



Draft 4
2006.12.07

SCH-r510

User's Guide



Intellectual Property

All Intellectual Property, as defined below, owned by or which is otherwise the property of Samsung or its respective suppliers relating to the SAMSUNG Phone, including but not limited to, accessories, parts, or software relating there to (the "Phone System"), is proprietary to Samsung and protected under federal laws, state laws, and international treaty provisions. Intellectual Property includes, but is not limited to, inventions (patentable or unpatentable), patents, trade secrets, copyrights, software, computer programs, and related documentation and other works of authorship. You may not infringe or otherwise violate the rights secured by the Intellectual Property. Moreover, you agree that you will not (and will not attempt to) modify, prepare derivative works of, reverse engineer, decompile, disassemble, or otherwise attempt to create source code from the software. No title to or ownership in the Intellectual Property is transferred to you. All applicable rights of the Intellectual Property shall remain with SAMSUNG and its suppliers.

Samsung Telecommunications America (STA), Inc.

Headquarters:

1301 East Lookout Drive Suite 150 Richardson,
TX 75082

Internet Address: <http://www.samsungusa.com>

©2006 Samsung Telecommunications America, Inc. is a registered trademark of Samsung Electronics America, Inc. and its related entities.

Openwave® is a registered trademark of Openwave, Inc.
RSA® is a registered trademark of RSA Security, Inc.

Disclaimer of Warranties; Exclusion of Liability

EXCEPT AS SET FORTH IN THE EXPRESS WARRANTY CONTAINED ON THE WARRANTY PAGE ENCLOSED WITH THE PRODUCT, THE PURCHASER TAKES THE PRODUCT "AS IS", AND SAMSUNG MAKES NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT, INCLUDING BUT NOT LIMITED TO THE MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR ANY PARTICULAR PURPOSE OR USE; THE DESIGN, CONDITION OR QUALITY OF THE PRODUCT; THE PERFORMANCE OF THE PRODUCT; THE WORKMANSHIP OF THE PRODUCT OR THE COMPONENTS CONTAINED THEREIN; OR COMPLIANCE OF THE PRODUCT WITH THE REQUIREMENTS OF ANY LAW, RULE, SPECIFICATION OR CONTRACT PERTAINING THERETO. NOTHING CONTAINED IN THE INSTRUCTION MANUAL SHALL BE CONSTRUED TO CREATE AN EXPRESS OR IMPLIED WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT. IN ADDITION, SAMSUNG SHALL NOT BE LIABLE FOR ANY DAMAGES OF ANY KIND RESULTING FROM THE PURCHASE OR USE OF THE PRODUCT OR ARISING FROM THE BREACH OF THE EXPRESS WARRANTY, INCLUDING INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, OR LOSS OF ANTICIPATED PROFITS OR BENEFITS.



Important safety precautions



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

Drive safely at all times

Do not use a hand-held phone while driving. Park the 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.



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 the ear). Avoid unnecessary contact with the antenna when the phone is switched on.

Emergency call

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 accessories and batteries. Use of any unauthorized accessories could damage your phone and may be dangerous.



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

Qualified service

Only qualified service personnel may repair your phone.

For more detailed safety information, see "Health and safety information" on page 20.

Contents

Overview of menu functions 4

Your phone 5

Keys, features, and locations

Unpack 5

Make sure you have each item

Get started 6

First steps to operating your phone

Install and charge the phone 6

Power on or off 7

Keys 8

Menu functions 9

All menu options listed

Solve problems 18

Help and personal needs

Health and safety information 20

Overview of menu functions

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

1 Messages

- 1 Send message
- 2 Inbox
- 3 Outbox
- 4 Drafts
- 5 Voicemail
- 6 Instant Message
- 7 Erase Msg
- 8 Msg Settings

2 Access Shop

- 1 Access Shop

3 Multimedia

- 1 Camera
- 2 Camcorder
- 3 My Images
- 4 My Videos
- 5 My Ringtones
- 6 My Sounds
- 7 Shuffle
- 8 MP3 Player

4 Access Web

- 1 Access Web

5 Contacts

- 1 Find
- 2 Add New Entry
- 3 Speed Dial
- 4 Group
- 5 Memory Info

6 Calls

- 1 Outgoing Calls
- 2 Incoming Calls
- 3 Missed Calls
- 4 All Calls
- 5 Data Call
- 6 Call Timer
- 7 Data Counter

7 Tools

- 1 Voice Service
- 2 Bluetooth
- 3 Calendar
- 4 Memo Pad
- 5 Alarm Clock
- 6 World Time
- 7 Calculator
- 8 Stop Watch
- 9 Converter
- 0 Tip Calculator

8 Settings

- 1 Location
- 2 Display Settings
- 3 Sound Settings
- 4 Call Settings
- 5 Phone Settings
- 6 Memo Info
- 7 Software Update

9 Phone Info

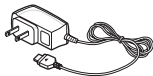
- 1 Phone Number
- 2 Icon Glossary
- 3 Version

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 at your Samsung dealer may vary, depending on your country.

Your phone

Keys, features, and locations

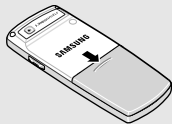


Get started

First steps to operating your phone

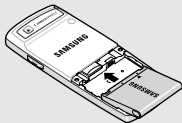
Install and charge the phone

- 1 Remove the battery cover.

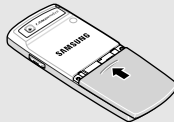


If the phone is already on, first turn it off by pressing and holding **END**.

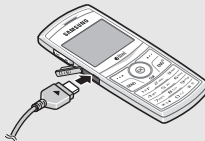
- 2 Install the battery.



- 3 Reattach the battery cover.



- 4 Plug the travel adapter into the phone.



- 5 Plug the adapter into a standard AC wall outlet.


- 6 When the phone is completely charged (the battery icon becomes still), unplug the adapter from the power outlet.

- 7 Remove the adapter from the phone.



Low battery indicator

When the battery is low:


- a warning tone sounds,
- the battery low message displays, and
- the empty battery icon  blinks.

If the battery level becomes too low, the phone automatically turns off. Recharge your battery.

Power on or off

Power on

1. Open the phone.


2. Press and hold .

Do not turn on the phone when mobile phone use is prohibited.






3. If necessary, enter the PIN and press **[OK]**.










Power off

1. Open the phone.

2. Press and hold .

Keys

	Perform the function indicated on the bottom line of the display.
	In Idle mode, access menu options directly. In Menu mode, scroll through the menu options.
	In Idle mode, access Menu mode. In Menu mode, select the highlighted menu option.
	Make or answer a call. In Idle mode, retrieve the recent numbers dialed, missed, or received.
	Delete characters from the display. In Menu mode, return to the previous menu level.

	Press and hold to switch the phone on and 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  to access your voicemail.
 	Enter special characters. Press and hold  to enter an international call prefix. In Idle mode, press and hold  to activate or deactivate Silent mode.
	Adjust the phone volume. In Idle mode, with the phone open, adjust the key tone volume.

Menu functions

All menu options listed

Messages

Use the **Messages** menu to send and receive short text messages to and from other mobile phones. In addition, your phone supports the Enhanced Messaging Service (EMS), which enables you to include simple pictures, melodies, and animated images in your messages. You can also use the voice mail feature.

To access this menu, press <**Menu**> in Idle mode and select **Messages**.

Send Message

In this menu, you can create and send new text messages. You can also create and send multimedia messages using various images and sounds (pix message) and video clips (flix message).

Inbox

You can view the messages you have received in this message box. When you access this menu, a list of messages displays.

Outbox

This folder stores messages that the phone is attempting to send or has failed to send.

Drafts

You can view the messages you have saved in this message box while creating a message.

Voicemail

Use this menu to access your voice mails.



You must enter the voice server number before you can access your voice mails. Your service provider can give the voice server number.

Instant Message

This menu allows you to have a conversation with your friends, family, or co-workers by sending and receiving instant messages.

- ☒ You can use Samsung messenger between Samsung mobile phones equipped with the feature.

If you send and receive packet data via Samsung messenger, you will be charged by your service provider.

Erase message

Use this menu to delete messages in each message folder all at once.

Msg Setting

You can change the various settings for using the message feature.

Axcess Shop

Use this menu to use various online applications, such as, games and screen savers for your phone. You can also demonstrate free sample applications.

To access this menu, press **<Menu>** in Idle mode and select **Axcess Shop**.

Axcess Shop

In this menu, you can purchase and manage online applications. Select **Help** to customize and learn how to use this menu.

Multimedia

The **Multimedia** menu allows you to take photos or record videos by using the camera module built into your phone. You can also access images, videos, music files, and sound files stored in the phone's memory.

To access this menu, tap or press **<Menu>** and select **Multimedia** in Idle mode.

Camera

You can take photos using the camera module embedded in your phone.

- ☒ • Do not take photos of people without their permission.
- Do not take photos in a place where cameras are not allowed.
- Do not take photos in a place where you may interfere with another person's privacy.

Camcorder

You can record a video of what is displayed on the camera screen and save it.

My Images

This menu displays photos you have taken and images you have downloaded, received in messages, or imported from a computer.

My Videos

This menu displays video clips you have recorded, downloaded, received in messages, or imported from a computer.

My Ringtones

Use this menu to select a ringtone for voice calls and messages separately.

My Sounds

This menu displays voice memos you have recorded, and sound files you have downloaded, received in messages, or imported from a computer.

Shuffle

Use this menu to set the images you want as wallpaper, or the melodies you want as your call ringtone. The selected items will be displayed or played in random order.

MP3 Player

Use this menu to listen to music. To enjoy the music you need to save MP3 files in your phone's memory.

Axcess Web

Use this menu to access internet services with your phone.

To access this menu, press <**Menu**> in Idle mode and select **Axcess Web**.

Axcess web

Use this menu to browse various web pages.

Contacts

You can store phone numbers with associated names in your phone's memory called Contacts to make it easy for you to make a call without having to remember the phone number.

To access this menu, press <**Menu**> in Idle mode and select **Contacts**.

Find

This menu allows you to find an entry by scrolling through the Contact List or by entering the entry name you want.

Add New Entry

This menu allows you to add a new entry to your Contacts. A name can contain up to 5 numbers in different categories; Home, Office, Mobile, Pager and Fax.

Speed Dial

Once you have stored phone numbers in **Contacts**, you can set up to 999 speed-dial entries and then dial them easily by pressing and holding the associated one or two number keys.

Group

Use this menu to organize your contacts in caller groups.

Memory Info

Use this menu to check the number of contacts you have stored in the phone's memory.

Calls

Use this menu to view the calls you have dialed, received, or missed, and the length of your calls.

To access this menu, press <Menu> in Idle mode and select **Calls**.

Outgoing Calls

If Caller Line Identification is available, your phone keeps a list of the 20 most recent outgoing calls that you have made. Contact your service provider for the availability.

Incoming Calls

This menu lets you view up to 20 of the most recent calls you have received if you subscribe to the Caller Line Identification service. Contact your service provider for further details about this service. When you access this menu, a list of the incoming calls displays.

Missed Calls

The phone stores the most recent numbers you have failed to answer. When you access this menu, a list of the missed calls displays.

All calls

Use this menu to view the most recent calls dialed, received, or missed. When you access this menu, a list of all calls displays.

Data Call

This item displays how long you have transmitted and received data through the wireless web.

Call Timer

This item displays the time log for calls made and received, or all calls together. You can also view the elapsed time of your last call, the time spent on calls while roaming, and even view how much data has been transmitted and received through the wireless web.

Note that the actual time invoiced by your service provider will vary.

Data Counter

You can view how much data has been transmitted and received through the wireless web.

Note that the actual time invoiced by your service provider will vary.

Tools

The **Tools** menu provides you with various convenient features, such as, a calendar, task list, memo pad, alarm, and calculator.

To access this menu, press <**Menu**> in Idle mode and select **Tools**.

Voice Service

Use this menu to perform some functions or access specific menus by your voice command. You only need to say the command into the microphone. You can also change the settings for using the Voice Commands feature.

Bluetooth

Use this menu to connect your phone to other compatible devices wirelessly using Bluetooth technology. Using Bluetooth wireless, you can connect the phone wirelessly to a Bluetooth headset or hand-free kit to talk hands-free.

Calendar

This menu allows you to view the current month, as well as past or future months in calendar format.

On the calendar, the current day is indicated by a colored box and the selected day is highlighted. Days with scheduled events are indicated by blue box on the calendar day.

Memo Pad

This feature allows you to make and view memos of important things you need to remember.

Alarm Clock

This menu allows you to set an alarm to ring at a specific time.

World Time

Use this menu to find out the current time in another part of the world. Scroll through the map by pressing the Navigation keys.

Calculator

Use this menu to perform basic arithmetic functions such as addition, subtraction, multiplication, and division.

Stop Watch

Use this menu to measure elapsed time.

Converter

Use this menu for common conversions, such as currency and temperature.

Tip Calculator

This menu lets you calculate the amount of money for a tip when you pay bills.

Settings

Many different features of your phone's system can be customized to suit your preferences.

To access this menu, press <Menu> in Idle mode and select **Settings**.

Location

Use this menu to set your network provider to spot your current location, in case of emergency.

Display Settings

This menu enables you to customize various settings for the display and the light. In this menu, you can:

- set a banner message to be displayed on the phone screen in Idle mode.
- specify the length of time the backlight for the display and keypad stay on.
- adjust the brightness or contrast of the display for varying lighting conditions.
- change the background image for the main display.

- select a display theme to be used for the phone screen.
- select a clock type for the main display.
- select an entering mode to be used while dialing.

Sound Settings

This menu enables you to customize various settings for sounds. In this menu, you can:

- set the ringer melodies for calls.
- set the alert tones for text, multimedia, and voicemail messages.
- set the keypad tone and volume.
- adjust volume for the keypad and earpiece.
- customize additional tones for the phone.

Call Settings

Use this menu to customize the settings for calls. In this menu, you can:

- set answering options and the automatic redialing feature.

- activate or deactivate TTY mode or the one-touch dial feature.
- encrypt the voice channel so that people cannot eavesdrop on your conversation.
- set whether or not the phone restricts calls.
- configure data settings.
- set the length of the DTMF tone.

Phone Settings

This menu enables you to customize various settings for the phone's system.

- select the language to be used.
- set various security options.
- set the current date and time.
- activate or deactivate Airplane mode
- select a number to be used, if you have more than one number.
- select the phone network used while roaming.

Memory Info

Use this menu to view memory information for media items in the phone's memory or on a memory card.

Software Update

This feature allows you to update the phone's software.

Phone Info

Use this menu to view the information of your phone, such as your own number and the software version of the phone.

To access this menu, press <**Menu**> in Idle mode and select **Phone Info**.

Phone Number

Access this menu to view your own phone number.

Icon Glossary

View the icon information to be displayed on the screen when you use the phone.

Version

In this menu, you can view the software and hardware versions of your phone.

Solve problems

Help and personal needs

To save the time and expense of an unnecessary service call, perform the simple checks in this section before contacting a service professional.

When you switch on your phone, the following messages may appear:


“Phone locked Enter password”

- The automatic locking function has been enabled. You must enter the phone’s password before you can use the phone.


“No service,” “Network failure,” or “Not done” displays

- The network connection has been lost. You may be in a weak signal area. Move and try again.
- You are trying to access an option for which you have no subscription with your service provider. Contact the service provider for further details.

You have entered a number but it was not dialed

- Be sure that you have pressed .
- Be sure that you have accessed the right cellular network.
- Be sure that you are not in FDN mode.

Your correspondent cannot reach you

- Be sure that your phone is switched on.
( pressed for more than one second.)
- Be sure that you have accessed the right cellular network.




Your correspondent cannot hear you speaking

- Be sure that you have switched on the microphone.
- Be sure that you are holding the phone close enough to your mouth. The microphone is located at the bottom of the phone.

The phone starts beeping and “LOW BATTERY” flashes on the display

- Your battery is insufficiently charged. Recharge the battery.

The audio quality of the call is poor

- Check the signal strength indicator on the display (). The number of bars indicates the signal strength from strong () to weak ().
- Try moving the phone slightly or moving closer to a window if you are in a building.

No number is dialed when you re-call an Address Book entry

- Use the **Contact List** menu to ensure the number has been stored correctly.
- Re-store the number, if necessary.

The battery doesn't charge properly or the phone sometimes turns itself off

Wipe the charging contacts both on the phone and on the battery with a clean soft cloth.

If the above guidelines do not help you to solve the problem, take note of:

- The model and serial numbers of your phone
- Your warranty details
- A clear description of the problem

Then contact your local dealer or Samsung after-sales service.

Health and safety information

Exposure to Radio Frequency (RF) Signals

Certification Information (SAR)

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the exposure limits for radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. government. These FCC exposure limits are derived from the recommendations of two expert organizations, the National Council on Radiation Protection and Measurement (NCRP) and the Institute of Electrical and Electronics Engineers (IEEE). In both cases, the recommendations were developed by scientific and engineering experts drawn from industry, government, and academia after extensive reviews of the scientific literature related to the biological effects of RF energy.

The exposure limit set by the FCC for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate (SAR). The SAR is a measure of the rate of absorption of RF energy by the human body expressed in units of watts per kilogram (W/kg). The FCC requires wireless phones to comply with a safety limit of 1.6 watts per kilogram (1.6 W/kg). The FCC exposure limit incorporates a substantial margin of safety to give additional protection to the public and to account for any variations in measurements.

SAR tests are conducted using standard operating positions accepted by the FCC 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 wireless base station antenna, the lower the power output.

Before a new model phone is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests for each model phone are performed in positions and locations (e.g. at the ear and worn on the body) as required by the FCC.

The highest reported SAR values of the are:

CDMA mode:

Head:0.633 W/kg; Body-worn:0.584 W/kg

PCS mode:

Head:1.28 W/kg; Body-worn:0.751 W/kg

For body worn operation, this model phone has been tested and meets the FCC RF exposure guidelines when used with a Samsung accessory designated for this product or when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body.

Non-compliance with the above restrictions may result in violation of FCC RF exposure guidelines.

SAR information on this and other model phones can be viewed on-line at www.fcc.gov/oet/fccid. This site uses the phone FCC ID number, A3LSCHR510. Sometimes it may be necessary to remove the battery pack to find the number. Once you have the FCC ID number for a particular phone, follow the instructions on the website and it should provide values for typical or maximum SAR for a particular phone. Additional product specific SAR information can also be obtained at www.fcc.gov/cgb/sar.

Consumer Information on Wireless Phones

The U.S. Food and Drug Administration (FDA) has published a series of Questions and Answers for consumers relating to radio frequency (RF) exposure from wireless phones. The FDA publication includes the following information:

What kinds of phones are the subject of this update?

The term wireless phone refers here to hand-held wireless phones with built-in antennas, often called "cell," "mobile," or "PCS" phones. These types of wireless phones can expose the user to measurable radio frequency energy (RF) because of the short distance between the phone and the user's head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone 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 phones," 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 well within the FCC's compliance limits.

Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radio frequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by 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.

What is FDA's role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radio frequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone 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 phones;

- “Design wireless phones 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 phones with the best possible information on possible effects of wireless phone use on human health.

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
- “Federal Communications Commission
- “Occupational Safety and Health Administration
- “National Telecommunications and Information Administration

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

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

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

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 energy (RF) exposures characteristic of wireless phones 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 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 phones, so we don't 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 phones 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 phones RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

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

A combination of laboratory studies and epidemiological studies of people actually using wireless phones 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 phones. Many factors affect this measurement, such as the

angle at which the phone is held, or which model of phone is used.

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

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 energy (RF).

FDA has been a leading participant in the World Health Organization international Electromagnetic 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.

FDA and Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

What steps can I take to reduce my exposure to radio frequency energy from my wireless phone?

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 energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

- "If you must conduct extended conversations by wireless phone 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 phone away from your body or use a wireless phone connected to a remote antenna.

Again, the scientific data do not demonstrate that wireless phones 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 phone use.

What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radio frequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone 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 phones 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 phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

Do hands-free kits for wireless phones reduce risks from exposure to RF emissions?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that hands-free kits reduce risks. Hands-free kits can be used with wireless phones for convenience and comfort. These systems reduce the absorption of RF energy in the head because the phone, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the phone 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 phones 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.

Do wireless phone accessories that claim to shield the head from RF radiation work?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF absorption use special phone cases, while others involve nothing more than a metallic accessory attached to the phone. Studies have shown that these products generally do not work as advertised. Unlike “hand-free” kits, these so-called “shields” may interfere with proper operation of the phone. The phone may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal Trade Commission (FTC) charged two companies that sold devices that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

What about wireless phone interference with medical equipment?

Radio frequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic 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 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 phone EMI. FDA has tested wireless phones 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 phones so that no interference occurs when a person uses a compatible phone and a compatible hearing aid at the same time. This standard was approved by the IEEE in 2000.

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

Additional information on the safety of RF exposures from various sources can be obtained from the following organizations:

- FCC RF Safety Program:
<http://www.fcc.gov/oet/rfsafety/>
- Environmental Protection Agency (EPA):
<http://www.epa.gov/radiation/>
- Occupational Safety and Health Administration's (OSHA):
<http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>
- National Institute for Occupational Safety and Health (NIOSH):
<http://www.cdc.gov/niosh/emfpg.html>
- World Health Organization (WHO):
<http://www.who.int/peh-emf/>

- International Commission on Non-Ionizing Radiation Protection:
<http://www.icnirp.de>
- National Radiation Protection Board (UK):
<http://www.nrpb.org.uk>
- Updated 4/3/2002: US food and Drug Administration
<http://www.fda.gov/cellphones>

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

1. Get to know your wireless phone and its features, such as speed dial and redial. If available, these

features help you to place your call without taking your attention off the road.

2. When available, use a hands-free device. If possible, add an additional layer of convenience and safety to your wireless phone with one of the many hands free accessories available today.
3. Position your wireless phone within easy reach. Be able to access your wireless phone without removing your eyes from the road. If you get an incoming call at an inconvenient time, let your voice mail answer it for you.
4. 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, ice and even heavy traffic can be hazardous.
5. Do not take notes or look up phone numbers while driving. Jotting down a "to do" list or flipping through your address book takes attention away from your primary responsibility, driving safely.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before

pulling into traffic. Try to plan calls when your car will be stationary. If you need to make a call while moving, 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. Make people you are talking with aware you are driving and suspend conversations that have the potential to divert your attention from the road.
8. Use your wireless phone to call for help. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!

9. Use your wireless phone to help others in emergencies. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
10. Call roadside assistance or a special non-emergency wireless assistance number when necessary. 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 number.

"The wireless industry reminds you to use your phone safely when driving."

For more information, please call 1-888-901-SAFE, or visit our web-site www.wow-com.com

Provided by the Cellular Telecommunications & Internet Association

Operating Environment

Remember to follow any special regulations in force in any area and always switch your phone off 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).

Using Your Phone Near Other 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.

Persons with pacemakers:

- should always keep the phone more than 15 cm (6 inches) from their pacemaker when the phone is switched on.
- should not carry the phone in a breast pocket.
- should use the ear opposite the pacemaker to minimize potential interference.

If you have any reason to suspect that interference is taking place, switch your phone off 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 your phone off in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using 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

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

Potentially Explosive Environments

Switch your phone 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.

Users are advised to switch the phone off while at a refueling 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 below deck 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 (medical emergencies, for example).

Remember, to make or receive any 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. If the phone is not on, switch it on.
2. Key in the emergency number for your present location (for example, 911 or other official emergency number). Emergency numbers vary by location.
3. Press  .

If certain features are in use (call barring, for example), you may first need to deactivate those features before you can make an emergency call. Consult this document and your local cellular service provider.

When making an emergency call, remember to give all the necessary information as accurately as possible. Remember that your phone may be the only means of communication at the scene of an accident; do not cut off the call until given permission to do so.

Restricting Children's access to your Phone

Your phone is not a toy. Children should not be allowed to play with it because they could hurt themselves and others, damage the phone or make calls that increase your phone bill.

FCC Notice and Cautions

FCC Notice



- 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.
- 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

The phone may cause TV or radio interference if used in close proximity to receiving equipment. The FCC can require you to stop using the phone if such interference cannot be eliminated.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection

Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Battery march Park, Quincy, MA 02269, Attn: Publication Sales Division.

Cautions

Changes or modifications made in the radio phone, not expressly approved by Samsung, will void the user's authority to operate the equipment.

Only use approved batteries, antennas and chargers.

The use of any unauthorized accessories may be dangerous and void the phone warranty if said accessories cause damage or a defect to the phone.

Although your phone is quite sturdy, it is a complex piece of equipment and can be broken. Avoid dropping, hitting, bending or sitting on it.

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 both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
 - Switch your phone off before boarding an aircraft. The use of wireless phone in aircraft is illegal and may be dangerous to the aircraft's operation.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Product Performance

Getting the Most Out of Your Signal Reception

The quality of each call you make or receive depends on the signal strength in your area. Your phone informs you of the current signal strength by displaying a number of bars next to the signal strength icon. The more bars displayed, the stronger the signal.

If you're inside a building, being near a window may give you better reception.

Understanding the Power Save Feature

If your phone is unable to find a signal after 15 minutes of searching, a Power Save feature is automatically activated. If your phone is active, it periodically rechecks service availability or you can check it yourself by pressing any key.

Anytime the Power Save feature is activated, a message displays on the screen. When a signal is found, your phone returns to standby mode.

Understanding How Your Phone Operates

Your phone is basically a radio transmitter and receiver. When it's turned on, it receives and transmits radio frequency (RF) signals. When you use your phone, the system handling your call controls the power level. This power can range from 0.006 watts to 0.2 watts in digital mode.

Maintaining Your Phone's Peak Performance

For the best care of your phone, only authorized personnel should service your phone and accessories. Faulty service may void the warranty.

There are several simple guidelines to operating your phone properly and maintaining safe, satisfactory service.

- Hold the phone with the antenna raised, fully-extended and over your shoulder.
- Try not to hold, bend or twist the phone's antenna.
- Don't use the phone if the antenna is damaged.
- Speak directly into the phone's receiver.

- Avoid exposing your phone and accessories to rain or liquid spills. If your phone does get wet, immediately turn the power off and remove the battery. If it is inoperable, call Customer Care for service.

Availability of Various Features/Ring Tones

Many services and features are network dependent and may require additional subscription and/or usage charges. Not all features are available for purchase or use in all areas. Downloadable Ring Tones may be available at an additional cost. Other conditions and restrictions may apply. See your service provider for additional information.

Battery Standby and Talk Time

Standby and talk times will vary depending on phone usage patterns and conditions. Battery power consumption depends on factors such as network configuration, signal strength, operating temperature, features selected, frequency of calls, and voice, data, and other application usage patterns.

Battery Precautions

- Never use any 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 network operator.
- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby 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. When a charger is not in use, disconnect it from the power source. 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, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A phone with a hot or cold battery may temporarily not work, 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 (coin, clip or pen) causes a direct connection between the + and - terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.
- Dispose of used batteries in accordance with local regulations. In some areas, the disposal of batteries in household or business trash may be prohibited. For safe disposal options for Li-Ion batteries, contact your nearest Samsung authorized service center. Always recycle. Do not dispose of batteries in a fire.

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 the 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 will 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 slightly dampened in a mild soap-and-water solution.
- 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, a stove or a radiator. The phone may explode when overheated.

- When the phone or battery gets wet, the label indicating water damage inside the phone changes color. 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. Unauthorized 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.

Licensed by QUALCOMM incorporated under one or more of the following Patents.

U.S Patent No.	4,901,307	5,056,109	5,099,204
	5,101,501	5,103,459	5,107,225
	5,109,390		

- * 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>