

User guide.

LM-X210VPP

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Before you begin using your new phone

Included in the box with your phone are separate information leaflets. These leaflets provide you with important information regarding your new device. Please read all of the information provided. This information will help you to get the most out of your phone, reduce the risk of injury, avoid damage to your device, and make you aware of legal regulations regarding the use of this device.

It's important to review the Product Safety and Warranty Information guide before you begin using your new phone. Please follow all of the product safety and operating instructions and retain them for future reference. Observe all warnings to reduce the risk of injury, damage, and legal liabilities.



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Multi-tasking feature

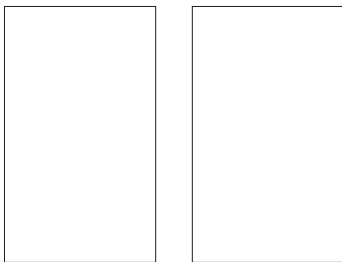
Multi window

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



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

You can also access this feature doing the following:

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





NOTES

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

Overview screen



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

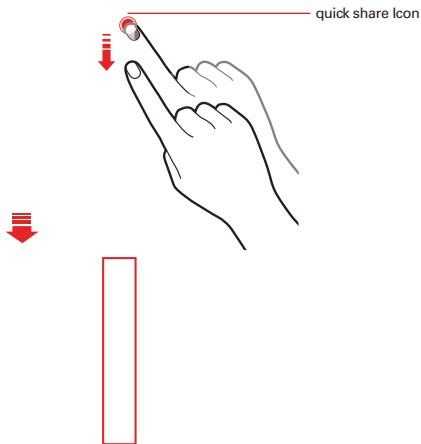
To view the list of recently used apps, tap  **Recent apps** on the Home touch buttons, then tap the displayed app.

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

quick share

You can share a photo or video using a desired app immediately after taking it.

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



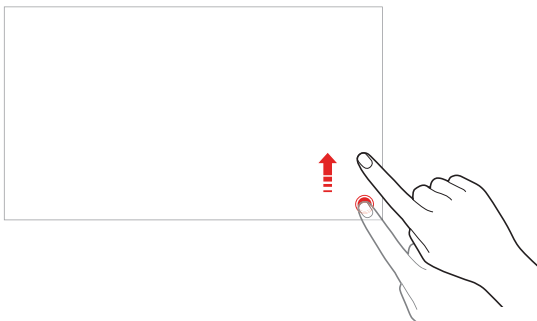
- NOTES**
- The app displayed by the quick share icon may vary, depending on the type and frequency of access to the apps installed on the device.
 - This feature is available only in specific modes.

Gallery features

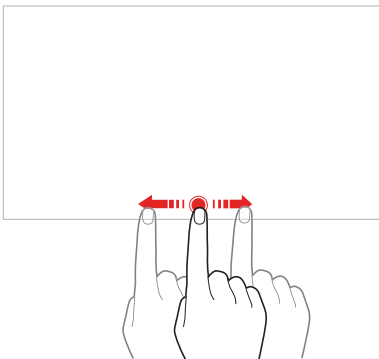
Floating button

You can use the floating button at the lower part of the Gallery app screen in landscape mode.

- ▶ After dragging **◀ Back** upwards, release it when you reach **⊙ Home** to return to the Home screen.






- ▶ You can drag **◀ Back** to the left or right to move the floating button as desired.




Creating a movie


You can create a new video by putting images and videos together.

1. Tap  Home >  Gallery, select an album, and then tap  Options > Create movie.
2. Select images or videos for your movie and then tap NEXT.
3. Edit the selected images and videos and then tap SAVE.

Deleting files

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


Adding files

Tap  Add at the bottom of the screen and select images or videos to add. You can also select the images or videos you have previously added.


Rearranging files

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


Adding movie effects

Tap  Library to add a theme or background music, change the font, and add a title and author.

Resetting the movie edits

You can reset the edits made to the movie (e.g. play time, theme, background music and font) by tapping  **Revert**.


Previewing a file

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

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


Making a GIF file

You can easily create a GIF using previously recorded video.

1. At the desired starting point while watching a video, tap  **Create GIF**.
2. Select the length of the GIF you want to create, if necessary.
 - ▶ The GIF file is generated for the time selected from the current time.
 - ▶ For videos less than 5 seconds, GIF images are automatically generated for the remaining time.

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

You can also create a GIF file from the Gallery.

1. While viewing an album, tap  **Options** > **Create GIF**.
2. Select the desired photos and videos to create a GIF file and then tap **NEXT**.
 - ▶ You can add more images and adjust the GIF speed, screen ratio, and file order.
3. Tap **SAVE**.

- NOTE** A maximum of 100 images can be used to create a GIF file.

Google Assistant

You can manage tasks, plan your day, get answers, and much more.

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

Opening Google Assistant

1. Touch and hold **○ Home** from the Home screen to launch **Google Assistant**.
2. Tap **GET STARTED**.
3. Follow the on-screen instructions to configure the voice settings.
 - ▶ The device saves your voice data for recognition.

Launching Google Assistant from the Home screen

1. Say '**Ok Google**' when the screen is turned on or locked.
2. Say a command or question when '**Hi, how can I help?**' appears on the screen.

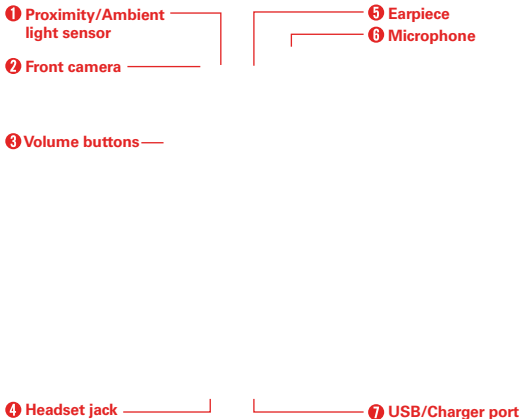
Launching Google Assistant from the Home screen by touching and holding the Home button

1. Touch and hold **○ Home** from the Home screen.
2. Say a command or question when '**Hi, how can I help?**' appears on the screen.

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

Phone Overview

Front View



- NOTES**
- All screen shots in this guide are simulated. Actual displays may vary.
 - Instructions to perform tasks in this guide are based on the default settings and may change depending on the mode and software version on your phone.

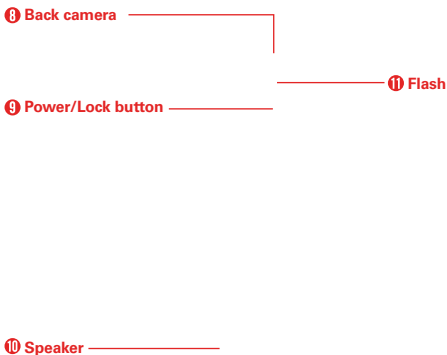
WARNING! Some of the device parts are made of tempered glass. If you drop your device on a hard surface or subject it to severe impact, the tempered glass may be damaged. If this happens, stop using your device immediately and contact an LG Customer Service Center.

- Proximity/Ambient light sensor** Senses proximity toward other objects (such as your head) so that touch commands are not accidentally activated during a call or when carried inside a pocket. It also employs an ambient sensor which measures the surrounding light and adjusts the LCD brightness to provide a vivid screen.

NOTE Don't block the sensor or near the sensor to avoid problems with the touch screen.

2. **Front camera** Use to take pictures and record videos of yourself. You can also use this for video chatting. Keep it clean for optimal performance.
3. **Volume buttons** Press to adjust the ringer, the media volumes, or the in-call volume during a call. They can also activate the camera shutter and access shortcuts when enabled in the Settings menu.
4. **Headset jack** Allows you to plug in an optional headset for convenient, hands-free conversations or recording your voice using the HD Audio Recorder app. You can also plug in headphones to listen to music.
5. **Earpiece** Lets you hear callers and automated prompts.
6. **Microphone** Transmits your voice to the other caller. It's also used for voice-activated functions.
7. **USB/Charger port** Allows you to connect the phone and the USB cable for use with the charger adapter, or other compatible accessories.

Rear View



NOTE Press and hold the volume down (-) button and Power/Lock button at the same time for a second to take a screenshot.

8. **Back camera** Use to take photos and record videos. Keep it clean for optimal performance.
9. **Power/Lock button** Press to turn off the screen backlight and lock the screen, or turn the screen backlight back on. Press and hold to turn the phone on/off, restart, or activate/deactivate Airplane mode.
10. **Speaker** Use to listen to audio (e.g., music, videos, sound clips, speakerphone, etc.) from the rear speaker instead of the earpiece.
11. **Flash** Brightens up the captured image or recorded video in low-light environments.

Help

The Help app allows you to quickly and conveniently view information about your phone, including how-to tutorials, Icon glossary, etc.

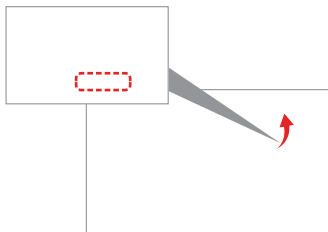
To access Help, tap  Home >  Help.

Setting Up Your Phone

Your phone already has a SIM card installed.

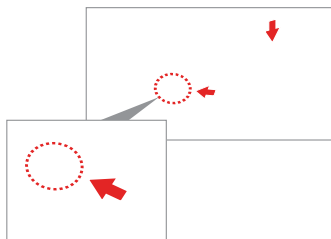
Step 1. Remove the Back Cover

With the phone facing down, insert your fingernail into the cutout located on the lower left of the back cover and lift the cover up gently.



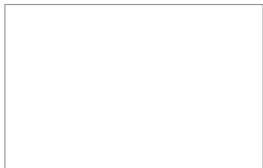
Step 2. Insert the Battery

Insert the battery, making sure the gold contacts line up. Press down gently to secure it.



Step 3. Replace the Back Cover

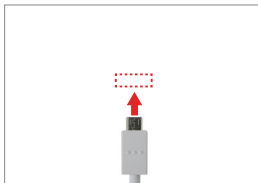
Align the cover over the back of the phone and then press down along the edges to secure it.



Step 4. Charge the Phone

Fully charge your phone before turning it on.

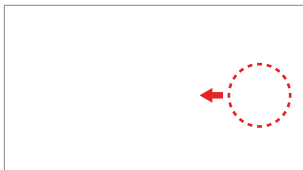
Plug the small end of the USB cable into the USB/charger port on your phone. Plug the other end into the charger and plug the charger into an outlet.



WARNING! Only use approved chargers with your device. Incompatible chargers or tampering with the charging port could damage your device and void the warranty.

Installing the SIM card

1. Remove the back cover (as demonstrated in the previous instructions).
2. Slide the SIM card into the SIM card slot with the gold-colored contacts facing downwards.



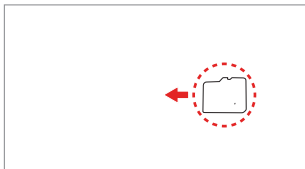
Precautions when using the SIM card

- ▶ Do not lose your SIM card. LG is not responsible for damage and other issues caused by loss or transfer of a SIM card.
- ▶ Be careful not to damage the SIM card when you insert or remove it.

Inserting and Removing a Memory Card

Inserting a microSD card

1. Remove the back cover (as demonstrated in the previous instructions).
2. Position the microSD card (sold separately) with the label side facing up and the gold contacts toward the slot, then carefully slide it into the slot until it's secured in place.






NOTE

- The microSD card is sold separately.
- The microSD card can be easily damaged by improper operation. Please be careful when inserting, removing, or handling it.

WARNING!

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

Removing the memory card

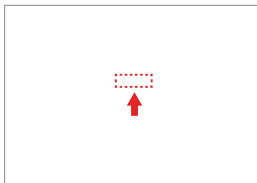
1. Unmount a memory card.
 - ▶ Tap  Home >  Settings > Storage >  Eject.
2. Remove the back cover and locate the microSD card slot (as demonstrated in the previous instructions).
3. Carefully pull the memory card out to remove it.

WARNING!

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

Charging Your Phone

Before using the device, fully charge the battery.



- WARNING!**
- Do not charge while the device or charging cable is wet or contains moisture. This can cause fire, electric shock, injury or damage to device.
 - Make sure to use the USB cable provided with your device.
 - Make sure to use an LG-approved charger and charging cable. Charging the battery with a third-party charger may cause the battery to explode or may damage the device.
 - Using the device when it is charging may cause electric shock. To use the device, stop charging it.

- NOTES**
- Remove the charger from the power socket after the device is fully charged. This prevents unnecessary power consumption.
 - Another way to charge the battery is by connecting a USB cable between the device and a desktop or laptop computer. This may take a longer time than plugging the adapter to a wall outlet.
 - Do not charge the battery by using a USB hub that is unable to maintain the rated voltage. Charging may fail or unintentionally stop.

Precautions when using the device

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


Using the battery efficiently

Battery lifespan may decrease if you keep many apps and functions running simultaneously and continuously. Cancel background operations to increase battery life. To minimize battery consumption, follow these tips:

- ▶ Turn off the **Bluetooth**[®] or Wi-Fi network function when not using them.
- ▶ Set the screen timeout to as short a time as possible.
- ▶ Minimize the screen brightness.
- ▶ Set a screen lock when the device is not in use.
- ▶ Check the battery usage details and close any downloaded apps.

Turning Your Phone On and Off


Turning your phone on

- ▶ Press and hold the  **Power/Lock button** for a couple of seconds until the screen turns on.

NOTES

- When the device is turned on for the first time, initial configuration takes place. The first booting time for the smart phone may be longer than usual.
- A soft reset may be used to reset the device if the screen freezes, or the buttons, touch screen, or device are no longer responding. To perform a soft reset of your device, simply press and hold the **Volume Down button** and **Power/Lock button** until the device restarts.

Turning your phone off

1. Press and hold the  **Power/Lock button** until the Phone options appear.
2. Tap **Power off**.
3. Tap **POWER OFF** to confirm that you want to turn off the phone.

Power control options

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

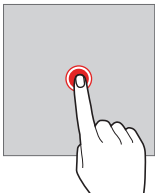
- ▶ **Power off:** Turn the device off.
- ▶ **Power off and restart:** Restart the device.
- ▶ **Turn on Airplane mode:** Block telecommunication-related functions, including making phone calls, messaging and browsing the Internet. Other functions remain available.

Touch Screen

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

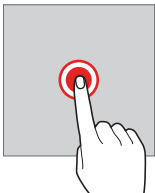
Tapping

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



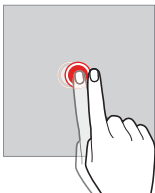
Touching and holding

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



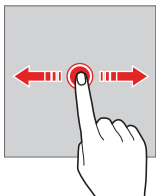
Double-tapping

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



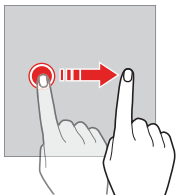
Dragging

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



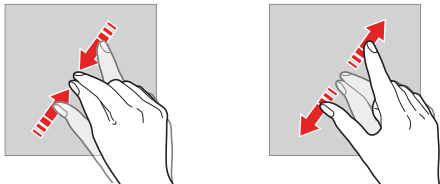
Swiping

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



Pinching and spreading

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



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

NOTES

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

Getting to Know the Home Screen



The Home screen is your starting point to access all of the features on your phone using simple motions on the screen. It's comprised of multiple panels (swipe horizontally to switch). You can customize all of your Home screen panels with app shortcuts, icons, widgets, folders, and other features.

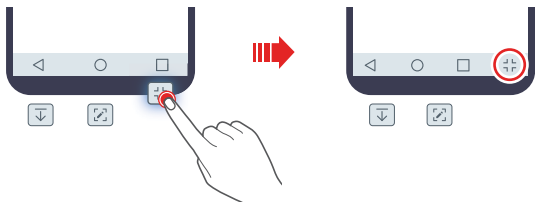


NOTE The Home screen may vary, depending on the service provider or software version.

Modifying the Home touch buttons



You can change buttons displayed on the Home touch buttons bar, as well as their position and color.

1. Tap  Home >  Settings > Display > Home touch buttons.
2. Select the modification you want to apply.
 - ▶ Tap **Button combination** to select which Home touch buttons you want in the bar and their location within the bar. Choose from **Back**, **Home**, **Recent apps**, **Notification**, **Capture+**, and **QSlide**.
 - ▶ Tap **Background color** to set the button color to white or black.





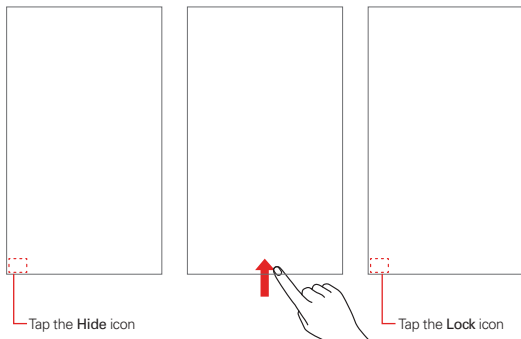
Hide the Home touch buttons

You can choose to hide or display the Home touch buttons on the screen.

1. Tap  Home >  Settings > Display > Home touch buttons.
2. Tap **Hide Home touch buttons** to choose the apps that will hide the buttons by default while you are using the app.

Using the Hide Home touch button option


- ▶ While using an app, tap  **Hide** to hide Home touch buttons.
- ▶ When the Home touch buttons are hidden, swipe upward from the bottom of the screen to temporarily display them.
- ▶ You can also choose to keep the Home touch buttons bar displayed by tapping  **Lock**.




Status Bar

The Status Bar appears at the top of every screen. It displays icons indicating that you've received notifications (on the left) and icons indicating the phone's status (on the right), along with the current time.





















Call icons

	In call		Missed call
	Speakerphone on		Microphone muted












Sound icons

	Do not disturb - Priority only		Do not disturb - Total silence
	Vibrate mode		Silent mode
	Music playing		Music paused








Network icons

	3G connected		3G in use
	4G LTE connected		4G LTE in use
	Wi-Fi connected		Wi-Fi with no Internet
	Signal strength		No signal
	Roaming		Network extender
	No SIM card		Unknown SIM card
	Airplane mode		GPS on
	App update available		App update successful
	Downloading		Uploading
	Download successful		Emergency Alert

Connectivity icons

	Syncing		Mobile Hotspot on
	USB connected		USB debugging mode
	Bluetooth connected		Bluetooth on
	Bluetooth headset battery full		Bluetooth headset battery low
	Headset connected		Headset with microphone connected
	Internal storage full		






Email and Messaging icons

	New email		New Gmail message
	New message		New Verizon message
	New voicemail		Email not sent
	Message not sent		




Calendar and Alarm icons

	Alarm set		Upcoming events
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Battery icons

	Full battery		Fast Charging
	Charging battery		Wireless charging
	Low battery		Empty battery
	Not Charging		

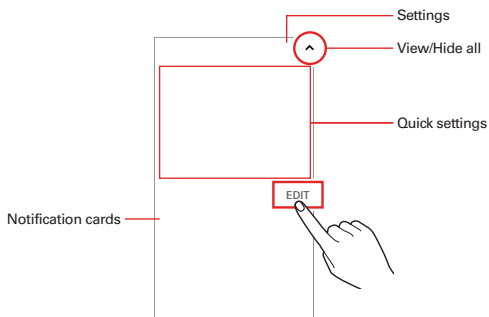
Other icons

	More notifications		Screenshot saved
	Keyboard		

Notifications panel

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

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




NOTE

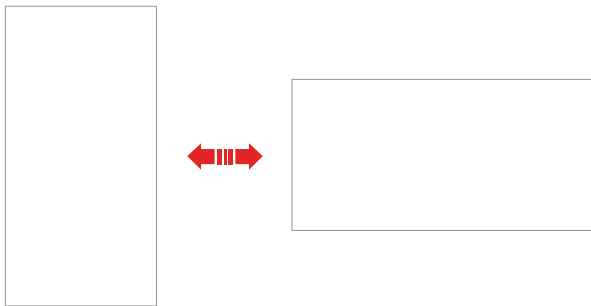
You can use the notifications panel even on the lock screen. Drag the notifications panel while the screen is locked to quickly access the desired features.

Switching the screen orientation

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


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


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



Editing the Home screen

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

- ▶ To rearrange the Home screen canvases, touch and hold on a canvas, then drag it to a desired location.
- ▶ To add a widget to the Home screen, select **Widgets**.
- ▶ To change a wallpaper, select **Wallpapers** from the available choices and complete your selection as necessary.
- ▶ To change a theme, select **Theme**. You can also tap **Home** >  **Settings** > **Home screen** > **Theme**, then select a theme to apply to the device.
- ▶ To configure the Home screen settings, select **Home screen settings**.
- ▶ To change the app arrangement mode, select **Grid**.

- ▶ To change the default screen, move to desired screen, tap  Default screen, then tap the screen once more.

————— Default screen

Using folders from the Home screen


Creating folders

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

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

Editing folders

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



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

NOTE

The folder color cannot be changed for downloaded themes.


EasyHome screen version



EasyHome is a more simplified version of the Home screen that you can choose to use on your phone.

Tap  Home >  Settings > Home screen > Select Home > EasyHome.

The EasyHome Home screen has three panels.

Home with separate apps list

Home with separate apps list is another version of the Home screen that you can use on your phone. This version places all of your installed and downloaded apps in an Applications screen instead of on your Home screen panels. The  Apps icon in the Quick Access Bar provides you with access to all of your apps and you can just copy shortcuts of the desired apps to your Home screen.

▶ Tap  Home >  Settings > Home screen > Select Home > Home with separate apps list.



Setting Your Lock Screen

Your device's screen turns off and locks itself if you press the Power/Lock button. This also happens after the device is left idle for a specified period of time. If you press the Power/Lock button when a screen lock is not set, the Home screen appears immediately. To ensure security and prevent unwanted access to your device, set a screen lock.

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

Setting a Screen Lock

There are several screen lock options available.

1. Tap  Home >  Settings > Lock screen.
2. Tap **Select screen lock** and then select the method you prefer.
3. Customize the following settings.

None: Deactivate the screen lock function.

Swipe: Swipe on the screen to unlock the screen.

Pattern: Draw a pattern to unlock the screen.

PIN: Enter a numeric password to unlock the screen.

Password: Enter an alphanumeric password to unlock the screen.

Secure start-up settings

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

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

Precautions for the secure start-up feature

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

KnockON

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

NOTES

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

Turning the screen on

Double-tap the middle of the screen.

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



Turning the screen off

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

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

Memory card encryption

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

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

NOTES

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

Entering text

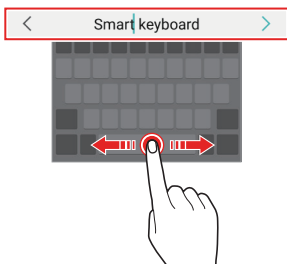
Using the Smart keyboard

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

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

Moving the cursor

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

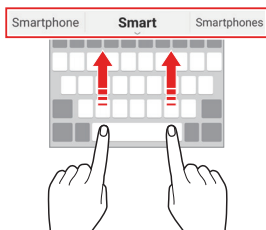
**NOTE**

This option is available only on the QWERTY keyboard.

Suggesting words

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

Enter text, then tap a suggested word.



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

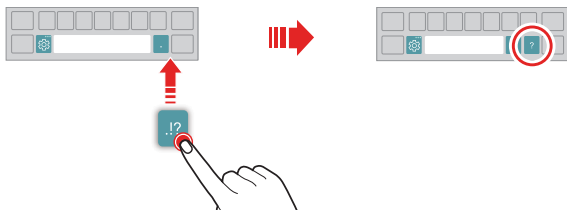
Changing the QWERTY keyboard layout

You can add, delete or rearrange keys on the bottom row of the keyboard.

1. Tap Home > Settings > Language & input > LG Keyboard > Keyboard height and layout > QWERTY layout.

You can also touch and hold the Voice on the keyboard and tap Settings > Keyboard height and layout > QWERTY layout.


2. Tap a key on the bottom row, then drag it to a desired position.



- NOTES**
- This option is available on the QWERTY, QWERTZ and AZERTY keyboards.
 - This function may not be supported for some languages.

Customizing the keyboard height

You can customize the keyboard height to maximize hand comfort when typing.

1. Tap  Home >  Settings > Language & input > LG Keyboard > Keyboard height and layout > Keyboard height.



You can also touch and hold the  Voice on the keyboard and tap  Settings > Keyboard height and layout > Keyboard height.

2. Adjust the keyboard height.



Selecting a landscape keyboard mode

You can select a landscape keyboard mode from several choices.



1. Tap  Home >  Settings > Language & input > LG Keyboard > Keyboard height and layout > Keyboard type in landscape.

You can also touch and hold the  Voice on the keyboard and tap  Settings > Keyboard height and layout > Keyboard type in landscape.

2. Select a keyboard mode.

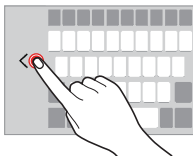
One-handed operation mode

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


1. Tap  Home >  Settings > Language & input > LG Keyboard > Keyboard height and layout > One-handed operation.

You can also touch and hold the  Voice on the keyboard and tap  Settings > Keyboard height and layout > One-handed operation.


2. Press the arrow displayed next to the keyboard to move the keyboard in the desired direction.



Entering text by using voice


On the keyboard, tap  Voice.

NOTES

- To maximize the voice command recognition, speak clearly.
- To enter text with your voice, make sure that your device is connected to a network.
- To select the language for voice recognition, tap  Settings > Languages on the voice recognition screen.
- This function may not be supported, or the supported languages may differ depending on the service area.

Copy and Paste





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

1. Touch and hold around the text you want to copy or cut.
2. Drag  to specify the area to copy or cut.
3. Select either **CUT** or **COPY**.
 - ▶ Cut or copied text is automatically added to the clipboard.
4. Touch and hold the text input window, then select **PASTE**.

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

Clip Tray

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



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

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

Languages



You can set only one main language for your phone's operating software, but you can set multiple secondary languages and switch as needed. In addition, you can set multiple languages used for the on-screen keyboard.

To change the main language



- ▶ Tap  Home >  Settings > Language & input > Language > ADD LANGUAGE. Tap the language of your choice. Touch and hold the language, then drag it to the top of the language list to make it your phone's main language.



NOTE After adding additional secondary languages, drag any language to the top of the list to set it as your main language.

To add additional languages for your keyboard



- ▶ Tap  Home >  Settings > Language & input > LG Keyboard > Select languages > checkmark all languages you want to use on the keyboard.

Capturing a Screenshot

Press and hold the  Volume Down button and the  Power/Lock button at the same time for 2 seconds to capture a screenshot of the current screen.

To view the captured image, tap  Home >  Gallery > the Screenshots album.

Using Capture+ to capture a screenshot

On the screen you want to capture, drag the Status Bar downward and tap  Capture+ (in the Quick settings). The image is captured, but not saved until you tap  Done and choose a location to save it to.







NOTE Make sure that the paper style is not set to paper.

Access the app (**QuickMemo+** or **Gallery**) where you saved it to view your captured image.

NOTE Screenshots saved to the Gallery app are in the **Capture+** album.

Calculator


Using your calculator

1. Tap  Home > Essentials >  Calculator.
2. Tap the number buttons and the function buttons (, ,  or ) as necessary. The result automatically appears as soon as sufficient calculation information is entered.
 - ▶ Drag the blue sidebar (on the right side of the screen) to the left to access and enter scientific calculator functions.
 - ▶ To clear input, tap the DEL. To clear the display, touch and hold the DEL.

NOTE Turning the device to landscape orientation expands the calculator and keeps the scientific functions displayed on the screen.

Calendar





Viewing Your Calendar and Events

The Calendar app allows you to track your schedule of events (that you created or that you've been invited to), organized by day, week, month, year, or agenda. Tap  **Menu** to switch calendar views or access your Tasks list.

Tap  Home >  **Calendar**, and then tap  **Menu**.





- ▶ **Day:** Display today's schedule by hour. Swipe left or right across the screen to display another day.
- ▶ **Week:** Display the current week. Swipe left or right across the screen to display another week.
- ▶ **Month:** Display the current month. Swipe left or right across the screen to display another month.
- ▶ **Year:** Display all twelve months of this year. Swipe left or right across the screen to display another year.
- ▶ **Agenda:** Display all events.

Adding an event to your calendar

1. Tap  Home >  Calendar.
2. Tap  Menu to change the calendar view (Day, Week, Month, Year, or Agenda), if necessary.
3. Tap the date (or the time in the day calendar view) you want to add an event to and tap  New event.
4. Enter the event name.
5. Tap **Location** field and enter the location. Check the date and enter the time you wish your event to start and finish.
6. Enable the **All day** switch, if applicable.
7. Tap **More** to enter additional options such as **Reminders**, **Repeat**, **Repeat until**, **Description**, **Time zone**, **Show me as**, and **Privacy**, as necessary.
8. Tap **SAVE** to save the event in the calendar.






Added information icons

There are several Calendar icons designed to help streamline event entry by extracting information (such as dates, addresses, etc.) from other sources and automatically updating corresponding event fields. In addition, there are icons you can use to embellish your events with identifying images. Simply tap one of the following icons (displayed below the Time zone field) to apply it to the event.


- ▶  Allows you to insert a photo.
- ▶  Allows you to insert a saved memo.
- ▶  Allows you to insert saved tasks that have no deadline.
- ▶  Allows you to insert a saved Pocket file.

Using Event pocket

Use the Event pocket feature to easily add events to your Calendar. You can add events using images, text, memos, tasks, location, and also invites and events from your Facebook account.




1. Tap  Home >  Calendar >  Event pocket to split the screen (Calendar on the left and Pocket on the right).
2. Tap a pocket type to view items saved in it, then drag an item to the desired date in your Calendar.
 - ▶  Displays your saved tasks that have no deadline.
 - ▶  Display memos and images.
3. The event is automatically saved. You can edit the event to add additional details.

NOTE

While viewing items in the Pocket folder, tap  Add to add an image or a memo, then complete as necessary.

QSlide for the Calendar app

You can view your month calendar in a QSlide window allowing you to easily check dates, obligations, etc. while using other apps at the same time.

1. Tap  Home >  Calendar.
2. Tap  Options > QSlide to display the month Calendar in a QSlide window.
 - ▶ Swipe left and right to scroll through the months.
 - ▶ Tap a date to view the events for that day in your day calendar.


Camera

You can use the Camera app to take and share pictures and videos. Your phone has an integrated standard camera that lets you capture sharp pictures and videos. It has many state-of-the-art features such as gesture shots, interval shots, burst shots, capturing still images while recording video, and much more. These features will allow you to easily and creatively capture your world.

NOTE Be sure to clean the protective lens cover with a soft cloth before taking pictures. A lens cover with smudges from fingers can cause blurry pictures with a "halo" effect.

Starting the camera

▶ Tap  Home >  Camera.

TIP With the backlight off, press the  **Volume Down** button twice to immediately activate the Camera app (when enabled in the Settings app).

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

Turn the flash on or off. 


 Start the Gallery.


Switch between front and rear cameras. 

 Record videos.



Apply a film filter effect. 



 Take photos.

Change the camera options. 






 Back to the previous screen.

Taking a photo

1. Select a camera mode and tap the subject to focus the camera on it.
2. Tap  **Capture** to take a photo.
 - ▶ You can also press the  **Volume buttons** to take a photo.


NOTE When the screen is turned off or locked, start the camera by pressing the **Volume Down** button twice. Tap  **Home** >  **Settings** > **Shortcut keys** and enable the switch.

Recording a video

1. Select a camera mode and tap the subject to focus the camera on it.
2. Tap  **Record**.
 - ▶ To take a photo while recording a video, tap  **Capture**.
 - ▶ To pause the recording, tap  **Pause**. To resume the recording, tap  **Record**.
3. Tap  **Stop** to end the video recording.

Customizing the camera options

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

Tap  **Settings** on the camera screen.

NOTE Available options vary depending on the selected camera (front or back camera) and the selected camera mode.

Photo size	Sets the desired value for the aspect ratio and size of your photos.
Video resolution	Sets the desired value for the resolution and size of your videos.
HDR	Sets compensation effects to produce photos in vivid colors, even when they are taken against the light. These functions are provided by the high dynamic range (HDR) technology equipped in the device's camera.

Timer	Sets the timer to automatically take photos after a specified period of time.
Cheese shutter	Enables taking photos with voice commands.
Tag locations	Saves the image with GPS location data.
Grid	Displays guide grids so that you can take photos or record videos based on the horizontal and vertical reference lines.
Storage	Select if you want to store the pictures and videos in the Internal storage or SD card. (Available when a memory card is inserted.)
Simple view	Hides all menus from the camera screen.

Additional options on the front camera

Selfie shot	Sets how you want to take your selfies (Gesture or Auto). Available from the front-facing lens only.
Gesture view	Allows you to check your selfie shot immediately after taking it. Available from the front-facing lens only.
Save as flipped	Enables the selfie to be saved as a mirror image of the screen view. Available from the front-facing lens only.


NOTE

When using the front camera, you can adjust the filter.

Burst shot

You can take continuous shots to create an illusion of moving pictures.

Touch and hold  **Capture**.

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

NOTE You can take up to 30 photos using the rear camera and 20 photos using the front camera.

Simple view

Tap  **Settings** > **Simple view** to hide the menus on the camera screen.

Tap  **Redisplay** to display them again.

Selfie shot

You can use the front camera to view your face on the screen and take selfies. The camera settings allow you to configure the selfie shot settings.

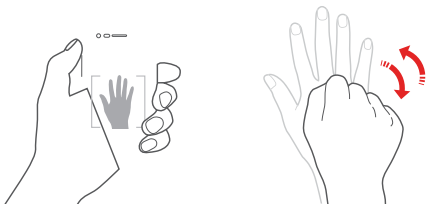
Gesture shot

You can take selfies 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, then tap  **Settings > Selfie shot > Gesture shot**.
- Make sure that your palm and fist are completely within the recognition area so that the camera can detect them.
- This feature may not be available while using some of the camera features.

Interval shot

You can take a series of selfies at an interval.

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


- ▶ After a short timer delay, four photos are taken at about two-second intervals.

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.

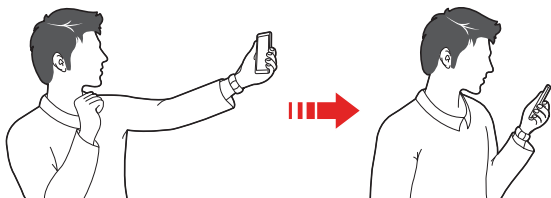
- ▶ The white colored guide frame appears when the front camera detects your face. If the subject within the guide frame stops moving, the guide frame color turns green, then the camera takes a photo.

**NOTE**


To use this feature, switch to the front camera, then tap  **Settings > Selfie shot > Auto shot**.

Gesture view


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



NOTES


- To use this feature, switch to the front camera, then tap  **Settings > Gesture view** to enable the Gesture view feature.
- Only one preview is available each time a photo is taken.
- If you rotate the device while viewing the preview screen, the screen switches to camera mode.

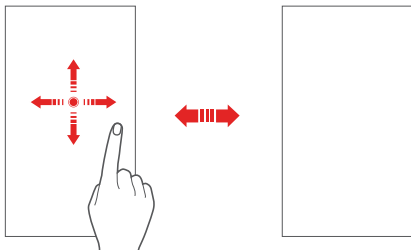
Save as flipped

Before taking a photo with the front camera, tap  **Settings > Save as flipped** to flip the captured image horizontally.

Switching between cameras


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

On the camera screen, tap  **Swap** or swipe the screen in any direction to switch between the front and back cameras.



Zoom in or out

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

- ▶ On the camera screen, pinch or spread two fingers to zoom in or out, then use the displayed +/- slide bar.
- ▶ You can also drag  **Capture** up or down.





NOTE

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


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. Tap  Home >  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 **Repeat**, **Alarm sound**, **Alarm volume**, **Alarm with vibration**, **Snooze duration**, **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. Tap  Home >  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. Tap  Home >  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. Tap  Home >  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

▶ Tap  Home >  Contacts.

NOTE




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

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.


In Case of Emergency (ICE) contacts is displayed above your list of contacts. Add up to 5 emergency entries from your contacts list. These are entries that someone can contact on your behalf in the event of an emergency, whether or not the phone is locked.

To add ICE entries



1. Tap  Home >  Contacts.
2. Tap **In Case of Emergency contacts** (at the top of the list).
3. Tap the  **Add entry**.
4. Checkmark the entry (or entries) to add to your ICE list, then tap **ADD**.

ICE Information

In addition to your emergency contacts, you can enter personal information about you (such as health record, allergies, medications, special instructions, etc.) that can be accessed in case of an emergency. To add your personal information:

1. From the emergency contacts screen, tap the ⓘ **Information**.
2. Tap  **Add**, enter your information, then tap **SAVE**.




To search for a contact

1. Tap  **Home** >  **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. Tap  **Home** >  **Contacts**.
2. Tap  **Options** > **Contacts settings** > **Online search**.



To open your groups list





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

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**, **Change order**, **Default screen**, and **Contacts settings**.

To view details about a contact

1. Tap  Home >  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.
 - ▶  **Email** starts an email.
 - ▶  **Options** accesses the following menu options: **Share**, **Forward**, **Merge**, **Back up**, **Refresh**, **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 manage that process manually by merging or separating entries.




To add a new contact

1. Tap  Home >  **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 select 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  **Add** under a category to add more than one entry for that category. For example, in the phone number category, enter a work number and add a home number. Tap the label field to the right of the entered information to open a drop-down menu of preset labels. For example, **Home**, **Work**, **Home Fax** or **Other** for a phone number.
 - ▶ 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. Tap  Home >  **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. Tap  Home >  **Contacts**, and then tap the contact entry you want to merge with another entry.
2. Tap the **Menu** , then tap **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. Tap  Home >  **Contacts**, and then tap the contact entry you want to separate.
2. Tap  **Options**, then tap **Separate**.
3. Tap **SEPARATE** to confirm.

Setting Speed Dials

Designating multiple speed dials

1. Tap  Home >  **Contacts**, and then tap  **Options**.
2. Tap **Speed dial**.
3. Tap the speed dial number you want to assign, then tap the Contact entry for it.
4. Repeat selecting a speed dial number and the desired Contact entry as necessary.

Downloads

You can view, delete or share files downloaded via the Internet or apps.

1. Tap  Home >  **Essentials folder** >  **Downloads**.

Email

The following account types are supported: Microsoft Exchange, Outlook, Yahoo! Mail, AOL Mail, Verizon, and other accounts.

To open the Email app


- ▶ Tap  Home >  Email.

The first time you open the Email app, a setup wizard opens to help you add an email account. After the initial setup, the Email app displays the contents of your Inbox.

NOTE You can also add your email account(s) using the **Accounts** menu in the **Settings** app.




The Accounts list

The Menu displays all of your email accounts.

Open the **Email** app. Tap  **Menu** to display a list of all of your email accounts and folders. You can also swipe horizontally from the left side of the screen to open the Email Menu to view your Accounts list.

- ▶ Each account name is displayed in an identifying color. Tap an account to toggle between displaying and hiding its folders. The number of unread mail is displayed next to each account's Inbox.

Using the Email app

- ▶ Tap  **Compose** to compose a new message.
- ▶ Tap  **Menu** to switch between your email accounts and folders.
- ▶ Touch and hold a message, then you can tap **MARK AS READ/UNREAD**, **MOVETO**, or **DELETE**. You can also tap **Select all** to select all of your messages at once, then tap the action to apply to all of them.
- ▶ Swipe a message off the screen to the left or right to delete the message.
- ▶ Tap  **Options** to access **Sort by**, **QSlide**, and **Settings**.
- ▶ Drag downward from the top of the Inbox list to refresh the list.

Message search

Tap **Search**, enter the text you're looking for, then tap one of the displayed results.

Reading Your Email

You can read your email from the Inbox, or from other folders within each individual account. Tap a message entry to open it.

NOTE If you enable the Split view setting, the Email app is displayed in a split-screen format when the phone is held horizontally. Your Inbox (or any other selected folder) is displayed on the left side of the screen. Tap an email to open and display its contents on the right side of the screen.

To read an email

When viewing the combined view for your Inboxes, the color displayed to the left of each message corresponds with each account's identifying color.

1. Open the **Email** app, then tap **Menu**.
2. Tap **Inbox** under **COMBINED VIEW** to display all of your messages from all accounts together or tap **Inbox** under the account you want to view.

To add an account

- ▶ From the **Email** app, tap **Options** > **Settings** > **Add account**. Then, configure the new email account settings as necessary.

Changing Email settings

- ▶ To change the Email settings, open the **Email** app, tap **Options** > **Settings**.


Other settings

The **Other settings** menu includes the following options: **Preview**, **Split view**, **Save to**, **Ask before deleting**, **Auto-advance**, and **Load images**.




Accounts

Tap an account in the list to modify the settings that apply only to that account.






File Manager

Use the **File Manager** app to easily view and manage your folders and files stored in your phone. To access the desired file(s), manually browse by tapping any folder icon (and subsequent folder icons within each folder), or enter search text by tapping the  **Search**.


To open the File Manager app

Tap  Home >  Essentials folder >  File Manager.

Using File Manager

- ▶  : Allows you to select the desired storage location. Choose from **Internal storage**, **SD card**, and **Cloud**.
- ▶  : Allows you to search for desired files by entering text.
- ▶  : Allows you to open two File Manager apps to move or copy files between folders.
- ▶  : Allows you to select folders or files to delete.
- ▶  : Allows you to access **New folder**, **Move**, **Copy**, **Share**, **Compress**, **View as**, **Sort by**, **Show/Don't show hidden files**, **SD card settings**, and **QSlide**.



Searching in File Manager

Open the **File Manager** app, select where you want to search (Internal storage, SD card, or Cloud) if necessary, then tap  **Search** to search for your files or information.

Gallery

Gallery overview


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




1. Tap  Home >  Gallery.
 - ▶ Saved photos and videos are displayed by folder.
2. Tap a folder and select a file.
 - ▶ View the selected file in full-screen mode.
 - ▶ While viewing a photo, swipe left or right to view the previous or next photo.
 - ▶ While viewing a video, swipe left or right to rewind or fast-forward the video.

NOTES




- Some file formats may not be supported, depending on the installed software.
- Some files may not open due to encoding.
- Files that exceed the size limit may cause an error.

Viewing photos

Back to the  previous screen.

 Access additional options.
 Start the camera.
 Add to or remove from your favorites.



Write a memo on  a photo.
 Edit images. 

 Back to the previous screen.
 Delete images.
 Share images.


NOTE

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

Editing photos

1. While viewing a photo, tap  **Edit**.
2. Use a variety of effects and tools to edit the photo.
3. Tap **SAVE** to save changes.
 - ▶ The edited photo overwrites the original file.
 - ▶ To save the edited photo as another file, tap  **Options** > **Save copy**.

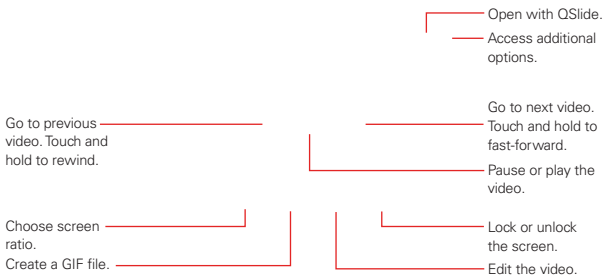
Writing a memo on the photo

1. While viewing a photo, tap  **Memo**.
2. Write a memo on the photo and tap **SAVE**.
 - ▶ The memo is applied to the photo.

NOTE Some photos may not support the photo memo feature.


Playing a video

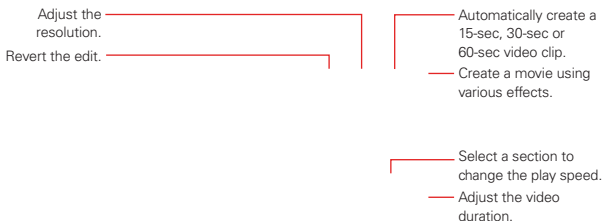
Select a video from an album in your Gallery. Playing it using the Videos app provides the following options.



- 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 video screen up or down.

Editing videos

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



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




Making a GIF

You can easily make a GIF using recorded video.

See *Making a GIF file* for details.




Deleting files

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

- ▶ Touch and hold a file from the file list, then tap **Delete**.
- ▶ Tap  **Delete** in an album, select files you want to delete, then tap **DELETE**.
- ▶ Deleted files are automatically moved to Trash and they can be restored to the Gallery within 7 days.
- ▶ On the Gallery, tap  **Menu** > **Trash**. Tap  **Delete** to permanently delete the files. In this case, the files cannot be restore.

Sharing files

You can share a file using one of the following options:

- ▶ On the photo or video screen, tap  **Share** to share the file using the desired method.
- ▶ While viewing a video, tap  **Options** > **Share** to share the file using the desired method.
- ▶ Tap  **Share** from the Albums screen to select one or more files and share using the desired method.

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.

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.

Maps

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

Photos

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

Duo

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

Chrome

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

Gmail

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

Play Movies & TV

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

YouTube

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



Play Music

Use your Google Account to purchase music files from Play Store. Play music files saved on your device.

Google

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

Messaging

Two apps are preloaded on your phone that allow you to send messages: the  **Messaging**, and  **Message+**, but only one can be set as your default messaging app which will enable you to use all of the app's features.

To open the Messaging app

- ▶ Tap  Home >  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 **Search** and **Settings**.

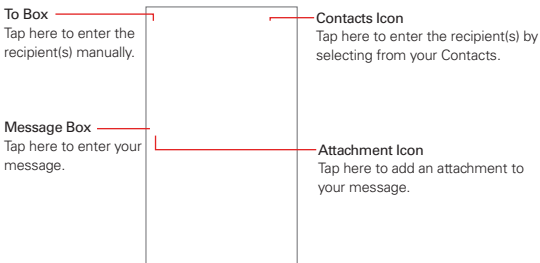
NOTE Pinch in (or spread apart) on your list of messages to resize it for easier viewing or navigation.

To delete a message thread from the Messaging window

1. Touch and hold the message thread.
2. Tap **Delete** in the context menu that opens.
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 tap **Back** while composing a message, it's automatically saved as a draft. The **Draft** on the right side of the message thread indicates a pending draft message to the recipient. 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** 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 the **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 **Notification**, **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  Home >  Music.

Back to the previous screen. 

Switch to the Now playing playlist. 

Access additional options. 


Play in random order. 


Add to or remove from your favorites. 

Select a repeat mode. 

Adjust the sound volume. 



Set Audio effects. 

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

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

Pause or play. 

Playing a song

1. Tap  Home >  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.

Other Music player options

- ▶ Touch and hold any song in the Music library to access its context menu which includes: **Add to playlist**, **Delete**, **Phone ringtone**, **Caller ringtones** and **Details**.
- ▶ Tap **⋮ Options** in the Music library to access its options menu which includes: **Cloud**, **Select to play**, **Add to playlist**, **Share**, and **Settings**.

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 If you choose Caller ringtones, tap a desired contact to set it.

Phone

To open the Phone app


- ▶ Tap  Home >  Phone.

Call

Tap here to dial the number that you entered manually.

Voice Dialer

Tap here to dial by saying the number.

Touch and hold  to enter the plus (+) symbol to dial an international number.

Delete

Tap here to delete incorrect number(s) (appears after you begin entering numbers).




Message

Tap here to send a message to the number that you entered.

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 current tab is displayed with an underlined white line.




Making a call by dialing

1. Tap  Home >  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.
- ▶ Tap  Home >  **Phone**.
- ▶ Drag the Status Bar down, then tap  **End** in the Current call notification.

NOTE You can also press the  **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. Tap  Home >  **Phone** >  **Options** > **Call settings**.
2. Tap **Call blocking & Ignore with message** > **Allow ignore with message** switch to toggle it On (blue).

TIP Tap **Allow ignore with message** to manage the predefined text message choices that can be sent after ignoring a call.

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

Tap Home > Phone > Options > Call settings > More > Incoming voice call pop-up.

During a Call

Add Call

Tap here to add a call to the current conversation.

Camera

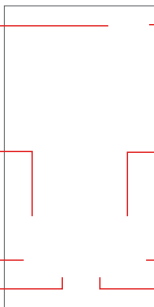
Tap here to switch to a video call.

Bluetooth

Tap here to switch between using a Bluetooth device and the phone.

Speaker

Tap here to turn the speakerphone on or off.



Settings

Tap here to access additional in-call options

One-way Camera

Tap here to share your camera.

Keypad

Tap here to display the keypad.

Mute

Tap here to mute the microphone 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




- ▶ Tap  Home >  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


Tap  Home >  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. Tap  Home >  Phone > **Recent**.
2. Tap  **Options**.

- ▶ Tap **Clear** to select entries to remove from the list. Checkmark the entries to delete, tap **CLEAR**, then **CLEAR**.
- ▶ Tap **Clear all** to remove all of the entries from the list. Tap **CLEAR** to confirm you want to delete the entire list.



NOTE You can also select a specific number to be deleted. Touch and hold an entry in the Recent tab. Tap **Clear all logs of this number**, then tap **CLEAR** to confirm.

Speed Dial

Create a Speed Dial

1. Tap  Home >  Phone > Dial.
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. Tap  Home >  Phone > Dial.
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**.



OR

- ▶ 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.

Activating Advanced Calling




You can make high-definition voice and video calls, and surf the web while you talk on the phone, when you add **Advanced Calling** to your line.

To upgrade to **Advanced Calling**:

1. Tap  Home >  **Settings** > **Advanced Calling**.
2. Choose what type of **Advanced Calling** feature(s) you want to use.

Activating Wi-Fi Calling

Wi-Fi Calling allows you to make and receive voice and video calls over a Wi-Fi network when cellular is not available.

1. Tap  Home >  **Settings** > **Advanced Calling**.
2. Tap **Activate Wi-Fi Calling**.
3. Tap  **Wi-Fi Calling On/Off** to turn on or off.
4. Tap **Update Current Emergency Address** to enter the emergency location information (E911) address then tap **SAVE**.
 - ▶ This info gets transmitted to the emergency dispatcher for all 911 calls made over a Wi-Fi network. If address validation fails then the users will be prompted to enter a new address until a valid address is entered.
5. Upon successful validation of the address, Wi-Fi Calling turns on.

NOTE

You must be connected to a Wi-Fi network to enable this feature.

QSlide

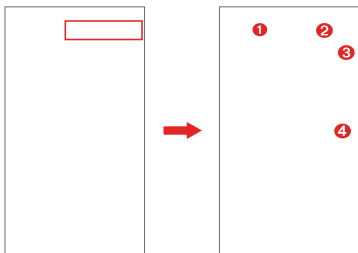
The **QSlide** function enables an overlay window on your phone's display for easy multi-tasking. The overlay window can be moved, resized, or made transparent. QSlide windows can be opened directly from the apps that support the QSlide function.

To open a QSlide window

- ▶ While using an app that supports QSlide, tap **⋮ Options**, then tap **QSlide**.
 - ▶ You can add the **QSlide** icon to the Home touch buttons bar to allow you to easily use QSlide.
1. Tap **○ Home** > **⚙ Settings** > **Display** > **Home touch buttons** > **Button combination**.
 2. Drag **⊞ QSlide** on the bar to add it to the Home touch buttons bar.

Using QSlide

The **QSlide** function opens the associated app in a window in the foreground, allowing you to access other apps in the background. It's displayed continuously on the screen until you close it.



1		Tap to return to full window view.
2		Slide to adjust the transparency.
3		Tap to exit the QSlide function.
4		Drag to adjust the size of the QSlide window.

NOTE

The **QSlide** function can support up to two windows at the same time. QSlide is supported only on the following apps: **Video, Phone, Contacts, Messaging, Calendar, Email, and File Manager.**









QuickMemo+

QuickMemo+ provides you with the ability to make creative notes using a variety of options. This advanced notepad feature, unlike other conventional notepad apps, supports image management and screenshots.



Creating a note

1. Tap Home > Essentials folder > QuickMemo+.
2. Tap Add to create a note, then use the tools and options as needed.
 - ▶ : Tap to save the note you created.
 - ▶ : Tap to undo the most recent action.
 - ▶ : Tap to redo the most recently deleted action.
 - ▶ T : Tap to insert text into your memo.
 - ▶ : Tap to draw on your memo. Tap again to select the pen type, size, color, and transparency.
 - ▶ : Tap to erase pen marks you've made on the memo.
 - ▶ : Tap to select a section of your handwritten memo to modify (e.g., erase, rotate, expand, shrink, etc.).
 - ▶ : Tap to access additional options.
3. Tap Done to save the note.

Writing notes on a photo

1. Tap  Home >  Essentials folder >  QuickMemo+.
2. Tap  Camera to use the Camera function. Tap  Capture to take a photo, then tap OK.
 - ▶ The photo is automatically inserted in your note.
3. Write notes on the photo.
 - ▶ Tap  Pen to write notes by hand on the photo.
 - ▶ Tap  Text to enter text below the photo.
4. Tap  Done to save the note.

Writing notes on a screenshot







1. While viewing the screen you want to capture, drag the Status Bar downward and then tap  Capture+ in the Quick settings.
 - ▶ The screenshot appears as the notepad background theme. Memo tools appear at the top of the screen.
2. Crop the image (if necessary) and take notes as desired.
 - ▶ Write notes by hand on the photo.
3. Tap  Done and save the note to the location of your choice.
 - ▶ Saved notes can be viewed in either **QuickMemo+** or **Gallery**.
 - ▶ To save notes in the same location all the time, select the **Use as default app** checkbox before selecting a desired app.

NOTES

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

Managing folders

You can view your notes grouped together by type and easily manage your memo files.

1. Tap  Home >  Essentials folder >  QuickMemo+.
2. Tap  Menu and select a menu item:
 - ▶ **All memos:** View all notes saved in QuickMemo+.
 - ▶ **My memos:** View notes created using QuickMemo+.
 - ▶ **Photo memos:** View notes created using  Camera.
 - ▶ **Capture+:** View notes created using the Capture+ option from the Status Bar.
 - ▶ **Trash:** View deleted notes.
 - ▶ **New category:** Adds a new category. Enter a name and select an associated graphic.
 - ▶  **Settings:** Manages (add, delete, rename, and rearrange) your folder categories. To change the name of a category, tap the category.

NOTE



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


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

▶ Tap  Home >  Settings.

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

Viewing settings

Tap  **Options** at the upper-right corner of the Settings app, then tap **Tab view** (or **List view**).

▶ **List view** Scroll up and down through the list.

▶ **Tab view** Swipe left and right or tap the tab you want.

NOTE The instructions to perform tasks in this guide are based on the default **List view** setting.

WIRELESS NETWORKS

The Wireless Networks 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. Tap  Home >  Settings > Wi-Fi.
2. Tap  Wi-Fi ON/OFF to turn Wi-Fi on and start scanning for available Wi-Fi networks.
3. Tap **SEARCH** 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.

Show Wi-Fi pop-up Enable this option to be notified when a Wi-Fi network is available when you launch an app.

USEFUL SETTINGS

Manage networks Allows you to specify the order in which your Wi-Fi networks will be detected. Tap a network to connect to it, view it, forget it, or modify it.

Keep Wi-Fi on during sleep Allows you to set the Wi-Fi status when the screen is off.

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.)

CONNECTION

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

Connect by WPS button Provides information to connect to a secured Wi-Fi network with a WPS button.

Connect by WPS PIN Provides the WPS PIN to connect to a secured Wi-Fi network.

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.

Help Displays information about Wi-Fi networks.

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.

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. Tap  Home >  Settings > **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 **SEARCH**.

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. Tap  Home >  Settings > Bluetooth.
2. Tap  Bluetooth ON/OFF to turn Bluetooth on.
3. Tap **ACCEPT** when you receive a data 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 Tethering & Mobile Hotspot screen, tap **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.

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 **Use 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.

Mobile networks Allows you to set various mobile network settings.

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 to learn how.

More

Mobile networks Allows you to set various mobile network settings.

Mobile data Enable this option to allow data access over the mobile network.

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

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.

View Verizon Account Allows you to set up your Verizon account.

Change carrier Activate your Verizon phone on another network.

VPN Allows you to set up VPNs (Virtual Private Networks). Choose **Add VPN**.

Printing Allows you to set up wireless printer(s).

PRINT SERVICES

Cloud Print Searches for available printers.

NOTE Tap  Options to access Add printer, and Settings.

Wireless Emergency Alerts Allows you to view emergency alerts and customize your emergency alerts settings.

DEVICE

The Device category allows you to configure and manage the general device functions such as sound and display options.

Sound

GENERAL

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

SOUND

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.

Ringtone ID Enable this option to allow you to set calls to play a specially composed ringtone.

VIBRATION

Sound with vibration Enable this option to emit sound as well as vibration.

Vibration type Allows you to set the vibration pattern.

ADVANCED SETTINGS

Notification sound Allows you to set the sound heard for new notifications. You can also add and delete notification sounds.

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

Sound effects Allows you to set when a sound is emitted to notify you of an event. Enable **Dialing keypad sound**, **Keyboard sound**, **Touch sound**, **Screen lock sound**, **Sound when roaming**, and set the **Emergency tone**.

Notifications

GENERAL

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 Priority only setting.

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

Lock screen Allows you to set the level of privacy for notifications displayed on your Lock screen.

Display

FONT

Font type Allows you to set the font used for the phone software.

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.

APPEARANCE

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

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

BASIC

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

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

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

Home touch buttons Allows you to set the buttons displayed at the bottom of all screens, including color and placement.

ADVANCED SETTINGS

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

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

Home screen

GENERAL

Select Home Allows you to set the layout for the Home screen. You can choose the standard Android layout that displays all apps on the Home screen, a simplified Home screen layout, or a layout that stores all installed apps separately which allows you to selectively set app shortcuts on your Home screen.

STYLE

Wallpaper Allows you to set your Home screen background (wallpaper). Select from **Wallpaper gallery**, **Gallery**, **Live wallpapers**, and **Photos**.

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

Theme Allows you to select a screen theme for your device.

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

LAYOUT

AppFlash Allows you to display the AppFlash feature on the left screen of the Home screen panel.

Sort apps by Allows you to set how to sort the 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 first screen after the last screen).

TIPS

Help Displays information regarding the Home screen items and functions.

Lock screen

SCREEN SECURITY

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

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

CUSTOMIZE

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.

Screen swipe effect Allows you to set the screen transition effect to apply when the screen is unlocked.

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


LOCKTIME

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.

Gaming

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

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 do not touch the screen for 5 minutes.

Application manager

Allows you to view and manage the apps on your device. Tap an entry to view more information, tap **Stop** (or **Force stop**), then **OK** to stop the app from running.


Storage


DEVICE STORAGE

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.

PORTABLE STORAGE

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**.

Battery


BATTERY INFORMATION

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.

Battery percentage on Status Bar Enable this option to display the battery level as a percentage on the Status Bar next to the battery icon.

BATTERY SAVER

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.

Smart cleaning


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

PERSONAL

The Personal category allows you to configure, manage, and secure your personal information.

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.

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

Mode Allows you to set how your location is established. This setting is gray if the Location switch is off.


RECENT LOCATION REQUEST

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

LOCATION SERVICES

Low power location estimation Enable this option to improve location performance while conserving battery.

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 Location sharing allows you to share real-time locations (using Location History) with selected people and devices.

Security

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

ENCRYPTION

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

Secure start-up Enable this option to immediately lock the screen when you turn on the device to help keep it secure. Unlock the screen by entering the current unlock method, such as a Knock Code, pattern, password, or PIN. Until the screen is unlocked, you cannot receive most phone calls, text messages, alarms, notifications, and more.

- NOTES**
- If the password is entered incorrectly more than a specific number of times, the device will automatically factory reset. Be sure to remember the password.
 - If you forget your decryption password, you must factory reset the device to use it again. Resetting will delete all of the user data saved before the reset.

SIM CARD LOCK

Set up SIM card lock Allows you to lock your SIM card with a PIN. After it's set, you can change it in this menu.

PASSWORDS

Make passwords visible Enable this option to briefly show each character of the password as you type it so you can see what you've entered.

PHONE ADMINISTRATION

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

Unknown sources Enable this option to allow installation of non-Play Store apps.

CREDENTIAL STORAGE

Credential protection Displays the current storage type.

Certificate management Allows you to manage your secure certificates.

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.

ADVANCED

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.

⋮ **Options** accesses **Memory, Show system, Reset app preferences, and Reset default apps.**

Accounts

Auto-sync data 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.

Language & input

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

KEYBOARD & INPUT METHODS

Default Displays the name of the current keyboard. Tap to change it.

LG Keyboard Allows you to change the settings for the LG keyboard.

Select languages Allows you to set multiple languages to be used on the LG keyboard.

English Displays the keyboard type for the selected language. Tap to change it.

GENERAL

Keyboard height and layout Allows you to adjust various height and layout options for your keyboard to make it easier for you to use.

These options include **QWERTY layout**, **Extended keyboard**, **Keyboard height**, **Keyboard type in landscape**, and **One-handed operation**.

Word suggestions Enable this option to show predicted words in the selection box as you type. Tap **Word suggestions** for additional options, such as **Emoticons**, **Next word**, **Personal dictionary**, **Update word suggestions**, and **Clear suggestion history**.

ADVANCED

Path input Enable this option to enter a word by drawing a path through all of its letters.

Auto-correction Allows you to set your level of automatic word correction for each of your keyboard languages.

More Allows you to set other keyboard options to enhance your text input. Options include **Vibrate on keypress**, **Sound on keypress**, **Pop-up on keypress**, **Auto-capitalization**, **Auto-punctuation**, and **Touch and hold time**.

TIPS

Help Displays information regarding text input.

Google voice typing Allows you to change the settings for voice input.

Languages Allows you to set the default language for Google voice typing and set additional languages.

“Ok Google” detection Allows you to start the Google voice search by saying “OK Google”. You can also personalize the Google voice model.

Hands-free Allows you to set which connected devices will allow voice requests when the device is locked.

Speech output Allows you to set when to use speech output.

Offline speech recognition Allows you to manage downloaded languages.

Block offensive words Enable this setting to hide recognized offensive text.

Bluetooth headset Enable this setting to record audio through a connected Bluetooth headset.

SPEECH

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.

MOUSE/TRACKPAD

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

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

Backup & reset

LG MOBILE SWITCH & 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 the Play Store are stored on the Drive app automatically.
 - Fully charge the battery before transferring data to avoid unintentional powering off during the process.

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

Back up my data Enable this option to automatically backup your data to Google servers.

Backup account Allows you to identify which account(s) to backup. You can also add new accounts.

Automatic restore Enable this option to automatically restore your device to its previous state when you reinstall an app.

RESET

Network settings reset Allows you to reset all of the network settings.

Factory data reset Allows you to erase all of the data on the phone. Read the warning, then tap **RESET PHONE**. Tap **Delete all** to confirm and reset the phone.

Reset settings Allows you to restore the default system settings.

Google services

Allows you to manage your Google apps and account settings.

SYSTEM

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

Shortcut keys

Tap the switch at the top of its screen to toggle it On or Off. On enables the **Volume** buttons to directly launch apps when the screen is turned off or locked.

- ▶ Press the **Volume Up** button twice to open the **Capture+** app.
- ▶ Press the **Volume Down** button twice to launch the **Camera** app.

Date & time

BASIC

Enable the **Auto-date & time** option or tap **Set date** and/or **Set time** to use a date/time other than the one provided by the network.

Enable the **Auto-time zone** option or tap **Select time zone** to use a time zone other than the one provided by the network.

TIME FORMAT

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).

Accessibility

TYPE

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 **TalkBack** 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 **Message/call voice notifications** to modify your notification settings for **Calls**, **Messages**, **Read messages**, and **Message/call voice notifications language**.

Font size Allows you to set the size of the screen text.

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

Display size Allows you to set the size for displayed screen items (e.g., icons, text, etc.). Changing the size may affect item positioning 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 **Window zoom** 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 **Screen color adjustment** to adjust it.

Grayscale Enable this option to switch the screen to grayscale mode.

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

Hearing Sets options for people with impaired hearing.

Captions Enable this option to allow your phone to display caption text. Tap **Captions** 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.

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 Enter text by touching and holding the screen or modify it by simply touching the screen.

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 **Key repeat** to set the delay before the key entry will be repeated and the 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 **Auto mouse click** 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 triple-tap **○ Home**. Tap **Accessibility features shortcut** 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.

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

About phone

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

System updates

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

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.

Phone software update

LG Mobile phone software update from the Internet

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

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

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

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

Open Source Software Notice Information

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

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

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

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

Trademarks

- Google is a trademark of Google Inc.
- 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.

More information

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.

Before You Start

WARNING! This product contains chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

Call (800) 243-0000 for more information.

Wash hands after handling.

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-ratesar-cell-phones-what-it-means-you>. You may also wish to contact the manufacturer of your device.

Can I minimize my RF exposure?

If you are concerned about RF, there are several simple steps you can take to minimize your RF exposure. You can, of course, reduce your talk time.

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

Do wireless devices pose any special risks to children?

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

Where can I get further information about RF emissions?

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

U.S. Food and Drug Administration

FDA Consumer magazine November-December 2000

Telephone: (888) INFO-FDA

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

U.S. Federal Communications Commission

445 12th Street, S.W. Washington, D.C.20554

Telephone: (888) 225-5322

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

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

283 Sparks Street Ottawa, Ontario K1R 7X9 Canada

Telephone: (613) 991-6990

http://www.rsc.ca/index.php?page=Expert_Panels_RF&Lang_id=120

World Health Organization

Avenue Appia 20 1211 Geneva 27 Switzerland

Telephone: 011 41 22 791 21 11

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

International Commission on Non-Ionizing Radiation Protection

c/o Bundesamt für Strahlenschutz Ingolstaedter Landstr. 1

85764 Oberschleissheim Germany

Telephone: 011 49 1888 333 2156

<http://www.icnirp.de>

American National Standards Institute

1819 L Street, N.W., 6th Floor Washington, D.C. 20036

Telephone: (202) 293-8020

<http://www.ansi.org>

National Council on Radiation Protection and Measurements

7910 Woodmont Avenue, Suite 800 Bethesda, MD 20814-3095

Telephone: (301) 657-2652

<http://www.ncrponline.org>

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

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

Consumer Information on SAR

(Specific Absorption Rate)

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

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions specified by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although SAR is

determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Because the device is designed to operate at multiple power levels to use only the power required to reach the network, in general, the closer you are to a wireless base station antenna, the lower the power output. Before a device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model.

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 ZNFX210VPP.

* 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.

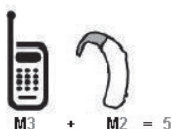
The ratings are not guaranteed. Results will vary depending on the user's hearing device and hearing loss. If your hearing device happens to be vulnerable to interference, you may not be able to use a rated device successfully. Trying out the device with your hearing device is the best way to evaluate 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

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).

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 or open crush, bend or deform, puncture or shred.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, expose to fire, explosion or other hazard.
- Only use the battery for the system for which it is specified.
- Only use the battery with a charging system that has been qualified with the system per CTIA Certification Requirements for Battery System Compliance to IEEE1725. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Do not short circuit a battery or allow metallic conductive objects to contact battery terminals.
- Replace the battery only with another battery that has been qualified with the system per this standard, IEEE-Std-1725. Use of an unqualified battery may present a risk of fire, explosion, leakage or other hazard. Only authorized service providers shall replace battery (if the battery is non-user replaceable).
- Promptly dispose of used batteries in accordance with local regulations.
- Battery usage by children should be supervised.

- Avoid dropping the phone or battery. If the phone or battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- Improper battery use may result in a fire, explosion or other hazard.

Charger and Adapter Safety

- The charger and adapter are intended for indoor use only.
- Insert the battery charger vertically into the wall power socket.
- Only use the LG-approved battery charger. Otherwise, you may cause serious damage to your device.
- Use the correct adapter for your device when using the battery charger abroad.

Battery Information and Care

- Always unplug the charger from the wall socket after the device is fully charged to save unnecessary power consumption of the charger.
- Please read the manual of the specified charger for information about its charging method.
- Do not damage the power cord by bending, twisting, or heating. Do not use the plug if it is loose as it may cause electric shock or fire.
- Do not place any heavy items on the power cord. Do not allow the power cord to be crimped as it may cause electric shock or fire.
- Unplug the power cord prior to cleaning your device, and clean the power plug pin when it's dirty. When using the power plug, ensure that it's firmly connected. If not, it may cause excessive heat or fire. If you put your device in a pocket or bag without covering the receptacle of the device (power plug pin), metallic articles (such as a coin, paperclip or pen) may short-circuit the device. Always cover the receptacle when not in use.
- Recharge the device after long periods of non-use to maximize battery life. Battery life will vary due to usage pattern and environmental conditions.

- Please use only an approved charging accessory to charge your LG device. Improper handling of the charging port, as well as the use of an incompatible charger, may cause damage to your device and void the warranty.
- The charging temperature range is between 0 °C/32 °F and 35 °C/95 °F. Do not charge the battery out of the recommended temperature range. Charging out of the recommended range might cause heat to be generated or serious damage to the battery. It might also cause the deterioration of the battery's characteristics and cycle life.
- Do not use or leave the device in direct sunlight or in a car heated by sunshine. The device may generate excessive heat, smoke, or flame. It also might cause deterioration of device's characteristics or cycle life.
- If the skin or cloth is smeared with liquid from the battery, wash with fresh water. It may cause skin inflammation.
- Please take your device to an authorized service center immediately if this occurs.
- Do not handle the device with wet hands while it is being charged. It may cause an electric shock or seriously damage your device.
- Do not charge while the device or charging cable is wet or contains moisture. This can cause fire, electric shock, injury or damage to the device.
- Do not place or answer calls while charging the device as it may short-circuit the device and/or cause electric shock or fire.
- Talking on your device for a long period of time may reduce call quality due to heat generated during use.

Explosion, Shock, and Fire Hazards

- Do not put your device in a place subject to excessive dust and keep the minimum required distance between the power cord and heat sources.
- Unplug the power cord prior to cleaning your device, and clean the power plug pin when it's dirty.

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

General Notice

- Do not place items containing magnetic components, such as a credit card, phone card, bank book, or subway ticket, near your device. The magnetism of the device may damage the data stored in the magnetic strip.
- Talking on your device for a long period of time may reduce call quality due to heat generated during use.
- When the device is not used for a long period time, store it in a safe place with the power cord unplugged.
- Using the device in proximity to receiving equipment (i.e., TV or radio) may cause interference to the device.
- Do not immerse your device in water, liquid, or expose to high humidity. Immediately, take it to an LG Authorized Service Center.
- Do not paint your device.
- The data saved in your device might be deleted due to careless use, repair of the device, or upgrade of the software. Please backup your important phone numbers. (Ringtones, text messages, voice messages, pictures, and videos could also be deleted.) The manufacturer is not liable for damage due to the loss of data.
- When you use the device in public places, set the ringtone to vibration so you don't disturb others.

- Do not turn your device on or off when putting it to your ear.
- Use accessories, such as earphones and headsets, with caution. Ensure that cables are tucked away safely.

FDA Consumer Update



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

1. Do wireless devices pose a health hazard?

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

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

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

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

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

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

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

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

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

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

The term “wireless device” refers here to handheld wireless devices with built-in antennas, often called “cell,” “mobile,” or “PCS” devices. These

types of wireless devices can expose the user to measurable Radio Frequency (RF) energy because of the short distance between the device and the user's head.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10. What about children using wireless devices?

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

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

11. What about wireless device interference with medical equipment?

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

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

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

12. Where can I find additional information?

For additional information, please refer to the following resources:

FDA web page on wireless devices

<http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/default.htm>

Federal Communications Commission (FCC) RF Safety Program

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

International Commission on Non-Ionizing Radiation Protection

<http://www.icnirp.de>

World Health Organization (WHO) International EMF Project

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

National Radiological Protection Board (UK)

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

Driving

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

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

10 Driver Safety Tips

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

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

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

stopped at a stop sign, red light, or otherwise stationary. But if you need to dial while driving, follow this simple tip – dial only a few numbers, check the road and your mirrors, then continue.

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

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

Warranty

Your device has been designed to provide you with reliable, worry-free service. If for any reason you have a problem with your equipment, please refer to the manufacturer's warranty in this section.

Limited Warranty Statement

ARBITRATION NOTICE: THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REQUIRES YOU AND LG 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.

Warranty Laws

The following laws govern warranties that arise in retail sales of consumer goods:

- The California Song-Beverly Consumer Warranty Act [CC §§1790 et seq],
- The California Uniform Commercial Code, Division Two [Com C §§2101 et seq], and
- The federal Magnuson-Moss Warranty Federal Trade Commission Improvement Act [15 USC §§2301 et seq; 16 CFR Parts 701– 703]. A typical Magnuson-Moss Act warranty is a written promise that the product is free of defects or a written promise to refund, repair, or replace defective goods. [See 15 USC §2301(6).] Remedies include damages for failing to honor a written warranty or service contract or for violating disclosure provisions. [See 15 USC §2310(d).] Except for some labeling and disclosure requirements, the federal Act does not preempt state law. [See 15 USC §2311.]

1. WHAT THIS WARRANTY COVERS:

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

- (1) The limited warranty for the product extends for TWELVE (12) MONTHS beginning on the date of purchase of the product with valid proof of purchase, or absent valid proof of purchase, FIFTEEN (15) MONTHS from date of manufacture as determined by the unit's manufacture date code.
- (2) The limited warranty extends only to the original purchaser of the product and is not assignable or transferable to any subsequent purchaser/end user.
- (3) This warranty is good only to the original purchaser of the product during the warranty period as long as it is in the U.S., including Alaska, Hawaii, U.S. Territories and Canada.
- (4) The external housing and cosmetic parts shall be free of defects at the time of shipment and, therefore, shall not be covered under these limited warranty terms.
- (5) Upon request from LG, the consumer must provide information to reasonably prove the date of purchase.
- (6) The customer shall bear the cost of shipping the product to the Customer Service Department of LG. LG shall bear the cost of shipping the product back to the consumer after the completion of service under this limited warranty.

2. WHAT THIS WARRANTY DOES NOT COVER:

- (1) Defects or damages resulting from use of the product in other than its normal and customary manner.
- (2) Defects or damages from abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized connections, unauthorized repair, misuse, neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of LG, including damage caused by shipping, blown fuses, spills of food or liquid.
- (3) Breakage or damage to antennas unless caused directly by defects in material or workmanship.

- (4) That the Customer Service Department at LG was not notified by consumer of the alleged defect or malfunction of the product during the applicable limited warranty period.
- (5) Products which have had the serial number removed or made illegible.
- (6) This limited warranty is in lieu of all other warranties, express or implied either in fact or by operations of law, statutory or otherwise, including, but not limited to any implied warranty of marketability or fitness for a particular use.
- (7) Damage resulting from use of non LG approved accessories.
- (8) All plastic surfaces and all other externally exposed parts that are scratched or damaged due to normal customer use.
- (9) Products operated outside published maximum ratings.
- (10) Products used or obtained in a rental program.
- (11) Consumables (such as fuses).

3. WHAT LG WILL DO:

LG will, at its sole option, either repair, replace or refund the purchase price of any unit that is covered under this limited warranty. LG may choose at its option to use functionally equivalent re-conditioned, refurbished or new units or parts or any units. In addition, LG will not re-install or back-up any data, applications or software that you have added to your device. It is therefore recommended that you back-up any such data or information prior to sending the unit to LG to avoid the permanent loss of such information.

4. STATE LAW RIGHTS:

No other express warranty is applicable to this product. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN. LG SHALL NOT BE LIABLE FOR THE LOSS OF THE USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE, THIS PRODUCT OR FOR ANY BREACH

OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THIS PRODUCT.

Some states do not allow the exclusive limitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

5. HOW TO GET WARRANTY SERVICE:

To obtain warranty service, please call or fax to the following telephone numbers from anywhere in the continental United States:

Tel. 1-800-793-8896 or Fax. 1-800-448-4026

Or visit <http://www.lg.com/us/support>.

Correspondence may also be mailed to:

LG Electronics Service- Mobile Handsets, P.O. Box 240007, Huntsville, AL 35824

DO NOT RETURN YOUR PRODUCT TO THE ABOVE ADDRESS.

Please call or write for the location of the LG authorized service center nearest you and for the procedures for obtaining warranty claims.

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 MobileComm U.S.A., 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, USA, Inc. Attn: Legal Department- Arbitration 1000 Sylvan Ave, Englewood Cliffs 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. 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, USA, Inc. Attn: Legal Department-Arbitration 1000 Sylvan Avenue 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, 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 > 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.