- * 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.

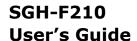
SAMSUNG ELECTRONICS



World Wide Web http://www.samsungmobile.com

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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: B012860
- Java™ is a trademark or registered trademark of Sun Microsystems, Inc.
- Windows Media Player® is a registered trademark of Microsoft Corporation.

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 $\boxed{}$.

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

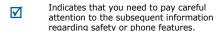
Only qualified service personnel may repair your phone.

For more detailed safety information, see "Health and safety information" on page 38.

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 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, < Menu>



Camera and camcorder

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

Special features of your phone



Synchronisation with Windows Media Player

Transfer music files to your phone directly from the Windows Media Player.



Music player

Play music files using your phone as a music player. You can use other phone functions while listening to music.



FM radio

Listen to your favourite radio stations anytime, anywhere.



Offline mode

Switch your phone to Offline mode to use its non-wireless functions while on an aeroplane.



Bluetooth

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



Web browser

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



Multimedia Message Service (MMS)

Send and receive MMS messages with a combination of text, images, video, and audio.

Contents

Unpack	6
Make sure you have each item	
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Assemble and charge the phone Power on or off	7 7 8 1 2
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Begin with call functions, music player, web browse and other special features Make or answer calls	•

Overview of menu functions



To access Menu mode, press < Menu > in Idle mode.

1 Call log

- 1 Recent contacts
- 2 Missed calls
- 3 Dialled calls 4 Received calls
- 5 Delete all
- 6 Call manager

2 Phonebook

- 1 Contact list
- 2 Create contact
- 3 Group 4 Speed dial
- 4 Speed diai 5 My namecard
- Own numbers
- 7 Management
- 8 Service number¹

3 Music

L Music player 2 Music Recognition²

4 Applications

1 Camera

- 3 Calendar
- 4 Voice recorder 5 Java world
- 6 World clock
- 7 Alarm 8 Calculator
- 8 Calculator 9 Convertor
- 10 Timer
- 11 Stopwatch
- 12 Memo
 13 SIM application toolkit¹

5 Browser

- l Home
- 2 Enter URL
- 3 Bookmarks
- 4 Saved pages
- 5 History 6 Browser settings
- 7 Streaming settings³

6 Messages

- 1 Create message
- 2 My messages
- 3 Templates 4 Delete all
- Settings Memory status

7 My files

- 1 Images 2 Videos
- Music Sounds
- 5 Other files
- 6 Memory card4 7 Memory status

8 Settings

- 1 Time and date
- 2 Phone settings
- 3 Display settings4 Sound settings
- 5 Light settings
- 6 Setup wizard 7 Network services
- 8 Bluetooth
- 9 Security 10 Connection settings
- 11 Reset settings
- Available only if supported by your SIM card.
- Available only if supported by your country.
- Available only if supported by your service provider.
- Available only if a memory card is inserted.

Unpack

Make sure you have each item

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

You can obtain various accessories from your local Samsung dealer.

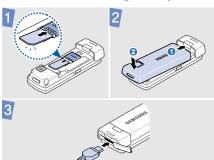


The items supplied with your phone and the accessories available at your Samsung dealer may vary, depending on your country or service provider.

Get started

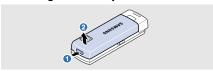
First steps to operating your phone

Assemble and charge the phone

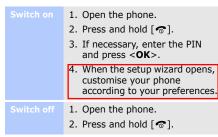


To AC power outlet

Removing the battery



Power on or off



Phone layout

Front view



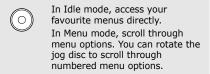


Rear view



Keys and icons

Keys



In Idle mode, launch the web browser. With the phone closed, launch the music player.

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

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

8

In Idle mode, press and hold to turn on the camera.

In Camera mode, take a photo or record a video.

Make or answer a call.

In Idle mode, retrieve the numbers recently dialled, missed, or received.

Delete characters from the display or items in an applications.

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 Silent mode. Press and hold [*] to enter a pause between numbers.

Adjust the phone volume.

In the music player, with the phone closed, lock the exposed keys.

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.

Tadl	Signal strength
6	Call in progress
×	Out of your service area or Offline mode
9	Music playback in progress
9	Music playback paused
⊠	New message: ■

Call diverting feature active
Bluetooth hands-free car kit or headset connected
Bluetooth active
GPRS (2.5G) network
Connecting to GPRS (2.5G) network
Transferring data in GPRS (2.5G) network
EDGE network
Connecting to EDGE network
Transferring data in EDGE network
Home Zone
Office Zone

B	Roaming network
6	Connected to secured web page
	Memory card inserted
+=	FM radio on
	Alarm set
M	Silent mode (Mute)
×	Silent mode (Vibration)
Q.	Mute mode, during a call
9	Whisper mode, during a call
184	Call ringer set to vibrate
m	Battery power level

Access menu functions

Select an option	 Press a desired soft key. Press the Navigation keys to move to the next or previous option. Press <select>, <ok>, or [Centre] to confirm the function displayed or option highlighted.</ok></select> Press <back> to move up one level. Press [] to return to Idle mode. </back>
Use menu numbers	Press the number key corresponding to the option you want.

Enter text

Change the text input mode	 Press and hold [*] to select the input method you want. Press [*] to change case. Press and hold [#] to switch to Symbol mode.
ABC mode	To enter a word: Press the appropriate key until the character you want appears on the display.

	To enter a word:
	 Press [2] to [9] to start entering a word.
	Enter the whole word before editing or deleting characters.
	 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.

Press the keys corresponding to the symbols you want. • 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.
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

Customise your phone

Display language

- In Idle mode, press
 <Menu> and select
 Settings → Phone
 settings → Language.
- 2. Select a language.

Call ringer melody

- In Idle mode, press
 <Menu> and select
 Settings → Sound
 settings → Incoming call
 → Ringtone.
- 2. Select a ringtone category.
- 3. Select a ringtone.
- 4. Press <Save>.

Key tone

In Idle mode, press [+/-] to adjust the key tone volume.

Idle mode wallpaper

- In Idle mode, press
 <Menu> and select
 Settings → Display
 settings → Wallpaper →
 Main display.
- 2. Select a category.
- 3. Select an image or a video.
- 4. Press < Select >.
- Press < Save >.

Menu mode skin colour

- In Idle mode, press
 <Menu> and select
 Settings → Display
 settings → Skin.
- 2. Select a colour pattern.

Menu shortcuts

- In Idle mode, press
 Menu> and select
 Settings → Phone
 settings → Shortcuts.
- 2. Select a kev.
- 3. Select a menu to be assigned to the key.

Silent mode

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

Phone lock

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

Use an optional memory card

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 electrical noise.

Insert a memory card

- 1. Remove the battery.
- Insert the card into the card slot, with the label side face down.



3. Attach the battery.

Remove the memory card

Remove the card from the slot.

Step outside the phone

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

Make or answer calls

Make a call

- 1. In Idle mode, enter an area code and phone number.
- Press [].
 Press [+/-] to adjust the volume.

Answer a call

- 1. When the phone rings, press [].
- 2. Press [to end the call.

Make a multi-party call

- 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.
- During a multi-party call, press < Options > and select Select one:
 - Press < Options > and select Private to have a private conversation with one participant.
 - Press < Options > and select Removed to drop one participant.

Use the camera

Take a photo

- 1. In Idle mode, press and hold [窗] to turn on the camera.
- Aim the lens at the subject and make any desired adjustments.
- 3. Press [Centre] or [1831] to take a photo. The photo is saved automatically.
- Press < Preview > to take another photo.

View a photo

- In Idle mode, press
 <Menu> and select My
 files → Images → My
 photos.
- 2. Select the photo you want.

Record a video

- In Idle mode, press and hold [8] to turn on the camera.
- 2. Press [1] to switch to Record mode.
- 3. Press [Centre] or [18] to start recording.
- 4. Press [Centre], < 下>, or [图] to stop recording. The video is saved automatically.
- 5. Press < 1 > to record another video.

View a video

- In Idle mode, press
 <Menu> and select My
 files → Videos → My video
 clips.
- 2. Select the video you want.

Play music

Prepare music files

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. See the next section.
- Synchronise music files with Windows Media Player. See page 19.



To play music files on a memory card, they must be in the "Music" folder.

Copy music files to a memory card

- 1. Insert a memory card into the phone.
- 2. In Idle mode, press
 <Menu> and select
 Settings → Phone
 settings → USB setting →
 Mass storage.
- Connect your phone and PC with an optional PC data cable.
- Select Open folder to view files when a pop-up window appears on your PC.
- 5. Copy files from the PC to the "Music" folder in the memory card.
- When you have finished, disconnect the phone from the PC.

Synchronise with Windows Media Player

You can copy music files to your phone by synchronising with Windows Media Player 11.

- In Idle mode, press
 <Menu> and select
 Settings → Phone
 settings → USB setting →
 Media player.
- Connect your phone and PC with an optional PC data cable.
- Select Sync digital media files to this device when a pop-up window appears on your PC.
- 4. Enter the name of your phone and click **Finish**.

- Select and drag the music files you want to the sync list.
- Click Start Sync.
- 7. When synchronisation is finished, disconnect the phone from the PC.

Create a playlist

- From the music player screen, press <
 > and select Open playlist →
 My music .
- 2. Press <<--> and select Create playlist.
- 3. Open the phone.
- 4. Enter the title of the playlist and press **<OK>**.

- 5. Close the phone.
- Press < > to return to the music player screen.
- 7. Press<>>
- 8. Select a music category and scroll to a music file.
- Press <
 > and select Add to playlist → Selected or Multiple.
- 10.For Multiple, press < √> to select the files you want and press [Centre].
- 11.Press <**✓**> to select the added playlist and press [Centre].
- 12.Access the added playlist and press [Centre] to play music.

Play music files

- 1. Close the phone.
- When the music setup wizard opens, customise the music player settings by following onscreen instructions.
 After finishing the setup, the music player appears.
- 3. Press [Centre] to start playing music.
- 4. During playback, use the following keys:
 - Centre: pause or resume playback.

- Left: restart playback. Press it again within 3 seconds to 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.
- +/-: adjust the volume.
- in the playlist.
- <a>: access the music player options.
- ①: lock or unlock the exposed keys.

Listen to the FM radio

Listen to the radio

- Plug the connecter of the supplied headset into the multi-function jack on the phone.
- In Idle mode, press
 < Menu > and select
 Applications → FM Radio.
- 3. Close the phone.
- 4. Press [Centre] to turn on the radio.
- 5. Press [Left] or [Right] to find available radio stations.
- 6. Press [Centre] to turn off the radio.

Store radio stations

By automatic tuning:

- From the radio screen, press <
 and select Open Favourites.
- Press <
 and select Selftuning.
 Available radio stations are automatically saved.

By manual setup:

- From the radio screen, press [Left] or [Right] to find the radio station you want.
- Press <
 and select Add to Favourites.

Browse the web

Launch the web browser

In Idle mode, press [Centre]. The homepage of your service provider opens.

Navigate the web

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

Use Phonebook

Add a contact

- In Idle mode, enter a phone number and press < Options >.
- Select Save contact → a memory location → New.
- 3. For **Phone**, select a number type.
- 4. Specify contact information.
- Press < Save > or [Centre] to save the contact.

Find a contact

- 1. In Idle mode, press < Contacts > .
- 2. Enter the first few letters of the name you want.

- 3. Select a contact.
- Scroll to a number and press [] to dial, or press [Centre] to edit contact information.

Send messages

Send a text message

- In Idle mode, press
 <Menu> and select
 Messages → Create
 message → Text
 message.
- 2. Enter the message text.

- Press <Options> and select Save and send or Send only.
- 4. Enter destination numbers.
- Press [Centre] to send the message.

Send a multimedia message

- In Idle mode, press
 <Menu> and select
 Messages → Create
 message → Multimedia
 message.
- Select Subject.
- 3. Enter the message subject and press [Centre].

- Select **Image or video** and add an image or a video clip.
- Select **Sound** and add a sound clip.
- 6. Select Text.
- 7. Enter the message text and press [Centre].
- Press < Options > and select Send.
- Enter destination numbers or email addresses.
- 10.Press [Centre] to send the message.

View messages

View a text message

- In Idle mode, press <Menu> and select Messages → My messages → Inbox.
- 2. Select a text message.

View a multimedia message

- In Idle mode, press <Menu> and select Messages → My messages → Inbox.
- 2. Select a multimedia message.

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

- In Idle mode, press
 Menu> and select
 Settings → Bluetooth →
 Activation → On.
- Select My phone's visibility → On to allow other devices to locate your phone.

Search for and pair with a Bluetooth device

- In Idle mode, press
 <Menu> and select
 Settings → Bluetooth →
 My devices → Search for
 new devices.
- 2. Select a device.
- 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

- Access an application, such as Phonebook, My files, Calendar, or Memo.
- 2. Select an item.
- 3. Press <Options> and select Send via → Bluetooth.
- For sending a contact, select which data you want to send.
- Search for and select a device.
- If necessary, enter the Bluetooth PIN and press < OK>.

Receive data

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

Menu functions

All menu options listed

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

Call log

Menu	Description
Recent contacts, Missed calls, Dialled calls, Received calls	Check the most recent calls dialled, received, or missed.
Delete all	Delete all of the records in each call type.
Call manager → Call time	Check the time record for calls made and received.

Menu	Description
Call manager → Call cost	Check the cost of your calls, if supported by your SIM card.
Call manager → Reject list	Make a list of the phone numbers of callers to reject.

Phonebook

Menu	Description
Contact list	Search for contact information stored in Phonebook.
Create contact	Add a new contact to Phonebook.

Menu	Description
Group	Organise your contacts in caller groups.
Speed dial	Assign a speed dial number for your most frequently dialled numbers.
My namecard	Create a name card and send it to other people.
Own numbers	Check your phone numbers, or assign a name to each of the numbers.
Management	Manage contacts in Phonebook or change the default settings for Phonebook.

Menu	Description
Service number	View the SDN (Service Dialling Number) list assigned by your service provider, if supported by your SIM card.

Music

Menu	Description
Music player	Access and listen to all music files sorted by criteria. You can also make your own music playlists.

Menu functions

Menu	Description
Music Recognition	Download information for your music files from the online database and browse recognition results. This menu may not be available, depending on the country.

Applications

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

Description
Listen to music or news via the FM radio on your phone.
Keep track of your schedule.
Record voice memos and any other sounds.
Access Java games and applications.
Set your local time zone and find out the current time in another part of the world.

Menu	Description
Alarm	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.
Calculator	Perform arithmetic functions.
Convertor	Do conversions, such as length and temperature.
Timer	Set a period of time for the phone to count down.
Stopwatch	Measure elapsed time.
Memo	Make memos for things that are important and manage them.

Menu	Description
SIM application toolkit	Use a variety of additional services offered by your service provider. Depending on your SIM card, this menu may be available but labelled differently.

Browser

Menu	Description
Home	Connect your phone to the network and load the homepage of the wireless web service provider.

Description
Enter a URL address and access the associated web page.
Save URL addresses in order to quickly access web pages.
Access the list of pages you have saved while online.
Access the list of pages you have accessed recently.
Select a connection profile to be used for accessing the wireless web.
Select a connection profile to be used for accessing a streaming server.

Messages

Menu	Description
Create message	Create and send text or multimedia messages.
My messages	Access messages that you have received, sent, or that have failed during sending.
Templates	Make and use templates of frequently used messages or passages.
Delete all	Delete messages in each message folder all at once.
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, Music, Sounds, Other files	Access media files and other files stored in the phone's memory.
Memory card	Access the files stored on a memory card. This menu is only available when you insert a memory card into the phone.
Memory status	Check information about the memory currently in use.

Settings

Menu	Description
Time and date	Change the time and date displayed on your phone.
Phone settings → Language	Select a language for the display text.
Phone settings → Greeting message	Enter the greeting that is displayed briefly when the phone is switched on.
Phone settings → Shortcuts	Use the Navigation keys as shortcuts to access specific menus directly from Idle mode.
Phone settings → Volume key	Set how the phone reacts if you press and hold [+/-] when a call comes in.

Menu functions

Menu	Description
Phone settings → USB setting	Select a USB mode that will be used when you connect your phone to another device via USB interface.
Phone settings → Extra settings	Change additional settings for using the phone.
Phone settings → Offline mode	Switch the phone to Offline mode, in which the phone functions requiring network connection are deactivated.
Display settings → Wallpaper	Set up the idle screen on the display.
Display settings → Main menu style	Select a display style for the main menu screen.

Menu	Description
Display settings → Skin	Select a skin colour pattern for Menu mode.
Display settings → Brightness	Adjust the brightness of the display for varying lighting conditions.
Display settings → Dialing display	Customise the settings for the display while dialling.
Display settings → Clock display	Select a clock type for the display.
Display settings → Show caller information	Set the phone to display or block caller information on all missed calls and incoming messages.
Sound settings → Incoming call	Change the sound settings for incoming calls.

Menu	Description
Sound settings → Keypad tone	Select the tone that the phone sounds when you press a key.
Sound settings → Message tone	Change the sound settings for incoming messages individually according to message type.
Sound settings → Power on/off	Set your phone to sound when it is switched on or off.
Sound settings → Silent mode	Set how the phone acts to alert you to a specific event while in Silent mode.
Sound settings → Extra tones	Customise additional tones for the phone.

Menu	Description
Light settings → Backlight time	Select the length of time the backlight or display stays on when the phone is not used.
Light settings → Keypad light	Set how the phone controls the use of the keypad light.
Setup wizard → Phone setup wizard	Quickly customise basic settings of your phone. Select the option you want for each setting by following the onscreen instructions.

Menu	Description
Setup wizard → Music setup wizard	Quickly customise basic settings of the music player. Select the option you want for each setting by the following onscreen instructions.
Network services → Call diverting	Set the phone to reroute incoming calls to a phone number that you specify.
Network services → Call barring	Set the phone to restrict calls.
Network services → Call waiting	Set the phone to inform you when someone is calling you while on another call.

Menu	Description
Network services → Network selection	Select the network to be used while roaming outside of your home area, or let the network be chosen automatically.
Network services → Caller ID	Set the phone to hide your phone number from the person you are calling.
Network services → Voice mail server	Store the number of the voicemail server and access your voicemails.
Network services → Closed user group	Set calls to be restricted to a selected user group.
Bluetooth	Connect the phone wirelessly to other Bluetooth devices.

Menu	Description
Security → PIN check	Activate your PIN to protect your SIM card against unauthorised use.
Security → Change PIN code	Change the PIN.
Security → Phone lock	Activate your phone password to protect your phone against unauthorised use.
Security → Change password	Change the phone password.
Security → Privacy lock	Lock access to messages, files, or all menu functions on the phone, except for call functions.

Menu	Description
Security → SIM lock	Set the phone to work only with the current SIM card by assigning a SIM lock password.
Security → Fixed dialling mode	Set the phone to restrict calls to a limited set of phone numbers, if supported by your SIM card.
Security → Change PIN2 code	Change your current PIN2, if supported by your SIM card.

Menu	Description
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 SIM card. This feature may be unavailable due to certain features supported by your service provider.
Connection settings	Create and customise the profiles containing the settings for connecting your phone to the network.
Reset settings	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

The highest SAR value for this model phone was 0.201 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.

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.

Health and safety information

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.

Health and safety information

- 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.