

ENGLISH  
FRANÇAIS

# nexus 4

Quick Start Guide  
Guide de démarrage  
rapide



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ENGLISH

# nexus 4

## Quick Start Guide

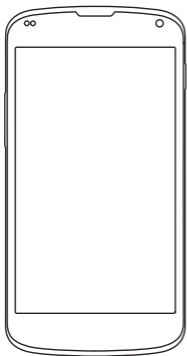
For online help and support, visit  
[support.google.com/nexus](http://support.google.com/nexus)

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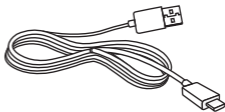
The content of this guide may differ in some details from the product or its software. All information in this document is subject to change without notice.

For online help and support, visit [support.google.com/nexus](http://support.google.com/nexus)

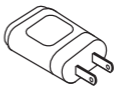
## What's in the box



Nexus 4



Micro USB cable



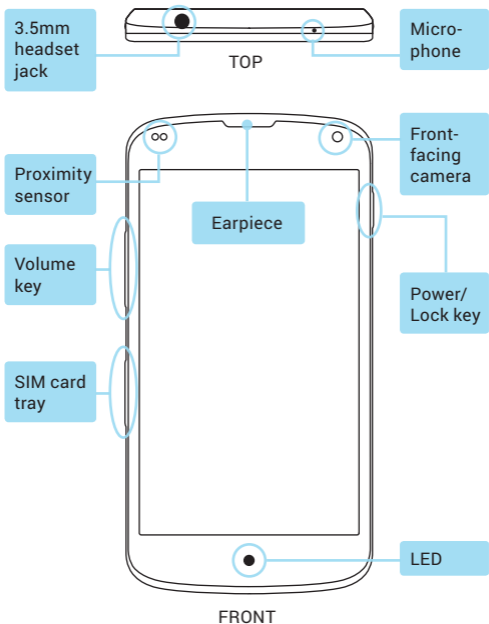
Travel adapter

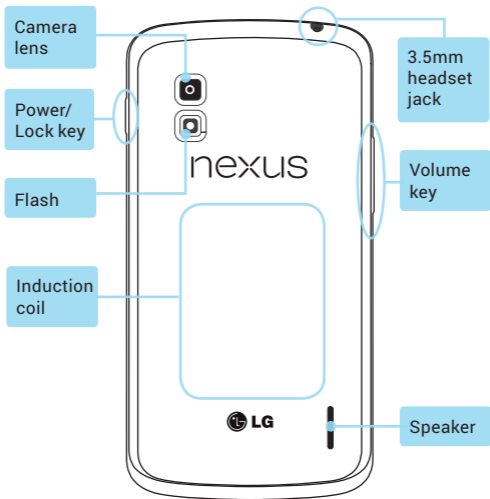


SIM ejection tool

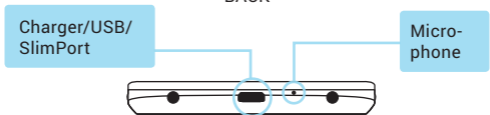
- If any item is damaged or missing, contact your point of purchase for assistance.
- Use only approved accessories.
- Accessories may vary by country or region.

## Your Nexus 4





BACK

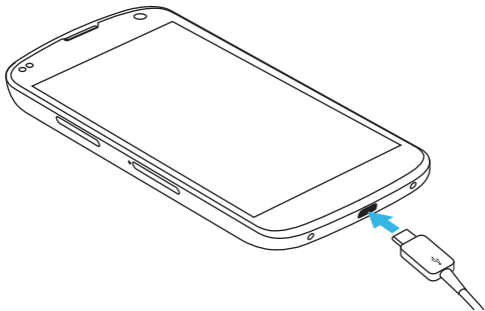


BOTTOM

## Charge the battery

Your battery will not be fully charged when you first unpack your Nexus 4. It's a good idea to fully charge the battery as soon as you get a chance.

If you're using the travel adapter that comes with the phone, connect one end of the data cable to the charger port at the bottom of the phone, and the other end to the travel adapter. Then connect the travel adapter to a power outlet.





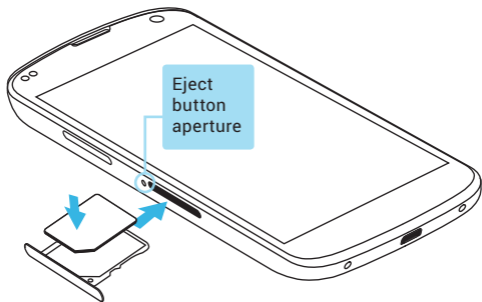
- The travel adapter varies by country or region.
- Use only the travel adapter and Micro USB cable that come with your Nexus 4. Using a different travel adapter or cable may damage your phone.
- The input voltage range between the wall outlet and this travel adapter is AC 100V–240V, and the travel adapter's output voltage is DC 5V, 1.2A.
- Charging your phone through a USB cable attached to another device, such as a laptop computer, takes longer than charging with a travel adapter.
- Nexus 4's battery can't be removed. Don't attempt to open the phone.

If you're using a wireless charger, see the instructions that come with the charger.

**IMPORTANT:** If you use a wireless charger, you must use an approved model and only as directed. The Nexus 4 travel adapter may not generate enough current to power a wireless charger.

## Insert Micro SIM card & turn on phone

Before you start using your phone, you may need to insert your Micro SIM card. If no card is installed, the message “No SIM card” appears on the phone’s lock screen.



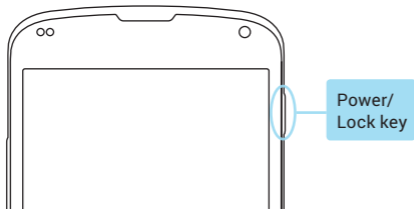
The SIM card tray is located on the left side of the phone below the volume button. The eject button is a small round aperture just above the tray door. To install a new Micro SIM card:

1. Insert the SIM ejection tool that comes with the phone (or a thin pin) into the eject button aperture, and push firmly but gently until the tray pops out.

2. Remove the tray and place the micro SIM card inside it, with the contacts out and the angled corner to the right. There is only one possible way to fit the card snugly into the tray.
3. Carefully reposition the tray in the slot and push it gently back into the phone.

**TIP:** Your phone's IMEI identification number is on the SIM card tray. You may need this number later to identify your phone for service purposes. Write the IMEI number down in your QSG or take a photo of the label on the product box.

**To turn on your Nexus 4**, press and hold the Power button on the right edge near the top for a few seconds.



When Nexus 4 is on, press the Power button again to put it into sleep mode or wake it up.

**To turn off your Nexus 4**, press and hold the Power button until a confirmation dialog appears. Then touch **OK** to complete the shut down.

To restart your Nexus 4 if it becomes unresponsive, press and hold the Power/Lock key for at least 10 seconds.

**TIP:** To quickly silence your phone or toggle airplane mode, press and hold the power button for one or two seconds to see a quick confirmation dialog – even from the lock screen.

## Set up your Nexus 4

The first time you turn on your phone, you'll see a Welcome screen. To choose a different language, touch the menu. Then touch **Start** and follow the on-screen instructions.



A series of screens takes you through the setup process. If you already have Gmail, use your Gmail address and password when asked. If you don't have Gmail or any other Google Account, go ahead and create one.

A Google Account lets you access your personal information from any computer or mobile device:

- **Access from anywhere.** View your email messages, text messages, or social stream no matter where you are or what computer or mobile device you're using – as long as you have a Wi-Fi or mobile data connection. The same goes for Play music, movies, or books in your Google Play libraries.
- **Never lose your contacts again.** When you sign into your phone with a Google Account, all the contacts you associate with that account in the People

app are automatically backed up. They're always accessible through your Google Account from any computer or mobile device.

- **Keep your stuff secure and available.** Google works around the clock to protect your personal data from unauthorized access and to ensure that you get it when you need it, wherever you need it.
- **Synchronize and back up all your data.** Whether you draft an email, add a contact, add an event to your calendar, or take a photo, your work gets backed up continuously by Google and synchronized with any computer where you use the same Google Account.
- **Use other Google services.** Your Google Account also lets you take full advantage of any other Google apps and services that you may want to use, such as Gmail, Google Maps Navigation, Google Play, YouTube, Google+, and many more.

If you skipped some of the steps in the Setup Wizard, you can configure new accounts (including Gmail) and adjust many other settings at any time. Touch the  All Apps icon from any Home screen, then  Settings.

For additional help and support, visit [support.google.com/nexus](http://support.google.com/nexus).

## Airplane precautions

Check with airline personnel if you want to use your Nexus 4 on board an aircraft. Most airlines have restrictions for using electronic devices. Most airlines allow electronic use only between and not during takeoffs and landings.

There are three main types of airport security devices: X-ray machines (used on items placed on conveyor belts), magnetic detectors (used on people walking through security checks), and magnetic wands (hand-held devices used on people or individual items). You can send your Nexus 4 through airport X-ray machines. But do not send your Nexus 4 through airport magnetic detectors or expose it to magnetic wands.

# For Your Safety

## Important Information

This user guide contains important information on the use and operation of this phone. Please read all the information carefully for optimal performance and to prevent any damage to or misuse of the phone. Any changes or modifications not expressly approved in this user guide could void your warranty for this equipment.

## Before You Start

### Safety Instructions

**WARNING:** To reduce the possibility of electric shock, do not expose your phone to high humidity areas, such as the bathroom, swimming pool, etc.

**Always store your phone away from heat.** Never store your phone in settings that may expose it to temperatures less than 32°F (0°C) or greater than 104°F (40°C), such as outside during extreme weather conditions or in your car on a hot day. Exposure to



excessive cold or heat will result in malfunction, damage and/or catastrophic failure.

**Be careful when using your phone near other electronic devices.**

RF emissions from your mobile phone may affect nearby electronic equipment. You should consult with manufacturers of any personal medical devices such as pacemakers and hearing aides to determine if they are susceptible to interference from your mobile phone.

Turn off your phone in a medical facility or at a gas station.

**IMPORTANT!** Please read the TIA Safety Information found below before using your phone.

## Safety Information

Read these simple guidelines. Breaking the rules may be dangerous or illegal. Further detailed information is given in this user guide.

- Never place your phone in a microwave oven as it will cause the battery to explode.
- Your phone contains an internal battery. Do not dispose of your phone near fire or with hazardous or flammable waste. You should dispose of your phone in accordance with all applicable laws.
- Make sure that no sharp-edged items come into contact with the battery. There is a risk of this causing a fire.
- Be careful that children do not swallow any parts such as

rubber plugs (earphone, connection parts of the phone, etc.). This could cause asphyxiation or suffocation.

- Unplug the power cord and charger during lightning storms to avoid electric shock or fire.
- When riding in a car, do not leave your phone or set up the hands-free kit near to the air bag. If wireless equipment is improperly installed and the air bag is activated, you may be seriously injured.
- Do not use a hand-held phone while driving.
- Do not use the phone in areas where its use is prohibited. (For example: aircraft).
- Do not expose the battery charger or adapter to direct sunlight or use it in places with high humidity, such as a bathroom.
- Never store your phone in temperatures less than  $-4^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$ ) or greater than  $122^{\circ}\text{F}$  ( $50^{\circ}\text{C}$ ).
- Do not use harsh chemicals (such as alcohol, benzene, thinners, etc.) or detergents to clean your phone. There is a risk of this causing a fire.
- Do not drop, strike, or shake your phone severely. Such actions may harm the internal circuit boards of the phone.
- Do not use your phone in high explosive areas as the phone may generate sparks.
- Do not damage the power cord by bending, twisting, pulling, or heating.
- Do not use the plug if it is loose as it may cause a fire or electric shock.
- Do not place any heavy items on the power cord. Do not allow the power cord to be crimped as it may cause fire or electric

shock.

- Do not handle the phone with wet hands while it is being charged. It may cause an electric shock or seriously damage your phone.
- Do not disassemble the phone.
- Do not place or answer calls while charging the phone as it may short-circuit the phone and/or cause electric shock or fire.
- Only use the antennas and chargers provided by LG. The warranty will not be applied to products provided by other suppliers.
- Only authorized personnel should service the phone and its accessories. Faulty installation or service may result in accidents and consequently invalidate the warranty.
- Do not hold or let the antenna come in contact with your body during a call.
- An emergency call can be made only within a service area. For an emergency call, make sure that you are within a service area and that the phone is turned on.
- Use accessories, such as earphones and headsets, with caution. Ensure that cables are tucked away safely and do not touch the antenna unnecessarily.
- Do not attempt to repair or modify the device yourself. Your device is equipped with an internal rechargeable battery which should be replaced only by LG or an authorized LG repair center. You should never attempt to open or disassemble this device yourself and doing so may cause damage that voids your warranty.

## Memory card information and care

- Always insert/ remove the memory card while the handset power is off. If you remove it while the power is on, it may be damaged.
- If a damage cannot be fixed, format the memory card.
- The memory card cannot be used for recording copyright protected data.
- Do not write forcefully on the memo area.
- Carry and store the memory card in its case.
- Do not allow the memory card to get wet.
- Do not leave the memory card in extremely hot location.
- Do not disassemble or modify the memory card.

## HAC

This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service provider or phone retailer.

# FCC RF Exposure Information

## **WARNING**

Read this information before operating the phone.

In August 1996, the Federal Communications Commission (FCC) of the United States, with its action in Report and Order FCC 96-326, adopted an updated safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies.

The design of this phone complies with the FCC guidelines and these international standards.

## **CAUTION**

Use only the supplied and approved antenna. Use of unauthorized antennas or modifications could impair call quality, damage the phone, void your warranty and/or result in violation of federal regulations. Do not use the phone with a damaged antenna. If a damaged antenna comes into contact with skin, a minor burn may result. Contact your local dealer for a replacement antenna.

## **Body-worn Operation**

This device was tested for typical body-worn operations with the back of the phone kept 1 cm (0.39 inches) between the user's body and the back of the phone. To comply with federal RF exposure requirements, a minimum separation distance of 1 cm (0.39 inches) must be maintained between the user's body and the back of the phone.

Third-party belt-clips, holsters, and similar accessories containing metallic components should not be used.

Body-worn accessories that cannot maintain 1 cm (0.39 inches) separation distance between the user's body and the back of the phone, and have not been tested for typical body-worn operations may not comply with federal RF exposure limits and should be avoided.

## **Vehicle Mounted External Antenna (optional, if available)**

A minimum separation distance of 20cm (8 inches) must be maintained between the user/bystander and the vehicle mounted external antenna to satisfy federal RF exposure requirements. For more information about RF exposure, visit the Industry Canada website at [www.ic.gc.ca](http://www.ic.gc.ca) or the Health Canada website at [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

## FCC Part 15 Class B Compliance

This device and its accessories comply with part 15 of FCC rules and ICES-003 Class B digital apparatus requirements for Industry Canada.

Operation is subject to the following two conditions:

(1) This device and its accessories may not cause harmful interference, and (2) this device and its accessories must accept any interference received, including interference that may cause undesired operation.

## Battery Disposal

Your phone contains an embedded, internal battery. Please dispose of your phone properly or bring it to our local wireless carrier or other appropriate facility for recycling. Do not dispose of your phone in a fire or with hazardous or flammable materials.

## Adapter (Charger) Cautions

- Using the wrong battery charger could damage your phone and void your warranty.
- The adapter or battery charger is intended for indoor use only.

Do not expose the adapter or battery charger to direct sunlight or use it in places with high humidity, such as the bathroom.

## Avoid damage to your hearing

- Damage to your hearing can occur if you are exposed to loud sounds for long periods of time. We therefore recommend that you do not turn on or off the handset close to your ear. We also recommend that music and call volumes are set to a reasonable level.
- If you are listening to music whilst out and about, please ensure that the volume is at a reasonable level so that you are aware of your surroundings. This is particularly imperative when attempting to cross the street.

## Wi-Fi Caution

This device is capable of operating in 802.11 a/n mode. For 802.11a/ n devices operating in the frequency range of 5.15 – 5.25 GHz, they are restricted for indoor operations to reduce any potential harmful interference for of Mobile Satellite Services (MSS) in the US. WIFI Access Points that are capable of allowing your device to operate in 802.11 a/n mode(5.15 – 5.25 GHz band) are optimized for indoor use only.If your WIFI network is capable of operating in this mode, please restrict your WIFI use indoors to not violate federal regulations to protect Mobile Satellite.



# Safety Guidelines

## **TIA Safety Information**

Provided herein is the complete TIA Safety Information for Wireless Handheld phones. Inclusion of the text covering Pacemakers, Hearing Aids, and Other Medical Devices is required in the owner's manual for CTIA Certification. Use of the remaining TIA language is encouraged when appropriate.

## **Exposure to Radio Frequency Signal**

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals. In August, 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones.

Those guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies:

ANSI C95.1 (1992) \*

NCRP Report 86 (1986)

ICNIRP (1996)

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1).

\* American National Standards Institute; National Council on Radiation Protection and Measurements; International Commission on Non-Ionizing Radiation Protection

The design of your phone complies with the FCC guidelines (and those standards).

## Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate federal regulations.

## Phone Operation

**NORMAL POSITION:** Hold the phone as you would any other telephone with the antenna pointed up and over your shoulder.

## Tips on Efficient Operation

For your phone to operate most efficiently:

- Do not touch the antenna unnecessarily when the phone is in use. Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

## Driving

Check the laws and regulations on the use of wireless phones in the areas where you drive. Always obey them. Also, if using your phone while driving, please:

- Give full attention to driving - driving safely is your first responsibility;
- Use hands-free operation, if available;
- Pull off the road and park before making or answering a call if driving conditions so require.

## Electronic Devices

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone.

## Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of six (6") inches be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers:

- Should ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON;
- Should not carry the phone in a breast pocket.

- Should use the ear opposite the pacemaker to minimize the potential for interference.
- If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

## Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider.

## Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

## Health Care Facilities

Turn your phone OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may use equipment that could be sensitive to external RF energy.

## **Vehicles**

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.

You should also consult the manufacturer of any equipment that has been added to your vehicle.

## **Posted Facilities**

Turn your phone OFF in any facility where posted notices so require.

## **Aircraft**

Federal regulations prohibit using your phone while in the air. Turn your phone OFF before boarding an aircraft.

## **Blasting Areas**

To avoid interfering with blasting operations, turn your phone OFF when in a 'blasting areas or in areas posted: 'Turn off two-way radio'. Obey all signs and instructions.

## Potentially Explosive Atmosphere

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, marked clearly. Potential areas may include: fueling areas (such as gasoline stations); below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles (such as grain, dust, or metal powders); and any other area where you would normally be advised to turn off your vehicle engine.

## For Vehicles Equipped with an Air Bag

An air bag inflates with great force. DO NOT place objects, including either installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

## Safety Information

Please read and observe the following information for safe and proper use of your phone and to prevent damage. Also, keep the user guide in an accessible place at all the times after reading it.

### Charger and Adapter Safety

- The charger and adapter are intended for indoor use only.
- Only use the appropriate LG approved battery charger for your phone. Otherwise, you may cause serious damage to your phone.

### Battery Information and Care

- The battery does not need to be fully discharged before recharging.
- Use only LG-approved chargers specific to your phone model since they are designed to maximize battery life.
- Do not disassemble or impact the battery as it may cause electric shock, short-circuit, and fire.
- Keep the battery's metal contacts clean.
- Take your phone to an authorized service centre to have your battery replaced when it no longer provides acceptable performance. The battery can be recharged several hundred times before replacement.
- Recharge the battery after long periods of non-use to maximize battery life.

- Battery life will vary due to usage patterns and environmental conditions.
- Use of extended backlighting, Media Net Browsing, and data connectivity kits affect battery life and talk/standby times.
- The self-protection function of the battery cuts the power of the phone when its operation is in an abnormal state.
- Actual battery life will depend on network configuration, product settings, usage patterns, battery and environmental conditions.
- Make sure that no sharp-edged items such as animal's teeth or nails, come into contact with the battery. This could cause a fire.
- The battery pack has protection circuit to avoid danger. Do not use near a place that generates more than 100v of static electricity because this will damage the protection circuit. If the protection circuit were broken, the battery would generate smoke, rupture or flame
- Always unplug the charger from the wall socket after the phone is fully charged to save unnecessary power consumption.
- Never store your phone in temperature less than -20°C or greater than 50°C.
- Charge the battery in range between 0°C – 45°C. Do not charge the battery out of recommended temperature range. Charging out of recommended range might cause the generating heat or serious damage of battery. And also, it might cause the deterioration of battery's characteristics and cycle life.



- Do not use or leave the battery under the blazing sun or in heated car by sunshine. The battery may generate heat, smoke or flame. And also, it might cause the deterioration of the battery.

## **Explosion, Shock, and Fire Hazards**

- Do not put your phone in a place subject to excessive dust and keep the minimum required distance between the power cord and heat sources.
- Unplug the power cord prior to cleaning your phone, and clean the power plug pin when it is dirty.
- When using the power plug, ensure that it is firmly connected. If it is not, it may cause excessive heat or fire.
- If you put your phone in a pocket or bag without covering the receptacle of the phone (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the phone. Always cover the receptacle when not in use.
- Do not short-circuit the battery. Metallic articles such as a coin, paperclip or pen in your pocket or bag may short-circuit the + and – terminals of the battery (metal strips on the battery) upon moving. Short-circuiting of the terminal may damage the battery and cause an explosion.

## General Notice

- Using a damaged battery or placing a battery in your mouth may cause serious injury.
- Do not place items containing magnetic components such as a credit card, phone card, bank book or subway ticket near your phone. The magnetism of the phone may damage the data stored in the magnetic strip.
- Talking on your phone for a long period of time may reduce call quality due to heat generated during use.
- When the phone is not used for a long period time, store it in a safe place with the power cord unplugged.
- Using the phone in proximity to receiving equipment (i.e., TV or radio) may cause interference to the phone.
- Do not use the phone if the antenna is damaged. If a damaged antenna contacts skin, it may cause a slight burn. Please contact an LG Authorized Service Centre to replace the damaged antenna.
- Do not immerse your phone in water. If this happens, turn it off immediately. If the phone does not work, take it to an LG Authorized Service Centre.
- Do not paint your phone.
- The data saved in your phone might be deleted due to careless use, repair of the phone, or upgrade of the software. Please backup your important phone numbers. (Ring tones, text messages, voice messages, pictures, and videos could also be deleted.) The manufacturer is not liable for damage due to the loss of data.

- When you use the phone in public places, set the ring tone to vibration so as not to disturb others.
- Do not turn your phone on or off when putting it near your ear.
- Your phone is an electronic device that generates heat during normal operation. Extremely prolonged, direct skin contact in the absence of adequate ventilation may result in discomfort or minor burns. Therefore, use care when handling your phone during or immediately after operation.

## **Caution: Avoid potential hearing loss.**

Prolonged exposure to loud sounds (including music) is the most common cause of preventable hearing loss. Some scientific research suggests that using portable audio devices, such as portable music players and cellular telephones, at high volume settings for long durations may lead to permanent noise-induced hearing loss. This includes the use of headphones (including headsets, earbuds and Bluetooth® or other wireless devices). Exposure to very loud sound has also been associated in some studies with tinnitus (a ringing in the ear), hypersensitivity to sound and distorted hearing. Individual susceptibility to noise-induced hearing loss and other potential hearing problems varies. The amount of sound produced by a portable audio device varies depending on the nature of the sound, the device, the device settings and the headphones. You should follow some commonsense recommendations when using any portable audio device:

- Set the volume in a quiet environment and select the lowest volume at which you can hear adequately.
- When using headphones, turn the volume down if you cannot hear the people speaking near you or if the person sitting next to you can hear what you are listening to.
- Do not turn the volume up to block out noisy surroundings. If you choose to listen to your portable device in a noisy environment, use noise-cancelling headphones to block out background environmental noise.
- Limit the amount of time you listen. As the volume increases, less time is required before your hearing could be affected.
- Avoid using headphones after exposure to extremely loud noises, such as rock concerts, that might cause temporary hearing loss. Temporary hearing loss might cause unsafe volumes to sound normal.
- Do not listen at any volume that causes you discomfort. If you experience ringing in your ears, hear muffled speech or experience any temporary hearing difficulty after listening to your portable audio device, discontinue use and consult your doctor.

# FDA Consumer Update

The U.S. Food and Drug Administration Centre for Devices and Radiological Health Consumer Update on Mobile Phones.

## **1. Do wireless phones pose a health hazard?**

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radio frequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the standby mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

## **2. What is the FDA's role concerning the safety of wireless phones?**

Under the law, the FDA does not review the safety of radiation emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radio frequency energy (RF) at a level that is hazardous to the user. In such a case, the FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace, or recall the phones so that the

hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, the FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;
- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- Cooperate in providing of wireless phones with the best possible information on possible effects of wireless phone use on human health.

The FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Occupational Safety and Health Administration (Administración de la seguridad y salud laborales)
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

The National Institutes of Health participates in some interagency working group activities, as well.

The FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. The FCC relies on the FDA and

other health agencies for safety questions about wireless phones. The FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the subject of the safety questions discussed in this document.

### **3. What kinds of phones are the subject of this update?**

The term ‘wireless phone’ refers here to handheld wireless phones with built-in antennas, often called ‘cell’, ‘mobile’, or ‘PCS’ phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user’s head. These RF exposures are limited by FCC safety guidelines that were developed with the advice of the FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person’s RF exposure decreases rapidly with increasing distance from the source. The so-called “cordless phones” which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.

### **4. What are the results of the research done already?**

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have

yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer causing chemicals so as to be predisposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health. Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures.

However, none of the studies can answer questions about longterm exposures, since the average period of phone use in these studies was around three years.

#### **5. What research is needed to decide whether RF exposure from wireless phones poses a health risk?**

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting



effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer.

This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

#### **6. What is the FDA doing to find out more about the possible health effects of wireless phone RF?**

The FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF). The FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The project has also helped develop a series of public information documents on EMF issues. The FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. The FDA provides the scientific oversight, obtaining input from experts in government,

industry, and academic organizations. CTIA funded research is conducted through contracts with independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

#### **7. How can I find out how much radiofrequency energy exposure I can get by using my wireless phone?**

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. The FCC established these guidelines in consultation with the FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects. Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

## **8. What has the FDA done to measure the radiofrequency energy coming from wireless phones?**

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, 'Recommended Practice for Determining the Spatial- Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques,' sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue simulating model of the human head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

## **9. What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone?**

If there is a risk from these products - and at this point we do not know that there is - it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless

phone will reduce RF exposure. If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna. Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

#### **10. What about children using wireless phones?**

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

## **11. What about wireless phone interference with medical equipment?**

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, the FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by the FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI. The FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a 'compatible' phone and a 'compatible' hearing aid at the same time. This standard was approved by the IEEE in 2000. The FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, the FDA will conduct testing to assess the interference and work to resolve the problem.

## **12. Where can I find additional information?**

For additional information, please refer to the following resources:  
FDA web page on wireless phones (<http://www.fda.gov/>)

Federal Communications Commission (FCC) RF Safety Program  
(<http://www.fcc.gov/oet/rfsafety>)

International Commission on Non-Ionizing Radiation Protection  
(<http://www.icnirp.de>)

World Health Organization (WHO) International EMF Project  
(<http://www.who.int/emf>)

National Radiological Protection Board (UK)  
(<http://www.nrpb.org.uk/>)

Industry Canada  
(<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>)

## **10 Driver Safety Tips**

Your wireless phone gives you the powerful ability to communicate by voice almost anywhere, anytime. An important responsibility accompanies the benefits of wireless phones, one that every user must uphold. When operating a car, driving is your first responsibility.

When using your wireless phone behind the wheel of a car, practice good common sense and remember the following tips:

1. Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features

most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.

2. When available, use a handsfree device. A number of handsfree wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.
3. Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can reach it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voicemail answer it for you.
4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.
5. Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to-do" list while driving a car, you are not watching where you are going. It is common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try

to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip – dial only a few numbers, check the road and your mirrors, then continue.

7. Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix; they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
8. Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations – with your phone at your side, help is only three numbers away. Dial 911 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!
9. Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a “Good Samaritan” in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 911 or other local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special wireless nonemergency assistance number when necessary. Certain situations you encounter while driving may require attention,



but are not urgent enough to merit a call for emergency services. But you can still use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or you see a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

For more information, please call to 888-901-SAFE, or visit our website [www.ctia.org](http://www.ctia.org)

## **Consumer Information on SAR (Specific Absorption Rate)**

### **This Model Phone Meets the Government's Requirements for Exposure to Radio Waves.**

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the federal government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR.

The SAR limit set by the Industry Canada is 1.6 W/kg. \* Tests for SAR are conducted using standard operating positions with the phone transmitting at its highest certified power level in all tested frequency bands.

Although SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. Because the phone is designed to operate at multiple power levels to use only the power required to reach the network, in general, the closer you are to a wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required for each model.

The highest SAR value for this model phone when tested for use at the ear is 0.56 W/kg and when worn on the body, as described in this user's manual, is 1.27 W/kg. (Body-worn measurements differ among phones models, depending upon available accessories and FCC/IC requirements.) While there may be differences between SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The FCC and Industry Canada have granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the relevant RF emission guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/ea/fccid> after searching on FCC ID: ZNFE960.

The SAR information is also on file with Industry Canada and can be found by going to <http://www.ic.gc.ca/app/sitt/reitel/srch/nwRdSrch.do?lang=eng> and searching the following IC ID: 2703C-E960

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) website at <http://www.ctia.org/>

\* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

\* Product meets current FCC & IC Radio Frequency Exposure Guidelines.

FCC ID: ZNFE960

IC ID: 2703C-E960

## Regulatory information

Go to “**System setting > About Phone > Regulatory information**” to get the regulatory information.



# LIMITED WARRANTY STATEMENT

## 1. WHAT THIS WARRANTY COVERS:

LG offers you a limited warranty that the enclosed subscriber unit and its enclosed accessories will be free from defects in material and workmanship, according to the following terms and conditions:

1. The limited warranty for the product extends for ONE (1) year beginning on the date of purchase of the product by the original end user.
2. The limited warranty extends only to the original end user of the product and is not assignable or transferable to any subsequent purchaser/end user.
3. This warranty is good only to the original end user of the product during the warranty period as long as it is in Canada.
4. Upon request from LG, the consumer must provide information to reasonably prove the date of purchase.
5. During the applicable warranty period, LG will repair or replace at LG's sole option, without charge to the original end user, any defective component part of the phone or accessory.
6. LG may use rebuilt, reconditioned or new parts or components when repairing any product or replace a product with a rebuilt, reconditioned or new product.

## 2. WHAT THIS WARRANTY DOES NOT COVER:

1. Defects or damages resulting from use of the product in other than its normal and customary manner.
2. Defects or damages from abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized connections, unauthorized repair, misuse, neglect, abuse, accident, alteration, improper installation or other acts which are not the fault of LG, including damage caused by spills of food or liquids.
3. Breakage or damage to antennas unless caused directly by defects in material or workmanship.
4. The fact that the Customer Service Department at LG was not notified by the original end user of the alleged defect or malfunction of the product, during the warranty period.

5. Products which have had their serial numbers removed or made illegible.
6. Damage resulting from use of non-LG approved accessories.
7. All plastic surfaces and all other externally exposed parts that are scratched or damaged due to normal customer use.
8. Products serviced by non-authorized persons or companies.

**Notes:**

1. This limited warranty supersedes all other warranties, expressed or implied either in fact or by operations of law, statutory or otherwise, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose.
2. Shipping damage is the sole responsibility of the shipping company.

**3. EXCLUSION OF LIABILITY:**

No other express warranty is applicable to this product.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN. LG ELECTRONICS CANADA, INC. SHALL NOT BE LIABLE FOR THE LOSS OF THE USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE, THIS PRODUCT OR FOR ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY APPLICABLE TO THIS PRODUCT.

**4. HOW TO GET WARRANTY SERVICE:**

To obtain warranty service, please call the following telephone number from anywhere in Canada:

LG Electronics Canada, Inc.

Tel. 1-888-LG-Canada (1-888-542-2623)

[http://www.lg.com/ca\\_en](http://www.lg.com/ca_en) (see links to "Support > Mobile phone support")



**LG**

Electronics Canada Inc.  
North York, Ontario