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SAMSUNG

DIGITAL CELLULAR TELEPHONE SCH-A670

User's Manual

Please read this manual before operating your phone, and keep it for future reference .

Important Safety Precautions

Read these guidelines before using your wireless phone. Failure to comply with them may be dangerous or illegal.

Road Safety at All Times
Do not use a hand-held phone while driving; park the vehicle first.

Switching Off When Refueling
Do not use the phone at a refueling point (service station) or near fuels or chemicals.

Switching Off in Aircraft
Wireless phones can cause interference. Using them in aircraft is both illegal and dangerous.

Switching Off in Hospitals
Switch off your phone near medical equipment. Follow any regulations or rules in force.

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

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 (in a hospital for example).

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
Ensure the phone is switched on and in service.
Key in the emergency number for your present location, then press **TALK**. If certain feature are in use, deactivate those features before you can make an emergency call. Give all the necessary information as accurately as possible. Do not cut off the call until given permission to do so.

Water Resistance
Your phone is not water-resistance. Keep it dry.

Accessories and Batteries
Use only Samsung-approved accessories and batteries.

Qualified Service
Only qualified service personnel may install or repair your phone.

For more detailed safety information, see “Health and Safety Information” on page 67.

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Key Descriptions

Key	Functions
Soft Keys	: Perform the functions indicated by the text above them, on the bottom line of the display.
OK	: *In the menu facility,* selects a menu function or stores information that you have entered (such as a name) in the phone memory.
Navigation	: *In the menu facility*, scroll through the menu tions and phonebook memory. up: enters Memo Pad. down: enters Get It Now left: enters Web. right: enters Messags.
SEND	: Makes or answers a call. *In Standby mode*, redials the last outgoing number when pressed twice.
CLR	: Deletes characters from the display. *In the menu facility*, returns to the previous menu level.
END	: Ends a call. Also switches the phone on and off when pressed and held. *In the menu facility*, returns to Standby mode and cancels your input.
Volume	: *During a call*, adjusts the voice volume. *In Standby mode with the phone open*, adjusts the ringer volume.

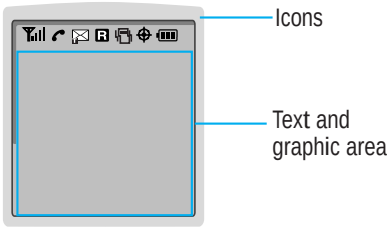
Key Descriptions (continued...)

Key	Functions
*	: Use this key for the special star calling feature.
#	: Use this key when you make a call to an automate systemm, especially when using teleservices.

Display

Layout

The display comprises two areas; an upper line of fixed icons, and the lower text and graphic area. The following icons display at power-on:



Icons

Signal strength : Shows the received signal strength. The greater the number of bars, the better the signal strength.

Service: Appears when a call is in progress.

No service indicator: Appears when you are outside a service area. When it appears, you cannot make or receive calls.

New voice message: Appears when you have a new voice message.

New text message: Appears when you have a new text message.

Alarm on: Appears when you set an alarm.

GPS on: Appears when GPS mode is on.

Roaming: Appears when you are out of your home area and have registered with a different network (when travelling in other countries, for example).

Vibration mode: Appears when a vibration mode on.

Battery strength: Shows the level of your battery. The more bars you see, the more power you have left.

Backlight

The display is illuminated by a backlight. When you press any key, the backlight illuminates. It turns off if no key is pressed within a given period of time.

Service Light

The service light is at the top right of the phone. It flashes to indicate incoming call or message. Also, the service light flashes for a few seconds when you turn on the phone.

Getting Started

Charging a Battery

Your phone is powered by a rechargeable Li-ion battery. A travel adapter is provided with your phone. Use only approved batteries and chargers. Ask your local SAMSUNG dealer for further details.

The phone can be used while the battery is charging.

Note: You must fully charge the battery before using your phone for the first time.

1. Connect the lead from the travel adapter to the bottom of the phone. Check that the arrow on the lead connector is facing towards the front of the phone.

2. Connect the adapter to a standard AC wall outlet.

   The LEDs on the front of the charger indicate the following:

   - Red indicates that the battery is charging.
   - Green indicates that the battery is fully charged.
   - Yellow indicates that the battery is operating at a temperature that is too high or too low, or that something is not plugged in correctly. Check the charger and battery for proper connections.

3. When charging is finished, disconnect the adapter from the power outlet.

   Disconnect the adapter from the phone by pressing the grey tabs on either side of the connector and pulling the connector out.

Low Battery Indicator

You can easily tell if your battery needs to be recharged by checking the battery strength indicator in the upper-right corner of your phone's display. The presence of all three bars indicates a full charge, two bars indicates a smaller charge, and one bar indicates an even smaller charge. No bars (the battery icon is empty) means your battery must be charged.
When the battery charge level gets low, the battery sensor blinks an empty battery icon (), sounds a tone. If the battery level gets too low, the phone will turn off automatically. Unfortunately, if this happens you'll lose whatever you are doing, including dropping your call. Watch the battery strength icon and make sure your battery is adequately charged.

Switching the Phone On / Off

1. Press the Flip Up button to flip up.

2. Hold down **END** for more than one second to switch the phone on.

   When the system locates services, the greeting message displays along with the date and time.

   If the phone is out of service, the icon appears in the display. In this case, you cannot place and receive calls. You can try again later when service is available.

3. When you wish to switch the phone off, hold down **END** for more than two seconds.

Call Functions

Making a Call

In Standby mode, key in the area code and phone number and press **SEND** .

Correcting the Number

To clear ...	Then ....
The last digit displayed	Press **CLR** .
The whole display	Hold down **CLR** for more than one second.

Ending a Call

When you have finished your call, briefly press **END** or close the phone.

If you press **END**, the call time (length of the call) displays briefly and the phone returns to Standby mode.

Using Call Log

Press **SEND** to access call log in Standby mode.
To recall any number of these log, proceed as follows.

1. Use the navigation key to scroll through the list until you select the required name or number.
2. Press **SEND** to dial the number displayed.

Speed Dialing

Once you have stored phone numbers in the phone book memory, you can dial them easily whenever you want.

You can dial the stored phone number automatically without pressing **SEND**. See below.

One-Touch Dial

Memory locations 01 through 09 are special one-touch locations. You can dial the phone numbers stored in the Phone Book memory from 01 through 09 simply by pressing one button.

Press and hold the third digit of the memory location containing the number to be dialed.

For example: Location no. 009
Press and hold **9**.

The number (and name) stored is displayed, then dialed.

Two-Touch Dial

Memory locations 10 through 99 are special two-touch locations.

Press the second digit briefly, then hold down the third digit of the memory cell.

For example: Location no. 023
Press 2 briefly and hold down 3.

The number (and name) stored is displayed, then dialed.

Three-Touch Dial

Memory locations 100 through 500 are special three-touch locations.

Press the first and the second digit briefly, then hold down the third digit of the memory cell.

For example: Location no. 123
Press 1 and 2 briefly, then hold down 3.

The number (and name) stored is displayed, then dialed.

Pause Dialing

When you call automated system, like banking services, you are often required to enter a password or account number. Instead of manually entering the numbers each time, you can store the numbers in your Phone Book, separated by special characters called pauses.

Your phone has two pause dialing methods:
- Pause dialing from the Phone Book
- Manual pause dialing

Storing Pauses in a Phone Book Entry

To store a number in your Phone Book that contains pauses:

1. Enter the phone number you want to store (such as the bank's tele-service phone number).

2. Press **MENU** soft key. The pause menu options display.

   - 'P' pause : The letter 'P' displays within the number, meaning that a hard pause will occur at that point in the calling sequence. Enter digits that need to follow the pause.

   - 'T' pause: The leletter 'T' displays in the number, meaning that a "Timed (2 second) pause will occur at that point in the calling sequence.

   - Hyphen: Places a hyphen between characters.

3. Press **OK** to select an option. Continue entering the number and press **OK** to store the number in your Phone Book.

4. Store the number in your Phone Book as you normally would by pressing **OK** and following the screen prompts..

Pause Dialing from a Stored Phone Book Entry

1. Dial the number from the Phone Book.

2. Wait for the appropriate prompt for the number (credit card number, bank account number, etc.).

3. When prompted, press **SEND** to send the DTMF number that follows your hard pause.

   "SENDING DTMF" flashed on the display and the transmitted tone sounds.

Manual Pause Dialing

You can enter pauses manually during the dialing process.

1. Enter the phone number of the service you want to connect to (such as a bank's tele-service phone number).

2. Press **MENU** soft key. The pause menu options display.

3. Press **OK** to select an option.

4. After connecting, press **SEND** again to transmit the additional number at the prompt from the tele-service.

Answering a Call

When somebody calls you, the phone rings and the phone icon is displayed in the middle of the external display.

If the caller can be identified, the caller's phone number (or name if pre-stored in your Phone Book) is displayed. If the caller cannot be identified, only the phone icon appears.

1. To answer a call, open the phone. If the phone is already open, press **SEND**.

2. End the call by closing the phone or pressing **END**.

   Note: You can answer a call while using the phone book or menu features. The current operation will be interrupted.

In-Call Options

Your phone provides a number of functions that you can use during a call. You may not utilize all of these functions at all times. Many of the in-call options are network services.

Press **MENU** soft key during a call to access the following in-call options:

Phone Book: allows you to access the **Phone Book** menu.

Mute/Quit: allows you to switch your phone's microphone off, so that the other party cannot hear you.

Example: You wish to say something to another person in the room but do not want the other party to hear you.

Silent/Quit: does not transmit the key tones. It allows you to press keys without hearing annoying key tones during a call.

Send Tel #: Sends the telephone number to the other caller.

My Phone #: shows your phone number.

SEND: Sends the DTMF..

Using Caller ID

This feature tells you who is calling you by displaying the caller's number when the phone rings. If a caller's name and number are stored in your Phone Book, the corresponding name is also displayed. If you call someone who has this feature, your phone number will be displayed on the their phone.

Note: Contact your service provider to setup the Caller ID service.

Viewing Missed Calls

Your phone keeps a list of calls that you do not answer when the phone is on and service is available. The phone indicates a missed call by displaying a text notification on the screen. Additionally, if caller information is available, the screen displays the phone number of the most recent missed call.

Press **SEND** to call the displayed number, or **OK** to save the number in Phone Book.

Dropped Calls

A dropped call can occur during a conversation in response to a signal fade or leaving a service area. In this case, the call ends and “Call Dropped” displays.

Failed Calls

A failed call can occur if your phone is out of calling range or the network is temporarily busy. Your phone responds to a failed call by displaying an appropriate message: “Call Failed Out of Range” or “Call Failed Network Busy.”

Three-Way Calling

This feature enables you to conduct conference calls with two separate parties at the same time. The phone records each party into the Outgoing Calls Log. Also, You are billed airtime for each outgoing call separately.

Note: Contact your service provider to activate Three-Way Calling.

To place a Three-Way call:

1. During a conversation, press **SEND**. The phone places the other party on hold.

2. Enter the phone number for the third party, and then press **SEND** . The phone dials the third party.

3. When you are connected to the third party, press **SEND** again to begin your three-way call.

If one of the callers (not you) hangs up, you and remaining caller stay connected. If you initiated the call and you hang up first, all three parties are disconnected.

Call Waiting

Call Waiting lets you receive a second call during conversation. Your phone notifies you of a call waiting by beeping an displaying “Call Waiting.”

Your phone provides the option of turning the Call Waiting feature on and off (if you have subscribed to the service). Call Waiting is on by default in the phone. If you choose to have a undisturbed conversation, simply turn off the feature for the current call.

Note: Contact your service provider to activate the Call Waiting service.

To answer a waiting call:

1. To answer the call, press **SEND** . The phone connects the calling party, and places the current party on hold.
2. Press **SEND** again to switch between two parties.

Note: If you do not respond to a Call Waiting notification, the phone will forward the call to voicemail or another number that you have set up. Contact your service provider for more information.

Call Forwarding

This feature provides the option of forwarding incoming calls to another phone number, even while your phone is off. Activating Call Forwarding does not affect outgoing calls made from this phone. Contact your service provider to activate Call Forwarding.

Adjusting the Volume

During a call, if you want to adjust the voice volume, use the volume keys on the left side of the phone.

In Standby mode, you can adjust the ring volume using the same keys.

Entering Text

Changing Text Input Mode

When using your phone, you will need to enter text at many times. For example, when storing a name in the Phone Book, creating your personal greeting or scheduling events in your calendar. You can enter alphanumeric characters into your phone by using your phone's keypad.

When you are prompted to enter text, the current text entry method will appear in the bottom of the display as T9Word, ABC, Symbol or 123.

To change the input mode, press **MENU** and then press the navigation key to scroll to the mode you want and press **OK** .

T9 Mode

The T9 predictive text input mode allows you to enter words easily with a minimum of key presses. As you press each key, the phone selects a letter that makes up the word that it thinks you are typing, based on a built-in dictionary. As a new letter is added, the word changes based on the key that you have pressed.

1. When you are in the T9 predictive text input mode, start entering a word by pressing keys **2** to **9**. Press each key only once for one letter.

   The word that you are typing appears in the display. It may change with each key that you press.

2. Enter the whole word before editing or deleting any keystrokes.

3. If the word is correct, start entering the next word.

   Otherwise, press **0** repeatedly to display alternate word choices for the keys that you have pressed.

4. Complete each word with a space by pressing the **#** key.

To type words not found in the T9 mode, change the text input mode to the ABC mode.

To delete letters, press **CLR**. Press and hold down **CLR** to erase entire words.

ABC Mode

When typing in **ABC** mode, you should press key labeled with the required letter:
-Once for the first letter
-Twice for the second letter
-And so on.

For example, you press 2 three times quickly to display the letter “C” , 5 two times quickly to display the letter “K”. So, this method is called Multi-tap typing.

Refer to the table on next page for the list of characters assigned on each key.

List of characters available:

Key	Characters in the Order Displayed
1	. , - ? ! ‘ @ : / 1
2	A B C 2
3	D E F 3
4	G H I 4
5	J K L 5
6	M N O 6
7	P Q R S 7
8	T U V 8
9	W X Y Z 9
0	0

(Caps Lock mode)

To shift the case of the next letter(s) that you type, press * one or more times. There are three shift states: Lower Case is indicated by abc in the right corner of the display, Initial Capital is Abc, and Capitals Lock is ABC.

The cursor moves to the right when you press a different key. When entering the same letter twice (or a different letter on the same key), just wait for a few seconds for the cursor to move right automatically, and then select the next letter.

If you enter a specific word in this mode the first time, the word is automatically added to your phone’s database, and offers the new word as an option for its keystroke sequence when you are in the T9(English) mode.

- Press # to insert a space.
- To move the cursor left or right through your text message, press the navigation key.
- Press **CLR** one or more times to clear letters to the left.

Symbol Mode

Symbol mode enables you enter symbols into a text message.

Press the navigation key to display more symbols up to Set 6.

Press keys corresponding to the desired mark, then the phone automatically switches back to the text entry mode used just prior to selecting the Symbol mode.

123 Mode

123 mode enables you to enter numbers into a text message. Press keys corresponding to the desired digits, and manually switch back to text entry mode of choice.

Using the Menus

The phone offers a range of functions that allows you to tailor the phone to your needs. These functions are arranged in menus and submenus.

The menus and submenus can be accessed by scrolling or by using the shortcuts.

Accessing a Menu Functions by Scrolling

1. In Standby mode, press **MENU** soft key to access the menu facility. Scroll with the navigation key to reach the desired main menu. Press **OK**.

2. If the menu contains any submenus,find the one you want by scrolling with the navigation key.
   Press the **OK** key to enter the submenu.

   If the menu you have selected contains submenus, repeat this step.

3. Scroll with the navigation key to find the setting of your choice. Press the **OK** key to confirm the chosen setting.

Notes:

- You can return the previous menu level by pressing **CLR**.

- You can exit the menu without changing the menu settings by pressing **END** .

Accessing a Menu Functions by Using its Shortcut

The menu items (menu, submenus and setting options) are numbered and can be accessed quickly by using their shortcut number.

1. In Standby mode, press **MENU** soft key to access the main menu.

2. Within three seconds, key in the first digit of the shortcut number. Repeat this for each digit of the shortcut number.

3. Find the setting of your choice pressing the navigation key and then press **OK**

Note: The numbers assigned to each menu function are indicated on the list on the next page.

Your Phone's Main Menu

Main menu	Main menu 1	Main menu 2
1. Camera	1. Take a picture 2. Gallery 3. Online Album 4. settings	
2. Phone Book	1. Find 2. Add 3. Rename Group 4. My Phone # 5. Memory	
3. Calls	1. Outgoing 2. Incoming 3. Missed 4. Erase Logs 5. Call Timer	1. Outgoing 2. Incoming 3. Missed 4. All Calls
4. Message	1. Send New Msg 2. Voice 3. Inbox 4. Outbox 5. Draft 6. Saved 7. WebAlert 8. Msg Setting 9. Erase Msg	
5. Get It Now		
6. Mobile Web	1. Get In Web 2. Prompt	
7. Planner	1. Today 2. Scheduler 3. Jump To Date 4. To Do List 5. Memo Pad 6. Count Down 7. Alarm Clock 8. World Time 9. Calculator	

Main menu	Main menu 1	Main menu 2
8. Voice Kit	1. Voice Dial	1. Record
		2. Review
		3. Erase All
	2. Voice Memo	1. Record
		2. Review
		3. Erase All
	3. Call Screen	1. On/Off
		2. Inbox
		3. Greeting
		4. Call Sound
		5. Wait Time
	4. Set Active	
0. Setup	1. Location	
	2. Display	1. Menu Style
		2. Animation
		3. Banner
		4. Backlight
		5. Auto Hyphen
	3. Sounds	1. Volume/Vibrate
		2. Ringer Type
		3. Key beep
		4. Alert
		5. Power On/Off
		6. Roam Ringer
		7. Whisper Mode
	4. Network	1. Set NAM
		2. Roam Option
	5. Security	1. Lock Phone
		2. Change Lock
		3. Emergency #
		4. Voice Privacy
		5. Restriction
		6. Erase Memory
		7. Reset Phone
	6. Others	1. Launch Pad
		2. Language
		3. Call Answer
		4. Auto Answer
		5. Auto Retry
		6. Data/Fax
		7. Clock Set
		8. Airplane Mode
		9. Service LED
	7. Version	

Camera

Using the camera module embedded in your phone, you can take pictures of people or events while on the move.

Take a picture *MENU 1-1*

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

Gallery *MENU 1-2*

In this menu option, you can review the pictures you have taken. By default, your phone displays them in the thumbnail mode, which shows a picture as a small image.

Online Album *MENU 1-3*

Using this menu option, you can manage the pictures uploaded to the wireless web page assigned to you from the server when you are subscribed to the associated service.

Settings

MENU 1-4

You can change the default settings of the camera options.

The following options are available:

Flash: allows you to specify whether or not you want to use the flash.

Resolution: allows you to set the image resolution to one of **High:649*480**, **Med:320*240** and **Low:160*120**.

Fun Frames: allows you to select a frame type.

Color Tones: allows you to set the color tone to one of **Mono**, **Sepia**, **Negative**, **Emboss**, **Sketch**, **UV Positive** and **UV Negative**.

White balance: allows you to set the white balance to adjust the color balance of pictures to remove the current lighting conditions add. With this setting, you can make your picture appear warm or cool. When you set this option to **Auto**, the phone automatically determines the white balance depending on lighting conditions.

Shutter sound: allows you to select a sound when you press the sutter.

Quality: allows you to select the image quality from **Economy**, **Normal** and **Fine**.

Phone Book

The Phone book allows you to store frequently used phone numbers and the associated names in your personal directory to make it easy for you to make a call without having to remember or enter the phone number. You can store up to 500 entries including the voice dial entries.

Find

Menu 2-1

This option allows you to find an entry.

Note: You can access this menu by pressing the **Contacts** soft key in Standby mode.

1. Press left or right navigation to scroll to the desired method.

   By Name: enter the character(s) you want with the desired Input mode. Then the phone shows the entries containing that character(s).

   By Group: Select the group containing the entry you want to find using left or right navigation key. The phone lists all entries in the selected group.

   By Entry: enter the location by pressing the numeric keys.

2. When the desired entry is highlighted, press **OK** to access the entry.

3. The phone shows the details on the name. Press **SEND** to place a call or press **MENU** to see the following options.

   Talk: allows you to place a call.
   Edit: allows you to edit phone number, name, location number, label category and so on.
   Erase: erases the entry.

When the desired entry is highlighted press **MENU** to access the following options:

Edit: allows you to edit phone number, name, location number, label category and so on.

Erase: erases the number.

Add New: allows you to add a new entry. Refer to **Add** menu(**2-2**) for details.

Add

Menu 2-2

This menu allows you to store a number with a name in your Phone Book. You can save a person's various numbers, such as workplace number, mobile number and fax number, into one entry. Using this feature, you can keep someone's information together. It also helps you to find numbers easily in the Phone Book.

Creating a New Entry

1. The **Phone Book** dissplay screen prompts you to confirm **Number** or **E-Mail**.
2. Press **OK**. Enter the phone number or e-mail address. For pause option press **Option** soft key.
3. Press **OK** to save in New Entry.
4. Enter a name and press **OK**.
5. Use the navignation key to highlight one of fields.
6. Enter the name that is associated with the number using the keypad.
7. Press **OK** to save the entery.

Rename Group

Menu 2-3

Use this option to rename or edit a group in your phone book.

My Phone

Menu 2-4

This option displays the phone number of the phone being used.

Memory

Menu 2-5

This option shows the memory status for Phone Book.

Calls

You can use the **Calls** menu to:

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

Outgoing

Menu 3-1

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

To ...	Press ...
Select an entry	up or down naviagiton key
Dial the selected entry	**SEND**
View the details	**OK**

When you press **OK**, you can view the date/time stamp for the selected entry. If there is a Phone Book match, the name and the label display.

Press **MENU** soft key to access **Options**. The following options are available:

Talk: dials the selected number.

Show Entry (or **Save** if the phone number is not currently stored in the Phone Book): shows the phone book entry or stores the number in the Phone Book.

Prepend: allows to add an area code or feature code to the number before calling the number.

Incoming

Menu 3-2

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.

To...	Press ...
Select entry	up or down navigation key
Dial the selected entry	**SEND**
View the details	**OK**

When you press **OK**, you can view the date/time stamp for the selected entry. If there is a Phone Book match, the name and the label display.

Press **MENU** soft key to access **Options**. The following options are available:

Talk: dials the selected number.

Show Entry (or **Save** if the phone number is not currently stored in the Phone Book): shows the phone book entry (or stores the number) in the Phone Book.

Prepend: allows to add an area code or feature code to the number before calling the number.

Missed

Menu 3-3

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.

To...	Press ...
Select entry	navigation key
Dial the selected entry	**SEND**
View the details	**OK**

When you press **OK**, you can view the date/time stamp for the selected entry. If there is a Phone Book match, the name and the label display.

Press **MENU** soft key to access **Options**. The following options are available:

Talk: dials the selected number.

Show Entry (or **Save** if the phone number is not currently stored in the Phone Book): shows the phone book entry (or stores the number) in the Phone Book.

Prepend: allows to add an area code or feature code to the number before calling the number.

Erase Logs *Menu 3-4*

You can erase any one of the call directories (Outgoing, Incoming or Missed), or you can erase all three.

Call Timer *Menu 3-5*

You can view the duration of your last call, total calls, and calls made during the life of your phone. This feature is not for billing purposes.

Message

Your phone comes equipped with several ways to send and receive messages.

Send New Message *Menu 4-1*

1. Enter the number of the recipient and press **OK**.
2. Enter your message using the keypad. Press the **Option** soft key. A pop-up menu appears in the display.
3. Use the navigation key to select the input mode (ABC, T9Word, Symbol, or 123). Also use the navigation key to choose the text format, or if you wish to Add Media such as a picture, animation, melody, or a canned message.
4. Once you’re finished entering your message, press **OK**.
5. Press the **Send** soft key. Your message is sentto the intended recipient.

Voice *Menu 4-2*

When the voice mail list display, press navigation key to scroll to a voice message and press the **Select** soft key to review the message.

Inbox *Menu 4-3*

New messages are stored in your inbox.

1. Use the navigation key to highlight the message you wish to view.
2. Press **OK** to view the contents of the message.

Outbox *Menu 4-4*

Your phone stores messages in Outbox, regardless of whether the message was successfully transmitted.

1. Use the navigation key to highlight the message you wish to view.
2. Press **OK** to view the contents of the message.

Draft *Menu 4-5*

Draft messages are those that have been composed but never sent. You can return to the Draft folder at any time to view, edit, or send a draft message.

Saved *Menu 4-6*

Your phone can store draft message that art yet to be sent in the Saved message box.

WebAlert *Menu 4-7*

Occasionally, your service provider may send notifications to your phone in the form of web alerts. These alerts may contain information regarding new services or updates. When you receive an alert, you'll be receive a text notification and hear an audible tone.

Msg Setting *Menu 4-8*

The Msg Setting menu allows you to define settings for picture, text, and general messages.

Erase Msg *Menu 4-9*

You can erase voice, text, draft and your outbox messages all from one convenient location.

Get It Now

You can download games, ring tones, e-mail and more using **Get it now**. For more information on airtime charges, contact your service provider.

Mobile Web

Your phone comes equipped with Mobile Web Service. You can view specially designed versions of popular sites which include sports, weather, news, stock quotes, and more.
Browsing the web through your phone is not the same as using your PC since site providers have only selected certain aspects of the available sites to present to the wireless phone users and have removed most graphics.

Planner

The Scheduler feature enables you to:

- Keep track of important dates and events
- Create a list of things to do
- Check the time in another part of the world
- Use the phone as a calculator

Today

Menu 7-1

You can schedule up to 9 events 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.

Scheduling an Event

1. Enter your event information. You can enter up to 32 characters.

2. Press **OK** to accept your entry.

3. Enter the Start Time and Date, and press **OK**.

Note: Press the volume key on the left side of the phone to toggle between AM and PM.

4. Enter the End Time and Date, and press **OK**.

5. Select an alarm to notify your of your event by pressing the navigation key. The available alarm options are: **10 minutes Before**, **30 minutes Before**, **1 hour Before**, **No Alarm** and **On time**.

6. Press **OK** to save your event.

Adding, Editing, or Erasing an Event

If you already scheduled events when you select the **Today** menu option (**7.1**), the events are displayed. Press the navigation key to select the event you want to view. If necessary, press **OK** to display more contents in the selected to do item.

The following options are available when you press **MENU** soft key.

Add new: allows you to add a new event.

Edit: allows you to edit a scheduled event.

Erase: allows you to erase a selected events.

Erase all: allows you to ease all of the event.

After you select an option, press **OK**. Then follow the screen prompt.

Scheduler

Menu 7-2

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

Creating a New Event

Scroll to the desired date in the calendar using the navigation keys and volume keys and then press to confirm the selected date. And schedule a new event referring “Today”.

Adding, Editing, or Erasing a Event

When a stored memo is displayed, press **MENU** soft key to access the **Options**.

For further details on Options, refer “Today”.

Jump To Date *Menu 7-3*

Jump To Date allows you to specify the calendar date you want to view. You can enter, edit, and/or erase events in your calendar.

To Do List *Menu 7-4*

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

Creating the Task List Item

1. Enter the first task.

   Note: You can enter up to 32 characters. For further details on how to enter characters, see page 36.

2. Press **OK** to confirm.

3. Enter your deadline using the numeric keys.

   Note: Press the volume key on the left side of the phone to toggle between AM and PM.

4. Select high or low priority using the navigation key and then press **OK**.

5. Your phone saves your input.

Adding, Editing and Erasing an Task

If tasks are already defined in the Task List when you select the **To Do List** menu option (**7.4**), the current contents are displayed with the deadline and the associated priority (**!** for High or **-** for Low).

Scroll to the desired item by pressing the navigation key. If necessary, press **OK** to display more contents in the selected to do item.

The following options available when you press **OK** .

Add new: allows you to add a new task.

Edit: allows you to edit a saved task.

Erase: allows you to erase the selected task.

Erase all: allows you to ease all of the event.

After you select an option, press **OK** . Then follow the screen prompt.

Memo Pad

Menu 7-5

This feature allows you to write down memos.
You can enter up to 60 characters for each memo.

If memos are already saved, scroll to the desired item by pressing up or down navigation key.

The following options available when you press **MENU**.

Add new: allows you to add a new memo.

Edit: allows you to edit a saved memo.

Erase: allows you to erase a selected memo.
Erase All: allows you to erase memos.

After you select an option, press **OK** . Then follow the screen prompt.

Count Down

Menu 7-6

This menu help 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 Count down timers using this menu.

To create a new count down timer;

1. Enter a name for your new Count down item and press
   OK .

2. Enter the date and time that you want to Count down to or from.

   Notes: You can enter the years between 1980 and 2099 for dates.

3. Press **OK** to save the item.

If a Count Down timer is already defined when you select the **Count Down** menu option, the defined Count Down timer is displayed.

Alarm Clock

Menu 7-7

Your phone has an alarm clock function with three separate alarms.Each alarm can be set to go off once, or daily at a set programmed time. Once you set an alarm, it is easy to change it's time or to turn it off.

1. Select the alarm you want to set by pressing the navigation key. Your choices are **Once**, **Daily**, or **Off**.

2. Press the **OK** to select the desired alarm.
3. Follow the prompts to save the alarm setting of choice.
4. Press the **CLR** to return to the previous menu.

World Time

Menu 7-8

This menu allows you to check the current time for Greenwich Mean Time (GMT) and 24 major cities around the world:

Select the city corresponding to your time zone by pressing the navigation keys one or more times. The local date and time are displayed.

Calculator

Menu 7-9

Using this feature, you can use the phone as a calculator. The calculator provides the basic arithmetic functions: addition, subtraction, multiplication and division.

Using the Calculator

1. Enter the first number using the numeric keys.

2. Press the navigation key to set the operator for your calculation until the required arithmetic symbol appears: + (add), - (subtract), x (multiply), / (divide).

3. Enter the second number.

4. To calculate the result, press **OK** .

5. Repeat steps 1 to 4 as many times as required.

   Each time you change the operator, the previous calculation is performed and the result is displayed as the top number in the display.

Notes:

- To erase any mistakes and clear the display, press **CLR**.
- Use * to enter a decimal point and # to change the sign of a number to a negative (-).

Voice Kit

In this menu, you can use the phone's voice features such as:

- voice dial
- voice memo

Voice Dial *Menu 8-1*

When your phone is in the digital mode, you can call up to 20 stored entries by speaking the name into the microphone. Using the voice dialling option requires that you first program the phone to recognise the name of the person you are calling.

Record

This option allows you to record names and register numbers for subsequent voice dialling. The phone provides voice prompts and screen displays to guide you through the recording process.

Review

When a list of your stored voice dial numbers displays, scroll to the desired entry and press the **Play** soft key. The recorded name plays audibly.

Erase All

This option erases all of the entries on the Voice Dial list.

Voice Memo *Menu 8-2*

Record

You can record up to voice memos of 4 minutes total. This feature shares the memory with the Answering (Ans.) Machine feature and the amount of time for memos are dependent on the available memory less any callers' messages; for example, if your phone has the callers' messages of 4 minutes total, you cannot record any voice memo.

Review

When a list of your voice memos displays, scroll to the memo you want to review and press the **Play** soft key. The phone plays back the memo.

Erase All

This option allows you to erase all of the voice memos.

Call Screen

Menu 8-3

Call Screen lets you use your phone as an answering machine, complete with a default or custom greeting that plays when you don't answer, and an inbox where you can review and replay missed calls.

Set Active

Menu 8-4

Voice Dialling is always active once you have programmed the phone to accept voice dialling entries and the associated phone numbers.

To place a call using voice dialling, simply press and hold * key in the standby mode and then say the name into the phone after you hear a prompt.

Using the **Set Active** menu option, you can set how to initiate a voice dialling call.

Setting

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

Location *Menu 9-1*

The settings allow you to turn the Location ON or 911 Only. When you first use your phone this option is set to 911 Only. This option is automatically turned ON when you place a call to 911. However, this option is turned back OFF when your 911 call is completed.

Display *Menu 9-2*

Menu Style

Menu Style allows you to choose the background style for your phone while in standby mode. The three style options Icon, Nature, and Camera not only affect how the display looks, but also how you access the menus.

Animation

This feature allows you to choose the multi-media or pictures that display on your phone when you turn it on, turn if off, and while in standby mode.

Banner

The banner option allows you to edit the greeting displayed on the standby screen.

Backlight

You have several options for setting how the LCD, keypad backlight operates. Remember that backlight use drains your battery faster.

Auto Hyphen

With the option set to Yes, your phone automatically hyphenates phone numbers as they are entered. For example: 972-761-0000.

Sounds *Menu 9-3*

Your phone provides a variety of ringer options through the Sounds menu. These options allow you to customize your ringer type and ringer volume settings in order to easily recognize a certain type of incoming call, message or scheduled event.

Volume / Vibrate

Set your calls and alarms volume level or set to vibrate.

Ringer Type

Five monotone ringer types and ten melody tones can be found under the ringer type option in the Sounds menu.

Key beep

Key Beep allows you to adjust the tone length and volume level that the keypad generates each time you press a key. The display icon shows up to 5 levels (the loudest setting). No bars indicate that the key beep function is silenced.

Alert

Your phone will beep from time to time, this beep is called an alert beep and can easily be turned on or off. This feature offers the following options: Minute beep, Service, Connect, Disconnect, Fade, Roam, and Privacy.

Power On / Off

Using this feature you can choose to have sound when you power on and off.

Roam Ringer

When this option is set to On, your phone sounds a unique tone when a call is received in a network service area. This feature is set to On by default.

Whisper Mode

This feature allows you to whisper and still be heard by a caller.

Network *Menu 9-4*

Your phone allows you to set the preferred system. Contact your service provider to determine the best networking methods for you.

Security *Menu 9-5*

Lock Phone

Locking the phone limits all outgoing calls except calls to 911 emergency and the three user-programmable emergency/secret numbers.
You can lock the phone manually during use, or set the phone to lock automatically when it is turned on. When the phone is in Lock Mode, you can answer incoming calls, but you must unlock the phone to place outgoing calls (except to emergency and secret numbers).

Change Lock

This feature allows you to change your current lock code to a new one. The lock code is preset to 0000 at factory.

Enter a new, four-digit lock code, then press **OK**.

Emergency Number

Your phone provides the option of storing three emergency numbers. Each number can be up to 32 digits. All emergency numbers can be manually called at any time even when your phone is locked or restricted. This can be a useful feature for controlling what numbers can be called from your phone.

Voice Privacy

Used only in digital networks, Voice Privacy encrypts the voice channel so that people cannot eavesdrop on your conversation.

Restriction

This feature allows you to restrict the use of your phone.

Erase Memory

Erase memory erases your Phone Book and Voice Dial recordings. Personal settings (the call log, Messages, Schedules, or other phone feature settings), are unaffected by erasing the memory on your phone. This feature is useful if you want to give your phone to a friend or family member, or if you want to erase all of your phone numbers.

Reset Phone

Resetting the phone returns all setup options to the factory default settings.

Others

Menu 9-6

Launch Pad

This feature allows you to customize defult Launch Pad function.

Langeage

The language option on your phone can change the language of voice prompts, menus, and key-input.

Call Answer

With this option activated, your phone will allow you to select a specific answer mode when you receive an incoming call. Your phone can be preset to answer when you do any of the following:

- SEND key: You can answer the phone by pressing SEND.
- Any key: You can answer the call by pressing any key except END key.
- Folder open: Opening your phone will answer your call.

Auto Answer

With this option activated, your phone will automatically answer calls after the specified number of seconds. This options is useful when driving.
If Auto Answer is set to Off the phone will not answer an incoming call. If you do not answer the call it is automatically stored in the Missed Call log..

Auto Retry

With this option activated, your phone automatically dials the number when a connection fails. Dependent upon your location, the number of times your phone automatically dials the number may vary.

Data / Fax

Your phone is capable of sending and receiving digital data and fax call when connected to a computing device (laptop, desktop, handheld, palmtop, etc.) running Windows 95, Windows 98, Windows NT or later versions. The phone functions just like a typical modem on your PC, enabling you to use wireless data involving a wide variety of Windows software applications.

To use digital data or fax services with your phone, you will need to obtain a digital data/fax kit from your service provider. This kit will contain the necessary cables, software, and user's guide required for your to connect and use your phone with your computing device.

Clock Set

To display the correct date and time on the idle screen or to use the Organiser features, such as Scheduler, Task List, Count Down, Alarm and World Time, you need to set the current time and date using this menu.

Enter the time and date using the numeric keys.

The minute, hour, month and day each must be entered using 2 digits and the year requires all 4 digits. You need to enter the hour in 12-hour format.

Airplane Mode

This menu allows you to set airplane mode.

Service LED

This menu allows you to to select whether the service light on the folder is used or not.

Version *Menu 9-7*

You can view both the software version and hardware version running on your phone.

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 set by the FCC is 1.6W/kg *.

*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.

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.
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.

FCC certification information for this model phone is attached separation paper.

For Body Operation

This device was tested for typical body-worn operations with the back of the phone kept 1.5 cm from the body.
To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that maintain a 1.5 cm separation distance between the user's body and the back of the phone,including the antenna.
The use of belt-clips, holsters, and similar accessories should not contain metallic components. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

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

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

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 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. 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.

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 extra 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 phonebook takes your 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 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.

8. 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!

9. 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.

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 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.

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

Potentially Explosive Atmospheres

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 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, proceed as follows.
1. If the phone is not on, switch it on.
2. Key in the emergency number for your present location. Emergency numbers vary by location.
3. 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 cut off 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 may be dangerous to the operation of the aircraft, and is illegal.
- 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 touch the phone with a wet hand while it is charging. 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 it. 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

Cautions

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Compliance Information

This device complies with Part 15 of 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.

Information to User

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.

APPENDIX

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 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.

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 seatbelts 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 radiofrequency 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 radiofrequency 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 radiofrequency 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 radiofrequency 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 radiofrequency 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 radiofrequency 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 radiofrequency 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.

8. 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.

9. What about wireless phone interference with medical equipment?

Radiofrequency 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 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.

10. 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 radiofrequency 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.

11. 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.

12. 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

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