





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- Default apps on the device are subject to updates, and support for these apps may be withdrawn without prior notice.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 Center. 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 license 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 licensed 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.

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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Custom-designed Features

Camera features

Flash Jump-Cut

ou can create a GI by taking photos at three second intervals

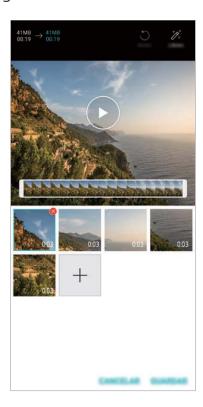
- 1 Tap ○> then tap MODE > Flash Jump-Cut 🗔
- 2 Tap 4 to set the number of cuts you want to take
- 3 Tap ① to take photos

Gallery features

Creating a movie

ou can create a new movie by putting images and videos together

- 1 Tap ○> ▲ select an album then tap : > Create movie
- 2 Select images or videos for your movie and tap **NEXT**
- 3 Edit the selected images and videos and then tap **SAVE**



Deleting files

ou can select images or videos to delete from your video by tapping at the top right corner of its thumbnail

Adding files

ou can select images or videos to add after tapping + at the bottom of the screen ou can also select the images or videos you have already previously added



• Touch and hold a file and then tap another file for multiple selection

Rearranging files

To rearrange the images and videos touch and hold the file you want to move then dragging it to the desired location

Adding file effects

Tap // to add a theme or background music or change the font

Resetting the movie edits

ou can reset the edits made to the movie e g play time by tapping 5

Previewing a file

Check your new video before saving it by tapping After the playback time elapses the next file is played automatically



- A maximum of 50 images and videos can be used to create a video
- The playback time for an image is 3 seconds by default and it cannot be changed ideos can be trimmed down to a minimum of 1 second
- This feature may not support some image or video formats

Making a GIF

ou can easily make a GI file using recorded video

- 1 At the desired starting point while watching a video tap 🕼
- 2 Select the length of the GI you want to create
 - GI is generated for the time selected from the current time
 - or videos less than 5 seconds GI images are automatically generated for the remaining time



• ou may use this feature solely for creative purposes The use of this feature involving infringement of any other persons rights such as copyright or defamatory or offensive statements may be subject to civil criminal or administrative liabilities and or penalties under applicable laws ou shall not copy reproduce distribute or otherwise make illegal use of any copyrighted materials without permission of the rightful owner or copyright holder To the fullest extent permitted by applicable law G Electronics disclaims all expressed and implied warranties as well as liabilities associated thereto

Google Assistant

ou can manage tasks plan your day get answers and much more



 To use this feature first connect to the network and sign in to your Google account

Launching Google Assistant

- 1 Press and hold O from the Home screen to launch Google Assistant
- 2 Tap **GET STARTED**
- 3 ollow the on-screen instructions to configure the voice settings
 - The device saves your voice data for recognition

Launching Google Assistant with your voice

- 1 Say "Ok Google" when the screen is turned off or locked
- 2 Say a command or uestion when *Hi, how can I help?* appears on the screen

Launching Google Assistant from the Home screen

- 1 Touch and hold O from the Home screen
- 2 Say a command or uestion when *Hi, how can I help?* appears on the screen



 oice recognition accuracy may decrease if you speak with an unclear voice or in a noisy place hen you use the voice recognition feature increase its accuracy by speaking with a clear voice in a uiet place

The *Hi, how can I help?* message may change depending on the software version

Multi-tasking feature

Multi-Window

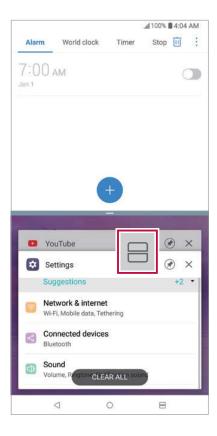
ou can use two apps at the same time by separating the screen into multiple windows

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

ou can also access this feature by doing the following

- 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- indow feature
 - The selected app appears at the bottom of the screen







- To deactivate the Multi- indow feature touch and hold \boxminus on the Home touch button
 - To ad ust the si e of the split screen drag at the center of the screen
 - The Multi- indow feature is not supported by some G apps and apps downloaded from the Play Store

Overview screen

each app preview

The verview screen provides a preview of your recently-used apps To view the list of recently-used apps tap ___ on the Home touch buttons • Touch and hold an app and drag it to the top of the screen to start the app with the Multi- indow feature ou can also tap \blacksquare at the top of



Product components and accessories

The following items are included with your device

Device

Quick Start Guide

SB cable

• E ection pin

Charger

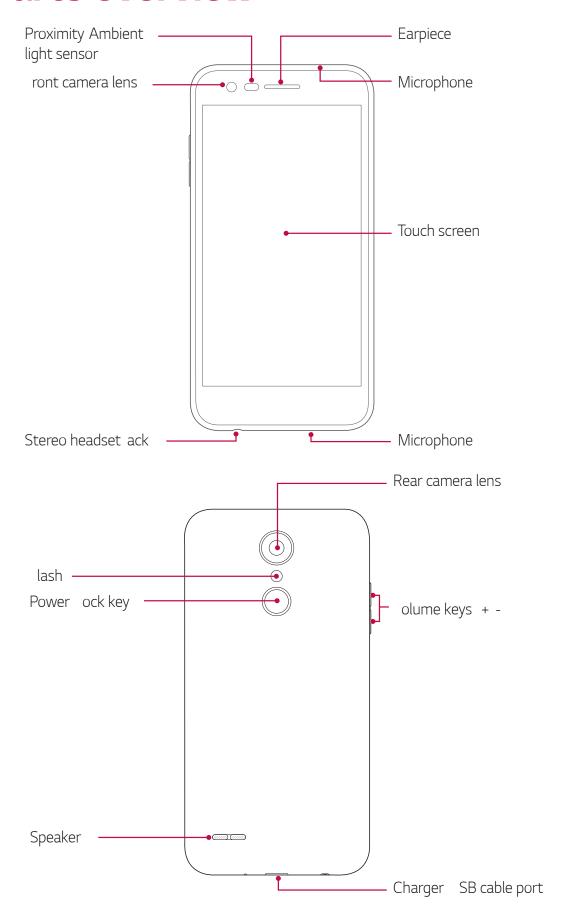


- The items supplied with the device and any available accessories may vary depending on the area and service provider
- Always use genuine G Electronics accessories sing accessories made by other manufacturers may affect your devices call performance or cause malfunctions This may not be covered by Gs repair service
- Some of the device parts are made of tempered glass If you drop your device on a hard surface or sub ect it to severe impact the tempered glass may be damaged If this happens stop using your device immediately and contact an G Customer Service Center



- If any of these basic items are missing contact the dealer from which you purchased your device
- To purchase additional basic items contact an G Customer Service Center
- To purchase optional items contact an G Customer Service Center for available dealers
- Some items in the product box are sub ect to change without notice
- The appearance and specifications of your device are sub ect to change without notice
- Device specifications may vary depending on the area or service provider
- Be sure to use authentic accessories provided by G Electronics sing third-party accessories may damage the device or cause malfunctions
- Remove the protective film from the ingerprint sensor before using the fingerprint recognition feature

Parts overview





Press and hold the volume down - key and Power ock key at the same time for a second to take a screenshot

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 analy es the ambient light intensity when the auto-brightness control mode is turned on
- aser detection auto-focus
 - Detect the distance from the camera to your sub ect for automatic focusing
 - Quickly focus on closer or farther ob ects when you use the rear camera to take photos
- olume keys
 - Ad ust the volume for ringtones calls or notifications
 - hile using the Camera gently press a olume key to take a photo To take continuous photos press and hold the olume key
 - Press the olume Down key twice to launch the Camera app when the screen is locked or turned off Press the olume p + key twice to launch Capture+
- Power ock 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



- Some functions may be restricted for access depending on the device specifications
- Do not put heavy ob ects on the device or sit on it Doing 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

Turning the power on or off

Turning the power on

hen the power is turned off press and hold the Power/Lock key



• hen 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

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 ther functions remain available

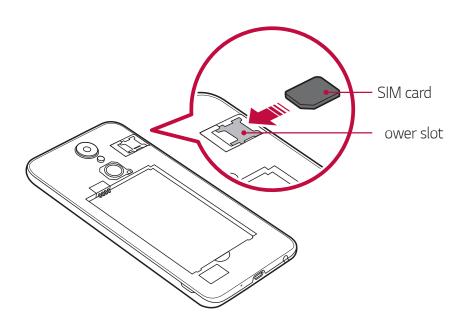
Installing the SIM card

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

1 To remove the back cover hold the phone firmly in one hand ith your other hand lift off the back cover with your thumbnail as shown in the figure below



2 Slide the SIM card into the SIM card slot with the gold-colored contacts facing downwards





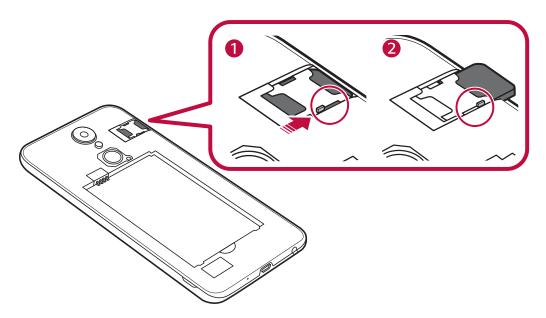
• This device supports only ano SIM cards



 or problem-free performance it is recommended to use the phone with the correct type of SIM card Always use a factory-made SIM card supplied by the service provider

To remove the SIM card

Push the pin on the left of the SIM card slot downwards as indicated in the image below



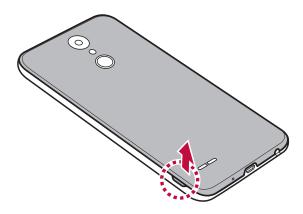
Precautions when using the SIM card

- Do not lose your SIM card G 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

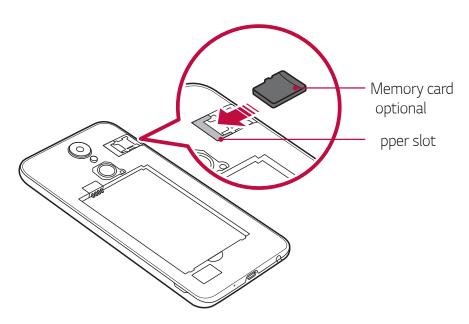
Inserting the memory card

The device can support up to a 32 GB microSD card Depending on the memory card manufacturer and type some memory card may not be compatible with your device

1 To remove the back cover hold the phone firmly in one hand ith your other hand lift off the back cover with your thumbnail as shown in the figure below



2 Insert the memory card into the memory card 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

Removing the memory card

nmount the memory card before removing it for safety

- 1 Tap ○> Tools > Settings > Storage > △
- 2 Remove the back cover and pull out the memory card



 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 G is not responsible for losses that result from the abuse or improper use of memory cards including the loss of data

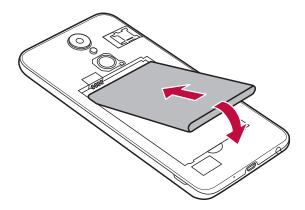
Battery

Installing the battery

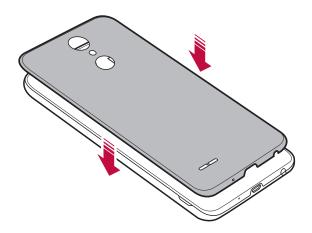
1 To remove the back cover hold the phone firmly in one hand ith your other hand lift off the back cover with your thumbnail as shown in the figure below



2 Insert the battery



3 To replace the cover onto the device align the back cover over the battery compartment and press it down until it clicks into place

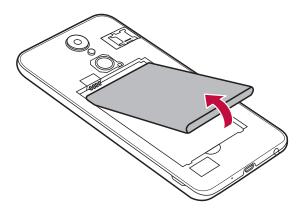




 ollow the instructions in this user guide cautiously when handling the device ailure to do so may damage the device or cause in ury to yourself or others

Removing the battery

pen the back cover and pull out the battery

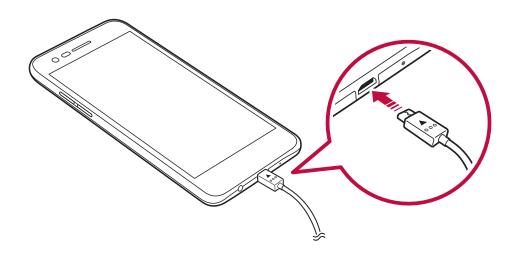




• Turn off the device before removing the battery ailure to do so may damage the device

Charging the battery

Before using the device fully charge the battery





- Make sure to use the SB cable provided with your device
- Make sure to use an G-approved charger battery and charging cable Charging the battery with a third-party charger may cause the battery to explode or may damage the device
- sing 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

Precautions when using the device

- hen replacing the battery take extra care to ensure that no foreign substances or water enter the device
- Ensure that the inside of the device does not make contact with a metallic object or water
- Make sure to use the SB cable provided do not use third party SB cables or chargers with your device The G limited warranty does not cover the use of third party accessories
- ailure to follow the instructions in this guide and improper use may damage the device

Using the battery efficiently

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

Stop apps and functions from running in the background to increase battery life

To minimi e battery consumption follow these tips

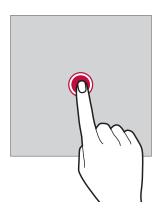
- Turn off the **Bluetooth** or i- i network function when not using them
- Set the screen timeout to as short a time as possible
- Minimi e the screen brightness
- Set a screen lock when the device is not in use
- Check the battery usage details and close any downloaded apps that are draining the battery

Touch screen

ou can familiari e yourself with how to control your device by using touch screen gestures

Tapping

ightly tap with your fingertip to select or run an app or option



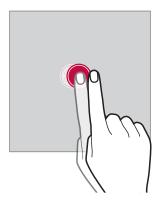
Touching and holding

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



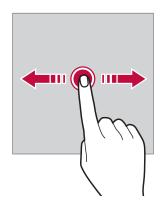
Double-tapping

Tap the screen twice uickly to oom in or out on a specific app



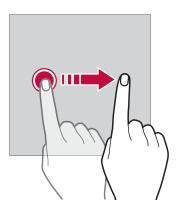
Dragging

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



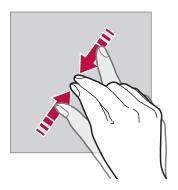
Swiping

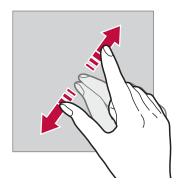
Touch the screen with your finger and move it uickly without pausing ou can use this gesture to scroll through a list a web page photos screens and more



Pinching and spreading

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







 Do not expose the touch screen to excessive physical shock ou 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—se 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
- The 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 O on any screen to directly go to the Home screen

ou 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

ou can view all apps and organi e widgets and folders on the Home screen





- The Home screen may differ depending on the manufacturer policy user settings software version or service provider
- Status bar iew status icons the time and the battery level
- **Weather widget** iew the weather information or time for a specific area
- Google search widget Perform a Google search by inputting spoken or written keywords
- Page icon Display the total number of Home screen canvases ou can tap the desired page icon to go to the page The icon reflecting the current canvas will be highlighted
- Quick access area ix main apps at the bottom of the screen so that they can be accessed from any Home screen canvas

Home touch buttons

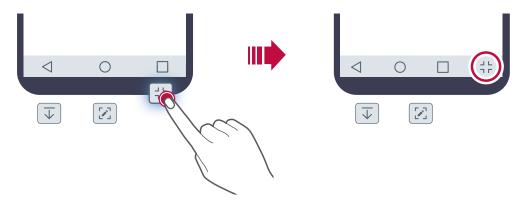
- Return to the previous screen Close the keypad or pop-up windows
- O Tap to go to the Home screen To launch Google Assistant touch and hold
- Tap to view a list of recently used apps or run an app from the list To delete all the recently used apps tap **CLEAR ALL** To use two apps at the same time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

Editing the Home touch buttons

ou can rearrange the Home touch buttons or add fre uently used functions to the Home touch buttons area

Tap > Tools > Settings > Display > Home touch buttons > Button combination and customi e the settings

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



Changing the color of the Home touch buttons bar

ou can change the background color of the Home touch buttons

- 1 Tap > Settings > Display > Home touch buttons
- 2 nder **Color** tap the desired color

Lock/hide icon

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

If you want to lock the Home touch buttons while shown tap $\ \square$ on the left of the Home touch buttons

To hide the Home touch buttons again double-tap

To deactivate the ock hide buttons feature tap \bigcirc > Settings > Display > Home touch buttons > Show lock/hide icon then tap



• Some features may not be supported while the Home touch buttons are hidden

Hiding the Home touch buttons

ou 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

Status icons

hen 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

×	o signal
4 G ↓↑	Data is being transmitted over the network
Ö	Alarm is set
1 1	ibrate mode is on
*	Bluetooth is on
Ŷ.	Connected to a computer via SB
	Battery level
十	Airplane mode is on
×	Missed calls
•	i- i is connected
×	Mute mode is on
•	GPS is on
((1))	Hotspot is on
	o SIM card

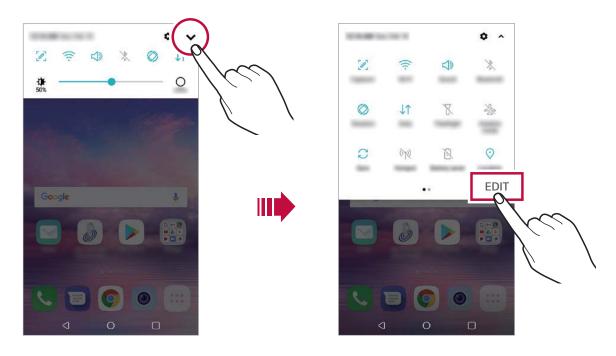


- Some of these icons may appear differently or may not appear at all depending on the device's status. Refer to the icons according to the actual environment and area in which you are using the device and your service provider.
- Displayed icons may vary depending on the area or service provider

Notifications panel

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

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





• ou can use the notifications panel even on the lock screen Drag the notifications panel while the screen is locked to uickly access the desired features

Switching the screen orientation

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

n the notification panel tap **Rotation** from the uick access icon list ou can also tap \bigcirc > **Tools** > **Settings** > **Display** and activate **Autorotate screen**



Editing the Home screen

n 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 a desired 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 a wallpaper or theme touch and hold on a blank area of the Home screen then select Wallpaper & theme

ou can also tap \bigcirc > Tools > Settings > Display > Wallpaper & theme then select a theme 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

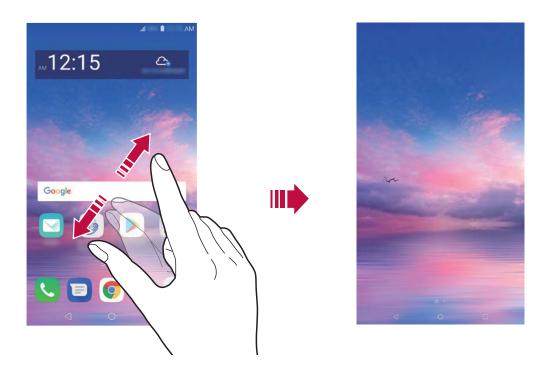


Viewing the background theme

ou 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 \triangleleft



Moving apps on the Home screen

n the Home screen touch and hold an app then drag it to a desired location

- To keep fre uently used apps at the bottom of the Home screen touch and hold an app then drag it to the uick access area at the bottom
- To remove an icon from the uick access area drag the icon to the Home screen

Using folders from the Home screen

Creating folders

n 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

n the Home screen tap a folder and do one of the following actions

- To edit the folder name and color 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 there is only one app remaining in the folder the folder is removed automatically
- ou can also add or remove apps after tapping + in the folder



The folder color cannot be changed for downloaded themes

Home screen settings

ou can customi e the Home screen settings

- Tap () > Tools > Settings > Display > Home screen
- 2 Customi e 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 a desired shape for icons
 - **Grid** Change the app arrangement mode for the Home screen

- Loop Home screen Enable to allow continuous Home screen scrolling loop back to the first screen after the last screen
- Search Search by swiping down on the Home screen

Screen lock

Screen lock overview

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

If you press the Power ock 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 e recommend that you activate the screen lock while not using the device

Setting a screen lock

There are several screen lock options available

- Tap > Tools > Settings > Lock screen & security > Select screen lock and then select the method you prefer
- 2 Customi e the following settings
 - None Deactivate the screen lock function
 - **Swipe** Swipe on the screen 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

Secure start-up settings

or additional security for your device you can enable the Secure start-up option when setting a screen lock

- ou 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
- hen you turn on the device right after the device reboots encryption also starts If you stop the encryption arbitrarily the data may be damaged Be sure to wait until the reboot is completed

KnockON

ou can turn the screen on or off by double-tapping the screen



- This option is available only on the Home screen provided by G It may not function properly on a custom launcher or on the Home screen installed by the user
- hen tapping the screen use your fingertip Do not use a fingernail
- To use the nock 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 screen ou can also double-tap an empty space on the status bar

Memory card encryption

ou 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 > Tools > Settings > 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



- To encrypt the memory card make sure that a screen lock is set using a PI or password
- nce 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 that 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 device To use the encrypted memory card on another mobile device format the card
- ou 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

ou can take screenshots of the current screen you are viewing

Via a shortcut

Press and hold the Power ock key and the olume Down - key at the same time for at least two seconds

• Screenshots can be viewed from the **Screenshots** folder in **Gallery**

Via Capture+

n the screen where you want to take a screenshot drag the status bar downwards then tap [2]



- hen the screen is turned off or locked you can access Capture+ by pressing the olume p + key twice To use this feature tap >
 Tools > Settings > Extensions and turn on Shortcut keys
- See riting notes on a screenshot for details

Entering text

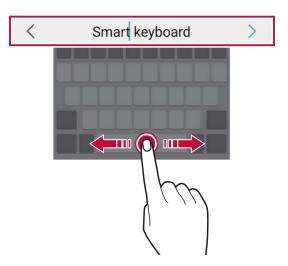
Using the Smart keyboard

ou can use the Smart keyboard to enter and edit text

ith 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

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





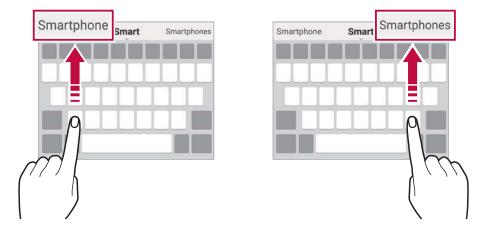
• This option is available only on the Q ERT keyboard

Suggesting words

Smart keyboard automatically analy es your usage patterns to suggest fre uently used words as you type The longer you use your device the more precise the suggestions are

Enter text then tap a suggested word

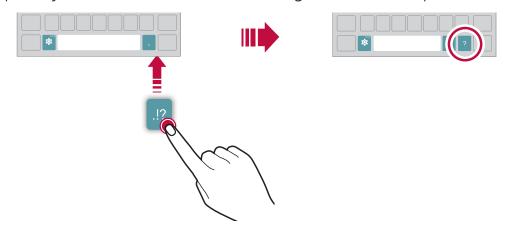
 The selected word is automatically entered ou do not need to manually type every letter of the word



Changing the QWERTY keyboard layout

ou can add delete or rearrange keys on the bottom row of the keyboard

- Tap > Tools > Settings > System > Language & input > On-screen keyboard > LG Keyboard > Keyboard height and layout > QWERTY keyboard layout
 - ou can also tap to on the keyboard and tap **Keyboard height and** layout > QWERTY keyboard layout
- 2 Tap a key on the bottom row then drag it to a desired position



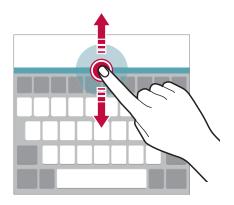


- This option is available on the Q ERT Q ERT and A ERT keyboards
- This function may not be supported for some languages

Customizing the keyboard height

ou can customi e the keyboard height to maximi e hand comfort when typing

- 1 Tap > Tools > Settings > System > Language & input > On-screen keyboard > LG Keyboard > Keyboard height and layout > Keyboard height
 - ou can also tap 🐯 on the keyboard and tap **Keyboard height and** layout > Keyboard height
- 2 Ad ust the keyboard height



Selecting a landscape keyboard mode

ou can select a landscape keyboard mode from several choices

- Tap > Tools > Settings > System > Language & input > On-screen keyboard > LG Keyboard > Keyboard height and layout > Keyboard type in landscape
 - ou can also tap to on the keyboard and tap **Keyboard height and** layout > Keyboard type in landscape
- 2 Select a keyboard mode

Splitting the keyboard

ou can split the keyboard in half and place each piece on either side of the screen when the screen is in landscape mode

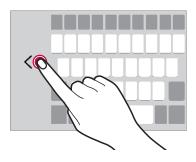
To split the keyboard turn the device horiontally and spread it apart on both sides with holding the keyboard with two fingers. To attach the keyboard close it with pressing with two fingers



One-handed operation mode

ou can move the keyboard to one side of the screen so that you can use the keyboard with one hand

- Tap > Tools > Settings > System > Language & input > On-screen keyboard > LG Keyboard > Keyboard height and layout > One-handed operation
 - ou can also tap on the keyboard and tap **Keyboard height and** layout > One-handed operation
- 2 Press the arrow displayed next to the keyboard to move the keyboard in the desired direction



Adding languages to the keyboard

ou can make additional languages available for keyboard input

- 1 Tap ○> Tools > Settings > System > Language & input > On-screen keyboard > LG Keyboard > Select languages
 ou can also tap ☼ on the keyboard and tap Select languages
- 2 Select the languages you want to use on the keyboard

Copy and Paste

ou can cut or copy text from an app and then paste the text into the same app r 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 clipboard
- 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

Entering text by using voice

n the keyboard touch and hold $\textcircled{s}^{"}$ and then select Ψ



- To maximi e 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

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

- n the keyboard touch and hold and select ou can also touch and hold the text input window then select **CLIP**
- 2 Select and paste an item from the clip tray
 - A maximum of 20 items can be saved to the clip tray
 - Tap \$\rightarrow\$ to lock saved items in order not to delete them even when the maximum uantity is exceeded A maximum of ten items can be locked To delete locked items unlock them first
 - Tap jij to delete the items saved to the clip tray



• The clip tray may not be supported by some downloaded apps

Do not disturb

ou 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 iew the help for Do not disturb



Installing and uninstalling apps

Installing apps

Access an app store to search and download apps

 ou can use Smart orld Play Store or the app store provided by your service provider



- Some app stores may re uire 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
- Smart orld may not be supported depending on the area or service provider

Uninstalling apps

ninstall apps that you no longer use from your device

Uninstalling with the touch and hold gesture

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

ninstalled apps can be reinstalled within 24 hours of uninstallation
 See App trash for details

Uninstalling by using the settings menu

Tap () > Tools > Settings > Apps & notifications > App info select an app then tap Uninstall

Uninstalling apps from the app store

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



• Some apps cannot be uninstalled by users

Installing and uninstalling apps during the setup

hen you turn on the device for the first time you can download recommended apps

ou can skip to the next step without installation

App trash

ou can view the uninstalled apps on the Home screen ou can also reinstall apps within 24 hours of uninstallation

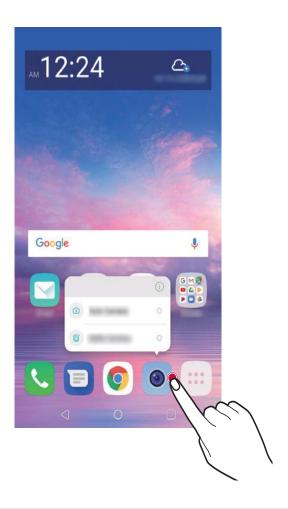
- 1 Touch and hold an empty area of the Home screen then tap **App** trash
- 2 Choose the desired option
 - Restore Reinstall the selected app
 - 🔟 Remove the uninstalled apps permanently from the device



- ninstalled 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

n the Home screen touch and hold an app icon such as Phone Message Camera Gallery and Settings to display a uick access menu se 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

Making a call from the contact list

- 1 Tap ○> □> Contacts
- 2 rom the contact list select a contact and tap &

Answering a call

To answer a call drag 📞 on the incoming call screen

- hen the stereo headset is connected you can make calls by using the call end button on the headset
- To answer a call using a shortcut key tap O > Tools > Settings >
 Network & internet > Call > Answer and end calls > Press the
 Volume Up key to and select Answer call
- To end a call without turning off the screen tap > > Tools >
 Settings > Network & internet > Call > Answer and end calls and activate End call with the Power key.

Rejecting a call

To re ect an incoming call drag on across the incoming call screen

- To send a re ection message drag the re ection message option across the screen
- To add or edit a re ection message tap > Tools > Settings >
 Network & internet > Call > Call blocking & Decline with message >
 Decline with message
- hen a call is coming in press the olume p + olume Down or Power ock key to mute ringtone or vibration or to hold the call

Checking an incoming call while using an app

hen a call comes in while using an app a pop-up notification can be displayed at the top of the screen ou can receive the call re ect the call or send message from the pop-up screen





Tap O > Tools > Settings > Network & internet > Call > Additional settings > Incoming voice call pop-up

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 ou 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

- Hold (This function may vary depending on the service provider)
 Place the current call on hold
- Contacts (This function may vary depending on the service provider) Allows access to your contacts list
- Add call (This function may vary depending on the service provider) Allows you to add another caller to initiate a conference call
- Dialpad Display or hide the dial pad
- Speaker Turn on the speakerphone function
- Mute Block your voice so that the other party cannot hear your voice
- **Bluetooth** Switch the call to a Bluetooth device that is paired and connected
- (End a call
- Access additional call options



Available setting items may vary depending on the area or service provider

Making a three-way calling

ou can make a call to another contact during a call

- 1 During a call tap Add call or : > Add call (Depending on the service provider)
- 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 or Merge calls



 ou 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 $\bigcirc > \bigcirc >$ 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 $\mbox{\Large \ensuremath{\bigcirc}}$
- To delete call records tap : > Delete



• The displayed call duration may differ from the call charge Consult with your service provider for more information

Configuring call options

ou can configure various call options

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

Messages

Sending a message

ou can create and send messages to your contacts using the Messages 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 attach files tap 🕕
 - To access optional menu items tap
- 4 Tap or to send the message

Reading a message

ou can view exchanged messages organi ed by contact

- 1 Tap () > ■
- 2 Select a contact from the message list

Configuring messaging settings

ou can change messaging settings to suit your preferences

- 1 Tap () > ■
- 2 Tap : > Settings from the message list

Camera

Starting the camera

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

Tap () > (e)



- 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 in Gallery See Gallery overview for details

Changing the camera mode

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

Tap () > • > MODE then select the desired mode



Auto mode

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

- 1 Tap > then tap MODE > Auto 🖺
- 2 To take a photo tap 🔘 To record a video tap 💿



Taking a photo

- 1 Select a camera mode and tap the sub ect to focus the camera on
- 2 Tap 🔘 to take a photo
 - ou can also press the olume Down or olume p + key to take a photo



 hen the screen is turned off or locked start the camera by pressing the olume Down - key twice To enable this feature tap > Tools > Settings > Extensions and turn on Shortcut keys

Recording a video

- 1 Select a camera mode and tap the sub ect to focus the camera on
- 2 Tap
 - To take a photo while recording a video tap (a)
 - To pause the video recording tap (II) To resume the video recording tap
- 3 Tap to end the video recording

Customizing the camera options

ou can customi e 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
- Select values for aspect ratio and si e for taking photos
- 🖂 Select values for resolution and si e for recording videos
- **(5)** Set the timer to automatically take photos or record videos after a specified period of time

HDR	btain photos in vivid colors and get compensated effects even when they are taken against the light These functions are provided by the High Dynamic Range HDR technology e uipped in the camera
Cheese shutter	Take photos with voice commands
Scan QR code	Allow you to scan QR code on the camera preview screen
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 hori ontal and vertical reference lines

Storage	Select if you want to store the pictures and videos in the Internal storage or SD card Available when the 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
Gesture view	Allows you to view the photo immediately after taking a photo
Save as flipped	Save as flipped images after taking selfies



 hen using the front camera you can ad ust the filter lighting effect and skin tone

Burst shot

ou can take continuous shots of photos to create moving pictures In the Auto mode touch and hold \bigcirc

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

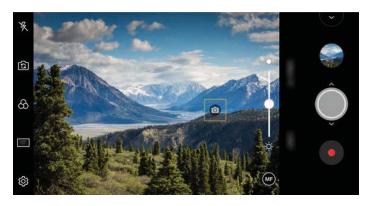


- ou can take up to 30 photos with the rear camera and 20 photos with the front camera
- This feature is available only in specific modes

Other useful features in the Camera app

Auto-Exposure/Auto-Focus lock

ou 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



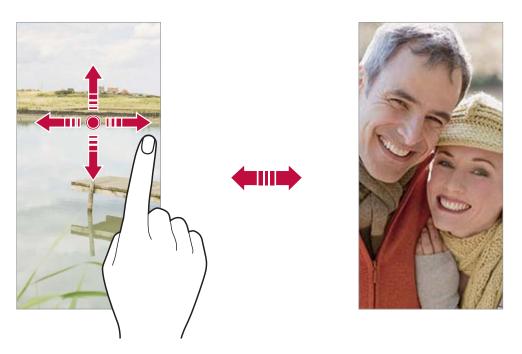


• This feature is available only in specific modes

Switching between cameras

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

n the camera screen tap ্রি or swipe the screen in any direction to switch between the front and rear cameras





se the front camera to take selfies See Selfie shot for details

Zoom in or out

ou can use oom in or out on the camera screen while taking a photo or recording a video

- n the camera screen pinch or spread two fingers to oom in or out then use the displayed + slide bar



 The oom feature is not available when using the front camera in selfie mode

Selfie shot

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

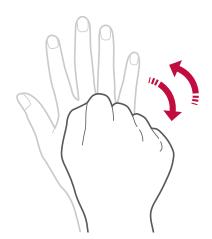
Gesture shot

ou can take selfies by using gestures

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

ou can use the face detection feature to take selfies easily and conveniently ou 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 colored guide frame appears when the front camera detects your face If the sub ect within the guide frame stops moving the guide frame color turns yellow then the camera takes a photo





• Tap 🔯 > Selfie shot > Auto shot to enable the Auto shot feature

Interval shot

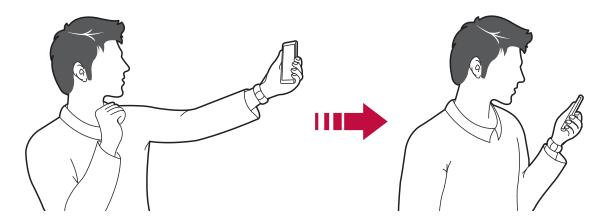
ou can take selfies at an interval

hile using the front camera you can show your palm to the camera then clench your fist twice uickly

 our 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
- nly 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 hori ontally

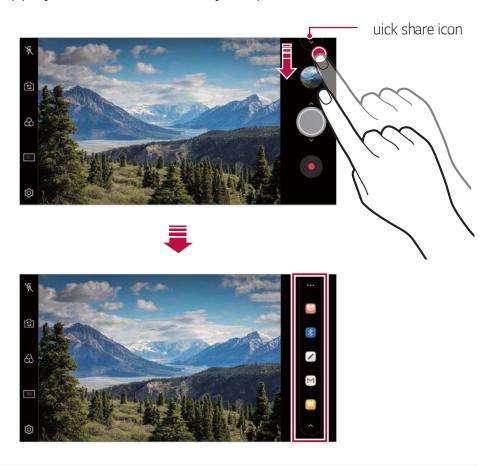


• hen using the front camera you can change the selfie shot settings in the camera options See *Customi ing the camera options* for details

quick share

ou can share a photo or video using a desired app 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 ou can also swipe the icon towards the opposite direction to see what other apps you can use to share your photos and videos





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

Gallery

Gallery overview

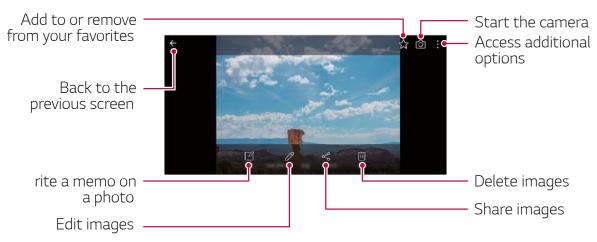
ou can view and manage photos and videos saved on your device

- 1 Tap ○> △
 - Saved photos and videos are displayed by folder
- 2 Tap a folder and select a file
 - iew the selected file in full-screen mode
 - hile viewing a photo swipe left or right to view the previous or next photo
 - hile viewing a video swipe left or right to rewind or fast-forward the video



- Some file formats may not be supported depending on the installed software
- · Some files may not be opened due to encoding
- iles that exceed the si e limit may cause an error

Viewing photos





 To display the menu items gently tap the screen To hide the menu items tap the screen again

Writing a memo on the photo

- 1 hile viewing a photo tap 🗹
- 2 rite a memo on the photo and tap **SAVE**
 - The memo is applied to the photo

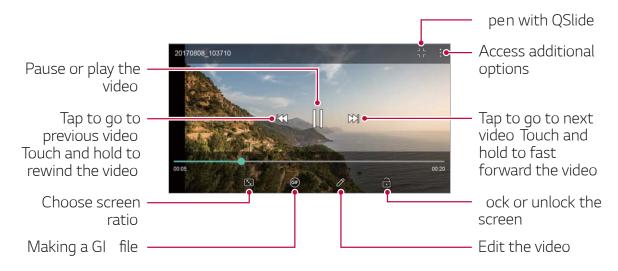


· Some photos may not support the photo memo feature

Editing photos

- 1 hile viewing a photo tap 🖉
- 2 se a variety of effects and tools to edit the photo
- 3 Tap **SAVE** to save changes
 - The changes are overwritten to the original file
 - To save the edited photo as another file tap > Save copy

Playing a video

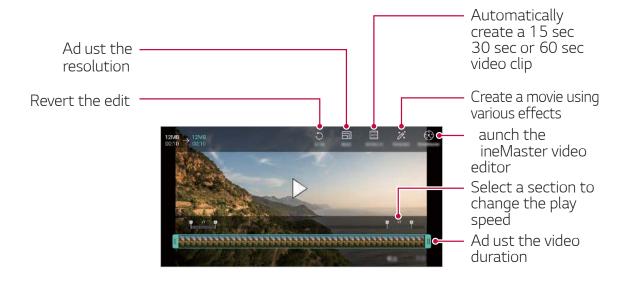




- To ad ust the sound volume drag the right side of the video screen up or down
- To ad ust the screen brightness drag the left side of the video screen up or down

Editing videos

- 1 hile viewing a video tap 🖉
- 2 se a variety of effects and edit tools to edit the video



3 Tap **SAVE** to save changes

Creating a video

ou can create a new video by putting images and videos together See *Creating a movie* for details

Making a GIF

ou can easily make a GI file using recorded video See *Making a GI* for details

Deleting files

ou can delete files by using one of the following options

- Touch and hold a file from the file list then tap Delete
- Tap iii in an album select files to delete then tap **DELETE**
- Deleted files are automatically moved to Trash and they can be restored to Gallery within 7 days
- In Gallery tap :> Trash then tap x
 ix to permanently delete the files In this case the files cannot be restored

Sharing files

ou can share files by using one of the following options

- hile viewing a photo tap \(\prescript{\alpha} \) to share the file by using a desired method
- hile viewing a video tap :> Share to share the file by using a desired method

Chrome

Sign in to Chrome and import opened tabs bookmarks and address bar data from a computer to your device

Tap () > (o)

Google apps

ou 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 or details on how to use an app see the Help section in the app



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

Docs

Create documents or edit documents created online or from another device Share and edit documents together with others

Drive

pload save open share and organi e files from your device iles accessible from apps can be accessed from anywhere including online and offline environments

Duo

Make a video call with your family friends and anyone else who uses the app

Gmail

Register your Google email account to your device to check or send email

Google

se Google to search for web pages images news and more by entering or speaking keywords

Maps

ind your location or the location of a place on the map iew geographical information

Photos

iew or share photos or albums saved on your device

Play Movies & TV

se your Google account to rent or purchase movies Purchased contents can be played anywhere

Play Music

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

Sheets

Create spreadsheets or edit spreadsheets created online or from another device. Share and edit spreadsheets together with others

Slides

Create presentation material or edit presentation material created online or from another device Share and edit presentation material together with others

YouTube

Search and play videos pload videos on ouTube to share them with people around the world

Contacts

Contacts overview

ou can save and manage contacts

Tap > Productivity > Contacts

Adding contacts

Adding new contacts

- 1 n the contact list screen tap 🕕
- 2 Enter contact details and tap **SAVE**

Importing contacts

ou can import contacts from another storage device

- 1 n 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 vCard file s and tap IMPORT

Adding contacts to the speed dial list

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



hile adding a new contact tap $\frac{12}{3}$ to add a speed dial number

Searching for contacts

ou can search for contacts by using one of the following options

- Tap ${\bf Q}$ from the top of the contacts list and then enter the contact information or phone number
- · Scroll the contact list up or down
- rom the index of the contact list screen tap the initial letter of a contact



• The search option is available in all tabs

Contact list

Editing contacts

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

Deleting contacts

ou can delete contacts by using one of the following options

- n the contact list screen touch and hold a contact you want to delete tap **Delete contact** then tap **DELETE** to confirm
- Tap : > Delete on the contact list screen select contacts you want to delete then tap DELETE

Adding favorites

ou can register fre uently used contacts as favorites

- 1 n the contact list screen select a contact
- 2 n the contact detail screen tap \diamondsuit

Creating groups

- 1 n the **Groups** tab 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

ou 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 () > Tools > QuickMemo+
- 2 Tap to create a note
 - Save a note
 - 🖒 ndo the previous edit
 - \longrightarrow Redo the recently deleted edits
 - T Enter a note by using the keypad
 - rite notes by hand
 - \Diamond Erase handwritten notes
 - O oom in or out rotate or erase the parts of a handwritten note
 - Access additional
- 3 Tap \checkmark to save the note

Writing notes on a photo

- 1 Tap ○> Tools > QuickMemo+ > ⑥
- 2 Tap () to take a photo then tap **OK**
 - The photo is automatically attached into the notepad
- 3 Tap T or \nearrow to write notes on the photo
 - rite notes by hand on the photo
 - Enter text below the photo
- 4 Tap \checkmark to save the note

Writing notes on a screenshot

- 1 hile viewing the screen you want to capture drag the status bar downwards and then tap [2]
 - 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
 - rite notes by hand on the photo
- 3 Tap

 and save the notes to the location of your choice
 - 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 before selecting an app



- ou can capture the entire screen by using the scroll capture feature
- hile using an app such as Messages 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

Managing folders

ou can view notes grouped by the type of the notes

- 1 Tap () > Tools > QuickMemo+
- 2 At the top of the screen tap = and select a menu item
 - All memos iew all notes saved in QuickMemo+
 - My memos iew notes created by QuickMemo+
 - **Photo memos** iew notes created by [6]
 - Capture+ iew notes created by Capture+
 - Trash iew deleted notes
 - New category Add categories
 - 🔯 Rearrange add or delete categories To change the name of a category tap the category



• Some folders do not appear when launching QuickMemo+ for the first time Disabled folders are enabled and appear when they contain at least one related note

Clock

Alarm

ou can set an alarm to trigger it at a specified time

- Tap () > Tools > 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 iii at the top of the screen ou can also touch and hold the alarm

World clock

ou can view the current time in cities around the world

- 1 Tap O > Tools > Clock > World clock
- 2 Tap and add a city

Timer

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

- 1 Tap O > Tools > 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

ou can use the stopwatch to record a lap time

- 1 Tap > Tools > 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

ou can use the calendar to manage events and tasks

Adding events

- 1 Tap > Productivity > 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



hen 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

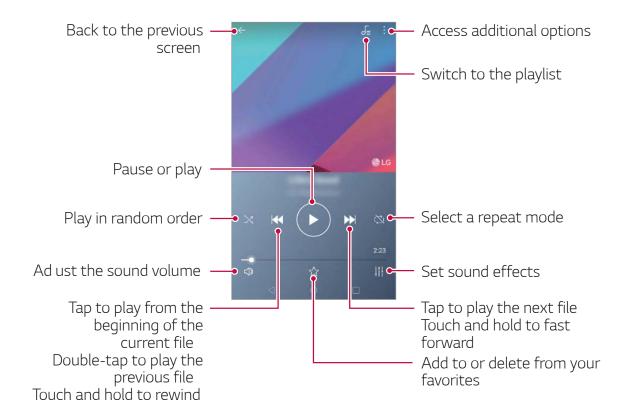
ou can register tasks to your device to easily manage schedules

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

Music

ou can play and manage songs or music albums

- 1 Tap () > Media > Music
- 2 Select a category
- 3 Select a music file





- Some file formats may not be supported depending on the installed software
- iles that exceed the si e limit may cause an error
- Music files may be protected by international copyright owners or copyright laws ou 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

Calculator

ou can use two types of calculators the basic calculator and the scientific calculator

- 1 Tap O > Tools > Calculator
- 2 se the keypad to make a calculation
 - To use the scientific calculator tap > Scientific calculator
 - To restart a calculation tap

Email

se the Email application to send and receive emails from your webmail or other accounts using P P3 or IMAP or access your Exchange account for your corporate email needs

Set up Email account

our phone supports several types of email accounts and allows you to have multiple email accounts set up at one time

Before setting up an email account make sure you have the username user ID password server name etc so you can get set up successfully

- 1 Tap ○> Email
- 2 ollow the onscreen instructions to set up your email account
 - The email account is set up and you will begin receiving email

FM Radio

ou can listen to M Radio

Tap () > Media > FM Radio



- To use this app first connect earphones to the device The earphones function as the radio antenna
 - · This function may not be supported depending on the area

File Manager

ou can view and manage files saved on your device or cloud

- 1 Tap ○> Productivity > File Manager
- 2 Tap = and select the desired storage location

Smart cleaning

ou can delete temporary files or apps that are no longer used

- 1 Tap > Smart cleaning
- n the Smart cleaning screen you can access **Optimize phone**Battery usage Battery saver and Test hardware



Downloads

ou can view delete or share files downloaded via the Internet or apps Tap > Tools > Downloads



Settings

ou can customi e the device settings in accordance with your preferences

Tap () > [ssi] > Tools > Settings



 \blacksquare Tap \bigcirc and enter a keyword in the search box to access a setting item

Network & internet

Airplane mode

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

- n the settings screen tap **Network & internet > Airplane mode**
- Tap **TURN ON** in the confirmation screen

Wi-Fi

ou can connect to nearby devices over a i- i network

Connecting to a Wi-Fi network

- n the settings screen tap **Network & internet > Wi-Fi**
- 2 Tap ____ to activate it
 - Available i- i networks appear automatically
- 3 Select a network
 - ou may need to enter the network s i- i password
 - The device skips this process for previously accessed i- i networks If you do not want to automatically connect to a certain

i- i network tap the network and then tap **FORGET**

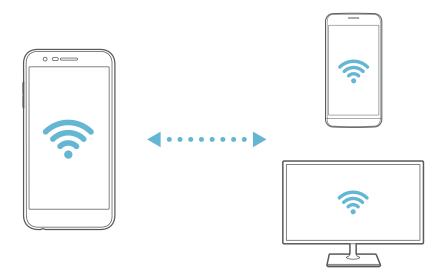
Wi-Fi Direct

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

- 1 n the settings screen tap **Network & internet > Wi-Fi > :** > **Advanced Wi-Fi > Wi-Fi Direct**
 - earby devices that support i- i Direct automatically appear
- 2 Select a device
 - Connection occurs when the device accepts the connection re uest



• The battery may drain faster when using i- i Direct



Wi-Fi Calling

i- i Calling can improve your coverage and allows you to make phone calls over a i- i network when a i- i network is available
 n the settings screen tap Network & internet > Wi-Fi Calling

Mobile data

ou can turn mobile data on and off ou can also manage mobile data usage

Turning on mobile data

- 1 n the settings screen tap **Network & internet > Mobile data**
- 2 Tap to activate it

Customizing mobile data settings

- 1 n the settings screen tap **Network & internet > Mobile data**
- 2 Customi e the following settings
 - On Enable 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
 - Customi e the desired mobile data settings

Advanced Calling (This function may vary depending on the service provider)

ou can turn HD oice on and off

n the settings screen tap **Network & internet > Advanced Calling**

Call

ou can customi e call settings such as voice call and international call options



- Some features may not be supported depending on the area or service provider
- 1 n the settings screen tap **Network & internet > Call**
- 2 Customi e the desired settings

Tethering

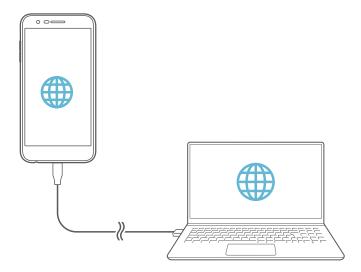
USB tethering

ou can connect the device to another device via SB and share mobile data

- 1 Connect your device and other devices via SB cable
- 2 n the settings screen tap **Network & internet > 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
- hen connecting to a computer download the SB driver from www lg com and install it on the computer
- ou cannot send or receive files between your device and a computer while SB tethering is turned on Turn off SB tethering to send or receive files
- perating systems that support tethering are indow P or higher or inux



Wi-Fi hotspot

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

- 1 n the settings screen tap **Network & internet > Tethering > Wi-Fi hotspot** and then tap _____ to activate it
- 2 Tap **Set up Wi-Fi hotspot** and enter the i- i name SSID and password
- 3 Turn on i- i on the other device and select the name of the device network on the i- i 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



Timeout

hen the i- i hotspot has not been used for a specific period of time it is automatically disconnected ou can set the time for automatic disconnection

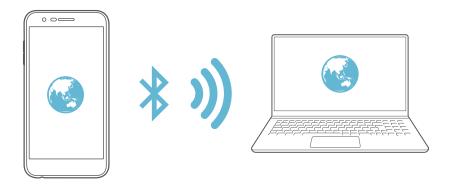
Bluetooth tethering

A Bluetooth-connected device can connect to the internet by using your devices mobile data

- 1 n the settings screen tap Network & internet > Tethering > Bluetooth tethering and then tap _____ to activate it
- 2 Turn on Bluetooth on both devices and pair them
- 3 Connect to the mobile network on the paired device



- This option uses mobile data and may incur data usage fees depending on your pricing plan
- More information is available at this web site
 http www.android.com tether Bluetooth tethering



Help

ou can view help on using tethering and hotspots

n the settings screen tap **Network & internet > Tethering > Help**

Mobile networks

ou can customi e the following mobile network settings

- n the settings screen tap **Network & internet > Mobile networks**
- 2 Customi e the following settings
 - VolTE (This function may not be available depending on the service provider) ou can enable HD oice and advanced communication services where available
 - Data roaming Turn data roaming on or off
 - **Disable 2G** Allows you to disable 2G service on your phone
 - Access Point Names iew or change the access point for using mobile data services To change the access point select a choice from the access point list

VPN

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

Adding VPN

- n the settings screen tap **Network & internet > VPN**
- 2 Tap + to add a new P



• This feature is available only when the screen lock is activated If the screen lock is deactivated a notification screen appears Tap SETTINGS from the notification screen to activate the screen lock See Setting a screen lock for details

3 Enter P details and tap **SAVE**

Configuring VPN settings

1 Tap a P from the **VPNS** list

- 2 Enter the P user account details and tap **CONNECT**
 - To save the account details select the Save account information checkbox

Wireless Emergency Alerts

If emergency alerts are issued those alerts will appear on this menu n the settings screen tap **Network & internet > Wireless Emergency Alerts**

Connected devices

Bluetooth

ou 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 n the settings screen tap **Connected devices > Bluetooth**
- 2 Tap to activate it
 - Available devices appear automatically
 - To refresh the device list tap



- nly devices set as visible are displayed on the list
- 3 Select a device from the list
- 4 ollow the on-screen instructions to perform authentication



• This step is skipped for previously accessed devices

Sending data via Bluetooth

- 1 Select a file
 - ou 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



· ile sharing processes may differ depending on the file

Sharing panel

ou can share contents from Gallery Music and ile Manager with nearby devices Also you can share content with specific people in apps that work with Google Direct Share

- 1 n the settings screen tap **Connected devices > Sharing panel**
- 2 Tap **Direct share O** to deactivate the option

Printing

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

1 n the settings screen tap **Connected devices > Printing**



- If the desired printer is not in the list install the printer driver from the app store
- 2 Select a printer from the printer list screen
- 3 Tap ____ to activate it
 - 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

Sound

ou can customi e sound vibration and notification settings n the settings screen tap **Sound** and customi e the following settings

- Sound profile Change the sound mode to Sound Vibrate only or Silent
- Volume Ad ust 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
- **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
- Vibration type ou 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 Enable the keypad sound effect
- LG Keyboard sound Enable the G keyboard sound effect
- Touch sound Enable the sound effect for tapping an item

- Screen lock sound Enable the sound effect to play when the screen is locked or unlocked
- Emergency tone Set behavior when an emergency call is made

Display

The Display category allows you to manage various display settings n the settings screen tap **Display** and customi e the following settings

- Home screen Customi e settings for the Home screen See Home screen settings for details
- Wallpaper & theme Select wallpaper or screen theme for your device
- Font Change the font si e boldness or face
- Home touch buttons Rearrange Home touch buttons or change their background colors
- **Display size** Set the items on the screen to a si e that is easy for you to see Some items may change position



- hen you change the screen resolution currently running apps are closed
- **Comfort view** Set the device to reduce amount of blue light on screen to reduce eye strain
- **Brightness** se the slide bar to change the devices screen brightness To automatically ad ust screen brightness according to ambient light intensity tap the **Auto** switch
- **Auto** Set the device so that the screen brightness is automatically ad usted in accordance with the ambient light intensity
- Auto-rotate screen Automatically rotate the screen according to the devices 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

Lock screen & security

ou can customi e lock screen and security settings n the settings screen tap **Lock screen & security**.

- Google Play Protect Scan the device periodically for potentially harmful codes or apps
- Find My Device Remotely track the device location ou 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
- Customize Lock screen Change the information displayed on the locked screen
- Secure lock settings Change the secure lock settings
- **Content lock** Allows you to set a lock type password or pattern for your QuickMemo+ and Gallery files
- **Location** ou can customi e 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** iew the type of the storage where the security certificate will be saved
 - **Trusted credentials** iew your systems root CA certificates and user-installed CA certificates
 - **User credentials** iew 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 ock or unlock the SIM card or change the password PI
- 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** Allows privileges to restrict the control or use of the device to particular apps
- Trust agents iew and use trust agents installed on the device
- **Screen pin** ix the app screen so that only the currently active app can be used
- Usage access iew details on usage of apps on the device

Extensions

Smart cleaning

ou can clean up temporary files or apps that are no longer used to free up storage space

- 1 n the settings screen tap **Extensions > Smart cleaning**
- 2 Select a category then select an item to delete
- 3 Tap **DELETE** > **DELETE** to delete the selected item

Gaming

ou can configure settings for game tools graphics and battery saving feature

- **Game tools** Tap ___ to activate this feature ou can launch this feature by tapping the game tool icon at the bottom of the screen while playing games
- Game graphics Ad ust the game graphics



- hen 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

Shortcut keys

ou can use the shortcut keys to directly launch apps when the screen is turned off or locked

n the settings screen tap Extensions > Shortcut keys

KnockOn

Double-tap the screen to turn the screen on or off See nock n for details

Apps & notifications

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

- 1 n the settings screen tap **Apps & notifications**
- 2 Customi e the settings as desired

Battery

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

- 1 n the settings screen tap **Battery**
- 2 Customi e the following settings
 - **Battery usage** iew the battery usage details To view more details select a specific item
 - Battery percentage on status bar Display the remaining battery level as a percentage on the status bar
 - 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 optimi ation mode

Storage

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

- 1 n the settings screen tap **Storage**
- 2 Customi e the following settings
 - **Internal storage** iew the total storage space and free space in the devices internal storage iew a list of apps in use and the storage capacity for each app
 - **SD card** iew 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 \triangle

Accounts

ou can add or manage accounts including a Google account ou can also sync particular apps or user information automatically

- 1 n the settings screen tap **Accounts**
- 2 Customi e the following settings
 - Auto-sync accounts Sync all the registered accounts automatically
 - ACCOUNTS iew a list of registered accounts To view or change details of an account tap the account
 - Add account Add accounts

Accessibility

ou can manage accessibility plug-ins installed on your device

- 1 n the settings screen tap **Accessibility**
- 2 Customi e 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 or message content via voice
 - Vision > Font Change the font si e boldness or face
 - Vision > Display size Set the items on the screen to a si e that is easy for you to see Some items may change position
 - Vision > Touch zoom oom in or out by tapping the screen three times
 - Vision > Window zoom oom in or out within a window and invert the color
 - Vision > Large mouse pointer Magnify the mouse pointer
 - Vision > High contrast screen Turn the background color into black for a high contrast screen

- Vision > Screen color inversion Increase the display color contrast for people with low vision
- Vision > Screen color adjustment Ad ust the display color
- Vision > Grayscale Switch the screen to grayscale mode
- Vision > End call with the Power key End a call by pressing the Power ock 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** Ad ust the audio output balance se 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 Set the desired delay time for touching and holding or ad ust the touch input to ignore repeated taps
- Motor & cognition > Physical keyboard Customi e the keyboard settings
- Motor & cognition > Auto mouse click Automatically click where the pointer stops
- 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 imit the touch area so that only a particular portion of the screen can be controlled by touch input

- Accessibility features shortcut Quickly access a fre uently used function by tapping \(\) three times
- **Auto-rotate screen** Automatically change the screen orientation according to the physical position of the device
- Select to Speak Allows you to tap items to hear spoken feedback
- Switch Access Create key combinations to control your device

Google

ou can use Google settings to manage your Google apps and account settings

n the settings screen tap Google

System

Update center

rom time to time updates may become available for your phone ou can download and apply updates through the Settings menu

n the settings screen tap **System > Update center**

Language & input

ou can customi e language and keyboard settings for your device

- 1 n the settings screen tap System > Language & input
- 2 Customi e the following settings
 - Language Select a language to apply for the device
 - **Current keyboard** iew the keyboard currently in use Select a keyboard to use when entering text
 - On-screen keyboard Change the G keyboard settings or voice recognition feature of Google oice

- **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 ou 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 Ad ust the pointer speed of a mouse or trackpad
- Reverse mouse buttons Reverse the right mouse button to perform primary direct-manipulation actions

Date & time

ou can customi e date and time settings for your device

- 1 n the settings screen tap **System > Date & time**
- 2 Customi e the desired settings

Memory

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

- 1 n the settings screen tap **System > Memory**

Backup

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

- 1 n the settings screen tap **System > Backup**
- 2 Customi e the following settings
 - **Google backup** Change Google drive backup settings ou can also check the backup account currently used or add a new backup account

Restart & reset

ou can reset the device including network and app settings

- 1 n the settings screen tap **System > Restart & reset**
- 2 Customi e the following settings
 - Auto-restart Automatically restart the phone once a week The phone will restart within one hour of the set time



- Any unsaved data and notifications including badges will be cleared after a restart Make sure you save what you are doing
- Network settings reset Reset i- i 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



Resetting your device deletes all data on it Enter your device name
 Google account and other initial information again

About phone

ou can view information about your device such as the name status software details and legal information

n the settings screen tap **System > About phone** and view information



Appendix

LG Language Settings

Select a language to use on your device

- Tap > Tools > Settings > System > Language & input > 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

Phone software update

LG Mobile phone software update from the Internet

or more information about using this function please visit http wwwlgcom common index sp 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 center This feature will only be available if and when G makes a newer firmware version available for your device

Because the mobile phone firmware update re uires the users 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 SB cable during the upgrade may seriously damage your mobile phone



G 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

Appendix 107

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

This feature allows you to conveniently update your phones software to a newer version via TA without connecting a SB cable This feature will only be available if and when G makes a newer firmware version available for your device

To perform the phone software update tap \bigcirc > Tools > Settings > System > Update center > Software Update



- our 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 license might be lost in the process of updating your phones software Therefore G recommends that you backup your personal data before updating your phones software G does not take responsibility for any loss of personal data
- This feature depends on the area or service provider

Anti-Theft Guide

ou can set up your device to prevent other people from using it if it s been reset to factory settings without your permission or 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 the 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

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FAQ

This chapter lists some problems you might encounter when using your phone Some problems re uire you to call your service provider but most are easy to fix yourself

Message	Possible causes	Possible corrective measures
SIM card error	There is no SIM card in the phone or it is inserted incorrectly	Make sure the SIM card is correctly inserted
o network connection Dropped network	Signal is weak or you are outside the carrier network	Move toward a window or into an open area Check the network operator coverage map
o applications can be set	ot supported by service provider or registration re uired	Contact your service provider
Downloaded application causes a lot of errors	Remove the application	 1 Tap > Tools > Settings 2 Tap Apps & notifications > App info 3 Tap the app > Uninstall
Calls not available	Dialing error	ew network not authori ed
	ew SIM card inserted	Check for new restrictions
Device cannot be turned on	Battery is not charged	Charge battery Check the charging indicator on the display

Message	Possible causes	Possible corrective measures
Charging error	Battery is not charged	Charge the battery
	utside temperature is too hot or cold	Make sure to charge the device in a moderate temperature environment
	Contact problem	Check the charger and its connection to the device
	o voltage	Plug the charger into a different outlet
	Charger defective	Replace the charger
	rong charger	se only original G accessories
umber not allowed	The ixed dialing number function is on	Check the Settings menu and turn the function off
iles do not open	nsupported file format	Check the supported file formats
The screen does not turn on when I receive a call	Proximity sensor problem	If you use a protection tape or case make sure it has not covered the area around the proximity sensor Make sure that the area around the proximity sensor is clean
o sound	ibration mode	Check the settings status in the sound menu to make sure the device is not in vibration or no interruptions mode

Message	Possible causes	Possible corrective measures
Hangs up or free es	Intermittent software hardware problem	Restarting the device If your device free es or hangs you may need to close apps or turn off the device and turn it on again
		Performing a boot-up Press and hold the Power ock key and the olume Down - key for about 10 seconds to restart your device
		Resetting the device If the methods above do not solve your problem perform a factory data reset In the settings screen tap System > Restart & reset > Factory data reset Reset all settings for the device and delete data Before performing the factory data reset remember to make backup 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



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 quide could void your warranty for this e uipment Any changes or modifications not expressly approved by the manufacturer could void the users authority to operate the e uipment

Before You Start



Cancer and Reproductive Harm - wwwP65 arnings ca gov

HAC Statement

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

This mobile phone has a Hearing Aid Mode that when activated may reduce interference with some hearing aid models

FCC RF Exposure Information

WARNING! Read this information before operating the device.

In August 1996 the ederal Communications Commission CC of the nited States with its action in Report and rder CC 96-326 adopted an updated safety standard for human exposure to Radio re uency R electromagnetic energy emitted by CC regulated transmitters Those guidelines are consistent with the safety standard previously set by both S and international standards bodies The design of this device complies with the CC 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 users 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 CC R exposure limits

Consumer Information about Radio Frequency Emissions

our wireless device which contains a radio transmitter and receiver emits radio fre uency energy during use The following consumer information addresses commonly asked uestions about the health effects of wireless devices

Are wireless devices safe?

Scientific research on the subject of wireless devices and radio fre juency. R energy has been conducted worldwide for many years and continues In the nited States the ood and Drug Administration DA and the ederal Communications CC set policies and procedures for wireless devices The DA 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 radiofre uency R 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 DA continues to monitor developments in this field ou can access the oint DA CC website at http wwwfdagov under c in the subject index select **Cell Phones** > **Research** ou can also contact the DA toll-free at 888 463-6332 or 888 I In une 2000 the DA entered into a cooperative research and development agreement through which additional scientific research is being conducted The CC 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 di iness or memory loss This publication is available at http wwwfccgov cgb cellularhtml or through the CC at 888 225-5322 or 888 CA - CC

What does "SAR" mean?

In 1996 the CC working with the DA the S Environmental Protection Agency and other agencies established R exposure safety guidelines for wireless devices in the nited States Before a wireless device model is available for sale to the public it must be tested by the manufacturer and certified to the CC that it does not exceed limits established by the CC ne of these limits is expressed as a Specific Absorption Rate or SAR SAR is a measure of the rate of absorption of R energy in the body Tests for SAR are conducted with the device transmitting at its highest power level in all tested fre uency bands Since 1996 the CC has re uired 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 or more information about SARs visit the CC website at <a href="https://doi.org/10.1007/nt.1

Can I minimize my RF exposure?

If you are concerned about R there are several simple steps you can take to minimi e your R exposure ou can of course reduce your talk time ou can place more distance between your body and the source of the R as the exposure level drops off dramatically with distance The DA CC website states that hands-free kits can be used with wireless devices for convenience and comfort These systems reduce the absorption of R energy in the head because the device which is the source of the R emissions will not be placed against the head n 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 R energy ireless devices marketed in the S are re uired to meet safety re uirements 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 ou should also read and follow your wireless device manufacturers instructions for the safe operation of your device

Do wireless devices pose any special risks to children?

The DA CC website states that the scientific evidence does not show a danger to users of wireless communication devices including children The DA CC website further states that some groups sponsored by other national governments have advised that children be discouraged from using wireless devices at all or example the Stewart Report from the nited ingdom 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 s recommendation to limit cell phone use by children was strictly precautionary it was not based on scientific evidence that any health ha ard exists A copy of the s leaflet is available at http www.dh.govuk search mobile or you can write to RPB Chilton Didcot xon 11 RQ nited ingdom Copies of the s annual reports on mobile phones and R are available online at http www.hpa.org.uk radiation search mobile Parents who wish to reduce their childrens R exposure may choose to restrict their childrens wireless device use

Where can I get further information about RF emissions?

or further information see the following additional resources websites current as of April 2005

U.S. Food and Drug Administration

DA Consumer maga ine ovember-December 2000
Telephone 888 I - DA
http wwwfdagov nder c in the sub ect index select **Cell Phones > Research**

U.S. Federal Communications Commission

445 12th Street S ashington D C 20554
Telephone 888 225-5322
http wwwfccgov oet rfsafety

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

283 Sparks Street ttawa ntario 1R 7 9 Canada Telephone 613 991-6990 http www.rsc.ca index.php page Expert Panels R ang id 120

World Health Organization

Avenue Appia 20 1211 Geneva 27 Swit erland Telephone 011 41 22 791 21 11 http wwwwho int mediacentre factsheets fs193 en

International Commission on Non-Ionizing Radiation Protection

c o Bundesamt fur Strahlenschut Ingolstaedter andstr 1 85764 berschleissheim Germany Telephone 011 49 1888 333 2156 http www.icnirp.de

American National Standards Institute

1819 Street 6th loor ashington DC 20036 Telephone 202 293-8020 http www.ansi.org

National Council on Radiation Protection and Measurements

7910 oodmont 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 ewhieee org soc embs comar

Consumer Information on SAR

(Specific Absorption Rate)

This model device meets the governments re-uirements for exposure to radio waves our wireless device is a radio transmitter and receiver It is designed and manufactured not to exceed the emission limits for exposure to Radio re-uency R energy set by the ederal Communications Commission of the S Government These limits are part of comprehensive guidelines and establish permitted levels of R energy for the general population. The guidelines are based on standards that were developed by independent scientific organiations 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 CC is 1 6

kg Tests for SAR are conducted using standard operating positions specified by the CC with the device transmitting at its highest certified power level in all tested fre uency 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 re uired 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 CC that it does not exceed the limit established by the government-adopted re uirement for safe exposure The tests are performed in positions and locations e.g. at the ear and worn on the body as re uired by the CC for each model

The highest SAR values are

• Head: 1.15 W/kg

Body (Body-worn/Hotspot): 0.90 W/kg

Body measurements differ among device models depending upon available accessories and CC re uirements

hile there may be differences between SAR levels of various devices and at various positions they all meet the government re uirement for safe exposure

The CC has granted an E uipment Authori ation for this model device with all reported SAR levels evaluated as in compliance with the CC R emission guidelines SAR information on this model device is on file with the CC and can be found under the Display Grant section of http wwwfccgov oet fccid after searching on CC ID 210 PP

Additional information on Specific Absorption Rates SAR can be found on the Cellular Telecommunications Industry Association CTIA website at http://doi.org/10.2016/nc.2016/

In the nited States and Canada the SAR limit for mobile phones used by the public is 1 6 watts kg 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

FCC Hearing-Aid Compatibility (HAC) Regulations for Wireless Devices

n uly 10 2003 the S ederal Communications Commission CC Report and rder in T Docket 01-309 modified the exception of wireless devices under the Hearing Aid Compatibility Act of 1988 HAC Act to re uire digital wireless devices be compatible with hearing-aids The intent of the HAC Act is to ensure reasonable access to telecommunications services for persons with hearing disabilities

hile some wireless devices are used near some hearing devices hearing aids and cochlear implants users may detect a bu ing humming or whining noise Some hearing devices are more immune than others to this interference noise and devices also vary in the amount of interference they generate

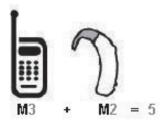
The wireless telephone industry has developed a rating system for wireless devices to assist hearing device users to find devices that may be compatible with their hearing devices of all devices have been rated Devices that are rated have the rating on their box or a label located on the box

The ratings are not guaranteed Results will vary depending on the users hearing device and hearing loss If your hearing device happens to be vulnerable to interference you may not be able to use a rated device successfully Trying out the device with your hearing device is the best way to evaluate it for your personal needs

M-Ratings Devices rated M3 or M4 meet CC re uirements and are likely to generate less interference to hearing devices than devices that are not labeled M4 is the better higher of the two ratings

T-Ratings Devices rated T3 or T4 meet CC re uirements and are likely to generate less interference to hearing devices than devices that are not labeled T4 is the better higher of the two ratings

Hearing devices may also be rated our hearing device manufacturer or hearing health professional may help you find this rating Higher ratings mean that the hearing device is relatively immune to interference noise. The hearing aid and wireless device rating values are then added together A sum of 5 is considered acceptable for normal use. A sum of 6 is considered for best use.



In the above example if a hearing aid meets the M2 level rating and the wireless device meets the M3 level rating the sum of the two values e ual M5 This should provide the hearing aid user with normal usage while using their hearing aid with the particular wireless device ormal usage in this context is defined as a signal uality thats acceptable for normal operation

The M mark is intended to be synonymous with the mark The T mark is intended to be synonymous with the T mark The M and T marks are recommended by the Alliance for Telecommunications Industries Solutions ATIS. The and T marks are referenced in Section 20.19 of the CC Rules. The HAC rating and measurement procedure are described in the American ational Standards Institute. A SI C63.19 standard

To ensure that the Hearing Aid Compatibility rating for your device is maintained secondary transmitters such as Bluetooth and A components must be disabled during a call

or information about hearing aids and digital wireless devices

ireless Devices and Hearing Aid Accessibility

http www.accesswireless.org

Gallaudet niversity RERC

http tap gallaudet edu oice

CC Hearing Aid Compatibility and olume Control

https www.fcc.gov.general hearing-aid-compatibility-and-volume-control

The Hearing Aid Compatibility CC rder

http hraunfoss fcc gov edocs public attachmatch CC-03-168A1 pdf

Hearing oss Association of America H AA

http hearingloss org content telephones-and-mobile-devices

Caution! Avoid Potential Hearing Loss

Prolonged exposure to loud sounds including music is the most common cause of preventable hearing loss. Some scientific research suggests that using portable audio devices such as portable music players and cellular telephones at high volume settings for long durations may lead to permanent noiseinduced hearing loss. This includes the use of headphones including headsets earbuds and Bluetooth or other wireless devices. Exposure to very loud sound has also been associated in some studies with tinnitus a ringing in the ear hypersensitivity to sound and distorted hearing. Individual susceptibility to noise-induced hearing loss and other potential hearing problems varies.

The amount of sound produced by a portable audio device varies depending on the nature of the sound the device the device settings and the headphones ou should follow some common sense recommendations when using any portable audio device

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

TIA Safety Information

The following is the complete TIA Safety Information for wireless handheld devices

Exposure to Radio Frequency Signal

our wireless handheld portable device is a low power radio transmitter and receiver hen it receives and sends out Radio re uency R signals In August 1996 the ederal Communications Commissions CC adopted R exposure guidelines with safety levels for handheld wireless devices Those guidelines are consistent with the safety standards previously set by both S and international standards bodies

A SI C951 1992 CRP Report 86 1986 IC IRP 1996

American ational Standards Institute ational Council on Radiation Protection and Measurements International Commission on on-Ioni ing Radiation Protection

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature or example over 120 scientists engineers and physicians from universities government health agencies and industry reviewed the available body of research to develop the A SI Standard C95 1

Electronic Devices

Most modern electronic e uipment is shielded from R signals However certain electronic e uipment may not be shielded against the R 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 ireless Technology Research

Persons with pacemakers

- Should A A S keep the device more than six 6 inches from their pacemaker when the device is turned
- Should not carry the device in a breast pocket
- Should use the ear opposite the pacemaker to minimi e the potential for interference
- Should turn the device immediately if there is any reason to suspect that interference is taking place

Hearing Aids

Some digital wireless devices may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider or call the customer service line to discuss alternatives.

Other Medical Devices

If you use any other personal medical device consult the manufacturer of your device to determine if it is ade uately shielded from external R energy our physician may be able to assist you in obtaining this information

Health Care Facilities

Turn your device in health care facilities when any regulations posted in these areas instruct you to do so Hospitals or health care facilities may use e uipment that could be sensitive to external R energy

Vehicles

R signals may affect improperly installed or inade uately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle ou should also consult the manufacturer of any e uipment that has been added to your vehicle

Posted Facilities

Turn your device in any facility where posted notices so re uire

Aircraft

CC regulations prohibit using your device while in the air Switch your device before boarding an aircraft

Blasting Areas

To avoid interfering with blasting operations turn your device when in a blasting area or in areas posted Turn off two-way radio bey all signs and instructions

Potentially Explosive Atmosphere

Turn your device 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 in ury 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 li uefied 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 D T place ob ects including either installed or portable wireless e uipment in the area over the air bag or in the air bag deployment area If in-vehicle wireless e uipment is improperly installed and the air bag inflates serious in ury could result

Part 15.19 Statement

This device complies with part 15 of the CC rules peration 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 users authority to operate the e-uipment

Part 15.105 Statement

This e uipment has been tested and found to comply with the limits for a class B digital device pursuant to Part 15 of the CC rules These limits are designed to provide reasonable protection against harmful interference in a residential installation This e uipment generates uses and can radiate radio fre uency 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 e uipment does cause harmful interference to radio or television reception which can be determined by turning the e uipment 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 e uipment and receiver
- Connect the e uipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio T 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: iolation of the instructions may cause minor or serious damage to the product

Charger and Adapter Safety

- The charger and adapter are intended for indoor use only
- Insert the battery charger vertically into the wall power socket
- nly use the G-approved battery charger therwise you may cause serious damage to your device
- se 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
- nplug the power cord prior to cleaning your device and clean the power plug
 pin when its dirty hen using the power plug ensure that its 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 maximi e 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 and 40 C 104 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 batterys 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 devices characteristics or cycle life
- If the skin or clothes are smeared with li uid from the battery wash with fresh water It may cause skin inflammation
- Please take your device to an authori ed 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 in ury 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 uality due to heat generated during use

Explosion, Shock, and Fire Hazards

- Do not put your device in a place sub ect to excessive dust and keep the minimum re uired distance between the power cord and heat sources
- nplug the power cord prior to cleaning your device and clean the power plug pin when its dirty
- hen using the power plug ensure that its 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 in ury 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 uality due to heat generated during use
- hen the device is not used for a long period time store it in a safe place with the power cord unplugged
- sing the device in proximity to receiving e uipment ie T or radio may cause interference to the device
- Do not immerse your device in water li uid or expose to high humidity Immediately take it to an G Authori ed 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
- hen 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
- se 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 li uid Do not use or recharge the product if it is wet nce the product becomes wet the li uid 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 S ood and Drug Administrations Center for Devices and Radiological Health Consumer pdate 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—ireless devices emit low levels of Radio—re—uency R—energy in the microwave range while being used. They also emit very low levels of R—when in standby mode—hereas high levels of R—can produce health effects by heating tissue—exposure to low level R—that does not produce heating effects causes no known adverse health effects. Many studies of low level R—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?

nder the law the DA 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 re uency R energy at a level that is ha ardous to the user In such a case the DA could re uire the manufacturers of wireless devices to notify users of the health ha ard and to repair replace or recall the devices so that the ha ard no longer exists

Although the existing scientific data do not ustify DA regulatory actions the DA has urged the wireless device industry to take a number of steps including the following

- Support needed research into possible biological effects of R of the type emitted by wireless devices
- Design wireless devices in a way that minimi es any R 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 DA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of R safety to ensure coordinated efforts at the federal level The following agencies belong to this working group

- ational Institute for ccupational Safety and Health
- Environmental Protection Agency
- ccupational Safety and Health Administration
- ational Telecommunications and Information Administration

The ational Institutes of Health participates in some interagency working group activities as well

The DA shares regulatory responsibilities for wireless devices with the ederal Communications Commission CC All devices that are sold in the nited States must comply with CC safety guidelines that limit R exposure The CC relies on the DA and other health agencies for safety uestions about wireless devices

The CC also regulates the base stations that the wireless device networks rely upon—hile these base stations operate at higher power than do the wireless devices themselves the R—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 sub ect of the safety—uestions 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 re uency R energy because of the short distance between the device and the users head

These R exposures are limited by CC safety guidelines that were developed with the advice of the DA and other federal health and safety agencies hen the device is located at greater distances from the user the exposure to R is drastically lower because a persons R 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 R exposures far below the CC 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 re uency R 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 R 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 R exposure ther studies exposed the animals to R 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 one of the studies demonstrated the existence of any harmful health effects from wireless device R exposures However none of the studies can answer uestions 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 ifetime 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 R 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 DA is working with the S ational Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important uestions about the effects of exposure to Radio re uency R energy

The DA has been a leading participant in the orld Health rgani ation International Electro Magnetic ields EM Pro ect 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 pro ect has also helped develop a series of public information documents on EM issues

The DA and the Cellular Telecommunications Internet Association CTIA have a formal Cooperative Research And Development Agreement CRADA to do research on wireless device safety The DA provides the scientific oversight obtaining input from experts in government industry and academic organi ations 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 nited States must comply with ederal Communications Commission CC guidelines that limit Radio re uency R energy exposures The CC established these guidelines in consultation with the DA and the other federal health and safety agencies The CC limit for R exposure from wireless devices is set at a Specific Absorption Rate SAR of 1 6 watts per kilogram 1 6

kg The CC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering IEEE and the ational Council on Radiation Protection and Measurement The exposure limit takes into consideration the bodys 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 R exposure level for each model of device to the CC The CC website <a href="https://dx.doi.org/10.1001/journal.org

locating the CC identification number on your device so you can find your devices R 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 re uency R energy exposure from wireless devices and other wireless handsets with the participation and leadership of DA scientists and engineers The standard Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate SAR in the Human Body Due to ireless Communications Devices Experimental Techni ues sets forth the first consistent test methodology for measuring the rate at which R is deposited in the heads of wireless device users The 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 minimilie your exposure to Radio reluency. Renergy 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. Rexposure If you must conduct extended conversations by wireless device every day you could place more distance between your body and the source of the Resince the exposure level drops off dramatically with distance or 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 Rexposure from these products you can use measures like those described above to reduce your Rexposure 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 re uency R 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 R source will reduce R exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless devices at all or example the government in the nited ingdom 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 ha ard exists.

11. What about wireless device interference with medical equipment?

Radio re uency R energy from wireless devices can interact with some electronic devices or this reason the DA 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 oint effort by the DA 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 DA 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 re-uirements 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 DA continues to monitor the use of wireless devices for possible interactions with other medical devices Should harmful interference be found to occur the DA will conduct testing to assess the interference and work to resolve the problem

12. Where can I find additional information?

or additional information please refer to the following resources

DA web page on wireless devices

http wwwfdagov Radiation-EmittingProducts

RadiationEmittingProductsandProcedures HomeBusinessandEntertainment CellPhones default.htm

ederal Communications Commission CC R Safety Program http wwwfccgov oet rfsafety

International Commission on on-loni ing Radiation Protection http www.icnirp.de

orld Health rgani ation H International EM Pro ect http wwwwho int emf

ational Radiological Protection Board 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
- se hands-free operation if available
- Pull off the road and park before making or answering a call if driving conditions or the law re uire it

10 Driver Safety Tips

our 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 hen operating a car driving is your first responsibility hen 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 memori e the device keypad so you can use the speed dial function without taking your attention off the road
- 2 hen available use a hands-free device A number of hands-free wireless device accessories are readily available today hether 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 ha ardous driving conditions or situations et the person you are speaking with know you are driving if necessary suspend the call in heavy traffic or ha ardous weather conditions Rain sleet snow and ice can be ha ardous 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 se your wireless device to call for help our 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 ha ard or medical emergency Remember its a free call on your wireless device
- 9 se your wireless device to help others in emergencies our 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 re uire 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 ha ard a broken traffic signal a minor traffic accident where no one appears in ured 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 urisdictions 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



LIMITED WARRANTY - USA

Limited Warranty – USA

TICE THIS IMITED ARRA T C TAI S A ARBITRATI ARBITRATI A D G as defined hereinafter in the PR ISI THAT REO IRES Definitions T RES E DISP TES B BI DI G ARBITRATI I STEAD RT ESS CH SET PT T I ARBITRATI C ASS ACTI A D R TRIA SARE T PERMITTED P EASE SEE THE SECTI PR CED RE R RES I G DISP TES BE

Should your G Mobile Phone Product fail due to a defect in materials or workmanship under normal and proper use during the warranty period set forth below G will at its option repair or replace the Product This limited warranty is valid only to the original retail purchaser of the Product and applies only when purchased and used within the nited States including S Territories

Warranty Period	Scope of Warranty
Twelve 12 months from date of original retail purchase or absent valid proof of purchase fifteen 15 months from manufacture date	Parts and abor internal functional parts only

- Replacement products and parts are warranted for the remaining portion of the original warranty period or ninety 90 days whichever is greater
- Replacement products and parts may be new reconditioned refurbished or otherwise factory remanufactured
- Replaced Products and parts will become the property of G

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THE PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THE ABOVE LIMITED WARRANTY. UNDER NO CIRCUMSTANCES SHALL LG OR ITS U.S. DISTRIBUTORS/DEALERS BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR PUNITIVE DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST GOODWILL, LOST REVENUES OR PROFITS, WORK STOPPAGE, IMPAIRMENT OF OTHER GOODS, COST OF REMOVAL AND REINSTALLATION OF THE PRODUCT, LOSS OF USE, OR ANY OTHER DAMAGES WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. LG'S TOTAL LIABILITY, IF ANY, SHALL NOT EXCEED THE PURCHASE PRICE PAID BY YOU FOR THE PRODUCT. Some states do not allow the exclusion

or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This limited warranty gives you specific legal rights and you may also have other rights that vary from state to state.

HOW SERVICE IS HANDLED:

The original sales receipt specifying the Product and date of purchase is re uired to obtain warranty service

G will not re-install or back-up any data applications or software that you have added to your Product It is therefore recommended that you back-up any such data or information prior to sending the Product to G to avoid permanent loss of such information

ou shall bear the cost of shipping the Product to G Customer Service G shall bear the cost of shipping the Product back to you after completion of service under this limited warranty

THIS LIMITED WARRANTY DOES NOT COVER:

- 1 Damage or defects of the Product resulting from use of the Product in other than its normal and customary manner
- 2 Damage or defects of the Product resulting from abnormal use abnormal conditions improper storage exposure to moisture or dampness unauthori ed modifications connection repair misuse neglect abuse accident alteration improper installation or other acts which are not the fault of G including damage or defects of the Product caused by shipping blown fuses spills of food or li uid
- 3 Damage or defects of the Product caused by transportation and or handling including scratches dents chips and or other damage to the finish of your Product including the external housing and cosmetic parts unless such damage results from defects in materials or workmanship and is reported within one 1 week of delivery Call 1-800-793-8896
- 4 Damage or defects to antennas unless caused directly by defects in material or workmanship
- 5 Damage or defects of the Product resulting from operating the Product contrary to the instructions outlined in the Product owners manual
- 6 That G Customer Service was not notified by you of the alleged defect or malfunction of the Product during the applicable limited warranty period

- 7 Products with original serial numbers that have been removed altered or cannot be readily determined
- 8 Damage or defects of the Product or missing items to any Product sold As Is ith all aults or similar disclaimer
- 9 Damage or defect of the Product caused by the use of accessories parts consumable cleaning products or service not provided or approved by G
- 10 All plastic surfaces and all other externally exposed parts that are scratched or damaged
- 11 Products operated outside published maximum ratings
- 12 Replacement of any consumable parts such as fuses

The cost of repair or replacement under the above excluded circumstances shall be borne by you.

TO OBTAIN WARRANTY SERVICE AND ADDITIONAL INFORMATION:

Call 1-800-793-8896 and select the appropriate option from the menu r visit our website at *http wwwlgcom*

r by mail G Electronics Customer Service P Box 240007 Huntsville A 35813 ATT CIC Mobile Handsets

DO NOT RETURN YOUR PRODUCT TO THE ABOVE ADDRESS. Please call or write for procedures for obtaining warranty service

PROCEDURE FOR RESOLVING DISPUTES:

DISP TES BET EE A D G ARISI G Τ R RE ATI GI A RTHEPR D CT SHA A T THIS IMITED ARRA T **BF RFS** FD GH BI DI G ARBITRATI TIAC SI E THR A D BI DI GARBITRATI A D G ARF GE ERA RISDICTI MEA STHAT EACH ALL GTHE RIGHTT A R TRIA A DT BRI G R PARTICIPATE I A C ASS ACTI

<u>Definitions</u> or the purposes of this section references to G mean G Electronics MobileComm SA Inc its parents subsidiaries and affiliates and each of their officers directors employees agents beneficiaries predecessors in interest successors assigns and suppliers references to dispute or claim shall include any dispute claim or controversy of any kind whatsoever whether based in contract tort statute regulation ordinance fraud misrepresentation or any other legal or e uitable theory arising out of or relating in any way to the sale condition or performance of the product or this imited arranty

otice of Dispute In the event you intend to commence an arbitration proceeding you must first notify G in writing at least 30 days in advance of initiating the arbitration by sending a letter to G at G Electronics SA Inc Attn egal Department- Arbitration 1000 Sylvan Ave Englewood Cliffs 07632 ou and G agree to engage in good faith discussions in an attempt to amicably resolve your claim The notice must provide your name address and telephone number identify the product that is the sub ect of the claim and describe the nature of the claim and the relief being sought If you and G are unable to resolve the dispute within 30 days either party may proceed to file a claim for arbitration

Agreement to Binding Arbitration and Class Action aiver pon failure to resolve the dispute during the 30 day period after sending written notice to G you and G agree to resolve any claims between us only by binding arbitration on an individual basis unless you opt out as provided below Any dispute between you and G shall not be combined or consolidated with a dispute involving any other persons or entitys product or claim. More specifically without limitation of the foregoing any dispute between you and G shall not under any circumstances proceed as part of a class or representative action. Instead of arbitration either party may bring an individual action in small claims court but that small claims court action may not be brought on a class or representative basis.

Arbitration Rules and Procedures To begin arbitration of a claim either you or G must make a written demand for arbitration The arbitration will be administered by the American Arbitration Association AAA and will be conducted before a single arbitrator under the AAAs Consumer Arbitration Rules that are in effect at the time the arbitration is initiated referred to as the AAA Rules and under the procedures set forth in this section The AAA Rules are available online at www.adrorg consumer Send a copy of your written demand for arbitration as well as a copy of this provision to the AAA in the manner described in the AAA Rules ou must also send a copy of your written demand to G at G Electronics SA Inc Attn egal Department- Arbitration 1000 Sylvan Avenue Englewood

SA Inc Attn egal Department- Arbitration 1000 Sylvan Avenue Englewood Cliffs 07632 If there is a conflict between the AAA Rules and the rules set forth in this section the rules set forth in this section will govern This arbitration provision is governed by the ederal Arbitration Act udgment may be entered on the arbitrators award in any court of competent urisdiction All issues are for the arbitrator to decide except that issues relating to the scope and enforceability of the arbitration provision and to the arbitrability of the dispute are for the court to decide The arbitrator is bound by the terms of this provision

<u>Governing aw</u> The law of the state of your residence shall govern this imited arranty and any disputes between us except to the extent that such law is preempted by or inconsistent with applicable federal law

<u>ees Costs</u> ou do not need to pay any fee to begin an arbitration pon receipt of your written demand for arbitration G will promptly pay all arbitration filing fees to the AAA unless you seek more than 25 000 in damages in which case the payment of these fees will be governed by the AAA Rules Except as otherwise provided for herein G will pay all AAA filing administration and arbitrator fees for any arbitration initiated in accordance with the AAA Rules and this arbitration provision If you prevail in the arbitration G will pay your attorneys fees and expenses as long as they are reasonable by considering factors including but not limited to the purchase amount and claim amount—otwithstanding the foregoing if applicable law allows for an award of reasonable attorneys fees and expenses an arbitrator can award them to the same extent that a court would If the arbitrator finds either the substance of your claim or the relief sought in the demand is frivolous or brought for an improper purpose as measured by the standards set forth in ederal Rule of Civil Procedure 11 b then the payment of all arbitration fees will be governed by the AAA Rules In such a situation you agree to reimburse G for all monies previously disbursed by it that are otherwise your obligation to pay under the AAA Rules Except as otherwise provided for G waives any rights it may have to seek attorneys fees and expenses from you if G prevails in the arbitration

Hearings and ocation If your claim is for 25 000 or less you may choose to have the arbitration conducted solely on the basis of 1 documents submitted to the arbitrator 2 through a telephonic hearing or 3 by an in-person hearing as established by the AAA Rules If your claim exceeds 25 000 the right to a hearing will be determined by the AAA Rules Any in-person arbitration hearings will be held at a location within the federal udicial district in which you reside unless we both agree to another location or we agree to a telephonic arbitration

<u>pt ut</u> ou may opt out of this dispute resolution procedure If you opt out neither you nor G can re uire the other to participate in an arbitration proceeding To opt out you must send notice to G no later than 30 calendar days from the date of the first consumer purchasers purchase of the product by either i sending an e-mail to *optout lge com* with the sub ect line Arbitration pt ut or ii calling 1-800-980-2973 ou must include in the opt out e-mail or provide by telephone a your name and address b the date on which the product was purchased c the product model name or model number and d the IMEI or MEID or Serial umber can be found i on the product box ii on a label on the back of the product beneath the battery if the battery is removable or iii from the settings menu via the following path

Settings > System > About phone > Status

ou may only opt out of the dispute resolution procedure in the manner described above that is by e-mail or telephone no other form of notice will be effective to opt out of this dispute resolution procedure pting out of this dispute resolution procedure will not affect the coverage of the imited arranty in any way and you will continue to en oy the full benefits of the imited arranty If you keep this product and do not opt out then you accept all terms and conditions of the arbitration provision described above

