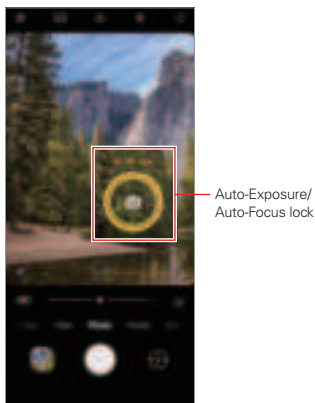


## Auto-Exposure/Auto-Focus lock

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




### NOTE

This feature is available only in specific modes.

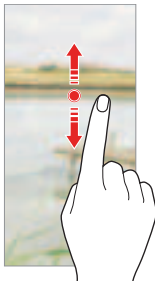
### Switching between cameras

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

On the camera screen, tap  to switch between the front and rear cameras.

or

On the camera screen, swipe the screen up or down.

**NOTE**

Use the front camera to take selfies. See **Selfie shot** for details.

### Zoom in or out




You may spread or pinch two fingers to zoom in or out when you take photos or videos.

**NOTES**

- Zoom in/out function is not available in the selfie mode (front camera).
- This function is not supported in a number of modes.

## Using the Burst Shot

You can take consecutive photos and view them as moving pictures in the Gallery.

1. Tap  **Camera** and select **Photo**.
2. Tap and hold  **Capture**.
  - ▶ Multiple, consecutive photos are taken while you are holding down  **Capture**.

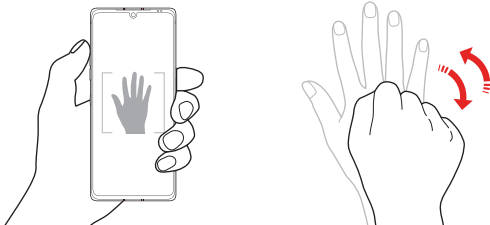
## Gesture shot

You can take selfies by using gestures.


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

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

- ▶ In three seconds, a photo is taken.



### NOTES


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

## Auto shot

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

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

### NOTE

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


## Interval shot

You can take selfies at an interval.

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

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

## Save as flipped

Before taking a photo with the front camera, tap  **Settings** > **Save as flipped**.





The image is flipped horizontally.

### NOTE

When using the front camera, you can change selfie shot settings in the camera options. See *Customizing the camera options* for details.

## Selfie shot





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

1. Tap  **Camera** and select **Photo** by swiping camera modes.
2. Tap  **Swap** to switch to the front camera.
3. Tap  **Capture** to take photos.
  - ▶ Tap  **Beauty effects** to apply various beauty effects.


## Clock

You use the Clock app to access the Alarm, World clock, Timer, and Stopwatch functions. Access these functions by tapping the tabs across the top of the screen or swiping horizontally across the screen.

### Alarm




1. On the home screen, tap  **Essentials** folder >  **Clock** > **Alarm** >  **Add**.
2. Set an alarm by tapping the hour or minutes and selecting the desired time on the clock graphic. Tap  **Keypad** to set the time using a keypad instead of the clock graphic. Tap **AM** or **PM** as necessary.
3. Set days, **Alarm sound and volume**, **Alarm with vibration**, **Snooze duration**, **Animated weather**, **Alarm note**, and **Puzzle lock**.
4. Tap **SAVE**.

#### NOTE

To access (and change) the alarm settings from the alarm list screen, tap the  **Options** then tap **Settings**.

### World clock

The World clock allows you to set up a list of cities to easily check current times in other time zones with a quick glance.



1. On the home screen, tap  **Essentials** folder >  **Clock** > **World clock**.
2. Tap  **New City**, search through the available cities, then tap the desired one.

#### NOTE

A network connection is necessary to search for cities.



## Timer

The Timer can alert you with an audible signal when a set amount of time has passed.

1. On the home screen, tap  **Essentials** folder >  **Clock** > **Timer**.
2. Set the desired time on the timer.
3. Tap **Start** to start the timer.
  - ▶ Tap **Pause** to pause the timer.
4. Tap **Stop** to stop the timer.

## Stopwatch

The Stopwatch allows you to use your device as a stopwatch.

1. On the home screen, tap  **Essentials** folder >  **Clock** > **Stopwatch**.
2. Tap **Start** to initiate the stopwatch.
  - ▶ Tap **Lap** to record lap times.
3. Tap **Pause** to suspend the stopwatch.
  - ▶ To resume the stopwatch, tap **Resume**.
  - ▶ To clear all the records and reset the stopwatch, tap **Reset**.

## Contacts

The Contacts app allows you to store names, phone numbers, and other information in your phone's memory. Entries are listed alphabetically. You can scroll through the list or select the Groups tab.

Use the Contacts app to add, view, and communicate with your friends, acquaintances, and associates.

### To open your Contacts app

- On the home screen, tap  **Essentials** folder >  **Contacts**.

#### NOTE



You can also tap the **Contacts** tab from the **Phone** app.

If you don't have any contacts in your Google Account or on your SIM card, hints will be displayed to help you start adding contacts to your phone.

### Contacts list

When you open the Contacts app, your contacts list is displayed. The alphabet is displayed vertically along the right side of the screen. You can drag along it or tap the desired letter.




### To search for a contact

1. On the home screen, tap  **Essentials** folder >  **Contacts**.
2. Tap the **Search contacts** box and enter the contact name. Matches are displayed as you begin to type.

### Searching your online contacts simultaneously

You can search for your contacts simultaneously from all of your online accounts.

To set your phone to search simultaneously,

1. On the home screen, tap  **Essentials** folder >  **Contacts**.
2. Tap  **Options** > **Contacts settings** > **Online search**.

### To open your groups list



- ▶ Open the **Contacts** app and tap **Groups**.

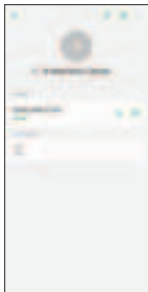
**Groups** displays your contacts by category (at the top of the screen) and your accounts (at the bottom of the screen).




**NOTE**

Tap  **Options** from the Groups to access **Delete**, **Share**, **Default screen**, **Contacts settings**, and **Help**.

### To view details about a contact

1. On the home screen, tap  **Essentials** folder >  **Contacts**.
2. Tap the contact whose details you want to view.



3. The information you entered for the contact is displayed. The following options are available (depending on the types of information saved).
  - ▶  **Dial** places a call to the number.
  - ▶  **Message** starts a message.
  - ▶  **Options** accesses the following menu options: **Share**, **Forward**, **Merge**, **Back up**, **Separate**, **Set defaults**, and **All calls to voicemail**.







## Adding Contacts




You can add contacts on your phone and synchronize them with the contacts in your Google™ Account, Microsoft Exchange account, or other accounts that support syncing contacts.

Since your contacts can come from a variety of sources, the Contacts app attempts to merge new information with existing similar contact entries to create a single entry. You can also manually merge or separate entries.

### To add a new contact




1. On the home screen, tap  **Essentials** folder >  **Contacts**.
2. Tap  **New contact**.
3. Tap the Accounts field to select an account in which you want to save the contact, if necessary.  
**NOTE** To change the account later, edit the entry, tap the account, then tap the desired account.
4. Enter the contact's name.
5. Tap a desired category, such as phone number or email address, to enter details about the contact.
  - ▶ Tap **More** to add additional fields.
6. Personalize the contact entry.
  - ▶ Set the group this contact belongs in.
  - ▶ Set a ringtone to identify calls from this contact.
  - ▶ Set a message alert sound to identify notifications from this contact.
  - ▶ Tap  **Image** to select a picture to identify the contact.
7. When you're finished, tap **SAVE**.

### Editing a Contacts entry




1. On the home screen, tap  **Essentials** folder >  **Contacts**, and then tap the contact entry you want to edit.
2. Tap  **Edit**.
3. Edit the entry as needed, then tap **SAVE**.

### Merging and separating contacts

When you have two or more entries for the same contact, you can merge them into a single entry. You can also separate contacts that were merged.




1. On the home screen, tap  **Essentials** folder >  **Contacts**, and then tap the contact entry you want to merge with another entry.
2. Tap the  **Options**, then tap **Manage contacts** > **Merge**.
3. Select the entry you want to merge.

Once entries have been merged, **Separate** becomes available in the options menu to allow you to separate the merged entries.

1. On the home screen, tap  **Essentials** folder >  **Contacts**, and then tap the contact entry you want to separate.
2. Tap  **Options**, then tap **Manage contacts** > **Separate**.
3. Tap **SEPARATE** to confirm.

### Setting Speed Dials

#### Designating multiple speed dials

1. On the home screen, tap  **Essentials** folder >  **Contacts**, and then tap  **Options**.
2. Tap **Speed dial**.
3. Tap the speed dial number to assign, then tap the Contact entry for it.
4. Repeat selecting a speed dial number and the desired Contact entry as necessary.


## Gallery

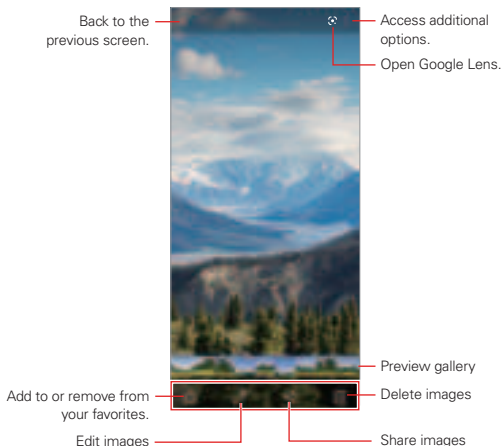
### Gallery overview

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

### Viewing photos

You can view the photos saved in Gallery.

1. Tap  **Gallery** and select a desired folder.
2. Tap a desired photo.
  - ▶ The Gallery app contains **Photos**, **Albums**, **Memories**, and **Play**.



#### NOTE

The menu appears when the screen is lightly touched. Touching the screen once again makes the menu disappear.

## Playing a video

You can view the videos saved in Gallery.




### NOTES

- To adjust the sound volume, drag the right side of the video screen up or down.
- To adjust the screen brightness, drag the left side of the screen up or down.
- Dragging the screen to the left on the video play screen allows you to rewind (REW) and dragging to the right allows you to fast forward (FF).

## Game launcher

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

1. On the home screen, tap  **Game Launcher**.
2. Select the desired option.

## LG Health

### LG Health overview

You can set the goal of daily exercise and check the amount of physical exercise to monitor your health and fitness information.

#### NOTES

- This device and related software are not intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment or prevention of disease. Consult a doctor before starting an exercise program.
- LG Health may vary or may not be available, depending on the country and the mobile service provider. LG Health functions that are available and apps that can be added to LG Health may vary, depending on the country. This is due to differing laws and regulations.



### Getting started with LG Health

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




1. On the home screen, tap  **Essentials** folder >  **LG Health**.
2. Follow the on-screen instructions to complete the setup.

## Using LG Health

You can easily manage the details of physical exercise and health information on LG Health.

1. On the home screen, tap  **Essentials** folder >  **LG Health**.
2. The following options are available:



- ▶  : View your exercise logs.
- ▶  : Record the route and amount of your physical exercise for each type of exercises performed.
- ▶  : Set your daily exercise goals including calories and number of steps, and customize LG Health settings.

## Messaging

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

### To open the Messaging app


- ▶ On the home screen, tap  **Essentials** folder >  **Messaging**.

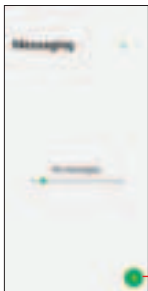
### Using the Messaging app

To use the **Messaging** features, you must set it as the default messaging app.



#### NOTE

You can view your messages in the Messaging app without setting it as your default app, but you can't create a message.

- ▶ Tap  **New message** to start a new text or multimedia message.




Tap here to create a new message.

- ▶ Tap an existing message thread to open it.
- ▶ Tap  **Delete** to delete message threads.
- ▶ Tap  **Options** to access **Settings** and **Help**.



#### NOTE

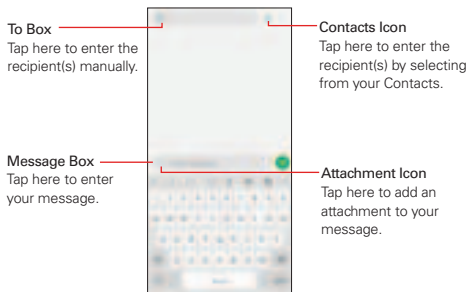
Pinch in (or spread apart) on your list of messages to resize it for easier viewing or navigation.

### To delete a message thread from the Messaging window

1. Touch and hold the message thread.
2. Tap **Delete** in the bottom of the right corner.
3. Tap  **Delete** to confirm you want to delete the message thread.

### To send a text message

1. Open the **Messaging** app (set it as your default, if necessary), then tap  **New message**.
2. Enter the recipient(s) in the **To** box.
  - ▶ Tap  **Contacts**, select one or more entries from your Contacts, then tap **DONE**.
  - ▶ Enter a name (or a partial number), then tap a suggestion displayed from your Contacts.
  - ▶ Enter a number manually for phone numbers not in your Contacts.
  - ▶ Tap the message box, then enter your message.




If you go back to the previous screen while composing a message, it is automatically saved as a draft. Tap the message thread to resume composing it.



3. Tap  **Options** > **Add subject** to add a message subject.

The subject text appears above the body text in bold letters.

4. Tap  **Attach** to open a dialog box where you can choose the type of media file to attach to the message.

**NOTE**

To delete an attachment, simply tap  **Delete** on the attached file.

5. Tap  **Send** to send the message.

Your sent and received messages appear in the same window, creating a message thread with that contact.

## Receiving and viewing messages


If you receive a message from a contact while in the message window with the contact, the message will be received without any notification.

Otherwise, you'll receive a new message notification based on the **Notification** settings.

- ▶ If the **Show as pop-ups** option is enabled, you'll receive a pop-up notification on the current screen which you can use to directly reply.

If the message contains a media file, tap the **Play** button to view, watch, or listen to it. Touch and hold the media file to open a context menu with additional options.


**TIP**

While viewing a message thread, you can tap  **Call** to place a call instead of sending a message.



## To respond to messages you receive

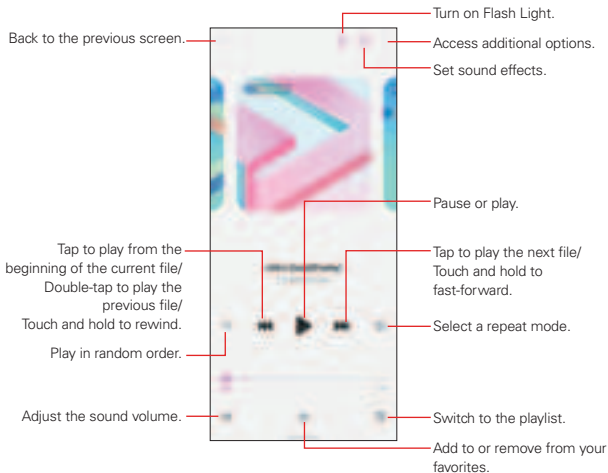
While viewing the received message, tap the message box at the bottom of the screen, complete your response as necessary, then tap **Send**.

## Changing Messaging Settings



- ▶ To change the Messaging settings, open the **Messaging** app (set it as your default, if necessary), tap  **Options** > **Settings**. Messaging settings include **Notifications**, **Blocked numbers**, **Quick reply**, and more.

## Music

Your phone has a music player that lets you play all of your favorite tracks. To access the Music player, tap  **Essentials** folder >  **Music**.




## Playing a song

1. On the home screen, tap  **Essentials** folder >  **Music**.
2. Select a category.
3. Tap the song you want to play.

### NOTES

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

## Exiting the Music player

To exit the Music player, swipe the Status Bar downward, then tap  **Close** in the upper-right corner of the Music notification.

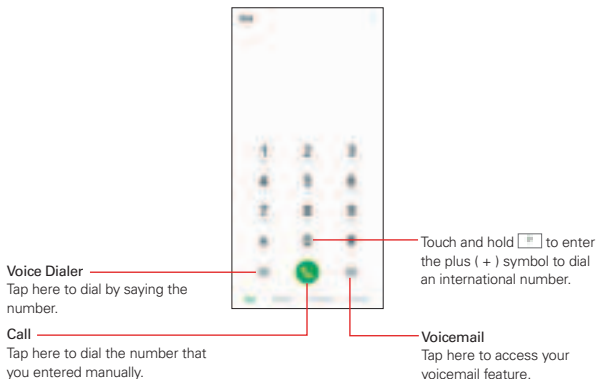
### NOTE

When you select Caller ringtones, tap a desired contact to set it.

## Phone

### To open the Phone app



- On the home screen, tap  **Phone**.



### Moving between the Phone app tabs

Tap any of the **Phone** app tabs (**Dial**, **Recent**, **Contacts**, and **Groups**) at the top of the screen to view that tab. You can also swipe the screen horizontally to scroll to the other tabs. The name of the current tab is underlined.



### Making a call by dialing

1. On the home screen, tap  **Phone** > **Dial**.
2. Use the dialpad to enter the number you want to call.
3. Tap  **Call** (on the dialpad) to dial the number that you entered.

## Ending a call

- ▶ Simply tap  **End** on the Call screen to end the call.

If you accessed other device functions while the call was in progress, there are several ways to return to the Call screen to end the call.

- ▶ Tap the **Ongoing call** portal.
- ▶ On the home screen, tap  **Phone**.
- ▶ Drag the Status Bar down, then tap  **End** in the Current call notification.

### NOTE

You can also press **Power/Lock button** to end the call if you activated this feature in the Call settings (tap **⋮ Options > Call settings > Answer and end calls > enable the End call with the Power key switch**).

## Answering or Rejecting Calls

When you receive a phone call, the Incoming call screen opens with the caller ID and any additional information about the caller that you've saved in the contact's entry. All incoming calls are recorded in the **Recent** tab.

### To answer a call

- ▶ Drag  **Answer** in any direction to answer the call.

### To ignore a call and divert it to Voicemail


- ▶ Drag  **Ignore** in any direction to ignore the call.

### NOTE

To silence the incoming call ringer, press either of the **Volume** buttons.

### To ignore a call and send a text message

To display the **Ignore with message** option on the Incoming call screen, enable it in the Phone app's Call settings menu.

1. On the home screen, tap  **Phone > ⋮ Options > Call settings**.
2. Tap **Call blocking & Ignore with message > Allow ignore with message** switch to toggle it On (green).

### TIP

Tap **Allow ignore with message** to manage your text message choices.



### NOTE

This feature can only be used to send a message to another mobile phone. It's not applicable to incoming landline calls.

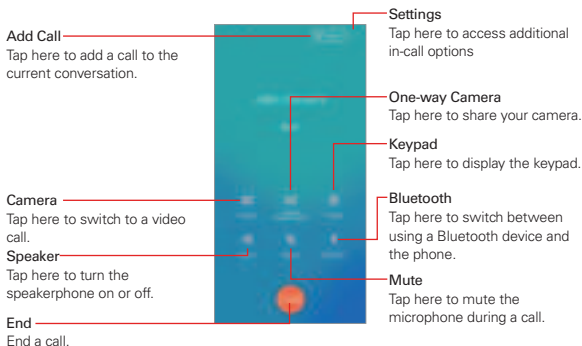
## Checking an incoming call while using an app

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

### NOTE

On the home screen, tap  **Phone** > ⋮ **Options** > **Call settings** > **Additional settings** > **Incoming voice call pop-up**  **ON/OFF**

## During a Call



### NOTE

Tap ⋮ **Options** on the Call screen to access **Contacts**.

## Recent Tab





The **Recent** tab records all of the calls you've dialed, received, missed, or ignored. It offers a convenient way to redial a number, return a call, or add a number to your **Contacts**.

### Opening the Recent tab



- On the home screen, tap  **Phone** > **Recent**.

The **Recent** tab lists your calls chronologically by phone number and call type. The number in parenthesis indicates the number of calls recorded for that phone number and type.

## Viewing call entry details


Open the **Recent** tab, then tap an entry to view all of call history for that phone number and call type. Each one includes the call type ( received,  dialed,  missed, and  ignored), the date and the time of the call.

## Filtering your list of calls


On the home screen, tap  **Phone** > **Recent**, and then  **Options** > **Filter**. Tap the call type you want to view.

Tap  **Back** to return to the **Recent** tab screen.

## Dialing a number in the Recent tab



- ▶ From the **Recent** tab, tap  **Call** at the right of the call entry.
- ▶ From the **Recent** tab, tap the image to the left of the call entry to view other information saved in your phone's memory for that contact. Tap a phone number to dial it.

### TIP

To insert an area code when you're traveling, touch and hold the entry, then tap **Copy number** in the context menu. Change to the **Dial** tab, touch and hold the phone number field, tap **PASTE**, then edit the number as necessary before tapping the  **Call**.



## Deleting your Recent calls

You can delete the entire list of Recent calls at once or selectively.


1. On the home screen, tap  **Phone** > **Recent**.
2. Tap  **Options**.
  - ▶ Tap **Clear** to select entries to remove from the list. Checkmark the entries to delete, tap **Clear**, then **Clear**.

## Speed Dial

### Create a Speed Dial

1. On the home screen, tap  **Phone**.
2. Tap  **Options** > **Speed dial**.
3. Tap **Add contact** and select a name or number to set up a speed dial.

## Making a call using Speed Dial

1. On the home screen, tap  **Phone**.
2. Touch and hold the Speed dial number.

## Managing Multiple Calls





Contact your wireless service provider to find out which call services are supported.

### To switch between current calls

The current call will be placed on hold and you'll be connected with the other call.

### To set up a conference call

Contact your wireless service provider to find out whether they support conference calls and how many participants you can include.

1. Place a call to the first participant.
2. When you're connected, tap  **Add call** on the Call screen.
3. Enter a phone number.
  - ▶ Use the **Phone** app tabs to select a saved number, then tap  **Call**.
  - ▶ Use the buttons on the dialpad to manually enter a number, then tap the  **Call**.
4. After you're connected, tap  **Merge** on the Call screen. The participant is added to the conference call and the Call screen indicates a conference call is active.



## LG Pay

### LG Pay overview

You can make a payment by touching the card reader with a mobile phone that supports LG Pay.

You can use the LG Pay service by adding multiple credit, debit, membership, gift cards, etc. to LG Pay.

#### NOTES

- The LG Pay app is not pre-loaded on this device. First, download it from Play Store.
- The information provided in this manual may differ depending on the software version, app updates, and the service policy of the card company.
- For more information about how to use LG Pay, please visit the LG Pay website (<https://www.lg.com/us/lg-pay>).
- The use of LG Pay may be restricted or impossible depending on the country, service provider, card company, and store.
- To use LG Pay, you must have a USIM card with the same name as your payment card.
- If you change the device, add your LG account into your new device to synchronize your membership and gift card information previously used. Please note that previously registered payment cards must be re-registered for security purposes.
- LG Pay requires an active internet connection. You can use a mobile data or WI-FI connection.
- Depending on your network connection, payments may not be made.
- Depending on the type of card reader, LG Pay may not be supported.
- If you use a metal case or have metal objects between the device and the case, the recognition rate may be lowered.

### Running LG Pay

1. Tap **LG Pay** to run the LG Pay app.
2. Tap **START**.

#### NOTES

- Please accept the permissions, and the terms and conditions required to use the LG Pay app.
- LG Pay is only available for LG products and cannot be downloaded from Play Store on third party devices.

## Joining LG Pay

To use LG Pay, sign up for an LG account.

Follow the instructions on the screen and complete the required fields.

## Setting your LG Pay app password

Set a password to secure the LG Pay app.

Enter six digits for your password, then enter it again to confirm.

## Registering your fingerprint

By registering your fingerprint, you can easily pay by fingerprint without entering a payment password.

After agreeing to use your fingerprint, follow the instructions on the screen to register your fingerprint.

### NOTES

- Repeat the action by moving the position little by little with the same finger until the fingerprint is registered.
- Follow the instructions on the screen to register your fingerprint. If you already have a fingerprint registered, this step is not necessary.
- You can select whether to use fingerprint in **⋮ Options > Settings** in the LG Pay app. If you turn off the fingerprint option, you can pay using your payment password.

## Adding a payment card

1. Tap **+** **Add** on the top of the LG Pay app main screen.
2. Make sure the numbered side of the card is in line with the guidelines on the screen.
  - ▶ Check that your card number and expiration date are correct.
  - ▶ If the card's information is recognized, the card information is automatically entered.
  - ▶ If your card isn't recognized correctly, tap **ENTER MANUALLY** to enter your card information.
3. Enter the security code (CVC) on the back of the card and tap **Next**.
4. Enter the "User Information (Name / Address)".
5. Agree to the credit card company's terms and conditions.

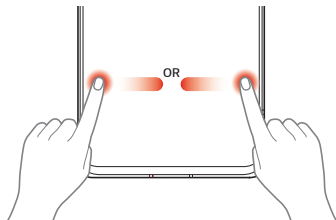
6. Tap **Done** to finish adding your payment card.

- ▶ To register additionally, click **Add additional card**.

### Paying with LG PayQuick

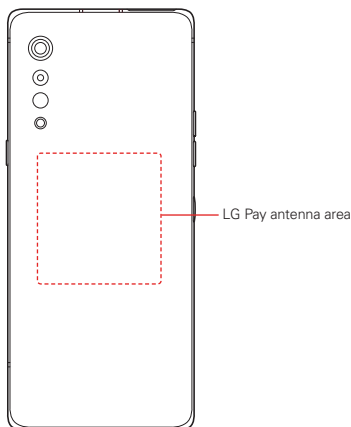
This feature allows you to make payments quickly and easily using your phone.

1. Run **LG PayQuick** by swiping left or right from any side of the screen.



- NOTES**
- The LG PayQuick cue appears on the side of the screen when a card is added to LG Pay.
  - Touch and hold the LG PayQuick cue to change the direction of swiping.
  - To enable/disable the option, open **LG Pay** and tap **⋮ Options > Settings > LG PayQuick > Show LG PayQuick cue**.

2. Select a card to use by swiping the cards left or right.
3. Authenticate by using your registered fingerprints or entering the password for each card.
4. Make a payment by touching the LG Pay antenna area of the product on a card reader within 50 seconds.



- NOTES**
- To change the LG PayQuick settings, tap **⋮ Options > Settings > LG PayQuick** in the LG Pay app.
  - If the navigation bar is set to **Buttons only**, swipe up from the bottom center of the screen to run **LG PayQuick**.
  - If the battery level is 5% or less, **LG PayQuick** will not run.

## Setting LG Pay

Tap **⋮ Options > Settings** on the top of the LG Pay app main screen to change various settings such as configuration for the LG PayQuick screen, notifications, settings for fingerprint, changing PIN, editing my info, etc.

## Canceling the LG Pay service

Canceling LG Pay will delete all data stored on the LG Pay app and server.

1. Tap **⋮ Options > Settings > About LG Pay** on the top of the main screen.
2. Tap **Terminate service**.

## QuickMemo+


### QuickMemo+ overview









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

This device supports the Active Pen AES2.0 (Active Electrostatic).

### Creating a note

1. On the home screen, tap  **QuickMemo+**.

2. Tap  **Add** to create a note.










- ▶  : Save a note.
- ▶  : Undo the previous edit.
- ▶  : Redo the recently deleted edits.
- ▶ **T** : Enter a note by using the keypad.
- ▶  : Save your favorite pen types.
- ▶  : Write notes by hand.
- ▶  : Erase handwritten notes.
- ▶  : Change into the calligraphy font as you write by hand.
- ▶  : Access additional options.

#### NOTE

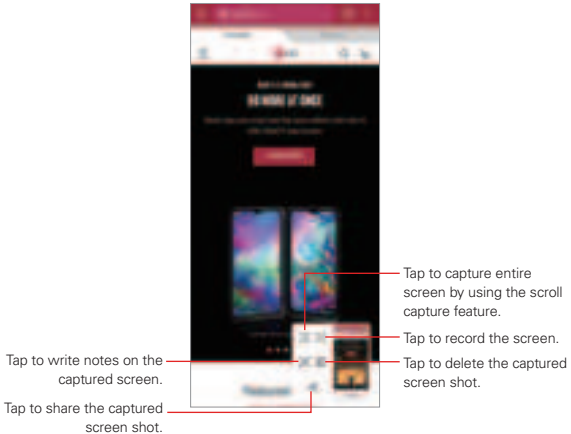
Tap  **Lock** to lock the navigation bar while making a note.

3. Tap  **Done** to save the note.



### Writing notes on a screenshot

1. While viewing the screen you want to capture, drag the status bar downwards and then tap  **Screenshot**.
  - ▶ The screen is captured and displayed as a thumbnail on the right bottom of the screen.
2. To write notes on the screen, tap  **Edit**.
3. Write notes using the tools.
  - ▶  : Zoom in or out, or adjust the area to capture.
  - ▶  : Write notes by hand.
  - ▶  : Erase handwritten notes.
  - ▶  : Undo the previous edit.
  - ▶  : Redo the recently deleted edits.
  - ▶  : Crop the screen as you desire.
4. Tap  **Save** to save the notes.
  - ▶ Saved notes can be viewed in **Gallery**.

## Additional features after capturing a screenshot






### NOTES

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

## Managing folders

You can organize and view memos according to the memo type.

1. On the home screen, tap  **QuickMemo+**.
2. Tap  **Menu** on the top part of the screen and then select the desired function.
  - ▶ **All memos**: You can collectively view all memos saved in QuickMemo+.
  - ▶ **My memos**: You can view the memos created in QuickMemo+.
  - ▶ **Coloring book**: You can view the memos created using Coloring book.
  - ▶ **Scratch art**: You can view the memos created using Scratch art.
  - ▶ **New category**: You can add folders.
  - ▶  : You can change the order of folders or add/delete folders.  
By pressing the folder, you can change the folder name.

### NOTES

- Some folders do not appear when the folder app initially started. Folders are additionally displayed only when relevant memos exist.
- Deleted memos are moved to the trash bin and can be recovered within 7 days from the day they were deleted.
- In the QuickMemo+ app, you can zoom in or out the screen by spreading or pinching two fingers.
- Some folders do not appear when the folder app is initially started.



## Voicemail


The **Voicemail** app allows the management of voicemail directly from the phone rather than accessing voicemail via traditional methods.

**Voicemail** can display a list of your messages allowing you to choose which message(s) to listen to or delete, without having to dial into your mailbox and listen to voice instructions or prior messages.


### Using Voicemail

1. On the home screen, tap  **Voicemail**.

#### NOTE

Listening to voicemail and setting up your voicemail service depend on the subscription status for the Visual Voicemail service. If you have subscribed to the Visual Voicemail service, when you tap  **Voicemail** on the dialpad, the Visual Voicemail app will be launched.

2. The first time you access the **Voicemail** app, you'll have to subscribe to the **Visual Voicemail** service to be able to use it.
3. After subscribing to the **Visual Voicemail** service, you'll be prompted to enter the password. To change the password, call voicemail (dial \*86).
4. After entering the password, your voicemail entries will be displayed in your Inbox.

While viewing the voicemail list, tap  **Options** to access the following options: **Search**, **Save**, **Set as heard**, **Sort by**, **Saved Voicemail**, **Refresh**, and **Settings**.

5. Tap a voicemail entry to listen to it.

## Google Apps

To use Google apps, a Google Account needs to be registered in your device first. The Google Account registration window appears automatically when you use a Google app for the first time (if you didn't register your account when you initially set up your device). If you do not have a Google Account, create one from your device. For details on how to use an app, refer to the Help text in the app.

### Google

Use Google to search for web pages, images, news and more by entering or speaking keywords.

### Gmail

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

### Maps

Find your location or the location of a specific place on a map. View geographical, traffic, or transit information. Get directions to destinations.

### YouTube

Search for and play videos. Upload videos on YouTube to share them with people around the world.

### Drive

Upload, save, open, share, and organize files from your device. Files accessible from apps can be accessed from anywhere, including online and offline environments.

### YT Music

A new music streaming service from YouTube.

### Play Movies & TV

Use your Google Account to rent or purchase movies. Purchased contents can be played anywhere.

## Duo

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

## Photos

View or share photos or albums saved on your device. Edit or enhance your photos.

## Docs

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

## Sheets

Sheets is a collaborative spreadsheet processing tool that enhances productivity. Use Sheets to import, organize and analyze information together in real-time.

## Slides

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

## Calendar

You can use the calendar to manage events and tasks.

## Files

Helps you free up space on your device, browser files and share files offline.


## Settings

The **Settings** app allows you to customize and personalize your phone by setting how its screens look, how it notifies you, how it reacts, and a lot more.

**NOTE** Settings that are specific to an app are accessed through its own Settings menu within the app. For example, the Chrome app has settings specific to your Internet access.

### To open the Settings app

► On the home screen, tap  **Settings**.

**TIP** The upper-right corner of the Notifications panel also has a  **Settings** icon that you can tap to open the **Settings** app.

## Network & internet

The Network & internet category allows you to configure and manage your device's wireless radio communications.

### Airplane mode

Tap its  switch to toggle it ON or OFF. On disables all wireless connections.




### Wi-Fi

With Wi-Fi, you can use high-speed Internet access within the coverage of the wireless access point (AP). Enjoy wireless Internet using Wi-Fi, without extra charges.

#### Connecting to Wi-Fi networks

To use Wi-Fi on your phone, you need to access a wireless access point or 'hotspot'. Some access points are open and you can simply connect to them. Others are hidden or use security features. You must configure your phone to be able to connect to them. Turn off Wi-Fi when you're not using it to extend the life of your battery.

## Turning Wi-Fi on and connecting to a Wi-Fi network

1. On the home screen, tap  **Settings** > **Network & internet** > **Wi-Fi**.
2. Tap  **Wi-Fi ON/OFF** to turn Wi-Fi on and start scanning for available Wi-Fi networks.
3. Tap  to see a list of active and in-range Wi-Fi networks.
  - ▶ Secured networks are indicated by a lock icon.
4. Tap a network to connect to it.
  - ▶ If the network is secured, you're prompted to enter a password or other credentials. (Ask your network administrator for details.)
5. The Status Bar displays icons that indicate your Wi-Fi status.

## Wi-Fi network settings

Allows you to set up many of your device's Wi-Fi services.

 **Options** Accesses the Wi-Fi options menu.

**Add Wi-Fi** Allows you to manually add a Wi-Fi network by entering its name (SSID), security, and password.

**Saved Wi-Fi** Displays your saved Wi-Fi networks allowing you to manage them.

**Advanced Wi-Fi** Provides additional specific Wi-Fi connection settings.

## NOTIFICATIONS

**Wi-Fi notification** Enable this option to be notified when Wi-Fi networks are available nearby.

## USEFUL SETTINGS

**Avoid bad Wi-Fi connections** Enable this option to use the mobile network whenever the Wi-Fi network you're connected to doesn't have an Internet connection. (Data usage may apply.)

**Hotspot 2.0** Enable this option to connect to Wi-Fi that supports Hotspot 2.0 automatically.

## CONNECTION

**Wi-Fi Direct** Allows you to connect with Wi-Fi devices without any access point.

## PERSONAL

**Install certificates** Allows you to install certificates from storage.

## INFORMATION

**MAC address** Displays your phone's MAC address (which may need to be entered in the router to connect to some wireless networks with MAC filters).

**IP address** Displays your phone's IP address.

### Wi-Fi Direct


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

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

### Tethering & Mobile Hotspot

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

#### Mobile Hotspot

1. On the settings screen, tap **Network & internet** > **Tethering & Mobile Hotspot** > **Mobile Hotspot** and then tap the  switch to toggle it ON or OFF.
2. Tap **Set up Mobile Hotspot**, and enter the Wi-Fi name (SSID) and password.

3. Turn on Wi-Fi on the other device, and select the name of the device network on the Wi-Fi list.
4. Enter your device's Mobile hotspot password on the target device.

- NOTES**
- 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>

**Set up Mobile Hotspot** Allows you to enter the SSID and security information for your mobile hotspot.

**Manage connections** Allows you to control which devices are allowed to use your device as a hotspot.

**Timeout** Allows you to set when to turn off your hotspot.

**Wi-Fi Sharing** When you activate this feature with the device connected via Wi-Fi, the shared devices are connected to the network by using the device's Wi-Fi. If this feature is deactivated, the mobile data features is used for network connection.

## CONNECTED DEVICES

Displays all connected devices.

- NOTE** Tap  **Options** to access mobile hotspot tips and help.

**USB tethering** Enable this option to allow you to connect via USB. This option is gray when not connected via USB.

**Bluetooth tethering** Enable this option to share the phone's Internet connection with other Bluetooth devices.

**Help** Displays help information regarding connecting other devices to your phone's Internet connection.

## Data usage

**Mobile data** Enable this option to allow connection to the mobile network. This switch allows you to manage your mobile data usage (e.g., disconnect from the mobile network to stop using mobile data and exclusively use a Wi-Fi network connection for data instead).

**Limit mobile data usage** Enable this option so you can set the amount of data that can be used during your cycle date. When that amount is reached, your mobile data network connection will be disabled.

**Alert me about data usage** Enable this option so you can set the amount of data usage that will trigger an alert.

**Cycle date** The date displayed is your current data usage cycle. Tap it to change it.

**Graph** Displays a visual of your data usage. Limit lines are displayed if the data usage switches are enabled.

**Apps list** All of the apps that use data are listed.

⋮ **Options** Accesses the Data usage options menu.

**Display in MB/GB** Changes the data usage units.

**Data Saver** Allows you to enable the **Data saver** option which restricts the data that runs in the background. You can set individual apps to have unrestricted data access when Data saver is enabled.

**Show Wi-Fi usage** Checkmark this option to display a **Wi-Fi** tab (in addition to the **Mobile** tab) to view your Wi-Fi data usage.

**Metered Wi-Fi networks** Allows you to select Wi-Fi networks to restrict apps that run in the background and be notified when downloading large files.

## Advanced Calling

You can make High-Definition Voice and Video Calls, and surf the web while talking on the phone when you add Advanced Calling to your line. Visit [verizonwireless.com/AdvancedCalling](http://verizonwireless.com/AdvancedCalling) to learn how.



## Mobile networks

Allows you to set various mobile network settings.

**Data roaming** Allows you to set when to allow data roaming.

**System select** Allows you to set your preferred network mode, as well as network submodes and operators.


**Network type and strength** Displays the current network type and the signal strength.

**Access Point Names** Allows you to set up APNs for data service.

**Roaming state** Displays your current roaming state.

## VPN

Allows you to set up VPNs (Virtual Private Networks). Choose **Basic VPN** or **LG VPN**.

**NOTE** Tap  Options from the LG VPN screen to access **Log**, **Settings**, **Import certificates**, **Delete all**, and **About**.

## Wireless Emergency Alerts

Allows you to view emergency alerts and customize your emergency alert settings.

## Private DNS

Allows you to use private DNS mode.




## Connected devices

### Bluetooth

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

#### Pairing with another device

You must pair your phone with a Bluetooth device before you connect to it.

1. On the home screen, tap  **Settings** > **Connected devices** > **Bluetooth**.
2. Tap  **Bluetooth ON/OFF** to turn Bluetooth on and search for the devices within your phone's range.
  - ▶ Available devices appear automatically.
  - ▶ To refresh the device list, tap .



**NOTE** Only devices set as visible are displayed on the list.

3. Choose the device you want to pair with from the list.
4. Follow the on-screen instructions to perform authentication.

**NOTE** This step is skipped for previously accessed devices.

Once pairing is successful, your phone will connect to the device.



#### Sending data via Bluetooth

1. Open the item you want to send, then tap  **Share**.  
OR  
Touch and hold the item you want to send, then select **Share**.  
OR  
Open the item you want to send, then tap  **Options** > **Share**.
2. Tap **Bluetooth** to share via Bluetooth.

**NOTE** The method for selecting an option may vary by data type.

3. Search for and pair with a Bluetooth-enabled device.

## Receiving data via Bluetooth

1. On the home screen, tap  **Settings** > **Connected devices** > **Bluetooth**.
2. Tap  **Bluetooth ON/OFF** to turn Bluetooth on
3. Tap **ACCEPT** when you receive a data request.

## Screen sharing

Allows you to project your phone's content on a compatible TV.

Tap  to toggle it On or Off.

**VELVET** Allows you to change your phone's name to easily identify it.

### AVAILABLE DEVICES

Displays all of the devices that can project your content via Miracast.

**Search** Refreshes the available devices list.

**Help** Displays information regarding how to use Miracast.

## NFC

Enable this option to allow you to send or receive files simply by bringing your phone and another data-compatible device together (typically within 20 mm of each other) at the NFC touch point. NFC (Near Field Communication) establishes radio communication between smartphones and similar devices. Tap NFC to manage its settings.

### NFC SECURITY ALERTS

**Show NFC security alerts** Enable this option to display a permission alert when another device tries to send you information via NFC.

### ALERTS TO SHOW

**Read** Enable this option to display a confirmation alert when receiving a contact or URL via NFC.

**Connection handover** Enable this option to display a confirmation alert when pairing devices via NFC.

## Sharing panel

Allows you to share contents with nearby devices or specific people.

### File sharing

Allows you to send and receive files between your device and other LG devices or tablets.

**VELVET** Allows you to change your phone's name for easy identification when setting up your devices for beaming.

**Save to** Allows you to set where to save your shared files.

**File sharing** Enable this option to make your device visible to BLE devices and exchange files.

**SmartShare Beam** Enable this option to receive multimedia content via SmartShare Beam from another LG phone or tablet.

**Help** Displays information regarding how to use file sharing.

### Media server

Allows you to share the phone's multimedia content with nearby DLNA-compatible devices.

**Content sharing** Enable this option to allow nearby devices to access your content.

#### YOUR PHONE

**VELVET** Allows you to change your phone's name to easily identify it.

**Content to share** Allows you to set the type of content you want to share between devices.

#### NEARBY DEVICES

**Allowed devices** Displays the nearby devices that can access your phone.

**Not-allowed devices** Displays the nearby devices that will be denied to access your phone.

## Printing

Allows you to set up wireless printer(s).

### PRINT SERVICES

Displays the list of your available print apps.

## Sound

### Sound profile

Allows you to set your device's sound profile to Sound, Vibrate only, or Silent.

### Volume

Allows you to set individual volume levels for ringtone, notifications, touch feedback, and other media.

### Ringtone

Allows you to set the ringtone for calls. You can also add and delete ringtones.

### Notification sound

Allows you to select a sound effect for new notifications. You can also add and delete notification sounds.

### Ring with vibration

Enable to set the device to vibrate in addition to the ringtone when you receive calls.

### Ringtone ID

Enable this option to allow you to set a unique ringtone for each caller.

### Flash alert for incoming call

Set the flash to blink according to LG ringtone.

### **Do not disturb**

Enable this option to allow you to set up and schedule when to prevent interruptions from notifications. You can set specific parameters that will override the option when set to Priority only.

### **Sound quality and effects**

Use the function to set the sound quality and effects while playing a song or video.

### **Vibration strength**

Allows you to set the vibration strength for calls, notifications, and touch feedback.

### **Vibration type**

Allows you to set the vibration pattern.

### **Vibrate on tap**

Enable this option to feel a vibration when you tap the Home touch buttons or app icons.

### **Dialing keypad sound**

Enable the keypad sound effect.

### **LG Keyboard sound**

Enable LG keyboard sound effect.

### **Touch sound**

Enable the sound effect to play when tapping an item.

### **Screen lock sound**

Enable the sound effect to play when the screen is locked or unlocked.

### **Sound when roaming**

Enable the sound effect to play when roaming.

### **Emergency tone**

Select the tone option for emergency alerts.

## Notifications

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

1. On the settings screen, tap **Notifications**.
2. Customize the settings as desired.

## Display

### Home screen

**Select Home** Allows you to set the layout for the Home screen. You can choose the standard Home layout that displays all apps on the Home screen, or a layout that stores all installed apps separately which allows you to selectively set app shortcuts on your Home with separate apps list, or EasyHome a simple layout with a large font size.

**Wallpaper** Select a desired screen wallpaper, theme and AOD option for your device.

**Screen swipe effect** Allows you to set the effect shown when you swipe to change screens.

**Icon shape** Allows you to choose the desired icon shapes on the Home screen.

**Google feed** Enable to display Google feed on the left screen of the Home screen panel.

**Sort apps by** Allows you to set how to sort apps on your Home screen (either alphabetically or by download date).

**Hide apps** Allows you to selectively hide apps from the Home screen.

**Loop Home screen** Enable to allow continuous Home screen scrolling (loop back to the first screen after the last screen).

**Swipe down on the Home screen** Allows you to display Integrated search or Notification panel on the Home screen panel.

**Swipe up on the Home screen** Allows you to display Integrated search on the Home screen panel.

**Home screen lock** Enable this option to prevent apps and widgets from being rearranged or removed.

**Help** Displays information regarding the Home screen items and functions.

### Navigation bar

Set the style of the navigation bar with Gestures or Buttons only. you can also change the button combination when you set Buttons only as a style of the navigation bar.

### Status bar

Set the color of the status bar on the top of the screen, or set the notification icon display and battery percentage display.

### AOD (always-on display)

Enable this option to always display information, such as the date, time and notifications, even when the screen is turned off.

### Comfort view

Enable this option to set a blue light filter to reduce eye strain. Once enabled, set the level to your preference.

### Night mode

You can apply a dimmed screen theme to avoid glare on the screen at night time.

### Screen color

Adjust the color, color temperature, or RGB values for the desired screen.

**NOTE** Tap  to reset the settings.

### Video Enhancer

Enable this option to set HDR effect while playing a video in full screen to make the color brighter and more vibrant.



## Font

**Size** Allows you to set the size of the font used for the phone software.

**Bold text** Enable this option to bold the text on the screen.

**TYPE** Allows you to set the font used for the phone software.

## Display size

Allows you to set the size for the items and text viewed on screens without dynamic zoom capability.

## Full screen apps

Adjust the screen size of downloaded apps.

## Brightness

Allows you to set the brightness for the screen or you can enable the automatic setting.

## Auto

Set the device so that the screen brightness is automatically adjusted in accordance with the ambient light intensity.


## Screen timeout

Allows you to set the amount of time before the screen times out due to inactivity to conserve your power.

## Auto-rotate screen

Enable this option to allow the screen to rotate automatically based on its orientation.

## Screen saver

Enable this option to display a screen saver when the device is connected to a holder or charger. Tap  **ON/OFF** and select a screen saver type to display.

## One-handed screen

Make the screen size smaller to conveniently use the device with one hand. To bring down the screen, drag the left/right edge to the middle and hold.

## Wallpaper & theme

Select a screen wallpaper, theme, and AOD option for your device.

## Lock screen & security

### SECURITY STATUS

#### Google Play Protect

Check the device periodically for potentially harmful apps.

#### Find My Device

Allows you to remotely track the device location. You can also save your data securely if you lose your device.

#### Security update

**Check for new system update** Allows you to check for any available updates for your phone.

**Automatic security updates** Allows you to install security updates automatically.

**Show system update history** Allows you to view your system update history.

**Use Software Upgrade Assistant** Displays information regarding how to use system updates.

**SYSTEM UPDATE STATUS** Displays your last update information.

**Select screen lock** Allows you to set a screen lock to secure your phone from unintentional and/or unauthorized use.

## Customize Lock screen

**Wallpaper** Allows you to set the background for your Lock screen.

**Clock** Allows you to set where to position the clock on the Lock screen.

**Shortcuts** Allows you to choose apps to run on your Lock screen. This setting appears only when a screen lock is set.

**Weather animation** Enable this option to display weather animations for the current location on the Lock screen.

**Contact info for lost phone** Allows you to set text to be displayed on the Lock screen to identify the phone's owner.

## Secure lock settings

**Make pattern visible** (shown only when Pattern is set as a screen lock): Turn on to make pattern visible.

**Lock timer** Allows you to set the amount of time before the screen automatically locks after the backlight turns off (time-out due to inactivity).

**Power key instantly locks** Enable this option to instantly lock the screen when the Power/Lock button is pressed. This setting overrides the Security Lock timer setting.

**Show lockdown option** (shown only when a screen lock is set): Enable this option to display the Lockdown icon when you press and hold the Power/Lock button. Tap the Lockdown icon to turn off Smart Lock, biometric unlocking, and notifications on the lock screen.

**Smart Lock** Allows you to set trusted devices, places, voice, and/or on-body detection that will allow your phone to remain unlocked.

**Fingerprints** Allows you to set up fingerprint impressions that will unlock your phone's screen, allow access to content, and/or allow you to pay using your device.

**NOTE** If your phone doesn't have a default payment app, go to Play Store and search for available payment apps.

**Content lock** Allows you to set a lock type (PIN or pattern) for your QuickMemo+ and Gallery files.

## Encryption & credentials

**Encrypt SD card** Allows you to encrypt or decrypt an external microSD card data. Encrypted data is not accessible on other devices.

**Credential protection** Displays the current storage type.

**Trusted credentials** Shows system root CA certificates and user added CA certificates.

**User credentials** Allows you to view and modify stored secure certificates.

**Install from storage** Allows you to install a secure certificate from storage.

**Clear credentials** Allows you to delete user added secure certificates and related credentials.

**Set up SIM card lock** Lock or unlock the USIM card, or change the password (PIN).

**Phone administrators** Allows you to view and selectively disable phone administrators.

**Trust agents** Allows you to view and selectively disable Trust agents.

**Screen pin** Allows you to selectively pin an app to your screen. Enable this option to be able to designate only a single app that can be used until you unpin it. This is helpful when allowing children to use your phone.

**Usage access** Allows you to enable or disable the apps that can view your phone's app usage.

## Privacy

### Permission manager

Allows you to check and change the permissions granted to the apps.

### Lock screen

Allows you to set notifications to show on the lock screen.

### 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.

### Device Personalisation Services


Allows you to get a suggestion based on users, apps, and interactive contents.

### Autofill service from Google

Enable this option to enter your information saved in your account such as password, address, or credit card number with a single tap. You can also disable this option, use the Google Autocomplete feature, or add a new service account.

### Google location history

Allows you to enable or disable Location History. When enabled, Google periodically stores and uses your phone's most recent location data in connection with your Google Account.

From the Location History screen, tap  **Options** to view and/or manage your location data.

### Activity controls

Select activities and information which you want Google to save.

### Ads

Allows you to check the advertising ID and set the personalized ads.

### Usage & diagnostics

Enable this option to help improve the Android experience by automatically sending diagnostic, device, and app usage data to Google.

## Location

Tap the switch at the top of its screen to toggle it On or Off. On enables sharing your location when you search for information and use location-based apps, such as Maps.

**Scanning** Allows you to enable Wi-Fi scanning and/or Bluetooth scanning even when those features are set to off.

**App-level permissions** Allows you to set permissions for each app.

### RECENT LOCATION REQUEST


Displays all of the apps that have requested access to your location. Tap one to view details.

### LOCATION SERVICES

**Emergency Location Service** Enable this option to allow you to using Google ELS when you contact an emergency number, if ELS is supported in your region.

**Google Location Accuracy** Enable this option to improve location accuracy.

**Google Location History** Allows you to enable or disable Location History. When enabled, Google periodically stores and uses your phone's most recent location data in connection with your Google Account.

From the Location History screen, tap  **Options** to view and/or manage your location data.

**Google Location Sharing** Allows you to share real-time locations (using Location History) with selected people and devices.


## Extensions

### Smart cleaning

Displays the space in use and free space in your phone and allows you to selectively clean up your files.

### Personalized service


You can get intelligent results when using the integrated search.

1. On the settings screen, tap **Extensions > Personalized service**.
2. Tap  **ON/OFF** to activate it.

### Gaming

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

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

**Game tools** Tap  **ON/OFF** to activate this feature. You can launch this feature by tapping the game tool icon at the bottom of the screen while playing games.

**Game graphics** Adjust the game resolutions.


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

**Break time** Allows you to set the screen brightness and performance to apply when you leave the device idle for longer than 5 minutes.



### Screen recording

You can configure the settings for screen recording.

1. On the settings screen, tap **Extensions > Screen recording**.
2. Customize the following settings:
  - ▶ **Include yourself in video by:** Select one from the following options.

- **Image:** Includes your profile image in video when recording. After selecting this, tap  **Select a photo** to take a photo or select a profile image from Gallery. Then, adjust the size of the image using the slide bar.
- **Front camera:** Includes yourself recorded using the front camera while recording the screen.
- **Never:** Nothing is included.
- ▶ **Audio source:** Choose the audio source between Mic and Contents.
- ▶ **Video resolution:** Select the resolution for screen recording.

#### To record the screen:

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

**NOTE** If you violate another person's rights such as portrait right or intellectual property right or defame another person's reputation by using the functions provided for the screen recording service, you may be held liable to civil, criminal or administrative charges in accordance with the relevant laws. LG Electronics is not legally responsible in any way for the acts of users.

## Dual App

You can use some apps with two accounts.

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



## Pen

You can configure options for using an Active pen (optional-sold separately). Please note that this device supports the Active Pen AES2.0 (Active Electrostatic).

1. On the settings screen, tap **Extensions > Pen**.
2. Customize the following settings:
  - ▶ **Pen key shortcuts**: Configure the shortcuts on each button on your Active pen.
  - ▶ **Pen Pop shortcut**: Select which apps (up to five) to display as a shortcut.
  - ▶ **Memo preview**: Enable this option to preview memos.
  - ▶ **Drawing sound**: Apply sound effects in drawing mode.
  - ▶ **Show pointer**: Enable this option to see a pen pointer over where the pen hovers.
  - ▶ **Ignore navigation bar gestures**: Block navigation bar gestures from being input, which is useful when drawing or writing on the edge of the screen with an Active pen.

## Shortcuts

You can customize the shortcut keys settings.

**Open Camera**: Press the Power key twice to open Camera.

**Open Screen-off memo**: Press the Volume Up key twice to open **Screen-off memo** when the screen is locked or off.

**Open Camera**: Press the Volume Down key twice to open **Camera** when the screen is locked or off.

**Open Google Assistant**: Press the Assistant key to launch Google Assistant at any time.

**Talk to Google Assistant**: Press and hold the Google Assistant key to quickly talk to your Assistant.

## **KnockON**

Enable this option to turn the screen on or off by tapping the screen twice.

## **Increase touch sensitivity**

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

## **Application manager**

Allows you to set notifications for individual apps including preventing them from displaying notifications, setting priority, hiding sensitive content, allowing peeking, and more.

## **Battery**

The current percentage of remaining battery power and the charging status (when charging) are displayed.

### **Battery usage**

Displays battery usage information including a graph and app usage details.

### **Optimized charging**

Adjust charging speed depending on your charging habits to prevent overheating and lengthen battery life.


### **Adaptive battery**

Allows you to save the battery by stopping apps running in the background.

### **Background restrictions**

Enable this option to restrict background apps to save the battery while using the device. Restricted apps for power saving may not work properly or may not send you notifications.

### **Battery saver**

Reduce battery consumption by cutting down some device settings, such as the display brightness, speed and vibration intensity. The status bar displays  when power saving mode is on.

## Power saving exclusions

Select apps to use without any functional limitation while in power saving or battery optimization mode.

## APP USAGE

Displays battery usage information for each app.

## Storage

### DEVICE

Displays the total amount of space used and the available space in your phone's memory in text and as a bar graph (unused space is gray). Tap **Internal storage** to see your apps and the amount of space they use.

### EXTERNAL

**SD card** Displays the amount of space used and the total available space in your memory card. Tap **SD card** to view the data stored on it.

 Allows you to eject (unmount) your microSD card.

To format the memory card, tap **SD card** > ⋮ **Options** > **Storage settings** > **Format**.

## Accounts

**Auto-sync accounts** Enable this option to automatically sync all accounts you've added on your phone.

### ACCOUNTS

Displays all of your added accounts. Tap one to view and/or manage (e.g., change details, access, sync settings, etc.) it.

**Add account** Allows you to add accounts to your phone.

## Digital Wellbeing & parental controls

You can get an overview of your device usage, set a timer for each app, and manage the screen time and notifications.

You can also set up parental controls.

On the settings screen, tap **Digital Wellbeing & parental controls** and set the desired function.

## Google

Allows you to manage your Google apps and account settings.

## System

The System category allows you to view and manage various system settings.

### Language & keyboard

**Language** Allows you to set a main language for your phone's operating software and also add other languages.

**Manage keyboards** Allows you to customize the LG keyboard settings or voice recognition feature by Google Voice.

**Physical keyboard** Allows you to set the physical keyboard, or check keyboard shortcut keys.

**Autofill service** Enable this option to enter your information saved in your account such as password, address, or credit card number with a single tap. You can also disable this option, use the Google Autocomplete feature, or add a new service account.

**Text-to-speech output** Allows you to set the preferred speech engine, speech rate, and pitch change. You can listen to an example and view the default language status.

**Pointer speed** Allows you to set the pointer speed on a slide bar.

**Reverse mouse buttons** Enable this option to reverse the mouse buttons to use the primary button on the right.

## Date & time

Enable the **Set automatically** option or tap **Set date** and/or **Set time** to use a date/time other than the one provided by the network. Tap **Select time zone** to use a time zone other than the one provided by the network.

**Use 24-hour format** Enable this option to display the time using the 24-hour format (e.g., 13:00 instead of 1:00 PM).

## Memory

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

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

## Backup

**LG Mobile Switch** Allows you to copy data from a previous device to a new device. You can transfer data using a USB cable, wireless network, and SD card.

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

**Backup & restore** Allows you to back up your data to internal storage or SD card. You can also restore your data from a previous backup.

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

**Google backup** You can choose to back up to your Google Drive.

### Restart & reset

**Auto-restart** Automatically restart to optimize the phone at a set time.

**Network settings reset** Reset Wi-Fi, Bluetooth and other network settings.

**Reset app preferences** Reset the settings for an app. The data saved in the app will not be deleted.

**Reset settings** Reset system settings back to default.

**Factory data reset** Reset all settings for the device and delete data.

### About phone

View information about your phone including **Phone name**, **Network**, **Status**, **Battery**, **Hardware info**, **Software info**, and **Legal info**.

### Regulatory & safety

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

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


## System updates


From time to time, updates may become available for your phone. You can download and apply updates through the Settings menu.

## Accessibility

### CATEGORIES

**Vision** Sets options for people with impaired sight.


**TalkBack** Enable this option to hear verbal feedback when you tap the screen. To select an item, tap it, then double-tap it. To scroll, use three fingers to swipe across the screen. Tap  **ON/OFF** to access and adjust the TalkBack settings.

**Message/call voice notifications** Enable this option to set your phone to automatically read your incoming calls and/or messages outloud. Tap  **ON/OFF** to modify your notification settings for **Calls, Messages, Read messages,** and **Message/call voice notifications language.**

**Font** Allows you to set the size and the type of the screen text.

**Display size** Allows you to set the size for displayed screen items (e.g., icons, text, etc.). Changing the size may affect the item's position on the screen.

**Touch zoom** Enable this option to allow you to triple-tap the screen to zoom in and out.

**Window zoom** Enable this option to activate a magnifying window. Use two fingers to drag it to other positions on the screen. When activated, you can zoom in or out within the window and set the window's color inversion. Tap  **ON/OFF** to view information and adjust its settings.

**Large mouse pointer** Enable this option to increase the size of the mouse pointer.

**High contrast screen** Enable this option to change the background color to black for a high contrast screen.

**Screen color inversion** Enable this option to invert the screen colors for higher contrast.


**Screen color adjustment** Enable this option to allow you to adjust the screen's hue and contrast. Tap  **ON/OFF** to adjust it.

**Monochrome** Enable this option to switch the screen to grayscale mode.

**End call with the Power key** Enable this option to use the Power/Lock button to end a call.

**Hearing** Sets options for people with impaired hearing.

**Live Caption** Set the device to detect the voice from the media and automatically generate subtitles.

**Caption preferences** Enable this option to allow your phone to display caption text. Tap  **ON/OFF** to access and adjust its settings.

**Flash alerts** Enable this option to enable the camera's flash to blink to notify you of incoming calls, messages, and alarms.

**TTY mode** A TTY (teletypewriter, also known as a TDD or Text Telephone) is a telecommunications device that allows people who are deaf, hard of hearing, or who have speech or language impairments, to communicate by telephone.

**RealTimeText (RTT) keyboard** Enable this option to show RTT keyboard during calls.

**Mute all sounds** Enable this option to silence all phone sounds and lower the volume from the earpiece.

**Audio channel** Allows you to set the audio type.

**Sound balance** Move the slider on the bar to set the sound balance between the left and right channel.

**Dexterity and interaction** Sets options for people with impaired motor skills.

## DEXTERITY

**Touch assistant** Turn on the touch board to make buttons and gestures easier to use.


**Touch input** Set the desired delay time for touching and holding, or adjust the touch input to ignore repeated taps.

**Touch and hold delay** Allows you to set how long you need to touch an item before the device reacts.

**Ignore repeated taps** Allows you to set how the device interprets your tap action.



**Physical keyboard** Allows you to customize specified key settings.

**Key repeat** Enable this option to set how the device reacts when a key is held. Tap  ON/OFF to set **Delay before repeat** and **Key repeat interval**.

**Sticky keys** Enable this option to allow you to press modifier keys without having to press and hold.

**Sticky keys shortcut** Enable this option to enable the Shift button as a shortcut to Sticky keys.

**Slow keys** Enable this option to set a delay time before input is displayed.

**Auto mouse click** Enable this option to automatically activate the cursor where the pointer stops. Tap  ON/OFF to set its delay time.

**Touch and hold for calls** Enable this option to allow you to touch and hold the Answer or Ignore icon on the Incoming call screen (instead of swiping).

**Screen timeout** Allows you to set the amount of time before the backlight turns off automatically.

## INTERACTION

**Touch control areas** Enable this option to allow you to restrict access to a specified portion of the screen.

## GENERAL

**Accessibility features shortcut** Enable this option to allow quick, easy access to selected features when you press the Power key and the Volume Up key simultaneously. Tap  ON/OFF to select the desired features.

**Auto-rotate screen** Enable this option to automatically rotate the screen based on the phone's orientation.

## SERVICES

**Select to Speak** Allows you to tap items to hear spoken feedback.

**Switch Access** Tap the switch at the top of its screen to toggle it ON or OFF. On allows you to use the switch for selected features. Tap **OK**, then tap **SETTINGS** to set it up.

**Digital Secure** Tap the switch at the top of its screen to toggle it On or Off. On allows you to enable Security & privacy to observe the apps your device uses to protect against web threats.

**My Verizon Guided Navigation** When Assistive touch service is active, your device provides access to read the elements displayed on the screen. This is used by the My Verizon app to provide assistive tutorials to navigate.

## User guide

You can view the User guide on your device.

## Phone software update

### LG Mobile phone software update from the Internet

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

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

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

**NOTE**

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

## Anti-Theft Guide

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

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

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

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

**NOTE**

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

## Open Source Software Notice Information

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

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

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

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

## Regulatory Information (FCC ID number, etc.)

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

## Trademarks

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- Bluetooth® is a registered trademark of Bluetooth SIG, Inc. worldwide.
- Wi-Fi® and the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance.
- All other trademarks and copyrights are the property of their respective owners.



## Laser Safety Statement

### FDA Notice

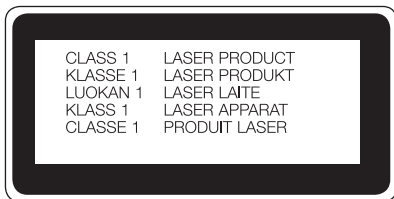
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

### Caution!

This product employs a laser system. To ensure proper use of this product, please read this owner's manual carefully and retain for future reference. Should the unit require maintenance, contact the LG Authorized Service Center.

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

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



## More information

### Tempered glass parts

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

- ▶ If you drop your device on a hard surface or subject it to severe impact, the tempered glass may be damaged. If this happens, stop using your device immediately and contact the LG Authorized Service Center.
- ▶ You can purchase protective cases to protect your device from damage. Note that these protective cases are not covered under the warranty service provided by LG Electronics and safety is not guaranteed.

## Guide to data movement

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

Division	Item details	LG device → LG device	Third party Android device → LG device	iOS device → LG device
Personal data	Contacts, messages, dial logs, calendar, voice recordings	Supported	Supported	Supported
	Memos	Supported	Not Supported	Supported
	Alarms	Supported	Not Supported	Not Supported
Media data	Photos, videos, songs, documents	Supported	Supported	Supported
Screen settings	Home screen settings (folders and widgets)	Supported	Not Supported	Not Supported
	Lock screen settings (screenlock settings excluded)	Supported	Not Supported	Not Supported
Apps	Downloaded apps	Supported	Supported	-
	Personal data of the downloaded app	Supported	Not Supported	
Others	Public certificate	Supported	Supported	Not Supported
	Settings (Wi-Fi, Bluetooth, Calls, sound & notification, accessibility, battery)	Supported	Not Supported	Not Supported

### NOTE

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

## Safety Information

### Important Information

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

### 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 questions 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 Federal Communications Commission (FCC) of the United States, with its action in Report and Order FCC 96-326, adopted an updated safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this device complies with the FCC guidelines and these international standards.



## Body-worn Operation

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

## Consumer Information about Radio Frequency Emissions

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

### Are wireless devices safe?

Scientific research on the subject of wireless devices and radio frequency ("RF") energy has been conducted worldwide for many years, and continues. In the United States, the Food and Drug Administration ("FDA") and the Federal Communications Commission ("FCC") set policies and procedures for wireless devices. The FDA issued a website publication on health issues related to cell phone usage where it states, "The scientific community at large... believes that the weight of scientific evidence does not show an association between exposure to radiofrequency (RF) from cell phones and adverse health outcomes. Still the scientific community does recommend conducting additional research to address gaps in knowledge." That research is being conducted around the world and FDA continues to monitor developments in this field. You can access the joint FDA/FCC website at <http://www.fda.gov> (under "c" in the subject index, select Cell Phones > Research). You can also contact the FDA toll-free at (888) 463-6332 or (888) INFO-FDA.

In June 2000, the FDA entered into a cooperative research and development agreement through which additional scientific research is being conducted. The FCC issued its own website publication stating that “there is no scientific evidence that proves that wireless device usage can lead to cancer or a variety of other problems, including headaches, dizziness or memory loss.” This publication is available at <http://www.fcc.gov/cgb/cellular.html> or through the FCC at (888) 225-5322 or (888) CALL-FCC.

### **What does “SAR” mean?**

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

Although the SAR is determined at the highest power level, the actual SAR value of a wireless device while operating can be less than the reported SAR value. This is because the SAR value may vary from call to call, depending on factors such as proximity to a cell site, the proximity of the device to the body while in use, and the use of hands-free devices.

For more information about SARs, visit the FCC website at <https://www.fcc.gov/consumers/guides/specific-absorption-rate-sar-cell-phones-what-it-means-you>. You may also wish to contact the manufacturer of your device.

## Can I minimize my RF exposure?

If you are concerned about RF, there are several simple steps you can take to minimize your RF exposure. You can, of course, reduce your talk time. You can place more distance between your body and the source of the RF, as the exposure level drops off dramatically with distance. The FDA/FCC website states that “hands-free kits can be used with wireless devices for convenience and comfort. These systems reduce the absorption of RF energy in the head because the device, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the device is mounted against the waist or other part of the body during use, then that part of the body will absorb more RF energy. Wireless devices marketed in the U.S. are required to meet safety requirements regardless of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.” Also, if you use your wireless device while in a car, you can use a device with an antenna on the outside of the vehicle. You should also read and follow your wireless device manufacturer’s instructions for the safe operation of your device.

## Do wireless devices pose any special risks to children?

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

**Where can I get further information about RF emissions?**

**U.S. Food and Drug Administration**

<http://www.fda.gov>

**U.S. Federal Communications Commission**

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

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

[http://www.rsc.ca/index.php?page=Expert\\_Panels\\_RF&Lang\\_id=120](http://www.rsc.ca/index.php?page=Expert_Panels_RF&Lang_id=120)

**World Health Organization**

<http://www.who.int/mediacentre/factsheets/fs193/en/>

**International Commission on Non-Ionizing Radiation Protection**

<https://www.icnirp.org>

**American National Standards Institute**

<http://www.ansi.org>

**National Council on Radiation Protection and Measurements**

<http://www.ncrponline.org>

**Engineering in Medicine and Biology Society, Committee on Man and Radiation (COMAR) of the Institute of Electrical and Electronics Engineers**

<http://ewh.ieee.org/soc/embs/comar/>

(websites current as of November 2018)

## Consumer Information on SAR

### (Specific Absorption Rate)

This model device meets the government's requirements for exposure to radio waves. Your wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to Radio Frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions specified by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Because the device is designed to operate at multiple power levels to use only the power required to reach the network, in general, the closer you are to a wireless base station antenna, the lower the power output. Before a device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model.

While there may be differences between SAR levels of various devices and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF emission guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID ZNFG900VM.

Additionally, the highest SAR values can also be found on the LG website: <https://www.lg.com/global/support/sar/sar>

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

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

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

On July 10, 2003, the U.S. Federal Communications Commission (FCC) Report and Order in WT Docket 01-309 modified the exception of wireless devices under the Hearing Aid Compatibility Act of 1988 (HAC Act) to require 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.

While some wireless devices are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, 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. Not 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 user's 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 FCC requirements 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 FCC requirements 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. Your 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 equal M5. This should provide the hearing aid user with "normal usage" while using their hearing aid with the particular wireless device. "Normal usage" in this context is defined as a signal quality that's acceptable for normal operation.

The M mark is intended to be synonymous with the U mark. The T mark is intended to be synonymous with the UT mark. The M and T marks are recommended by the Alliance for Telecommunications Industries Solutions (ATIS). The U and UT marks are referenced in Section 20.19 of the FCC Rules. The HAC rating and measurement procedure are described in the American National Standards Institute (ANSI) C63.19 standard.

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

**For information about hearing aids and digital wireless devices:**

**Wireless Devices and Hearing Aid Accessibility**

<http://www.accesswireless.org/>

**Gallaudet University, RERC**

<http://tap.gallaudet.edu/Voice/>

**FCC Hearing Aid Compatibility and Volume Control**

<https://www.fcc.gov/general/hearing-aid-compatibility-and-volume-control>

**The Hearing Aid Compatibility FCC Order**

[http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-03-168A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-168A1.pdf)

**Hearing Loss Association of America [HLAA]**

<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 noise-induced hearing loss. This includes the use of headphones (including headsets, earbuds and Bluetooth or other wireless devices). Exposure to very loud sound has also been associated in some studies with tinnitus (a ringing in the ear), hypersensitivity to sound and distorted hearing. Individual susceptibility to noise-induced hearing loss and other potential hearing problems varies.

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

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

## **TIA Safety Information**

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

### **Exposure to Radio Frequency Signal**

Your wireless handheld portable device is a low power radio transmitter and receiver. When ON, it receives and sends out Radio Frequency (RF) signals.

In August, 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless devices.

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

ANSI C95.1 (1992) \*

NCRP Report 86 (1986)

ICNIRP (1996)

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

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

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

### **Electronic Devices**

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

## **Pacemakers**

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

Persons with pacemakers:

- Should ALWAYS keep the device more than six (6) inches from their pacemaker when the device is turned ON;
- Should not carry the device in a breast pocket;
- Should use the ear opposite the pacemaker to minimize the potential for interference;
- Should turn the device OFF immediately if there is any reason to suspect that interference is taking place.

## **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 adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

## **Health Care Facilities**

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

## **Vehicles**

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

## **Posted Facilities**

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

## **Aircraft**

FCC regulations prohibit using your device while in the air. Switch OFF your device before boarding an aircraft.

## **Blasting Areas**

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

## **Potentially Explosive Atmosphere**

Turn your device OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Areas with a potentially explosive atmosphere are often, but not always marked clearly. Potential areas may include: fueling areas (such as gasoline stations); below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles (such as grain, dust, or metal powders); and any other area where you would normally be advised to turn off your vehicle engine.

## **For Vehicles Equipped with an Air Bag**

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

## Part 15.19 Statement

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

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

## Part 15.21 Statement

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

## Part 15.105 Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

## Safety Information

Please read and observe the following information for safe and proper use of your device and to prevent damage.

### **Caution**

**Violation of the instructions may cause minor or serious damage to the product.**

- Do not disassemble, open, crush, bend or deform, puncture or shred the device.
- Do not modify or re-manufacture the device. Do not insert foreign objects into the device or battery, or expose to fire, explosion or other hazard.
- Only use the device with an LG charging system that has been qualified with the device, per CTIA Certification Requirements for Battery System Compliance to IEEE1725. Use of an unqualified charger may present a risk of fire, explosion, leakage, or other hazard.
- Avoid dropping the device. If the device is dropped, especially on a hard surface, and you suspect damage, contact the LG Authorized Service Center for inspection.
- The entire device should be recycled in compliance with Lithium-Ion battery recycling standards because of the internal battery. To dispose of properly, call (800) 822-8837 or visit [www.call2recycle.org](http://www.call2recycle.org).
- Always unplug the charger from the wall socket after the device is fully charged to save unnecessary power consumption.
- Use and store your device in temperatures between 0 °C/32 °F and 35 °C/95 °F, if possible. Exposing your device to extremely low or high temperatures may result in damage, malfunction, or even explosion.
- A mobile device requires proper air circulation in order to dissipate heat. Direct skin contact and inadequate circulation of air flow to the device may cause the device to overheat. The device must be at least 1.0 cm from between the user's body.

- Prevent dust of any other foreign substances from getting into the Charger/USB cable port. It may cause heat or fire.
- Avoid exposing the device to low air pressure at high altitude.
- Do not expose the device to extremely low air pressure. Otherwise, it can cause explosion of the battery or leakage of flammable liquid or gas.

### **Charger and Adapter Safety**

- The charger and adapter are intended for indoor use only.
- Insert the battery charger vertically into the wall power socket.
- Only use the LG-approved battery charger. Otherwise, you may cause serious damage to your device.
- Use the correct adapter for your device when using the battery charger abroad.
- A charging adapter that supports fast charging is included with the product.
- Do not use third party chargers with your device as they may not support fast charging and may cause damage to your device.

### **Wireless Charging**

- This product supports wireless charging. Use a WPC (Qi) certified wireless charger (sold separately) to charge the product.
- Some coiled wireless chargers may not support wireless charging. Wireless chargers that support EPP (Extended Power Profile) allow high-speed wireless charging.

### **Battery Information and Care**

- Always unplug the charger from the wall socket after the device is fully charged to save unnecessary power consumption of the charger.
- Please read the manual of the specified charger for information about its charging method.
- Do not damage the power cord by bending, twisting, or heating. Do not use the plug if it is loose as it may cause electric shock or fire.

- Do not place any heavy items on the power cord. Do not allow the power cord to be crimped as it may cause electric shock or fire.
- Unplug the power cord prior to cleaning your device, and wipe the power plug pin with a clean dry cloth when it's dirty. When using the power plug, ensure that it's firmly connected. If not, it may cause excessive heat or fire. If you put your device in a pocket or bag without covering the receptacle of the device (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the device. Always cover the receptacle when not in use.
- Recharge the device after long periods of non-use to maximize battery life. Battery life will vary due to usage pattern and environmental conditions.
- Improper handling of the charging port, as well as the use of an incompatible charger, may cause damage or defect to your device.
- Do not use or leave the device in direct sunlight or in a car heated by sunshine. The device may generate excessive heat, smoke, or flame. It also might cause deterioration of device's characteristics or cycle life.
- If the skin or clothes are smeared with liquid from the battery, wash with fresh water. It may cause skin inflammation.
- Please contact the LG Authorized Service Center immediately if this occurs.
- Do not handle the device with wet hands while it is being charged. It may cause an electric shock or seriously damage your device.
- Do not charge while the device or charging cable is wet or contains moisture. This can cause fire, electric shock, injury or damage to the device.
- Do not place or answer calls while charging the device as it may short-circuit the device and/or cause electric shock or fire.



**WARNING! Notice for Battery Replacement**

- Do not remove the back cover.
- Your device has an internal battery. For your safety, do not remove the battery incorporated in the product. If you need to replace the battery, contact the LG Authorized Service Center or dealer for assistance.
- The Li-Ion Battery is a hazardous component which can cause injury.
- Battery replacement by a non-qualified professional can cause damage to your device.

**Explosion, Shock, and Fire Hazards**

- Do not put your device in a place subject to excessive dust and keep the minimum required distance between the power cord and heat sources.
- Unplug the power cord prior to cleaning your device, and clean the power plug pin when it's dirty.
- When using the power plug, ensure that it's firmly connected. If not, it may cause excessive heat or fire.
- If you put your device in a pocket or bag without covering the receptacle of the device (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the device and may cause an explosion. Always cover the receptacle when not in use.
- Do not charge while the device or charging cable is wet or contains moisture. This can cause fire, electric shock, injury or damage to the device.

## General Notice

- Do not place items containing magnetic components such as a credit card, phone card, bank book, or subway ticket near your device. The magnetism of the device may damage the data stored in the magnetic strip.
- Talking on your device for a long period of time may reduce call quality due to heat generated during use.
- When the device is not used for a long period time, store it in a safe place with the power cord unplugged.
- Using the device in proximity to receiving equipment (i.e., TV or radio) may cause interference to the device.
- Conform device use to IP68 capabilities. Do not immerse in water deeper than approximately 1.5 meters. Do not immerse your product in water for longer than 30 minutes, or liquids other than water. Immediately, contact the LG Authorized Service Center.
- Do not paint your device.
- The data saved in your device might be deleted due to careless use, repair of the device, or upgrade of the software. Please backup your important phone numbers. (Ringtones, text messages, voice messages, pictures, and videos could also be deleted.) The manufacturer is not liable for damage due to the loss of data.
- When you use the device in public places, set the ringtone to vibration so you don't disturb others.
- Do not turn your device on or off when putting it to your ear.
- Use accessories, such as earphones and headsets, with caution. Ensure that cables are tucked away safely.

## FDA Consumer Update



The U.S. Food and Drug Administration's Center for Devices and Radiological Health Consumer Update on Mobile Phones:

### 1. Do wireless devices pose a health hazard?

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

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

Under the law, the FDA does not review the safety of radiation-emitting consumer products such as wireless devices before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless devices are shown to emit Radio Frequency (RF) energy at a level that is hazardous to the user. In such a case, the FDA could require the manufacturers of wireless devices to notify users of the health hazard and to repair, replace, or recall the devices so that the hazard no longer exists. Although the existing scientific data do not justify FDA regulatory actions, the FDA has urged the wireless device industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless devices;
- Design wireless devices in a way that minimizes any RF exposure to the user that is not necessary for device function; and

- Cooperate in providing users of wireless devices with the best possible information on possible effects of wireless device use on human health.

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

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

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

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

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

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

The term “wireless device” refers here to handheld wireless devices with built-in antennas, often called “cell,” “mobile,” or “PCS” devices. These types of wireless devices can expose the user to measurable Radio Frequency (RF) energy because of the short distance between the device and the user’s head.

These RF exposures are limited by FCC safety guidelines that were developed with the advice of the FDA and other federal health and safety agencies. When the device is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless devices," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.

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

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of Radio Frequency (RF) energy exposures characteristic of wireless devices have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless devices, so we do not know with certainty what the results of such studies mean for human health. Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless devices and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless device RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of device use in these studies was around three years.

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

A combination of laboratory studies and epidemiological studies of people actually using wireless devices would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but ten or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop — if they do — may be many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless devices. Many factors affect this measurement, such as the angle at which the device is held, or which model of device is used.

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

The FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to Radio Frequency (RF) energy.

The FDA has been a leading participant in the World Health Organization International Electro Magnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The project has also helped develop a series of public information documents on EMF issues.

The FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research And Development Agreement (CRADA) to do research on wireless device safety. The FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through

contracts with independent investigators. The initial research will include both laboratory studies and studies of wireless device users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

### **7. How can I find out how much Radio Frequency energy exposure I can get by using my wireless device?**

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

### **8. What has the FDA done to measure the Radio Frequency energy coming from wireless devices?**

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the Radio Frequency (RF) energy exposure from wireless devices and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, "Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless device users. The test method uses a tissue-simulating model of the human head.

Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same device. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless device complies with safety guidelines.

### **9. What steps can I take to reduce my exposure to Radio Frequency energy from my wireless device?**

If there is a risk from these products — and at this point we do not know that there is — it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to Radio Frequency (RF) energy. Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless device will reduce RF exposure. If you must conduct extended conversations by wireless device every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless device away from your body or use a wireless device connected to a remote antenna. Again, the scientific data does not demonstrate that wireless devices are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless device use.

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

The scientific evidence does not show a danger to users of wireless devices, including children and teenagers. If you want to take steps to lower exposure to Radio Frequency (RF) energy, the measures described above would apply to children and teenagers using wireless devices. Reducing the time of wireless device use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless devices at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000.



They noted that no evidence exists that using a wireless device causes brain tumors or other ill effects. Their recommendation to limit wireless device use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

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

Radio Frequency (RF) energy from wireless devices can interact with some electronic devices. For this reason, the FDA helped develop a detailed test method to measure Electro Magnetic Interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by the FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless device EMI.

The FDA has tested hearing aids for interference from handheld wireless devices and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless devices so that no interference occurs when a person uses a “compatible” device and a “compatible” hearing aid at the same time. This standard was approved by the IEEE in 2000.

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

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

For additional information, please refer to the following resources:

FDA web page on wireless devices

[http://www.fda.gov/Radiation-EmittingProducts/  
RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/  
CellPhones/default.htm](http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/default.htm)

Federal Communications Commission (FCC) RF Safety Program

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

International Commission on Non-Ionizing Radiation Protection

<https://www.icnirp.org>

World Health Organization (WHO) International EMF Project

<http://www.who.int/emf>

National Radiological Protection Board (UK)

<http://www.hpa.org.uk/radiation/>

## **Driving**

Check the laws and regulations on the use of wireless devices in the areas where you drive and always obey them. Also, if using your device while driving, please observe the following:

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

## **10 Driver Safety Tips**

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

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

1. Get to know your wireless device and its features, such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most devices offer, including automatic redial and memory. Also, work to memorize the device keypad so you can use the speed dial function without taking your attention off the road.
2. When available, use a hands-free device. A number of hands-free wireless device accessories are readily available today. Whether you choose an installed mounted device for your wireless device or a speaker phone accessory, take advantage of these devices if available to you.
3. Make sure you place your wireless device within easy reach and where you can reach it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voicemail answer it for you.
4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow, and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.
5. Don't take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to-do" list while driving a car, you are not watching where you are going. It is common sense. Do not get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light, or otherwise stationary. But if you need to dial while driving, follow this simple tip – dial only a few numbers, check the road and your mirrors, then continue.
7. Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix; they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.

8. Use your wireless device to call for help. Your wireless device is one of the greatest tools you can own to protect yourself and your family in dangerous situations – with your device at your side, help is only three numbers away. Dial 911 or another local emergency number in the case of fire, traffic accident, road hazard, or medical emergency. Remember, it's a free call on your wireless device!
9. Use your wireless device to help others in emergencies. Your wireless device provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 911 or another local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special wireless non-emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you can still use your wireless device to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

The above tips are meant as general guidelines. Before deciding to use your mobile device while operating a vehicle, it is recommended that you consult your applicable jurisdiction's local laws or other regulations regarding such use. Such laws or other regulations may prohibit or otherwise restrict the manner in which a driver may use his or her device while operating a vehicle.

## DECLARATION OF CONFORMITY

Hereby, **LG Electronics** declares that this **LM-G900VM** product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the Declaration of Conformity can be found at <http://www.lg.com/global/declaration>

### Exposure to radio frequency energy

Radio wave exposure and Specific Absorption Rate (SAR) information.

This mobile phone model LM-G900VM has been designed to comply with applicable safety requirements for exposure to radio waves. These requirements are based on scientific guidelines that include safety margins designed to assure the safety of all persons, regardless of age and health.

- ▶ The radio wave exposure guidelines employ a unit of measurement known as the Specific Absorption Rate (SAR). Tests for SAR are conducted using standardized methods with the phone transmitting at its highest certified power level in all used frequency bands.
- ▶ While there may be differences between the SAR levels of various LG phone models, they're all designed to meet the relevant guidelines for exposure to radio waves.
- ▶ The SAR limit recommended by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) is 2 W/kg averaged over 10g of tissue.
- ▶ The highest SAR value for this model phone tested for use at the ear is: 0.447 W/Kg (10g) and when worn on the body is 1.484 W/kg (10g).
- ▶ This device meets RF exposure guidelines when used either in the normal use position against the ear or when positioned at least 0.5 cm away from the body. When a carry case, belt clip or holder is used for bodyworn operation, it shouldn't contain metal and should position the product at least 0.5 cm away from your body. In order to transmit data files or messages, this device requires a quality connection to the network. In some cases, transmission of data files or messages may be delayed until such a connection is available. Ensure the above separation distance instructions are followed until the transmission is completed.

## Cautions

- ▶ The user interface of Google apps (Google Search, Google Maps, Navigation, etc.) can vary depending on its software version.
- ▶ Locations are inaccurate when GPS and Wi-Fi are not set.
- ▶ With the Android operating system, some available Play Store apps only operate correctly with phones that have a specific screen resolution. Please be advised that some of the apps on Play Store may not be available for your phone due to an LCD resolution requirement that doesn't match your phone. In addition, please be aware that third party apps with programming defects may cause issues with your phone, including lock ups and resets.
- ▶ All of the phone's contents, including content which you create or download, will be deleted after a Factory Reset.



- ▶ Use your phone in temperatures between 0°C and 35°C, if possible. Exposing your phone to extremely low or high temperatures may result in damage, malfunction, or even explosion.
- ▶ Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

### - 5GHz WiFi Device

"The use of the 5150 – 5350 MHz band is restricted to indoor use only."

	AT	BE	BG	CH	CY	CZ	DE	DK	EE	EL	ES	FI	FR
	HR	HU	IE	IS	IT	LI	LT	LU	LV	MT	NL	NO	PL
	PT	RO	SE	SI	SK	UK	AL	ME	RS	MK	TR	BA	XK



To prevent possible hearing damage, don't listen at high volume levels for long periods.

- ▶ Excessive sound pressure from earphones and headphones can cause hearing loss.

## Limited Warranty – USA

ARBITRATION NOTICE: THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REQUIRES YOU AND LG (as defined hereinafter in the Definitions) TO RESOLVE DISPUTES BY BINDING ARBITRATION INSTEAD OF IN COURT, UNLESS YOU CHOOSE TO OPT OUT. IN ARBITRATION, CLASS ACTIONS AND JURY TRIALS ARE NOT PERMITTED. PLEASE SEE THE SECTION TITLED “PROCEDURE FOR RESOLVING DISPUTES” BELOW.

Should your LG Mobile Phone (“Product”) fail due to a defect in materials or workmanship under normal and proper use, during the warranty period set forth below, LG 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 United States including U.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 Labor (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 LG.

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 required to obtain warranty service.

LG 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 LG to avoid permanent loss of such information

You shall bear the cost of shipping the Product to LG Customer Service. LG 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 beyond IP68 tested use, unauthorized modifications/connection/repair, misuse, neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of LG, including damage or defects of the Product caused by shipping, blown fuses, spills of food or liquid.
- (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 owner's manual.
- (6) That LG 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", "With all Faults" 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 LG.
- (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.

Or visit our website at <http://www.lg.com>.

Or by mail: LG Electronics Customer Service P.O. Box 240007 Huntsville, AL 35813 ATTN: 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:**

ALL DISPUTES BETWEEN YOU AND LG ARISING OUT OF OR RELATING IN ANY WAY TO THIS LIMITED WARRANTY OR THE PRODUCT SHALL BE RESOLVED EXCLUSIVELY THROUGH BINDING ARBITRATION, AND NOT IN A COURT OF GENERAL JURISDICTION. BINDING ARBITRATION MEANS THAT YOU AND LG ARE EACH WAIVING THE RIGHT TO A JURY TRIAL AND TO BRING OR PARTICIPATE IN A CLASS ACTION.

Definitions. For the purposes of this section, references to “LG” mean LG Electronics U.S.A., 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 equitable theory) arising out of or relating in any way to the sale, condition or performance of the product or this Limited Warranty.

Notice of Dispute. In the event you intend to commence an arbitration proceeding, you must first notify LG in writing at least 30 days in advance of initiating the arbitration by sending a letter to LG at LG Electronics U.S.A., Inc. Attn: Legal Department- Arbitration 111 Sylvan Avenue, North Building, Englewood Cliffs, NJ 07632. You and LG 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 subject of the claim; and describe the nature of the claim and the relief being sought. If you and LG 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 Waiver. Upon failure to resolve the dispute during the 30 day period after sending written notice to LG, you and LG 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 LG shall not be combined or consolidated with a dispute involving any other person's or entity's product or claim. More specifically, without limitation of the foregoing, any dispute between you and LG 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 LG 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 AAA's 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.adr.org/consumer](http://www.adr.org/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. You must also send a copy of your written demand to LG at LG Electronics, U.S.A., Inc. Attn: Legal Department-Arbitration 111 Sylvan Avenue, North Building, Englewood Cliffs, NJ 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 Federal Arbitration Act. Judgment may be entered on the arbitrator's award in any court of competent jurisdiction. 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.

Governing Law. The law of the state of your residence shall govern this Limited Warranty and any disputes between us except to the extent that such law is preempted by or inconsistent with applicable federal law.

Fees/Costs. You do not need to pay any fee to begin an arbitration. Upon receipt of your written demand for arbitration, LG 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, LG 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, LG 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. Notwithstanding 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 Federal 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 LG for all monies previously disbursed by it that are otherwise your obligation to pay under the AAA Rules. Except as otherwise provided for, LG waives any rights it may have to seek attorneys' fees and expenses from you if LG prevails in the arbitration.

Hearings and Location. 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 judicial district in which you reside unless we both agree to another location or we agree to a telephonic arbitration.

Opt Out. You may opt out of this dispute resolution procedure. If you opt out, neither you nor LG can require the other to participate in an arbitration proceeding. To opt out, you must send notice to LG no later than 30 calendar days from the date of the first consumer purchaser's purchase of the product by either: (i) sending an e-mail to [optout@lge.com](mailto:optout@lge.com), with the subject line: "Arbitration Opt Out" or (ii) calling 1-800-980-

2973. You 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 Number, as applicable (the IMEI or MEID or Serial Number 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**).

You 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. Opting out of this dispute resolution procedure will not affect the coverage of the Limited Warranty in any way, and you will continue to enjoy the full benefits of the Limited Warranty. If you keep this product and do not opt out, then you accept all terms and conditions of the arbitration provision described above.