Some countries allow use on more channels. If you travel to a country that allows the use of other channels, change the **IBSS Channel Number** to that number.
- **Locale** selects the adapter properties that comply with the operating regulations for that locale. The **Locale** settings include **USA, Israel, Japan, Jordan, Thailand, and Worldwide**. This wireless LAN device is normally preset by default for the country in which the device is sold. Before operating this WLAN device, verify that the locale selection is correct by following the steps described in [Changing Settings](#) above. On the **Advanced** tab of **HP WLAN 54g W450 Network Adapter Properties**,
  - Click **Locale**
  - In the **Value** list, select the appropriate regional location
- **Radio Enable/Disable** allows you to turn the radio on or off as necessary to comply with restrictions prohibiting the emission of radio signals.

- **Rate** sets the transmission rate. The default setting is **Use best rate**. This automatically adjusts the data rate to the optimal rate based on the capabilities of the other clients and access points.

The default values for the properties listed below are set for maximum performance. Therefore, It is not recommended for home users to change the settings for any of these properties. Only network administrators or persons having technical wireless LAN experience should attempt to change any of the settings.

- **Fragmentation Threshold** is the threshold at which the IEEE 802.11 adapter break the packet into multiple frames.
  - **IBSS 54g (TM) Mode** is used to set the connection type in an ad hoc network. The following options are available:
    - 54g - 802.11b compatible— links at the best rate with an IEEE 802.11b and an IEEE 802.11g network (recommended setting).
    - 54g - Performance— links only with IEEE 802.11g networks at the highest rate. In addition it excludes IEEE 802.11b networks.
    - 802.11b Mode— links only with IEEE 802.11b networks at the highest rate. In addition it excludes IEEE 802.11g networks.
  - **Locally Administered MAC Address** is used to override the MAC address of the **Company 54g Wireless LAN** adapter.
  - **PLCP Header** is used to set the header type used for CCK rates. Can be long, auto (short/long).
  - **Power Output** is used for putting out a percentage of the maximum output power.
  - **Power Save Mode** is used to put the **Company 54g** enabled notebook into the IEEE 802.11 Power Save mode. In Power Save mode, the radio is periodically powered down to conserve power. When in Power Save mode, packets are stored in the AP until the STA comes on.
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# Specifications: *Company* 54g Wireless LAN (WLAN) User Manual

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## Physical Characteristics

<i>Characteristic</i>	<i>Description</i>
<b>Form Factor</b>	USB form factor
<b>Dimensions</b> (length, width)	65 mm × 44 mm

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## Temperature and Humidity Limitations

<i>Condition</i>	<i>Description</i>
<b>Operating Temperature</b>	0 to 85°C
<b>Operating Humidity</b>	90% maximum (no condensation allowed)
<b>Storage Temperature</b>	-40 to 90°C
<b>Storage Humidity</b>	90% maximum (no condensation allowed)

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## Power Characteristics

<i>Characteristic</i>	<i>Values</i>	
	<i>IEEE 802.11g Operation</i>	<i>IEEE 802.11b Operation</i>
<b>Doze Mode</b>	40 mA	40 mA
<b>Receive Mode</b>	400 mA	220 mA
<b>Transmit Mode</b>	600 mA	330 mA
<b>Power Supply</b>	3.3 V	3.3 V

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## Networking Characteristics

<b>Characteristic</b>	<b>Description</b>
<b>Compatibility</b>	IEEE Std 802.11b and IEEE Draft Std 802.11g for wireless LAN
<b>Network Operating System</b>	Microsoft® Windows® Networking
<b>Host Operating System</b>	Microsoft Windows XP
<b>Medium Access Protocol</b>	CSMA/CA (collision avoidance) with acknowledgment (ACK)
<b>Data rate (Mbps)</b>	IEEE Draft Std 802.11g: 1, 2, 5.5, 6, 11, 12, 18, 24, 36, 48, 54 IEEE Std 802.11b: 1, 2, 5.5, 11
NOTE—The <b>Company 54g WLAN</b> solution uses an automatic transmit rate select mechanism	

## Radio Characteristics

<b>Characteristic</b>	<b>Description</b>
<b>Frequency Band</b>	2.4 GHz (IEEE 802.11b, IEEE Draft Std 802.11g)
<b>Modulation Technique</b>	<p>Direct sequence spread spectrum (DSSS)</p> <ul style="list-style-type: none"> <li>• CCK for high and medium transmit rate</li> <li>• DQPSK for standard transmit rate</li> <li>• DBPSK for low transmit rate</li> </ul> <p>Orthogonal frequency division multiplexing (OFDM)</p> <ul style="list-style-type: none"> <li>• 52 subcarriers with BPSK, QPSK, 16-QAM or 64-QAM</li> <li>• Forward error correction convolutional coding rate: 1/2, 2/3, 3/4</li> </ul>
<b>Spreading</b>	11-chip Barker sequence
<b>Bit Error Rate (BER)</b>	Better than 10 <sup>(-5)</sup> ppm
<b>Nominal Output Power</b>	IEEE Std 802.11b: 14 dBm; IEEE Draft Std 802.11g: 15 dBm

**NOTE**—See [Regulatory Information](#) for country-specific performance characteristics and use restrictions.

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# Regulatory Information

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## Operational Information

### Wireless Interoperability

The **Integrated 54g** enabled device is designed to be interoperable with any wireless LAN product that is based on direct sequence spread spectrum (DSSS) and orthogonal frequency division multiplexing (OFDM) radio technology and to comply with the following standards:

- IEEE Std 802.11b-1999. Standard on 2.4 GHz Wireless LAN
- IEEE Std 802.11g-2002. Draft standard on 2.4 GHz Wireless LAN

### Safety

The **Integrated 54g** enabled device, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this devices, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The **Integrated 54g** enabled notebook operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of a **Integrated 54g** enabled device may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations include the following:

- Using the **Integrated 54g** enabled device in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

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## Regulatory Information

The **Integrated 54g** enabled device must be used in strict accordance with this manual. For country-specific approvals, see [Radio approvals](#). Hewlett-Packard is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this **Integrated 54g** enabled device kit, or the substitution or attachment of connecting cables and equipment other than that specified by Hewlett-Packard. The correction of interference caused by such unauthorized modification, substitution, or attachment is the responsibility of the user. Hewlett-Packard and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user's failing to comply with these guidelines.

## Canada—Industry Canada (IC)

This device complies with RSS210 of Industry Canada.

## Europe—EU Declaration of Conformity



This equipment complies with the essential requirements of the European Union directive 1999/5/EC.

Cet équipement est conforme aux principales caractéristiques définies dans la Directive européenne RTTE 1999/5/CE.

Die Geräte erfüllen die grundlegenden Anforderungen der RTTE-Richtlinie 1999/5/EG.

Questa apparecchiatura è conforme ai requisiti essenziali della Direttiva Europea R&TTE 1999/5/CE.

Este equipo cumple los requisitos principales de la Directiva 1999/5/CE de la UE, "Equipos de Terminales de Radio y Telecomunicaciones".

Este equipamento cumpre os requisitos essenciais da Directiva 1999/5/CE do Parlamento Europeu e do Conselho (Directiva RTT).

O exoplismos autos plhroi tis basikes apaits ths koinotikhs odhgias EU R&TTE 1999/5/E.

Deze apparatuur voldoet aan de noodzakelijke vereisten van EU-richtlijn betreffende radioapparatuur en telecommunicatie-eindapparatuur 1999/5/EG.

Deette udstyr opfylder de Væsentlige krav i EU's direktiv 1999/5/EC om Radio- og teleterminaludstyr.

Deette utstyret er i overensstemmelse med hovedkravene i R&TTE-direktivet (1999/5/EC) fra EU.

Utrustningen uppfyller kraven för EU-direktivet 1999/5/EC om ansluten teleutrustning och ömsesidigt erkännande av utrustningens överensstämmelse (R&TTE).

Tämä laite vastaa EU:n radio- ja telepäätelaitedirektiivin (EU R&TTE Directive 1999/5/EC) vaatimuksia.

This product is intended to be used in all countries of the European Economic Area when operating in IEEE 802.11b and/or IEEE draft 802.11g mode at 2.4 GHz (see [France](#) below).

## France

Some areas of France have a restricted frequency band for operation in the IEEE 802.11b mode and IEEE draft 802.11g mode at 2.4 GHz. The following information describes this restriction (please check ART's Web site (<http://www.art-telecom.fr>) for more up-to-date information).

Autorité de régulation des télécommunications (ART) has made decisions that will allow users to install WLAN ( wireless LAN) systems to provide high-speed Internet services primarily in high-traffic areas (called hot spots). ART recently released guidelines that establish the conditions for experimenting with the installation of public WLANs, such as for high-speed Internet access in locations that are currently being poorly served by existing networks. Such public WLANs would operate in the 2.4-GHz frequency

band. This series of measures answers many of the concerns expressed during Art's public consultation on this topic.

Decisions allowing the installation of wireless terminals in hot spots (train stations, airports, business centers, and the like): In agreement with the Ministry of Defense, ART has made two decisions setting the conditions for using wireless LANs in the 2.4-GHz band. One of these decisions has been submitted to the Minister of Telecommunications for approval. These decisions will allow the installation of WLAN access points to provide public services in high-traffic public places. This will allow service providers and licensed operators to install access points using 2.4 GHz band technologies without authorization, under the following technical conditions:

1. In 38 départements (see [Metropolitan Départements](#) for listing):
  - The 2400–2454 MHz band can be used both indoors and outdoors using systems (access points and devices) with less than 300 milliwatts (mW) of power.
  - The 2454–2483.5 MHz band can be used indoors using devices with less than 100 mW of power and can be used outdoors using devices with less than 10 mW of power. When the devices are being used outdoors on private property, the power may be increased to 100 mW after approval from the Ministry of Defense.
2. For the time being, in all other metropolitan départements, the conditions remain unchanged. The list of the first 38 départements will be progressively added to after 1 January 2003.
3. For the overseas départements (DOM), as well as Saint Pierre and Miquelon and Mayotte, the entire 2400–2483.5 MHz band may be used indoors and outdoors using devices with less than 100 mW of power, except for the Reunion Islands and Guyana, where the 2420–2483.5 MHz band may be used only outdoors using devices with less than 100 mW of power. ART reminds operators that these frequencies are used with no guarantee of nondisruption, and that the installations must respect all measures applying to radio installations (such as urban planning regulations). These decisions also allow the development of private uses. In particular, private networks (such as indoor corporate networks) can be established using these technologies.

These conditions are tabulated below in [Table of Authorized EIRP](#).

## Guidelines for Public WLAN Experimentation

- Networks using WLAN technology will be granted a free authorization for up to 18 months under article L.33-1 of the Post and Telecommunications Code. These networks may use systems with 100 mW of power (effective isotropic radiated power (EIRP)) on the entire band, indoors and outdoors. Moreover, in the 2.4 GHz band (and providing this power limit is respected), fixed point-to-point links can be established for these networks needs, or frequencies can be requested in other ad hoc bands.
- Private and public persons may submit applications to ART, provided that legislation and regulations allow them to do so.
- Applications will be processed in a simplified way, in the spirit of the new "Authorization" Directive.
- ART will send completed applications to the Ministry of Defense. The Ministry will then check that the projects are not located near any sensitive area and that they are not likely to cause disruptions to military equipment. For each application, ART will then submit its report and the draft authorization to the Minister of Telecommunications.
- Applications can be sent from 12 November 2002 so that the first experiments may be launched as soon as early 2003. Full reviews are to be sent to ART at the end of the temporary authorizations to determine whether the technology guarantees quality and security to users.

## Metropolitan Departments

The table below lists the 38 metropolitan départements that permit the use of WLAN systems using less than 100 mW of power (EIRP) indoors across the entire 2400–2483.5 MHz band and outdoors on the 2400–2454 MHz band:

01	Ain Orientales	36	Indre	66	Pyrénées
02	Aisne	37	Indre et Loire	67	Bas Rhin
03	Allier	41	Loir et Cher	68	Haut Rhin

05	Hautes Alpes	42	Loire	70	Haute Saône
08	Ardennes	45	Loiret	71	Saône et Loire
09	Ariège	50	Manche	75	Paris
11	Aude	55	Meuse	82	Tarn et Garonne
12	Aveyron	58	Nièvre	84	Vaucluse
16	Charente	59	Nord	88	Vosges
24	Dordogne	60	Oise	89	Yonne
25	Doubs	61	Orne	90	Territoire de Belfort
26	Drôme	63	Puy du Dôme	94	Val de Marne
32	Gers	64	Pyrénées Atlantique		

Conditions of use for WLANs in hot spots in these 38 départements:

- The 2400–2454 MHz band may be used both indoors and outdoors using devices with power (EIRP) of less than 100 milliwatts (mW).
- The 2454–2483.5 MHz band may be used indoors using devices with power (EIRP) of less than 100 mW and outdoors using devices with power of less than 10 mW. On private property outdoors, the power may be 100 mW with the approval of the Minister of Defense.

Conditions of use for WLANs in hot spots in other metropolitan départements: The conditions of use currently remain unchanged, that is,

- The 2400–2446.5 MHz band may be used indoors using devices with power (EIRP) of less than 10 mW.
- The 2446.5–2483.5 MHz band may be used indoors using devices with power (EIRP) of less than 100 mW. On private property outdoors, the power may be 100 mW with the approval of the Minister of Defence.

#### Table of Authorised EIRP

In the 38 Départements			
Frequency (MHz)	Authorized EIRP (mW)		
	Indoors	Outdoors: Decisions (Concernent les réseaux indépendants et les hot spots)	Outdoors: Guidelines (Concernent les expérimentations de réseaux ouverts au public)
2400	100	100	100
2454			
2483.5		10 and 100 on private property with Ministry of Defense approval	100 with Ministry of Defense approval
In Other Metropolitan Départements			
Frequency (MHz)	Authorized EIRP (mW)		
	Indoors	Outdoors: Decisions (Concernent les réseaux indépendants et les hot spots)	Outdoors: Guidelines (Concernent les expérimentations de réseaux ouverts au public)

2400	10	Not permitted	100 with Ministry of Defense approval
2446.5			
2483.5	100	100 on private property with Ministry of Defense approval	
<b>In Guadeloupe, Martinique, St. Pierre, and Miquelon and Mayotte</b>			
<b>Authorized EIRP (mW)</b>			
<b>Frequency (MHz)</b>	<b>Indoors</b>	<b>Outdoors: Decisions and Guidelines</b>	
2400	100	100	
2483.5			
<b>In Reunion Islands and Guyana</b>			
<b>Authorized EIRP (mW)</b>			
<b>Frequency (MHz)</b>	<b>Indoors</b>	<b>Outdoors: Decisions</b> (Concernent les réseaux indépendants et les hot spots)	<b>Outdoors: Guidelines</b> (Concernent les expérimentations de réseaux ouverts au public)
2400	100	Not permitted	100 with Ministry of Defense approval
2420			
2483.5		100	100

NOTE—The **Integrated 54g** enabled notebook transmits less than 100 mW of power, but more than 10 mW.

## USA—Federal Communications Commission (FCC)

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

- The device may not cause harmful interference.
- The device must accept any interference that may cause undesired operation.

NOTE—This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To avoid the possibility of exceeding the FCC radio frequency exposure limits, when intalled in end applications, a distance of at least 20cm from users must be ensured. This device must be installed by authorized personnels or service centers. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. □

## 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. If the equipment is not installed and used in accordance with the instructions, the equipment may cause harmful interference to radio communications. There is no guarantee, however, that such 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 taking one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.

- Connect the equipment to 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.

NOTE—This **Integrated 54g** enabled device must be used in strict accordance with your computer manufacturer's instructions. Any other installation or use violates FCC Part 15 regulations. Modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment.

## Radio Approvals

Only use this radio device in countries where the device is approved for use.

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## Glossary: *Company 54g* Wireless LAN (WLAN) User Manual

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access point	A stand-alone wireless hub that allows any computer that has a wireless network adapter to communicate with another computer and to connect to the Internet.
ad hoc (also known as computer-to-computer network)	A communication configuration in which every computer has the same capabilities and any computer can initiate a communication session.
available network	One of the networks listed under <b>Wireless Network Connection Properties</b> . Any wireless network that is broadcasting and is within receiving range of the <b>Company 54g</b> enabled notebook appears on the list.
BER	Bit error rate. The ratio of errors to the total number of bits being sent in a data transmission from one location to another.
client computer	The computer that gets its Internet connection by sharing either the host computer's connection or the access point's connection.
dBm	A unit of expression of power level in decibels with reference to a power of 1 milliwatt.
DBPSK	differential-binary-phase-shift keying.
DQPSK	differential-quadrature-phase-shift keying. A compression technique that transmits only the differences between the values of the phase of the sine wave rather than the full absolute value.
DSSS	direct sequence spread spectrum. A type of radio technology used in wireless local area networks. DSSS operates by spreading a signal over a wide range of the 2.4-GHz band.
Dynamic Host Configuration Protocol (DHCP)	A mechanism for allocating IP addresses dynamically so that addresses can be reused when hosts no longer need them.
file and printer sharing	A capability that allows a number of people to view, modify, and print the same file(s) from different computers.
GHz	gigahertz. A unit of frequency equal to 1 000 000 000 cycles per second.
host computer	The computer that is directly connected to the Internet via a modem or network adapter.
IEEE	Institute of Electrical and Electronics Engineering
Internet Protocol (IP) address	The address of a computer that is attached to a network. Part of the address designates which network the computer is on, and the other part represents the host identification.
LAN	local area network
m	meter
MHz	megahertz. A unit of frequency equal to 1 000 000 cycles per second.
Mbps	megabits per second. Transmission speed of 1 000 000 bits per second.
ns	nanosecond. 1 billionth (1/1 000 000 000) of a second.

OFDM	orthogonal frequency division multiplexing. A method of digital modulation in which a signal is split into several narrowband channels at different frequencies. OFDM is used in European digital audio broadcast services.
preferred network	One of the networks that has been configured. Such networks appear under <b>Preferred networks</b> on the <b>Wireless Networks</b> tab of <b>Wireless Network Connection Properties</b> .
Service Set Identifier (SSID)	A value that controls access to a wireless network. The SSID for your wireless network card must match the SSID (network name) for any access point that you want to connect with. If the value does not match, you are not granted access to the network. You can have up to three SSIDs. Each SSID can be up to 32 characters long and is case-sensitive.
Wired Equivalent Privacy (WEP)	A form of data encryption for WLAN security. The WEP key information in the client computer must match the WEP key used by the access point or host computer. The WEP key can be enabled or disabled. The WEP key is case-sensitive.

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