



SGH-Z170

User's Guide





Important safety precautions

- ☒ Failure to comply with the following precautions may be dangerous or illegal.

Copyright information

- Bluetooth® is a registered trademark of the Bluetooth SIG, Inc. worldwide.
Bluetooth QD ID: B012677
- Java™ is a trademark or registered trademark of Sun Microsystems, Inc.

Drive safely at all times

Do not use a hand-held phone while driving. Park your vehicle first.

Switch off the phone when refuelling

Do not use the phone at a refuelling point (service station) or near fuels or chemicals.

Switch off in an aircraft

Wireless phones can cause interference. Using them in an aircraft is both illegal and dangerous.

Switch off the phone near all medical equipment

Hospitals or health care facilities may be using equipment that could be sensitive to external radio frequency energy. Follow any regulations or rules in force.

Interference

All wireless phones may be subject to interference, which could affect their performance.

Be aware of special regulations

Meet any special regulations in force in any area and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger.

Water resistance

Your phone is not water-resistant. Keep it dry.

Sensible use

Use only in the normal position (held to your ear). Avoid unnecessary contact with the antenna when the phone is switched on.

Emergency calls

Key in the emergency number for your present location, then press .

Keep your phone away from small children

Keep the phone and all its parts, including accessories, out of the reach of small children.

Accessories and batteries

Use only Samsung-approved batteries and accessories, such as headsets and PC data cables. Use of any unauthorised accessories could damage you or your phone and may be dangerous.

- The phone could explode if the battery is replaced with an incorrect type.
- Dispose of used batteries according to the manufacturer's instructions.



At very high volumes, prolonged listening to a headset can damage your hearing.

Qualified service

Only qualified service personnel may repair your phone.

For more detailed safety information, see "Health and safety information" on page 35.

About this Guide

This User's Guide provides you with condensed information about how to use your phone.

In this guide, the following instruction icons appear:



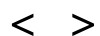
Indicates that you need to pay careful attention to the subsequent information regarding safety or phone features.



Indicates that you need to press the Navigation keys to scroll to the specified option and then select it.



Indicates a key on the phone. For example, [↶]



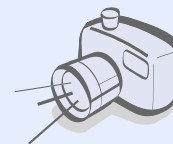
Indicates a soft key, whose function is displayed on the phone screen. For example, <**Select**>



- **3G**

Your phone is capable of operating in a 3G environment, allowing much greater data transfer speed, video streaming, and video conferencing.

Special features of your phone



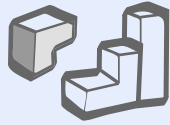
- **Camera and camcorder**

Use the camera module on your phone to take a photo or record a video.



- **Media player**

Play media files on your phone. You can enjoy high quality videos and music.



- **Java**

Enjoy Java-based games and download new games.



- **Image editor**

Edit or decorate your photos.



- **Digital data printing**

Print images, messages, and personal data directly from your phone.



- **Bluetooth**

Transfer media files and personal data, and connect to other devices using wireless Bluetooth technology.



- **File viewer**

Open documents in various formats on the phone without corruption.



- **Web browser**

Access the wireless web to get up-to-the-minute information and a wide variety of media content.



- **Calendar**

Keep track of your daily, weekly, and monthly schedule.



- **Alarm**

Use your phone as an alarm clock to wake you up in the morning or notify you of an impending event.

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Overview of menu functions

To access Menu mode, press [**OK**] in Idle mode.

1 Call log

2 Phonebook

3 Media player

4 Internet

- 1 Go to homepage
- 2 Enter URL
- 3 Bookmarks
- 4 Saved pages
- 5 History
- 6 Advanced
- 7 Browser settings

5 Messages

- 1 Create message
- 2 Inbox
- 3 Email inbox
- 4 Drafts
- 5 Outbox
- 6 Sentbox
- 7 My folders
- 8 Templates
- 9 Delete all
- 10 Messages settings
- 11 Memory status

6 My files

Images
Videos
Sounds
Games and more
Other files
Memory status

7 Calendar

8 Camera

9 Google

* Applications

- 1 Memo
- 2 Task
- 3 Voice recorder
- 4 World clock
- 5 Calculator
- 6 Converter
- 7 Timer
- 8 Stopwatch
- 9 SIM application toolkit¹

0 Alarms

Settings

- 1 Phone profiles
- 2 Time & date
- 3 Display & light settings
- 4 Phone settings
- 5 Call settings
- 6 Security
- 7 Application settings
- 8 Network settings
- 9 Memory settings
- 10 Master reset

1. Available only if supported by your USIM or SIM card.

Unpack

Make sure you have each item

- Phone
- Travel adapter
- Battery
- User's Guide

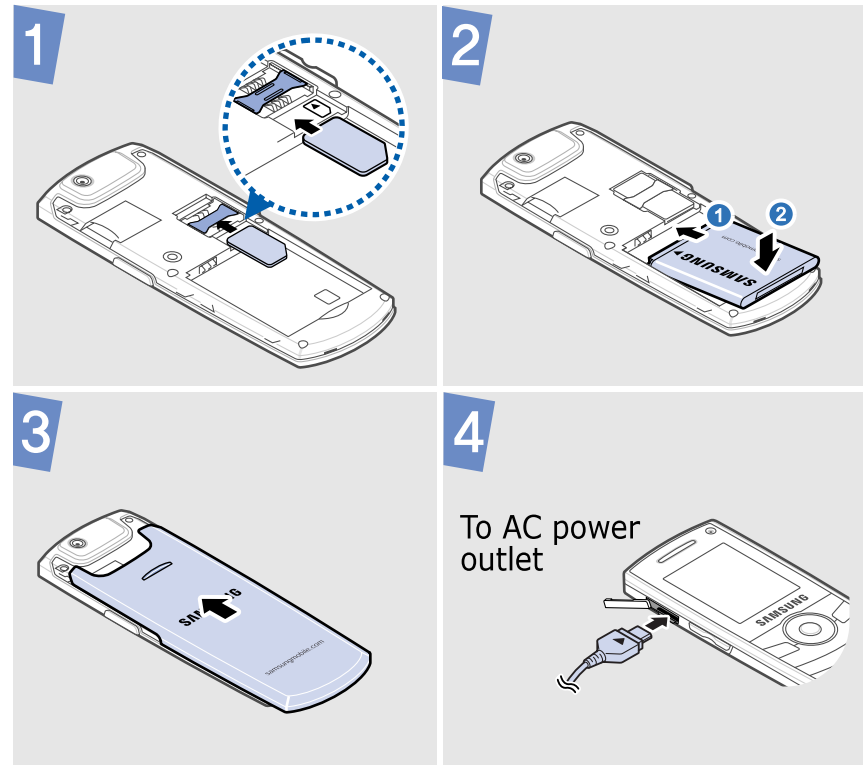
You can obtain various accessories from your local Samsung dealer.

- ☒ The items supplied with your phone and the accessories available at your Samsung dealer may vary, depending on your country or service provider.

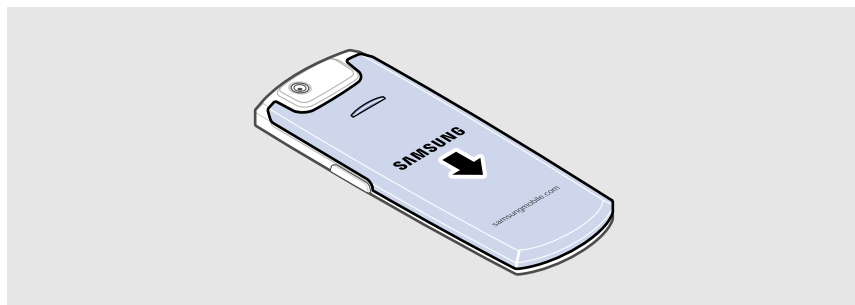
Get started

First steps to operating your phone

Assemble and charge the phone



Removing the battery cover

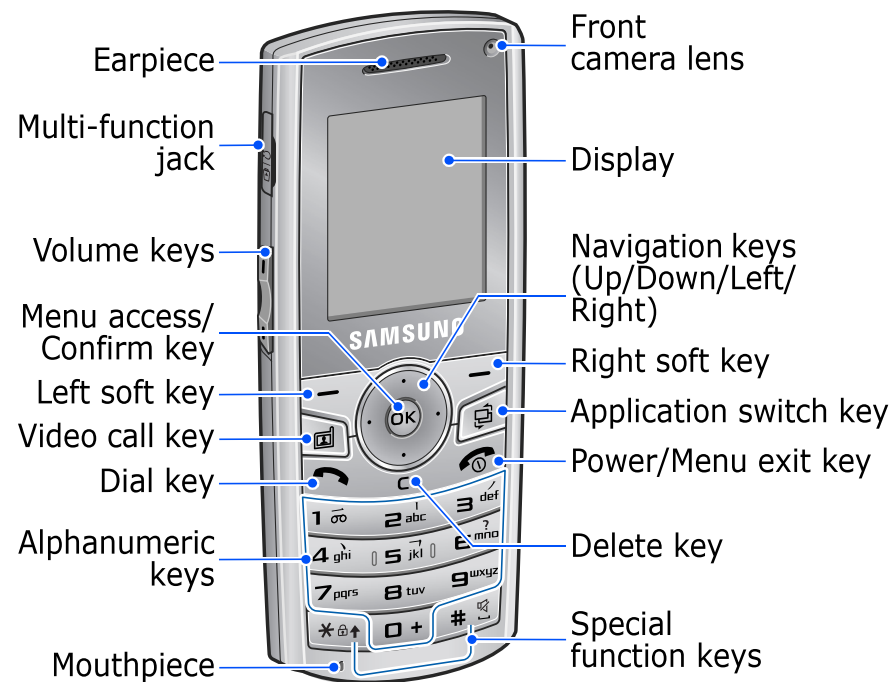


Power on or off

Switch on	1. Press and hold []. 2. If necessary, enter the PIN and press <Confirm>.
Switch off	Press and hold [].

Phone layout

Front view



Rear view



- ☒ You can lock the keypad to prevent any unwanted phone operations from accidentally pressing any of the keys. In Idle mode, press and hold [*] and then <Yes>. To unlock the keypad, press <Unlock> and then <OK>.

Keys and icons

Keys



Perform the function indicated on the bottom line of the display.



In Idle mode, access your favourite menus directly.
In Menu mode, scroll through menu options.



In Idle mode, access Menu mode.
In Menu mode, select the highlighted menu option or confirm input.



Make a video call.



Make or answer a call.
In Idle mode, retrieve the numbers recently dialed, missed, or received.



Delete characters from the display or items in an application.



Open the application switch window to access other applications without exiting the current application.



Press and hold to switch the phone on or off.
End a call.

In Menu mode, cancel input and return the phone to Idle mode.



Enter numbers, letters, and some special characters.
In Idle mode, press and hold [1] to access your voicemail server.
Press and hold [0] to enter an international call prefix.



Enter special characters or perform special functions.



In Idle mode, press and hold [#] to activate or deactivate the Silent profile. Press and hold [*] to enter a pause between numbers.



Adjust the phone volume.



In Idle mode, press and hold to turn on the camera.
In Camera mode, take a photo or record a video.

Icons

The following icons may appear on the top line of the screen to indicate your phone's status. Depending on your country or service provider, the icons shown on the display may vary.



Signal strength



GPRS (2.5G) network



Connecting to GPRS (2.5G) network or transferring data in GPRS (2.5G) network



EDGE network

	Connecting to EDGE network or transferring data in EDGE network
	UMTS (3G) network
	Connecting to UMTS (3G) network or transferring data in UMTS (3G) network
	Voice call in progress
	Out of your service area
	Video call in progress
	Out of your service area
	Roaming network
	Bluetooth active
	Connected with PC via a USB port
	Browsing Internet

	Connected to secured web page
	Memory card inserted
	New message:  : Text message  : Multimedia message  : Email  : Voicemail  : Push message  : Configuration message
	Profile setting:  : Normal  : Silent  : Driving  : Meeting  : Outdoor  : Offline
	Battery power level

Access menu functions

Select an option	1. Press a desired soft key. 2. Press the Navigation keys to move to the next or previous option. 3. Press <Select>, <OK>, or [OK] to confirm the function displayed or option highlighted. 4. Press <Back> to move up one level. Press [] to return to Idle mode.
Use menu numbers	Press the number key corresponding to the option you want.

Enter text

Change the text input mode	1. In the text entry screen, press the right soft key. 2. Select the mode you want.
Chinese Pinyin mode	To enter a word: 1. Press the keys corresponding to the Chinese phonetic spelling, pinyin. 2. Press [Left] or [Right] to select alternative pinyins. 3. If necessary, press [Up] or [Down] to find the character you want. 4. Press [1]. Numbers are added to each character. 5. Press the number key corresponding to the character.

To use the tones:

1. Press the keys corresponding to the pinyin of the letter you need.
2. If necessary, press [Left] or [Right] to select the pinyin.
3. Press [✱] for tones.
4. If necessary, press [Up] or [Down] to find the character you want.
5. Press [1].

Press the number key corresponding to the character.

Rapid character entry

To enter the word *zhong guo* (中国), enter the first character using the following keystrokes; [9], [4], [6], [6], [4], [1], and [1]. You do not have to complete the Pinyin spelling to include *guo* (国). The character displays automatically.

Chinese Stroke mode

To enter a word:

1. Press the keys corresponding to a character's component strokes.
2. If necessary, press [Up] or [Down] to find the character you want.
3. Press the number key corresponding to the character you want.

ABC mode	To enter a word: Press the appropriate key until the character you want appears on the display.
T9 mode	To enter a word: 1. Press [2] to [9] to start entering a word. 2. Enter the whole word before editing or deleting characters. 3. When the word displays correctly, press [#] to insert a space. Otherwise, press [0] to display alternative word choices.

Number mode	Press the keys corresponding to the digits you want.
Symbol mode	Press the corresponding number key to select a symbol.
Other operations	• Press [1] to enter punctuation marks or special characters. • Press [#] to insert a space. • Press the Navigation keys to move the cursor. • Press [C] to delete characters one by one. • Press and hold [C] to clear the entire display.

Customise your phone

Display language

1. In Idle mode, press [**OK**] and select **Settings** → **Phone settings** → **Language** → **Screen text**.
2. Select a language.
3. Press <**Save**>.

Call ringer melody

To change the profile properties:

1. In Idle mode, press [**OK**] and select **Settings** → **Phone profiles**.
2. Scroll to the sound profile you are using.
3. Press <**Options**> and select **Edit**.

4. Select **Voice call ringtone** → a category → a ringtone.
5. Select **Video call ringtone** → a category → a ringtone.
6. Press <**Options**> and select **Save**.

To change the sound profile:

1. In Idle mode, press [**OK**] and select **Settings** → **Phone profiles**.
2. Select the profile you want.

Key tone volume

In Idle mode, press [Volume] to adjust the key tone volume.

Idle mode wallpaper

1. In Idle mode, press [**OK**] and select **Settings** → **Display & light settings** → **Display settings** → **Wallpaper** → **Pictures** → **Images**.
2. Select an image category.
3. Select an image.
4. Press <**Set**>.

Menu shortcuts

1. In Idle mode, press [**OK**] and select **Settings** → **Phone settings** → **Shortcuts**.
2. Select a key.
3. Select a menu to be assigned to the key.

Silent profile

You can activate the Silent profile to avoid disturbing other people. In Idle mode, press and hold [**#**].

Phone lock

1. In Idle mode, press [**OK**] and select **Settings** → **Security** → **Phone lock**.
2. Select **On**.
3. Enter a new 4- to 8-digit password and press <**Confirm**>.
4. Enter the new password again and press <**Confirm**>.

Step outside the phone

Begin with call functions, camera, media player, web browser, and other special features

Make or answer calls

Make a call

To make a voice call:

1. In Idle mode, enter an area code and phone number.
2. Press [].
Press [Volume] to adjust the volume.
3. Press [] to end the call.

To make a video call:

1. In Idle mode, enter an area code and phone number.
2. Press [].
3. Press [] to end the call.

Answer a call

1. When the phone rings, press [].
If it is a video call, press <**Show me**> to allow the caller to see you via the camera.
2. Press [] to end the call.

Use the speakerphone feature

During a voice call, press [**OK**] and then <**Yes**> to activate the speaker.
Press [**OK**] again to switch back to the earpiece.

Make a multi-party call

1. During a call, call the second participant.
The first call is put on hold.
2. Press <**Options**> and select **Join**.
3. Repeat step 1 and 2 to add more participants.
4. During a multi-party call:
 - Press <**Options**> and select **Split** to have a private conversation with one participant.
 - Press <**Options**> and select **End** → **Select participant** to drop one participant.
5. Press [

Use the camera

Take a photo

1. In Idle mode, press and hold [Camera] to turn on the camera.
2. Aim the lens at the subject and make any desired adjustments.
3. Press [**OK**] or [Camera] to take a photo. The photo is saved automatically.
4. Press < > to take another photo.

View a photo

1. In Idle mode, press [**OK**] and select **My files** → **Images** → **My photos**.
2. Select the photo you want.

Record a video

1. In Idle mode, press and hold [Camera] to turn on the camera.
2. Press [**1**] to switch to Record mode.
3. Press [**OK**] or [Camera] to start recording.
4. Press [**OK**] or [Camera] to stop recording. The video is saved automatically.
5. Press <**Back**> to record another video.

View a video

1. In Idle mode, press [**OK**] and select **My files** → **Videos** → **My video clips**.
2. Select the video you want.

Play music

Copy music files to the phone

Use these methods:

- Download from the wireless web.
- Download from a PC using the optional Samsung PC Studio. See Samsung PC Studio User's Guide.
- Receive via Bluetooth.
- Copy to a memory card and insert the card into the phone.

Create a playlist

1. In Idle mode, press [**OK**] and select **Media player**.
2. Scroll to the **Music** tab.
3. Press <**Options**> and select **Create playlist**.
4. Enter the name for the playlist and press [**OK**].
5. Select the playlist you just created.
6. Press <**Options**> and select **Add** → **Playlist** or **Files**.
7. Scroll to the playlist you want, or press [**OK**] to select the files you want.
8. Press <**Select**> or <**Add**>.

Play music files

1. Select the file you want to play.
2. During playback, use the following keys:
 - **OK**: pause or resume playback.
 - Left: return to the previous file. Press and hold to scan backward in a file.
 - Right: skip to the next file. Press and hold to scan forward in a file.
 - Up: open the current playlist.
 - Volume: adjust the volume.
3. Press [Down] to stop playback.

Browse the web

Launch the web browser

In Idle mode, press right soft key. The homepage of your service provider opens.

Navigate the web

- To scroll through browser items, press [Up] or [Down].
- To select an item, press [**OK**].
- To return to the previous page, press <**Back**>.
- To access browser options, press <**Options**>.

Use Phonebook

Add a contact

1. In Idle mode, enter a phone number and press <**Options**>.
2. Select **Add to Phonebook** → a memory location → **New**.
3. For **Phone**, select a number type.
4. Specify contact information.
5. Press [**OK**] to save the contact.

Find a contact

1. In Idle mode, press [**OK**] and select **Phonebook**.
2. Enter the first few letters of the name you want.

-
3. Select a contact.
 4. Scroll to a number and press [] to dial, or press [**OK**] and select **Edit** to edit contact information.

Send messages

Send a text message

1. In Idle mode, press </> and select **Create message** → **Message**.
2. Press [**OK**] and enter the message text.
3. Press <**Options**> and select **OK**.
4. Move to the recipient field.
5. Enter destination numbers.
6. Press <**Options**> and select **Send** to send the message.

Send a multimedia message

1. In Idle mode, press </> and select **Create message** → **Message**.
2. Press [**OK**] and enter the message text.
3. Press <**Options**> and select **Add item, Create item**, or **Add attachment**.
4. Add a media file, contact, calendar item, or bookmark item.
5. Press <**Options**> and select **OK**.
6. Press <**Options**> and select **Add subject**.
7. Press <**Options**> and select **Edit**.
8. Enter the message subject and press [**OK**].
9. Press [Up] until the recipient field highlights.

-
10. Enter destination numbers or email addresses.
 11. Press <**Options**> and select **Send** to send the message.

Send an email

1. In Idle mode, press < > and select **Create message** → **Email**.
2. Press [**OK**] and enter the email text.
3. Press <**Options**> and select **OK**.
4. Press <**Options**> and select **Add attachment** or **Create item**.
5. Add a media file, contact, calendar item, or bookmark item.
6. Press [Up] to move to the subject field.

-
7. Press [**OK**] and enter the email subject.
 8. Press <**Options**> and select **OK**.
 9. Press [Up] until the recipient field highlights.
 10. Enter email addresses.
 11. Press <**Options**> and select **Send** to send the email.

View messages

View a text message

1. In Idle mode, press <☒> and select **Inbox**.
2. Select a text message.

View a multimedia message

1. In Idle mode, press <☒> and select **Inbox**.
2. Select a multimedia message.

View an email

1. In Idle mode, press <☒> and select **Email inbox**.
2. Press <**Options**> and select **Download**.
3. Select an email or a header.
4. If you selected a header, press <**Options**> and select **Retrieve** to view the body of the email.

Use Bluetooth

Your phone is equipped with Bluetooth technology, enabling you to connect the phone wirelessly to other Bluetooth devices and exchange data with them, talk hands-free, or control the phone remotely.

Turn on Bluetooth

1. In Idle mode, press [**OK**] and select **Settings** → **Network settings** → **Bluetooth** → **Activation** → **On**.
2. Select **My phone's visibility** → **On** to allow other devices to locate your phone.

Search for and pair with a Bluetooth device

1. In Idle mode, press [**OK**] and select **Settings** → **Network settings** → **Bluetooth** → **My devices** → **Search new device**.
Select a device.

2. Enter a Bluetooth PIN or the other device's Bluetooth PIN, if it has one, and press **<OK>**.
When the owner of the other device enters the same code, pairing is complete.

Send data

1. Access an application, such as **Phonebook**, **My files**, **Calendar**, **Memo**, or **Task**.
2. Select an item.
3. Press **<Options>** and select **Send contact detail via**, **Send via**, or **Send → Bluetooth** or **Via bluetooth**.
4. Search for and select a device.
5. If necessary, enter the Bluetooth PIN and press **<OK>**.

Receive data

1. When a device attempts to access your phone, press **<Yes>** to permit the connection.
2. If necessary, press **<Yes>** to confirm that you are willing to receive.

Switch applications

You can switch to other applications from a menu, without closing the menu screen you are using.

Switch to an application

1. While using a menu, press [⌂].
2. Select an application.

Available applications

- **Call**: open the dialling screen.
- **Messages**: access the **Messages** menu.
- **Internet**: launch the web browser.

**Close all
running
applications**

1. Press [.
2. Scroll to **End all?**.
3. Press <**Yes**>.

Use a memory card

You can use a memory card to increase your phone's memory capacity.

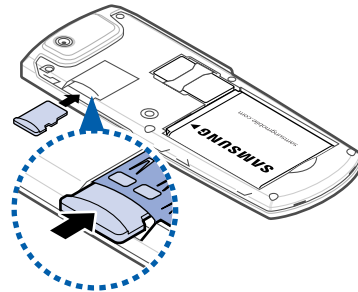
**Important
memory
card
information**

- Frequent erasing and writing will shorten a card's lifespan.
- Do not remove a card from the phone or turn off the phone while data is being accessed or transferred. This could result in loss of data and/or damage to the card or phone.
- Do not subject cards to strong shocks.

- Do not touch card terminals with your fingers or metal objects. If dirty, wipe the card with a soft cloth.
- Keep cards away from small children or pets.
- Do not expose cards in a place subject to electrostatic discharge and/or electromagnetic interference.

**Insert a
memory
card**

1. Remove the battery cover.
2. Insert the card into the card slot, with the label side face up.



3. Press the card until it locks into place.
4. Attach the battery cover.

**Remove the
memory
card**

1. Press the card so that it is disengaged from the phone.
2. Remove the card from the slot.

Menu functions

All menu options listed

This section provides brief explanations of menu functions on your phone.

Call log

Check the most recent calls dialled, received, or missed.

Phonebook

Search for contact information stored in Phonebook.

Media player

Listen to music or play video.

Internet

Menu	Description
Go to homepage	Connect your phone to the network and load the homepage of the wireless web service provider.
Enter URL	Enter a URL address and access the associated web page.
Bookmarks	Save URL addresses in order to quickly access web pages.
Saved pages	Access the list of pages you have saved while online.
History	Access the list of pages you have accessed recently.

Menu	Description
Advanced	Clear the cache. Delete cookies or set whether or not they are stored. Change the settings for the web browser and access version and copyright information about it.
Browser settings	Select a connection profile to be used for accessing the wireless web.

Messages

Menu	Description
Create message	Create and send text, multimedia, or email messages.

Menu	Description
Inbox	Access messages that you have received.
Email inbox	Access emails that you have received.
Drafts	Access messages that you have saved to send at a later time.
Outbox	Access messages that the phone is attempting to send or has failed to send.
Sentbox	Access messages that you have sent.
My folders	Create new folders and organise your messages.
Templates	Make and use templates of frequently used messages or passages.

Menu	Description
Delete all	Delete messages in each message folder all at once.
Messages settings	Set up various options for using the messaging services.
Memory status	Check information about the memory currently in use.

My files

Menu	Description
Images, Videos, Sounds, Other files	Access media files and other files stored in the phone's memory.
Games and more	Access the Java games and download Java applications.

Menu	Description
Memory status	Check information about the memory currently in use.

Calendar

Keep track of your schedule.

Camera

Use the camera embedded in your phone to take photos and record videos.

Google

Launch the Google search engine to find information, news, images, or local services from around the web. You can also use the email service.

Applications

Menu	Description
Memo	Make memos for things that are important and manage them.
Task	Make a list of tasks you need to complete.
Voice recorder	Record voice memos and any other sounds.
World clock	Set your local time zone and find out the current time in another part of the world.
Calculator	Perform arithmetic functions.
Converter	Do conversions, such as length and temperature.

Menu	Description
Timer	Set a period of time for the phone to count down.
Stopwatch	Measure elapsed time.
SIM application toolkit	Use a variety of additional services offered by your service provider. Depending on your USIM or SIM card, this menu may be available but labelled differently.

Alarms

Set a wake-up call to wake you up in the morning or an alarm to alert you to an event at a specific time.

Settings

Menu	Description
Phone profiles	Change the sound settings of the phone for different events or situations.
Time & date	Change the time and date displayed on your phone.
Display & light settings → Display settings → Wallpaper	Change the background image that is displayed in Idle mode.
Display & light settings → Display settings → Greeting message	Enter the greeting that is displayed briefly on the display when the phone is switched on.

Menu	Description
Display & light settings → Display settings → Main menu style	Select a display style for the main menu screen.
Display & light settings → Display settings → Pop up list menu	Display the pop-up list that shows the menu options.
Display & light settings → Display settings → Dialling display	Customise the settings for the display while dialling.
Display & light settings → Display settings → Clock display	Set the dual clock, one for your local time zone and the other for a time zone of your choice, to be displayed in Idle mode.

Menu	Description
Display & light settings → Light settings → LCD brightness	Adjust the brightness of the display for varying lighting conditions.
Display & light settings → Light settings → Backlight time	Select the length of time the backlight or display stays on when the phone is not used.
Display & light settings → Light settings → Keypad light	Set how the phone controls the use of the keypad light.
Phone settings → Language	Select a language for the display text.
Phone settings → Shortcuts	Use the Navigation keys as shortcuts to access specific menus directly from Idle mode.

Menu	Description
Phone settings → Own number	Check your phone numbers or assign a name to each of the numbers.
Phone settings → Volume key function	Set how the phone reacts if you press and hold [Volume] when a call comes in.
Phone settings → Auto keypad lock	Set the phone to lock the keypad automatically when the display turns off.
Call settings	Set options for call functions.
Security → Phone lock	Activate your phone password to protect your phone against unauthorised use.

Menu	Description
Security → SIM lock	Set the phone to work only with the current USIM or SIM card by assigning a SIM lock password.
Security → PIN lock	Activate your PIN to protect your USIM or SIM card against unauthorised use.
Security → Privacy lock	Lock access to messages, files, call logs, contacts, calendar, memo, or tasks.
Security → Fixed dialling mode	Set the phone to restrict calls to a limited set of phone numbers, if supported by your USIM or SIM card.
Security → Change phone password	Change the phone password.

Menu	Description
Security → Change PIN code	Change the PIN.
Security → Change PIN2 code	Change the PIN2.
Security → Mobile tracker	Set the phone to send the preset tracking message to your family or friends when someone tries to use your phone with another USIM or SIM card. This feature may be unavailable due to certain features supported by your service provider.
Application settings	Customise the settings for using applications available on the phone.

Menu	Description
Network settings → Bluetooth	Connect the phone wirelessly to other Bluetooth devices.
Network settings → Network selection	Select the network to be used while roaming outside of your home area, or let the network be chosen automatically.
Network settings → Network mode	Select the network you use.
Network settings → Preferred networks	Add a new network to your preferred network list, if your USIM or SIM card supports it.
Network settings → Connections	Create and customise the profiles containing the settings for connecting your phone to the network.

Menu	Description
Memory settings	Change the settings related with the memory and check information about the memory currently in use. You can also clear the memory.
Master reset	Reset the phone's settings you have changed.

Health and safety information

SAR certification information

This phone meets European Union (EU) requirements concerning exposure to radio waves. Your mobile phone is a radio transmitter and receiver. It is designed and manufactured to not exceed the limits for exposure to radio-frequency (RF) energy, as recommended by the EU Council. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines were developed by independent scientific organisations through the periodic and thorough evaluation of scientific studies. The limits include a substantial safety margin designed to ensure the safety of all persons, regardless of age and health.

The exposure standard for mobile phones employs a unit of measurement known as Specific Absorption Rate (SAR). The SAR limit recommended by the EU Council is 2.0 W/kg.¹

1. The SAR limit for mobile phones used by the public is 2.0 watts/kilogram (W/kg) averaged over ten grams of body tissue. The limit incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements. The SAR values may vary, depending on national reporting requirements and the network band.

The highest SAR value for this model phone was 0.301 W/kg.

SAR tests are conducted using standard operating positions with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a base station, the lower the power output of the phone.

Before a new model phone is available for sale to the public, compliance with the European R&TTE Directive must be shown. This directive includes as one of its essential requirements the protection of the health and safety of the user and any other person.

Precautions when using batteries

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

- Battery charging time depends on the remaining battery charge, the type of battery, and the charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.
- Use only Samsung-approved batteries, and recharge your battery only with Samsung-approved chargers. Disconnect the charger from the power source when it is not in use. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.
- Do not leave the battery in hot or cold places because the capacity and lifetime of the battery will be reduced. Try to keep the battery at room temperature. A phone with a hot or cold battery may not work temporarily, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0° C (32° F).

- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object like a coin, clip or pen causes a direct connection between the + and – terminals of the battery (metal strips on the battery). For example, do not carry a spare battery in a pocket or bag where the battery may contact metal objects. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.
- Dispose of used batteries in accordance with local regulations. Always recycle. Do not dispose of batteries in a fire.

Road safety

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

When you are driving a car, driving is your first responsibility. When using your wireless phone while driving, follow local regulations in the country or region you are in.

Operating environment

Remember to follow any special regulations in force in the area you are in, and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger.

When connecting the phone or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

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

Electronic devices

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

Pacemakers

Pacemaker manufacturers recommend that a minimum distance of 15 cm (6 inches) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research and recommendations of Wireless Technology Research. If you have any reason to suspect that interference is taking place, switch off your phone immediately.

Hearing aids

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

Other medical devices

If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy.

Your physician may be able to assist you in obtaining this information.

Switch off your phone in health care facilities when regulations posted in these areas instruct you to do so.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.

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

Posted facilities

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

Potentially explosive environments

Switch off your phone when in any area with a potentially explosive atmosphere, and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

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

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include the areas below decks on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas, such as propane or butane, areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Emergency calls

This phone, like any wireless phone, operates using radio signals, wireless, and landline networks as well as user-programmed functions, which cannot guarantee connection in all conditions. Therefore, you should never rely solely on any wireless phone for essential communications like medical emergencies.

To make or receive calls, the phone must be switched on and in a service area with adequate signal strength. Emergency calls may not be possible on all wireless phone networks or when certain network services and/or phone features are in use. Check with local service providers.

To make an emergency call:

1. Switch on the phone.
2. Key in the emergency number for your present location. Emergency numbers vary by location.
3. Press [].

Certain features like Call Barring may need to be deactivated before you can make an emergency call. Consult this document and your local cellular service provider.

Other important safety information

- Only qualified personnel should service the phone or install the phone in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless phone equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the phone, its parts, or accessories.

- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. Improperly installed wireless equipment could result in serious injury if the air bag inflates.
- Switch off your phone before boarding an aircraft. It is dangerous and illegal to use wireless phones in an aircraft because they can interfere with the operation of the aircraft.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Care and maintenance

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

- Keep your phone and all its parts and accessories out of the reach of small children and pets. They may accidentally damage these things or choke on small parts.
- Keep the phone dry. Precipitation, humidity, and liquids contain minerals that corrode electronic circuits.

- Do not use the phone with a wet hand. Doing so may cause an electric shock to you or damage to the phone.
- Do not use or store the phone in dusty, dirty areas, as its moving parts may be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When the phone warms up to its normal operating temperature, moisture can form inside the phone, which may damage the phone's electronic circuit boards.
- Do not drop, knock, or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone. Wipe it with a soft cloth.
- Do not paint the phone. Paint can clog the device's moving parts and prevent proper operation.
- Do not put the phone in or on heating devices, such as a microwave oven, stove, or radiator. The phone may explode when overheated.

- When the phone or battery gets wet, the label indicating water damage inside the phone changes colour. In this case, phone repairs are no longer guaranteed by the manufacturer's warranty, even if the warranty for your phone has not expired.
- If your phone has a flash or light, do not use it too close to the eyes of people or animals. This may cause damage to their eyes.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas or modified accessories may damage the phone and violate regulations governing radio devices.
- If the phone, battery, charger, or any accessory is not working properly, take it to your nearest qualified service facility. The personnel there will assist you, and if necessary, arrange for service.

- * Depending on the software installed or your service provider or country, some of the descriptions in this guide may not match your phone exactly.
- * Depending on your country, your phone and accessories may appear different from the illustrations in this guide.

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