# SGH-x427 Portable Digital Telephone User Manual 

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

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## Unpacking

Your package contains the following items:


Your local Samsung dealer can provide you with additional accessories including:

- Simple hands-free kit
- Standard battery
- Cigarette lighter adapter
- Holster
- Ear microphone
- Leather Case


## Your Phone

## Phone Layout

The following illustrations show the main elements of your phone:



## Key(s) Description



In Menu mode, scroll through the menus and Phonebook.

In Idle mode, allows you to access your favorite menus directly. For more information about shortcuts, see page 88.

In Menu mode, the Left key returns to the previous menu level and the Right key selects the current menu.

When entering text, move the cursor left and right respectively.
In Idle mode, allows you to access your favorite menus directly. For more information about shortcuts, see page 88.
 (soft keys)

Perform the functions indicated by the text above them, on the bottom line of the display.

Key(s) Description (continued)
In Idle mode, launches the WAP
(i) (Wireless Application Protocol) browser.

Makes or answers a call.
When held down in Idle mode, recalls the last number dialed or received.
In Menu mode, selects a menu function or stores information that you have entered, such as a name in the phone or SIM memory.

Deletes characters from the display.
In Menu mode, returns to the previous menu level.

Ends a call. Also switches the phone on and off when held down.
In Menu mode, cancels your input and returns to Idle mode.

When held down in Idle mode, accesses your voice mail.
$0+$ Enter numbers, letters and some special characters.

## Key(s) Description (continued)

**) Enter special characters.
(\#-0) Perform various functions.

(on the side of the phone)
During a call, adjust the earpiece volume.
In Idle mode, adjust the keypad tone volume.
In Menu mode, scroll through the menus and Phonebook.

## Display

## Display Layout

The display has three areas:


| Area | Description |
| :--- | :--- |
| First line | Displays various icons. See <br> page 12. |
| Middle lines | Displays messages, instructions, <br> and any information that you <br> enter, such as the number you are <br> dialing. |
| Last line | Shows the functions currently <br> assigned to the two soft keys. |

## I cons

## Icon Description

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

> Tinll
> If this icon is gray, you are outside your network area and are restricted to emergency calls only.

Appears when you are connected to the GPRS network.

Appears when a call is in progress.
B
Appears when you are out of your home area and have logged on a different network; for example, when traveling on other countries.

## I con Description



Appears when you set an alarm to ring at a specified time.

Appears when you are entering text to indicate the current text input mode.

Appears when a new text message is received.

Appears when a new voice mail message is received.

Appears when Mute mode is active.

Appears when Silent mode is active or you set the Alert Type menu (Menu 3.4), so that the phone vibrates when you receive a call. For further details, see page 28 and page 76 respectively.
(III) Shows the level of your battery. The more bars you see, the more power you have left.

## Backlight

A backlight illuminates the display and the keypad. When you press any key or open the folder, the backlight turns on. It turns off when no keys are pressed within a given period of time, depending on your setting in the Back Light menu (Menu 4.6.2). After one minute, the display turns off to conserve your battery power.

To specify the length of time the backlight is active, set the Back Light menu (Menu 4.6.2). See page 85 for further details.

You can also set the phone to use the backlight only during a specified period of time, in the Auto Light menu (Menu 4.6.3). See page 86 for further details.

## Service Light

The service light is at the top right-hand corner of the phone. It flashes when services are available on the phone.

To activate or deactivate the use of the service light, set the Service Light menu (Menu 4.6.4). See page 86 for further details.


## Getting Started

## Installing the SI M Card

When you subscribe to a cellular network, you are provided with a plug-in SIM card loaded with your subscription details, such as your PIN, any optional services available and many others.

I mportant! The plug-in SIM card and its contacts can be easily damaged by scratches or bending, so be careful when handling, inserting or removing the card.

Keep all SIM cards out of the reach of small children.

1. If necessary, switch off the phone by holding down the $\square$ key until the power-off image displays.
2. Remove the battery. To do so:

1 Press and hold the battery lock above the battery upward toward the top of the phone.

2 Lift the battery away, as shown.

3. Slide the SIM card into the SIM card socket so that it locks the card into place. Make sure the gold contacts of the card face into the phone.


Note: When you need to remove the SIM card, slide it, as shown, and take it out of the socket.

4. Place the battery so that the tabs on the end align with the slots at the bottom of the phone.

5. Press the battery until it clicks into place. Make sure that the battery is properly installed before switching the phone on.


## Charging a Battery

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

You can use the phone while the battery is charging, but this causes the phone to charge more slowly.

Note: You must fully charge the battery before using your phone for the first time. A discharged battery is fully recharged in approximately 200 minutes.

1. With the battery in position on the phone, plug the connector of the travel adapter into the jack at the bottom of the phone.

2. Plug the adapter into a standard AC wall outlet.
3. When charging is finished, unplug the adapter from the power outlet and disconnect it from the phone by pressing the gray tabs on both sides of the connector and pulling the connector out.


Note: You must unplug the adapter before you remove the battery from the phone during charging; otherwise, the phone could be damaged.

## Low Battery Indicator

When the battery is weak and only a few minutes of talk time remain, you hear a warning tone and a message repeats at regular intervals on the display. When this happens, your phone turns off the backlight to conserve the remaining battery power.

When the battery level gets too low, the phone automatically turns off.

## Switching the Phone On/ Off

1. Open the folder.
2. Press and hold the $\boldsymbol{\sim} / \mathbb{C}$ key until the phone switches on.
3. If the phone asks you to enter the phone password, enter the password and press the OK soft key. The phone password is factory set to "00000000." For further details, see page 122.
4. If the phone asks for a PIN, enter the PIN and press the OK soft key. For further details, see page 123.

The phone searches for your network and after finding it, the idle screen, illustrated below, appears on the display. Now, you can make or receive a call.


Note: The display language is preset to English at the factory. To change the language, use the Language menu (Menu 4.4). For further details, see page 82.
5. When you wish to switch the phone off, press and hold the $\boldsymbol{\sim} / \odot$ key until the power-off image displays.

## Call Functions

## Making a Call

When the idle screen displays, enter the area code and phone number, and press the key.

Note: When you activate the Auto Redial option in the Extra Settings menu (Menu 4.7), the phone automatically redials up to ten times when the person does not answer the call or is already on the phone. See page 87 for further details.

## Making an International Call

1. Press and hold the $0 \square$ key. The + character appears.
2. Enter the country code, area code, and phone number and press the key.

## Correcting the Number

| To clear | Press the |
| :--- | :--- |
| the last digit <br> displayed | key |
| any other digit <br> in the number | Left or Right key until the cursor <br> is immediately to the right of the <br> digit to be cleared. Press the <br> key. You can also insert a missing <br> digit simply by pressing the <br> appropriate key. |
| the whole <br> display | key and hold it for more than <br> one second. |

## Ending a Call

When you want to finish your call, briefly press the $\boldsymbol{\square}$ key.

## Redialing the Last Number

The phone stores the numbers you dialed, received or missed if the caller is identified. See "Call Records" on page 72 for further details.
To recall any of these numbers:

1. If you have typed characters on the display, press the -/ه key to return to Idle mode.
2. Press the key to display a list of the last numbers in the order you made or received.
3. Use the Up and Down keys to scroll through the numbers until the number you want highlights.

| 4. | Press the |
| :--- | :--- |
| dial the number | key. |
| edit the number | Options soft key and <br> select Edit. Then change <br> the number, referring to <br> "Correcting the Number" <br> on page 22. |
| delete the number | Options soft key and <br> select Delete. |
| delete all of the <br> numbers | Options soft key and <br> select Delete All. |

## Making a Call from Phonebook

You can store frequently phone numbers that you use regularly in the SIM card or the phone's memory, which are collectively called Phonebook. Simply select a name to recall the associated number. For further details about the Phonebook features, see page 31.

## Adjusting the Volume

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

Press the $\wedge$ key to increase the volume level and the $\checkmark$ key to decrease the level.


In Idle mode, you can also adjust the keypad tone volume using these keys.

## Answering a Call

When somebody calls you, the phone rings and displays the incoming call animation.

When the caller can be identified, the caller's phone number, or name if stored in your Phonebook, displays.

1. If necessary, open the folder. Press the key or the Accept soft key to answer the incoming call.

If the Anykey Answer option in the Extra Settings menu (Menu 4.7) is activated, you can press any key to answer a call except for the $\boldsymbol{\mathbf { n }} / \odot$ key and the Reject soft key. See page 87.

If the Open to Answer option in the Extra Settings menu (Menu 4.7) is activated, you can answer the call simply by opening the folder.

Note: To reject an incoming call, press and hold the Volume keys on the left side of the phone before opening the folder, or press the Reject soft key or ©/® key.
2. End the call by closing the folder or pressing the $\boldsymbol{\sim} / \mathbb{O}$ key.

Note: You can answer a call while using the Phonebook or menu features.

## Viewing Missed Calls

When you are unable to answer a call for any reason, you can find out who is calling you, if this service is available, so that you can call the person back.

The number of calls you missed displays on the idle screen immediately after a call is missed.

To view the missed call immediately:

1. If the phone is closed, open the folder.
2. Press the View soft key.

The number corresponding to the most recent missed call displays, if available.

| 3. To | Press the |
| :--- | :--- |
| scroll through the <br> missed calls | Up or Down key. |
| call the number <br> displayed | key. |
| edit or delete a missed <br> call number | Select soft key. See <br> below. |

## Editing a Missed Call Number

Note: When the number corresponding to the missed call is not available, the Edit Number option does not display.

1. Press the Options soft key.
2. Press the Up or Down key to highlight the Edit Number option.
3. Press the Select soft key.
4. Change the number.

| To | Press the |
| :--- | :--- |
| call the number | key. |
| store the number | Save soft key and enter <br> the name and location. <br> For further details, see <br> page 31. |

## Deleting a Missed Call

1. Press the Options soft key.
2. If necessary, press the Up or Down key to highlight the Delete option.
3. Press the Select soft key.

You can press the $\boldsymbol{\sim} / \mathbb{D}$ key at any time to exit the Missed Call feature.

Note: You can access the Missed Call feature at any time by selecting the Missed Calls menu (Menu 2.1). For further details, see page 72 .

## Quickly Switching to Silent Mode

Silent mode is convenient when you wish to stop the phone from making noise, in a theater for example.

In Idle mode, press and hold the \# key until the "Silent Mode" message and the Vibration icon (郢) display.

When you exit Silent mode, your phone changes the sound settings as follows:

| Option | New Setting |
| :--- | :--- |
| Alert Type (Menu 3.4) | Melody |
| Keypad Tone (Menu 3.5) | Tone |
| Message Tone (Menu 3.6) | Light Only |
| Folder Tone (Menu 3.7) | Off |
| Power On/Off | Classical |
| Extra Tones (Menu 3.9) | Off |

To exit and reactivate the previous sound settings, press and hold the \# key again until "Exit Silent Mode" appears. The Vibration icon (䧄) no longer displays.

Note: When you turn the phone off, Silent mode is automatically deactivated.

## Selecting Functions and Options

Your phone offers a set of functions that allow you to customize your phone. These functions are arranged in menus and sub-menus, accessed using the two soft keys marked $\square$ and $\cap$. Each menu and sub-menu allows you to view and alter the settings of a particular function.

The roles of the soft keys vary according to the function you are currently using; the label on the bottom line of the display just above each key indicates its current role.


Press the left soft key for Menu mode.

Press the right soft key for Phonebook.

To view the various functions and options available and to select the one you want:

1. Press the appropriate soft key.

| 2. | Press the |
| :--- | :--- |
| select the: <br> - function displayed <br> - option highlighted | Select soft key or <br> the Right key. |
| view the next function <br> or highlight the next <br> option on a list | Down key or $\vee$ key <br> on the left side of the <br> phone. |
| move back to the <br> previous function or <br> option on a list | Up key or $\wedge$ key on <br> the left side of the <br> phone. |
| move back up one level <br> in the structure | Left key, $\mathbf{~}$ soft key <br> or key. |
| exit the structure <br> without changing the <br> settings | $\mathbf{\sim} / \odot$ key. |

In some functions, you may be asked for a password or PIN. Enter the code and press the OK soft key.

Note: When you access a list of options, your phone highlights the current option. If, however, there are only two options, such as On/Off or Enable/Disable, your phone highlights the option that is not currently active so that you can select it directly.

## Phonebook

You can store phone numbers and their corresponding names in your SIM card and phone＇s memories．They are physically separate but are used as a single entity，called Phonebook．

## Storing a Number with a Name

There are two ways to store a number：
－Using the Save soft key in Idle mode
－Using the New Entry option in the Phonebook menu

## Storing a Number in Idle Mode

When you enter a number，Save appears above the left soft key to allow you to store the number in Phonebook．

1．Enter the number you want to store．
Note：If you make a mistake while entering a number， correct it using the key．

2．To save the number，press the Save soft key．
3．Select an icon to identify the category of the number to be stored．Three categories are available：

- 回：Mobile phone number
- 醜：Office number
- 通：Home number

To select the category，press the Left or Right key and press the Select soft key．
4. Enter a name and press the OK soft key.

The maximum length you can enter for a name depends on your SIM card.
5. Press the right soft key, labeled To Card or To Phone to switch between the phone's and card's memories.

Note: When you change phones, any numbers stored in your SIM card memory are automatically available with the new phone, whereas any numbers stored in the phone's memory must be reentered.
6. If you do not want to save the number and name in the suggested location, press the key and enter your preferred location.
7. Press the $\mathbf{O K}$ soft key to store the name and number. The new Phonebook entry displays.

| 8. To | Press the |
| :--- | :--- |
| use the entry options | Options soft key. For <br> further details, see <br> page 33. |
| return to the idle screen | $\mathbf{\Omega} / \mathbb{C}$ key. |

## Storing a Number Using the Phonebook Menu

1. At the idle screen, press the Name soft key.
2. Scroll to New Entry by pressing the Up or Down key and press the Select soft key.
3. Select an icon to identify the category of the number to be stored by pressing the Left or Right key, and press the Select soft key.

Note: The E-mail icon (國) is available in this step. It allows you to save an E-mail address instead of a phone number.
4. Enter a name and press the OK soft key.

The maximum length of a name depends on your SIM card.
5. Enter a number or address you want to store and press the Save soft key.
6. Continue the procedure from step 5 on page 32 to store the number.

## Using Phonebook Entry Options

While accessing any Phonebook entry, press the Options soft key to use the options for the entry.

| To | Press the |
| :--- | :--- |
| select the <br> highlighted option | Select soft key or the Right <br> key. |
| highlight a different <br> option | Up or Down key until the <br> option you want highlights. |

The following options are available:
Paste: allows you to paste the number into the normal dialing mode. Use this option to dial a number similar to one in Phonebook, such as a different extension in the same office.

Use the key to change the number as required; see page 22 for further details. When you are ready to dial, press the key.

Edit: allows you to edit the name and/or number.
Erase: allows you to erase the name and number from Phonebook. You are asked to confirm that you wish to erase the name and number by pressing the Yes soft key.

Copy: allows you to copy the number to another location. You can select the memory and the location number.

Caller Group: allows you to organize your Phonebook entry in caller groups so that the phone alerts you in a specific way when a person from one of your groups calls you. Select one of the ten groups available.

To remove an entry from a group, select the No Group option.

For more information about how to change caller group properties, see page 37.

Add Entry: allows you to add a new number to the currently selected name.

## Searching for a Number in Phonebook

After storing numbers in Phonebook, you can search for them in two ways; by name and by caller group.

## Searching for a Number by Name

1. At the idle screen, press the Name soft key.
2. Press the Select soft key when Search highlights. You are asked to enter a name.
3. Enter the first few letters of the name.

The Phonebook entries are listed, starting with the first entry matching your input.

| 4. | Press the |
| :--- | :--- |
| view the highlighted <br> entry | View soft key. |
| select a different <br> entry | Up or Down key until <br> the entry you want <br> highlights. |
| look for a name <br> starting with a <br> different letter | key labeled with the <br> letter you want. |

5. Once you have found the entry, press the key to dial the number, or press the Options soft key to access the Phonebook entry options; for further details, see page 33 .

## Searching for a Number by Caller Group

1. When the idle screen displays, press the Name soft key.
2. Scroll to Group Search by pressing the Up or Down key and press the Select soft key. You are asked to enter a group name.
3. Enter the first few letters of the group name that you wish to find.

The caller groups are listed, starting with the first group matching your input.
4. Scroll to the group you want by pressing the Up or Down key and press the View soft key.

The Phonebook entries in the caller group are listed.

| 5. | To |
| :--- | :--- |
| view the <br> highlighted entry | View soft key. |
| select a different <br> entry | Up or Down key until the <br> entry you want highlights. |

6. Once you have found the entry, press the $\rightarrow$ key to dial the number, or press the Options soft key to access the Phonebook entry options; for further details, see page 33.

## Editing a Caller Group

1. When the idle screen displays, press the Name soft key.
2. Scroll to Group Edit by pressing the Up or Down key and press the Select soft key.
3. Scroll through the group list by pressing the Up or Down key.
4. When the group you want highlights, press the Options soft key.
5. Select each option and change the settings, as required. The following options are available:

- Call Ring Tone: allows you to set the ring tone to be used when you receive a voice call from a person in the group.
- SMS Tone: allows you to set the ring tone to be used when you receive a text message from a person in the group.
- Graphic: allows you to set the graphic icon to be displayed when you receive a voice call from a person in the group.
- Group Name: allows you to assign a name to the group. For further details about how to enter characters, see page 40.

6. When you are finished, press the or $\square$ key.

## Speed-dialing

Once you have stored phone numbers in the SIM card, you can set up to eight speed-dial entries and then dial them easily whenever you want, simply by pressing the associated number key.

## Setting Up Speed-dial Entries

1. At the idle screen, press the Name soft key.
2. Scroll to Speed Dial by pressing the Up or Down key and press the Select soft key.
3. Select the key to which you wish to assign the speeddialing number, from the $2 \times$ keys, and press the OK soft key.

Note: Memory location 1 is reserved for your Voice Mail server number.

If you have already assigned a number to the key, the Options soft key replaces the OK soft key. Go to step 6.
4. Select a Phonebook entry and press the View soft key.
5. Select a number if the entry has more than one number, by pressing the Up or Down key and press the Select soft key.
6. Once you have assigned a number to the selected key, you can use the following options by pressing the Options soft key:

- Change: allows you to assign a different number to the key.
- Erase: allows you to clear the setting so that no number is assigned to the key.
- Erase All: allows you to clear the settings for all keys so that no numbers are assigned to any of the keys.
- Number: allows you to view the number assigned to the key.

7. When you are finished, press the or $\square$ key.

## Speed-dialing from Phonebook

To speed-dial the numbers assigned to keys 2 acc to (9.0), press and hold the appropriate key.

## Checking the Memory Status

You can check how many names and numbers are stored in Phonebook; SIM card and phone memories. You can also see the capacity of both memories.

1. When the idle screen displays, press the Name soft key.
2. Select the Memory Status option.
3. Press the Up or Down key to view the number of existing and remaining entries in the card and phone's memory.
4. When you are finished, press the or $\square$ key.

## Entering Text

When using your phone, you will often need to enter text, such as when storing a name in Phonebook, creating your personal greeting or scheduling events on your calendar. You can enter alphanumeric characters by using your phone's keypad.

Your phone has the following text input modes:

## - T9 mode

This mode allows you to enter words with only one keystroke per letter. Each key on the keypad has more than one letter; for example, when you press the (5m key once, J, K or L displays. The T9 mode automatically compares your keystrokes with an internal linguistic dictionary to determine the correct word, thus requiring far fewer keystrokes than the traditional upper/lowercase character modes.

## - Upper/ lower-case character modes

These modes allow you to enter letters by pressing the key labeled with the letter you want to enter once, twice, three or four times until the letter displays.

## - Symbol mode

This mode allows you to enter symbols, such as punctuation marks.

## - Number mode

This mode allows you to enter numbers.

## Changing the Text I nput Mode

When you are in a field that allows characters to be entered，you will notice the text input mode indicator on the display．

Example：Writing a text message


| To select | Press the 仑 soft key <br> until |
| :--- | :--- |
| T9 mode | （6）displays．See page 42． |
| Symbol mode | ※ displays．See page 45． |
| Upper－case character <br> mode | A displays．See page 43． |
| Lower－case character <br> mode | ⿴囗 displays．See page 43． |
| Number mode | 1 displays．See page 45． |

## Using T9 Mode

T9 is a predictive text input mode that allows you to key in any character using single keystrokes. This text input mode is based on a built-in dictionary.

To enter a word in T9 mode:

1. When you are in T9 mode, start entering a word by pressing the to keys. Press each key only once for each letter.
Example: To enter "Hello" in T9 mode, press the (40.), (30), 5m, 5m and (6.0 keys.

The word you are typing appears on the display. It may change with each key that you press.
2. Enter the whole word before editing or deleting the keystrokes.
3. When the word displays correctly, go to step 4.
If not, press the $\oplus+$, Up or Down key to display alternative word choices for the keys that you have pressed.
Example: Both "Of" and "Me" have the (6." and (3." keys. The phone displays the most commonly used choice first.
4. Put a space by pressing the \# key and start entering the next word.

- To type words not found in T9 mode, change the text input mode to the upper/lower-case character input mode.
- To enter full stops, hyphens or apostrophes, press the (100) key. T9 mode applies grammar rules to ensure that the correct punctuation is used.
Example: The (100 key is used twice to display two punctuation marks:

- To shift the case in T9 mode, use the * key. There are two cases: Lower Case (9) and Capital Lock (9)
- You can move the cursor by using the Left and Right keys. To delete letters, press the key. Press and hold the $\sigma$ key to clear the display.


## Using the Upper/ Lower-Case Character Mode

Use the ${ }^{100}$ to $\xlongequal[0+]{0}$ keys to enter your text.

1. Press the key labeled with the letter you want:

- Once for the first letter
- Twice for the second letter
- And so on

2. Select the other letters in the same way.

Note: 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 to the right automatically, and then select the next letter.

See the table below for more information about the characters available:

| Key | Characters in the Order Displayed |  |
| :---: | :---: | :---: |
|  | Upper Case | Lower Case |
| 1 | . 1 ! ? \& i ¿§ | . \% @ _ £ \$ |
| 2 | A B C 2 Ä Å F Ç Г | a b c 2 à ä å |
| 3 | D EF3É $\triangle$ ¢ | d e f 3 è é $\Phi$ |
| 4 | G HI4 $4 \Psi$ | gh i 4 ì $\Psi$ |
| 5 | JKL5 | j k l $5 \Lambda$ |
| 6 | M NO6 $\mathrm{N}^{\text {® Ö ö }}$ | m n o 6 ñ ø ò ö |
| 7 | PQRS $7 \Pi \Sigma \Xi$ | pqrs 7 ¢ $\Sigma$ g |
| 8 | T U V 8 Ü ü | $t \mathrm{u} v 8$ ù ü |
| 9 | W X Y Z $9 \Omega$ | wxy z $9 \Omega$ |
| 0 | 0* \# , ; " $=$ | /:- + ( ) < > |
| \# | Space |  |

- To insert a space, press the \# key.
- You can move the cursor by using the Left and Right keys. To delete letters, press the key. Press and hold the $\sigma$ key to clear the display.


## Using Number Mode

Number mode enables you to enter numbers into a text message. Press the keys corresponding to the digits you want to enter.

## Using Symbol Mode

Symbol mode enables you to insert symbols into a text message.

Use the Navigation keys to scroll to a symbol and then press the OK soft key to insert the highlighted symbol into your message

## Options During a Call

Your phone provides a number of control functions that you can use during a call.

## Putting a Call on Hold

You can place the current call on hold whenever you want. You can make another call while you have a call in progress if your network supports this service.

To place a call on hold, simply press the Hold soft key. You can reactivate the call whenever you want, by pressing the Unhold soft key.

To make a call while you have a call in progress:

1. Enter the phone number that you wish to dial or look it up in Phonebook.
2. Press the key to dial the second call. The first call is automatically put on hold.

## Or

1. Put the current call on hold by pressing the Hold soft key.
2. Make the second call in the normal way.

To switch between the two calls, simply press the Swap soft key.

The current call is placed on hold and the call on hold is reactivated so that you can continue conversing with the other party.

When you want to finish, end each call normally by pressing the $\boldsymbol{\Delta} / \mathbb{C}$ key.

## Switching the Microphone Off (Mute)

You can temporarily 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 person on the phone to hear you.

To switch the microphone off temporarily:

1. Press the Options soft key.
2. If necessary, press the Down key to highlight the Mute option.
3. Press the OK soft key. The other person can no longer hear you.

To switch the microphone back on:

1. Press the Options soft key.
2. If necessary, press the Down key to highlight the Unmute option.
3. Press the OK soft key. The other person can hear you again.

## Muting/ Sending Key Tones

These options allow you to turn the key tones off or on. If the Mute keys option is selected, your phone does not transmit the key tones. It allows you to press keys without hearing annoying key tones during a call.

Note: To communicate with answering machines or computerized telephone systems, the Send keys option must be selected.

## Sending Tones

This option allows you to send the correct type of tones if you need to enter a password or account number when calling an automated system, such as a bank. To send tones:

1. Press the Options soft key.
2. Highlight the Send Tones option.
3. Press the OK soft key.
4. Enter the required number and press the OK soft key.

## Searching for a Number in Phonebook

You can search for a number in Phonebook during a call．
1．Press the Options soft key．
2．Press the Down key to highlight the Phonebook option．
3．Press the OK soft key．
The Phonebook entries are listed．
4．Enter the name that you wish to find．
If you enter the first few letters of the name，the Phonebook entries are listed，starting with the first entry matching your input．

5．To view the highlighted entry，press the View soft key．
For further details about the Phonebook feature，see page 31.

## Using the Message Service（SMS）

If you receive an SMS（Short Message Service）message during a call，the Message icon（ $⿴ 囗 ⿱ 一 一 ⿻ 上 丨 又) ~ f l a s h e s ~ o n ~ t h e ~ d i s p l a y . ~$ The SMS Service option enables you to read the message or send a new message．

For further details about the Message feature，see page 60.

## Call Waiting

You can answer an incoming call while you have a call in progress, if this service is supported by the network and you have set the Call Waiting menu (Menu 6.3) to Activate; see page 102. You are notified of an incoming call by a call waiting tone.

To answer a call while you have a call in progress:

1. Press the key to answer the incoming call. The first call is automatically put on hold.
2. To switch between the two calls, press the Swap soft key.
3. To end a call on hold, press the Options soft key and select the End Held Call option.

To end the current call, press the $\mathbf{\square} / \mathbb{\circ}$ key.

## Making a Multi-party Call

A multi-party call is a network service that allows up to six people to take part simultaneously in a multi-party or conference call.

For further details about subscribing to this service, contact your service provider.

## Setting up the Multi-party Call

1. Call the first participant in the normal way.
2. Call the second participant in the normal way. The first call is automatically put on hold.
3. To join the first participant to the multi-party call, press the Options soft key and select J oin. Press the OK soft key.
4. To add a new person to the multi-party call, call the person in the normal way and then press the Options soft key. Select the Conference option and press the OK soft key.

You can add incoming callers by answering the call and pressing the Options soft key, and selecting Conference. Repeat as required.

## Having a Private Conversation With One Participant

1. Press the Options soft key and choose the Select one option. Press the OK soft key.

The list of call participants appears.
2. Highlight a person by pressing the Up or Down key, and press the Select soft key or the $\sim$ key.
3. When the Private option highlights, press the OK soft key.

Now you can talk privately to that person. The other participants can continue to converse with each other.
4. To return to the multi-party call, press the Options soft key and select Conference. Press the OK soft key.

All of the multi-party call participants can now hear each other.

## Dropping One Participant

1. Press the Options soft key and choose the Select one option. Press the OK soft key.

The list of call participants appears.
2. Highlight a person by pressing the Up or Down key, and press the Select soft key or the key.
3. Press the Down key to select the Remove option and press the OK soft key.

The call ends with that participant, but you can continue to talk to the other participants.
4. When you want to end the multi-party call, close the folder or press the $\boldsymbol{\sim} / \mathbb{D}$ key.

## Using the Menus

You can tailor the phone's range of functions to your needs using menus and sub-menus. Menus and sub-menus can be accessed by scrolling using the Navigation keys or by using the shortcuts.

## Accessing a Menu Function by Scrolling

1. In Idle mode, press the Menu soft key.
2. Scroll using the Up and Down keys to reach a main menu, Phone Settings for example. Press the Select soft key or the Right key to enter the menu.
3. If the menu contains sub-menus, Language for example, you can access them by scrolling and pressing the Select soft key.

If the menu that you have selected contains further options, repeat this step.

| 4. | Press the |
| :--- | :--- |
| scroll through the <br> menus | Up or Down keys or use <br> the $\wedge$ and $\cup$ keys. |
| confirm the <br> chosen setting | Select soft key or the <br> Left key. |
| return to the <br> previous menu level | S soft key or the Right <br> key. |
| exit the menu <br> without changing <br> the settings | $\mathbf{D} / \varnothing$ key. |

## Accessing a Menu Function by Using Its Shortcut

The menu items, such as menu, sub-menus and options, are numbered and can be accessed quickly by using their shortcut numbers. The shortcut number is shown at the bottom right next to the $\boldsymbol{\square}$ soft key on the display. Simply press the Menu soft key and enter the number of the menu you want.

Note: The numbers assigned to each menu are indicated on the list on the next page. They may not match the menu number on the phone, depending on the services supported by your SIM card.

Example: Accessing the Language menu.

1. Press the Menu soft key.
2. Press the (40m key for Phone Settings.
3. Press the (4iem key for Language.

The languages available display.

## List of Menu Functions

The following list shows the menu structure available and indicates the number assigned to each option and the page where you can find a description of each feature.

Note: If you use a SIM AT card that provides additional services, the SI M AT menu displays when you press the Menu soft key to enter Menu mode. For further details, see your SIM card instructions.

## 1. Messages (see page 60)

1.1 Inbox
1.2 Outbox
1.3 Write New
1.4 Templates
1.5 Settings
1.5.1 Setting $1^{*}$
1.5.2 Setting $2^{*}$
1.5.3 Common Setting
1.6 My Objects
1.6.1 My EMS Melody
1.6.2 My EMS Picture
1.6.3 My EMS Animation
1.6.4 Delete All
1.7 Delete All
1.8 Memory Status
1.8.1 SIM Memory
1.8.2 PHONE Memory
1.8.3 CB Memory
1.9 Voice Mail
1.9.1 Connect to Voice Mail
1.9.2 Voice Mail Number
1.10 Broadcast
1.10.1 Read
1.10.2 Receive
1.10.3 Channel List
1.10.4 Language

[^0]
## 2. Call Records (see page 72)

2.1 Missed Calls
2.2 Incoming Calls
2.3 Outgoing Calls
2.4 Delete All
2.4.1 Missed Calls
2.4.2 Incoming Calls
2.4.3 Outgoing Calls
2.5 Call Time
2.5.1 Last Call Time
2.5.2 Total Outgoing
2.5.3 Total Incoming
2.5.4 Reset Timers

## 3. Sound Settings (see page 75)

3.1 Ring Tone
3.2 Ring Volume
3.3 More Ringtones
3.4 Alert Type
3.5 Keypad Tone
3.6 Message Tone
3.6.1 SMS Tone
3.6.2 SMS-CB Tone
3.7 Folder Tone
3.8 Power On/Off
3.9 Extra Tones

## 4. Phone Settings (see page 80)

4.1 My Settings
4.1.1 Wallpaper
4.1.2 Menu Style
4.1.3 More Graphics
4.2 Greeting Message
4.3 Own Number
4.4 Language
4.5 Security
4.5.1 PIN Check
4.5.2 Change PIN
4.5.3 Phone Lock
4.5.4 Change Password
4.5.5 SIM Lock
4.5.6 FDN Mode*
4.5.7 Change PIN2*
4.6 Display Settings
4.6.1 Contrast
4.6.2 Back Light
4.6.3 Auto Light
4.6.4 Service Light
4.6.5 Graphic Logo
4.7 Extra Settings
4.8 Short Cut
4.8.1 Key Up
4.8.2 Key Down
4.8.3 Key Right
4.8.4 Key Left
4.9 Reset Settings

[^1]5. Organizer (see page 89)
5.1 Calendar
5.2 To Do List
5.3 Time \& Date
5.3.1 Set Time
5.3.2 Set Date
5.3.3 World Time
5.3.4 Time Format
5.4 Alarm
5.4.1 Once Alarm
5.4.2 Daily Alarm
5.4.3 Morning Call
5.4.4 Remove Alarm
5.4.5 Autopower
5.5 Calculator
5.6 Currency Exchange
6. Network Services (see page 100)
6.1 Call Forwarding
6.1.1 Forward Always
6.1.2 Busy
6.1.3 No Reply
6.1.4 Unreachable
6.1.5 Cancel All
6.2 Call Barring
6.2.1 All Outgoing
6.2.2 International
6.2.3 International Except to Home
6.2.4 All Incoming
6.2.5 Incoming While Abroad
6.2.6 Cancel All
6.2.7 Change Barring Password
6.3 Call Waiting
6.4 Network Selection

### 6.5 Caller ID

6.6 Closed User Group
6.6.1 Index List
6.6.2 Outside Access
6.6.3 Default Group
6.6.4 Deactivate*

## 7. Funbox (see page 108)

7.1 Games
7.2 More Games
7.3 WAP Browser
7.3.1 Home
7.3.2 Favorites
7.3.3 http://
7.3.4 Settings
7.3.5 Clear Cache
7.3.6 Push Message
7.4 Downloads
7.4.1 Games \& More
7.4.2 Sounds
7.4.3 Pictures
7.4.4 DNS Setting

[^2]
## Messages

Short Message Service (SMS) allows you to send and receive short text messages to and from other GSM 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. To use this feature, you must subscribe to your service provider's message service.

When the Message icon (国) appears, you have received new text messages. When the memory is full, an error message displays and you cannot receive any new messages. Use the Delete option in each message box to delete obsolete messages.

## I nbox (Menu 1.1)

This message box is used to store the messages that you have received.

When you enter this menu, the list of messages in the box displays with the senders' phone numbers or names, if available in your Phonebook.

1. Select a message from the list and press the View soft key to read the message contents.
2. To scroll through the contents, press the Up or Down key.
3. To scroll to the previous or next message, press the * or \# key.

While reading a message, you can choose the following options by pressing the Options soft key:

Delete: allows you to delete the message.
Forward: allows you to resend the message. For further information about how to send a message, see page 63.

Reply: allows you to reply to the sender by sending a text message.

Call Back: allows you to call the sender back.
Save Address: allows you to extract the sender's number and URL, e-mail addresses or phone numbers from the message text, so that you can save them in your phone's memory.

Move: allows you to move the message to another memory location, from the SIM card to the phone's memory or vice versa.

Select Objects: allows you to save media items, such as sounds or images, from the message into your phone's memory. You can then use the items when writing a message. For details, see page 64.

Outbox (Menu 1.2)
This message box is used to store the messages that you have already sent or will send.

When you enter this menu, the list of messages in the box displays with the recipients' phone numbers or names, if available in your Phonebook.

1. Select a message from the list and press the View soft key to read the message contents.
2. To scroll through the contents, press the Up or Down key.
3. To scroll to the previous or next message, press the * or \# key.

While reading a message, you can choose the following options by pressing the Options soft key:

Delete: allows you to delete the message.
Send: allows you to resend the message. For further information about how to send a message, see page 63.

Save Address: allows you to extract the destination number and URL, e-mail addresses or phone numbers from the message text, so that you can save them in your phone's memory.

Move: allows you to move the message to the SIM card.
Select Objects: allows you to save the media items, such as sounds or images, from the message into your phone's memory. You can then use the items when writing a message. For details, see page 64.

Write New (Menu 1.3)
In this menu, you can write and send a text message.
Note: When you add media items to the message, the number of characters you can enter decreases.

## Creating a Simple Text Message

1. Create your message.

Note: For more information about entering characters, see page 40.
2. When you finish entering your message, press the Options soft key. The following options are available:

- Send: allows you to send the message. The message is deleted after sending.
- Save and Send: allows you to save a copy of the message to the Outbox and then send the message.
- Save: allows you to save the message in the Outbox so that it can be sent later.
- For more information about the Text Formatting, Add Objects, Add Templates, Add Phonebook, Add Bookmark and Language options, see page 64.

3. Select Send or Save and Send, and press the Select soft key.
If you only want to save the message, select Save. After saving the message, the phone returns to the Messages menu.
4. If you select a save option, select a location and press the OK soft key.
5. Enter a destination number and press the OK soft key. The message is sent.

Note: When the phone fails to send the message, it asks you if you want to retry. Press the OK soft key to confirm. Otherwise, press the Exit soft key to return to the message screen.

## Creating a Message Using the Options

1. Create your message.
2. Press the Options soft key.
3. Select one of the following options by using the Up and Down keys and pressing the Select soft key.

- Text Formatting: allows you to format the style of the text.

For the Size attribute, Normal, Large and Small sizes are available. For the Underline and Strikethrough attributes, select On or Off.
The attributes can be combined.

- Add Objects: allows you to add a sound, melody, picture or animated image to your message. Select the category of the item to be added. In each category, you can select from the various factory-set items or choose an item received from other sources, such as the Internet or other phones.
- Add Templates: allows you to apply one of the preset message templates to the text. Select one of the five messages stored in the Templates menu (Menu 1.4). For further details, see page 65.
- Add Phonebook: allows you to add a Phonebook entry to your message. Select one from the list.
- Add Bookmark: allows you to add a web page's address stored in your Favorite list (Menu 7.3.2). Select one from the list.
- Language: allows you to change the language to be used in T9 input mode. Select the language to be used.

4. Complete the message, and send or save it by following the procedure from step 2 on page 63.

## Templates (Menu 1.4)

Using this menu, you can preset messages that you use most frequently.

Select an empty location or the message template you want and press the Options soft key.

The following options are available:
Edit: allows you to write a new message or edit the message.

Note: For further details about how to enter characters, see page 40.

Send Message: allows you to retrieve the message. Once you have completed the message, you can send, save and send, or simply save it. For details about how to send a message, see page 62.

Delete: allows you to delete the message. You are asked to confirm the deletion by pressing the Yes soft key.

## Settings (Menu 1.5)

In this menu, you can set up default message information. A setting group is a collection of settings required to send messages. The number of setting groups available depends on the capacity of your SIM card.

Note: The last setting you accessed is automatically activated for sending messages.

Setting $\mathbf{x}$ (where $\mathbf{x}$ is the setting group number): each group has its own sub-menu.

Service Center: allows you to store or change the number of your message center, which is required when sending messages. You must obtain this number from your service provider.

Default Destination: allows you to store the default destination number. The number automatically displays on the Destination screen when you create a message.

Default Type: allows you to set the default message type to Text, Fax, Email or Paging. The network can convert the messages into the selected format.

Default Validity: allows you to set the length of time your text messages are stored at the message center while attempts are made to deliver them.

Setting Name: allows you to give a name to the setting group currently being defined.

Common Setting: The following options are available:

Reply Path: allows the recipient of your message to send you a reply message using your message center, if your network supports this service.

Delivery Reports: allows you to activate or deactivate the report function. When this function is activated, the network informs you whether or not your message has been delivered.

Bearer Selection: allows you to choose either GSM or GPRS, depending on your network.

## My Objects (Menu 1.6)

In this menu, you can see the media objects you saved from messages into your phone's memory by using the Select Objects option.

Three categories of items are available:

- My EMS Melody
- My EMS Picture
- My EMS Animation

To delete an item, press the Delete soft key while you are reviewing it.

You can delete all of the items using the Delete All option (Menu 1.6.4).

| To | Press the |
| :--- | :--- |
| select a category | Up or Down key. To delete all <br> of your objects, select All <br> Object. |
| place a check <br> mark | Mark soft key. |
| remove the check <br> mark | Unmark soft key. |
| delete the marked <br> objects | Delete soft key. |

When a confirming message displays, press the Yes soft key to confirm.

## Delete All (Menu 1.7)

Select this option to delete all messages stored in SIM, phone, and Cell Broadcast memory.

## Memory Status (Menu 1.8)

This menu shows how many messages are currently stored in the SIM, phone, and CB (Cell Broadcast) memories.

To delete messages in each message box, use the Delete All option (Menu 1.7).

| To | Press the |
| :--- | :--- |
| select a message <br> type | Up or Down key. To delete all <br> of your messages, select All <br> Messages. |
| place a check <br> mark | Mark soft key. |
| remove the check <br> mark | Unmark soft key. |
| delete the marked <br> messages | Delete soft key. |

When a confirming message displays, press the Yes soft key to confirm.

## Voice Mail (Menu 1.9)

This menu provides you with a way of accessing your voice mailbox, if provided by your network.

The following options are available:
Connect to Voice Mail: before using the Voice Mail feature, you must enter the voice server number obtained from your service provider; see Menu 1.8.2. You can then select this option and press the OK soft key to listen to your messages.

You can connect to the voice server by pressing and holding the (100) key in Idle mode.

Voice Mail Number: allows you to change the voice mail server number, if necessary.

| To | Press the |
| :--- | :--- |
| enter the server number | corresponding numeric <br> keys. |
| correct a digit | C key. |
| move the cursor to the <br> left/right without <br> clearing the digit | Left or Right key. |

Note: Voice Mail is a network feature. Please contact your service provider for further details.

## Broadcast (Menu 1.10)

This network service allows you to receive text messages on various topics, such as the weather or traffic. Cell Broadcasting (CB) messages display as soon as they are received, provided that:

- the phone is in Idle mode.
- the Receive option is set to Enable.
- the message channel is currently active on the channel list.

The following options are available:
Read: lets you view the message. Volatile displays the messages from the network, but loses its contents as soon
as the phone is switched off. Scroll through the message using the Up and Down keys. While reading a message, press the Save soft key to store the message in the Archive box for later retrieval.

Receive: allows you to enable or disable the reception of broadcast messages.

Channel List: allows you to indicate the channels from which you wish to receive cell broadcast messages. The following options are available:

Select: used to enable or disable channels on the list by marking or unmarking them respectively.

Add Channel: used to enter the ID and title for a new channel.

Delete: used to remove a channel from the list.
Edit: used to change the ID and title of an existing channel.
Language: allows you to select your preferred language to be used when displaying cell broadcast messages.

Please contact your service provider for more information.

## Call Records

In this menu, you can view the:

- calls you missed, received or dialed.
- length of your calls.
- cost of your calls.

Note: You can access the numbers in the three types of call records by pressing the $\curvearrowleft$ key in Idle mode.

## Missed Calls (Menu 2.1)

This menu lets you view the numbers of the last 20 unanswered calls.

The number and name, if available, display together with the date and time when the call was received.

By pressing the Options soft key, you can:

- delete the call from the list.
- edit the number, if available, and save it in Phonebook.

You can also dial the number by pressing the $\curvearrowleft$ key.
I ncoming Calls (Menu 2.2)
This menu lets you view the last 20 numbers of the calls you answered.

The number and name, if available, display, together with the date and time when the call was received.

By pressing the Options soft key, you can:

- delete the call from the list.
- edit the number, if available, and save it in Phonebook.

You can also dial the number by pressing the key.

## Outgoing Calls (Menu 2.3)

This menu lets you view the last 20 numbers you dialed.
The number and name display, together with the date and time when the call was made.

By pressing the Options soft key, you can:

- delete the number.
- edit the number and save it in Phonebook.

You can also dial the number by pressing the key.

Delete All (Menu 2.4)
You can delete all of the numbers stored in each call record category.

Select a call record using the Up or Down key and press the Select soft key. When a confirming message appears, press the Yes soft key.

## Call Time (Menu 2.5)

This menu lets you view the timers for calls you made and received.

Note: The actual time invoiced for calls by your service provider may vary, depending on network features, such as rounding-off for billing purposes.

The following options are available:
Last Call Time: length of the last call.
Total Outgoing: total length of all calls you made since the timer was last reset.

Total Incoming: total length of all calls you received since the timer was last reset.

Reset Timers: option used to reset the call timers. You must first enter the phone password and then press the OK soft key.

Note: The password is preset to "00000000." To change this password, see page 122.

## Sound Settings

You can use the Sound Settings feature to customize various settings, such as the:

- ring melody, volume and type.
- sounds made when you press a key, receive a message, open/close the folder or switch your phone on/off.
- alert tone made every minute during a call, when you make an error or when your call is connected to the system.

Note: When the phone is in Silent mode (see page 28), you cannot change the sound settings.

## Ring Tone (Menu 3.1)

This menu allows you to select a ring melody.
You can choose between many different melodies. Each time you select a melody, it plays for a few seconds. If you have downloaded sounds from the Internet, you can use them in this menu.

## Ring Volume (Menu 3.2)

This menu allows you to adjust the ring volume to one of five levels.

Use the Up and Down keys or the Volume keys on the left side of the phone to increase or decrease the volume.

## More Ringtones (Menu 3.3)

This option opens the WAP browser to a web site where you can download additional ringtones.

## Alert Type (Menu 3.4)

This menu allows you to specify how you are to be informed of incoming calls.

The following options are available:
Light Only: the service light flashes the phone neither rings nor vibrates.

Melody: the phone rings using the ring melody selected in the Ring Tone menu (Menu 3.1).

Vibration: the phone vibrates but does not ring.
Vibra+Melody: the phone first vibrates three times and then starts ringing.

## Keypad Tone (Menu 3.5)

This menu allows you to select the tone that the phone sounds when you press a key. The options are OFF, Cool, Piano, Tone and Beep.

To turn off the sound, select Off.

## Message Tone (Menu 3.6)

This menu allows you to select how the phone informs you that a new message has been received.

## SMS Tone (Menu 3.6.1)

The following options are available for alerting you to new SMS messages:

Off: the phone does not use the SMS tone.
Light Only: the service light flashes.
Vibration: the phone vibrates.
Single Beep: the phone beeps once.
SMS Tones: the phone uses one of several SMS tones.

## SMS-CB Tone (Menu 3.6.2)

The following options are available for alerting you to new cell broadcast (CB) messages:

OFF: the phone does not use the CB tone.
Light Only: the service light flashes.
Vibration: the phone vibrates.
Single Beep: the phone beeps once.
SMS-CB Tones: the phone uses one of several CB tones.

## Folder Tone (Menu 3.7)

This menu allows you to select the tone that the phone sounds when you open or close the folder.

To turn the sound off, select Off.

## Power On/ Off (Menu 3.8)

This menu allows you to select the melody that the phone sounds when it is switched on and off.

To turn the sound off, select Off.

## Extra Tones (Menu 3.9)

You can customize additional tones used for the phone.

| To turn a given <br> tone | Press the |
| :--- | :--- |
| on | ON soft key. <br> A check mark displays in <br> front of the option. |
| off | OFF soft key. <br> The check mark no longer <br> displays. |

The following options are available:
Error Tone: sets whether or not the phone informs you when you have make a mistake.

Minute Minder: sets whether or not the phone beeps every minute during an outgoing call to keep you informed of the length of your call.

Connect Tone: sets your phone to beep when your call is connected to the system.

## Phone Settings

Many different features of your phone can be customized to suit your preferences. All of these features are accessed in the Phone Settings menu.

## My Settings (Menu 4.1)

You can change the background image and the display style for Menu mode according to your preference.

## Wallpaper (Menu 4.1.1)

This option allows you to change the background image to be displayed in Idle mode.

To change the background image:

1. Use the Up or Down key to select the image you want, then press the Select soft key.

You have various preset images available. You can also select the blank background or any downloaded images.
2. When the image displays, press the Select soft key.

The display asks you if you want to display text on the screen.
3. Press the Yes soft key to display the current date and time on the wallpaper image.

To display only the image, press the No soft key.

## Menu Style (Menu 4.1.2)

This menu allows you to select the menu display style. You can choose either Folder Style or Page Style.

More Graphics (Menu 4.1.3)
This option opens the WAP browser to a web site where you can download additional graphics.

## Greeting Message (Menu 4.2)

This menu allows you to set a greeting to be displayed briefly when the phone is switched on.

| To | Press the |
| :--- | :--- |
| clear the existing <br> message | C key and hold it down until <br> the message is cleared. |
| enter a new <br> message | appropriate alphanumeric <br> keys. |
| change the text <br> input mode | 仑 soft key. |

## Own Number (Menu 4.3)

This function is a memory aid, which you can use to check your own phone number if necessary.

## Language (Menu 4.4)

You can select a display language. When the language option is set to Automatic, the language is automatically selected according to the language of the SIM card used.

## Security (Menu 4.5)

The Security feature enables you to restrict the use of your phone to the people and the types of calls of your choice

Various codes and passwords are used to protect the features of your phone. They are described in the following sections. See also pages 122-124.

## PI N Check (Menu 4.5.1)

When the PIN Check feature is enabled, you must enter your PIN each time you switch the phone on. Consequently, any person who does not have your PIN cannot use your phone without your approval.

Note: Before disabling the PIN Check feature, you must enter your PIN.

The following options are available:
Disable: the phone connects directly to the network when you switch it on.

Enable: you must enter the PIN each time the phone is switched on.

## Change PI N (Menu 4.5.2)

This feature allows you to change your current PIN, provided that the PIN Check feature is enabled. You must enter the current PIN before you can specify a new one.

Once you have entered a new PIN, you are asked to confirm it by entering it again.

## Phone Lock (Menu 4.5.3)

When the Phone Lock feature is enabled, the phone is locked and you must enter the 8 -digit phone password each time the phone is switched on.

The password is preset to " 00000000 " at the factory. To change the phone password, see the Change Password menu (Menu 4.5.4).

Once the correct password has been entered, you can use the phone until you switch it off.

The following options are available:
Disable: you are not asked to enter the phone password when you switch the phone on.

Enable: you are required to enter the phone password when you switch the phone on.

## Change Password (Menu 4.5.4)

The Change Password feature allows you to change your current phone password to a new one. You must enter the current password before you can specify a new one.

The password is preset to " 00000000 " at the factory. Once you have entered a new password, you are asked to confirm it by entering it again.

## SI M Lock (Menu 4.5.5)

When the SIM Lock feature is enabled, your phone only works with the current SIM. You must enter the SIM lock code to unlock the SIM so you can use a different SIM card.

Once you have entered the lock code, you are asked to confirm your entry.

FDN Mode (Menu 4.5.6)
FDN (Fixed Dial Number) mode, if supported by your SIM card, allows you to restrict your outgoing calls to a limited set of phone numbers.

The following options are available:
Disable: you can phone any number.
Enable: you can only call phone numbers stored in Phonebook. You must enter your PIN2.

Note: Not all SIM cards have a PIN2. If your SIM card does not, this menu does not display.

## Change PIN2 (Menu 4.5.7)

The Change PIN2 feature allows you to change your current PIN2 to a new one. You must enter the current PIN2 before you can specify a new one. Once you have entered a new PIN2, you are asked to confirm it by entering it again.

Note: Not all SIM cards have a PIN2. If your SIM card does not, this menu does not display.

## Display Settings (Menu 4.6)

In this menu, you can change the settings for the display or backlight.

Contrast (Menu 4.6.1)
This menu allows you to adjust the contrast of the display screen to see them better in different lighting conditions.

Adjust the contrast using the Up and Down keys or the Volume keys on the left side of the phone.

## Back Light (Menu 4.6.2)

You can select whether or not the phone uses the backlight. A marginal increase in standby/talk time can be achieved by turning the backlight off.

Select the length of time for which the backlight is on. The backlight turns on when you press a key or receive a call or message and remains on for the specified length of time.

If you do not want to use the backlight, select Off.

## Auto Light (Menu 4.6.3)

Using this feature, you can specify the time for which the backlight is to be used. This feature helps you to conserve your battery power.

The following options are available:
Disable: the backlight is used according to the setting in the Back Light menu (Menu 4.6.2); see page 85.

Enable: the backlight is used only during the specified period of time. Set the time when the phone turns the light on and then turn it off, using the appropriate number keys.

## Service Light (Menu 4.6.4)

This menu allows you to select whether or not the service light is used or in which color it flashes.

Select one from the three color combinations. The service light flashes in the appropriate color.

If you do not want to use the service light, select Off.

## Graphic Logo (Menu 4.6.5)

This menu allows you to display your service provider's logo instead of its name.

Off: the service provider's name displays in Idle mode.
On: the service provider's logo displays in Idle mode; if no logo has been stored, the service provider's name displays.

## Extra Settings (Menu 4.7)

You can turn the automatic redialing or answering features on or off.

| To turn a feature | Press the |
| :--- | :--- |
| on | ON soft key. <br> A check mark displays in <br> front of the option. |
| off | OFF soft key. <br> The check mark no longer <br> displays. |

The following options are available:
Auto Redial: when this option is checked, the phone makes up to ten attempts to redial a phone number after an unsuccessful call.

Note: The interval between two call attempts varies.
Open to Answer: when this option is checked, you can simply open the folder to answer a call. When it is unchecked, you must open the folder and press a key to answer a call, depending on the setting of the Anykey Answer option. See below.

Anykey Answer: when this option is checked, you can answer an incoming call by pressing any key, except the区/ $\odot$ key and the Reject soft key. To reject the call, press the $\boldsymbol{\Sigma} / \mathbb{\circ}$ key or the Reject soft key.

When this option is unchecked, you can only press the $m$ key or Accept soft key.

## Short Cut (Menu 4.8)

The Navigation keys can be used as shortcut keys. In Idle mode, they allow you to access specific menus directly.

To assign a shortcut to a key:

1. Select the key to be used as a shortcut key by pressing the Up or Down key, and press the Select soft key.

## - Key Up

- Key Down
- Key Right
- Key Left

2. Select the menu to be assigned to the key by pressing the Up or Down key.

Note: To deactivate a shortcut key, select the None option.
3. Press the Select soft key to save the selection.

## Reset Settings (Menu 4.9)

You can easily reset your phone to its default settings. To reset your phone:

1. Select the Reset Settings menu.
2. Enter the 8-digit password and press the OK soft key.

Note: The password is preset to "00000000." To change this password, see page 83.

## Organizer

The Organizer feature enables you to:

- view the calendar and organize your schedule.
- define a list of things to do.
- set the current date and time.
- set the alarm so that the phone rings at a specific time, such as to remind you of an appointment.
- use the phone as a calculator for basic mathematical equations or currency exchange operations.


## Calendar (Menu 5.1)

With the Calendar feature, you can:

- consult the calendar.
- write memos to keep track of your schedule.
- set an alarm to act as a reminder, if necessary.


## Consulting the Calendar

When you select the Calendar menu (Menu 5.1), the calendar displays with today's date highlighted. The following options are available when you press the Options soft key:

Search All: displays all memos set, starting with the oldest, regardless of the day. To scroll through the memos, press the Up or Down key.

Delete All: allows you to delete all of the memos. You are asked to confirm your action.

Go to Date: allows you to jump to a specific date.
Exit: exits the Calendar feature and returns to Idle mode.

## Writing a Memo

To write or edit a memo on a specific date:

1. Select a date on the calendar, using the Navigation keys.

Note: To skip to the previous or next month, press the Volume keys on the left side of the phone.
2. Press the Select soft key.

An empty memo screen displays to allow you to enter your memo.
3. Enter your memo and then press the OK soft key.

Note: For further details about how to enter characters, see page 40.

You are asked if you wish to set an alarm.
4. If you want the alarm to ring on the chosen day, press the Yes soft key.

Otherwise, press the No soft key. The memo is saved and the display returns to the calendar.
5. If you pressed the Yes soft key, set the time for the alarm and press the OK soft key.

You can also select the melody for the alarm by pressing the Melody soft key.
6. Select either AM or PM and press the Select soft key.

Note: Your phone is preset to use 12-hour format. To change the time format, see page 97.

The color of the date on the calendar changes to green to indicate that a memo exists for that date.

## Editing a Memo

When you select a day for which a memo already exists on the calendar, you can press the Edit soft key to edit the memo displayed.

Note: For further details about how to enter characters, see page 40.
When you finish editing the memo, press the OK soft key to use the following options:

Alarm: allows you to set the alarm to ring at the specified time to remind you of the memo. If you set the alarm earlier, you can change or delete it.

Erase: allows you to delete the memo.
Copy to: allows you to copy the memo to another date or time.

Move to: allows you to change the date or time of the memo.

## To Do List (Menu 5.2)

This feature allows you to:

- enter a list of tasks to be done.
- assign a priority and a deadline to each task.
- sort the tasks by priority and status mark.


## Creating the To Do List

1. Press the New soft key.
2. Enter the first task.

Note: You can enter up to 40 characters. For further details about how to enter characters, see page 40.
3. Press the $\mathbf{O K}$ soft key.
4. Select high, normal or low priority using the Up or Down key and press the Select soft key.
5. Enter your deadline and press the OK soft key.

If you do not want to set a deadline, press the Skip soft key.Editing the To Do List

When you select the To Do List menu (Menu 5.2), the current contents display with a status mark, if the task has been done, and priority; for High, for Normal and for Low.

| Action | Procedure |
| :--- | :--- |
| View the details <br> for a specific task | 1. Highlight the task. <br> 2. Press the View soft key. <br> 3. Scroll through the tasks <br> using the Up and Down <br> keys. |
| Change the status <br> of a specific task | 1. Highlight the task. <br> 2. Press the * key to mark the <br> task as completed as of the <br> current date and time. |
| or |  |
| 1. Highlight the task. |  |
| 2. Press the Options soft key. |  |
| 3. Select the Mark option. |  |
| 4. Select the appropriate |  |
| status (Done or Undo). |  |


| Action | Procedure (continued) |
| :--- | :--- |
| Edit an existing <br> task | 1. Highlight the task. <br> 2. Press the Options soft key. <br> 3. Select the Edit option. <br> 4. Change the text, priority <br> and/or deadline for the <br> task. |
| Sort the existing <br> tasks by priority <br> or status | 1. Press the Options soft key. <br> 2. Select the Sort option. <br> 3. Select the sort criterion <br> (High, Low, Done or <br> Undo). |
| Copy a task | 1. Highlight the task. <br> 2. Press the Options soft key. <br> 3. Select the Copy option. <br> 4. Change the text, priority <br> and/or deadline for the <br> task. |


| Action | Procedure (continued) |
| :--- | :--- |
| Copy a task to the <br> calendar | 1. Highlight the task. <br> 2. Press the Options soft key. <br> 3. Select the Copy to <br> Calendar option. <br> 4. Change the text and/or <br> deadline for the task and set <br> the alarm. |
| Delete a task | 1. Highlight the task. <br> 2. Press the Options soft key. <br> 3. Select the Delete option. |
| Delete all tasks | 1. Press the Options soft key. <br> 2. Select the Delete All <br> option. |
| 3. Confirm the deletion by |  |
| pressing the OK soft key. |  |
| list the To Do | 1. Press the Options soft key. <br> 2. Select the Exit option. |

## Time \& Date (Menu 5.3)

This menu allows you to change the current time and date displayed. You can also check the current time for 22 major cities around the world.

The following options are available:
Set Time: allows you to enter the current time. You can choose the time format in the Time Format menu (Menu 5.3.4). See below.

Note: Before setting the time, you must specify your time zone in the World Time menu (Menu 5.3.3).

Set Date: allows you to enter the month, day and year.
World Time: allows you to find out what time it is another part of world, using the Left and Right keys.

The screen shows the:

- city name.
- current date and time.
- time difference between the selected city and your city if you have set the local time (see below for further details).
- city selected as your time zone.

To select your time zone:

1. Select the city corresponding to your time zone by pressing the Left or Right key one or more times. The local date and time display.
2. Press the Set soft key.

Time Format: allows you to change the time format to $\mathbf{2 4}$ Hours or $\mathbf{1 2}$ Hours.

Alarm (Menu 5.4)
This feature allows you to:

- set the alarm to ring at a specific time.
- set the phone to switch on automatically and ring the alarm even if the phone is switched off.

The following options are available:
Once Alarm: the alarm rings only once and is then deactivated.
Daily Alarm: the alarm rings every day at the same time.
Morning Call: the alarm rings to wake you up in the morning.

To set the alarm:

1. Choose the type of alarm to be set and press the Select soft key.
2. Enter the time for the alarm to sound.

If you want to use the alarm options, press the Options soft key. The following options are available:

- Remove Alarm: deactivates the current alarm.
- Alarm Sound Set: allows you to select an alarm melody.

3. Press the $\mathbf{O K}$ soft key.
4. Choose AM or PM using the Up and Down keys and press the Select soft key.

Note: Your phone is preset to use 12 -hour format. To change the time format, see page 97.
5. If you select Morning Call in step 1, select the repeat option, Monday to Friday or Monday to Saturday and press the Select soft key.

To stop the alarm when it rings, open the folder and press the Exit soft key.

Remove Alarm: deactivates all alarm settings.
Autopower: when this option is set to Enable, the alarm rings at the specified time, even if the phone is switched off.

If the option is set to Disable and the phone is switched off at the specified time, the alarm does not ring.

## Calculator (Menu 5.5)

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

1. Enter the first number using the numeric keys.

Note: To include a decimal point or a bracket, press the left soft key until the symbol you want displays.
2. Press the right soft key until the symbol you want displays: + (addition), - (subtraction), * (multiplication), / (division).
3. Enter the second number.
4. To view the result, press the key.

## Currency Exchange (Menu 5.6)

Using this menu, you can figure currency conversions.

1. Enter the current exchange rate of your source currency and press the OK soft key.

You can insert a decimal point by pressing the \# key.
2. Enter the amount to convert and press the OK soft key.

The amount you entered and its equivalent value display.
3. Press the Exit soft key to exit the currency converter.

## Network Services

These menu functions are network services. Please contact your service provider to check their availability and subscribe to them, if you wish.

## Call Forwarding (Menu 6.1)

This network service enables incoming calls to be rerouted to the number that you specify.

Example: You may wish to forward your business calls to a colleague while you are on holiday.

You can use the following options to forward voice calls and/or data calls:

Forward Always: all calls are forwarded.
Busy: calls are forwarded when you are already on another call.

No Reply: calls are forwarded when you do not answer the phone.

Unreachable: calls are forwarded when you are not in an area covered by your service provider.

Cancel All: all call forwarding options are canceled.

To set your call forwarding options:

1. Select a call forwarding option by pressing the Up or Down key and then press the Select soft key.
2. Select the type of calls, voice or data, by pressing the Up or Down key and then press the Select soft key.

The current status displays. If the option has already been set, the number to which the calls are forwarded displays.
3.

| To | Press the |
| :--- | :--- |
| activate call <br> forwarding | Activate soft key. Go to <br> step 4. |
| change the call <br> number | Change soft key. Go to <br> step 4. |
| deactivate call <br> forwarding | Remove soft key. |

4. Enter the number to which the calls are to be forwarded and press the OK soft key.

To enter an international code, press the $\mathbf{O}$ key until the + sign displays.

The phone sends your settings to the network and the network's acknowledgement displays.

You can deactivate all call forwarding settings by selecting the Cancel All option.

## Call Barring (Menu 6.2)

The call barring network service allows you to restrict your calls.

You can use the following options to restrict voice and/or data calls:

All Outgoing: calls cannot be made.
International: international calls cannot be made.
International Except to Home: when abroad, calls can be made only to numbers within the current country and to your home country, which is the country where your home network provider is located.

All Incoming: calls cannot be received.
I ncoming While Abroad: calls cannot be received when you are using your phone outside of your home service area.

Cancel All: all call barring settings are deactivated; calls can be made and received normally.

To set your call barring options:

1. Select a call barring option by pressing the Up or Down key and then press the Select soft key.
2. Select the type of calls, voice or data, by pressing the Up or Down key and then press the Select soft key.
3. Press the Activate soft key to confirm your settings.
4. Enter your call barring password supplied by your service provider.
The phone sends your settings to the network and the network's acknowledgement displays.

To deactivate specific call barring settings:

1. Select the call barring option to be deactivated.
2. Select the type of calls to which this option applies.
3. Press the Deactivate soft key.
4. Enter your call barring password supplied by your service provider.

The phone sends your settings to the network and the network's acknowledgement displays

You can also deactivate all call barring settings by selecting the Cancel All option.

Change Barring Password: you can set and change the call barring password obtained from your service provider using this option. You must enter the current password before you can specify a new one.

Once you have entered a new password, you are asked to confirm it by entering it again.

## Call Waiting (Menu 6.3)

This network service informs you when someone is trying to reach you during another call.

You can specify individual call waiting options for voice calls and/or data calls.

To set your call waiting options:

1. Select the type of calls, voice or data, to which the call waiting option is to be applied by pressing the Up or Down key and then press the Select soft key.
The screen informs you whether call waiting is activated or deactivated.
2. You can activate or deactivate the call waiting feature using the Activate or Deactivate soft key respectively.
To return to the previous screen, press the Exit soft key.

You can also deactivate all call waiting settings by selecting the Cancel All option.

## Network Selection (Menu 6.4)

The Network Selection feature enables you to automatically or manually select the network used when roaming outside of your home area.

Note: You can select a network other than your home network only if there is a valid roaming agreement between them.

To indicate to automatically or manually select the network when roaming:

1. When Network Selection displays, press the Select soft key.
2. Press the Up or Down key until the appropriate option highlights, then press the OK soft key.

If you select Automatic, you are connected to the first available network when roaming.

If you select Manual, the phone scans for the available networks. Go to Step 3.
3. Press the Up or Down key until the network you want highlights and then press the OK soft key.

You are connected to that network.

Caller ID (Menu 6.5)

You can prevent your phone number from being displayed on the phone of the person being called.

Note: Some networks do not allow you to change this setting.
The following options are available:
Default: the default setting provided by the network is used.

Hide Number: your number does not display on the other person's phone.

Send Number: your number is sent each time you make a call.

## Closed User Group (CUG) (Menu 6.6)

This network service allows incoming and outgoing calls to be restricted to a selected user group. You can create up to ten user groups.

For details on how to create and use a closed user group, contact your service provider.

Example: A company lends SIM cards to its employees and wants to restrict outgoing calls to members of the same team.

## Activating a Closed User Group

If you select the Closed User Group menu, you can enter the CUG function. You can now access the following options after pressing the Select soft key:

Index List: lets you list, add or delete CUG index numbers. The list of current CUG indexes appears. Add a new CUG index as advised by your service provider or delete a selected group.

| To | Press the |
| :--- | :--- |
| scroll through the <br> existing CUG <br> indexes | Up or Down key. |
| add a new CUG <br> index | Options soft key, select the <br> Add option and enter the <br> index. |
| delete a CUG <br> index | Options soft key and select <br> the Delete option. |
| activate a CUG <br> index | Options soft key and select <br> the Activate option. |

Outside Access: lets you enable or disable calls to numbers other than those in the Closed User Group. This feature depends on the nature of your CUG subscription. Please check with your service provider.

Default Group: you may set a default CUG with your service provider. If you have done so, you can enable the Default Group option on your phone. When making a call, you are given the option of using your default CUG, instead of selecting one from the list.

Deactivate: deactivates the CUG function. This option appears only when the default group is enabled or a CUG index is selected.

## Funbox

The Funbox menu contains several fun options.

Games (Menu 7.1)
You can enjoy two games with your phone.
Scroll to a game, using the Up and Down keys and press the Select soft key.

For each game, the following options are available:
New game: allows you to start a game.
High Score: shows you the High Score table.
Key Info.: shows you the key operation for the game.
Continue: allows you to continue the last game you played.

While you are playing a game:

| To | Press the |
| :--- | :--- |
| adjust the volume <br> of the game sound | Volume keys. |
| pause or resume <br> the game | key. |
| exit the game | $\mathbf{\square} / \odot$ key. |

At the end of the game, if your score is ranked fifth or higher, you may enter a name of up to 10 characters.

## More Games (Menu 7.2)

This option opens the WAP browser to a web site where you can download additional games.

## WAP Browser (Menu 7.3)

Your phone is equipped with a WAP (Wireless Application Protocol) browser to allow you to access and navigate the Wireless Web using your phone.

## Home (Menu 7.3.1)

Selecting this menu connects the phone to the network and loads the homepage of the Wireless Web service provider. You can also press the key in Idle mode.

The content of the WAP Browser startup homepage depends on your Wireless Web service provider. To scroll through the screen, use the Up and Down keys.

Note: To access the startup homepage from any other screen in the WAP Browser, use the Home option. For more information on the WAP Browser menus, see page 111.

## Exiting the WAP Browser

To exit the browser at any time, simply press the $\boldsymbol{\sim} / \odot$ key or press and hold the key.

## Navigating the WAP Browser

| To | Press the |
| :--- | :--- |
| scroll through and <br> select browser items | Up or Down key until the <br> symbol points to the required <br> item, and then press the OK <br> soft key to confirm the <br> selection. |
| select a numbered <br> item | corresponding numeric key. |
| return to the <br> previous page | Back soft key or the $\square$ key. |
| return to the startup <br> homepage | * key and select the Home <br> menu. For further details <br> about this option, see <br> page 111. |

## Entering Text in the WAP Browser

When you are prompted to enter text, the current text input mode is indicated on the screen.

The following modes are available:
Upper-case character (A): allows you to enter uppercase English characters.

Lower-case character (a): allows you to enter lowercase English characters.

Note: You can enter symbols in upper or lower-case character mode by pressing the ( ${ }^{100}$ key.

Number (1): allows you to enter numbers.

| To change the <br> text input <br> mode | Press the key one or more <br> times. |
| :--- | :--- |
| To enter a <br> space | Press the \# key. |
| To edit text | 1. Set the cursor to the right of <br> the character(s) to be corrected. <br> 2. Press the $\sigma$ key as required. <br> 3. Enter the correct character(s). |

## Selecting and Using Menu Options

Various menus are available when you are using the WAP Browser to navigate the Wireless Web.

To access a menu option:

1. Press and hold down the $*$ key. A menu displays.
2. Highlight a menu by pressing the Up and Down keys.
3. Select the option by pressing the Select soft key.
4. If necessary, select a secondary option using the Up and Down keys, and press the Select soft key to confirm.

Note: The menus may vary, depending on your version of the WAP Browser.

The following options are available:
Reload: reloads the current page.
Home: takes you back at any time to the homepage of the Wireless Web service provider.

Goto URL: allows you to manually enter the URL address of a Web page. After entering an address, press the OK soft key to go there directly.

Show URL: displays the URL address of the site to which you are currently connected. It also enables you to declare the current site as the startup homepage.

| To | Press the |
| :--- | :--- |
| declare the current <br> page as your <br> startup homepage | Option soft key, select the <br> Save to Home option and <br> press the Select soft key. |
| set a bookmark for <br> the current page | Option soft key, select the <br> Save to Bookmark option <br> and press the Select soft <br> key. |
| cancel your setting | Back soft key. |

Edit Home: allows you to change the startup homepage manually. Enter the required URL and press the OK soft key. For more information about entering text, see page 110.

Favorites (Menu 7.3.2)
This menu allows you to store the URL addresses of your favorite web sites. You can access this menu directly by pressing and holding down the \# key while using the WAP Browser.

To store a URL address:

1. Select an empty location and press the Options soft key.
2. Enter the address and press the Enter soft key.

Note: For further details about how to enter characters, see page 40.
3. Enter a name for the favorite item and press the Enter soft key.

After saving favorite items, you can use the following options by pressing the Options soft key:

Goto URL: takes you to the site.
Edit: allows you to edit the address.
Erase: deletes the address.
http:/ / (Menu 7.3.3)
This menu allows you to manually enter the URL address of the web site that you wish to access. You can access this menu directly by pressing and holding the $*$ key in the WAP browser.

For further details about entering characters, see page 40.

Settings (Menu 7.3.4)
This option allows you to set up five proxy servers for the WAP browser. Contact your service provider for details.

For each server, the following options are available:
Profile Name: enter a name that you wish to assign to the HTTP proxy server.

Homepage URL: set the address of your startup homepage. When the default homepage displays, you can delete it using the key and enter your own choice.

Security: set the data transmission mode. Choose Secure to protect your data against unauthorized access; otherwise, choose Non-Secure.

IP Address: enter the WAP gateway address required to connect to the Internet.

Bearer: select the bearer to be used for each type of network address accessed: GPRS or Data. The remaining options depend on the Bearer setting.

When the bearer is set to GPRS
User Name: enter the User ID required to connect to the GPRS network.

Password: enter the password required to connect to the GPRS network.

APN: enter the access point name used for the address of the GPRS network gateway.

When the bearer is set to Data
Login Name: enter the PPP server login ID.
Password: enter the PPP server password.
Dial-up Number: enter the PPP server phone number.
Data Call Type: select a data call type: Analog or ISDN.
Note: The WAP Browser settings may vary, depending on the service provider. Contact your service provider for further information.

Clear Cache (Menu 7.3.5)
You can clear the information stored in the cache, which is the phone's temporary memory which stores the most recently accessed Web pages.

Press the Yes soft key to confirm the deletion. Otherwise, press the No soft key.

## Push Message (Menu 7.3.6)

This menu allows you to receive web messages from the server, or to set the phone not to receive Web messages.

The following options are available:
Inbox: allows you to read the messages received from the web server.

Receive: allows you to set whether or not your phone receives web messages.

Delete All: allows you to delete all of the web messages.

## Downloads (Menu 7.4)

You can download images, sounds and MIDlets (J ava applications running on mobile phones) from various sources using the WAP Browser and store them in your phone. In the Downloads menu, you can access the downloaded items.

Games \& More (Menu 7.4.1)
When you access this menu, the list of the default games appears. Once you have downloaded MIDlets, they are added to the list.

For more details about how to download MIDlets in the WAP browser, see page 111.

## Launching a MI Dlet

1. Scroll to the MIDlet you want and press the Launch soft key.
2. Start the MIDlet using the soft keys.

## Using the Menus

From the Main Screen, press the Menu soft key to access the following options:
Info: displays information about the selected MIDlet, such as the file size, application version, vendor, and location of the jad file, which is the MIDlet description file.
Remove: removes the MIDlet. When the confirmation message appears, press the Remove soft key. To cancel your selection, press the Cancel soft key. This option is not available for the default games.

Update: accesses the server and updates the MIDlet. This option is not available for the default games.

## Entering Text

If you need to enter text while using a MIDlet, you can use the following input modes:
ABC: allows you to enter upper-case English characters.
abc: allows you to enter lower-case English characters.
123: allows you to enter numbers.
Sym: allows you to enter symbols. After highlighting a symbol by pressing the Navigation keys, press the key to insert it.
(9) : allows you to enter English characters by pressing one key per letter. In this mode, you can change the case by pressing the $\because+0$ key.
To change the text input mode, press the * key until the appropriate indicator appears on the soft key area of the display.

Sounds (Menu 7.4.2)
In this menu, you can view the list of sounds downloaded from the web server or received in multimedia messages. You can set the downloaded sounds as the current ring tone or send them to other phones.

When memory is full, a warning message displays and the phone rejects additional sounds until you erase obsolete ones.

By pressing the Options soft key, you can use the following options:

Rename: allows you to change the name of the sound.
Delete: deletes the sound.
Set as Ring Tone: sets the sound as your ring tone.
Pictures (Menu 7.4.3)
In this menu, you can view the list of pictures downloaded from the web server or received in messages. You can set the downloaded pictures as the current background image or send them to other phones.

When memory is full, a warning message displays and the phone rejects additional sounds until you erase obsolete ones.

Press the Options soft key to use the following options:
Rename: allows you to change the name of the image.
Delete: deletes the image.
Set as Wallpaper: sets the image as your wallpaper for the idle screen.

## DNS Setting (Menu 7.4.4)

The DNS (Domain Name Server) is the server that assigns the Java server domain name to an IP address. The DNS setting is preset at the factory, but sometimes you may need to change it. In this menu, you can determine whether or not the address is automatically updated.
Automatic: the server automatically transmits the address to the phone when it is changed.
Manual: you can manually change the address.

## Solving Problems

If you are experiencing problems with your phone, perform the following simple checks before contacting a service professional. This may save you the time and expense of an unnecessary service call.

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

## I nsert SI M Card

- Check 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 PI N

- You are using your phone for the first time. You must enter the Personal Identification Number 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 (Menu 4.5.1).


## Enter PUK

- The PIN code was 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 was lost. You may be in a weak signal area (in a tunnel or surrounded by buildings). Move and try again.
- You are trying to access an option for which you have not taken out a subscription with your service provider. Contact the service provider for further details.


## You have entered a number but it was not dialed

- Have you pressed the key?
- Are you accessing the right cellular network?
- You may have set an outgoing call barring option.


## Your correspondent cannot reach you

- Is your phone switched on (the 玉/® key pressed for more than one second)?
- Are you accessing the right cellular network?
- You may have set an incoming call barring option.


## Your correspondent cannot hear you speaking

- Have you switched off the microphone?
- Are you holding the phone close enough to your mouth? The microphone is located at the bottom of the phone.


## The phone starts beeping and "**Warning** Low Battery" flashes on the display

- The battery is insufficiently charged. Recharge the battery.


## The audio quality of the call is poor

- Check the signal strength indicator on the display (T.ull); the number of bars indicates the signal strength from strong ( $\mathrm{T}_{\text {rull }}$ ) to weak ( $\mathrm{T}_{\mathrm{r}}$ ).
- Try moving the phone slightly or moving closer to a window if you are in a building.


## No number is dialed when you recall a Phonebook entry

- Check that the number has been stored correctly, by using the Phonebook Search feature.
- Re-store the number, if necessary.

If the above guidelines do not help you to solve the problem, take a 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 aftersales service.

## Access Codes

There are several access codes that are used by your phone and its SIM card. These codes help you protect the phone against unauthorized use.

When requested for any of the codes explained below, enter the appropriate code (displayed as asterisks) and press the OK soft key. If you make a mistake, press the key until the incorrect digit is cleared and then continue entering the correct code.

The access codes, except for the PUK and PUK2 codes can be changed using the Security menu (Menu 4.5). See page 82 for further details.

I mportant! Avoid using access codes resembling emergency numbers, such as 911 , to prevent accidental dialing of an emergency number.

## Phone Password

The Phone Lock feature uses the phone password to protect your phone against unauthorized use. The phone password is supplied with the phone and is preset to "00000000" at the factory.

| To | See |
| :--- | :--- |
| activate/deactivate the <br> Phone Lock feature | page 83 <br> (Menu 4.5.3). <br> change the phone <br> passwordpage 83 <br> (Menu 4.5.4). |

## PIN

The Personal Identification Number or PIN (4 to 8 digits) protects your SIM card against unauthorized use. It is usually supplied with the SIM card.

If you enter an incorrect PIN three times in succession, the code is disabled and cannot be used until you re-enable it by entering the PUK. See below.

| To | See |
| :--- | :--- |
| activate/deactivate the <br> PIN Check feature | page 82 <br> (Menu 4.5.1). |
| change the PIN | page 83 <br> (Menu 4.5.2). |

## PUK

The 8-digit PUK ( $\mathbf{P I N}$ Unblocking Key) is required to change a disabled PIN. The PUK may be supplied with the SIM card. If not, contact your service provider.

To re-enable your PIN:

1. Enter the PUK and press the OK soft key.
2. Enter a PIN of your choice and press the OK soft key.
3. When the Confirm New PI N message displays, enter the same code again and press the OK soft key.

When you enter an incorrect PUK ten times in succession, the SIM card becomes invalid. Contact your service provider for a new card.

## PIN2

The PIN2 (4 to 8 digits), supplied with some SIM cards, is required to access specific functions, such as setting the maximum cost of a call. These functions are available if supported by your SIM card.

If you enter an incorrect PIN2 three times in succession, the code is disabled and you cannot access the functions until you re-enable it by entering the PUK2.

To change the PIN2, see page 84 (Menu 4.5.6).

## PUK2

The 8-digit PUK2 (PIN Unblocking Key 2), supplied with some SIM cards, is required to change a disabled PIN2. If you lose the code, contact your service provider.

To re-enable your PIN2:

1. Enter the PUK2 and press the OK soft key.
2. Enter a new PIN2 of your choice and press the $\mathbf{O K}$ soft key.
3. When the Confirm PI N2 message displays, enter the same code again and press the OK soft key.

When you enter an incorrect PUK2 ten times in succession, you are not able to access the functions requiring the PIN2. Contact your service provider for a new card.

## Health and Safety I nformation

## 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 $1.6 \mathrm{~W} / \mathrm{kg}$. ${ }^{*}$

[^3]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 governmentadopted 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

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 and 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. None 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 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 $0^{\circ} \mathrm{C}\left(32^{\circ} \mathrm{F}\right)$.
- Do not short-circuit the battery. Accidental shortcircuiting 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. 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 your phone off whenever it is forbidden to use it, or when it may cause interference or danger.

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

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

## Electronic Devices

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

## Pacemakers

Pacemaker manufacturers recommend that a minimum distance of 15 cm ( 6 inches) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research and recommendations of Wireless Technology Research.

Persons with pacemakers:

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

If you have any reason to suspect that interference is taking place, switch your phone off immediately.

## Hearing Aids

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

## Other Medical Devices

If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information. Switch your phone off in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

## Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.
You should also consult the manufacturer of any equipment that has been added to your vehicle.
You should also consult the manufacturer of any equipment that has been added to your vehicle.

## Posted Facilities

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

## Potentially Explosive Environments

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

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

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

## Emergency Calls

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

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

To make an emergency call:

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

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 I mportant Safety Information

- Only qualified personnel should service the phone or install the phone in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless phone equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases or explosive materials in the same compartment as the phone, its parts or accessories.
- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch your phone off before boarding an aircraft. The use of wireless 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 I ndustry 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 I nformation

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 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 $1.6 \mathrm{~W} / \mathrm{kg}$. 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 governmentadopted 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.

The highest SAR values for this model phone as reported to the FCC are Head: $1.37 \mathrm{~W} / \mathrm{Kg}$, Body-worn: $0.689 \mathrm{~W} / \mathrm{Kg}$. Body-worn operations are restricted to Samsung-supplied, approved or none Samsung designated accessories that have no metal and must provide at least 1.5 cm separation between the device, including its antenna whether extended or retracted, and the user's body. None compliance to the above restrictions may violate FCC RF exposure guidelines.

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 A3LSGHX426.

[^4]
# 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 vehiclewhether 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 nonemergency 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 radiationemitting 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.
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?

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.
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 cancercausing 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, gioma, 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

[^5]
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1 Year
1 Year 90 Days 90 Days 1 Year

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## Appendix C: Consumer Update on Wireless Phones

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## Glossary

To help you understand the main technical terms and abbreviations used in this booklet and take full advantage of the features on your mobile phone, here are a few definitions.

## Call Forwarding

Ability to reroute calls to another number.

## Call Holding

Ability to put one call on standby while answering or making another call; you can then switch between the two calls, as required.

## Call Waiting

Ability to inform users that they have an incoming call when engaged on another call.

## Caller Line I dentification Services (Caller ID)

Services allowing subscribers to view or block the telephone numbers of callers.

## Dual Band

Ability to operate with both DCS ( 1900 MHz ) and GSM (850 MHz ) networks. The phone automatically uses the network with strongest signal and even switches networks during a call within the same operator's network.

## EMS (Enhanced Message Service)

An adaptation of the Short Message Service (SMS) that allows you to send and receive ring tones and service provider's logo, as well as combinations of simple media to and from EMS-compliant handsets. Because EMS is based on SMS, it can use SMS centres the same way that SMS does. EMS works on all Global System for Mobile communications (GSM) networks. EMS senders can use text, melodies, pictures, sounds, and animations to enhance the expressive power of messages that are limited by the display constraints of mobile devices.

## GSM (Global System for Mobile Communication)

International standard for cellular communication, guaranteeing compatibility between the various network operators. GSM covers most European countries and many other parts of the world.

## Java

Programming language generating applications that can run on all hardware platforms, whether small, medium or large, without modification. It has been promoted for and geared heavily to the Web, both for public Web sites and Intranets. When a Java program runs from a Web page, it is called a Java applet. When it is run on a mobile phone or pager, it is called a MIDlet.

## Multi-party Calling

Ability to establish a conference call involving up to five additional parties.

## Phone Password

Security code used to unlock the phone when you have selected the option to lock it automatically each time it switches on.

## PI N (Personal I dentification Number)

Security code that protects the phone/SIM against unauthorized use. The PIN is supplied by the service provider with the SIM card. It may be a four to eight-digit number and can be changed, as required.

## Proxy Server

A server that resides between a web client, such as a web browser, and a real Web server and acts as an intermediary between them. When some people browse a web site, their browser is not actually connecting to the web server. The request from their browser goes to a proxy server, and the proxy server makes the request to the web server.

A proxy server can improve performance for groups of users because it cache the results of all requests for a certain amount of time. If a user requests a web page that it already fetched for another user, it returns the page instead of forwarding the request to the Web server, which can be a time-consuming operation.

## PUK (PI N Unblocking Key)

Security code that protects the phone/SIM against unauthorized use. The PIN is supplied by the service provider with the SIM card. It may be a four to eight-digit number and can be changed, as required.

## Roaming

Use of your phone when you are outside your home area (when traveling for example).

## SI M (Subscriber I dentification Module)

Card containing a chip with all the information required to operate the phone (network and memory information, as well as the subscriber's personal data). The SIM card fits into a small slot on the back of the phone and is protected by the battery.

## SMS (Short Message Service)

Network service sending and receiving messages to and from another subscriber without having to speak to the correspondent. The message created or received can be displayed, received, edited or sent.

## Soft Keys

Two keys marked $\vdots$ and $\lceil$ on the phone, the purpose of which:

- varies according to the function that you are currently using
- is indicated on the bottom line of the display just above the corresponding key.


## Voice Mail

Computerized answering service that automatically answers your calls when you are not available, plays a greeting (optionally in your own voice) and records a message.

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| Switch On/ <br> Off | Press and hold the <br> key. |
| :--- | :--- |
| Make a Call | 1 Key in the number. <br> 2 Press the key. |
| End a Call | Briefly press the $\mathbf{M} / \oplus$ key. |
| View Missed <br> Calls <br> Immediately <br> After Missing <br> Them | 1Open the phone and <br> press the View soft <br> key. <br> Scroll with the Up and <br> Down keys through the <br> missed calls. <br> 3 |
| To return the call, press <br> the key. |  |


| Access the Menu Functions | 1 Press the Menu soft key. <br> 2 Scroll with the Up and Down keys through the list of the menus until you reach the required menu. <br> 3 Press the Select soft key. <br> 4 Scroll with the Up and Down keys through the list of the options until the required one is selected. <br> 5 Press the Select soft key. |
| :---: | :---: |
| Each of the two soft keys ( $: \square$ and $\left[\begin{array}{l}\text { ) }\end{array}\right.$ perform the function indicated by the text above it, on the bottom line of the display. |  |




[^0]:    * Shows only if supported by your SIM card.

[^1]:    * Shows only if supported by your SIM card.

[^2]:    * Shows only when a Closed User Group is activated.

[^3]:    *. In the U.S. and Canada, the SAR limit for mobile phones used by the public is 1.6 watts $/ \mathrm{kg}(\mathrm{W} / \mathrm{kg})$ 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.

[^4]:    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.

[^5]:    Updated 4/3/2002: US Food and Drug Administration http:// www.fda.gov/cellphones

