



**MOBILE ENHANCEMENT**

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Wireless Multimedia Gateway

**WMG160**

MOBILE ENHANCEMENT

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## **Safety and usage information**

Comply with the following precautions to avoid dangerous or illegal situations and ensure peak performance of your product.

- Keep your product and all accessories out of the reach of small children or animals. Small parts may cause choking or serious injury if swallowed.
- Use only Samsung-approved accessories. Using incompatible accessories may damage your product or cause injury.
- Avoid exposing your product to very cold or very hot temperatures (below -10° C/14° F or above 40° C/104° F).
- Do not allow your product to get wet—liquids can cause serious damage. Do not handle your product with wet hands. Water damage to your product can void your manufacturer's warranty.
- Allowing unqualified personnel to service your product may result in damage to your product and will void your warranty.
- Avoid using or storing your product in dusty, dirty areas to prevent damage to moving parts.
- Your product is a complex electronic product—protect it from impacts and rough handling to avoid serious damage.

Follow these instructions to connect your Wireless Multimedia Gateway to your TV and a DMC (Digital Media Controller) using the Wi-Fi technology. Once connected, you can access files on a DMS (Digital Media Server) with the DMC and view them on your TV screen, or view files stored in a memory card.

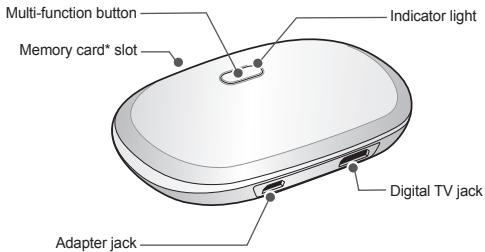


Your gateway supports the IEEE 802.11b/g/n.

## Unpack

- Gateway
- Travel adapter
- HDMI cable (for digital TVs)

## Layout

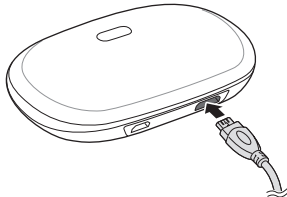


\* Your gateway accepts microSD™ or microSDHC™ memory cards up to 16 GB (depending on memory card manufacturer and type).

## Connect your gateway to a TV

To connect to a digital TV,

1. Connect the gateway to your TV with the supplied HDMI cable.



2. Switch the TV to the appropriate HDMI mode. For further details, see the TV user manual.

## Turn your gateway on

1. Connect your gateway to a TV with the HDMI cable. See "Connect your gateway to a TV."
2. Switch the TV to the appropriate HDMI mode. For further details, see the TV user manual.
3. Plug the small end of the travel adapter into the gateway and plug the large end of the travel adapter into a power outlet.
4. Press the Multi-function button until the indicator light becomes solid blue to turn the gateway on.



To turn the gateway off, press and hold the Multi-function button.



## Connect your gateway to a DMC (Digital Media Controller)

Connect the gateway to your DMC using the Wi-Fi technology.

1. Turn on the Wi-Fi feature of your DMC.
2. Press the Multi-function button to show the current Ad-hoc network WEP key.
3. When your DMC finds the WMG160\_xxx Ad hoc network, connect to it using the WEP key.

To change the WEP key,

1. Press the Multi-function button to show the current Ad-hoc network WEP key.
2. Press and hold the Multi-function button when the current WEP key is displayed.

For further details, see the DMC user manual.

## Play files stored in a DMS (Digital Media Server)

1. Open the media controller program from your DMC.

2. Select a DMS.

You can also select a memory card inserted to your gateway.

3. Select files you want to view on the TV screen.

4. Select the gateway as a media renderer.



- Due to the DRM (Digital Rights Management) system, some files may not play.
- During playback, buffering may happen depending on the connected device, or the resolution or bit rate of the playing files.

## Supported file format

- File viewer: PPT, PPTX, DOC, DOCX, PDF, XLS, HTML, TEXT
- Picture viewer: JPEG, GIF, Animated GIF, PNG, BMP, TIFF
- Music player
  - File format: MP3, WMA, AAC (M4A), OGG, FLAC, WAV (MS-PCM only)
  - Audio decoder: MP3, WMA, AAC, Vorbis, FLAC, AC3
- Video player
  - File format: AVI, ASF, MP4, WMV, 3GP, K3G, SKM, TP, MKV, MPG
  - Video decoder: DivX4/5/6, Xvid, H.263, MPEG-4 SP, H.264 MP, WMV9 (VC-1), MPEG-2, WMV7/8, DivX3.11
  - Audio decoder: MP3, AAC, AMR-NB/WB, AC3, WMA9 Standard
  - Subtitle: SMI, SRT (ASCII and Extended ASCII only)



For information about the firmware upgrade, visit <http://www.samsungmobile.com>.

## Warranty and parts replacement

Samsung warrants this product as free of defects in material, design and workmanship for the period of one year from the original date of purchase.\* If during the period of warranty this product proves defective under normal use and service you should return the product to the retailer from whom it was originally purchased or qualified service centre. The liability of Samsung and its appointed maintenance company is limited to the cost of repair and/or replacement of the unit under warranty.

- The warranty is limited to the original purchaser
- A copy of your receipt or other proof of purchase is required for a proper warranty service
- The warranty is void if the serial number, date code label or product label is removed, or if the product has been subject to physical abuse, improper installation, modification, or repair by unauthorised third parties
- Specifically exempt from any warranty are limited-life consumable components such as batteries and other accessories
- Samsung will not assume any responsibility for any loss or damage incurred in shipping. All repair work on Samsung products by unauthorised third parties voids any warranty

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\* Depending on your country, the length of warranty may vary.

## Correct disposal of this product



(Waste Electrical & Electronic Equipment)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

# Health and safety information

## **Consumer Information on devices**

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The U.S. Food and Drug Administration (FDA) has published a series of Questions and Answers for consumers relating to radio frequency (RF) exposure from devices. The FDA publication includes the following information:

### **What kinds of pdevices are the subject of this update?**

The term device refers here to hand-held devices with built-in antennas, often called “cell,” “mobile,” or “PCS” devices. These types of devices can expose the user to measurable radio frequency energy (RF) because of the short distance between the device and the user’s head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the device 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 devices," 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 well within the FCC's compliance limits.

### **Do devices pose a health hazard?**

The available scientific evidence does not show that any health problems are associated with using devices. There is no proof, however, that devices are absolutely safe. devices 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 stand-by 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.

### **What is FDA's role concerning the safety of devices?**

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

hazard and to repair, replace or recall the devices so that the hazard no longer exists.

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

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

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
- "Federal Communications Commission
- "Occupational Safety and Health Administration
- "National Telecommunications and Information Administration

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

FDA shares regulatory responsibilities for devices with the Federal Communications Commission (FCC). All devices that are sold in the United States must comply with FCC safety guidelines that limit RF



exposure. FCC relies on FDA and other health agencies for safety questions about devices.

FCC also regulates the base stations that the device networks rely upon. While these base stations operate at higher power than do the devices themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from devices. Base stations are thus not the primary subject of the safety questions discussed in this document.

### **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 radio frequency energy (RF) exposures characteristic of devices 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 pre-disposed to develop cancer in 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 devices, 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 devices 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 devices RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of device use in these studies was around three years.

### **What research is needed to decide whether RF exposure from devices poses a health risk?**

A combination of laboratory studies and epidemiological studies of people actually using devices 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 ten 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 devices. Many factors affect this measurement, such as the angle at which the device is held, or which model of device is used.

### **What is FDA doing to find out more about the possible health effects of devices RF?**

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 radio frequency energy (RF).

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.

FDA and Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wdevice safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of device users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

### **What steps can I take to reduce my exposure to radio frequency energy from my device?**

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 radio frequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a device will reduce RF exposure.

- "If you must conduct extended conversations by device 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 device away from your body or use a device connected to a remote antenna.

Again, the scientific data do not demonstrate that devices 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 device use.

### **What about children using devices?**

The scientific evidence does not show a danger to users of devices, including children and teenagers. If you want to take steps to lower exposure to radio frequency energy (RF), the measures described above would apply to children and teenagers using devices. Reducing the time of device 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 devices 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 device causes brain tumors or other ill effects. Their recommendation to limit device use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

### **Do hands-free kits for devices reduce risks from exposure to RF emissions?**

Since there are no known risks from exposure to RF emissions from devices, there is no reason to believe that hands-free kits reduce risks. Hands-free kits can be used with devices for convenience and comfort. These systems reduce the absorption of RF energy in the head because the device, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the device is mounted against the waist or other part of the body during use, then that part of the body will absorb more RF energy. Devices marketed in the U.S. are required to meet safety requirements regardless of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.

### **Do device accessories that claim to shield the head from RF radiation work?**

Since there are no known risks from exposure to RF emissions from devices, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF absorption use special device cases, while others involve nothing more than a metallic accessory attached to the device. Studies have shown that these products generally do not work as advertised. Unlike “hand-free” kits, these so-called “shields” may interfere with proper operation of the device. The device may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal Trade Commission (FTC) charged two companies that sold devices that claimed to protect device users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

## **What about device interference with medical equipment?**

Radio frequency energy (RF) from devices can interact with some electronic devices. For this reason, 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 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 device EMI. FDA has tested devices 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 devices so that no interference occurs when a person uses a compatible device and a compatible hearing aid at the same time. This standard was approved by the IEEE in 2000.

FDA continues to monitor the use of devices for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

- Additional information on the safety of RF exposures from various sources can be obtained from the following organizations:
- FCC RF Safety Program:
- <http://www.fcc.gov/oet/rfsafety/>
- Environmental Protection Agency (EPA):

- <http://www.epa.gov/radiation/>
- Occupational Safety and Health Administration's (OSHA):
- <http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>
- National institute for Occupational Safety and Health (NIOSH):
- <http://www.cdc.gov/niosh/emfpg.html>
- World health Organization (WHO):
- <http://www.who.int/peh-emf/>
- International Commission on Non-Ionizing Radiation Protection:
- <http://www.icnirp.de>
- National Radiation Protection Board (UK):
- <http://www.nrp.org.uk>
- Updated 4/3/2002: US food and Drug Administration
- <http://www.fda.gov/cellphones>

Your device gives you the powerful ability to communicate by voice, almost anywhere, anytime. But an important responsibility accompanies the benefits of devices, one that every user must uphold.

When driving a car, driving is your first responsibility. When using your device behind the wheel of a car, practice good common sense and remember the following tips:

## **Exposure to Radio Frequency (RF) Signals**

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Your device gives you the powerful ability to communicate by voice, almost anywhere, anytime. But an important responsibility

accompanies the benefits of devices, one that every user must uphold. When driving a car, driving is your first responsibility. When using your device behind the wheel of a car, practice good common sense and remember the following tips:

1. Get to know your device and its features, such as speed dial and redial. If available, these features help you to place your call without taking your attention off the road.
2. When available, use a hands-free device. If possible, add an additional layer of convenience and safety to your device with one of the many hands free accessories available today.
3. Position your device within easy reach. Be able to access your device without removing your eyes from the road. If you get an incoming call at an inconvenient time, let your voice mail answer it for you.
4. 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, ice and even heavy traffic can be hazardous.
5. Do not take notes or look up device numbers while driving. Jotting down a "to do" list or flipping through your address book takes attention away from your primary responsibility, driving safely.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary. If you need to make a call while moving, 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. Make people you are talking with aware you are driving and suspend conversations that have the potential to divert your attention from the road.
8. Use your device to call for help. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your device!
9. Use your device to help others in emergencies. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special non-emergency wireless assistance number when necessary. 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 a vehicle you know to be stolen, call roadside assistance or other special non-emergency number

**“The wireless industry reminds you to use your device safely when driving.”**

For more information, please call 1-888-901-SAFE, or visit our web-site [www.wow-com.com](http://www.wow-com.com)

Provided by the Cellular Telecommunications & Internet Association

## **Operating Environment**

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Remember to follow any special regulations in force in any area and always switch your device off whenever it is forbidden to use it, or

when it may cause interference or danger. When connecting the device or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

As with other mobile radio transmitting equipment, users are advised that for the satisfactory operation of the equipment and for the safety of personnel, it is recommended that the equipment should only be used in the normal operating position (held to your ear with the antenna pointing over your shoulder).

## **Using Your Device Near Other Electronic Devices**

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Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your device. Consult the manufacturer to discuss alternatives.

### **Pacemakers**

Pacemaker manufacturers recommend that a minimum distance of 15 cm (6 inches) be maintained between a device and a pacemaker to avoid potential interference with the pacemaker.

These recommendations are consistent with the independent research and recommendations of Wireless Technology Research.

### **Persons with pacemakers:**

- should always keep the device more than 15 cm (6 inches) from their pacemaker when the device is switched on.
- should not carry the device in a breast pocket.

- should use the ear opposite the pacemaker to minimize potential interference.

If you have any reason to suspect that interference is taking place, switch your device off immediately.

## **Hearing Aids**

Some digital devices may interfere with some hearing aids. In the event of such interference, you may wish to consult your hearing aid manufacturer to discuss alternatives.

## **Other Medical Devices**

If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information. Switch your device off in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using 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**

Switch your device off in any facility where posted notices require you to do so.

## Potentially Explosive Environments

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Switch your device 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.

Users are advised to switch the device off while at a refueling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, 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.

## FCC Notice and Cautions

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•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.

•This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

•However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device may cause TV or radio interference if used in close proximity to receiving equipment. The FCC can require you to stop using the device if such interference cannot be eliminated.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publication Sales Division.

## **Cautions**

Changes or modifications made in the radio phone, not expressly approved by Samsung, will void the user's authority to operate the equipment.

Only use approved batteries, antennas and chargers. The use of any unauthorized accessories may be dangerous and void the device warranty if said accessories cause damage or a defect to the device.

Although your device is quite sturdy, it is a complex piece of equipment and can be broken. Avoid dropping, hitting, bending or sitting on it.

## Other Important Safety Information

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- Only qualified personnel should service the device or install the device in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all device equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases or explosive materials in the same compartment as the device, its parts or accessories.
- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch your device off before boarding an aircraft. The use of device in aircraft is illegal and may be dangerous to the aircraft's operation.

Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

## Product Performance

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### Getting the Most Out of Your Signal Reception

The quality of each call you make or receive depends on the signal strength in your area. Your device informs you of the current signal

strength by displaying a number of bars next to the signal strength icon. The more bars displayed, the stronger the signal.

If you're inside a building, being near a window may give you better reception.

## **Understanding the Power Save Feature**

If your device is unable to find a signal after 15 minutes of searching, a Power Save feature is automatically activated. If your device is active, it periodically rechecks service availability or you can check it yourself by pressing any key.

Anytime the Power Save feature is activated, a message displays on the screen. When a signal is found, your device returns to standby mode.

## **Maintaining Your Device's Peak Performance**

For the best care of your device, only authorized personnel should service your device and accessories. Faulty service may void the warranty.

There are several simple guidelines to operating your device properly and maintaining safe, satisfactory service.

- Hold the device with the antenna raised, fully-extended and over your shoulder.
- Try not to hold, bend or twist the device's antenna.
- Don't use the device if the antenna is damaged.
- Speak directly into the device's receiver.



Avoid exposing your device and accessories to rain or liquid spills. If your device does get wet, immediately turn the power off and remove the battery. If it is inoperable, call Customer Care for service.

## **Availability of Various Features/Ring Tones**

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Many services and features are network dependent and may require additional subscription and/or usage charges. Not all features are available for purchase or use in all areas. Downloadable Ring Tones may be available at an additional cost. Other conditions and restrictions may apply. See your service provider for additional information.

## **Battery Standby and Talk Time**

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Standby and talk times will vary depending on device usage patterns and conditions. Battery power consumption depends on factors such as network configuration, signal strength, operating temperature, features selected, frequency of calls, and voice, data, and other application usage patterns.

## **Battery Precautions**

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- Never use any charger or battery that is damaged in any way.
- Use the battery only for its intended purpose.
- If you use the device near the network's base station, it uses less power; talk and standby time are greatly affected by the signal strength on the cellular network and the parameters set by the network operator.

- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.
- Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers. When a charger is not in use, disconnect it from the power source. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.
- Do not leave the battery in hot or cold places, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A device with a hot or cold battery may temporarily not work, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0 °C (32 °F).
- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes a direct connection between the + and - terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.

- Dispose of used batteries in accordance with local regulations. In some areas, the disposal of batteries in household or business trash may be prohibited. For safe disposal options for Li-Ion batteries, contact your nearest Samsung authorized service center. Always recycle. Do not dispose of batteries in a fire.

## Care and Maintenance

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Your device is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfill any warranty obligations and allow you to enjoy this product for many years.

- Keep the device and all its parts and accessories out of the reach of small children.
- Keep the device dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.
- Do not use the device with a wet hand. Doing so may cause an electric shock to you or damage to the device.
- Do not use or store the device in dusty, dirty areas, as its moving parts may be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device warms up to its normal operating temperature, moisture can form inside the device, which may damage the device's electronic circuit boards.

- Do not drop, knock or shake the device. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the device. Wipe it with a soft cloth slightly dampened in a mild soap-and-water solution.
- Do not paint the device. Paint can clog the device's moving parts and prevent proper operation.
- Do not put the device in or on heating devices, such as a microwave oven, a stove or a radiator. The device may explode when overheated.
- When the device or battery gets wet, the label indicating water damage inside the device changes color. In this case, device repairs are no longer guaranteed by the manufacturer's warranty, even if the warranty for your device has not expired.
- If your device has a flash or light, do not use it too close to the eyes of people or animals. This may cause damage to their eyes.
- Use only the supplied or an approved replacement antenna. Unauthorized antennas or modified accessories may damage the device and violate regulations governing radio devices.
- If the device, battery, charger or any accessory is not working properly, take it to your nearest qualified service facility. The personnel there will assist you, and if necessary, arrange for service.

**IMPORTANT NOTICE :****Fcc Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

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/fccid> after searching on FCC ID A3LWMG160.