

## **9. Users Manual**

\* Some of the contents of this manual may differ from your phone, depending on the software installed or your service provider.

**SAMSUNG ELECTRONICS**



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



**SPH-M220**  
**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

Tel: 972.761.7000

### Customer Care Center:

1601 E. Plano Parkway, Suite 150 Plano, TX 75074

Toll Free Tel: 1.888.987.HELP (4357)

Fax: 972.801.6065

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

©2004 Samsung Telecommunications America, Inc. is a registered trademark of Samsung Electronics America, Inc. and its related entities.

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.

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.

## Use road safety 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.



## 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 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 [TALK].

## 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 unauthorised accessories could damage 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.

## Qualified service

Only qualified service personnel may repair your phone.

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

## Contents

### **Unpack** **3**

---

*Make sure you have each item*

### **Your phone** **3**

---

*Buttons, features, and locations*

### **Get started** **4**

---

*First steps to operate your phone*

### **Menu functions** **8**

---

*All menu options listed*

### **Solve problems** **17**

---

*Help and personal needs*

### **Health and safety information** **19**

---



## *Unpack*

*Make sure you have each item*

Phone

Travel Adapter

Battery

User's Manual

## Get started


First steps to operate your phone

### Install and charge the phone

- 1 Install the battery:  
 To remove the battery, slide the battery catch toward the top of the phone and hold it.
- 2 Plug the adapter into the phone.
- 3 Plug the adapter into a standard AC wall outlet.
- 4 When the phone is completely charged (the battery icon stops blinking), unplug the adapter from the power outlet.
- 5 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

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

1. Open the phone.
2. Press and hold [END<sup>®</sup>] to turn on the phone.
3. If necessary, enter the PIN and press <OK>

#### Power off

1. Open the phone.
2. Press and hold [END<sup>®</sup>].

## Keys and display

Key(s)	Description
<b>Soft keys</b>	Perform the function indicated on the bottom line of the display.
Navigation keys	In Idle mode, access menu options directly. In Menu mode, scroll through the menu options.
Menu/OK key	In Idle mode, enters Menu mode. In Menu mode, selects the highlighted menu option.
Send key	Sends or answers a call. In Idle mode, retrieves the last number dialled, missed, or received.
Back key	Deletes characters from the display. In Menu mode, returns to the previous menu level.

Key(s)	Description
End key	Ends a call. Hold down to switch the phone on and off. In Menu mode, cancels input and returns the phone to Idle mode.
Numeric keys	Enter numbers, letters, and some special characters. In Idle mode, hold [ <b>1</b> ] down to access your voicemail.
*/# key	Enter special characters. Use for some special functions.
<b>R-Link key</b> (on the left)	Accesses the Ready link list. Makes and answers a R-Link call.

**Volume keys** (on the left)

Adjusts the phone volume.  
In Idle mode, with the phone open, adjusts the keypad tone volume. With the phone closed, hold down to turn on the backlight.  
In Menu mode, scrolls through the menu options.

**Speaker phone key** (on the right)

Turns on the external speaker during a call.  
In Idle mode, retrieves the last number dialed, received, or missed.  
Hold down to start the voice recognition.

## Overview of menu functions

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

### 1 Voice Kit

- 1 Voice Service
- 2 Voice Memo

### 2 Messaging

- 1 Send Message
- 2 Text Message
- 3 Picture Mail
- 4 Voice SMS
- 5 IM & Email
- 6 Voicemail
- 7 Chat & Dating
- 8 Settings

### 3 Tools

- 1 Voice Memo
- 2 Today
- 3 Scheduler
- 4 Task
- 5 Countdownl
- 6 Memo Pad
- 7 World Time
- 8 Update Phone
- 9 Alarm Clock
- 0 Calculator

### 4 Pictures

- 1 Camera
- 2 My Pictures
- 3 Online Albums
- 4 Order Prints
- 5 Settings and Info

### 5 Call History

- 1 Outgoing Calls
- 2 Incoming Calls
- 3 Missed Calls
- 4 Recent Calls

### 6 Web

### 7 Settings

- 1 Display
- 2 Sounds
- 3 Bluetooth
- 4 Data
- 5 Voice Service
- 6 Wireless Backup
- 7 Voice Service
- 8 Security
- 9 Roaming
- 10 Launch pad
- 11 Others
- 0 Phone info

### 8 My Content

### 9 Contacts

- 1 Find
- 2 Add New Entry
- 3 Speed Dial #'s
- 4 Group
- 5 My Name Card
- 6 Wireless Backup
- 7 Services

## *Menu functions*

*All menu options listed*

### **Voice Kit**

#### **Voice Service**

---

Your Sprint PCS Phone's Voice Services let you place calls using your voice. This section includes easy-to-follow instructions on using voice-activated dialing.

#### **Voice Memo**

---

You can use your phone's Voice Services to record brief memos to remind you of important events, phone numbers, or grocery list items.

### **Messaging**

Use the **Messaging** 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[<sup>MENU</sup><sub>OK</sub>] in Idle mode and select **Messaging**.

#### **Send Message**

---

You can create and send new text messages including voice SMS messages and e-mails.

#### **Text Message**

---

You can view the messages you have received, sent, or saved separately in this message box. When you access each message box, a list of messages displays.

#### **Picture Mail**

---

You can send or receive picture mail in this menu.

#### **Voice SMS**

---

Use this menu to view the voice SMS messages you have received in the message box.

## IM & Email

---

Use this menu to view the e-mails you have received in the message box.

## Voicemail

---

Use this menu to dial to the voice mail server and access your voice mails. You can also delete voice mails you have received.



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

## Chat & Dating

---

The service provider gives you the ability to join wireless chatrooms from your Phone, to send text messages and icons to chatroom participants, or to launch a one-on-one (private) chatroom.

## Settings

---

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

In this menu, you can:

- select the message notification settings.
- change the message sending settings.
- use the message template.
- edit your signature.
- change the message alert settings.
- set the phone to save outgoing messages after sending them in the Outbox.
- set the phone to erase the oldest message in order to free up memory space to receive a new message when the memory is full.
- set the voice SMS options.

## **Tools**

The **Tools** menu provides you various convenient features like a calendar, task list, memo pad, D-day counter, alarm, and calculator.

To access this menu, press [ <sup>MENU</sup>OK ] in Idle mode and select **Tools**.

## **Voice Memo**

---

You can use your phone's Voice Services to record brief memos to remind you of important events, phone numbers, or grocery list items.

## **Today**

---

You can schedule for the current day indicating each event's start and end time. You can even have your phone's calendar alert you before an event is to start. Events scheduled for future dates automatically appear on your Today events schedule on that day.

## **Scheduler**

---

This option allows you to view in calendar format the current month, or a past or future month. In this option, the current date is highlighted on the calendar. Days with the scheduled events are underlined. The scheduled events are underlined.

## **Task List**

---

This feature allows you to draw up a list of tasks to be done and assign a priority and deadline to each task.

## **Countdown**

---

This menu helps you know how much time it takes you to do something, or how many months, days, hours and minutes until a specific day. You can create up to 20 Countdown timers using this menu.



## Memo pad

---

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

## World time

---

You can use this menu to find out what time it is in another part of the world.

## Update Phone

---

## Alarm clock

---

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

## Calculator

---

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

## Pictures

Use the **Pictures** menu to use camera feature.

To access this menu, press [ MENU  
OK ] in Idle mode and select **Pictures**.

## Camera

---

In this menu, you can take a picture. The camera produces JPEG pictures.

## My Pictures

---

Your phone's picture storage area is called My Albums. There are two types of folders that can be used separately according to your needs:

- In Phone
- Online Albums

## Online Albums

---

## Order Prints

---

Order Prints to order printed copies of the image from an online printer.

## **Settings and Info**

---

Using this menu option, you can change information about your web page account.

Accessing the Online Albums menu option connects your phone to the wireless web. Once you are connected to the web, the setting options displays.

## **Call History**

You can use the Call History menu to:

- .View and dial the missed, outgoing or incoming numbers.
- Erase the numbers in the Call Log memory.

## **Outgoing Calls**

---

The phone stores up to 10 outgoing calls you dialed. When you access this menu, the list of outgoing calls is displayed.

## **Incoming Calls**

---

This option lets you view the last 10 calls received. (if you are subscribed to the caller ID service). When you access this menu, the last incoming calls are displayed.

## **Missed Calls**

---

This option lets you view the last 10 calls missed. (if you are subscribed to the caller ID service). When you access this menu, the last missed calls are displayed.

## **Recent Calls**

---

Use All recent to view received, dialed, and missed calls for your phone. You can also use All recent to erase your call history and view Call Timers.


While viewing All recent, you have options such as saving recent call numbers to your Phonebook, sending messages to recent call numbers, and prepending (editing) numbers before saving.

## Web

Your Sprint PCS Vision Multimedia Phone's built-in media player gives you the ability to listen to audio clips and view video clips right from your phone's display. It's a great way to stay up-to-date with news, weather, and sports information while also enjoying the latest blockbuster movie trailers or music videos . anywhere, anytime on the Sprint Nationwide PCS Network. Just access your media player from your phone's main menu, scroll to your choice of channel, and select one of the video or audio clips to play. It's like having a TV in the palm of your hand. This section explains the features and options of your phone's built-in media player.

## Settings

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

To access this menu, press [  ] in Idle mode and select **Settings**.

## Display

---

This menu enables you to customize various settings for display and the lights.

In this menu, you can:

- change the idle screen image.
- change the menu display style.
- set the caller ID image for incoming calls.
- set a greeting message to be displayed.
- specify the length of time the backlight of the display or keypad turns on. You can also select whether or not the phone use the backlight.
- adjust the brightness of the main and front display.
- select whether or not the service light is on.

## Sounds

---

This menu enables you to customize various settings for sounds.

In this menu, you can:

- adjust the ringer volume for calls, messages, and alarms.
- set the unique ringer melodies for incoming calls, alarm melodies, scheduler alert, or roaming alert.
- customize additional tones for the phone.
- select the key tone type and adjust the key tone volume and length.
- set the sound settings for using downloaded applications.

## Bluetooth

---

### HAC Mode

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

### Enable/Disable

This feature allows you to activate the Bluetooth feature. When this option is set to Enable, the Bluetooth icon appears.

### Visibility

This feature allows you to set whether or not your phone is available to other Bluetooth devices.

### Device name

This feature allows you to change your phone's Bluetooth device name, which is displayed on other devices.

### Device Info

allows you to view the information of the selected device.

## Data

---

## Wireless Backup

---

## Voice Service

---

Your Sprint PCS Vision Phone's Voice Services let you place calls using your voice, store voice reminders, check phone

status, and record memos right on your phone. This section includes easy-to-follow instructions on using voiceactivated dialing.

## Security

---

Your phone provides you with various security options, including a user-programmable lock code and special number features.

To access the **Security** menu, you must enter the 4-digit lock code. It is preset to "0000" at the factory.

In this menu, you can:

- lock your phone and services so that other people cannot use your phone and the additional services.
- change your current lock code to a new one.
- store emergency numbers.
- erase your Contacts entries and downloaded items.
- reset your phone.

## Roaming

---

Roaming is a feature, which is only relevant in areas where there are at least two cellular service providers having valid roaming agreements. Roaming allows you to register your phone on one of the networks, but use the facilities of the other if your own network is not available.

In this menu, you can:

- select a roaming mode.
- set the phone to remind you when you are making or receiving a roaming call.

## Launch pad

---

You can set the Navigation keys as shortcut keys to access specific menus directly in Idle mode.

## Others

---

In this menu, you can:

- set digits, such as area codes and network feature activation codes, to the beginning of a phone number before dialling it.
- activate the contact match feature.
- restrict outgoing calls.
- set how to answer incoming calls.
- turn the automatic redialing or answering features on or off.
- select one of several languages for the display text.

- activate or deactivate Airplane mode, the location feature, Headset mode, or Key Guard mode.

### Phone info

---

In this menu, you can:

- view your phone number.
- view information of the icons to be displayed on the screen.
- view the software and hardware versions of your phone.
- view details about your phone system.

### HAC Mode

---

Enabling HAC Mode adjusts the volume for HAC compliant devices used with this handset.

Important!: Enabling the HAC mode can affect the quality of the phone (voice) conversation.

1. To turn a feature on, highlight the HAC mode option and press the Select soft key or the OK key.
2. Highlight Off or On and press the OK key.

### My Content

This menu allows you to download various multimedia files, such as games, ringers, screen savers, and applications, from the wireless web.

To access this menu, press [MENU  
OK] in Idle mode and select **My Content**.

### Contacts

You can store phone numbers in your phone.

To access this menu, press [MENU  
OK] in Idle mode and select **Contacts**.

### Find

---

This menu allows you to find an entry using a person's name, entry number, or group name in your Contacts.

### Add New Entry

---

This menu allows you to add a new entry to your Contacts. A name can contain up to 6 numbers in

different categories; Home, Work, Mobile, Paper, Fax, and No label.

## **Speed Dial #s**

---

Speed dialing allows you to press and hold a key (or keys) to dial the number associated with those key(s).

There are three types of speed dialing; 1-touch, 2-touch, and 3-touch dialing.

## **Group**

---

In this menu, you can change the default group names and ringer melodies.

## **My Name Card**

---

My Name Card allows you to create a virtual business card. Once completed, you can send the card to recipients as a V-card attachment.

## **Wireless Backup**

---

## **Services**

---

In this menu, you can dial the service centers preset by your service provider to get more information. For details, contact your service provider.

### 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:**

##### “Insert SIM card”

- Be sure that the SIM card is correctly installed.

##### “Phone locked Enter password”

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

##### “Enter PIN”

- You are using your phone for the first time. You must enter the PIN supplied with the SIM card.
- The PIN Check feature is enabled. Every time the phone is switched on, the PIN has to be entered. To disable this feature, use the **PIN check** menu.

##### “Enter PUK”

- The PIN code has been entered incorrectly three times in succession, and the phone is now blocked. Enter the PUK supplied by your service provider.

#### **“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 [ TALK ].
- Be sure you have accessed the right cellular network.
- Be sure that you have not set an outgoing call barring option.



### **Your correspondent cannot reach you**

- Be sure your phone is switched on. ([ END<sup>o</sup> ] pressed for more than one second.)
- Be sure you are accessing the correct cellular network.
- Be sure that you have not set an outgoing call barring option.




### **Your correspondent cannot hear you speaking**

- Be sure you have switched off the microphone.
- Be sure 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 "Battery low" 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 dialled when you re-call a Contacts entry**

- Use the Contact Search feature to ensure the number has been stored correctly.
- Re-store the number, if necessary.

### **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**

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on the safety standards that were developed by independent scientific organizations through periodic and through evaluation of scientific studies.

The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless phones employs a unit of measurement known as Specific Absorption Rate (SAR). The SAR limit recommended by the FCC is 1.6W/kg.\*

SAR tests are conducted using standard operating positions specified 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 of the phone.

---

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

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 limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

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

## **For body operation**

---

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

The minimum distance for this model phone is written in the FCC certification information from the body. Non-compliance with the above conditions may violate FCC RF exposure guidelines.

For more information concerning exposure to radio frequency signals, see the following websites:

Federal Communications Commission (FCC)  
<http://www.fcc.gov>

Cellular Telecommunications Industry Association (CTIA):  
<http://www.wow-com.com>

U.S. Food and Drug Administration (FDA)  
<http://www.fda.gov/cdrh/consumer>

World Health Organization (WHO)  
<http://www.who.int/peh-emf/en>

## **Precautions when using batteries**

---

- 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, 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 (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. 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 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:

- 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.
- When available, use a hands-free device. If possible, add an extra layer of convenience and

safety to your wireless phone with one of the many hands-free accessories available today.

- 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.
- 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.
- Do not take notes or look up phone numbers while driving. Jotting down a To Do list or flipping through your Address Book takes your attention away from your primary responsibility, driving safely.
- 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.

- Do not engage in stressful or emotional conversations that may be distracting. Make the people with whom you are talking aware that you are driving and suspend conversations that have the potential to divert your attention from the road.
- Use your wireless phone to call for help. Dial the emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!
- Use your wireless phone to help others in emergencies. If you see a car accident, crime in progress or other serious emergency where lives are in danger, call the emergency number, as you would want others to do for you.
- 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 any other special non-emergency wireless number.

## **Operating environment**

---

Remember to follow 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.

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.

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 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 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. 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 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 the areas 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:

If the phone is not on, switch it on.

- 1.** Key in the emergency number for your present location (for example, 911 or other official



emergency number). Emergency numbers vary by location.

## 2. Press [TALK].

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 end the call until given permission to do so.

### **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 off your phone before boarding an aircraft. The use of wireless phones 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.

### **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's.
- 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.
- 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.

## Acknowledging Special Precautions and the FCC and Industry Canada Notice

### FCC Notice and Caution

- ☑ • 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 Batterymarch 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.

## **Appendix A: CERTIFICATION INFORMATION (SAR)**

THIS MODEL PHONE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

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

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate (SAR). The SAR limit set by the FCC is 1.6 W/kg. 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 limit established by the FCC. Tests are performed in positions and locations (e.g. at the ear and worn on the body) as required by the FCC.

The tests are performed in positions and locations(e.g., at the ear and worn on the body) as required by the FCC for each model.

The highest SAR values for this model phone as reported to the FCC are:

CDMA Mode(Part 22) Head: 1.08 W/Kg.

Body-worn: 0.774W/Kg.

PCS Mode(Part 24) Head:0.753 W/Kg.

Body-worn:0.574 W/Kg.

For body worn operations, 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 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 model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID A3LSPHM220.\*

---

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

## **Appendix B: Guide to Safe and Responsible Wireless Phone Use**

Cellular Telecommunications & Internet Association  
"Safety is the most important call you will ever make."

### **A Guide to Safe and Responsible Wireless Phone Use**

TENS OF MILLIONS OF PEOPLE IN THE U.S. TODAY TAKE ADVANTAGE OF THE UNIQUE COMBINATION OF CONVENIENCE, SAFETY AND VALUE DELIVERED BY THE WIRELESS TELEPHONE. QUITE SIMPLY, THE WIRELESS PHONE GIVES PEOPLE THE POWERFUL ABILITY TO COMMUNICATE BY VOICE-ALMOST ANYWHERE, ANYTIME-WITH THE BOSS, WITH A CLIENT, WITH THE KIDS, WITH EMERGENCY PERSONNEL OR EVEN WITH THE POLICE. EACH YEAR, AMERICANS MAKE BILLIONS OF CALLS FROM THEIR WIRELESS PHONES, AND THE NUMBERS ARE RAPIDLY GROWING.

But an important responsibility accompanies those benefits, one that every wireless phone user must uphold. When driving a car, driving is your first responsibility. A wireless phone can be an invaluable tool, but good judgment must be exercised at all times

while driving a motor vehicle whether on the phone or not.

The basic lessons are ones we all learned as teenagers. Driving requires alertness, caution and courtesy. It requires a heavy dose of basic common sense-keep your head up, keep your eyes on the road, check your mirrors frequently and watch out for other drivers. It requires obeying all traffic signs and signals and staying within the speed limit. It means using seat belts and requiring other passengers to do the same.

But with wireless phone use, driving safely means a little more. This brochure is a call to wireless phone users everywhere to make safety their first priority when behind the wheel of a car. Wireless telecommunications is keeping us in touch, simplifying our lives, protecting us in emergencies and providing opportunities to help others in need. When it comes to the use of wireless phones, safety is your most important call.

## Wireless Phone "Safety Tips"

Below are safety tips to follow while driving and using a wireless phone which should be easy to remember:

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

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

- 7.** Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix-they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
- 8.** Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations-with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!
- 9.** Use your wireless phone to help others in emergencies. Your wireless phone provides you a

perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.

- 10.** Call roadside assistance or a special wireless non emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number. Careless, distracted individuals and people driving irresponsibly represent a hazard to everyone on the road. Since 1984, the Cellular Telecommunications Industry Association and the wireless industry have conducted educational outreach to inform wireless phone users of their responsibilities as safe drivers and good citizens.



As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones.

And, as we take to the roads, we all have a responsibility to drive safely.

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

Cellular Telecommunications & Internet Association  
For more information, please call 1-888-901-SAFE.  
For updates: <http://www.wow-com.com/consumer/issues/driving/articles.cfm?ID =85>

## **Appendix C: Consumer Update on Wireless Phones**

U.S. Food and Drug Administration

**1.** 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.

**2. 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.

**3. 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.

#### 4. 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 the 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.

**5. 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.

**6. 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.

- 7.** 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.

**8.** 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 hearing aids for interference from handheld 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.

**9.** 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 the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions

under which people use wireless 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 phone 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.

**10.** 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 10 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.

**11.** Which other federal agencies have responsibilities related to potential RF health effects?

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-slc.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>



## Hearing Aid Compatibility with Mobile Phones

When some mobile phones are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and phones also vary in the amount of interference they generate.

The wireless telephone industry has developed ratings for some of their mobile phones, to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated. Phones that are rated have the rating on their box or a label on the box.

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

M-Ratings: Phones rated M3 or M4 meet FCC requirements and are likely to generate less interference to hearing devices than phones that are not labeled. M4 is the better/higher of the two ratings.

T-Ratings: Phones rated T3 or T4 meet FCC requirements and are likely to be more usable with a hearing device's telecoil ("T Switch" or "Telephone Switch") than unrated phones. T4 is the better/higher of the two ratings. (Note that not all hearing devices have telecoils in them.)

Hearing devices may also be measured for immunity to this type of interference. Your hearing device manufacturer or hearing health professional may help you find results for your hearing device. The more immune your hearing aid is, the less likely you are to experience interference noise from mobile phones.

## **STANDARD LIMITED WARRANTY**

**What is Covered and For How Long?** SAMSUNG TELECOMMUNICATIONS AMERICA, L.P. (SAMSUNG) warrants to the original purchaser ("Purchaser") that SAMSUNG's Phones and accessories ("Products") are free from defects in material and workmanship under normal use and service for the period commencing upon the date of purchase and continuing for the following specified period of time after that date:

Phone 1 Year

Batteries 1 Year

Other Phone Accessories 1 Year

**What is Not Covered?** This Limited Warranty is conditioned upon proper use of Product by Purchaser. This Limited Warranty does not cover: (a) defects or damage resulting from accident, misuse, abuse, neglect, unusual physical, electrical or electromechanical stress, or modification of any part of Product, including antenna, or cosmetic damage;

(b) equipment that has the serial number removed or made illegible; (c) any plastic surfaces or other externally exposed parts that are scratched or damaged due to normal use; (d) malfunctions resulting from the use of Product in conjunction with accessories, products, or ancillary/peripheral equipment not furnished or approved by SAMSUNG; (e) defects or damage from improper testing, operation, maintenance, installation, or adjustment; (f) installation, maintenance, and service of Product, or (g) Product used or purchased outside the United States or Canada.

This Limited Warranty covers batteries only if battery capacity falls below 80% of rated capacity or the battery leaks, and this Limited Warranty does not cover any battery if (i) the battery has been charged by a battery charger not specified or approved by SAMSUNG for charging the battery, (ii) any of the seals on the battery are broken or show evidence of tampering, or (iii) the battery has been used in equipment other than the SAMSUNG phone for which it is specified.

**What are SAMSUNG's Obligations?** During the applicable warranty period, SAMSUNG will repair or replace, at SAMSUNG's sole option, without charge to Purchaser, any defective component part of Product. To obtain service under this Limited Warranty, Purchaser must return Product to an authorized phone service facility in an adequate container for shipping, accompanied by Purchaser's sales receipt or comparable substitute proof of sale showing the date of purchase, the serial number of Product and the sellers' name and address. To obtain assistance on where to deliver the Product, call Samsung Customer Care at 1-888-987-4357. Upon receipt, SAMSUNG will promptly repair or replace the defective Product. SAMSUNG may, at SAMSUNG's sole option, use rebuilt, reconditioned, or new parts or components when repairing any Product or replace Product with a rebuilt, reconditioned or new Product. All other repaired/replaced Product will be warranted for a period equal to the remainder of the original Limited Warranty on

the original Product or for 90 days, whichever is longer. All replaced parts, components, boards and equipment shall become the property of SAMSUNG. If SAMSUNG determines that any Product is not covered by this Limited Warranty, Purchaser must pay all parts, shipping, and labor charges for the repair or return of such Product.

**What Are the Limits On SAMSUNG's Liability?**  
**EXCEPT AS SET FORTH IN THE EXPRESS WARRANTY**  
CONTAINED HEREIN, PURCHASER TAKES THE PRODUCT "AS IS," AND SAMSUNG MAKES NO WARRANTY OR REPRESENTATION AND THERE ARE NO CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, 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;  
WARRANTIES OF TITLE OR NON-INFRINGEMENT;  
DESIGN, CONDITION, QUALITY, OR 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 WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT. ALL IMPLIED WARRANTIES AND CONDITIONS THAT MAY ARISE BY OPERATION OF LAW, INCLUDING IF APPLICABLE THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY LIMITED TO THE SAME DURATION OF TIME AS THE EXPRESS WRITTEN WARRANTY STATED HEREIN.

SOME STATES/PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IN ADDITION, SAMSUNG SHALL NOT BE LIABLE FOR ANY DAMAGES OF ANY KIND RESULTING FROM THE PURCHASE, USE, OR MISUSE OF, OR INABILITY TO USE THE PRODUCT OR ARISING

DIRECTLY OR INDIRECTLY FROM THE USE OR LOSS OF USE OF THE PRODUCT OR FROM THE BREACH OF THE EXPRESS WARRANTY, INCLUDING INCIDENTAL, SPECIAL, CONSEQUENTIAL OR SIMILAR DAMAGES, OR LOSS OF ANTICIPATED PROFITS OR BENEFITS, OR FOR DAMAGES ARISING FROM ANY TORT (INCLUDING NEGLIGENCE OR GROSS NEGLIGENCE) OR FAULT COMMITTED BY SAMSUNG, ITS AGENTS OR EMPLOYEES, OR FOR ANY BREACH OF CONTRACT OR FOR ANY CLAIM BROUGHT AGAINST PURCHASER BY ANY OTHER PARTY. SOME STATES/PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE/PROVINCE TO PROVINCE. THIS LIMITED WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OF THIS PRODUCT AND STATES PURCHASER'S EXCLUSIVE REMEDY. IF ANY PORTION

OF THIS LIMITED WARRANTY IS HELD ILLEGAL OR UNENFORCEABLE BY REASON OF ANY LAW, SUCH PARTIAL ILLEGALITY OR UNENFORCEABILITY SHALL NOT AFFECT THE ENFORCEABILITY FOR THE REMAINDER OF THIS LIMITED WARRANTY WHICH PURCHASER ACKNOWLEDGES IS AND WILL ALWAYS BE CONSTRUED TO BE LIMITED BY ITS TERMS OR AS LIMITED AS THE LAW PERMITS.

THE PARTIES UNDERSTAND THAT THE PURCHASER MAY USE THIRD-PARTY SOFTWARE OR EQUIPMENT IN CONJUNCTION WITH THE PRODUCT. SAMSUNG MAKES NO WARRANTIES OR REPRESENTATIONS AND THERE ARE NO CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, AS TO THE QUALITY, CAPABILITIES, OPERATIONS, PERFORMANCE OR SUITABILITY OF ANY THIRD-PARTY SOFTWARE OR EQUIPMENT, WHETHER SUCH THIRD-PARTY SOFTWARE OR EQUIPMENT IS INCLUDED WITH THE PRODUCT DISTRIBUTED BY SAMSUNG OR OTHERWISE, INCLUDING THE ABILITY TO INTEGRATE ANY SUCH SOFTWARE OR EQUIPMENT WITH THE PRODUCT.

THE QUALITY, CAPABILITIES, OPERATIONS, PERFORMANCE AND SUITABILITY OF ANY SUCH THIRD-PARTY SOFTWARE OR EQUIPMENT LIE SOLELY WITH THE PURCHASER AND THE DIRECT VENDOR, OWNER OR SUPPLIER OF SUCH THIRD-PARTY SOFTWARE OR EQUIPMENT, AS THE CASE MAY BE.

This Limited Warranty allocates risk of Product failure between Purchaser and SAMSUNG, and SAMSUNG's Product pricing reflects this allocation of risk and the limitations of liability contained in this Limited Warranty. The agents, employees, distributors, and dealers of SAMSUNG are not authorized to make modifications to this Limited Warranty, or make additional warranties binding on SAMSUNG. Accordingly, additional statements such as dealer advertising or presentation, whether oral or written, do not constitute warranties by SAMSUNG and should not be relied upon.

Specifications and availability subject to change without notice. [080802]

Samsung Telecommunications America (STA), Inc.  
1301 East Lookout Drive  
Richardson, TX 75082  
Phone: 1-800-SAMSUNG  
Phone: 1-888-987-HELP (4357)

©2004 Samsung Telecommunications America. All rights reserved.

No reproduction in whole or in part allowed without prior written approval.



## Hearing Aid Compatibility with Mobile Phones

When some mobile phones are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and phones also vary in the amount of interference they generate.

The wireless telephone industry has developed ratings for some of their mobile phones, to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated. Phones that are rated have the rating on their box or a label on the box.

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

**M-Ratings:** Phones rated M3 or M4 meet FCC requirements and are likely to generate less interference to hearing devices than phones that are not labeled. M4 is the better/higher of the two ratings.

**T-Ratings:** Phones rated T3 or T4 meet FCC requirements and are likely to be more usable with a hearing device's telecoil ("T Switch" or "Telephone Switch") than unrated phones. T4 is the better/higher of the two ratings. (Note that not all hearing devices have telecoils in them.)

Hearing devices may also be measured for immunity to this type of interference. Your hearing device manufacturer or hearing health professional may help you find results for your hearing device. The more immune your hearing aid is, the less likely you are to experience interference noise from mobile phones.