

USER GUIDE

LM-G850EMW

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MFLXXXXXXXX (1.0)

www.lg.com

About this user guide

Thank you for choosing this LG product. Please carefully read this user guide before using the device for the first time to ensure safe and proper use.

- Always use genuine LG accessories. The supplied items are designed only for this device and may not be compatible with other devices.
- Descriptions are based on the device default settings.
- Default apps on the device are subject to updates, and support for these apps may be withdrawn without prior notice. If you have any questions about an app provided with the device, please contact an LG Service Centre. For user-installed apps, please contact the relevant service provider.
- Modifying the device's operating system or installing software from unofficial sources may damage the device and lead to data corruption or data loss. Such actions will violate your LG licence agreement and void your warranty.
- Some content and illustrations may differ from your device, depending on the area, service provider, software version, or OS version, and are subject to change without prior notice.
- Software, audio, wallpaper, images, and other media supplied with your device are licenced for limited use. If you extract and use these materials for commercial or other purposes, you may be infringing copyright laws. As a user, you are fully responsible for the illegal use of media.
- Additional charges may incur for data services, such as messaging, uploading, downloading, auto-syncing and location services. To avoid additional charges, select a data plan suitable to your needs. Contact your service provider to obtain additional details.
- This user guide is written in major languages for each country. Depending on the language used, content may partly differ.

Instructional notices



WARNING: Situations that could cause injury to the user and third parties.



CAUTION: Situations that may cause minor injury or damage to the device.



NOTE: Notices or additional information.

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Guidelines for safe and efficient use

Important information about the device

- Device apps and services are subject to change or cancellation without notice, depending on the provider's situation and the software version.
- When the device is turned on for the first time, an initial configuration takes place. The first booting time may be longer than usual.

Read before use

- To purchase optional items, contact the LG Customer Information Centre for available dealers.
- The appearance and specifications of the device are subject to change without notice.
- Do not use LG products for other purposes than those originally intended. Using non-certified apps or software may damage the device and this is not covered by warranty.

Before you begin

Safety Guidelines



- To reduce the possibility of electric shock, do not expose your product to high humidity areas, such as bathroom or swimming pool.

Keep the phone away from heat. Never store your phone in environment that may expose it to temperatures below 0 °C or above 40 °C, such as outdoor during snowstorm, or in your car in hot days. Exposure to cold or heat will result in malfunction, damage or permanent failure. Be careful when using your phone near other electronic devices. The RF emissions from mobile phones may affect nearby electronic equipment that not adequately shielded. You should consult manufacturers of any personal medical devices, as in the case of pacemakers and hearing aides, to determine whether they are susceptible to interference from cell phones. Turn off your phone in medical facilities or at gas stations. Never place your phone in microwaves, as it will cause the battery to explode.

Important

- Before using your phone, please read the SAFETY INFORMATION OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA).

Safety Information

Read these simple guidelines. Breaking the rules may be illegal or dangerous.

More detailed information is provided in this user's guide.

- Never use an unapproved battery that could cause damages to the phone or the battery itself, or even explode.
- Never place your phone in a microwave oven, as this will result in an explosion of the battery.
- Do not dispose of your battery in fire or with hazardous or flammable materials.
- Make sure the battery does not come into contact with sharp-edged items, such as animal teeth or claws. This could cause a fire.
- Store the battery in a place out of the reach of children.
- Be careful so that children do not swallow any parts of the phone, such as rubber plugs (earpiece, parts that connect to the phone, etc.). This could cause asphyxiation or suffocation.
- Disconnect the plug and charger from the outlet when the phone shows that the battery has been fully charged, because it may cause electric shock or fire hazard.
- When in the car, do not leave your phone, or install a hands-free kit, near the airbag. If wireless equipment is improperly installed, you can be seriously injured if the airbag is deployed.
- Do not use mobile phone while driving.
- Do not use the phone in areas where its usage is prohibited. (For example: in airplanes).
- Do not expose the battery charger or adapter to direct sunlight, or use it in places with high humidity, such as bathroom.
- Never store your phone in temperatures lower than -20 °C or higher than 50 °C.
- Do not use harsh chemicals (such as alcohol, benzene, solvents, etc.) or detergents to clean the phone. This could cause fire.
- Do not drop the phone, strike it, or shake it hard.

Such actions may harm the phone's internal circuit boards.

- Do not use your phone in high explosive areas, as this may generate sparks.
- Do not damage the power cord by bending, twisting, pulling, or heating it. Do not use the plug if it is loose as it may cause fire or electric shock.
- Do not handle the phone with wet hands while it is charging. This can cause electric shock or seriously damage your phone.
- Do not disassemble the phone.
- Do not make or answer calls while charging the phone, which can cause a short circuit, electric shock, or fire.
- Use only batteries and chargers provided by LG. The warranty does not apply to products provided by other providers.
- Only authorized personnel should service the phone and its accessories.
- 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.
- Emergency calls can be made only within a service area. To make an emergency call, make sure you are within a service area and the phone is on.
- Use your accessories, such as headphones or headsets, with caution, ensuring that the cables are plugged properly and that they do not touch the antenna unnecessarily.
- Do not use your device near medical equipment without requesting permission. Please consult your doctor to determine if operation of your device may interfere with the operation of your medical device.

Information about the RF exposure from FCC

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

Part 15.19 statement

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.

Part 15.21 Statement

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Body effects

This device was tested for typical body operation, keeping a distance of 1.0 cm (0.39 inch) between the user's body and the back of the phone. To comply with RF exposure requirements of the FCC standards, a minimum distance of 1.0 cm (0.39 inch) between the user's body and the back of the phone is required.

Belt-clips, holsters, and similar accessories containing metallic components from others manufacturers **included LG Electronics** should not be used.

Accessories worn close to the body, without keeping a minimum distance of 1.0 cm (0.39 inch) between the user's body and the back of the phone, and that have not been tested for typical body operation, may not comply with FCC's RF exposure limits and should be avoided.

Part 15.105 Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference 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.

Class B Compliance under article 15 of the FCC

This device and its accessories comply with Article 15 of the FCC rules.

The operation is subject to the following conditions:

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

Battery Precautions

- Do not disassemble.
- Do not short-circuit.
- Do not expose to high temperatures, over 60 °C (140 °F).
- Do not incinerate.

Battery Disposal

- Please dispose of your battery properly, or bring it to your wireless provider for recycling.
- Do not dispose of your battery in fire or with hazardous or flammable materials.

Adapter Precautions (Charger)

- Using the wrong battery charger could damage your phone and void your warranty.
- The adapter or battery charger is only designed for indoor use.
- Do not expose the battery charger or adapter to direct sunlight, or use it in places with high humidity, such as the bathroom.

Cautions for Battery

- Do not disassemble or open crush, bend or deform, puncture or shred.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, expose to fire, explosion or other hazard.
- Only use the battery for the system for which it is specified.
- Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Do not short circuit a battery or allow metallic conductive objects to contact battery terminals.
- Replace the battery only with another battery that has been qualified with the system per this standard, IEEE-Std-1725. Use of an unqualified battery may present a risk of fire, explosion, leakage or other hazard.
- Promptly dispose of used batteries in accordance with local regulations.
- Battery usage by children should be supervised.
- Avoid dropping the phone or battery. If the phone or battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- Improper battery use may result in a fire, explosion or other hazard.
- For those host devices that utilize a USB port as a charging source, the host device's user manual shall include a statement that the phone shall only be connected to products that bear the USB-IF logo or have completed the USB-IF compliance program.
- Always unplug the charger from the wall socket after the phone is fully charged to save unnecessary power consumption of the charger.

Avoid damage to your ear

- Damage to your hear can occur due to constant exposure to excessive high sound. We, therefore, recommend that you do not turn on or off the phone near your ear. We also recommend you be reasonable with the music and volume level.
- If you listen to music, please ensure that the volume level is adequate, so that you are aware of your surroundings. This is particularly important when attempting to cross a street.

Safety instructions

TIA's Safety Information

This includes complete security information on wireless phones from TIA (Telecommunications Industry Association).

It's required, for CTIA Certification, the inclusion in the user manual of text covering pacemakers, hearing aids and other medical devices. It's encouraged the use of the remaining TIA language when relevant.

Exposure to Radio Frequency Signal

Your wireless handheld portable telephone is a lowpower 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).

Suggestions for a more efficient operation

For your phone to operate most efficiently:

- Do not touch the antenna unnecessarily, when the phone is in use. The contact with the antenna affects call quality, and may cause the phone to operate at a higher power level than otherwise would be need.

Driving

Check the laws and regulations related to the use of wireless phones in the areas where you drive. Always obey these regulations. Also, if using your phone while driving, make sure to:

- Pay 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 demand so.

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.

Pacemaker

The Medical Industry Manufacturers Association recommends a minimum distance of fifteen (15) centimeters, or six (6) inches, between a handheld wireless phone and a pacemaker, in order to avoid potential interference between them.

These advices are consistent with independent researches, and with recommendations based on wireless technology research.

People with pacemakers should:

- Always keep the product more than six (6) inches from their pacemaker when the product is turned ON.
- Not carry the phone in a shirt pocket.
- Use the ear opposite to the pacemaker, to minimize the potential interference.
- If you have any reason to suspect that interference is taking place, switch off your phone immediately.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, we recommend that you contact your service provider.

Other Medical Devices

If you use any other personal medical devices, consult your device manufacturer to determine if they are adequately shielded from external RF energy. Your doctor can help you obtain this information.

Health Care Facilities

Turn off your phone in health care facilities, whenever there are signs asking 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 devices in motor vehicles.

Check with the manufacturer, or its representative, regarding your vehicle.

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

Facilities with signs

Turn off the phone in any facility where warning signs request you to do so.

Airplanes

FCC regulations prohibit the use of phones while in the air.

Turn off your phone before boarding an airplane.

Blasting Areas

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

Potentially Explosive Atmosphere

Turn off the phone when in an area with a potentially explosive atmosphere, and obey all signs and instructions.

Sparks in such areas could cause an explosion or fire that could result in personal injury or death.

Areas with a potentially explosive atmosphere are often clearly marked, but not always. Among the potentially dangerous areas are:

Fueling areas (such as gas stations), areas below deck on boats, facilities where chemical products are transferred or stored, vehicles using liquefied petroleum gas (as propane or butane), areas where the air contains chemicals or particles (such as grain, dust or metal powders), and any other areas where you would normally be advised to turn off your vehicle engine.

For vehicles equipped with air bags

Air bags inflate with strong force. Do not place objects in the area over the air bag or in its deployment area, including wireless equipment, either installed or portable.

Serious injuries could occur if wireless equipment is improperly installed into the car when the air bag inflates.

Safety Information

Read and observe the following information for the safe and proper use of your phone, and to prevent any damage.

Also, keep the user's guide in an accessible place at all times after reading it.

Charger, Adapter and Battery Security

- The charger and adapter are designed only for indoor use.
- Dispose of your battery properly, or bring it to your wireless provider for recycling.
- The battery doesn't need to be fully discharged before recharging.
- Only use LG approved chargers that are specifically made for your phone model, since they are designed to maximize the battery life.
- Do not disassemble or short-circuit it.
- Keep the metal contacts on the battery clean.
- Replace the battery when it no longer provides acceptable performance. The battery can be recharged several hundred times before replacement.
- Charge the battery after long periods without use to maximize its life.
- The battery life will vary depending on usage patterns and environmental conditions.
- Intensive use of backlighting, browser, and packet data connectivity affect battery life and talk/standby times.
- The role of self-protection interrupts the phone when its operation is in an abnormal state. In this case, remove the battery from the phone, reinstall it, and turn on the phone.

Explosion, Shock and Fire Danger

- Do not place the phone in a place exposed to excessive dust, and keep the minimum required distance between the power cord and heat sources.
- Unplug the power cord before cleaning the phone, and clean the power plug whenever it is dirty.
- When using the power plug, make sure it is firmly connected. Otherwise, it can overheat or start a fire.
- Placing the phone in a pocket or bag without covering the receptacle (power plug pin), metallic articles (such as a coin, clip or pen) may short-circuit the phone. Always cover the receptacle when not in use.
- Do not short-circuit the battery. Metal items, such as coins, paper clips, or pens, in your pocket or bag may cause a shortcircuit between the + and - terminals of the battery (metal strips on the battery). The short-circuit of the terminals may damage the battery and cause an explosion.

General Notice

- Using a damaged battery, or inserting it into the mouth can cause serious injuries.
- Do not place the phone in proximity to items containing magnetic components, such as credit cards, calling cards, bank books, or subway tickets. The phone magnetism may damage the data stored in the magnetic strip.
- Talking on the phone for a long period of time may reduce call quality, because of the heat generated during use.
- When the phone has not been in use for a long time, store it in a safe place, with the power cord unplugged.
- Using the phone close to a receiving equipment (such as TV or radio) may cause interference.
- Do not immerse your phone in water. If this happens, immediately turn it off and remove the battery. If your phone does not work, take it to an LG Authorized Service Facility.
- The power supply contains elements that could be harmful to your health, if components are handled directly. If this happens, we recommend immediate hand-washing.
- Do not paint the phone.
- Data stored in your phone might be deleted due to careless use, hardware repair or software upgrade. Please backup your important phone numbers (ringtones, text or voice messages, images, and videos might also get deleted). The manufacturer is not liable for damages due to loss of data.
- When using the phone in public places, you may set the ringer on vibrate to avoid disturbing others.
- Do not switch the phone on/off while it is in your ear.
- Repairs under warranty, at LG's discretion, may include replacement parts or boards that are either new or reconditioned, provided that they have functionality equal to that of the parts being replaced.
- Please ensure that the product does not get in contact with liquid. Do not use or recharge the product if it is wet. Once the product becomes wet, the liquid damage indicator changes color. Please note that this will limit you from receiving any free-of-charge repair services provided under warranty.

Precautions when using SIM cards

- Do not insert the SIM card into the device with the label or seal attached. This may cause damage.
- Do not remove the SIM card while using the device.
- This may damage the SIM card or the system.
- Take extra care to ensure that the SIM card is not scratched, bent, or damaged by magnet. This may delete files saved on the SIM card or cause device malfunctions.

Precautions when using memory cards

- Make sure that the orientation is correct when inserting the memory card. Inserting using the wrong orientation may damage the card.

Ambient temperatures

Use your phone in temperatures between 0 °C and 40 °C, if possible. Exposing your phone to extremely low or high temperatures may result in damage, malfunction, or even explosion.



Notice for Battery replacement

- For your safety, do not remove the battery incorporated in the product. If you need to replace the battery, take it to the nearest authorised LG Electronics service point or dealer for assistance.
- Li-Ion Battery is a hazardous component which can cause injury.
- Battery replacement by non-qualified professional can cause damage to your device.

Securing personal information

- Make sure to protect your personal information to prevent data leakage or misuse of sensitive information.
- Always back up important data while using the device. LG is not responsible for any data loss.
- Make sure to back up all data and reset the device when disposing of the device to prevent any misuse of sensitive information.
- Read the permission screen carefully while downloading applications.
- Be cautious using the applications that have access to multiple functions or to your personal information.
- Check your personal accounts regularly. If you find any sign of misuse of your personal information, ask your service provider to delete or change your account information.
- If your device is lost or stolen, change the password of your account to secure your personal information.
- Do not use applications from unknown sources.



01

Custom-designed Features

Air Motion

Air Motion overview

The ToF sensor and IR illuminator located near the front camera can recognise the location and shape of your hand to launch certain apps without touching the screen.

Show your hand to the front camera and then perform hand gestures to launch desired apps.

Air Motion bar

Air Motion feature activated



- This feature may not be available depending on some apps.
- Make sure that the ToF sensor and IR illuminator are not blocked by a sticker or any other foreign substances.
- Make sure not to move your hand too fast or bring it too far from or close to the device while using the Air Motion feature.
- If you are wearing gloves or the ToF sensor and IR illuminator are exposed to direct sunlight, the recognition accuracy may decrease.
- If you place an object which can reflect light well, the recognition accuracy may decrease or may not work properly.

Using Air Motion

You can launch the desired apps by using the Air Motion feature.

Shortcut and capture

While viewing the Home screen or using an app, you can swipe left or right in the air to open an app or pinch with all fingers to take a screenshot.

- 1 Tap  > **Settings** > **General** > **Air Motion** > **Shortcut and capture**.
- 2 Tap  to activate this feature.
- 3 Select desired apps under **Swipe left** and **Swipe right** to use as shortcuts with Air Motion.

Hand gestures

- 1 To enable Air Motion, place your palm at a distance of 6 ~ 12 cm (2 ~ 5 inches) from the device.
- 2 When the Air Motion bar appears at the top of the screen, cup your hand in the air while lifting it to the distance of 15 ~ 20 cm (6 ~ 8 inches) from the device to launch the Swipe shortcuts controller.
- 3 Swipe your hand left or right to open the desired app.
Or, pinch with all fingers to take a screenshot.

To open an app

To take a screenshot

Control music and videos

While using the music app or video player, you can pause, play or adjust volumes with your hand gestures in the air.

- 1 Tap  > **Settings** > **General** > **Air Motion** > **Control music and videos**.
- 2 Tap  to activate this feature.
- 3 Place your hand at a distance of 6 ~ 12 cm (2 ~ 5 inches) from the device to enable Air Motion.
 - When the Air Motion bar appears at the top of the screen, cup your hand in the air to launch the Player control controller.
- 4 Swipe your hand left or right to control the desired function.
 - To use the Shortcut and capture feature, swipe left. To pause or play, swipe right.

Player controller

- To adjust the volume, cup your hand and wait until the volume controller appears. Then, turn left or right to decrease or increase the volume.

Volume controller



- If you move your hand too fast or perform hand gesture too big, the volume controller feature may not work properly.

Control calls and alarms

You can receive a call or turn off notifications by swiping your hand left or right in the air.

- 1 Tap  > **Settings** > **General** > **Air Motion** > **Control calls and alarms**.
- 2 Tap  to activate this feature.
- 3 With Air Motion enabled, cup your hand at a distance of 15 ~ 20 cm (6 ~ 8 inches) from the device to launch the controller.
 - Air Motion is automatically enabled when a call is received or an alarm or timer rings.
- 4 Swipe your hand left or right to control as desired.

Alarms controller



- You can end a call by using the Air Motion feature while turning on the speakerphone, or connecting earphones and headsets to the device.
- You cannot end a video call by using the Air Motion feature.

Show hand guide

Turn this on to preview your hand gesture.

Make sure your hand stays within the guide circle while you control the Air Motion controller.

- 1 Tap  > **Settings** > **General** > **Air Motion** > **Show hand guide**.
- 2 Tap  to activate this feature.

Camera features

Triple cameras

The triple cameras, which are located on the back of the device, allow you to take photos or record videos with three different angles of view.

Tap  > , and select  /  /  while taking photos or recording videos with the rear camera.



Triple shot

The triple cameras located on the back of the device take a series of photos with different angles of view and save as a video with slide effect.

- 1 Tap  > , then tap **More > Triple shot**.
- 2 Tap  to take a photo.
 - The triple cameras take photos automatically in sequence.

- A triple shot video is automatically saved in Gallery.



- While taking a photo, hold the device steady until all 3 photos have been taken.

Triple Preview

You can preview images of different angles taken by the triple cameras located on the back of the device and select a desired angle to take a photo or record a video.

Before taking a photo, touch and hold a camera view icon to display preview icons of three angles on the right.

- The screen displays the preview image of the selected angle of view.
- After selecting a desired angle, tap  or  to take a photo or record a video.

Select
preview
icon.

Wide-Angle view

Standard-Angle view

Telephoto view



- This feature is available only in the Auto mode and AI Cam.

Studio

You can create studio level photos by using Spotlight and Backdrop features in the camera.

Spotlight

You can apply various lighting effects while taking photos.

- 1 Tap  > , then tap **Studio**.
- 2 Tap  to select a lighting effect.

Spotlight icon

Spotlight options

- 3 Tap the desired lighting effect icon.
- 4 When **Studio effect is available.** appears on the screen, tap  to take a photo.
 - The Studio feature may not work if the camera cannot recognise the subject.
 - While taking a selfie, tap  3D Lighting to adjust the colour temperature and brightness level. You can also change the light location by dragging .

Backdrop

You can apply various effects for background while taking portrait photos.

- 1 Tap  > , then tap **Studio**.
- 2 Tap  to select a backdrop effect.
- 3 Select a background colour you want to apply.

Backdrop icon

Background colours

Portrait

You can create an artistic portrait photo, whereby the subject is in focus and the background is blurred. You can also edit the image by applying lighting or colour effect to the background.



- While taking a photo, keep the distance to your subject to 1.3 ~ 5 feet.
- This feature is not available if the surroundings are too dark.

- 1 Tap  > , and tap **Portrait**.
- 2 Drag the slide bar to the left or right to adjust the blur strength.

Adjust blur strength.

- 3 When **Portrait is available.** appears on the screen, tap  to take a photo.
 - The Portrait feature may not work if the camera cannot recognise the subject.

Makeup Pro

While taking selfies, you can apply various makeup techniques.

When using the front camera, adjust the skin tone and apply eye and lip makeups.

- 1 Tap  , switch to the front camera, then tap .
- 2 Select a desired makeup option, then drag the slide bar to the left or right to adjust the effect.
 - When you select **None**, the slide bar disappears.
- 3 Tap  to take a photo.

Google Lens

You can get more information or take action on items around you using Google Lens, like landmarks, posters, restaurant menus, animals, flowers, or barcodes, directly in your device.

For example, when you use Google Lens on a:

- Business card: You can save the phone number or address to a contact.
- Book: You can get reviews and other details about it.
- Landmark or building: You can get more details about it.
- Painting in a museum: You can get details about it.
- A plant or animal: You can learn more about it.
- A flyer or event billboard: You can add that event to your calendar.



- Google Lens is available only when your device is connected to the internet. If you use mobile data, you may be charged for data usage, depending on your pricing plan.
- This function may be not supported, or the supported languages may differ depending on the service area.

Use Google Lens

- 1 Tap > , then tap .
- 2 Point your camera at an item.
- 3 To get details or take action:
 - Tap the item on your screen.
 - To select text: Tap a word, then tap it again and drag the blue dots.

AR features

You can use various AR (Augmented Reality) features with the Camera app. You can create your own My Avatar, AR Emoji, or AR Sticker for rich content. My Avatar helps you create a cartoon version of yourself and customise it. AR Emoji help you create 3D animated animal emojis that mimic facial expression. AR Sticker allows you to choose from several different stickers to use on a photo or video while facing your camera.

Creating My Avatar

- 1 Tap  > , switch to the front camera, then tap  > .
- 2 Tap  >  to take a photo.
 - Follow the on-screen instructions to align your face on the screen.
 - To make My Avatar by using one of the saved photos from Gallery, tap .

- 3 Select My Avatar's gender and select details including avatar type, skin tone, hairstyle, and clothes, then tap **OK**.

- 4 To take a photo, tap . To record a video, tap .

 - Taken photos are saved in Gallery.

Using My Avatar, AR Emoji, AR Sticker

- 1 Tap  > , switch to the front camera, then tap  > .
- 2 Select an option you want to record.

My Avatar

AR Emoji

AR Sticker

- 3 To take a photo, tap . To record a video, tap .
- Taken photos are saved in Gallery.

Using Avatar Stickers

- 1 Tap  on the LG Keyboard.
- 2 Select the desired Avatar Sticker.

Avatar
Sticker icon

Select My
Avatar.

Using Ani Sticker

- 1 Tap  on the LG Keyboard.
- 2 Select the desired My Avatar.
- 3 Tap  to record voice and video, and then tap  to save.
 - Ani Stickers with various facial expressions, motions, and voices are created.
- 4 Tap  to upload Ani Sticker.
 - Tap  to preview the created Ani Sticker.

Select an
Ani Sticker.

AI CAM

You can use the AI Cam feature to automatically recognise the object when taking a photo or recording a video for an optimal quality.

- 1 Tap  > , then tap **AI CAM**.
- 2 When the object is recognised, the best effect for the scene is applied.
 - To apply other effects, tap the scene icon.
 - A wide range of categories, such as portrait, animals, food, sunrise, sunset, landscape, sky, beach, babies, flowers and text, can be recognised automatically.



- The result of the scene recognition may differ depending on the illumination or the location of the subject while taking photos. Keywords do not appear on the actual photos or videos.

QLens

You can do shopping, search image, or scan QR code by taking a photo with **QLens**.

- 1 Tap  > , then tap **QLens**.
- 2 Select the desired option among Visual Search or Scan QR code.
- 3 Tap the screen to take a photo of the object you want to search or focus the QR code.
 - The result will appear after a moment.



- This feature is available only when your device is connected to a network. If you use mobile data, you may be charged for data usage, depending on your pricing plan.
- For Visual Search features, you can select the desired area from the image that you have taken, and then search it again.
- This feature is available only when the rear camera is in the Auto mode.
- This function may not be supported depending on the area.

Cine shot

You can record a moment and make a video with only a part of the scene in motion.

While recording a video, hold the device steady. After recorded, rub the area in the video you want in motion. The selected area starts moving and the rest of the video remains still.

- 1 Tap , then tap **More** > .
- 2 Tap to record a 3 second video.
 - Hold the device steady while recording the video.
- 3 Tap and rub the area you want in motion with the cine shot effect.

Undo

Redo

Play forward and
backward repeatedly.

Play forward repeatedly.

Select the area to move.

Erase the selected area.

- Tap to erase the selected area.
 - Tap to play the selected area in motion forward repeatedly.
 - Tap to play the selected area in motion forward and backward repeatedly.
- 4 Tap **SAVE**.
 - The selected area will be in motion.

Cine Video

You can record a movie-like video.

- 1 Tap  > .
- 2 Tap **More** > .
- 3 Tap  to record a video.
 -  : Record a video by selecting the point zoom feature to zoom in/out around a specific area.
 -  : Select an effect to apply to the recording. You can also adjust the vignette and strength for each Cine effect. This feature cannot be changed after you have started recording.



- The Point Zoom feature supports a zoom speed of up to 3x.
- This feature only supports video recordings in standard angle.

Steady cam

Use Steady Cam to prevent the camera from shaking when recording a video while walking or making large movements.

Activate Anti-shake to reduce or eliminate blurry image resulting from camera shake while recording a video.

- 1 Tap  > .
- 2 Tap **More** > .
- 3 Tap  to record a video.

Sound quality and effects features

DTS:X 3D Surround

You can play a song or video in three-dimensional, immersive and vivid sound. To use this feature, connect earphones, speaker or other external audio devices to your device.

Tap  > **Settings** > **Sound** > **Sound quality and effects**, then tap **DTS:X 3D Surround**  to activate this feature.

Adjusting the sound direction

You can adjust the sound direction as desired.

- 1 Tap  > **Settings** > **Sound** > **Sound quality and effects** > **DTS:X 3D Surround**.
- 2 Select sound direction.

Floating Bar

Floating Bar overview

You can activate frequently used features, including shortcuts, screen capture, music player, and quick contacts, by touching and then swiping the Floating Bar on the screen.

To enable the Floating Bar feature, tap  > **Settings** > **General** > **Floating Bar** .

Opening and closing the Floating Bar

- To open the Floating Bar: Tap < or >.
- To close the Floating Bar: Tap > or <.

Floating Bar

- To access the rest of the bar options, swipe left or right on the floating bar.

Moving the Floating Bar position

Touch and hold Floating Bar, then drag it to the desired location. Either way, it can be moved to any direction.

Google Assistant

Google Assistant overview

Your device has the built-in Google Assistant feature. Find answers and get things done while on-the-go. To get started, just press the Google Assistant key on the side of the device or touch and hold .



- To use this feature, first connect to the network and sign in to your Google Account.

Sign in

- 1 Touch and hold  from the Home screen to launch **Google Assistant** or press the Google Assistant key on the left side of the device.
- 2 Tap **GET STARTED**.
- 3 Follow the on-screen instructions and say **"Ok Google"**.
 - The device saves your voice data for recognition.
- 4 Select whether to use the voice recognition unlock feature.
 - When this feature is activated, you can unlock the screen by saying **"Ok Google"** while the screen is turned off or unlocked.



- This feature may be more vulnerable to security than the other screen locks, such as Knock Code, Pattern, PIN, and Password. When a similar voice or your recorded voice is used, the screen may be unlocked.
- To use this feature, tap  > **Settings > General > Lock screen & security > Secure lock settings > Smart Lock**, and then use the screen lock method you set to unlock the device. Tap **Voice Match**, then tap **Unlock with Voice Match** , then enter the currently used unlock method again. Note that Swipe is excluded.
- You need to unlock the device by using the specified method if you fail to unlock the device with voice recognition. See [Setting a screen lock](#) for details.

5 Tap **Save**.

Launching Google Assistant

- 1 You can launch the Google Assistant by using one of the following methods:
 - Touch and hold  on the Home screen.
 - Press the Google Assistant key on the left side of the device.
 - Say “**Ok Google**” when the screen is turned off or locked.
- 2 Say a command or question when you see  on the bottom of the screen.



- Voice recognition accuracy may decrease if you speak with an unclear voice or in a noisy place. When you use the voice recognition feature, increase its accuracy by speaking with a clear voice in a quiet place.

Hand ID

Hand ID overview

You can unlock the screen with your hand by using the Hand ID feature. Place your device on a flat surface and bring your hand towards the front camera to unlock the screen.



- This feature uses the saved palm vein data on your device. The recognised palm vein data is securely stored in your device.
- The ToF sensor and IR illuminator located near the front camera can recognise your palm vein patterns.
- Hand ID is considered less secure than other lock types.

Precautions for Hand ID

Hand ID recognition accuracy may decrease in the following cases. To increase its accuracy, check the following before using the device.

- Make sure that the ToF sensor and IR illuminator are not blocked by a sticker or any other foreign substances while using the Hand ID feature.
- When water, dust or other foreign substance is on the ToF sensor, IR illuminator or your hand, the Hand ID recognition may not work. Clean and dry the sensor and your hand before having the hand recognised.
- If you bend your hand, Hand ID may not be recognised. Make sure to open your hand comfortable and flat while registering and recognising Hand ID.
- Make sure that the device is parallel with your hand while registering or recognising Hand ID. If you tilt the device or your hand, registering or recognising Hand ID may not work properly.
- Make sure that your device is placed on a flat surface or placed on a stable holder.
- While using the Hand ID feature, keep the distance to your palm to 10 cm (4 inch).

ToF sensor
Front camera

Proximity/Ambient
light sensor
IR illuminator

Registering Hand ID

Before using the Hand ID feature, register your palm vein data on your device.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Hand ID**.
- 2 Tap **NEXT** and unlock the screen according to the specified method.
- 3 Place the device on a flat surface and tap **START**.
- 4 Register your palm by following the on-screen instructions.
 - Place your palm at a distance of 15 ~ 20 cm (6 ~ 8 inches) from the device.
 - When the device recognises your palm, slowly lower the palm towards the ToF sensor.
 - Tap **CONTINUE** to register again with the device placed in a different position.
- 5 When the palm registration is done, tap **OK**.

Unlocking the screen with Hand ID

You can unlock the screen with your hand.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Hand ID**.
- 2 On the Hand ID settings screen, configure the following settings:
 - **Delete hand data:** You can delete the registered Hand ID data and register it again if the Hand ID does not work properly.
 - **Cover to wake for Hand ID:** You can wake your phone and then use the Hand ID by covering the screen when the screen is off.

- **Swipe to unlock:** After your device recognises your Hand ID, you must swipe the screen to unlock it.

Fingerprint recognition

Fingerprint recognition overview

You must register your fingerprint on your device first before using the fingerprint recognition function.

You can use the fingerprint recognition function in the following cases:

- To unlock the screen.
- To view the locked content in the Gallery or QuickMemo+.
- Confirm a purchase by signing in to an app or identifying yourself with your fingerprint.



- Your fingerprint can be used by the device for user identification. Very similar fingerprints from different users may be recognised by the fingerprint sensor as the same fingerprint.
- If the device cannot detect your fingerprint, or you forgot the value specified for registration, visit the nearest LG Customer Service Centre with your device and ID card.

Precautions for fingerprint recognition

Fingerprint recognition accuracy may decrease due to a number of reasons. To maximise the recognition accuracy, check the following before using the device.

- The device has a fingerprint sensor. Ensure that the fingerprint sensor is not damaged by a metallic object, such as coin or key.
- When water, dust or other foreign substance is on the fingerprint sensor or your finger, the fingerprint registration or recognition may not work. Clean and dry your finger before having the fingerprint recognised.

- A fingerprint may not be recognised properly if the surface of your finger has a scar or is not smooth due to being soaked in water.
- If you bend your finger or use the fingertip only, your fingerprint may not be recognised. Make sure that your finger covers the entire surface of the fingerprint sensor.
- Scan only one finger for each registration. Scanning more than one finger may affect fingerprint registration and recognition.
- The device may generate static electricity if the surrounding air is dry. If the surrounding air is dry, avoid scanning fingerprints, or touch a metallic object such as a coin or a key before scanning fingerprints to remove static electricity.

Registering fingerprints

You can register and save your fingerprint on the device to use fingerprint identification.

1 Tap  > **Settings** > **General** > **Lock screen & security** > **Fingerprints**.



- A lock screen must be set in order to be able to use this feature.
- If the screen lock is not active, configure the lock screen by following the on-screen instructions. See [Setting a screen lock](#) for details.

2 Locate the fingerprint sensor on the back of the device and gently put your finger on it to register the fingerprint.



- Gently press the fingerprint sensor so that the sensor can recognise your fingerprint.
- Ensure that your finger covers the entire surface of the fingerprint sensor.

- 3 Follow the on-screen instructions.
 - Repeat scanning the fingerprint by moving your finger little by little until the fingerprint is registered.
- 4 When the fingerprint registration is done, tap **OK**.
 - Tap **ADD MORE** to register another fingerprint. If you register only one fingerprint and the corresponding finger is not in a good condition, the fingerprint recognition may not work well. As the preventive measure against this kind of situation, register multiple fingerprints.

Managing fingerprints

You can edit or delete registered fingerprints.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Fingerprints**.
- 2 Unlock according to the specified lock method.
- 3 From the fingerprint list, tap a fingerprint to rename it. To delete it, tap .

Unlocking the screen with a fingerprint

You can unlock the screen or view the locked content by using your fingerprint. Activate the desired function:

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Fingerprints**.
- 2 Unlock according to the specified lock method.
- 3 On the fingerprint settings screen, activate the desired function:
 - **Screen lock:** Unlock the screen with a fingerprint.
 - **Content lock:** Unlock content with a fingerprint. To do this, make sure that the content lock is set.

Face Unlock

Face unlock overview

You can unlock the screen lock by using the saved facial data.



- This feature may be more vulnerable to security than the other screen locks, such as Knock Code, Pattern, PIN, and Password.
- When a similar face such as a twin is used, the device may recognise it as the registered user and may be unlocked.
- The recognised facial data is securely stored in your device.
- If the device cannot detect your face, or you forgot the value specified for registration, visit the nearest LG Customer Service Centre with your device and ID card.

Precautions for Face Unlock

Face Unlock accuracy may decrease in the following cases. To increase its accuracy, check the following before using the device.

- When your face is covered with a hat, eyeglasses, sunglasses, or mask, or your face is significantly different due to heavy makeup or beard.
- When there are fingerprints or foreign substances on the front of the camera lens, or your device cannot detect your face due to too bright or dark light.

Registering facial data

Before using the Face Unlock feature, register your facial data on your device.

1 Tap  > **Settings** > **General** > **Lock screen & security** > **Face Unlock**.



- To use this feature, the screen lock must be set with a Knock Code, Pattern, PIN, or Password.
- When the screen lock is not set, register the data by following the on-screen instructions. See [Setting a screen lock](#) for details.

- 2 Tap **NEXT** and unlock the device according to the specified method.
- 3 Tap **START** and raise your device in the front of your eyes.
 - Register your face in a room that is not too bright or dark.
 - Hold the device in the distance of 25 ~ 51 cm (10 ~ 20 inches) from your face.
 - Position your entire face inside the guideline on the screen, and then move your head slowly in a circle while looking at the screen.
 - Keep still while registering your face. You can improve recognition rate by taking steady photos multiple times.



- Only one face can be registered at a time.

4 When the face registration is done, tap **OK**.

Unlocking the screen with your face

You can release the screen lock with your face instead of a Knock Code, Pattern, PIN, or Password.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Select screen lock**.
- 2 Unlock the screen according to the specified method.
- 3 Tap **Allow Face Unlock**  to allow you to unlock the screen using facial recognition.

Face Unlock options

You can customise Face Unlock options.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Face Unlock**.
- 2 Customise the following settings:
 - **Improve Face Unlock:** You can add facial data in various conditions to improve face unlock.
 - **Delete face:** You can delete the registered facial data and register it again if the face unlock does not work properly.
 - **Raise to wake up for Face Unlock:** You can wake your phone and then use Face Unlock by raising the phone when the screen is off.
 - **Swipe to unlock:** After your device recognises your face, you must swipe the screen to unlock it.
 - **Content lock:** Allow you to show locked content in Gallery and QuickMemo+ with your face.

Multi-tasking feature

Multi window

You can use two apps at the same time by separating the screen into the multiple windows.

- 1 Tap  from the Home touch buttons.
 - Recently-used apps appear.
- 2 Tap  at the top of the desired app to use the Multi window feature.
 - The selected app appears at the top half of the screen.

Alternatively,

- 1 Touch and hold  while using an app.
 - Recently-used apps appear on the split screen.
- 2 Tap  at the top of the desired app to use the Multi window feature.
 - The selected app appears at the bottom half of the screen.



- To deactivate the Multi window feature, touch and hold  on the Home touch button.
- To adjust the size of the split screen, drag  at the centre of the screen.
- The Multi window feature is not supported by some LG apps and the apps downloaded from the Play Store.

Overview screen

The Overview screen provides a preview of your recently used apps.

To view the list of recently used apps, tap  on the Home, then tap the displayed app.

- Touch and hold an app and drag it to the top of the screen to start the app with the Multi window feature. You can also tap  at the top of each app.

Always-on display

You can view the date, time or signature when the main screen is turned off.

Swipe the bottom of the Always-on display screen to activate features including Camera, Capture+, Wi-Fi, sound settings, **Bluetooth®**, Flash, Music and more.

- 1 Tap  > **Settings** > **Display** > **Always-on display**.
- 2 Select the image you want to display and tap **SAVE**.
 - Tap the desired image among **Digital clock**, **Analog clock**, **Dual clock**, **Signature**, **Calendar**, or **Image**.
 - Drag **Quick tools & music player**  to swipe over the status icons for Quick tools and the music player.
 - Tap **AI Pick**  to see useful information provided based on Context Awareness.
 - To set the time period not to activate Always-on display feature, tap **Daily timeout**.
 - To enhance brightness for the Always-on display feature, tap **Brighter display**.



- The battery may drain faster when you use Always-on display. Turn this feature off to save battery power.
- To deactivate Always-on display feature, tap  > **Settings** > **Display** > **Always-on display**, and then tap .

Quick Help

You can view help information about the main features of the device, frequently asked questions or the user guide. Search for help information using keywords. You can solve your problems quickly by consulting one-on-one with a specialist.

- 1 Tap  > **Quick Help**.
- 2 Search for help information by entering keywords in the search field.



- This feature is periodically updated utilising user feedback.
- Available menu items may vary depending on the area or service provider.
- You can view the user manual online from the Quick Help app to view detailed information about the device's features.

Notes on Water Resistant Properties

This product is water and dust resistant in compliance with the Ingress Protection rating IP68.

Your product has undergone testing in a controlled environment and is proven to be water and dust resistant in certain circumstances (meets the requirements of classification IP68 as described by the international standard IEC 60529 - Degrees of Protection provided by Enclosures [IP Code]; test conditions: 15-35 °C, 86-106kPa, 1.5 meter, for 30 minutes). Do not expose the device in conditions that are different from the test conditions. Results may vary in actual use.



WARNING

Despite a rating of IP68, your device is not impervious to conditions not tested in LG's controlled environment. Please note that any damages that occur due to such causes changes the colour of the LDI (Liquid Damage Indicator). If the colour of LDI located inside the product changes, the product is to be considered ineligible for any free-of-charge repair services provided under the product's limited warranty.

Avoid exposing the product to environments with excessive dust or moisture. Do not use the product in the following environments.



Do not immerse the product in any liquid chemicals (soap, etc.) other than water.



Do not immerse the product in salt water, including seawater.



Do not immerse the product in a hot spring.



Do not swim with this product.



Do not place the product directly on sand (such as at a beach) or mud.



Do not immerse your product in water deeper than approximately 1.5 meters.

Do not immerse your product in water for longer than 30 minutes.

- If your product becomes wet be sure to wipe the microphone, speaker, and stereo jack with a dry cloth before use.
- Should your product or your hands become wet, dry them before handling the product.
- Do not use the product in places where it may be sprayed with high pressure water (e.g. near a faucet or shower head) or submerge it in water for extended periods of time, as the product is not designed to withstand high water pressure.

- This product is not resistant to shock. Do not drop the product or subject it to shock. Doing so might damage or deform the main unit, causing water leakage.
- The product's water and dust resistant features may be damaged by dropping or receiving an impact.
- If the product gets wet, use a clean, soft cloth to dry it thoroughly.
- The touch screen and other features may not work properly if the device is used while wet.
- Your product is water resistant only when the SIM/Memory card tray is properly inserted into the product.
- Do not open or close the SIM/Memory card tray while the product is wet or immersed in water. Exposing the open tray to water or moisture may damage the product.
- The SIM/Memory card tray contains rubber [packing] to help prevent dust, water, or moisture from entering the product. Do not damage the rubber [packing] as this may allow dust, water, or moisture to enter your product and cause damage.



- Failure to follow the provided instructions may invalidate your device's limited warranty.
- If the device is wet, the LDI located inside the device changes in colour. In this case, the device is ineligible for any free-of-charge repair services provided under the device's limited warranty.
- Despite a rating of IP68, your device is not completely impervious to water in any situation.



02

Basic Functions

Product components and accessories

The following items are included with your device.

- Device
- Stereo headset
- USB cable
- Ejection pin
- Charger
- Quick Start Guide
- Jelly Phone Case



- The items described above may be optional.
- The items supplied with the device and any available accessories may vary depending on the area and service provider.
- Always use genuine LG Electronics accessories. Using accessories made by other manufacturers may affect your device's call performance or cause malfunctions. This may not be covered by LG's repair service.
- Some of the device parts are made of tempered glass. If you drop your device on a hard surface or subject it to severe impact, the tempered glass may be damaged. If this happens, stop using your device immediately and contact an LG Customer Service Centre.



- If any of these basic items are missing, contact the dealer from which you purchased your device.
- To purchase additional items, contact an LG Customer Service Centre.
- Some items in the product box are subject to change without notice.
- The appearance and specifications of your device are subject to change without notice.
- Device specifications may vary depending on the area or service provider.
- Remove the protective film from the Fingerprint sensor before use of the fingerprint recognition feature.

Parts overview

ToF sensor

Front camera lens

Volume keys (+/-)

Google Assistant key

Stereo headset jack

Rear camera lenses

Nano-SIM card tray

Speaker

Proximity/Ambient light
sensor
IR illuminator

Earpiece
Power/Lock key

Touch screen

Charger/USB cable port

Microphone

Flash

Fingerprint sensor

NFC

Wireless charging
antenna area

Microphone



Do NOT attempt to remove the back cover by yourself.

Doing so may severely damage the battery and device, which could cause overheating, fire, and injury. This device's back cover and battery are not to be removed or replaced by a non-qualified professional.

- Z Camera

- Z Camera is composed of a ToF sensor and an IR illuminator to increase the recognition accuracy in a dark place or outdoors by three-dimensionally detecting the distance or depth between the device and an object.

Z Camera

- ToF (Time-of-Flight) sensor

- Measure the accurate distance by detecting the infrared emitted from the IR illuminator.

- IR illuminator

- Emit the infrared light.

- Proximity/Ambient light sensor

- Proximity sensor: During a call, the proximity sensor turns off the screen and disables touch functionality when the device is in close proximity to the human body. It turns the screen back on and enables touch functionality when the device is outside a specific range.
- Ambient light sensor: The ambient light sensor analyses the ambient light intensity when the auto-brightness control mode is turned on.

- Volume keys
 - Adjust the volume for ringtones, calls or notifications.
 - While using the Camera, gently press a Volume key to take a photo. To take continuous photos, press and hold the Volume key.
 - Press the Volume Down key twice to launch the Camera app when the screen is locked or turned off. Press the Volume Up key twice to launch Capture+.
- Power/Lock key
 - Briefly press the key when you want to turn the screen on or off.
 - Press and hold the key when you want to select a power control option.
- Google Assistant key
 - Your device has the Google Assistant built-in. Find answers and get things done while on-the-go. To get started, just tap the Google Assistant key on the side of the phone. Press and hold the key to quickly talk to your Assistant. Press twice to open Visual Snapshot.
 - Activate Google Assistant. See the *Google Assistant* for details.
- Fingerprint sensor
 - Turn on the fingerprint recognition feature to simplify the process of unlocking the screen. See *Fingerprint recognition overview* for details.



- Some functions may be restricted for access, depending on the device specifications.
- The rear of the device includes a built-in NFC antenna. Be cautious when handling the device to avoid damaging or covering the NFC antenna.
- Do not put heavy objects on the device or sit on it. Failure to do so may damage the touch screen.
- Screen-protective film or accessories may interfere with the proximity sensor.
- If your device is wet or is being used in a humid place, the touch screen or buttons may not function properly.

Hold the device correctly as shown below. If you cover the microphone hole with a hand, finger, or protective case while using the device, you may sound unclear during a call.

Good example

Bad example

Microphone

Do not cover the microphone.

Turning the power on or off

Turning the power on

When the power is turned off, press and hold the Power/Lock key.



- When the device is turned on for the first time, initial configuration takes place. The first booting time for the smart phone may be longer than usual.

Turning the power off

Press and hold the Power/Lock key, then select Power off.

Restarting the device

When the device is not working properly or does not respond, restart it by following the instructions below.

- 1 Press and hold the Power/Lock key and the Volume Down key at the same time until the power is turned off.
- 2 When the device is restarted, release the key.

Power control options

Press and hold the Power/Lock key, then select an option.

- **Power off:** Turn the device off.
- **Power off and restart:** Restart the device.
- **Turn on Airplane mode:** Block telecommunication-related functions, including making phone calls, messaging and browsing the Internet. Other functions remain available.

Installing the SIM card

Insert the SIM (Subscriber Identity Module) card provided by your service provider to start using your device.



- Be careful with the ejection pin since it has a sharp edge.



- In order for the water-resistant and dust-resistant features to work effectively, the card tray must be inserted correctly.

1 Insert the ejection pin into the hole on the card tray.

2 Pull out the card tray.

- 3 Put the SIM card on the card tray with the gold-coloured contacts facing downwards.

Put the primary SIM card on the SIM card tray 1 and the secondary SIM card on the SIM card tray 2.



- The SIM card tray 2 also serves as the memory card tray. However, you cannot put both the SIM card and the memory card (optional) at the same time.

- 4 Insert the card tray back into the slot.



- This device supports only Nano SIM cards.



Micro



Standard



- For problem-free performance, it is recommended to use the device with the correct type of SIM card. Always use a factory-made SIM card supplied by the operator.
- Do not lose your SIM card. LG is not responsible for damage and other issues caused by loss or transfer of a SIM card.
- Be careful not to damage the SIM card when you insert or remove it.
- When you insert the SIM card or memory card, place it on the card tray correctly.
- When you insert the card tray back into the device, insert it horizontally in the direction of arrow as shown in the figure. Make sure that the card placed on the card tray does not move out of its position.
- Insert the SIM card with the gold-coloured contacts facing downwards.
- Be sure to insert the SIM card into the device by following the instructions in the user manual.
- If you insert to or remove the card tray from the device, be careful not to let water or other liquids enter into the card tray. If a wet card tray or card is inserted into the device, your device may get damaged.
- Memory card is an optional item.
- Frequent writing and erasing of data may shorten the memory card lifespan.
- Some memory cards may not be fully compatible with the device. If you use an incompatible card, it may damage the device or the memory card, or corrupt the data stored in it.

Inserting the memory card

Insert the memory card into your device.

The device can support up to a 2 TB microSD card. Depending on the memory card manufacturer and type, some memory card may not be compatible with your device.

- 1 Insert the ejection pin into the hole on the card tray.
- 2 Pull out the card tray.
- 3 Put the memory card on the card tray with the gold-coloured contacts facing downwards.

Memory card
(optional-sold separately)

SIM card

- 4 Insert the card tray back into the slot.



- Some memory cards may not be fully compatible with the device. If you use an incompatible card, it may damage the device or the memory card, or corrupt the data stored in it.



- Frequent writing and erasing of data may shorten the memory card lifespan.

Removing the memory card

Unmount the memory card before removing it for safety.

- 1 Tap  > **Settings** > **General** > **Storage** > .
- 2 Insert the ejection pin into the hole in the card tray and then pull out the card tray from the device.
- 3 Remove the memory card from the card tray.
- 4 Insert the card tray back into the slot.



- Do not remove the memory card while the device is transferring or accessing information. This may cause data to be lost or corrupted, or may damage the memory card or the device. LG is not responsible for losses that result from the abuse or improper use of memory cards, including the loss of data.

Battery

Charging the battery

Before using the device, fully charge the battery.

Charge the device with the USB Type-C cable.

Charging cable terminal



- Do not use the external terminal, charging cable or gender for the device in presence of moisture. This may cause fire, electric shock, injury, or device malfunction. If there is moisture, stop using the device immediately and remove the moisture completely.
- Make sure to use the USB cable provided with your device.
- Make sure to use an LG-approved charger and charging cable. Charging the battery with a third-party charger may cause the battery to explode or may damage the device.
- Your device has an internal rechargeable battery. For your safety, do not remove the embedded battery.
- Using the device when it is charging may cause electric shock. To use the device, stop charging it.



- Remove the charger from the power socket after the device is fully charged. This prevents unnecessary power consumption.
- A charging adapter that supports fast charging is included with the product.
- The fast charging feature may not work if a fast charging adapter other than the genuine adapter provided with the product is used.
- Another way to charge the battery is by connecting a USB cable between the device and a desktop or laptop computer. This may take a longer time than plugging the adapter to a wall outlet.
- Do not charge the battery by using a USB hub that is unable to maintain the rated voltage. Charging may fail or unintentionally stop.

Precautions when using the device

- Make sure to use the USB cable provided; do not use third party USB cables or chargers with your device. The LG limited warranty does not cover the use of third party accessories.
- Failure to follow the instructions in this guide and improper use may damage the device.

Wireless charging

This device supports wireless charging feature. Charge the device with a Qi certified wireless charger (optional, sold separately).

Charging the battery with a wireless charger

- 1 Place your device on the centre of the wireless charger aligned with the wireless charging antenna on the back of the device.
 - To check the wireless charging antenna area, see [Parts overview](#).
- 2 When the battery is fully charged, remove the device from the charger.



- When you charge the battery with a wireless charger, do not put a magnetic, metallic or conductive materials between the device and the charger. This may disturb charging or the device and the charger may become heated. In this case, the device, charger or SIM/Memory cards may be damaged.



- If the battery temperature exceeds a certain level while charging the device, charging may be stopped.
- If magnetic, metallic or conductive materials are attached on the back of the device or a protective case is inserted, the device may not charge properly.
- If you charge the battery with a wireless charger in areas where the network signal strength is weak, the network performance of your device may be further degraded.
- Charge the device with a Qi certified wireless charger (optional, sold separately). Because the LG limited warranty does not cover the use of third party accessories, contact the third party manufacturer.
- This product supports wireless charging. Use a Qi certified wireless charger (sold separately) to charge the product. Some coiled wireless chargers may not support wireless charging. Wireless chargers that support EPP (Extended Power Profile) allow high-speed wireless charging.

Using the battery efficiently

Battery lifespan may decrease if you keep many apps and functions running simultaneously and continuously.

Cancel background operations to increase battery life.

To minimise battery consumption, follow these tips:

- Turn off the Bluetooth or Wi-Fi network function when not using them.
- Set the screen timeout to as short a time as possible.
- Minimise the screen brightness.
- Set a screen lock when the device is not used.
- Check the battery level while using any downloaded apps.

Touch screen

You can familiarise yourself with how to control your device by using touch screen gestures.

Tapping

Lightly tap with your fingertip to select or run an app or option.

Touching and holding

Touch and hold for several seconds to display a menu with available options.

Double-tapping

Tap twice quickly to zoom in or out on a web page or map.

Dragging

Touch and hold an item, such as an app or widget, then move your finger to another location in a controlled motion. You can use this gesture to move an item.

Swiping

Touch the screen with your finger and move it quickly without pausing. You can use this gesture to scroll through a list, a web page, photos, screens, and more.

Pinching and spreading

Pinch two fingers to zoom out such as on a photo or map. To zoom in, spread your fingers apart.



- Do not expose the touch screen to excessive physical shock. You might damage the touch sensor.



- A touch screen failure may occur if you use the device near a magnetic, metallic or conductive material.
- If you use the device under bright lights, such as direct sunlight, the screen may not be visible, depending on your position. Use the device in a shady location or a location with an ambient light that is not too bright and bright enough to read books.
- Do not press the screen with excessive force.
- Gently tap with your fingertip on the option you want.
- Touch control may not work properly if you tap while wearing a glove or by using the tip of your fingernail.
- Touch control may not work properly if the screen is moist or wet.
- The touch screen may not function properly if a screen-protective film or accessory purchased from a third party store is attached to the device.
- Displaying a static image for extended periods of time may result in after-images or screen burn-in. Turn off the screen or avoid displaying the same image for a long time when you do not use the device.

Home screen

Home screen overview

The Home screen is the starting point for accessing various functions and apps on your device. Tap  on any screen to directly go to the Home screen.

You can manage all apps and widgets on the Home screen. Swipe the screen left or right to view all installed apps at a glance.

Home screen layout

You can view all apps and organise widgets and folders on the Home screen.

Status bar

Weather widget

Google Search widget

Page icon

Quick access area

Home touch buttons



- The Home screen may differ depending on the manufacturer policy, user settings, software version or service provider.

- **Status bar:** View status icons, the time and the battery level.
- **Weather widget:** View the information of weather and time for a specific area.
- **Google Search widget:** Type or speak to pull open Google Search.
- **Page icon:** Display the total number of Home screen canvases. You can tap the desired page icon to go to the page you selected. The icon reflecting the current canvas will be highlighted.
- **Quick access area:** Fix main apps at the bottom of the screen so that they can be accessed from any Home screen canvas.

- **Home touch buttons**

- ◀: Return to the previous screen. Close the keypad or pop-up windows.
- ○: Tap to go to the Home screen. To launch Google Assistant, touch and hold.
- □: Tap to view a list of recently used apps or run an app from the list. To delete all the recently used apps, tap **CLEAR ALL**. To use two apps at the same time with the Multi window feature, touch and hold the button while using an app.

Changing the style of the Home touch buttons

You can change the style of the Home touch buttons.

- 1 Tap ○ > **Settings** > **Display** > **Home touch buttons**.
- 2 Under **STYLE**, select **Buttons only** or **Gesture and buttons** to suit your preferences.
 - **Buttons only**: ◀ / ○ / □ are available. Tap □ to see recent apps.
 - **Gesture and buttons**: Back button ◀ and Home button ○ are available. To see recent apps, swipe the Home button ○ up.

Editing the Home touch buttons

You can rearrange the Home touch buttons or add frequently used functions to the Home touch buttons area.

Tap ○ > **Settings** > **Display** > **Home touch buttons** > **Button combination** and customise the settings.

- Several functions, including QSlide, Notification and Capture+, are provided. A maximum of two additional items can be added.

Hiding the Home touch buttons

You can hide the Home touch buttons to view in a larger screen while using an app.

- 1 Tap  > **Settings** > **Display** > **Home touch buttons** > **Hide Home touch buttons**.
- 2 Select apps to hide the Home touch buttons whiling using the app, and tap .
 - The Home touch buttons disappear 3 seconds after the last touch.
 - To view the Home touch buttons again, drag the bottom of the screen upwards.

Lock/hide icon

The icon to lock or hide the Home touch buttons appears at the bottom left of the screen.

If you want to lock the Home touch buttons while hiding the buttons, tap  on the left of the Home touch buttons.

To hide the Home touch buttons again, double-tap .



- Some features may not be supported while hiding the Home touch buttons.

Status icons

When there is a notification for an unread message, calendar event or alarm, the status bar displays the corresponding notification icon. Check your device's status by viewing notification icons displayed on the status bar.

	No signal
	Data is being transmitted over the network
	Alarm is set
	Vibrate mode is on
	Bluetooth is on
	Connected to a computer via USB
	Battery level
	Airplane mode is on
	Missed calls
	Wi-Fi is connected
	Mute mode is on
	GPS is on
	Hotspot is on
	No SIM card
	The NFC mode is on



- Some of these icons may appear differently or may not appear at all, depending on the device's status. Refer to the icons according to the actual environment and area in which you are using the device and your service provider.
- Displayed icons may vary, depending on the area or service provider.

Notifications panel

You can open the notifications panel by dragging the status bar downward on the main screen.

- To open the quick access icons list, drag the notifications panel downwards.
- To rearrange, add, or remove icons, tap **EDIT**.
- If you touch and hold the icon, the settings screen for the corresponding function appears.



- You can use the notifications panel even on the lock screen. Drag the notifications panel while the screen is locked to quickly access the desired features.

Switching the screen orientation

You can set the screen orientation to automatically switch according to the device's physical orientation.

On the notification panel, tap **Rotation** from the quick access icon list.

You can also tap ○ > **Settings** > **Display** and activate **Auto-rotate screen**.

Editing the Home screen

On the Home screen, touch and hold on an empty space, then select the desired action from below.

- To rearrange the Home screen canvases, touch and hold on a canvas, then drag it to another location.
- To add a widget to the Home screen, touch and hold on a blank area of the Home screen, then select **Widgets**.
- To change wallpapers, themes, icons, and AOD, touch and hold on a blank area of the Home screen, then select **Wallpaper & theme**.

You can also tap ○ > **Settings** > **Display** > **Wallpaper & theme**, then select wallpapers, themes, icons, and AOD, to apply to the device.

- To configure the Home screen settings, touch and hold on a blank area of the Home screen, then select **Home screen settings**. See *Home screen settings* for details.
- To view or reinstall the uninstalled apps, touch and hold on a blank area of the Home screen, then select **App trash**. See *App trash* for details.
- To change the default screen, touch and hold on a blank area of the Home screen, move to desired screen, tap , then tap the screen once more.

Default screen

Viewing the background theme

You can view only the background image by hiding the apps and widgets on the Home screen.

Spread two fingers apart on the Home screen.

- To return to the original screen, which displays apps and widgets, pinch your fingers on the Home screen or tap .

Moving apps on the Home screen

On the Home screen, touch and hold an app, then drag it to another location.

- To keep frequently used apps at the bottom of the Home screen, touch and hold an app, then drag it to the quick access area at the bottom.
- To remove an icon from the quick access area, drag the icon to the Home screen.

Using folders from the Home screen

Creating folders

On the Home screen, touch and hold an app, then drag it over another app.

- A new folder is created and the apps are added to the folder.

Editing folders

On the Home screen, tap a folder and do one of the following actions.

- To edit the folder name and colour, tap the folder name.
- To add apps, touch and hold an app, then drag it over the folder and release it.
- To remove an app from the folder, touch and hold the app and drag it to outside the folder. If the removed app is the only one app that existed in the folder, the folder is removed automatically.
- You can also add or remove apps after tapping  in the folder.



- You cannot change the folder colour while using downloaded theme.

Home screen settings

You can customise the Home screen settings.

- 1 Tap  > **Settings** > **Display** > **Home screen**.
- 2 Customise the following settings:
 - **Select Home:** Select a Home screen mode.
 - **Wallpaper:** Change the Home screen background wallpaper.
 - **Screen swipe effect:** Select an effect to apply when the Home screen canvas switches.
 - **Icon shape:** Choose if you want icons to have square or rounded corners.

- **Left Home screen:** Select what to display on the screen located left to the main Home screen.
- **Sort apps by:** Set how apps are sorted on the Home screen.
- **Grid:** Change the app arrangement mode for the Home screen.
- **Hide apps:** Select which apps you want to hide from the Home screen.
- **Loop Home screen:** Enable to allow continuous Home screen scrolling (loop back to first screen after the last screen).



- This function is available when Google feed is enabled.

- **Search:** Search by swiping down on the Home screen.
- **Home screen lock:** Enable to prevent apps and widgets from being rearranged or removed.

Screen lock

Screen lock overview

Your device's screen turns off and locks itself if you press the Power/Lock key. This also happens after the device is left idle for a specified period of time.

If you press the Power/Lock key when a screen lock is not set, the Home screen appears immediately.

To ensure security and prevent unwanted access to your device, set a screen lock.



- A screen lock prevents unnecessary touch input on the device screen and reduces battery consumption. We recommend that you activate the screen lock while not using the device.

Setting a screen lock

There are several options available for configuring the screen lock settings.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Select screen lock** and then select the method you prefer.
- 2 Customise the following settings:
 - **None**: Deactivate the screen lock function.
 - **Swipe**: Swipe on the screen to unlock the screen.
 - **Knock Code**: Tap the screen in a pattern to unlock the screen.
 - **Pattern**: Draw a pattern to unlock the screen.
 - **PIN**: Enter a numeric password to unlock the screen.
 - **Password**: Enter an alphanumeric password to unlock the screen.
 - **Fingerprints**: Unlock the screen by using your fingerprint.
 - **Allow Face Unlock**: Unlock the screen by allowing the device to recognise your face.
 - **Allow Hand ID**: Unlock the screen by allowing the device to recognise your hand ID.



- If you incorrectly attempt to unlock the device 5 times, the screen is blocked for 30 seconds.

Secure start-up settings

When you select Knock Code, Pattern, PIN or Password as a screen lock method, you can configure your device to be locked whenever turning on the device in order to secure your data.

- You cannot use all functions, except for emergency calls until you unlock the device.
- If you forget your decryption password, you cannot restore encrypted data and personal information.

Precautions for the secure start-up feature

- If you forget your decryption password, you cannot restore encrypted data and personal information.
- Be sure to keep your screen lock passwords separately.
- If you enter the screen lock passwords incorrectly more than the specified times, the device automatically resets itself and the encrypted data and your personal information are deleted automatically and they cannot be restored.
- Be cautious not to enter incorrect screen lock passwords more than the specified times.
- When you turn on the device right after the device resets, encryption also starts. If you stop the encryption arbitrarily, the data may be damaged. Be sure to wait until the reset is completed.

Customise Lock screen

You can customise lock screen.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Customize Lock screen**.
- 2 Select a function you want to set.
 - **Wallpaper**: Allow you to set the background for your Lock screen.
 - **Clock**: Allow you to set where to position the clock on the Lock screen.
 - **Shortcuts**: Allow you to choose apps to run on your Lock screen. This setting appears only when a screen lock is set.
 - **Weather animation**: Enable this option to display weather animations for the current location on the Lock screen.
 - **Contact info for lost phone**: Allow you to set text to be displayed on the Lock screen to identify the phone's owner.

Secure lock settings

You can set secure lock settings.

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Secure lock settings**.
- 2 Select a function you want to set.
 - **Make pattern visible:** Allow you to make pattern visible.
 - **Lock timer:** Allow you to set the amount of time before the screen automatically locks after the backlight turns off (time-out due to inactivity).
 - **Power key instantly locks:** Enable this option to instantly lock the screen when the Power/Lock button is pressed. This setting overrides the Security Lock timer setting.
 - **Show lockdown option:** Allow you to show power menu option to turn off Lock screen notifications, Smart Lock and biometric locks.
 - **Smart Lock:** Allow you to set trusted devices, places, voice, and/or on-body detection that will allow your phone to remain unlocked.



- Menus you can set may be different depending on lock screen methods you choose.

KnockON

You can turn the screen on or off by double-tapping the screen.



- This option is available only on the Home screen provided by LG. It may not function properly on a custom launcher or on the Home screen installed by the user.
- When tapping the screen, use your fingertip. Do not use a fingernail.
- To use the KnockON feature, make sure that the proximity/light sensor is not blocked by a sticker or any other foreign substance.

Turning the screen on

Double-tap the middle of the screen.

- Tapping the top or bottom of the screen may decrease the recognition rate.

Turning the screen off

Double-tap on an empty space on the Home screen and Lock screen.

You can also double-tap an empty space on the status bar.

Knock Code

You can unlock the screen by creating your own Knock Code. When the screen is locked, you can directly access the Home screen by tapping the screen in a specified sequence.



- You can use your Knock Code together with the KnockON feature.
- Make sure to use your fingertip when tapping the screen.

Creating a Knock Code

- 1 Tap  > **Settings** > **General** > **Lock screen & security** > **Select screen lock** > **Knock Code**.
- 2 Tap the squares in a pattern of your choice to create a Knock Code and tap **NEXT**.
- 3 Input the created Knock Code again for verification, then tap **CONFIRM**.

Unlocking the screen with a Knock Code

Unlock the screen by inputting the Knock Code you have created.

You can also input your Knock Code on the touch screen when the screen is turned off.

- It is also possible to enter a Knock Code when the lock screen is turned on.

Memory card encryption

You can encrypt and protect data saved on the memory card. The encrypted data in the memory card cannot be accessed from another device.

- 1 Tap  > **Settings > General > Lock screen & security > Encryption & credentials > Encrypt SD card.**
- 2 Read the on-screen overview of memory card encryption and then tap **CONTINUE** to continue.
- 3 Select an option and tap **ENCRYPT NOW.**
 - **New data encryption:** Encrypt only data that is saved on the memory card after encryption.
 - **Full encryption:** Encrypt all the data currently saved on the memory card.
 - **Exclude media files:** Encrypt all files, except for media files such as music, photos and videos.



- Once memory card encryption starts, some functions are not available.
- If the device is turned off while encryption is underway, the encryption process will fail, and some data may be damaged. Therefore, be sure to check if the battery level is sufficient before starting encryption.
- Encrypted files are accessible only from the device where the files were encrypted.
- The encrypted memory card cannot be used on another LG device. To use the encrypted memory card on another mobile device, format the card.
- You can activate memory card encryption even when no memory card is installed into the device. Any memory card that is installed after encryption will automatically be encrypted.

Taking screenshots

You can take screenshots of the current screen you are viewing.

Via a shortcut

Press and hold the Power/Lock key and the Volume Down key at the same time for at least two seconds.

- Screenshots can be viewed from the **Screenshots** folder in the **Gallery**.

Via Capture+

On the screen where you want to take a screenshot, drag the status bar downwards, then tap .



- When the screen is turned off or locked, you can access **Capture+** by pressing the Volume Up key twice. To use this feature, tap  **Settings** > **General** > **Shortcuts** and turn on **Open Capture+**.
- See *Writing notes on a screenshot* for details.

Entering text

Using the Smart toolbar

You can use various keyboard input methods in one place. You can select the desired input method from the top of the keyboard.

- 1 Select the desired keyboard input method from the Smart toolbar.
- 2 Tap  and select the input method you want to show on the Smart tool, or reorganise them.

Smart
toolbar



- LG keyboard is not default on your phone. You can change it from the keyboard settings.
- Some supporting input methods may differ depending on the device you have.
- You can turn on or off the Smart tool feature from the keyboard settings.
- You can also use the keyboard input methods by tapping .

-  : Add emojis.
-  : Add avatar stickers.
-  : Add ani-stickers.
-  : Tap  to enter text with your voice.
 - To maximise the voice command recognition, speak clearly.
 - To enter text with your voice, make sure that your device is connected to a network.

- To select the language for voice recognition, tap  > **Languages** on the voice recognition screen.
- This function may not be supported, or the supported languages may differ depending on the service area.
-  : Access keyboard settings.
-  : Open the clip tray. See *Clip Tray* for details
-  : Activate floating keyboard when you use the Multi-window feature. You can also move the keyboard to the desired location.

Using the Smart keyboard

You can use the Smart keyboard to enter and edit text.

With the Smart keyboard, you can view text as you type without bothering to alternate between the screen and a conventional keyboard. This allows you to easily find and correct errors when typing.

Moving the cursor

With the Smart keyboard, you can move the cursor to the exact position you want. When typing text, touch and hold on the space bar and then drag left or right.



- This option is available only on the QWERTY keyboard.

Suggesting words

Smart keyboard automatically analyses your usage patterns to suggest frequently used words as you type. The longer you use your device, the more precise the suggestions are.

Enter text, then tap a suggested word or gently drag the left or right side of the keyboard upwards.

- The selected word is automatically entered. You do not need to manually type every letter of the word.

Adding languages to the keyboard

You can make additional languages available for keyboard input.

- 1 Tap  > **Settings** > **General** > **Language & keyboard** > **On-screen keyboard** > **LG Keyboard** > **Select languages**.
- 2 Select the languages you want to make available.

Copy and Paste

You can cut or copy text from an app, and then paste the text into the same app. Or, you can run other apps and paste the text into them.

- 1 Touch and hold around the text you want to copy or cut.
- 2 Drag  to specify the area to copy or cut.
- 3 Select either **Cut** or **Copy**.
 - Cut or copied text is automatically added to the clip tray.
- 4 Touch and hold the text input window, then select **Paste**.



- If there is no item that has been copied or cut, the **Paste** option will not appear.

Clip Tray

If you copy or cut an image or text, it is automatically saved to the clip tray and can be pasted to any space at any time.

- 1 On the Smart tool, select .
You can also touch and hold the text input window, then select **Clip Tray**.
- 2 Select and paste an item from the clip tray.
 - A maximum of 20 items can be saved to the clip tray.
 - Tap  to lock saved items in order not to delete them, even when the maximum quantity is exceeded. A maximum of ten items can be locked. To delete locked items, unlock them first.
 - Tap  to delete the items saved to the clip tray.



- The clip tray may not be supported by some downloaded apps.

Content sharing

Playing content from another device

You can play photos, videos or songs saved on your device from a TV.

- 1 Connect the TV and your device to the same Wi-Fi network.
- 2 While viewing the items from the **Gallery** or **Music** app, tap  > **Play on other device**.
Or tap  > **Settings** > **Network** > **Screen sharing** and then tap  to activate it.
- 3 Select the TV you want to connect to.



• For use with Chromecast, Google Play services should be up to date.

Viewing content from nearby devices

You can view content from various devices, such as a computer, NAS or mobile device, by using the Gallery or Music apps.

Tap  > **Settings** > **Network** > **Media server** and then tap **Content sharing**  to activate it.

Connecting the devices

Connect both your device and another device that support DLNA function to the same wireless network.



• Make sure that File sharing (DLNA) is activated on both the device and the connected device.

Searching for nearby devices

You can view a list of DLNA devices on the same network by selecting the **Nearby devices** menu in each app.

Use content from nearby devices as if you were using it on your device.

Sending or receiving files

You can share files between your device and another LG device, or a tablet or computer.

Sending files

From the **Gallery** or **File Manager** app, tap  > **Share** or , then select a device on the file sharing list.

Receiving files

Drag the status bar downward and then tap **File sharing**.

If your device does not support the file sharing feature, tap  > **Settings** > **Network** > **File sharing** > **SmartShare Beam** .



- Make sure that your device is connected to the same wireless network as the file transfer target device.
- Make sure that File sharing is activated on both the device and the target device.

Viewing content from your cloud

You can directly view the content saved on your cloud account, without downloading it to your device.

- 1 From the **Gallery** or **Music** app, select  > **Cloud**.
Or from the **File Manager** app, select  > **Cloud**.
- 2 Select a cloud account and sign in.
- 3 Save or play content in your cloud.

Do not disturb

You can limit or mute notifications to avoid disturbances for a specific period of time.

Tap  > **Settings** > **Sound** > **Do not disturb**.

- **Mode** and select the mode you want:
 - **Priority only**: Receive sound or vibrate notifications for the selected apps. Even when Priority only is turned on, alarms still sound.
 - **Total silence**: Disable both the sound and vibration.
- **Select priorities**: Receive alarms and the notifications for the selected apps.
 - **App notifications**: Select apps to receive the notifications.
 - **Calls from**: Set up a range of notifications when receiving a call.
 - **Repeated calls**: Second call from same caller within 15 min is not silenced.
 - **Messages from**: Set up a range of notifications when receiving a message.
- **Use Do not disturb**: Turn on the Do not disturb feature.
- **SCHEDULE**: Set the schedule for which you want to turn on the Do not disturb feature.
- **Help**: View the help for Do not disturb.



03

Useful Apps

Installing and uninstalling apps

Installing apps

Access an app store to search and download apps.

- You can use SmartWorld, Play Store or the app store provided by your service provider.



- Some app stores may require you to create an account and sign in.
- Some apps may charge fees.
- If you use mobile data, you may be charged for data usage, depending on your pricing plan.
- SmartWorld may not be supported depending on the area or service provider.

Uninstalling apps

Uninstall apps that you no longer use from your device.

Uninstalling with the touch and hold gesture

On the Home screen, touch and hold the app to uninstall, then drag it over **Delete** at the top of the screen.

- If apps were uninstalled within 24 hours from now, you can reinstall them. See [App trash](#) for details.

Uninstalling by using the settings menu

Tap  > **Settings** > **General** > **Apps & notifications** > **App info**, select an app, then tap **Uninstall**.



- Some apps cannot be uninstalled by users.

Uninstalling apps from the app store

To uninstall an app, access the app store from which you download the app and uninstall it.

Installing and uninstalling apps during the setup

When you turn on the device for the first time, you can download recommended apps.

You can skip to the next step without installation.

App trash

You can view the uninstalled apps on the Home screen. You can also reinstall apps which were uninstalled within 24 hours from now.

1 Tap > **Management** > **App trash**.

You can also touch and hold an empty area of the Home screen, then tap **App trash**.

2 Activate the desired function:

- **Restore**: Reinstall the selected app.
-  : Remove the uninstalled apps permanently from the device.



- Uninstalled apps are automatically removed from the device 24 hours after they were uninstalled. If you want to reinstall the uninstalled apps, you must download them again from the app store.
- This feature is activated on the default Home screen only. If you uninstall apps while using the EasyHome screen or other launcher, they are immediately and permanently removed from the device.

App Shortcuts

On the Home screen, touch and hold an app icon such as Call, Message, Camera, Gallery and Settings to display a quick access menu. Use apps more easily through App Shortcuts.



- This feature is available only on some apps.

Phone

Voice call

Make a phone call by using one of the available methods, such as manually entering a phone number and making a call from the contact list or the list of recent calls.

Making a call from the keypad

- 1 Tap  >  > **Dial**.
- 2 Make a call by using a method of your choice:
 - Enter a phone number and tap .
 - Touch and hold a speed dial number.
 - Search for a contact by tapping the initial letter of a contact name in the contact list, and then tap .



- To enter "+" when making an international call, touch and hold number 0.
- See [Adding contacts](#) for details on how to add phone numbers to the speed dial list.

Answering a call

To answer a call, drag  on the incoming call screen.

- When the stereo headset is connected, you can make calls by using the call/end button on the headset.
- To end a call without turning off the screen, tap  > **Settings** > **Network** > **Call** > **Answer and end calls** and then activate **End call with the Power key**.

Rejecting a call

To reject an incoming call, drag  across the incoming call screen.

- To send a rejection message, drag the rejection message option  across the screen.
- To add or edit a rejection message, tap  > **Settings** > **Network** > **Call** > **Call blocking & Decline with message** > **Decline with message**.
- When a call is coming in, press the Volume Up, Volume Down or Power/Lock key to mute ringtone or vibration, or to hold the call.

Checking an incoming call while using an app

When a call comes in while using an app, a pop-up notification can be displayed at the top of the screen. You can receive the call, reject the call, or send message from the pop-up screen.



- Tap  > **Settings** > **Network** > **Call** > **Additional settings** > **Show voice calls while in an app** and then select the desired way you would like to display the incoming call while using an app.

Viewing missed calls

If there is a missed call, the status bar at the top of the screen displays . To view missed call details, drag the status bar downwards. You can also tap  >  > **Call logs**.

Functions accessible during a call

During a call, you can access a variety of functions by tapping the on-screen buttons:

- **Contacts**: View the contact list during a call.
- **Hold**: Hold a call.
- **Dialpad**: Display or hide the dial pad.
- **Speaker**: Turn on the speakerphone function.
- **Mute**: Mute your voice so that your voice cannot be heard by the other party.
- **Bluetooth**: Switch the call to a Bluetooth device that is paired and connected.
-  : End a call.
-  : Access additional call options.



- Available settings items may vary depending on the area or service provider.

Making a three-way calling

You can make a call to another contact during a call.

- 1 During a call, tap  > **Add call**.
- 2 Enter a phone number and tap .
 - The two calls are displayed on the screen at the same time, and the first call is put on hold.
- 3 To start a conference call, tap **Merge calls**.



- You may be charged a fee for each call. Consult with your service provider for more information.

Viewing call records

To view recent call records, tap  >  > **Call logs**. Then, you can use the following functions:

- To view detailed call records, select a contact. To make a call to the selected contact, tap .
- To delete call records, tap  > **Delete**.



- The displayed call duration may differ from the call charge. Consult with your service provider for more information.
- The deleted call history can not be restored.
- Pinch two fingers or spread your fingers apart to adjust the font size of call logs or contacts.

Configuring call options

You can configure various call options.

- 1 Tap  >  > **Dial** or **Call logs**.
- 2 Tap  > **Call settings** and then configure the options to suit your preferences.

Messaging

Sending a message

You can create and send messages to your contacts using the Messaging app.



- Sending messages abroad may incur additional charges. Consult with your service provider for more information.

- 1 Tap  > .
- 2 Tap .
- 3 Specify a recipient and create a message.
 - To use multimedia options, tap .
 - To access optional menu items, tap .
- 4 Tap  to send the message.

Reading a message

You can view exchanged messages organised by contact.

- 1 Tap  > .
- 2 Select a contact from the message list.

Configuring messaging settings

You can change messaging settings to suit your preferences.

- 1 Tap  > .
- 2 Tap  > **Settings** from the message list.

Camera

Starting the camera

You can take a photo or record a video to cherish all of your memorable moments.

Tap  > .



- Before taking a photo or recording a video, wipe the camera lens with a soft cloth.
- Be careful not to stain the camera lens with your fingers or other foreign substance.
- Images included in this user guide may be different from the actual device.
- Photos and videos can be viewed or edited from the Gallery. See [Gallery overview](#) for details.

Changing the camera mode

You can select a camera mode that suits your environment to take a photo or record a video easily and conveniently.

Tap  > , then select the desired mode.

- Press and hold the Mode icon and drag it to the desired location to change the mode order.

Auto mode

You can take photos or record videos by selecting a variety of camera modes and options.

- 1 Tap  > , then tap **Auto**.
- 2 To take a photo, tap . To record a video, tap .

Turn the flash on or off.

Switch between front and rear cameras.

Apply a film filter effect.

Change the camera options.

Change the camera angle.

Start the Gallery.

Take photos.

Record videos.

Taking a photo

- 1 Select a camera mode and tap the subject to focus the camera on.
- 2 Tap  to take a photo.
 - You can also press the Volume Down or Volume Up key to take a photo.



- When the screen is turned off or locked, start the camera by pressing the Volume Down key twice. Tap  > **Settings** > **General** > **Shortcuts** and then tap **Open Camera**  to activate it.

Recording a video

- 1 Select a camera mode and tap the subject to focus the camera on.
- 2 Tap .
 - To take a photo while recording a video, tap .
 - To pause the video recording, tap . To resume the video recording, tap .
 - While recording a video, you may spread or pinch two fingers to zoom in or out.
 - While recording a video, you may tap the desired area to adjust the brightness.
- 3 Tap  to end the video recording.



- To check the aspect ratio before recording a video, press and hold .

Customising the camera options

You can customise a variety of camera options to suit your preferences.

Tap  on the screen.



- Available options vary depending on the selected camera (front or rear camera) and the selected camera mode.

- : Take a photo in FullVision.
- : Select values for aspect ratio and size for taking photos.
- : Select values for resolution and size for recording videos.
- : Set the timer to automatically take photos or record videos after a specified period of time.

Vision search	When associated info is found in Auto mode, QLens or Google Lens will be used.
HDR	Obtain photos in vivid colours and get compensated effects even when they are taken against the light. These functions are provided by the high dynamic range (HDR) technology equipped in the camera.
Steady recording	Minimise motion blur while recording a video.
Live photo	Record the action before and after you take a photo.
Cheese shutter	Take photos with voice commands.
Tracking focus	Enable the camera to remain focused on the subject you touch on the screen, even if the subject is moving. (Available when the Standard camera is in use.)
Tag locations	Save the image with GPS location data.
Grid	Display guide grids so that you can take photos or record videos based on the horizontal and vertical reference lines.
Add signature	Display a personalised signature on the photos.
Storage	Select if you want to store the pictures and videos in the Internal storage or SD card. (Available when a memory card is inserted.)
Help	Provide Help for each camera menu.

Additional options on the front camera

Selfie shot	Take a selfie by selecting its option between Gesture shot and Auto shot .
Save as flipped	Save as flipped images after taking selfies.
Gesture view	Allow you to view the photo immediately after taking a photo.

Various camera modes

Night view

You can take vivid and clear night photos. While taking a photo, hold the device steady. You can adjust photo brightness by dragging the slide bar up or down.

- 1 Tap  > , then tap **More** > .
- 2 To take a photo, tap .

YouTube Live

You can record a video and directly upload to YouTube.

- 1 Tap  > , then tap **More** > .
- 2 Tap  and record a video.

To use this feature, you need to verify your phone number.



- YouTube Live is available only when your device is connected to the Internet. If you use mobile data, you may be charged for data usage, depending on your pricing plan.

Food

You can take a photo or record a video with adjusting the colour slide bar and white balance.

- 1 Tap  > , then tap **More** > .
- 2 To take a photo, tap 
 - Drag the colour slide bar on the screen to adjust the white balance and select the best colour.
 - If the slide bar is not displayed, tap  to adjust the white balance.

Slo-mo

You can create an entertaining video by changing the moving speeds of subjects in your video. This feature allows you to record a video at a faster rate of speed and then play it at the standard speed so that the video appears to be slowed down.

- 1 Tap  > , then tap **More** > .
- 2 Tap  and record a video.
- 3 Tap  to end the video recording.

Panorama

You can create a panoramic photo by moving the camera in one direction to photograph and stitch continuous shots of a wide view.

- 1 Tap  > , then tap **More** > .
- 2 Tap  and then slowly move the camera in one direction.
 - Move the device by following the direction of the arrow in the guideline.
- 3 Tap  to stop capturing the panoramic.

Flash Jump-Cut

Photos taken at a regular interval are saved as GIF files.

- 1 Tap  > , then tap **More** > .
- 2 Tap  to take a photo.
 - Photos are taken every 3 seconds and saved as a GIF file.
 - Tap  on the screen to select the number of photos you want to take.
 - While taking photos, tap  to create GIF files with previously taken photos.



- The flash automatically turns on to act as a timer.
- The shots taken this time and the total number of shots are displayed at the bottom of the screen.
- All taken photos are saved as GIF files only.
- You may not change the GIF speed nor image order.

Graphy

You can apply the recommended values for the white balance, ISO and shutter speed as if taken by an expert.

- 1 Tap  > , then tap **Manual Camera**.
- 2 Tap  and then tap **Graphy photos**  to activate the feature.
- 3 Tap  and select the desired scene from the recommended images.
- 4 Tap  to take a photo.



- This feature is available only in Manual camera mode.
- You can add more scenes by tapping  and downloading the Graphy app from the Play Store. You may be charged for data usage, depending on your pricing plan.
- Tap , then tap  from the Graphy menu to deactivate this feature.

Portrait

You can take sharp portrait by applying camera lens blur effect.

See *Portrait* for details.

Google Lens

You can get more information or take action on items around you using Google Lens, like landmarks, posters, restaurant menus, animals, flowers, or barcodes, directly in the device.

AI CAM

You can effectively take photos or record videos since the camera recognises the object when taking a photo or recording a video.

See *AI CAM* for details.

Burst shot

You can take continuous shots of photos to create moving pictures.

In the Auto mode, touch and hold .

- Continuous shots are taken at a fast speed while  is held down.

Manual camera mode

You can create photos featuring professional touch by using a variety of advanced features. Adjust the white balance, focus, brightness, ISO, shutter speed and other options.

- 1 Tap , then tap **Manual Camera**.
- 2 Customise the following camera settings.

- Reset the settings.
- Adjust shutter speed.
- Adjust ISO speed.
- Adjust white balance.
- Adjust focus.
- Adjust brightness.

- 3 Tap  to take the photo.

Customising the camera options

You can customise a variety of camera options to suit your preferences.

Tap  on the screen.

-  : Take a photo in FullVision.
-  : Select values for aspect ratio and size for taking photos.
-  : Set the timer to automatically take photos after a specified period of time.

Graphy photos	Adjust the white balance, ISO and shutter speed for the recommended photo. See <i>Graphy</i> for details.
Save as RAW	The image is stored as a RAW file format so that you can modify it. The DNG and JPEG files are created while taking a photo, then saved as a non compressed high resolution image.
Cheese shutter	Take photos with voice commands.

Tracking focus	Enable the camera to remain focused on the subject you touch on the screen, even if the subject is moving. (Available when the Standard camera is in use.)
Tag locations	Save the image with GPS location data.
Guide	Display guide grids so that you can take photos based on the horizontal and vertical reference lines.
Add signature	Display a personalised signature on the photos.
Storage	Select if you want to store the pictures and videos in the Internal storage or SD card. (Available when a memory card is inserted.)
Help	Provide Help for each camera menu.

Manual Video mode

You can record a video by using various features such as controls for white balance, focus, brightness, ISO, shutter speed and more.

1 Tap  > , then tap **More > Manual Video**.

2 Customise the camera settings.

Adjust audio
balance.

Reset the settings.

Adjust shutter speed.

Adjust ISO speed.

Adjust brightness.

Adjust focus.

Adjust white
balance.

3 Tap  to record a video.

Customising the camera options

You can customise a variety of camera options to suit your preferences.

Tap  on the screen.

- : Select values for resolution and size for recording videos.
- : Set the timer to automatically record videos after a specified period of time.

Frame rate	Select the frames per second value.
Bit rate	Select the image quality for videos.
Hi-Fi	Record a video with Hi-Fi quality sound.
Save as HDR10	Save a video in the HDR10 format for high definition and vivid colour.
Steady recording	Minimise motion blur while recording a video.
Tracking focus	Enable the camera to remain focused on the subject you touch on the screen, even if the subject is moving. (Available when the Standard camera is in use.)
Tag locations	Save the image with GPS location data.
Grid	Display guide grids so that you can record videos based on the horizontal and vertical reference lines.
Storage	Select if you want to store the pictures and videos in the Internal storage or SD card. (Available when a memory card is inserted.)
Help	Provide Help for each camera menu.

Other useful features in the Camera app

Auto-Exposure/Auto-Focus lock

You can fix the current exposure level and focus position by touching and holding the screen in the Auto mode. To turn off the feature, tap a blank area on the screen.



- This feature is available only in specific modes.

Focus peaking

You can adjust the focus on the subject with the focus peaking feature. Access Focus peaking by tapping the Manual focus (MF) button. When Focus peaking is enabled, the subject you focus on appears yellow. Move the the toggle wheel up and down to focus on the desired area, then take the photo.



- This feature is only available in Manual camera mode and Manual video mode.
- Disable this feature by tapping the **Focus peaking** button once more.
- This feature is not available using the wide-angle camera.

Switching between cameras

You can switch between the front and rear cameras to suit your environment.

On the camera screen, tap  or drag the screen in any direction to switch between the front and rear cameras.



- Use the front camera to take selfies. See *Graphy* for details.

Zoom in or out

You can use zoom in or out on the camera screen while taking a photo or recording a video.

- On the camera screen, pinch or spread two fingers to zoom in or out, then use the displayed slide bar.
- You can also drag the  button up or down. This feature is available only in Auto mode and Manual camera mode.



- The zoom feature is not available when using the front camera in selfie mode.

Selfie shot

You can use the front camera to view your face on the screen and take selfies.

Gesture shot

You can take selfies by using gestures.

Show your palm to the front camera and then clench your fist.

You can also clench your fist and then open it towards the front camera.

- In three seconds, a photo is taken.



- To use this feature, switch to the front camera mode, then tap  > **Selfie shot > Gesture shot**.
- Make sure that your palm and fist are within the reference line so that the camera can detect them.
- This feature may not be available while using some of the camera features.

Auto shot

You can use the face detection feature to take selfies easily and conveniently. You can set the device so that, when you look at the screen, the front camera detects your face and takes a selfie automatically.

- The white coloured guide frame appears when the front camera detects your face. If the subject within the guide frame stops moving, the guide frame colour turns yellow, then the camera takes a photo.



• Tap  > **Selfie shot** > **Auto shot** to enable the Auto shot feature.

Interval shot

You can take selfies at an interval.

While using the front camera, you can show your palm to the camera, then clench your fist twice quickly.

- Four photos are taken at regular intervals after a timer delay of three seconds.

Gesture view

After taking a selfie with the front camera, you can preview the selfie immediately by placing the screen close to your face.



- Tap  > **Gesture view** to enable the Gesture view feature.
- Only one preview is available each time a photo is taken.
- If you rotate the device while in preview screen, the screen switches to camera mode.

Save as flipped

Before taking a photo with the front camera, tap  > **Save as flipped**. The image is flipped horizontally.



- When using the front camera, you can change how selfies are taken in the camera options. See *Customising the camera options* for details.

Signature

You can create a personalised photo by using your signature.

- 1 Tap  > , then tap  > **Add signature**.
- 2 Enter the signature as desired and tap **ADD**.

quick share

You can share a photo or video to the app you want immediately after taking it.

- 1 Tap , then take a photo or record a video.
- 2 Tap the app icon that appears on the screen to share it using that app. You can also swipe the icon towards the opposite direction to see what other apps you can use to share your photos and videos.

quick share icon



- The app displayed by the quick share icon may vary, depending on the type and frequency of access to the apps installed on the device.
- This feature is available only in specific modes.

Gallery

Gallery overview

You can view and manage photos and videos saved on your device.

- 1 Tap  > .

 - Saved photos and videos are displayed by folder.

- 2 Tap a folder and select a file.

 - View the selected file in full-screen mode.
 - While viewing a photo, swipe left or right to view the previous or next photo.
 - While viewing a video, swipe left or right to rewind or fast-forward the video.
 - When you take a photo by using the AI CAM feature, a Tag folder is created under the Album tab of the Gallery app. The photos are automatically classified by tags under the Tag folder.
 - You can view the photos or videos organised by year, month or day in the Photos tab.
 - To view photos by location at which the photo was taken, tap  >  >  > **Tag locations**, then tap . The photos are automatically grouped by location under the Memory tab of the Gallery app.



- Some file formats may not be supported, depending on the installed software.
- Some files may not be opened due to encoding.
- Files that exceed the size limit may cause an error.
- You need to activate the GPS feature to create Memory albums.

Viewing photos

Back to the previous screen.

Start QLens.

Access additional options.

Start the camera.

Add to or remove from your favourites.

Write a memo on a photo.

Delete images.

View related content.

Share images.

Edit images.



- To display the menu items, gently tap the screen. To hide the menu items, tap the screen again.
- Some photos may not support the photo memo feature.

Playing a video

Pause or play the video.

Open with QSlide.

Access additional options.

Tap to play previous video.
Touch and hold to rewind.

Tap to play next video.
Touch and hold to fast-forward.

Choose screen ratio.

Lock or unlock the screen.

DTS:X on/off

Edit the video.

Making a GIF file.



- To adjust the sound volume, drag the right side of the video screen up or down.
- To adjust the screen brightness, drag the left side of the screen up or down.

Editing videos

- 1 While viewing a video, tap .
- 2 Use a variety of effects and edit tools to edit the video.

Adjust the resolution.

Revert the edit.

Automatically create a 15 sec, 30 sec or 60 sec video clip.

Create a movie using various effects.
Launch the KineMaster video

Select a section to change the play

Adjust the video duration.

- 3 Tap **SAVE** to save changes.

Deleting files

You can delete files by using one of the following options:

- Touch and hold a file from the file list, then tap **Delete**.
- Tap  from the file list and delete the desired files.
- Deleted files are automatically moved to **Trash** and they can be restored to the Gallery within 7 days.
- Tap  to completely delete the files. In this case, the files cannot be restored.

Sharing files

You can share files by using one of the following options:

- While viewing a photo, tap  to share the file by using the method you want.
- While viewing a video, tap  > **Share** to share the file by using the method you want.
- Tap  from the file list to select files and share them using the method you want.

Contacts

Contacts overview

You can save and manage contacts.

Tap  > **Essentials** > **Contacts**.

Adding contacts

Adding new contacts

- 1 On the contact list screen, tap .
- 2 Enter contact details and tap **SAVE**.

Importing contacts

You can import contacts from another storage device.

- 1 On the contact list screen, tap  > **Manage contacts** > **Import**.
- 2 Select the source and target locations of the contact you want to import, and then tap **OK**.
- 3 Select the contacts and tap **IMPORT**.

Adding contacts to the speed dial list

- 1 On the contact list screen, tap  > **Speed dial**.
- 2 Tap **Add contact** from a speed dial number.
- 3 Select a contact.



- While adding a new contact, tap  to add a speed dial number.

Searching for contacts

You can search for contacts by using one of the following options:

- Tap  from the top of the contacts list and then enter the contact information or phone number.
- Scroll the contact list up or down.
- From the index of the contact list screen, tap the initial letter of a contact.



- Tap  from the top of the contacts list and then enter the contact information or phone number to display all search details from call logs, contacts and groups.

Contacts list

Editing contacts

- 1 On the contact list screen, select a contact.
- 2 On the contact detail screen, tap  and edit details.
- 3 Tap **SAVE** to save changes.

Deleting contacts

You can delete contacts by using one of the following options:

- On the contact list screen, touch and hold a contact you want to delete, then tap **Delete contact**.
- Tap  > **Delete** on the contact list screen.



• Deleted contacts may not be restored.

Adding favourites

You can register frequently used contacts as favourites.

- 1 On the contact list screen, select a contact.
- 2 On the contact detail screen, tap .

Creating groups

- 1 On the contacts group list, tap .
- 2 Enter a new group name.
- 3 Tap **Add members**, select contacts, then tap **ADD**.
- 4 Tap **SAVE** to save the new group.

QuickMemo+

QuickMemo+ overview

You can make creative notes by using a variety of options on this advanced notepad feature, such as image management and screenshots, which are not supported by the conventional notepad.

Creating a note

- 1 Tap  > **QuickMemo+**.
- 2 Tap  to create a note.
 -  : Save a note.
 -  : Undo the previous edit.
 -  : Redo the recently deleted edits.
 -  : Enter a note by using the keypad.
 -  : Write notes by hand.
 -  : Erase handwritten notes.
 -  : Zoom in or out, rotate or erase the parts of a handwritten note.
 -  : Access additional options.
- 3 Tap  to save the note.

Writing notes on a photo

- 1 Tap  > **QuickMemo+**.
- 2 Tap  to take a photo, then tap **OK**.
 - The photo is automatically attached into the notepad.
- 3 Tap **T** or  to write notes on the photo.
 - Write notes by hand on the photo.
 - Enter text below the photo.
- 4 Tap  to save the note.

Writing notes on a screenshot

- 1 While viewing the screen you want to capture, drag the status bar downwards and then tap .
- The screenshot appears as the notepad background theme. Memo tools appear at the top of the screen.
- 2 Crop the image (if necessary) and take notes as desired.
 - Write notes by hand on the photo.
- 3 Tap  and save the notes to the location you want.
 - Saved notes can be viewed in either **QuickMemo+** or **Gallery**.
 - To save notes in the same location all the time, select the **Use as default app** checkbox and select an app.



- You can capture the entire screen by using the scroll capture feature.
- While using an app such as Message and Chrome, drag the notifications panel downwards and then tap **Capture+ > Extended** to capture the entire screen you are currently viewing as a single file.
- This feature is available only on some apps that support the scroll capture feature.
- Pinch two fingers or spread your fingers apart to change the memo layout.

Audio recording features

The HD Audio Recorder allows you to configure the audio settings manually so that you can record audio based on your environment.

Recording modes

You can record a high definition audio file by selecting and configuring the desired audio mode to suit the recording environment.

Tap  > **Essentials** > **HD Audio Recorder** > .

Normal

You can record audio without extra settings.

Concert

You can record audio in a concert or other music event.

Custom

You can manually configure the desired settings to record audio.

Studio Mode

With Studio mode, you can play an audio file or music and record your voice at the same time, create a chord by recording your voice multiple times, and record your comments over the presenter's or speaker's original audio file.

- 1 Tap  > **Essentials** > **HD Audio Recorder** >  > **Custom**.
- 2 Tap .
- 3 Select an audio file to use as background music.
- 4 Tap  to record voice.
- 5 Tap  to save the recorded file.



- Background music can only be played through earphones. Make sure to plug in earphones before using this feature.

Clock

Alarm

You can set an alarm to trigger it at a specified time.

- 1 Tap  > **Clock** > **Alarm**.
- 2 Tap  to add a new alarm.
- 3 Configure the alarm settings and tap **SAVE**.



- If you select a previously set alarm, you can edit the alarm.
- To delete an alarm, tap  at the top of the screen. You can also touch and hold the alarm.

World clock

You can view the current time in cities around the world.

- 1 Tap  > **Clock** > **World clock**.
- 2 Tap  and add a city.

Timer

You can set the timer to trigger an alarm after a specified period of time.

- 1 Tap  > **Clock** > **Timer**.
- 2 Set the time and tap **Start**.
 - To suspend the timer, tap **Pause**. To resume the timer, tap **Resume**.
- 3 Tap **Stop** to stop the timer alarm.

Stopwatch

You can use the stopwatch to record a lap time.

- 1 Tap  > **Clock** > **Stopwatch**.
- 2 Tap **Start** to initiate the stopwatch.
 - To record a lap time, tap **Lap**.
- 3 Tap **Pause** to suspend the stopwatch.
 - To resume the stopwatch, tap **Resume**.
 - To clear all the records and restart the stopwatch, tap **Reset**.

Calendar

Calendar overview

You can use the calendar to manage events and tasks.

Adding events

- 1 Tap  > **Essentials** > **Calendar**.
- 2 Select a date and then tap .
- 3 Enter event details and tap **SAVE**.

Syncing events

Tap  > **Calendars to sync**, and select a calendar to sync.



- When your events are saved from the device to your Google account, they are automatically synced with the Google Calendar, too. Then, you can sync other devices with the Google Calendar in order to make those devices have the same events that your device has and to manage your events on those devices.

Tasks

You can register tasks to your device to easily manage schedules.

- 1 Tap  > **Essentials** > **Tasks**.
- 2 Tap  to add a task.
- 3 Enter task details and then tap **SAVE**.

Music

You can play and manage songs or music albums.

- 1 Tap  > **Essentials** > **Music**.
- 2 Select a category.
- 3 Select a music file.

Back to the previous screen.

Tap to play from the beginning of the current file / Double-tap to play the previous file / Touch and hold to rewind.

Play in random order.

Adjust the sound volume.

Add to or delete from your favourites.

Turn on/off Flash Light.

Set sound effects.

Access additional options.

Switch to the playlist.

Pause or play.

Tap to play the next file / Touch and hold to fast forward.

Select a repeat mode.

Change pitch and speed.



- Some file formats may not be supported, depending on the installed software.
- Files that exceed the size limit may cause an error.
- Music files may be protected by international copyright owners or copyright laws. You may have to obtain legal permission before copying a music file. To download or copy a music file, first check the copyright law for the relevant country.
- This model supports Hi-Fi audio playback. Hi-Fi audio files display the Hi-Fi icon.

Game Launcher

You can use Game Launcher to view the entire list of installed games, or set the device to mute or prevent any notifications while playing games.

- 1 Tap  > **Essentials** > **Game Launcher**.
- 2 Select the desired option.

Calculator

You can use two types of calculators: the simple calculator and the scientific calculator.

- 1 Tap  > **Essentials** > **Calculator**.
- 2 Use the keypad to make a calculation.

LG Health

LG Health overview

You can manage your health and maintain good exercise habits by keeping track of the exercises you do.

Getting started with LG Health

You can configure LG Health when launching the app for the first time or after resetting it.

- 1 Tap  > **Essentials** > **LG Health**.
- 2 Follow the on-screen instructions to complete configuration.

Using LG Health

You can view main information on LG Health and manage the amount of physical exercise and health information.

- 1 Tap  > **Essentials** > **LG Health**.
- 2 The following options are available.

-  : View your exercise log on the day you want to check.
-  : Begin tracking an exercise. The route and amount of your physical exercise are recorded for each exercise type.
-  : Set your daily exercise goals including calories and steps, or set various LG Health settings.



- Health-related information provided by LG Health is designed for user convenience and cannot be used for purposes of disease prevention, treatment, diagnosis or other medical issues.
- LG Health may vary or may not be available, depending on the country and service provider. LG Health functions that are available and apps that can be added to LG Health may vary, depending on the country. This is due to differing laws and regulations.

E-mail

E-mail overview

You can register an email account to your device and then you can check and send emails from your device.



- If you use mobile data, you may be charged for data usage depending on your pricing plan. Consult with your service provider for more information.

Registering email accounts

When you use the email app for the first time, register your email account.

- 1 Tap > **Essentials** > **E-mail**.
- 2 Select an email service provider.
- 3 Enter your email address and password and then tap **NEXT** to register your account.
 - To manually register an email account, tap **MANUAL SETUP** (if necessary).

Managing email accounts

To view or edit your email account settings, tap > **Settings**.

- To add an account, tap **Add account**.
- To delete an account, tap > **Remove account**.

Opening another email account

If several email accounts are registered and you want to view another account, tap and select another one from the account list.

Checking email

- 1 Tap  and select a mail box.
- 2 Select an email from the email list.
 - The email message appears.

Sending email

- 1 Tap .
- 2 Enter the recipient's email address.
- 3 Enter a subject and message.
 - To attach files, tap .
 - To access optional menu items, tap .
- 4 Tap  to send the email.



- Pinch two fingers or spread your fingers apart to adjust the font size of your email list.

File Manager

You can view and manage files saved on your device or cloud.

- 1 Tap  > **Management** > **File Manager**.
- 2 Tap  and select the desired storage location.

Smart Doctor

You can use Smart Doctor to diagnose the device's condition and optimise it.

- Tap  > **Management** > **Smart Doctor**.

LG Mobile Switch

Easily transfer data from a used device to a new device via LG Mobile Switch.

- 1 Tap  > **Management** > **LG Mobile Switch**.
You can also tap  > **Settings** > **General** > **Backup** > **LG Mobile Switch**.
- 2 Follow the on-screen instructions to select a desired method for transfer.



- Data in a Google Account will not be backed up. When you synchronise your Google Account, Google apps, Google contacts, Google Calendar, Google memo app data and apps downloaded from the Play Store are stored on the Drive app automatically.
- Fully charge the battery before transferring data to avoid unintentional powering off during the process.

SmartWorld

You can download a variety of games, audio content, apps and fonts provided by LG Electronics. Customise your device to suit your preferences by using Home themes and fonts.



- If you use mobile data, you may be charged for data usage depending on your pricing plan.
- This feature may not be supported depending on the area or service provider.

- 1 Tap  > **Services** > **SmartWorld**.
- 2 Tap  > **LG Account**, then sign in.
- 3 Select and download the desired content items.

Downloading SmartWorld app

If the SmartWorld app is not installed, follow these steps to download it.

- 1 Tap  > **Settings** > **General** > **Update centre** > **App Updates**.
- 2 From the list, select **SmartWorld** and tap **Download**.

RemoteCall Service

Your device can be remotely diagnosed for resolving issues. First, make a phone call to an LG Customer Service Centre as follows:



- To use this function, first you must agree to usage of the function.
- If you use mobile data, you may be charged for data usage depending on your pricing plan.

- 1 Tap  > **Services** > **RemoteCall Service**.
- 2 Connect a call to an LG Customer Service Centre.
- 3 After the call connects, follow the service associate's instructions to enter a six-digit access number.
 - Your device is remotely connected and the remote support service starts.

Cell Broadcast

You can view real-time text broadcasts on emergency situations, such as typhoons, floods and earthquakes.

Tap  > **Services** > **Cell Broadcast**.

Google apps

You can use Google apps by setting a Google Account. The Google Account registration window appears automatically when you use a Google app for the first time. If you do not have a Google Account, create one from your device. For details on how to use an app, see the Help in the app.



- Some apps may not work depending on the area or service provider.

Chrome

A fast, simple, and secure web browser, built for the modern web.

Docs

Docs is a collaborative, word-processing tool that powers productivity. Use Docs to create, edit and work together in real-time.

Drive

Drive is a file storage and sharing app that makes it easy to find, share and collaborate on work projects from anywhere, instantly.

Duo

Make simple, high quality video calls to your friends and family on Android phones and iPhones.

Gmail

Gmail is an easy to use mail app that keeps your messages safe, makes your inbox smarter, and helps you stay organised.

Google

The Google app keeps you in the know about the things you care about. Find quick answers, explore your interests, and get a feed of stories and updates on topics that matter to you.

Maps

Going somewhere? Go with Maps, the app you can rely on for real-time GPS navigation, traffic, transit, and details about millions of places, such as reviews and popular times.

News

Comprehensive up-to-date news coverage, aggregated from sources all over the world by Google News.

Photos

Home for all your photos and videos, automatically organised so you can share and save what matters.

Play Movies & TV

Use your Google Account to rent or purchase movies. Purchase content and play it anywhere.

Play Music

Purchase music from the Play Store. Play music saved on your device.

Sheets

Sheets is a collaborative spreadsheet processing tool that powers productivity. Use Sheets to import, organise and analyse information together in real-time.

Slides

Google Slides is a collaborative presentation creation tool that powers productivity. Use Slides to organise information, present results, and make decisions together in real-time.

YouTube

Watch your favourite channels, listen to music you love, and upload videos to share with people around the world.

Keep notes

Create, edit, and share you text and photo notes with Google Account.

Assistant

Your device has the Google Assistant built-in. Find answers and get things done while on-the-go. To get started, just tap the Google Assistant key on the side of the phone or touch and hold the home button of the phone.



- The Google Assistant is not available in certain languages and countries.



04

Settings

Settings

You can customise the device settings in accordance with your preferences.

Tap  > **Settings**.



- Tap  and enter a keyword in the search box to access a setting item.
- Tap  to change the view mode. This user guide assumes that you are using the Tab view.

Network

Dual SIM card

You can configure Dual SIM settings.

- 1 On the settings screen, tap **Network** > **Dual SIM card**.
- 2 Customise the following functions:
 - **SIM card 1**: Change the name and icon of the SIM card 1.
 - **SIM card 2**: Change the name and icon of the SIM card 2.
 - **SIM card colour theme**: Change the colour themes for the SIM cards.
 - **Cost save mode**: Activate or deactivate the cost save mode. In the cost save mode, if you make a call to a contact to which a specific SIM is assigned, this SIM is used for the call even if the other SIM is active, for example, it is using mobile data.
 - **Mobile data**: Select a SIM card you want to use for mobile data service. You can also turn off this function.
 - **Data roaming**: Select this option to enable the device to use mobile data when you are roaming outside your home network area.
 - **Mobile data during calls**: Access mobile data using the nondefault data SIM card temporarily during an HD voice call with the same card.

Wi-Fi

You can connect to nearby devices over a Wi-Fi network.

Connecting to a Wi-Fi network

- 1 On the settings screen, tap **Network > Wi-Fi**.
- 2 Tap  to activate it.
 - Available Wi-Fi networks appear automatically.
- 3 Select a network.
 - You may need to enter the network's Wi-Fi password.
 - The device skips this process for previously accessed Wi-Fi networks. If you do not want to automatically connect to a certain Wi-Fi network, tap the network and then tap **FORGET**.

Wi-Fi network settings

On the settings screen, tap **Network > Wi-Fi**.

- **Switch to mobile data:** If the mobile data connection function is activated but the device cannot connect to the Internet via Wi-Fi connection, the device automatically connects to the Internet via the mobile data connection.



• This feature depends on the service provider.

-  : Customise Wi-Fi network settings.

Wi-Fi Direct

You can connect your device to other devices that support Wi-Fi Direct to share data directly with them. You do not need an access point. You can connect with more than two devices by using Wi-Fi Direct.

- 1 On the settings screen, tap **Network > Wi-Fi > ⋮ > Advanced Wi-Fi > Wi-Fi Direct**.
 - Nearby devices that support Wi-Fi Direct automatically appear.
- 2 Select a device.
 - Connection occurs when the device accepts the connection request.



- The battery may drain faster when using Wi-Fi Direct.

Bluetooth

You can connect your device to nearby devices that support Bluetooth to exchange data with them. Connect your device to a Bluetooth headset and a keyboard. This makes it easier to control the device.

Pairing with another device

- 1 On the settings screen, tap **Network > Bluetooth**.
- 2 Tap ☐ to activate it.
 - Available devices appear automatically.
 - To refresh the device list, tap ↻.



• Only devices set as visible are displayed on the list.

- 3 Select a device from the list.
- 4 Follow the on-screen instructions to perform authentication.



• This step is skipped for previously accessed devices.

Sending data via Bluetooth

- 1 Select a file.
 - You can send multimedia files or contacts.
- 2 Tap > **Bluetooth**.
- 3 Select a target device for the file.
 - The file is sent as soon as the target device accepts it.



• File sharing processes may differ, depending on the file.

Mobile data

You can turn mobile data on and off. You can also manage mobile data usage.

Turning on mobile data

- 1 On the settings screen, tap **Network > Mobile data**.
- 2 Tap  to activate it.

Customising mobile data settings

- 1 On the settings screen, tap **Network > Mobile data**.
- 2 Customise the following settings:
 - **Mobile data:** Set to use data connections on mobile networks.
 - **Limit mobile data usage:** Set a limit for mobile data usage to block mobile data if the limit is reached.
 -  :Customise mobile data settings.

Call

You can customise call settings, such as voice call and international call options.



- Some features may not be supported depending on the area or service provider.

- 1 On the settings screen, tap **Network > Call**.
- 2 Customise the settings.

Tethering

USB tethering

You can connect the device to another device via USB and share mobile data.

- 1 Connect your device and other devices via USB cable.
- 2 On the settings screen, tap **Network > Tethering > USB tethering** and then tap ☐ to activate it.



- This option uses mobile data and may incur data usage fees, depending on your pricing plan. Consult with your service provider for more information.
- When connecting to a computer, download the USB driver from www.lg.com and install it on the computer.
- You cannot send or receive files between your device and a computer while USB tethering is turned on. Turn off USB tethering to send or receive files.
- Operating systems that support tethering are Window XP or higher, or Linux.

Wi-Fi hotspot

You can set the device as a wireless router so that other devices can connect to the Internet by using your device's mobile data.

- 1 On the settings screen, tap **Network > Tethering > Wi-Fi hotspot** and then tap  to activate it.
- 2 Tap **Set up Wi-Fi hotspot**, and enter the Wi-Fi name (SSID) and password.
- 3 Turn on Wi-Fi on the other device, and select the name of the device network on the Wi-Fi list.
- 4 Enter the network password.



- This option uses mobile data and may incur data usage fees, depending on your pricing plan. Consult with your service provider for more information.
- More information is available at this web site:
<http://www.android.com/tether#wifi>

Wi-Fi hotspot turn off timer

When the Wi-Fi hotspot has not been used for a specific period of time, it is automatically disconnected. You can set the time for automatic disconnection.

Bluetooth tethering

A Bluetooth-connected device can connect to the Internet by using your device's mobile data.

- 1 On the settings screen, tap **Network > Tethering > Bluetooth tethering** and then tap  to activate it.
- 2 Turn on Bluetooth on both devices and pair them.



- This option uses mobile data and may incur data usage fees, depending on your pricing plan. Consult with your service provider for more information.
- More information is available at this web site:
http://www.android.com/tether#Bluetooth_tethering

Help

You can view help on using tethering and hotspots.

On the settings screen, tap **Network > Tethering > Help**.

Screen sharing

You can play the screen and sound of the device on a different device, such as a TV, that supports the Miracast function.

- 1 On the settings screen, tap **Network > Screen sharing**.
- 2 Tap  to activate it.
- 3 Select a device from the list of nearby devices.
 - If the desired device does not appear, tap **SEARCH** to refresh the list.
 - After connecting to the device, the device displays the screen of your device.



- Screen sharing turns off automatically if there is no sharing-compatible device in the vicinity.

NFC

You can use the device as a transportation card or credit card. You can also share data with the other device.

- 1 On the settings screen, tap **Network > NFC**.
- 2 Tap  to activate it.
 - Touch your device with other device that supports NFC to allow sharing data.



- NFC antenna may be located differently depending on the device type. See [Parts overview](#) for details about the NFC antenna area.

Android Beam

You can share files by touching the back of the device to other device. You can also share files including music, videos or contacts and open a web page or launch an app from the other device.

- 1 On the settings screen, tap **Network > Android Beam**.
- 2 Touch the back of the device with another device.



- NFC antenna may be located differently depending on the device type. See [Parts overview](#) for details about the NFC antenna area.

Sharing panel

You can share contents from Gallery, Music and File Manager with nearby devices. Also you can share the content with specific people in apps that work with Google Direct Share.

- 1 On the settings screen, tap **Network > Sharing panel**.
- 2 Tap  to deactivate each option.

File sharing

You can send and receive files between your device and other LG devices or tablets.

- 1 On the settings screen, tap **Network > File sharing**.
- 2 Customise the following settings:
 - **G8S ThinQ**: Change the device name.
 - **Save to**: Set the destination folder to save files sent from other devices in.
 - **File sharing**: Permit receipt of files sent from other devices.
 - **SmartShare Beam**: Share files with other devices via SmartShare Beam.
 - **Help**: You can view help on sharing files.

Media server

You can share media content on your device with nearby devices that support DLNA.

- 1 On the settings screen, tap **Network > Media server**.
- 2 Customise the following settings:
 - **Content sharing**: Share content on your device with nearby devices.
 - **G8S ThinQ**: Set your device's name.
 - **Content to share**: Select the type of media content to share with other devices.
 - **Allowed devices**: View a list of devices permitted to access content on your device.
 - **Not-allowed devices**: View a list of devices not permitted to access content on your device.

LG AirDrive

You can use your LG account to manage files saved on the device from a computer. You do not need a USB connection.

- 1 On the settings screen, tap **Network > LG AirDrive**.
- 2 Use a single LG account to sign in to LG Bridge on the computer and **LG AirDrive** on the device.
 - LG Bridge software can be downloaded from www.lg.com.
- 3 Manage files on the device from the computer.

MirrorLink

You can connect the device to a car via USB to use the MirrorLink app installed on the device from the infotainment system or the head unit of the car.



- This app is available only in cars that support MirrorLink.
- Download the MirrorLink app from an app store or market. For more information, visit <https://mirrorlink.com/apps>.
- Some functions may be restricted for driver's safety while using the MirrorLink feature.

- 1 On the settings screen, tap **Network > MirrorLink**.
- 2 Connect the device to an automobile using the USB cable and turn on **Connect via USB cable**.



- If your device is connected to a vehicle that supports automatic MirrorLink connection, Connect via USB cable is automatically activated on your device.
- Tap to configure MirrorLink USB auto-connect.

Printing

You can connect your device to a Bluetooth printer and print photos or documents saved on the device.

1 On the settings screen, tap **Network > Printing**.



- If the desired printer is not in the list, install the printer driver from the app store.

2 Tap ☐ to activate it.

3 Select a printer from the printer list screen.

- To add a printer, tap **:** > **Add printer**.
- To search for a printer name, tap **:** > **Search**.
- Tap **:** > **Settings** from the printer list screen.

4 Select a file and tap **:** > **Print**.

- The document prints.



- If you do not have a Google Account, tap **Add account** to create an account.

Airplane mode

You can turn off the call and mobile data functions. When this mode is on, functions that do not involve data, such as games and music playback, remain available.

- 1 On the settings screen, tap **Network > Airplane mode**.
- 2 Tap **TURN ON** in the confirmation screen.

Mobile networks

You can customise the mobile networks settings.

- 1 On the settings screen, tap **Network > Mobile networks**.
- 2 Customise the following settings:
 - **Data roaming**: Browse the web, use emails, multimedia messages and other data services overseas.
 - **Network mode**: Select a network type.
 - **Access Point Names**: View or change the access point for using mobile data services. To change the access point, select a choice from the access point list.
 - **Network operators**: Search for network operators and connect automatically to a network.

VPN

You can connect to a safe virtual network, such as an intranet. You can also manage connected virtual private networks.

Adding VPN

- 1 On the settings screen, tap **Network > VPN**.
- 2 Tap **+**.



- This feature is available only when the screen lock is activated. If the screen lock is deactivated, a notification screen appears. Tap **CHANGE** from the notification screen to activate the screen lock. See *Setting a screen lock* for details.

3 Enter VPN details and tap **SAVE**.

Configuring VPN settings

- 1 Tap a VPN from the **VPNS** list.
- 2 Enter the VPN user account details and tap **CONNECT**.
 - To save the account details, select the **Save account information** checkbox.

Private DNS

You can configure the Private DNS (Domain Name System) options.

- 1 On the settings screen, tap **Network > Private DNS**.
- 2 Select the desired option and tap **SAVE**.

Sound

You can customise sound, vibrate and notification settings.

On the settings screen, tap **Sound** and customise the following settings:

- **Sound profile:** Change the sound mode to **Sound, Vibrate only**, or **Silent**.
- **Volume:** Adjust the sound volume for various items.
- **Ringtone:** Select a ringtone for incoming calls. Add or delete ringtones.
- **Ringtone ID:** Create a ringtone for an incoming call from a particular contact.
- **Ring with vibration:** Set the device to vibrate and play a ringtone simultaneously.
- **Flash alert for incoming call:** Set the flash to blink according to LG ringtone.

- **Notification sound:** Select a notification ringtone. Set music saved on the device as a notification ringtone.
- **Do not disturb:** Set the time, range and app type to receive notification messages. Receive notification messages only on particular days of the week.
- **Sound quality and effects:** Use the function to set the sound quality and effects while playing a song or video.
 - **Volume:** Adjust the sound volume for various items.
 - **Normalize volume:** Use the function to normalise the volumes of different sound sources.
 - **Equalizer:** Use the function to adjust the equaliser settings.
 - **DTS:X 3D Surround:** Use the function to play music or video in three-dimensional, immersive and vivid sound when earphones, speaker or other external audio devices are connected. See *DTS:X 3D Surround* for details.
- **Vibration strength:** Adjust the vibration intensity.
- **Vibration type:** You can select the type of vibration when receiving calls.
- **Vibrate on tap:** Set the device to vibrate when you tap certain items on the screen.
- **Dialing keypad sound:** Select the keypad sound effect.
- **LG Keyboard sound:** Select LG keyboard sound effect.
- **Touch sound:** Select a sound effect for tapping an item.
- **Screen lock sound:** Select a sound effect when the screen is locked or unlocked.

Display

You can customise detailed settings for each screen type.

On the settings screen, tap **Display** and customise the following settings:

- **Home screen:** Customise settings for the Home screen. See *Home screen settings* for details.
- **Wallpaper & theme:** Select a screen wallpaper, theme, icon, and AOD for your device.
- **Font:** Change the font size, bold text or type.
- **New Second Screen:** Select how the status bar and app corners will look.
- **Home touch buttons:** Rearrange Home touch buttons or change their background colours.
- **Always-on display:** Always display information, such as the date, time and notifications, even when the screen is turned off. For details, see *Always-on display*.
- **App scaling:** Adjust the screen size of apps.



Aspect ratio

- This device uses 18.7:9 aspect ratio.
 - Some downloaded apps may not support 18.7:9 aspect ratio. In this case, select the most optimal screen ratio for the app or consult the app provider for more information.
 - You can select the aspect ratio for individual apps by tapping  **Settings > Display > App scaling**. Select the desired aspect ratio from **Compatibility (16:9)**, **Standard (16.7:9)**, and **Full screen**.

- **Display size:** Set the items on the screen to a size easy for you to see. Some items may change position.

- **True View:** Allow you to adjust the screen brightness and colour depending on the light source.
- **Screen colour:** Adjust the colour, colour temperature, or RGB values for the desired screen.



• Tap  to reset the settings.

- **HDR video effect:** Apply HDR effect while playing a video in full screen to make the colour brighter and more vibrant.
- **Comfort view:** Set the device to reduce amount of blue light on screen to reduce eye strain.
- **Brightness:** Use the slide bar to change the device's screen brightness. To automatically adjust screen brightness according to ambient light intensity, tap the **Auto** switch.
- **Auto:** Set the device so that the screen brightness is automatically adjusted in accordance with the ambient light intensity.
- **Auto-rotate screen:** Automatically rotate the screen according to the device's orientation.
- **Screen timeout:** Automatically turn off the screen when the device is left idle for a specified period of time.
- **Screen saver:** Display a screen saver when the device is connected to the holder or charger. Select a screen saver type to display.
- **Mini view:** Make the screen size smaller to conveniently use the device with one hand. Drag the Home touch button at the bottom of the screen to the left or right.

General

Lock screen & security

You can customise lock screen and security settings.

- **Google Play Protect:** Scans your device daily for potentially harmful apps.
- **Find My Device:** Remotely track the device location. You can also protect your data securely if you lost your device.
- **Security update:** Check for software update and configure automatic installation settings.
- **Select screen lock:** Select the desired screen lock method. See [Setting a screen lock](#) for details.
- **Customise Lock screen:** Change the information displayed on the locked screen.
- **Secure lock settings:** Change the secure lock settings.
- **Fingerprints:** Use your fingerprint to unlock the screen or content. See [Fingerprint recognition overview](#) for details.
- **Face Unlock:** Allow you to unlock the screen with your face. See [Face unlock overview](#) for details.
- **Hand ID:** Allow you to unlock the screen with your hand. See [Hand ID overview](#) for details.
- **Content lock:** Allow you to set a lock type (password or pattern) for your QuickMemo+ and Gallery files.
- **Location:** You can customise how your location information is used by particular apps.
- **Encryption & credentials:** Configure the settings for SD card encryption and credentials.

- **Encrypt SD card:** Encrypt the memory card to prevent use on another device. See *Memory card encryption* for details.
- **Secure start-up:** Protect your device with a lock when it powers on. See *Secure start-up settings* for details.
- **Credential protection:** View the type of the storage where the security certificate will be saved.
- **Trusted credentials:** View your system's root CA certificates and user-installed CA certificates.
- **User credentials:** View and change secure certificate information stored on your device.
- **Install from storage:** Install a secure certificate from a storage.
- **Clear credentials:** Delete user-installed secure certificates and related credentials.
- **Set up SIM card lock:** Lock or unlock the USIM card, or change the password (PIN).
- **Make passwords visible:** Enable this option to briefly show each character of the password as you type it so you can see what you've entered.
- **Phone administrators:** Allow privileges to restrict the control or use of the device to particular apps.
- **Trust agents:** View and use trust agents installed on the device.
- **Screen pin:** Fix the app screen so that only the currently active app can be used.
- **Usage access:** View details on usage of apps on the device.

Apps & notifications

You can check a list of installed apps, and configure the settings for notifications, app permissions, and more.

- 1 On the settings screen, tap **General > Apps & notifications**.
- 2 Customise the settings.

Battery

You can view the current battery information or turn on power-saving mode.

- 1 On the settings screen, tap **General > Battery**.
- 2 Customise the following settings:
 - **Battery usage**: View the battery usage details.
 - **Battery percentage on status bar**: Display the remaining battery level as a percentage on the status bar.
 - **Optimized charging**: Automatically adjust charging speed according to how you charge to reduce heat and extend lifespan of battery.
 - **Adaptive battery**: Allow you to save the battery by stopping apps running in the background.
 - **Background restrictions**: Enable this option to restrict background apps to save the battery while using the device. Restricted apps for power saving may not work properly or may not send you notifications.
 - **Battery saver**: Reduce battery consumption by cutting down some device settings, such as the display brightness, speed and vibration intensity.
 - **Power saving exclusions**: Select apps to use without any functional limitation while in power saving or battery optimisation mode.

Storage

You can view and manage internal storage on the device or storage space of the memory card.

- 1 On the settings screen, tap **General > Storage**.
- 2 Customise the following settings:
 - **Internal storage:** View the total storage space and free space in the device's internal storage. View a list of apps in use and the storage capacity for each app.
 - **SD card:** View the total storage space and free space in the memory card. This option appears only when a memory card is inserted. To unmount the memory card, tap .

Accounts

You can add users to share your device and register a cloud account.

- 1 On the settings screen, tap **General > Accounts**.
- 2 Customise the settings.

Accessibility

You can manage accessibility plug-ins installed on your device.

- 1 On the settings screen, tap **General > Accessibility**.
- 2 Customise the following settings:
 - **Vision > TalkBack:** Set the device to notify screen status or actions via voice.
 - **Vision > Voice notifications:** Set the device to read the caller information via voice.
 - **Vision > Font:** Change the font size, bold text or type.
 - **Vision > Display size:** Set the items on the screen to a size easy for you to see. Some items may change position.
 - **Vision > Touch zoom:** Zoom in or out by tapping the screen three times.

- **Vision > Window zoom:** Zoom in or out within a window and invert the colour.
- **Vision > Large mouse pointer:** Magnify the mouse pointer.
- **Vision > High contrast screen:** Turn the background colour into black for a high contrast screen.
- **Vision > Screen colour inversion:** Increase the display colour contrast for people with low vision.
- **Vision > Screen colour adjustment:** Adjust the display colour.
- **Vision > Grayscale:** Switch the screen to grayscale mode.
- **Vision > End call with the Power key:** End a call by pressing the Power/Lock key.
- **Hearing > Captions:** Turn on the subtitle service when playing videos for the hearing impaired.
- **Hearing > Flash alerts:** Set the device to notify you with a blinking light for incoming calls, messages and alarms.
- **Hearing > Mute all sounds:** Mute all sounds and lower volume on the receiver.
- **Hearing > Audio channel:** Select the audio type.
- **Hearing > Sound balance:** Adjust the audio output balance. Use the slide bar to change the balance.
- **Motor & cognition > Touch assistant:** Turn on the touch board to make buttons and gestures easier to use.
- **Motor & cognition > Touch input:** Enter text by touching and holding the screen or modify it by simply touching the screen.
- **Motor & cognition > Physical keyboard:** Customise the keyboard settings.
- **Motor & cognition > Auto mouse click:** Automatically click the mouse pointer in case of no movement.
- **Motor & cognition > Touch and hold for calls:** Answer or decline calls by touching and holding the call button instead of dragging it.

- **Motor & cognition > Screen timeout:** Turn off the screen automatically when the device is left idle for a specified period of time.
- **Motor & cognition > Touch control areas:** Limit the touch area so that only a particular portion of the screen can be controlled by touch input.
- **Accessibility features shortcut:** Quickly access a frequently used function by tapping  three times.
- **Auto-rotate screen:** Automatically change the screen orientation according to the physical position of the device.
- **Amazon Assistant:** Amazon Assistant provides product comparisons automatically as you shop in select apps on your device.
- **Select-to-Speak:** Allow you to tap items to hear spoken feedback.
- **Switch Access:** Create key combinations to control your device.

Google

You can use Google settings to manage your Google apps and account settings.

On the settings screen, tap **General > Google**.

Smart Doctor

You can use Smart Doctor to diagnose the device's condition and optimise it.

On the settings screen, tap **General > Smart Doctor**.

Floating Bar

You can activate frequently used features including shortcuts, screenshots, Music, Contacts and more by touching and then swiping the Floating Bar on the screen. See [Floating Bar overview](#) for details.

Gaming

You can configure settings for game tools, graphics and battery saving feature.

- **Game launcher:** Tap  to use the game launcher.
- **Game tools:** Tap  to activate this feature. You can launch this feature by tapping the game tool icon at the bottom of the screen while playing games.
- **Game graphics:** Adjust the game graphics.



- When you change the resolutions on some games, the screen display feature may not work properly.

- **Break time:** Reduce the screen brightness and performance whenever you leave the game running for more than 5 minutes.

Screen recording

You can configure the settings for screen recording.

- 1 On the settings screen, tap **General > Screen recording**.
- 2 Customise the following settings:
 - **Include yourself in video by:** Select one from the following options and tap **SAVE**.
 - **Image:** Includes your profile image in video when recording. After selecting this, tap  and select a profile image. Then, adjust the size of the image using the slide bar.
 - **Front camera:** Includes yourself recorded using the front camera while recording the screen.
 - **Never:** Nothing is included.
 - **Audio source:** Choose the audio source between **Mic** and **Contents**.
 - **Video resolution:** Select the resolution for screen recording.

To record the screen:

- 1 Drag the status bar downward to open the Quick access icons list.
- 2 (If necessary, swipe left over the Quick access icons area.) Tap .
- 3 Read the disclaimer and tap **START**. It will start recording in 3 seconds.
- 4 To stop recording, tap  located at the bottom right of the screen. The recorded video will be saved in Gallery.

Context Awareness

You can automatically change your device settings according to the usage pattern and location.

- 1 On the settings screen, tap **General > Context Awareness**.
- 2 Activate items you want to automatically change settings for.
 - **Parking Assistant:** This option will store your parking locations. If you don't want to receive parking notifications around your home or work place, turn My places notifications off . The parking records are stored in QuickMemo+.



- Make sure that your car and device are connected via Bluetooth, Android Auto or MirrorLink to store your parking locations automatically.

- **AUTOMATED:** You can set the device to change the sound profile, Bluetooth and Wi-Fi options automatically in different environments, such as At home, Away from home, At work, and Off work. You can also set an app to open when earphones are plugged in or a Bluetooth device is connected.



- To use this feature, home or work location must be preset in My places. On the settings screen, tap **General > Lock screen & security > Location > My places** to set the locations.

Dual APP

You can use some apps with two accounts.

- 1 On the settings screen, tap **General > Dual App**.
- 2 After reading the disclaimer, tap **CONFIRM**.
- 3 In the list of available apps, tap **Install** to install a copy of a desired app and follow the on-screen instructions.

Shortcuts

You can customise the shortcut keys settings.

- 1 On the settings screen, tap **General > Shortcuts**.
- 2 Customise the following settings.
 - **View notification panel:** Swipe down/up on the fingerprint sensor for the notification panel.
 - **Open Camera:** Press Power key twice to open Camera.
 - **Open Capture+:** Press Volume Up key twice to open **Capture+** when the screen is locked or off.
 - **Open Camera:** Press Volume Down key twice to open **Camera** when the screen is locked or off.
 - **Open Google Assistant:** Press the Google Assistant key on the side of the phone.
 - **Talk to Google Assistant:** Press and hold the Google Assistant key to quickly talk to your Assistant.
 - **Show visual snapshot:** Press the Google Assistant key twice to see a snapshot of your day in the Google Assistant app.

Air Motion

Enable this option to recognise the location and shape of your hand to launch certain features or apps without touching the screen.

Show your hand to the front camera and then perform hand gestures to launch desired features or apps.

See *Air Motion* for details.

KnockON

Double-tap the screen to turn the screen on or off.

See *KnockON* for details.

Increase touch sensitivity

You can set the touch screen more sensitive to your touch. Recommended to turn this feature on when using a screen protector.

On the settings screen, tap **General > Increase touch sensitivity**.

Update centre

You can check and install the latest version of the app or software provided by LG.

- 1 On the settings screen, tap **General > Update centre**.
- 2 Customise the following settings:
 - **App Updates:** Check if an app update is available. If available, you can install the update.
 - **Software Update:** Check if a software update is available. If available, you can install the update.

Language & keyboard

You can customise language and keyboard settings for your device.

- 1 On the settings screen, tap **General > Language & keyboard**.
- 2 Customise the following settings:
 - **Language:** Select a language to apply for the device.
 - **Default keyboard:** View the keyboard currently in use. Select a keyboard to use when entering text.
 - **On-screen keyboard:** Change the LG keyboard settings or voice recognition feature of Google Voice.
 - **Physical keyboard:** Select to use the physical keyboard, or check keyboard shortcut keys.
 - **Autofill service:** Enable this option to enter your information saved in your account such as password, address, or credit card number with a single tap. You can also disable this option, use Google Autocomplete, or add a new service account.
 - **Text-to-speech output:** Configure the settings for text-to-speech output.
 - **Pointer speed:** Adjust the pointer speed of a mouse or trackpad.
 - **Reverse mouse buttons:** Reverse the right mouse button to perform primary direct-manipulation actions.

Date & time

You can customise date and time settings for your device.

- 1 On the settings screen, tap **General > Date & time**.
- 2 Customise the settings.

Memory

You can view the average amount of memory usage over a certain period of time and the memory occupied by an app.

- 1 On the settings screen, tap **General > Memory**.
- 2 Tap ▼ to set a time slot to retrieve data.

Backup

You can back up data saved on your device to another device or account.

- 1 On the settings screen, tap **General > Backup**.
- 2 Customise the following settings:
 - **LG Mobile Switch:** Allow you to transfer data from an old LG device to your new LG device. See *LG Mobile Switch* for details.
 - **Backup & restore:** Back up your device data or restore data to your device from a backup.



- Resetting your device may delete backup files saved in storage. Make sure to copy and store the important backup files to your PC.

- **Google backup:** Change Google drive backup settings. You can also check the backup account currently used, or add a new backup account.

Restart & reset

You can reset the device including network and app settings.

- 1 On the settings screen, tap **General > Restart & reset**.
- 2 Customise the following settings:
 - **Auto-restart:** Automatically restart and optimise the phone at a set time. Tap  to activate this feature. The device automatically restarts at a set time and optimise itself. Select a date and time for restart.



- You can set the device to restart itself once a week. The device automatically restarts in an hour from the preset time.
 - Once the device restarts, notifications and badges are erased. Save important data before the preset time.
 - The Auto-restart feature is not activated in the following situations: When the screen is turned on, when the device is in use, when the battery level is 30% or less, when the USIM card is locked, or when the device lock is activated while turning on the device.
- **Network settings reset:** Reset Wi-Fi, Bluetooth and other network settings.
 - **Reset app preferences:** Reset the settings for an app. The data saved in the app will not be deleted.
 - **Factory data reset:** Reset all settings for the device and delete data.



- Restarting and resetting your device deletes all data on it. Enter your device name, Google Account and other initial information again.

About phone

You can view information about your device, such as the name, status, software details and legal information.

On the settings screen, tap **General** > **About phone** and view information.

Regulatory & safety

You can view regulatory marks and related information on your device.

On the settings screen, tap **General** > **Regulatory & safety**.

Support

You can access Quick Help to quickly and conveniently view information about your phone.

On the settings screen, tap **General** > **Support**.



- Available menu items may vary depending on the area or service provider.



05

Appendix

LG Language Settings

Select a language to use on your device.

- Tap  > **Settings** > **General** > **Language & keyboard** > **Language** > **ADD LANGUAGE**, and select a language.
- Touch and hold  and drag it to the top of the language list to set it as a default language.

LG Bridge

LG Bridge overview

LG Bridge is an app that helps you manage the photos, music, videos and documents saved on your LG smartphone from your computer conveniently. You can back up contacts, photos and more to the computer or update the device software.



- See LG Bridge help for details.
- The supported features may vary depending on the device.
- LG USB driver is a necessary program to connect your LG smartphone with the computer and is installed when you install LG Bridge.

LG Bridge functions

- Manage the files on the device from a computer via Wi-Fi connection or mobile data connection.
- Back up data from the device to a computer or restore data from a computer to the device via USB cable connection.
- Update the device software from a computer via USB cable connection.

Installing LG Bridge on a computer

- 1 Go to *www.lg.com* from your computer.
- 2 Select your region.
- 3 Click **Support > Software & Firmware**.
- 4 Enter the name of your device.
OR
Select by the Product Category.
- 5 Go to **PC Sync > LG Bridge** to download the setup file.
 - Go to **Details** to view the minimum requirements for installing LG Bridge.

Phone software update

LG Mobile phone software update from the Internet

For more information about using this function, please visit <http://www.lg.com/common/index.jsp>, select your country and language.

This feature allows you to conveniently update the firmware on your phone to a newer version from the Internet without needing to visit a service centre. This feature will only be available if and when LG makes a newer firmware version available for your device.

Because the mobile phone firmware update requires the user's full attention for the duration of the update process, please make sure you check all instructions and notes that appear at each step before proceeding. Please note that removing the USB cable during the upgrade may seriously damage your mobile phone.



- LG reserves the right to make firmware updates available only for selected models at its own discretion and does not guarantee the availability of the newer version of the firmware for all handset models.

LG Mobile Phone software update via Over-the-Air (OTA)

This feature allows you to conveniently update your phone's software to a newer version via OTA, without connecting a USB cable. This feature will only be available if and when LG makes a newer firmware version available for your device.

To perform the phone software update,

Settings > General > Update centre > Software Update > Check now for update.



- Your personal data from internal phone storage—including information about your Google Account and any other accounts, your system/application data and settings, any downloaded applications and your DRM licence—might be lost in the process of updating your phone's software. Therefore, LG recommends that you backup your personal data before updating your phone's software. LG does not take responsibility for any loss of personal data.
- This feature depends on the area or service provider.

Anti-Theft Guide

Set up your device to prevent other people from using it if it's been reset to factory settings without your permission. For example, if your device is lost, stolen, or wiped, only someone with your Google Account or screen lock information can use the device.

All you need to make sure your device is protected is:

- Set a screen lock: If your device is lost or stolen but you have a screen lock set, the device can't be erased using the Settings menu unless your screen is unlocked.
- Add your Google Account on your device: If your device is wiped but you have your Google Account on it, the device can't finish the setup process until your Google Account information is entered again.

After your device is protected, you'll need to either unlock your screen or enter your Google Account password if you need to do a factory reset. This ensures that you or someone you trust is doing the reset.



- Do not forget your Google Account and password you had added to your device prior to performing a factory reset. If you can't provide the account information during the setup process, you won't be able to use the device at all after performing the factory reset.

Open Source Software Notice Information

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit <http://opensource.lge.com>.

In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to opensource@lge.com.

This offer is valid for a period of three years after our last shipment of this product. This offer is valid to anyone in receipt of this information.

Regulatory information (Regulation ID number, E-labeling, etc.)

For regulatory details, go to **Settings > General > Regulatory & safety**.

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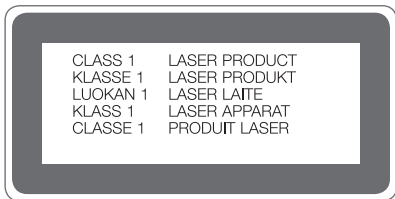
Laser safety statement

Caution!

This product employs a Laser system. To ensure proper use of this product, please read this owner's manual carefully and retain for future reference. Should the unit require maintenance, contact an authorised service centre.

Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure or make direct contact with the laser.



DECLARATION OF CONFORMITY

Hereby, **LG Electronics** declares that this **LM-G850EMW** product is in compliance with the essential requirements and other relevant provisions of Directive **2014/53/EU**.

A copy of the Declaration of Conformity can be found at
<http://www.lg.com/global/declaration>

More information

Tempered glass parts

Tempered glass parts of this device are not permanent and they may wear out over time.

- If you drop your device on a hard surface or subject it to severe impact, the tempered glass may be damaged.

If this happens, stop using your device immediately and contact an LG Customer Service Centre.

- You can purchase protective cases to protect your device from damage on the market.

Note that these protective cases are not covered under the warranty service provided by LG Electronics and safety is not guaranteed.

Aspect ratio

This device uses 18.7:9 aspect ratio.

- Some downloaded apps may not support 18.7:9 aspect ratio.

In this case, select the most optimal screen ratio for the app or consult the app provider for more information.

Guide to data transfers

- For the data that can be exchange between LG devices or between the LG device and a third party device, see the following table.

Type	Item details	LG device → LG device	Third party Android device → LG device	iOS device → LG device
Personal data	Contacts, messages, dial logs, calendar, voice recordings	○	○	○
	Memos	○	X	○
	Alarms	○	X	X
Media data	Photos, videos, songs, documents	○	○	○
Screen settings	Home screen settings (folders and widgets)	○	X	X
	Lock screen settings (screen lock settings excluded)	○	X	X
Apps	Downloaded apps	○	○	-
	Personal data of the downloaded app	○	X	
Others	Public certificate	○	○	X
	Settings (Wi-Fi, Bluetooth, Calls, sound & notification, accessibility, battery)	○	X	X

- 
- Some data may not be transmitted depending on the software version, app version, operating system, manufacturer or service provider's policy.

FAQ

This chapter lists some problems you might encounter when using your device. Some problems require you to call your service provider, but most are easy to fix yourself.

SIM card error

Make sure the SIM card is correctly inserted.

No network connection or dropped network

Signal is weak. Move to a window or an open area.

You are outside the carrier network area. Move and check the network.

Calls are not available

New network not authorised.

Make sure you have not set call barring for the incoming number.

Make sure you have not set call barring for the number you are dialling.

Device cannot be turned on

When the battery is completely discharged, your device will not turn on.

Fully charge the battery before turning on the device.

Charging error

Make sure device is charging at a normal temperature.

Check the charger and its connection to the device.

Use only in-box accessories which are authorised by LG.

The battery depletes faster than when first purchased

When you expose the device or the battery to very cold or hot temperatures, the battery life may be reduced.

Battery consumption will increase when you use certain features or apps, such as GPS, games or the Internet.

The battery is consumable and the battery life will get shorter over time.

Error messages appear when launching the camera

Charge the battery.

Free some memory by transferring files to a computer or deleting files from your device.

Restart the device.

If you are still having trouble with the camera app after trying these tips, contact a LG Electronics Service Center.

The photo quality is poor

The quality of your photos may vary, depending on the surroundings and the photography techniques you use.

If you take photos and videos, standard angle quality is better than wide-angle.

If you take photos in dark areas, at night or indoors, image noise may occur or images may be out of focus.

If you have any problems, reset the options.

The touch screen responds slowly or incorrectly

If you attach a screen protector or optional accessories to the touch screen, the touch screen may not function properly.

If you are wearing gloves, if your hands are not clean while touching the touch screen or if you tap the screen with sharp objects or your fingertips, the touch screen may malfunction.

The touch screen may malfunction in humid conditions or when exposed to water.

Restart your device to clear any temporary software bugs.

If the touch screen is scratched or damaged, visit a LG Electronics Service Center.

Hangs or freezes

Restart the device

- If your device freezes or hangs, you may need to close apps or turn the device off and then on again.

Perform a boot-up

- A soft reset may be used to reset the device if the screen freezes, or the buttons, touch screen or device are no longer responding.
- To perform a soft reset of your device, simply press and hold the Volume Down and Power keys until the device restarts.

Reset the device

- If the methods above do not solve your problem, perform a factory data reset.
- On the settings screen, tap **General > Restart & reset > Factory data reset**.
 - This method resets all settings for the device and deletes data. Before performing the factory data reset, remember to make back-up copies of all important data stored in the device.
 - If you registered a Google Account to the device, you must sign in to the same Google Account after resetting the device.

Bluetooth device is not located

Make sure the Bluetooth wireless feature is activated on your device.

Make sure the Bluetooth wireless feature is activated on the device you wish to connect to.

Make sure your device and the other Bluetooth device are within the maximum Bluetooth range (10 m).

If the tips above do not solve your problem, contact a LG Electronics Service Center.

A connection is not established when you connect the device to a computer

Make sure the USB cable you are using is compatible with your device.

Make sure you have the proper driver installed and updated on your computer.

Downloaded application causes a lot of errors

Application has problems.

Remove and reinstall the application.



06

For Your Safety

Important Information

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

Before You Start



Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

FCC RF Exposure Information

WARNING! Read this information before operating the device.

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 device complies with the FCC guidelines and these international standards.

Body-worn Operation

This device was tested for typical use with the back of the device kept 0.39 inches (1.0 cm) from the body. To comply with FCC RF exposure requirements, a minimum separation distance of 0.39 inches (1.0 cm) must be maintained between the user's body and the back of the device. Any belt-clips, holsters, and similar accessories containing metallic components may not be used. Avoid the use of accessories that cannot maintain 0.39 inches (1.0 cm) distance between the user's body and the back of the device and have not been tested for compliance with FCC RF exposure limits.

Consumer Information about Radio Frequency Emissions

Your wireless device, which contains a radio transmitter and receiver, emits radio frequency energy during use. The following consumer information addresses commonly asked questions about the health effects of wireless devices.

Are wireless devices safe?

Scientific research on the subject of wireless devices and radio frequency ("RF") energy has been conducted worldwide for many years, and continues. In the United States, the Food and Drug Administration ("FDA") and the Federal Communications Commission ("FCC") set policies and procedures for wireless devices. The FDA issued a website publication on health issues related to cell phone usage where it states, "The scientific community at large... believes that the weight of scientific evidence does not show an association between exposure to radiofrequency (RF) from cell phones and adverse health outcomes. Still the scientific community does recommend conducting additional research to address gaps in knowledge." That research is being conducted around the world and FDA continues to monitor developments in this field. You can access the joint FDA/FCC website at <http://www.fda.gov> (under "c" in the subject index, select **Cell Phones > Research**). You can also contact the FDA toll-free at (888) 463-6332 or (888) INFO-FDA. In June 2000, the FDA entered into a cooperative research and development agreement through which additional scientific research is being conducted. The FCC issued its own website publication stating that "there is no scientific evidence that proves that wireless device usage can lead to cancer or a variety of other problems, including headaches, dizziness or memory loss." This publication is available at <http://www.fcc.gov/cgb/cellular.html> or through the FCC at (888) 225-5322 or (888) CALL-FCC.

What does “SAR” mean?

In 1996, the FCC, working with the FDA, the U.S. Environmental Protection Agency, and other agencies, established RF exposure safety guidelines for wireless devices in the United States. Before a wireless device model is available for sale to the public, it must be tested by the manufacturer and certified to the FCC that it does not exceed limits established by the FCC. One of these limits is expressed as a Specific Absorption Rate, or “SAR.” SAR is a measure of the rate of absorption of RF energy in the body. Tests for SAR are conducted with the device transmitting at its highest power level in all tested frequency bands. Since 1996, the FCC has required that the SAR of handheld wireless devices not exceed 1.6 watts per kilogram, averaged over one gram of tissue.

Although the SAR is determined at the highest power level, the actual SAR value of a wireless device while operating can be less than the reported SAR value. This is because the SAR value may vary from call to call, depending on factors such as proximity to a cell site, the proximity of the device to the body while in use, and the use of hands-free devices. For more information about SARs, visit the FCC website at <https://www.fcc.gov/consumers/guides/specific-absorption-rate-sar-cell-phones-what-it-means-you>. You may also wish to contact the manufacturer of your device.

Can I minimize my RF exposure?

If you are concerned about RF, there are several simple steps you can take to minimize your RF exposure. You can, of course, reduce your talk time. You can place more distance between your body and the source of the RF, as the exposure level drops off dramatically with distance. The FDA/FCC website states that “hands-free kits can be used with wireless 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. Wireless 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.” Also, if you use your wireless device while in a car, you can use a device with an antenna on the outside of the vehicle. You should also read and follow your wireless device manufacturer’s instructions for the safe operation of your device.

Do wireless devices pose any special risks to children?

The FDA/FCC website states that “the scientific evidence does not show a danger to users of wireless communication devices, including children.” The FDA/FCC website further states that “some groups sponsored by other national governments have advised that children be discouraged from using wireless devices at all.” For example, the Stewart Report from the United Kingdom [“UK”] made such a recommendation in December 2000. In this report a group of independent experts noted that no evidence exists that using a cell phone causes brain tumors or other ill effects. [The UK’s] recommendation to limit cell phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists. A copy of the UK’s leaflet is available at <http://www.dh.gov.uk> (search “mobile”), or you can write to: NRPB, Chilton, Didcot, Oxon OX11 0RQ, United Kingdom. Copies of the UK’s annual reports on mobile phones and RF are available online at <http://www.hpa.org.uk/radiation/> (search “mobile”). Parents who wish to reduce their children’s RF exposure may choose to restrict their children’s wireless device use.

Where can I get further information about RF emissions?

For further information, see the following additional resources (websites current as of April 2005):

U.S. Food and Drug Administration

FDA Consumer magazine November-December 2000

Telephone: (888) INFO-FDA

<http://www.fda.gov> (Under “c” in the subject index, select **Cell Phones > Research.**)

U.S. Federal Communications Commission

445 12th Street, SW. Washington, D.C. 20554

Telephone: (888) 225-5322

<http://www.fcc.gov/oet/rfsafety>

Royal Society of Canada Expert Panels on Potential Health Risks of Radio Frequency Fields from Wireless Telecommunication Devices

283 Sparks Street Ottawa, Ontario K1R 7X9 Canada

Telephone: (613) 991-6990

http://www.rsc.ca/index.php?page=Expert_Panels_RF&Lang_id=120

World Health Organization

Avenue Appia 20 1211 Geneva 27 Switzerland

Telephone: 011 41 22 791 21 11

<http://www.who.int/mediacentre/factsheets/fs193/en/>

International Commission on Non-Ionizing Radiation Protection

c/o Bundesamt für Strahlenschutz Ingolstaedter Landstr. 1 85764

Oberschleissheim Germany

Telephone: 011 49 1888 333 2156

<http://www.icnirp.de>

American National Standards Institute

1819 L Street, NW, 6th Floor Washington, D.C. 20036

Telephone: (202) 293-8020

<http://www.ansi.org>

National Council on Radiation Protection and Measurements

7910 Woodmont Avenue, Suite 800 Bethesda, MD 20814-3095

Telephone: (301) 657-2652

<http://www.ncrponline.org>

Engineering in Medicine and Biology Society, Committee on Man and Radiation (COMAR) of the Institute of Electrical and Electronics Engineers

<http://ewh.ieee.org/soc/embs/comar/>

Consumer Information on SAR

(Specific Absorption Rate)

This model device meets the government's requirements for exposure to radio waves. Your wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to Radio Frequency (RF) energy set by the Federal Communications Commission of the U.S. 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 FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions specified by the FCC with the device 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 device while operating can be well below the maximum value. Because the device 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 device 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 by the FCC for each model.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF emission guidelines. SAR information on this model device 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 **ZNFG850EMW**

* 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.

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 device.

Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of six (6) inches be maintained between a handheld wireless device 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 device more than six (6) inches from their pacemaker when the device is turned ON;
- Should not carry the device in a breast pocket;
- Should use the ear opposite the pacemaker to minimize the potential for interference;
- Should turn the device OFF immediately if there is any reason to suspect that interference is taking place.

Other Medical Devices

If you use any other personal medical device, 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.

Health Care Facilities

Turn 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 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 device OFF in any facility where posted notices so require.

Aircraft

FCC regulations prohibit using your device while in the air. Switch OFF your device before boarding an aircraft.

Blasting Areas

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

Potentially Explosive Atmosphere

Turn 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.

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.

Part 15.19 Statement

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.

Part 15.21 Statement

Changes or modifications that are not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

Part 15.105 Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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.

Safety Information

Please read and observe the following information for safe and proper use of your device and to prevent damage.



Caution: Violation of the instructions may cause minor or serious damage to the product.

- Do not disassemble, open, crush, bend or deform, puncture or shred the device.
- Do not modify or re-manufacture the device, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire, explosion or other hazard.
- Only use the battery for the device for which it is specified.
- Only use the device with an LG charging system that has been qualified with the device, per CTIA Certification Requirements for Battery System Compliance to IEEE 1725. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Avoid dropping the device. If the device is dropped, especially on a hard surface, and you suspect damage, take it to a service center for inspection.
- To dispose of the battery properly, call (800) 822-8837 or visit www.call2recycle.org.
- Always unplug the charger from the wall socket after the device is fully charged to save unnecessary power consumption.

Charger and Adapter Safety

- The charger and adapter are intended for indoor use only.
- Insert the battery charger vertically into the wall power socket.
- Only use the LG-approved battery charger. Otherwise, you may cause serious damage to your device.
- Use the correct adapter for your device when using the battery charger abroad.

Battery Information and Care

- Always unplug the charger from the wall socket after the device is fully charged to save unnecessary power consumption of the charger.
- Please read the manual of the specified charger for information about its charging method.
- Do not damage the power cord by bending, twisting, or heating. Do not use the plug if it is loose as it may cause electric shock or fire.
- Do not place any heavy items on the power cord. Do not allow the power cord to be crimped as it may cause electric shock or fire.
- Unplug the power cord prior to cleaning your device, and clean the power plug pin when it's dirty. When using the power plug, ensure that it's firmly connected. If not, it may cause excessive heat or fire. If you put your device in a pocket or bag without covering the receptacle of the device (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the device. Always cover the receptacle when not in use.
- Recharge the device after long periods of non-use to maximize battery life. Battery life will vary due to usage pattern and environmental conditions.
- Improper handling of the charging port, as well as the use of an incompatible charger, may cause damage or defect to your device.
- The charging temperature range is between 0 °C/32 °F and 40 °C/104 °F. Do not charge the battery out of the recommended temperature range. Charging out of the recommended range might cause heat to be generated or serious damage to the battery. It might also cause the deterioration of the battery's characteristics and cycle life.
- Do not use or leave the device in direct sunlight or in a car heated by sunshine. The device may generate excessive heat, smoke, or flame. It also might cause deterioration of device's characteristics or cycle life.
- If the skin or clothes are smeared with liquid from the battery, wash with fresh water. It may cause skin inflammation.
- Please take your device to an authorized service center immediately if this occurs.
- Do not handle the device with wet hands while it is being charged. It may cause an electric shock or seriously damage your device.
- Do not charge while the device or charging cable is wet or contains moisture. This can cause fire, electric shock, injury or damage to the device.

- Do not place or answer calls while charging the device as it may short-circuit the device and/or cause electric shock or fire.
- Talking on your device for a long period of time may reduce call quality due to heat generated during use.

WARNING! Notice for Battery Replacement

- Do not remove the back cover.
- Your device has an internal battery. For your safety, do not remove the battery incorporated in the product. If you need to replace the battery, take it to the nearest authorized LG Electronics service point or dealer for assistance.
- The Li-Ion Battery is a hazardous component which can cause injury.
- Battery replacement by non-qualified professional can cause damage to your device.

Explosion, Shock, and Fire Hazards

- Do not put your device 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 device, and clean the power plug pin when it's dirty.
- When using the power plug, ensure that it's firmly connected. If not, it may cause excessive heat or fire.
- If you put your device in a pocket or bag without covering the receptacle of the device (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the device and may cause an explosion. Always cover the receptacle when not in use.
- Do not charge while the device or charging cable is wet or contains moisture. This can cause fire, electric shock, injury or damage to the device.

General Notice

- Do not place items containing magnetic components, such as a credit card, phone card, bank book, or subway ticket, near your device. The magnetism of the device may damage the data stored in the magnetic strip.
- Talking on your device for a long period of time may reduce call quality due to heat generated during use.

- When the device is not used for a long period time, store it in a safe place with the power cord unplugged.
- Using the device in proximity to receiving equipment (i.e., TV or radio) may cause interference to the device.
- Do not immerse your device in water, liquid, or expose to high humidity. Immediately, take it to an LG Authorized Service Center.
- Do not paint your device.
- The data saved in your device might be deleted due to careless use, repair of the device, or upgrade of the software. Please backup your important phone numbers. (Ringtones, 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 device in public places, set the ringtone to vibration so you don't disturb others.
- Do not turn your device on or off when putting it to your ear.
- Use accessories, such as earphones and headsets, with caution. Ensure that cables are tucked away safely.
- Please ensure that the product does not get in contact with liquid. Do not use or recharge the product if it is wet. Once the product becomes wet, the liquid damage indicator changes color. Please note that this will limit you from receiving any free-of-charge repair services provided under warranty.

FDA Consumer Update



The U.S. Food and Drug Administration's Center for Devices and Radiological Health Consumer Update on Mobile Phones:

1. Do wireless devices pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless devices. There is no proof, however, that wireless devices are absolutely safe. Wireless devices emit low levels of Radio Frequency (RF) energy in the microwave range while being used. They also emit very low levels of RF when in 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 devices?

Under the law, the FDA does not review the safety of radiation-emitting consumer products such as wireless devices before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless devices are shown to emit Radio Frequency (RF) energy at a level that is hazardous to the user. In such a case, the FDA could require the manufacturers of wireless 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, the FDA has urged the wireless 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 wireless devices;
- Design wireless 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 wireless devices with the best possible information on possible effects of wireless device 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
- 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 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. The FCC relies on the FDA and other health agencies for safety questions about wireless devices. The FCC also regulates the base stations that the wireless device networks rely upon. While these base stations operate at higher power than do the wireless devices themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless devices. Base stations are thus not the subject of the safety questions discussed in this document.

3. What kinds of devices are the subject of this update?

The term “wireless device” refers here to handheld wireless devices with built-in antennas, often called “cell,” “mobile,” or “PCS” devices. These types of wireless devices can expose the user to measurable Radio Frequency (RF) energy because of the short distance between the device 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 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 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 Radio Frequency (RF) energy exposures characteristic of wireless 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 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 devices, so we do not 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 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 wireless device 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.

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

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

6. What is the FDA doing to find out more about the possible health effects of wireless device 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 Radio Frequency (RF) energy.

The FDA has been a leading participant in the World Health Organization International Electro Magnetic 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 device 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 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.

7. How can I find out how much Radio Frequency energy exposure I can get by using my wireless device?

All devices sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit Radio Frequency (RF) energy 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 devices 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 device and is set well below levels known to have effects. Manufacturers of wireless devices must report the RF exposure level for each model of device to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your device so you can find your device's RF exposure level in the online listing.

8. What has the FDA done to measure the Radio Frequency energy coming from wireless devices?

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the Radio Frequency (RF) energy exposure from wireless devices 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 device 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 device.

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 device complies with safety guidelines.

9. What steps can I take to reduce my exposure to Radio Frequency energy from my wireless 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 (RF) energy. Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless device will reduce RF exposure. If you must conduct extended conversations by wireless 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 wireless device away from your body or use a wireless device connected to a remote antenna. Again, the scientific data does not demonstrate that wireless 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 wireless device use.

10. What about children using wireless devices?

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

11. What about wireless device interference with medical equipment?

Radio Frequency (RF) energy from wireless devices can interact with some electronic devices. For this reason, the FDA helped develop a detailed test method to measure Electro Magnetic 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 device EMI.

The FDA has tested hearing aids for interference from handheld wireless 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 wireless 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.

The FDA continues to monitor the use of wireless devices 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 devices

[http://www.fda.gov/Radiation-EmittingProducts/
RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/
CellPhones/default.htm](http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/default.htm)

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.hpa.org.uk/radiation/>

Driving

Check the laws and regulations on the use of wireless devices in the areas where you drive and always obey them. Also, if using your device while driving, please observe the following:

- 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 or the law require it.

10 Driver Safety Tips

Your wireless device gives you the powerful ability to communicate by voice almost anywhere, anytime. An important responsibility accompanies the benefits of wireless devices, one that every user must uphold. When operating a car, driving is your first responsibility. When using your wireless device behind the wheel of a car, practice good common sense and remember the following tips:

1. Get to know your wireless device and its features, such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most devices offer, including automatic redial and memory. Also, work to memorize the device keypad so you can use the speed dial function without taking your attention off the road.
2. When available, use a hands-free device. A number of hands-free wireless device accessories are readily available today. Whether you choose an installed mounted device for your wireless device or a speaker phone accessory, take advantage of these devices if available to you.
3. Make sure you place your wireless device 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. Don't 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. Do not 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 device to call for help. Your wireless device is one of the greatest tools you can own to protect yourself and your family in dangerous situations -- with your device at your side, help is only three numbers away. Dial 911 or another local emergency number in the case of fire, traffic accident, road hazard, or medical emergency. Remember, it's a free call on your wireless device!
9. Use your wireless device to help others in emergencies. Your wireless device 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 another local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special wireless non-emergency 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 device 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 a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

The above tips are meant as general guidelines. Before deciding to use your mobile device while operating a vehicle, it is recommended that you consult your applicable jurisdiction's local laws or other regulations regarding such use. Such laws or other regulations may prohibit or otherwise restrict the manner in which a driver may use his or her device while operating a vehicle.

