

The Samsung logo, consisting of the word "SAMSUNG" in white capital letters inside a blue oval.

SAMSUNG

Smartphone
SGH-i607
User's Guide

DRAFT

Table of contents

Important safety precautions	5
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CHAPTER 1 **Getting started**

What's in the box?	7
Getting to know your phone	8
Installing the SIM card	11
Installing the battery	13
Charging your phone	14
Turning your phone on or off	15

CHAPTER 2 **The basics**

Using the Home screen	16
Start menu screen	21
Entering text	22
Customising your phone	23
Security settings	29
Searching for items	33
Locking the keys	34
Using an optional memory card	34
Adding and removing programs	36
Managing certificates	38
Resetting your phone	39
Using online help	40
SIM Application Toolkit	41

CHAPTER 3 **Synchronisation**

Installing ActiveSync	43
Customising connection settings	44
Connecting your phone to a computer	44
Synchronising information	47
Customising synchronisation settings	48

CHAPTER 4 Call functions

Turning the phone functions on and off	51
Using the Dialling screen	52
Making a call	52
Advanced calling features	53
Answering or ignoring a call	56
Options during a call	56
Call-related features	58
Customising your phone functions	62

CHAPTER 5 Messaging, Internet, and Messenger

Messaging	67
Internet Explorer	81
Pocket MSN	85

CHAPTER 6 Organiser

Contacts	90
Calendar	96
D-Day	101
Tasks	102
NotePad	103
Voice Notes	105
Alarms	106
World Clock	107

CHAPTER 7 Multimedia

Camera	108
Windows Media Player	114
Pod Cast	122
RSS Reader	123
Contents Manager	125

CHAPTER 8	Extra programs	
	Games	129
	Calculator	131
	Smart Converter	131
	Stopwatch	132
	Voice Assist	133
	Picxel Viewer	136
	Download Agent	139
	File Explorer	140
	Task Manager	141
CHAPTER 9	Getting connected	
	Beaming with Bluetooth	143
	Connecting to a computer via USB	147
	Internet Sharing	147
	Connecting to the Internet or your network	148
CHAPTER 10	Troubleshooting	
	General problems	155
	Call problems	157
	Power and charging problems	158
	Program problems	159
CHAPTER 11	Regulatory notices	
	Exposure to radio frequency(RF) signals	164
	For body operation	165
	Precautions when using batteries	166
	Road safety	167
	Operating environment	169
	Electronic devices	170
	Appendix A: CERTIFICATION INFORMATION (SAR)	178
	Appendix B: Guide to safe and responsible wireless phone use	180
	Appendix C: Consumer update on wireless phones	184

Important safety precautions

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

Drive safely at all times

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

Switch off the phone when refuelling

Do not use the phone at a refuelling point (service station) or near fuels or chemicals.

Switch off in an aircraft

Wireless phones can cause interference. Using them in an aircraft is both illegal and dangerous.

Switch off the phone near all medical equipment

Hospitals or health care facilities may be using equipment that could be sensitive to external radio frequency energy. Follow any regulations or rules in force.

Interference

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

Be aware of special regulations

Meet any special regulations in force in any area and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger.

Water resistance

Your phone is not water-resistant. Keep it dry.

Sensible use

Use only in the normal position (held to the ear). Avoid unnecessary contact with the antenna when the phone is switched on.

Emergency calls

Key in the emergency number for your present location, then press .

Keep your phone away from small children

Keep the phone and all its parts, including accessories, out of the reach of small children.

Accessories and batteries

Use only Samsung-approved batteries and accessories, such as headsets and PC data cables. Use of any unauthorised accessories could damage you and your phone and may be dangerous.

CAUTION:

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



At very high volumes, prolonged listening to a headset can damage your hearing.

Qualified service

Only qualified service personnel may install or repair your phone. Failure to do so may invalidate the warranty.

For more detailed safety information, see "Precautions when using batteries" on page 166.

Getting started

Congratulations on the purchase of your new Smartphone! This chapter helps you set up your phone, charge the phone's batteries, and familiarise yourself with the different components of your phone.

What's in the box?

Your package contains the following items:



Phone



PC data cable



Battery



Travel adapter



CD-ROMs*



Quick Reference Guide

* One contains Microsoft ActiveSync software, Add-on software and programs, and the other contains User's Guide in PDF format.

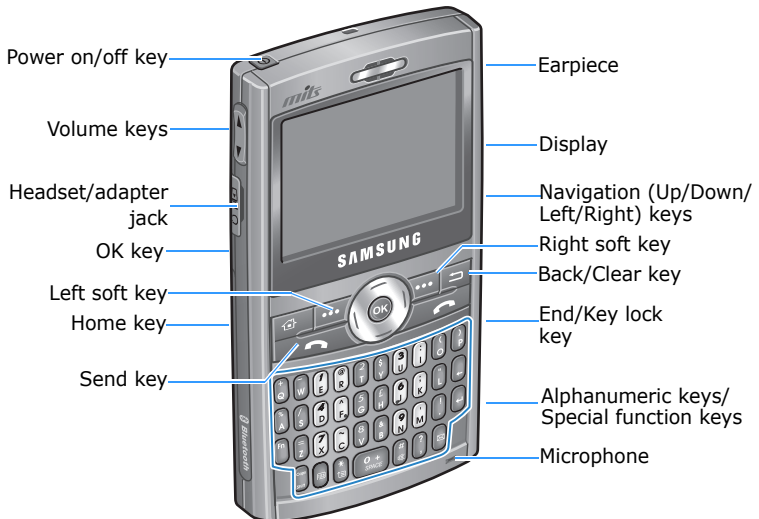
In addition, you can obtain the following accessories for your phone from your local Samsung dealer:

- Car charger/adapter
- Travel adapter
- PC data cable
- Bluetooth mono & stereo headset
- Standard battery
- Bluetooth hands-free car kit
- Straight headset
- Bluetooth USB dongle kit

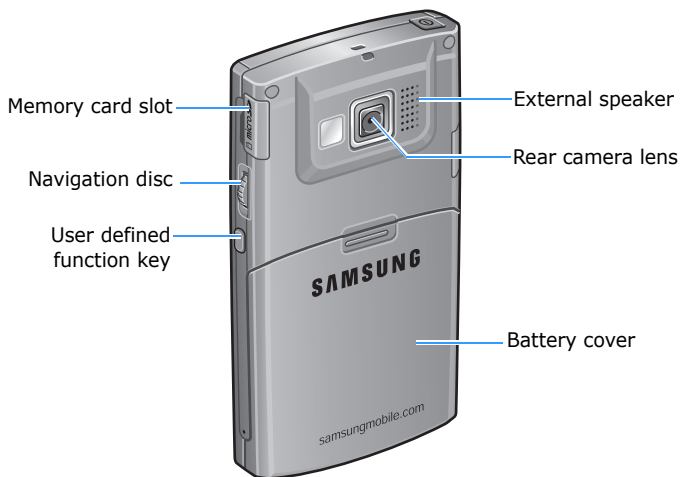
Note: The items supplied with your phone and the accessories available at your Samsung dealer may vary, depending on your country or service provider.

Getting to know your phone

Front view



Rear view



Keys of your phone

Key	Description
	• Press and hold to turn the phone on or off. • Press to open the Quick List screen.
	• Press to switch to the Home screen from a program. • Press and hold to open Task Manager.
	Press to perform the command shown on the screen immediately above the key.
	• Press to return to the previous screen. • Press to delete characters in a text input field.

Key	Description
	• Press to scroll through a list. • Press to move the cursor in a text input field.
	• Press to confirm your selection or input.
	• Press to open the Dialling screen. • Press to make or answer a call.
	• Press to end a call or exit a program. • Press and hold to lock the keys.
	Press to enter numbers, characters, and symbols.
	Press to delete characters.
	Press to switch between using the characters on the upper half of the keys and the characters on the lower half in a text input field.
	• Press to confirm your selection or input. • Press to start a new line in a text input field.
	Press to change case in a text input field.
	Press to switch the text input mode to 123 mode.
	Press to change the text input mode.

Key	Description
	• Press to enter a space between characters. • Press and hold to insert an international call prefix.
	Press and hold to activate or deactivate the Silent profile from the Home screen.
	Press to open the Messaging program.
	• Press to adjust the earpiece and speaker volume. • Press to mute the call ringer as a call comes in. Press and hold to reject the call.
	Press and hold to open a specified program.

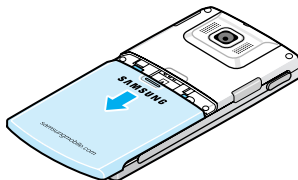
Installing the SIM card

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 other details.

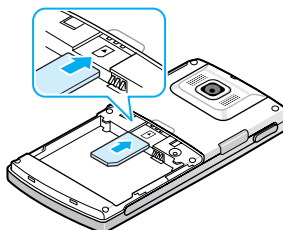
- Keep all miniature SIM cards out of the reach of small children.
- The SIM card and its contacts can be easily damaged by scratches or bending, so be careful when handling the card.
- When installing the SIM card, always make sure that the phone is switched off before you remove the battery.

Inserting the SIM card

1. Remove the battery cover.



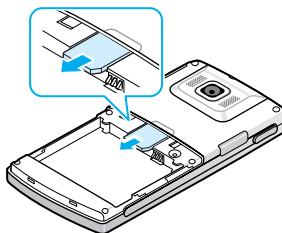
2. Insert and slide the SIM card, as shown, ensuring that the gold-coloured contacts of the card are face down.



Continue to [install the battery](#). See the next page.

Removing the SIM card

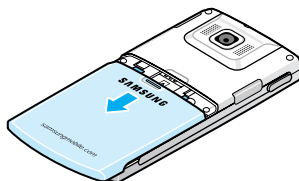
To remove the SIM card, slide the card out of the holder, as shown.



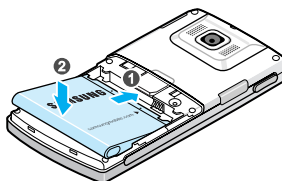
Installing the battery

Installing the battery

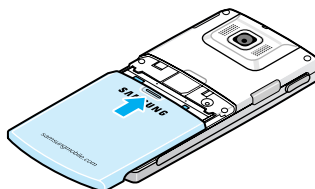
1. Remove the battery cover, if necessary.



2. Insert the battery into the battery compartment, as shown.



3. Reattach the battery cover.

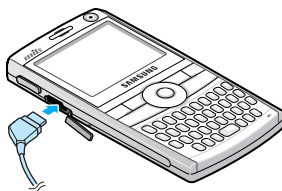


Removing the battery

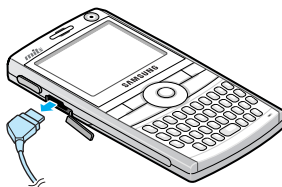
1. If necessary, switch off the phone by pressing and holding  until the power-off image displays.
2. Remove the battery cover.
3. Lift the battery away from the phone.

Charging your phone

1. Plug the connector of the travel adapter into the jack on the left side of the phone.



2. Plug the travel adapter into a standard AC wall outlet.
3. When charging is finished, unplug the travel adapter from the wall outlet.
4. Remove the travel adapter from the phone.



Note: Do not remove the battery while charging. It may cause malfunctions and may damage the phone.

Low battery warning

Your phone displays the Battery Very Low icon () and a warning message when the battery gets very low. If this happens, charge the battery.

Turning your phone on or off

Press and hold  to turn on your phone. The phone is logged into your home network and receives the signal from the network. You can now make or answer a call and use programs on the phone.

To turn off the phone, press and hold .

The basics

This chapter explains basic information about using your phone, such as customising your phone and using online help.

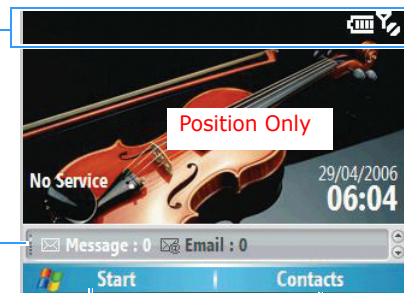
Using the Home screen

When you turn on your phone, the Home screen, the phone's idle screen, appears. You can also access this screen by pressing  from any program.

On the Home screen, you can view important information for the day or messages at a glance. You can also quickly switch to the programs you recently accessed.

Status icons indicates your phone's current status. See the next page.

Quick Launcher: Select to view appointments or messages, access recent programs you used, or change the profile settings.



Press the left soft key to open the **Start** menu and switch to a program.

Press the right soft key to open **Contacts**.

Status bar

On the top line of the screen, the status bar displays icons to show your phone's current status. Followings are some of the status icons you may see:

Icon	Description
	Shows the strength of the signal. You can also view the following service status: • : You are out of a service area. • : The phone functions are turned off.
	Appears when a call is in progress.
	Appears when a data call is in progress.
	Appears when the current call is on hold.
	Appears when a GPRS connection is available in the network. When a GPRS connection is active,  appears.
	Appears when you are roaming out of your home service area and logged onto a different GPRS network.
	Shows the level of your battery power. The more bars you see, the more power you have remaining. When the battery level is very low,  appears.
	Appears when the ring type has been set to Vibrate in the current profile or the ring tone has been set to Vibrate in Sounds. Also, appears when the Silent profile is activated. For details, see page 26.

Icon	Description
1/2	Indicates that you can make calls using phone line 1 or 2 only (network service).
	Appears when you are roaming outside of your home area and logged onto a different network.
	Appears when Bluetooth is activated. For details, see page 143.
	Appears when a text (SMS) or multimedia (MMS) message has been received.
	Appears when an instant message has been received.
	Appears when a new voicemail has been received. : A new voicemail from line 1. : A new voicemail from line 2. : A new voicemail from both lines.
	Appears when there is a call you have missed.
	Appears when you have set incoming calls to be diverted to another destination.

Accessing information from the Home screen

From the Home screen, you can:

- access the most recently accessed programs
- view upcoming appointments
- change the profile option
- view unread text (SMS) or multimedia (MMS) messages

To change information on each item:

1. From the Home screen, scroll to the item you want on the Quick Launcher by pressing the Navigation keys or spinning the Navigation disc, and press .
2. Access appointments or messages, or change the profile setting.

For more information on changing these items, see the appropriate instructions for each task in this guide.

3. Press  or  to return to the Home screen.

Note: To ensure that operations, such as moving or saving files, proceed to completion, wait at least 50 seconds before removing the battery.

Customising the Home screen

You can customise the Home screen according to your preferences.

Setting the Home screen properties

1. On the Home screen, press the **Start** soft key.

2. Select **Settings** → **Display** → **Home Screen**.
3. Press the Up or Down key to scroll to an option, and press the Left or Right key to change the setting.

The following options are available:

- **Home screen layout:** Select the layout to be used for the Home screen.
- **Colour scheme:** Select the colour scheme to be used for the Home screen.
- **Background image:** Select an image to use as a background image on the Home screen.
- **Time out:** Specify the length of time the phone waits before returning the display to the Home screen if the phone is not used.

4. When you have finished, press the **Done** soft key.

Changing the right soft key function

Contacts is assigned by default to the right soft key on the Home screen. You can change the program assignment for the key.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **HomeScreen RSK setting**.
3. Select the program you want.
4. Enter the name to be displayed on the Home screen for the program in the **Display Name** field.
5. When you have finished, press the **Done** soft key.

Start menu screen

On the Start menu, you can access all of the programs in your phone. On the Home screen, press the **Start** soft key to open the Start menu screen.

A screen will be inserted

Opening programs or folders

Scroll to a program or a folder by pressing the Navigation keys and press  to open it. You can also press the number key assigned to the program you want.

Switching between programs

Your phone is a multi-tasking device. You can run multiple programs at the same time and switch from one program to another. From any program, press  or  to switch to the Home screen. Then access another program from the Quick Launcher or Start menu.

Note: When you use a GPRS connection, pressing  terminates the connection. If you want the current connection to continue, press , or  as many times as necessary, to switch to the Home screen.

Closing programs

Using Task Manager, you can end the programs which are currently open.

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Utilities** → **Task Manager**.
3. Scroll to a program, press the **Stop** soft key. To close all of the running programs, press the **Menu** soft key and select **Stop All**.



Entering text

Your phone is equipped with a QWERTY keypad to support easy and quick text input. You can enter text as you would when using a computer's keyboard.

The keys are labelled with alphabet on the upper half and numbers and symbols on the lower half. Press the key corresponding to the character you want to enter. To switch between using the upper characters and lower characters, press .

You can move the cursor by pressing the Navigation keys. To delete a character, press .

In addition, you can use the following function keys:

- : deletes characters.
- : starts a new line.
- : changes case or switches to Capital Lock mode.

- : changes the text input mode. You can switch between ABC mode and T9 mode in which displays the word choices for your key presses. 123 mode and Symbol mode are also available for entering numbers and symbols.
- : switches to 123 mode.

Customising your phone

You can customise the phone settings to suit the way you work.

Regional settings

Using **Regional Settings**, you can change number, currency, and time and date formats appropriate to the countries in question.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **More...** → **Regional Settings**.
3. Select the option you want in each field.
4. When you have finished, press the **Done** soft key.
5. If you changed the **Language** or **Locale** option, press the **OK** soft key.

Then you need to turn the phone off and then back on to make your changes take effect.

Time and date settings

The **Date and Time** setting enables you to set the date, time, and time zone.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **Clock & Alarm** → **Date and Time**.

Note: By using **Alarm** on the Clock & Alarm screen, you can set alarms to sound at a specified time.

3. Select your time zone and set the current date and time.
4. When you have finished, press the **Done** soft key.

Note: You can change the time and date format to be displayed in **Regional Settings**. To set AM or PM, press any number keys.

Power settings

You can conserve battery power by adjusting the time-out settings for the display and the backlight of the keypad and display or adjusting the display brightness.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Power Management**.
3. Select the power settings:
 - **Main battery:** You can check the remaining battery power.
 - **Backlight time out on battery:** You can select the length of time the display backlight stays on when you do not use the phone.

- **Backlight time out on AC:** You can select the length of time the display backlight stays on while charging.
 - **Display time out:** You can select the length of time the display stays on. During standby, the phone goes to Sleep mode after a specified period of time, so very little power is being consumed.
 - **Display Brightness:** You can adjust the brightness for the display.
 - **Keypad backlight on:** You can select when the keypad backlight is used.
4. When you have finished, press the **Done** soft key.

Accessibility settings

You can configure the options to increase the accessibility to your phone's functions.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Accessibility**.
3. Select the options you want.
 - **System font size:** You can set the size of the font on your screen.
 - **Multipress time out:** You can set the length of time between key presses when entering text.
 - **Confirmation time out:** You can set the delay before an unconfirmed action times out.
 - **In-call alert volume:** You can set the volume of the alert tone that sounds when you are on a call.
4. When you have finished, press the **Done** soft key.

Sound settings

You can customise sound settings for various [events](#) on the phone.

Setting sounds and notifications

Your phone reminds you in various ways when you have something to do, receive a message, or press the keys on the phone. For example, if you have set up an appointment, you are notified in any of the following ways:

- A sound, which you can specify, plays,
- The LED indicator flashes, or
- Your phone vibrates.

You can change phone sounds by choosing types or sounds for each event.

To choose a ringtone for the call ringer:

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **Sounds** → **Ring tone**.
3. Select the ringtone you want.
4. Press the **Done** soft key.

To choose reminder types and sounds:

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **Sounds** → **Other Sounds**.
3. Select the event for which to specify a sound.
4. Select the reminder type or ringtone.
5. When you have finished, press the **Done** soft key.

Notes:

- You can connect to the Internet and then download ringtones that are in a .wav or .mid format.
 - To use an .mp3 or .wma file as your call ringtone, it must be saved in a Storage or Storage Card folder.
-

Changing the sound profile

Using Profiles, you can adjust and customise the phone tones for different events or environments and then apply the settings as a group. The currently selected profile displays on the Home screen.

To change profiles:

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **Profiles**. The list of profiles opens.
3. Select the profile you want.

If you select **Automatic**, the profile will automatically switch between **Normal** and **Meeting** according to your calendar items.

Notes:

- You can quickly change the profile. Press  and select the profile you want from the Quick List.
 - You can quickly activate or deactivate the Silent profile by pressing and holding  from the Home screen.
-

To customise profiles:

1. On the Profiles screen, scroll to the profile you want.
2. Press the **Menu** soft key and select **Edit**.

3. Change the settings in each field. Available options may differ depending on the selected profile.
4. When you have finished, press the **Done** soft key.

Notes:

- To change all profile settings to their factory default, press the **Menu** soft key from the profile list and select **Reset to default**.
 - For the Headset profile, when you set the ring type to **Silent** or **Vibrate**, you must manually answer calls even if the **Auto-answer in** option is activated.
-

Owner information

Owner Information identifies the owner or user of the phone. Set your contact information in case you have lost the phone.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **More...** → **Owner Information**.
3. Fill in each input field.
4. When you have finished, press the **Done** soft key.

Error reporting setting

Your phone has the Error Reporting function which informs you of errors in a program that can give a crash to the phone system. You can enable or disable this function.

1. On the Home screen, press the **Start** soft key.

2. Select **Settings** → **More...** → **More...** → **Error Reporting**.
3. Select **Enable** or **Disable** and press the **Done** soft key.

Security settings

With options in Security, you can protect your phone and SIM card from unauthorised use.

Locking the phone

You can protect your phone using the Device Lock feature. Once the feature is enabled, your phone is automatically locked after the specified period of inactivity.

Note: Even if the phone is locked, you will be able to receive calls.

To lock the phone:

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **Device Lock**.
3. Select **Prompt if device unused for** and select a length of time the phone waits for before locking itself when it is not in use.
4. Scroll to the **Password type** field and select a password type.
 - **Simple PIN:** Use a numeric password.
 - **Strong alphanumeric:** Use an alphanumeric password. A password must be more than 7 characters and contain at least 3 of uppercase and lowercase letters, numbers, or punctuation marks.

5. Enter a password in the **Password** field.
6. Re-enter the same password in the **Confirm password** field for confirmation.
7. Press the **Done** soft key.
8. Press the **Yes** soft key.

To unlock your phone:

1. On the Home screen, press the **Unlock** soft key.
2. Enter the password and press the **Done** soft key.

Activating the SIM PIN

When SIM PIN is enabled, you must enter your PIN supplied with your phone each time you turn the phone on or insert the current SIM card into another device. Consequently, any person who does not have your PIN cannot use your phone without your approval.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **Enable SIM PIN**.
3. Enter the PIN and press the **Done** soft key.

Locking the SIM card

When SIM Lock is enabled, your phone works only with the current SIM card. To use another SIM card, you must enter the SIM lock password.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **Enable SIM Lock**.

3. Enter a password for your SIM card and press the **Done** soft key.
4. Re-enter the password for confirmation and press the **Done** soft key.

Changing PIN2

A PIN 2 is used for certain functions supported by the SIM card. You can change the PIN2 supplied with your SIM card to a new one.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **Change PIN2**.
3. Enter the current PIN2, then a new PIN2, and re-enter the new one for confirmation.
4. Press the **Done** soft key.

Changing the call barring Password

You can change the default call barring password supplied by your service provider.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **Call Barring Password**.
3. Enter the current password, then a new password, and re-enter the new one for confirmation.
4. Press the **Done** soft key.

Side key setting

You can change the program assigned to the user-defined function key, **0** to your favorite program.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **Side Key Settings**.
3. Select the program.
4. Press the **Done** soft key.

Menu shortcut settings

The number keys can be used as shortcut keys to directly access specific programs that exist in the Start menu.

Note: You can also assign phone numbers, e-mail addresses, or web pages in Contacts to the number keys as speed dial entries. For details about setting the speed dial list, see page 58.

Assigning a shortcut to a key

1. On the Home screen, press the **Start** soft key.
2. Scroll to the program you want to assign to a key.
3. Press the **Menu** soft key and select **Add Speed Dial**.
4. If necessary, enter the name you want in the **Name** field.
5. Select a location in the **Keypad assignment** field and press the **Done** soft key.

Accessing a menu using its shortcut

On the Home screen, use one of the following ways:

- For one-digit shortcut keys, press and hold the number key.
- For two-digit shortcut keys, press the first number key and then press and hold the last number key.

Searching for items

Your phone provides a search program, Smart Search, to allow you to search for data or media files in your phone with ease and quickly access them.

Searching for an item

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Utilities** → **Smart Search**.
3. Enter the first few letters of the item name in the **Find** field and select an item type in the **Type** field.
4. Select **Match case** and/or **Match whole word** to let the phone to search for the matching items more quickly.
5. Press the **Go** soft key. The phone searches its file directory or programs and lists all matching items.
6. Scroll to the one you want and press the **Open** soft key.

Setting up the search options

You can change the search options for each item type to provide the phone with more specific information about the items you want to search for.

1. From the SmartSearch screen, press the **Menu** soft key and select **Options**.
2. Select the item type you want and set each option.
3. When you have finished, press the **Done** soft key.

Locking the keys

You can lock the keys on the phone to keep any accidental key presses from causing a program's launch or phone switch on or off.

To lock the keypad, press and hold , or press  and select **Key lock**.

To unlock the keypad, press the **Unlock** soft key and then press .

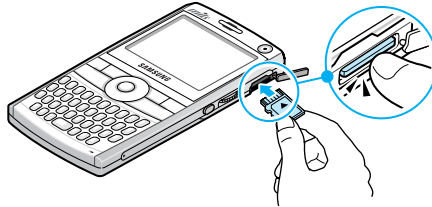
Using an optional memory card

Your phone has an expansion slot compatible with microSD memory cards, which are primarily used to back up or transfer files and data.

Note: Use only compatible memory cards with your phone. Using incompatible memory cards, such as Secure Digital (SD) cards, may damage the card, as well as the phone, and data stored on the card.

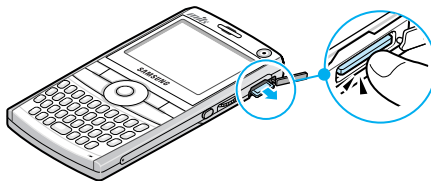
Inserting the memory card

Push the memory card into the slot with the label side face down until it clicks into place. The card is secure when it is not protruding from the phone.



Removing the memory card

To remove the card, push it in and release so that it is disengaged from the slot. Then slide the card out.



Adding and removing programs

You can install any program created for your phone, as long as the phone has enough memory. The most popular place to find software for your phone is on the Microsoft web site.

Adding programs using ActiveSync

You can install programs downloaded from the Internet or included on the supplied software CD-ROM by performing synchronisation between your phone and your computer.

First you need to determine what your phone and processor type is so that you know which version of the software to install.

1. On the Home screen, press the **Start** soft key and select **Settings** → **More...** → **More...** → **About**. Check the version of your phone.
2. Download a program to your computer from the Internet or insert the CD-ROM that contains the program into your computer.

Be sure to select the program designed for your phone and the phone's processor type.
3. Read any installation instructions, Read Me files, or documentation that comes with the program.
4. Connect your phone to your computer and make sure that the ActiveSync is running.

For more information on ActiveSync, see page 42.

5. Double-click the *.exe file on the computer.

If the file is an installer, the installation wizard will begin. Follow the instructions on the screen. Once the software has been installed, the installer will automatically transfer the software to your phone.

If the file is not an installer, you will see an error message. You need to move this file to your phone by using ActiveSync Explore to copy the program file to the **Start Menu** folder on your phone.

Once installation is completed, you can view and open the program by accessing the **Start** menu.

Adding a program directly from the Internet

First, you need to determine what your phone and processor type is so that you know which version of the software to install.

1. On the Home screen, press the **Start** soft key and select **Settings** → **More...** → **More...** → **About**. Check the version of your phone.
2. Download the program to your phone straight from the Internet using Internet Explorer.

Be sure to select the program designed for your phone and the phone's processor type.
3. Read any installation instructions, Read Me files, or documentation that comes with the program.
4. Select the file, such as a *.xip or *.exe file. The installation wizard will begin.
5. Follow the directions on the screen.

Once installation is completed, you can view and open the program by accessing the Start menu.

Removing programs

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Remove Programs**.
3. Scroll to the program you want to delete.
4. Press the **Menu** soft key and select **Remove**.
5. Press the **Yes** soft key to confirm the deletion.
6. When you have finished, press the **Ok** soft key.

Managing certificates

On your phone you can add and delete public key certificates. You can store the following two types of certificates on your phone.

- **Root:** help to establish the identity of servers with which you connect. This helps to prevent unauthorised users from accessing your phone and information.
- **Personal:** help to establish your identity, when you log on to a secured network, such as a corporate network.

Viewing certificates

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **Certificates** → a certificate type.

3. To view more details, select the certificate.

Deleting a certificate

1. Scroll to the certificate you want on the list.
2. Press the **Menu** soft key and select **Delete**.
3. Press the **Yes** soft key to confirm the deletion.

Resetting your phone

You can reset your phone's settings and clear all added data from memory.

Resetting the phone

1. On the Home screen, press the **Start** soft key
2. Select **Settings** → **More...** → **Security** → **More...** → **Reset**.
3. Enter the reset password and press the **Done** soft key.
The default password is "1234."
4. Press the **Yes** soft key to confirm.
The phone resets and reboots itself.

Changing the reset password

You can change the reset password to prevent the phone from being reset by unauthorised people.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Security** → **More...** → **Change Reset Password**.
3. Enter the old password, then a new password, and re-enter the new one for confirmation.
4. Press the **Done** soft key.

Using online help

Your phone is supported by additional information available online, or on the CD-ROM that came with your phone.

For information on:	see:
additional programs that can be installed on your phone,	the supplied CD-ROM.
connecting to and synchronising with a PC,	Chapter 3 in this User's Guide or ActiveSync Help on your PC. To view the ActiveSync help, click the ActiveSync icon on the Windows task bar.

SIM Application Toolkit

This is available if you use a SIM AT card that provides the SIM Application Toolkit menus and additional services, such as news, weather, sports, entertainment, and location services. Available services may vary, depending on your service provider's plans.

On the Home screen, press the **Start** soft key and then the **More** soft key twice, and select **SIM Toolkit**.

For details, see your SIM card instructions or contact your service provider.

Synchronisation

Using Microsoft® ActiveSync®, you can synchronise data on your desktop computer with the data on your phone. Synchronisation compares the data on your phone with your desktop computer and updates both your phone and computer with the latest data.

With ActiveSync, you can:

- Keep Contacts, Calendar, Tasks, or Inbox data up-to-date by synchronising your phone with Microsoft Outlook data on your desktop computer.
- Copy (rather than synchronise) files between your phone and desktop computer.
- Control the moment when synchronisation occurs by selecting a synchronisation mode.
- Select data types to be synchronised and control the amount of synchronised data.

WARNING!

- ActiveSync synchronises two devices using the latest data. Therefore, if you delete some specific data from the phone after synchronisation, and then perform a synchronisation again, the corresponding data on the computer will be deleted. Be careful not to lose important data.
 - If you turn off the phone after copying files to any folders, except for the Storage folder, using ActiveSync, all files in those folders will be deleted. Store important files in the Storage folder to prevent from being deleted.
-

Installing ActiveSync

Before beginning synchronisation, you must install ActiveSync on your desktop computer using the supplied CD-ROM. You can also download the latest version of ActiveSync from the Microsoft web site (<http://www.microsoft.com>).

1. Insert the CD-ROM into the CD-ROM drive of your desktop computer. Alternatively, double-click the downloaded ActiveSync installer.
2. Follow the instructions on the screen for installing Microsoft ActiveSync.

When installation is completed, the Synchronisation Setup Wizard helps you to connect your phone to your desktop computer, to set up a partnership.

3. Follow the instructions on the screen.

Note: See page 44 for more information on connecting the phone and a computer.

Your first synchronisation process will automatically begin when your phone is connected to the computer. After the first synchronisation, take a look at Contacts, Calendar, and Tasks on your phone. You will notice that your information has been copied to the phone.

■ ■ Customising connection settings

To establish a connection between your computer and the phone, you must enable the connections you want to use in the ActiveSync program. By default, all connections are enabled.

1. From the ActiveSync window on your computer, select **File** → **Connection Settings...**
2. Change the connection settings.



If your phone is not connected to the computer, click this button to establish a connection.

3. Click **OK**.

■ ■ Connecting your phone to a computer

To connect the phone to your computer, you can choose one of the following ways:

- Using a PC data cable
- Using a Bluetooth connection

Connecting with a PC data cable

Connect one end of the PC data cable to the jack on the left side of the phone and the other end to the USB port on your computer.

Note: USB mode of your phone must be set for ActiveSync. Press the **Start** soft key and select **Settings** → **More...** → **Connections** → **More...** → **USB**. Then change the mode.

The connection is established and the Microsoft ActiveSync window appears. The synchronisation automatically begins.

Notes:

- When an error occurs in a USB connection, activate the DHCP Client service, or deactivate the firewall or VPN environment.
 - USB hubs and laptop docking stations have not exhibited consistent stability with Windows Mobile powered devices and ActiveSync. You can connect the device to the PC USB ports if you experience connection drops or inability to connect through a USB hub or docking station.
-

Connecting via Bluetooth

1. On the Home screen, press the **Start** soft key and select **ActiveSync**.
2. Press the **Menu** soft key and select **Connect via Bluetooth**.
3. Press the **Yes** soft key, if you are connecting to a computer via Bluetooth for the first time.

4. Select **Add new device...** to search for a new Bluetooth-compatible devices.
5. Select your Bluetooth-compatible computer to pair the phone with the computer.
6. Enter a Bluetooth password and press the **Next** soft key. This password is used just once and you do not need to memorise it.

When you enter the same password on your computer, pairing is finished.

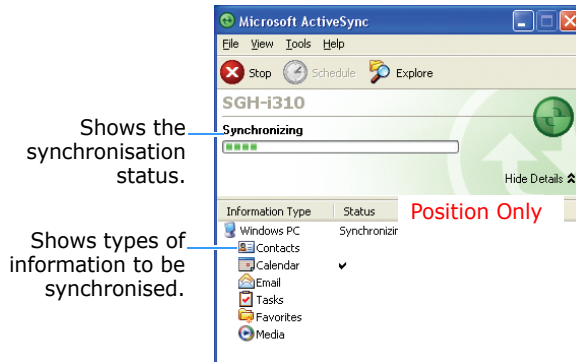
7. Enter a display name for the computer and press the **Next** soft key.
8. Check the services you want to use and press the **Done** soft key.

Note: **ActiveSync** must be checked on the service list. If **Serial** is available, instead, select it and make sure that a correct Bluetooth COM port is selected from the Connection Settings on the PC ActiveSync.

9. Press the **Done** soft key.

Synchronising information

To begin synchronisation, connect your phone to your computer. For more information on connecting the phone and the computer, see page 44. The Microsoft ActiveSync window on your computer automatically appears and synchronisation starts.



Once the synchronisation is completed, the phone stays connected to the computer. If any change is made, ActiveSync automatically will begin synchronisation. To begin synchronisation, press the **Sync** soft key in ActiveSync on your phone.

You can open the phone's file directory by clicking **Explore** from the Microsoft ActiveSync window. You can then copy files quickly and easily from the phone to the computer, or vice versa.

Note: To synchronise Bluetooth devices with a compatible computer, the computer must have the Bluetooth stack for Windows XP Service Pack 2.

Customising synchronisation settings

You can customise various setting options for synchronisation with a computer and a server, and set the synchronisation schedule.

First, you must terminate the connection between your phone and computer. Disconnect the PC data cable or remove the phone from the Bluetooth range.

Changing PC settings

1. In ActiveSync on your phone, press the **Menu** soft key and select **Options**.
2. Highlight **Windows PC**.
3. Press the **Menu** soft key and select **Settings**.
4. Change the computer name, set how to handle a data conflict between the phone and computer, and set a event logging type.
5. Press the **Done** soft key.
6. Select data types to be synchronised.
7. Press the **Done** soft key.

Note: For more information on the conditions that must be met on the computer and how to change synchronisation options, see ActiveSync Help.

Setting server synchronisation

You can synchronise information automatically as items arrive only if your company is running Microsoft Exchange Server with Exchange ActiveSync.

Configuring an Exchange Server connection

1. In ActiveSync on your phone, press the **Menu** soft key and select **Add Server Source**.
2. Enter the server address and select **This server requires an encrypted (SSL) connection** to use a SSL protocol for server access.
3. Press the **Next** soft key.
4. Enter your Microsoft Exchange user name, password, and domain name.

To save the password for subsequent accesses, select **Save password**.
5. Press the **Next** soft key.
6. Select data types to be synchronised.
7. When you have finished, press the **Finish** soft key.

Changing the synchronisation schedule

You can schedule synchronisation with the Microsoft Exchange Server on two separate times. Use the peak time schedule to synchronise during working hours or other times when you experience higher mail volumes. Use the off-peak time schedule to synchronise during times when you experience lower mail volumes.

1. In ActiveSync on your phone, press the **Menu** soft key and select **Schedule**.
2. Set each option:
 - To synchronise periodically during peak times, select a frequency of synchronisation in the **Peak times** field.
 - To synchronise periodically during off-peak times, select a frequency of synchronisation in the **Off-peak times** field.
 - To use the peak time and off-peak time setting while roaming, select **Use above settings when roaming**.
 - To synchronise each time you send an e-mail, select **Send outgoing items immediately**.
 - To set the days and hours for peak times, press the **Menu** soft key and select **Peak Times**.
3. When you have finished, press the **Done** soft key.

Call functions

This chapter explains all of the call functions provided by your phone.

Turning the phone functions on and off

You can choose to turn off the phone functions and just use the PDA functions at any time and then turn it back on when you want.

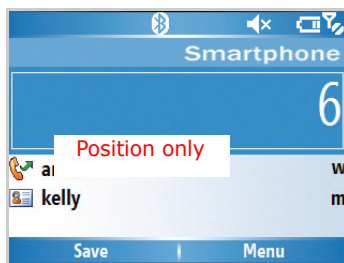
Note: In many countries you may be required by law to turn off the phone functions while on a flight. To turn off the display of your phone does not actually turn off the phone functions; you must turn off your wireless connection to your operator's network.

To turn off the phone functions, press  and select **Wireless Manager**. Then select **Phone** to set it to **Off**.  appears on the top right corner of the screen.

To turn back on the phone functions, select **Phone** to set it to **On** from the Wireless Manager screen.

■ ■ Using the Dialling screen

When you press , the Dialling screen opens. You can view the most recent calls you have dialled, received, and missed on the screen.



When you enter a digit, the Dialling screen lists all of the numbers containing the entered digit in Contacts and Call History, as well as the phone number assigned to the corresponding speed dial key.

■ ■ Making a call

You can make a phone call using the number keypad.

To make a voice call:

1. On the Home screen, enter a number including an area code.

2. Press  to make a call.

When a call is connected, the call duration displays. During a call, you can use several call options. For details, see page 56.

To adjust the earpiece volume during a call, press / to increase or decrease the volume level.

3. To end the call, press .

Advanced calling features

You can make a call from Contacts, Speed Dial, and Call History.

Making a call from Contacts

1. On the Home screen, press the **Contacts** soft key. You can also press the **Start** soft key and select **Contacts**.
2. Select a contact card from the contact list.
3. Scroll to the number you want and press  for a voice call.

Making a call from Speed Dial

Speed Dial is a list you can create of often-dialled numbers. Information on adding a number to Speed Dial is detailed on page 58.

By memorising the position on the Speed Dial list, you can dial the number simply by entering that number of the Speed Dial key. The phone number assigned to the key appears on the Dialling screen.

Alternatively, if you do not remember the position of a number, access the Speed Dial list:

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Accessories** → **Speed Dial**.
3. Scroll to the number you want and press  for a voice call.

Making a call from Call History

1. On the Home screen, press the **Start** soft key.
2. Select **Call History**. The recent call list appears.

Note:  is for incoming calls,  is for outgoing calls, and  is for missed calls.

To view the calls categorised by call type, press the **Menu** soft key, select **Filter**, and select a category from the pop-up list.

3. Scroll to the number you want and press  for a voice call.

Making an international call

1. Press and hold  until the + sign appears. The + replaces the international access code.
2. Enter the full phone number you want to dial. It includes the country code, the area code (without the leading zero), and the phone number.
3. Press .

Note: You can set the country or dialling code to be added before the number when dialling. See page 63.

Making an emergency call

Your phone provides the emergency number **112**. This number can normally be used to make an emergency call in any country, with or without a SIM card inserted, if you are within a mobile phone network's service area.

Enter the emergency number **112** and press .

Notes:

- Some service providers may require a SIM card to be inserted, and in some cases the PIN to be entered as well.
 - In some cases, other emergency numbers may also be accessed. Your service provider may save additional local emergency numbers on the SIM card.
-

■ ■ Answering or ignoring a call

When a call comes in and the phone rings or vibrates, depending on the ringer setting:

- Press the **Accept** soft key or  to answer the call.
- Press the **Ignore** soft key or press  to reject the call. You can also press and hold .

Note: If you reject a call, the busy tone is sent out. Depending on your service provider, the caller may be guided to your voicemail server.

- Press  to mute the ringer.

■ ■ Options during a call

Your phone provides a number of control functions that you can use while a call is in progress.

Answering a second call

If a person is trying to call you when you are talking on the phone, a notification window will pop out.

1. Press the **Accept** soft key or  to answer the second call and put the first on hold.
2. To switch back and forth between the two callers, press the **Swap** soft key.
3. To end the second call and go back to the first, press the **End** soft key or press .

Using In-call options

During a call, you can access various options by pressing the **Menu** soft key.

For a voice call, the following options are available:

- **Hold:** places the current call on hold.
- **Swap:** switches back and forth between the two callers.
- **Mute/Unmute:** turns off the microphone so that the person with whom you are speaking cannot hear you, or turns it back on.
- **Speakerphone on:** turns on the speakerphone mode to talk and listen to the phone a short distance away.
- **Conference:** makes a conference call when you have an active call and a call on hold. You can have a conversation with up to 5 people at the same time.
- **Contacts:** opens the contact list.
- **Save to Contacts:** saves the phone number of the person with whom you are speaking.
- **View contact:** opens the contact details, if the dialled number is stored in Contact.
- **View Calendar:** opens the calendar.
- **Call History:** opens the call history list.

Call-related features

Checking your voicemail

The first speed dial location is assigned to your voicemail box by default. When you insert your SIM card into the phone, it automatically detects and sets as default the voicemail centre number of your mobile service provider.

To check your voicemail, press and hold  from the Dialling screen.

Note: You can check and change the voicemail centre number. See page 62.

Managing the Speed Dial list

You can assign frequently-used phone numbers, e-mail addresses, or web pages in Contacts to the speed dial location 2 through 99. The location 0 and 1 on the Speed Dial list are preset for the international call prefix and the voicemail centre number, respectively.

Note: You cannot create a speed dial entry for a phone number stored on the SIM card.

Adding a contact to the Speed Dial list

1. On the Home screen, press the **Contacts** soft key. You can also press the **Start** soft key and select **Contacts**.
2. Select a contact from the list.

3. Scroll to a number, e-mail address, or web page address.
4. Press the **Menu** soft key and select **Add to Speed Dial**.
5. If necessary, enter the name you want.
6. In the **Keypad assignment** field, select a location.
7. Press the **Done** soft key.

Deleting Speed Dial assignments

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Utilities** → **Speed Dial**.
3. On the Speed Dial list, select an entry.
4. Press the **Menu** soft key and select **Delete**.
5. Press the **Yes** soft key to confirm the deletion.

Managing your Call History

Call History details all incoming, outgoing, and missed calls, and also provides a summary of total calls. It can also tell you when a call was initiated and how long it lasted.

To open Call History:

On the Home screen, press the **Start** soft key and select **Call History**. A list of all calls appears.

If necessary, select the category of the call history to be displayed by pressing the **Menu** soft key and selecting

Filter.

Calls are categorised as below:

- **No Filter:** shows all calls made to and from the phone in chronological order.
- **Missed Calls:** shows only calls that were not answered.
- **Incoming Calls:** shows only calls made to the phone.
- **Outgoing Calls:** shows only calls made from the phone.

Viewing details of calls

- To view the duration of a call and time and date you received or made it, scroll to the call you want to view and press **OK**.
- To save a phone number of a call to Contacts, scroll to the call you want and press the **Save** soft key.
- To view contact information, scroll to a contact, press the **Menu** soft key, and select **Find Contact**.
- To send an SMS message, press the **Menu** soft key and select **Send Text Message**.
- To send an e-mail message, press the **Menu** soft key and select **E-mail**.
- To delete an individual call, press the **Menu** soft key and then select **Delete**. To delete all calls, select **Delete List**.

Viewing call timers

In Call History, you can view the duration of your calls. This option is convenient for estimating your usage.

1. On the Call History screen, press the **Menu** soft key and select **View Timers**.

You can view the total call time, the last call time, the time of calls you received or made, the data calls, the roaming calls and a lifetime calls. You can also view the time you reset the call time.

2. Press the **Done** soft key.

You can easily erase the call time records at any time, except for **Lifetime calls**, by pressing the **Menu** soft key and selecting **Reset Timers**.

Customising your phone functions

You can personalise the settings of the phone functions, the services you have, and the network to which you have connected.

Accessing the Phone setting options

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **Phone**.
3. Select a setting menu, and then set each option.
4. When you have finished, press the **Done** soft key.

Available setting options

All calls

- **Call Options:** You can customise settings related to call functions, such as an answering option, voicemail and SMS access numbers, and auto dial codes.

Any key answer: When this option is activated, you can answer incoming calls by pressing any key, except for , , , and .

Show SIM contacts: With this option is activated, the contact cards stored on the SIM card display in Contacts.

Phone number: Check your phone number.

Voice mail number/Text messages service centre:

When you insert your SIM card into your phone, the phone automatically detects and sets your voicemail and SMS access numbers by default. If not, you can manually enter the numbers obtained from your service provider.

Country code/Area code: You can enter a country code or area code. The code will be automatically added before a phone number when dialling.

- **Caller ID:** When you place a call, your phone number can be displayed to or hidden from the person to whom you are calling. Using this option, you can enable or disable the display of your caller identification.
- **Channels:** This option allows you to set the broadcast message receipt and set up broadcast channels from which you want to receive broadcast messages.

Enable channels: Select to enable the receipt of broadcast messages.

Receive channel list: Select to receive a list of all available broadcast channels from the network.

Language: Select your preferred languages to display broadcast messages.

To edit the channel list, press the **Menu** soft key and select **Edit Channels**. Then press the **Menu** soft key and select the options for adding or editing channels.

- **Closed User Group:** This option allows you to set incoming and outgoing calls to be restricted to a selected user group. For details about how to create a closed user group (CUG), contact your service provider.

Use user group: Select to activate the CUG feature.

Outside access: Enable calls to numbers other than those in the closed user group. This feature depends on the nature of your CUG subscription.

Default group: Enable the default CUG, if you have set one with your service provider. When making a call, you are given the option of using your default CUG, instead of selecting one from the list.

Group Index: Set the index number of the user group.

Select **More...** to access the following option:

- **Fixed Dialing:** When this option is activated, your phone allows outgoing calls only to the limited set of phone numbers. You can call only those numbers that are included in the Fixed Dialling Number list or which begin with the same digit(s) as a phone number on the list.
- **Networks:** You can set the phone to automatically select a network when you are roaming out of your service area, or find and select the network you want.

Press the **Menu** soft key to access the following options:

Current Network: Search for all available networks. You can start searching when the phone is out of your service area.

Network Selection: Select a network from the available networks.

Preferred Networks: Set up a list of your preferred networks. You can set priority of the networks or add networks manually by selecting them from the preset network list or entering their service ID codes.

Cancel: Exit the **Networks** menu.

Voice Calls

- **Call Barring:** This network service allows you to restrict your incoming or outgoing calls. To set up this service, you need to enter the call barring password obtained from your service provider.

For incoming call barring, the following options are available:

All Calls: No calls can be received.

When roaming: Calls cannot be received when you are using your phone outside of your home service area.

Off: Call barring is deactivated; all calls can be received normally.

For outgoing call barring, the following options are available:

All Calls: No calls can be made.

Int'l except home: When abroad, calls can be made only to number within the current country and to your home country.

Int'l calls: International calls cannot be made.

Off: Call barring is deactivated; all calls can be made normally.

- **Call Forwarding:** This network service allows you to forward your incoming calls to another phone number.

Unconditional: All calls are forwarded.

No Reply: Calls are forwarded when you do not answer.

Busy: Calls are forwarded when you are on the phone.

Unavailable: Calls are forwarded when your phone is turned off or your phone is out of the service area.

Data Calls: All data calls are forwarded.

Fax Calls: All fax calls are forwarded.

- **Call Waiting:** This service allows you to receive another call while you have a call in progress.

Own Number

You can store your phone numbers with descriptive names. Changes made with this options does not affect the actual subscriber number of your SIM card.

SDN

You can access the access numbers of the services supported by your service provider. This option may be unavailable depending on your SIM card.

Messaging, Internet, and Messenger

Messaging

In Messaging, you can create, send, receive, view, edit, and organise:

- Text messages (SMS)
- Multimedia message (MMS)
- E-mail messages

To open Messaging:

On the Home screen, press the **Start** soft key and select **Messaging**.

Working with SMS or MMS messages

You can write an SMS message of up to 160 characters. When you enter more than 160 characters, your phone handles the message as a multi-part message.

You can also send or receive multimedia messages (MMS). In addition to the familiar text content of text messages, multimedia messages can contain images, video clips, audio clips, and combinations of these things in more than one page.

MMS also supports e-mail addressing, so that messages can be sent from phone to e-mail and vice versa.

Creating and sending an SMS message

1. On the Messaging main screen, select **SMS/MMS**.
2. Press the **New** soft key and select **SMS**.

3. In the **To** field, enter the recipients' phone numbers, separating them with a semicolon.

You can retrieve numbers from the contact list by pressing the **Menu** soft key and selecting **Add Recipient**.

4. Press the Down key and enter the message text.

To enter preset or frequently used sentences, press the **Menu** soft key and select **My Text** → a sentence.

5. When you have finished composing the message, press the **Send** soft key.

Note: To know if your message is delivered to the recipient(s), press the **Menu** soft key, select **Message Options** → **Request message delivery notification**.

Creating and sending an MMS message

1. On the Messaging main screen, select **SMS/MMS**.
2. Press the **New** soft key and select **MMS**.
3. In the **To**, **Cc**, or **Bcc** field, enter the recipients' numbers or addresses, separating them with a semicolon.

Note: The **Cc** and **Bcc** fields are above the **To** field.

You can also retrieve numbers or the addresses from the contact list or the messages you have sent by pressing the **Menu** soft key and selecting **Add Recipients**.

4. Press the Down key to move to the **Subject** field and enter the message subject.

5. Press the Down key and enter the message text.
6. Press the **Menu** soft key to access the following options for composing a message:
 - **Preview:** shows the multimedia message you created.
 - **Add Recipients:** allows you to add recipients' addresses.
 - **Edit Item:** allows you to edit the selected item.
 - **Add:** allows you to add a media file.
 - **Attach:** allows you to attach a contact card or calendar item as a digital file format, or a media file.
 - **Edit Page:** allows you to add or delete pages, change the text style, or set the page order or duration.
 - **Save to:** allows you to save the message as a draft or as an MMS template.
 - **Cancel Message:** cancels sending the message.
 - **MMS Options:** allows you to change the message options. See page 72.
7. When you have finished composing the message, press the **Send** soft key.

Viewing SMS/MMS messages

When you receive a new SMS or MMS message, the New Message icon () displays on the top line of the screen and a new message is stored in Inbox. Press the **Message** soft key to open the message.

You can also view messages you received, sent, composed but not sent by accessing the message folders.

To open the message folders:

On the SMS/MMS screen, press the **Menu** soft key and select **Folders**. The following default folders display:

- **Deleted Items:** contains messages that have been deleted on your phone.
- **Drafts:** stores draft messages that have not been sent.
- **Inbox:** contains received messages. Received push message and broadcast messages are also stored in this folder.
- **Outbox:** is a temporary storage place for messages waiting to be sent.
- **Sent Items:** stores the messages that have been sent.

To view a message:

1. Open the message folder you want.

The icons on the message list tells you the message type.

- : SMS message
- : MMS message

Note: You can change the default settings for viewing a message. From any message folder, press the **Menu** soft key and select **Options** → **Display**.

2. Select the message you want to view.

If you open a push message from a WAP server, press the **Proceed** soft key to access the URL specified in the message.

3. Press the Left or Right key to view other messages.

To access message options:

From any message folder, you can access the following options by pressing the **Menu** soft key; depending on the selected folder, available options may vary:

- **Delete:** deletes the message.
- **Reply:** sends a reply to the sender and/or all other recipients, or forwards the message to other people.
- **Folders:** allows you to access other folders.
- **Switch Accounts:** allows you to switch to another message account.
- **Delete all:** deletes all of the messages in the current folder.
- **MMS Options:** allows you to change the options for MMS messages. See page 72.
- **Move:** allows you to move the message to other folders.
- **Mark as Unread/Mark as Read:** allows you to mark the message as unread or read. Unread messages are boldfaced on the message list.
- **Copy to SIM:** copies the message to the SIM card. This option is only available for SMS messages.
- **Options:** allows you to change the options for the Messaging.

Viewing messages on the SIM card

Sometimes, text messages may be stored on the SIM card, depending on their specifications. To view the messages stored on the SIM card, you need to copy them to a folder in your phone.

1. From the Home screen, press the **Start** soft key.
2. Select **Accessories** → **MySim Message**.

3. Select the message you want.

Configuring MMS settings

You can change the default MMS settings. While composing or viewing an MMS message, press the **Menu** soft key and select **MMS Options**. The following options are available:

- **Sending Options:** allows you to change the settings for sending MMS messages.

Priority: You can select the priority level of your messages.

Validity Period: You can select the length of time your messages are stored in the message centre after they are sent.

Delivery Time: You can select the time delay before messages are sent.

Creation Mode: You can set whether or not the phone allows the MMS creation using unsupported files.

Size: You can select the maximum message size.

Hide address: You can set your caller ID to be hidden from outgoing messages.

Request delivery report: When this option is activated, the network informs you whether or not your message has been delivered.

Request read report: When this option is activated, your phone sends a request for a read reply along with your message to the recipient.

- **Receiving Options:** allows you to change the settings for receiving MMS messages.

Home Network: Set how to retrieve new messages from the server in your home network.

Roaming Network: Set how to retrieve new messages from the server while roaming around another network.

Reject Unknown Sender: Reject messages from unknown senders.

Report Allowed: Send a delivery report from the network to the sender.

Advertisement Allowed: Accept advertisements.

Information Allowed: Accept information messages.

- **MMS Profiles:** allows you to set up and activate MMS profiles which are sets of MMS parameters required to send or receive MMS messages. To activate a profile, select it from the profile list.

To edit a profile, press the **Menu** soft key and select **Edit**. You can change the following options:

Profile Name: Enter the profile name.

MMSC URL: Enter the URL address of the MMS centre.

Proxy: Activate or deactivate the proxy server. When this option is activated, the **IP Address** and **Port** options are activated.

IP Address: Enter the IP address of the gateway.

Port: Enter the port number of the gateway.

Bearer: Check the network bearer type.

Press the **Menu** soft key and select **Advanced Settings** to access the additional options:

APN: Enter the access point name.

Login ID: Enter the login name.

Password: Enter the login password.

DNS1/DNS2: Enter the primary or secondary DNS address.

- **About:** shows version and copyright information.

Working with e-mail messages

You can send and receive e-mail messages in one of these ways:

- Synchronise e-mail messages with Microsoft Exchange or Microsoft Outlook on your PC.
- Send and receive e-mail messages by connecting directly to an e-mail server through an Internet Service Provider (ISP) or a network.

Synchronising e-mail messages

Use the **Outlook Email** account to send and receive e-mail messages by synchronising e-mail messages with Microsoft Exchange or Microsoft Outlook on your PC.

E-mail messages can be synchronised as part of the general synchronisation process. You will need to enable Inbox synchronisation in ActiveSync.

During synchronisation:

- Messages are copied from the mail folders of Exchange or Outlook on your PC to the **Outlook Email** folders on your phone.
- E-mail messages in **Outlook Email** on your phone are transferred to Exchange or Outlook, and then sent from those programs.

Connecting directly to an e-mail server

You can send and receive e-mail messages by connecting to an e-mail server. You'll need to set up a remote connection to a network or an ISP, and a connection to your e-mail server.

When you connect to the e-mail server, new messages are downloaded to the phone's Inbox folder. Also messages in the phone's Outbox folder are sent, and messages that have been deleted on the e-mail server are removed from the phone's message folders.

Folder behavior with a direct connection to an e-mail server

The behavior of the folders you create depends on whether you are using POP3 or IMAP4.

- If you use POP3 and you move e-mail messages to a folder you created, the link is broken between the messages on the phone and their copies on the mail server. The next time you connect, the mail server will see that the messages are missing from the phone and delete them. This prevents you from having duplicate copies of a message, but it also means that you will no longer have access to messages that you move to folders created from anywhere except the phone.
- If you use IMAP4, the folders you created and the e-mail messages you moved are mirrored on the server. Therefore, messages are available to you anytime you connect to your mail server. This synchronisation of folders occurs whenever you connect to your mail server; create new folders or rename/delete folders when connected.

Creating an e-mail account

You need to create a new account to be used for retrieving and sending e-mail messages.

To make a new account:

1. From the main Messaging screen, select **New Account**.
2. Select **Other (POP3/IMAP)** and press the **Next** soft key.

3. Enter your display name and e-mail address, and press the **Next** soft key.

If you want to set up your account automatically from the Internet, select **Attempt to obtain email settings from the Internet**.

4. Enter your user information, such as user name, password, and domain name, press the **Next** soft key.
5. Select the e-mail server type, enter an account name, and select a network type.
6. Press the **Next** soft key.
7. Enter the server names and press the **Next** soft key.

To set up an outgoing server, select **Outgoing Server Settings**.

8. Set the options for downloading e-mail messages and press the **Next** soft key.

You can select the number of days for which you receive e-mail messages and set the maximum data volume of e-mail messages you want to download.

9. Select how often your phone automatically connects to the server and checks for incoming e-mails, and press the **Next** soft key.
10. Press the **Finish** soft key.

To edit an account:

1. From the main Messaging screen, scroll to the account you want.
2. Press the **Menu** soft key and select **Settings**.

3. Change the account settings as you would when creating it.

For **Message**, you can set to send a delivery report request for outgoing messages or to use Unicode encoding.

Creating and sending an e-mail message

1. On the Messaging main screen, select the e-mail account with which you want to send.
2. Press the **New** soft key.
3. In the **To**, **Cc**, or **Bcc** field, enter the recipients' e-mail addresses, separating them with a semicolon.

Note: The **Cc** and **Bcc** fields are above the **To** field.

You can retrieve addresses from the contact list by pressing the **Menu** soft key and selecting **Add Recipient**.

4. Press the Down key to move to the **Subject** field and enter the e-mail subject.
5. Press the Down key and enter the message text.

To enter preset or frequently used sentences, press the **Menu** soft key and select **My Text** → a sentence.

You can add a picture or voice note as an attachment by pressing the **Menu** soft key and selecting **Insert** → an item type.

6. When you have finished composing the message, press the **Send** soft key.

7. Press the **Menu** soft key and select **Send/Receive** to connect to the network and send the message.

Viewing e-mail messages

You can also view messages you received, sent, composed but not sent by accessing the message folders.

To open the message folders:

On the Messaging main screen, access the e-mail account you want, press the **Menu** soft key, and select **Folders**.

The following default folders display:

- **Deleted Items:** contains messages that have been deleted on your phone.
- **Drafts:** stores draft messages that have not been sent.
- **Inbox:** contains received messages.
- **Outbox:** is a temporary storage place for messages waiting to be sent.
- **Sent Items:** stores the messages that have been sent.

To view an e-mail message:

1. On the Messaging main screen, select the e-mail account from which you want to receive e-mail messages.
2. Press the **Menu** soft key and select **Send/Receive**.

The phone connects to your e-mail server and receives incoming e-mail messages or sends e-mail messages in Outbox.

3. Select the message you want to view.

To access message options:

From any message folder, you can access the following options by pressing the **Menu** soft key:

- **Delete:** deletes the message.
- **Reply:** sends a reply to the sender and/or all other recipients, or forwards the message to other people.
- **Folders:** allows you to access other folders.
- **Switch Accounts:** allows you to switch to another message account.
- **Delete all:** deletes all of the messages in the current folder.
- **MMS Options:** allows you to change the options for MMS messages. See page 72.
- **Move:** allows you to move the message to other folders.
- **Mark as Unread/Mark as Read:** allows you to mark the message as unread or read. Unread messages are boldfaced on the message list.
- **Download Message/Do Not Download:** allows you to set the phone to download the complete contents of the e-mail from the e-mail server, or cancel the download setting.
- **Options:** allows you to change the options for the Messaging.
- **Send/Receive:** sends or receives the e-mail messages.

Setting downloading options

You can specify your downloading preferences when you set up the account or select your synchronisation options.

- Change options for Inbox synchronisation using ActiveSync options. For more information, see "ActiveSync Help."

- Change options for direct e-mail server connections in Inbox on your phone. Press the **Menu** soft key and select **Options** → **Account Options**. Select the account you want and change it.

Viewing e-mail attachments

To download an attachment, select **Get entire message and any attachments** in an open message, or press the **Menu** soft key and select **Download Message**. It will be downloaded the next time you synchronise or connect to your e-mail server. To view an attachment, select the attachment in an open message.

Inserting signatures into messages

You can specify a signature to be automatically inserted into SMS, MMS or e-mail messages that you send.

To specify a signature:

1. From any message folder, press the **Menu** soft key and select **Options** → **Signatures**.
2. Select the account for which you want to specify from the **Select an account** field.
3. Select **Use signature with this account**.
4. To insert a signature in every messages, including when you reply or forward the message, select **Include when replying and forwarding**.
5. Enter a signature to be inserted and press the **Done** soft key.

Internet Explorer

Use Microsoft® Pocket Internet Explorer to view Web HTML, cHTML, and WAP pages. You can browse by connecting to an Internet Service Provider (ISP) or network and browse the Web. To do this, you'll need to create the connection first as described on page 148.

When connected to an ISP or network, you can also download files and programs from the Internet.

To open Internet Explorer:

On the Home screen, press the **Start** soft key and select **Internet** → **Internet Explorer**.

Connecting to a website

1. To connect and start browsing, do one of the following:
 - Press the **Menu** soft key and select **Address Bar**. Enter the web address you want to visit or select a page from the history list.
 - Scroll to the page you want to view from the Favourites list.
2. Press the **Go** soft key on the browser to open the associated web page.

Navigating the Internet Explorer

From web pages, you can use the following options:

To	Press
scroll through browser items	the Navigation keys.
select a browser item	 .
return to the previous page	 .
refresh the connection	the Menu soft key and select Refresh .
To change the display options	the Menu soft key, select View , and select the option you want.
To change the text and image size	the Menu soft key, select Zoom , and select the option you want.
view information on the web page	the Menu soft key and select Tools → Properties .

Using the Favorites list

You can store your favourite links while using the Internet Browser and then access them easily at a later time. Categorising them enables you to find them more quickly.

Adding a web page to the Favorites list

1. Go to the page you want to add, press the **Menu** soft key, and select **Add to Favourites**.
2. Change the name for the favourite link, if necessary.

3. Select a category under which you want to save the favourite link from the **Folder** field.

You can also create a new category. See page 87.

4. Press the **Add** soft key.

Opening a link through the Favorites list

1. On the Internet Explorer screen, press the **Favorites** soft key.

2. Scroll to the link you want to access.

If the link you want is in the certain folder, open the folder and scroll to the link.

3. Press the **Go** soft key.

Managing Favorites categories

You can create a new category for saving favourite web pages, and rename or delete the created categories.

To add a category:

1. On the Internet Explorer screen, press the **Favorites** soft key.
2. Press the **Menu** soft key and select **Add Folder**.
3. Enter a category name and press the **Add** soft key.

To edit the categories:

Scroll to the category you want, press the **Menu** soft key, and select **Edit** or **Delete** to rename or delete the selected category.

Changing Explorer options

You can customise web browsing options, change the connection settings, and clear memory. On the Internet Explorer screen, press the **Menu** soft key and select **Tools** → **Options**.

The following options are available:

- **General:** You can select whether or not to play sounds on web pages, view the warnings when you move from a secure web page to a non-secure one, or enable or disable the receiving and sending of cookies. You can also select the text encoding type to use.
- **Connections:** You can change the network setting to connect to Internet Explorer. If you select **Automatically detect settings**, your phone automatically detects network settings from your service provider.
- **Memory:** You can check the amount of memory currently being used for the Internet Explorer. To clear the memory, scroll to a type of memory and press the **Clear** soft key.

 Pocket MSN

Pocket MSN delivers an always-on experience that enables you to remain available to other online users and always up to date with e-mail, instant messaging (IM) and other online services without maintaining a continuous network connection to the phone.

The connection will be restored when a new message arrives or when you needs the service. In addition, subscribers will receive only updates or changes to their contacts and Inbox — rather than receiving entire lists — when they connect to the service.

You will have one-click access to MSN Hotmail® and MSN Messenger. In addition, Pocket MSN will allow you to wirelessly browse online and receive other MSN services, including MSN Alerts, which include news, sports and weather updates.

In addition to always-on services, you can access, compose and answer Hotmail messages offline, maximising their time when mobile connections are not available.

To access Pocket MSN:

On the Home screen, press the **Start** soft key and select **Pocket MSN**.

Signing In

To use the MSN Messenger or Hotmail service, you must have a Microsoft Passport™ account or Hotmail account, or a Microsoft Exchange e-mail account. If you have a Hotmail® or MSN account, you already have a Passport. Once you have obtained either a Microsoft Passport or a Microsoft Exchange account, you are ready to set up your account.

Note: Sign up for a Microsoft Passport account at <http://www.passport.com>. Get a free Microsoft Hotmail e-mail address at <http://www.hotmail.com>.

To sign into the MSN service:

1. On the Pocket MSN main screen, select **MSN Messenger**, **MSN Hotmail**, or **Compose Hotmail**.
2. If you selected **MSN Messenger**, press the **Sign In** soft key.
3. Enter the e-mail address and the password of your Microsoft Passport and Hotmail account.
4. Press the **Sign In** soft key.

Using MSN Messenger

MSN® Messenger on your phone is an instant messaging program that lets you:

- see who is online.
- send and receive instant messages.
- have instant message conversations with groups of contacts.

Working with contacts

The MSN Messenger screen shows all of your messenger contacts at a glance, divided into the **Online** and **Not Online** categories. From this view, while connected, you can start a chat.

- To see others who are online but not seen on the MSN Messenger screen, press the **Menu** soft key and select **Chats**.

- To add a contact, press the **Menu** soft key and select **Add Contact**.
- To delete a contact, press the **Menu** soft key and select **Delete Contact**.
- To set the MSN Messenger to automatically update the contacts' status when it changes, press the **Menu** soft key and select **Auto update status**.
- To view the properties of a contact, press the **Menu** soft key and select **Properties**.
- To block a contact from chatting with you, press the **Menu** soft key and select **Block**.

Chatting with contacts

1. To open a chat window, scroll to the contact with whom you want to chat.
2. Press the **Menu** soft key and select **Send Message**.
3. Enter your message in the text entry area at the bottom of the screen, or press the **Menu** soft key and select **My Text** to enter a preset message.
4. Press the **Send** soft key to send the message.
5. Repeat steps 3 and 4 to chat with the contact.

During a chat:

- To invite another contact to a multi user chat, press the **Menu** soft key, select **Invite**, and select the contact you want to invite.
- To switch back to the main window, press the **Menu** soft key and select **My Contacts**. To revert back to your chat window, press the **Menu** soft key, select

Chats, and select the person whom you were chatting with.

- To view the participants of the current chat, press the Menu soft key and select **Chat Members**.

6. To end the chat, press the **Menu** soft key and select **End Chat**.

Customising MSN messenger settings

To change the settings for the MSN messenger, press the **Menu** soft key and select **Options**. You can change your display name or set your contact list to be updated automatically when changes are made.

Using the Hotmail service

You can send and read e-mail messages on the phone via the Microsoft Hotmail service.

Composing and sending an e-mail

1. On the Pocket MSN screen, select **Compose Hotmail**.
2. Compose an e-mail as you would in the Messaging program.

Viewing e-mail messages

1. On the Pocket MSN screen, select **MSN Hotmail**.
2. Press the **Menu** soft key and select **Folders**.
3. Select a message folder, and then select the message you want to view.

Accessing the MSN Mobile Homepage

On the Pocket MSN screen, select **MSN Mobile Home**. You can access various mail, information, entertainment services provided by Microsoft.

Changing Pocket MSN setting options

From the Pocket MSN mail screen, press the **Options** soft keys. The following options are available:

Note: To change the settings, you may need to sign in to the MSN service.

- **General:** You can clear the saved password, if any, or set Pocket MSN to be displayed on the Home screen.
- **Hotmail:** You can set filters to receive or block e-mails or set Hotmail to automatically download new e-mails to the phone.
- **Messenger:** You can change your display name in Messenger or set Messenger to automatically update your contacts' presence information.
- **SMS:** You can set Pocket MSN to temporarily use SMS when a data connection is unavailable.
- **Switch User:** You can reset user information to sign in to the MSN service by another user account.

Organiser

This chapter explains how to use Personal Information Management (PIM) programs to keep track of contacts and appointments and make a list of tasks you need to do.

Contacts

Contacts maintains a list of your friends and colleagues so that you can easily find the information you are looking for, whether you are at home or on the road.

To open Contacts:

On the Home screen, press the **Contacts** soft key. You can also press the **Start** soft key and select **Contacts**. You can view the list of contact cards that you have created.

Creating a contact card

You can save a new contact card in the phone's memory or on the SIM card.

Creating a contact card in the phone's memory

1. On the contact list, press the **New** soft key.
2. Enter a name and other contact information.

You can add a personal ringtone to a contact card. Scroll to the **Custom ring tone** field and select the ring melody you want.

Select the **Picture** field to add an image for the caller ID image. To remove the added image, press the **Menu** soft key and select **Remove Picture**.

To assign the contact card to a category, scroll to the **Categories** field and select a category.

3. When you have finished, press the **Done** soft key.

Creating a contact card on the SIM card

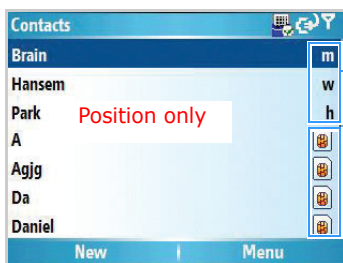
1. On the contact list, press the **Menu** soft key and select **New SIM Contact**.
2. Enter the name of the person you want to add.
3. Scroll to the **Mobile Phone** field and enter the number you want to store.
4. Press the **Done** soft key.

Creating a contact card from the Dialling screen

1. On the Home screen, enter the phone number and press the **Save** soft key.
2. To create a new contact card, select **<New Item>**.
To add the phone number to an existing contact card, select the contact card.
3. Scroll to the location in which you want to save the number and press the **Insert** soft key.
4. Fill in the other fields and press the **Done** soft key.

Viewing and editing a contact card

When you access Contacts, the contact list displays the names of your contacts alphabetically, along with an abbreviation for the primary contact number or e-mail address, such as the person's work phone number (**w**) or mobile phone number (**m**).



Indicates the type of the default number or e-mail address.

Indicates the contacts stored on the SIM card.

The following table shows possible abbreviations that might be displayed on the contact list and their meanings:

Abbreviation	Meaning
w/w2	work phone/work phone 2
h/h2	home phone/home phone 2
m	mobile phone
co	company phone
pgr	pager
car	car phone
ast	assistant phone
rdo	radio phone number
e/e2/e3	e-mail/e-mail 2/e-mail 3

Abbreviation	Meaning
im/im2/im3	IM/IM2/IM3
web	web page

Note: All of the contacts saved on the SIM card follow all of the contacts saved in the phone's memory.

To open a contact card:

1. On the contact list, select the contact card you want to view.

If the contact card is assigned to a certain category, press the **Menu** soft key, select **Filter**, and select the category from the pop-up list.

2. On the summary screen:
 - To edit the contact information, press the **Menu** soft key and select **Edit**.
 - To send an SMS message or MMS message, press the **Menu** soft key and then select **Send Text Message** or **Send MMS**.
 - To send an e-mail, select the e-mail address.
 - To access a web page, select the web page.

Adding a number or address to the Speed Dial list

You can assign a short cut number to a phone number for speed dialling or to an e-mail or URL address for quick access.

1. On the contact list, select the contact card you want.
2. Scroll to the number or address you want.
3. Press the **Menu** soft key and select **Add to Speed Dial**.
4. If necessary, change the name and select a keypad location.
5. Press the **Done** soft key.

Copying entries between the SIM card and Contacts

You can copy the contact card or all of contact entries in a specific category to the SIM card or vice versa.

Copying from Contacts to the SIM card

1. On the contact list, select the contact card stored in the Contacts.
2. Scroll to the phone number to be copied.
3. Press the **Menu** soft key and select **Save to SIM**.
4. If necessary, change the contact name.
5. Press the **Done** soft key.

Copying from the SIM card to Contacts

1. On the contact list, select the contact card stored on the SIM card.
2. Press the **Menu** soft key and select **Save to Contacts**.
3. If necessary, change the contact name.
4. Fill in the other fields and press the **Done** soft key to save the changes.

Beaming a contact card

You can send a contact card in Contacts to another phone via SMS, MMS, or an active Bluetooth connection.

On the contact list or on the summary screen, press the **Menu** soft key.

- To send via SMS, select **Send Contact** → **Text Message**. For details, see page 67.
- To send via MMS, select **Send as vCard**. For details, see page 68.
- To send via Bluetooth, select **Send Contact** → **Beam**. For details, see page 144.

Deleting a contact card

1. On the contact list, select a contact card.
2. Press the **Menu** soft key and select **Delete Contact**.
3. Press the **Yes** soft key to permanently delete the contact card.

Note: If you delete a contact card on your phone and synchronise Contacts with your computer, the contact card in Microsoft Outlook on your computer will be deleted.

Calendar

Use Calendar to schedule appointments, including meetings and other events. You can check your appointments in one of several views (Agenda, Week, and Month).

To open Calendar:

On the Home screen, press the **Start** soft key and select **Organizer** → **Calendar**. You can view the lists of appointments that you have created for the current day.

Creating an appointment

1. Press the **Menu** soft key and select **New Appointment**.
2. Fill in the fields.
 - **Subject:** Enter a description of the appointment.
 - **Start date, Start time, End date, and End time:** If needed, change the date and time. To change AM or PM in 12-hour format, press any number key.
 - **All day event:** If checked, the appointment lasts all day.
 - **Location:** Enter the place of the appointment.
 - **Reminder:** Select a time setting for the alarm to remind you of the appointment.

- **Occurs:** Select a repeat interval to set how often the appointment repeats.
- **Status:** Select an appropriate status for the appointment.
- **Sensitivity:** Select a sensitivity class by which Microsoft Exchange Server handles the appointment.
- **Notes:** Add a note for the appointment.

3. When you have finished, press the **Done** soft key.

Viewing and editing an appointment

On the Calendar screen, you can view and edit your appointments using the different views: Agenda, Week, or Month. By default, the calendar first appears in the agenda view, which provides the most detailed information about your appointment.

Switching the view mode

You can change the view mode of the calendar to cycle through the agenda, week, and month view. In each view, press the **Week**, **Month**, or **Agenda** soft key.

- **Week View:** shows the week calendar of your appointments.

A screen will be inserted

Time cells having scheduled items are indicated by the following colours (Navy blue: Busy, Purple: Out of office, White: Free, Sky blue: Tentative).

- **Month View:** allows you to keep track of your monthly schedule and shows which days have appointments scheduled (🏠: Morning appointment, 🏡: Afternoon appointment, 🏢: Morning/Afternoon appointment, 🏣: All day appointment).

A screen will be inserted

- **Agenda View:** shows you the appointments for the selected day.

A screen will be inserted

Editing an appointment

1. Select the calendar view by pressing the **Week, Month,** or **Agenda** soft key.
2. In each view, select the date you want. In Agenda view, you can access other dates by pressing the Left or Right key.

To go to today's date, press the **Menu** soft key and select **Go to Today**.

To go to a certain date, press the **Menu** soft key and select **Go to Date**. Enter the date and press the **Done** soft key.

3. Select the appointment you want to view.
4. Press the **Edit** soft key.
5. If you are editing a repeating or continuous appointment, decide whether to edit all appointments in the series or only the current appointment by pressing the **No** or **Yes** soft key.
6. Edit the appointment information and press the **Done** soft key to save the changes to the appointment.

Beaming an appointment

You can send an appointment to another phone via an active Bluetooth connection.

On the calendar screen, open the appointment you want. Press the **Menu** soft key and select **Beam Appointment**. For details, see page 145.

Deleting an appointment

1. On the calendar screen, scroll to an appointment to delete.
2. Press the **Menu** soft key and select **Delete Appointment**.
3. If you are deleting a repeating or continuous appointment, decide whether to delete all appointments in the series or only the current appointment by pressing the **No** or **Yes** soft key.

Or, press the **Yes** soft key to permanently delete the appointment.

Changing calendar setting options

From any view, press the **Menu** soft key and select **Options**. The following options are available:

- **First day of week:** You can select which day the calendar starts with.
- **Week view:** You can select a week view type.
- **Month view:** You can set the month view to show the current week number.
- **Set reminders:** You can select the default schedule alarm time.

D-Day

In D-Day, you can calculate how many days are left before or have passed since a specific event.

To open D-Day:

On the Home screen, press the **Start** soft key and then the **More** soft key, and select **Organizer** → **D-Day**.

Creating a D-Day counter

1. Press the **New** soft key.
2. Set options in each field.
 - **Date:** Enter the date of the day you want to count to or from.
 - **Title:** Enter the counter title.
 - **Category:** Select one of the preset categories. You can filter counters by category from the counter list.
 - **Repeat every year:** Select to set the D-day counter to repeat every year.
3. When you have finished, press the **Done** soft key.

The counter is added to the list and shows how many days are left or have passed.

Editing D-Day categories

You can change the names and icons of D-Day categories.

1. From the counter list, press the **Menu** soft key and select **Edit Category**.
2. Scroll to the category you want.

3. Press the **Menu** soft key and select **Rename**.
4. Enter a new name and press the **Done** soft key.
5. Press the Left or Right key to change the category icon.
6. Press the **Done** soft key to save changes.

Deleting a D-Day counter

1. Scroll to the counter you want.
2. Press the **Menu** soft key and select **Delete**.

Tasks

Tasks is a convenient place to create task reminders. You can mark a task as completed or delete a task.

To open Tasks:

On the Home screen, press the **Start** soft key and select **Organizer** → **Tasks**.

Creating a task note

1. Enter your task information in the **Enter new task here** field.
2. When you have finished, press .

Completing a task

When a task is complete, mark it to indicate that the task is done. To mark, scroll to the completed task and press the **Complete** soft key.

To unmark, press the **Activate** soft key.

Beaming a task note

You can send a task note to another phone via an active Bluetooth connection.

On the task list, scroll to the task you want. Press the **Menu** soft key and select **Beam Task**. For details, see page 145.

Deleting a task

1. On the task list, scroll to the task.
2. Press the **Menu** soft key and select **Delete Task**.
3. Press the **Yes** soft key to confirm the deletion.



NotePad

Using NotePad, you can create memos for important things, and manage them.

To access NotePad:

On the Home screen, press the **Start** soft key and select **Organizer** → **NotePad**.

Creating a memo

1. Press the **New** soft key.
2. Enter the memo text and press the **Done** soft key.

Viewing a memo

To view memo details, select the memo you want from the list.

Sending a memo

You can send your notes as part of a SMS or e-mail message.

1. Scroll to the memo you want.
2. Press the **Menu** soft key and select **Send via E-mail/SMS**.
3. Compose and send a message. For details, see page 67 and page 77.

Deleting a memo

1. Scroll to the memo you want.
2. Press the **Menu** soft key and select **Delete**.
3. Press the **Yes** soft key to confirm the deletion.

Voice Notes

In any program where you can write on the screen, you can also quickly capture thoughts, reminders, and phone numbers by recording a message. Using Voice Notes, you can create a recording.

To open Voice Notes:

On the Home screen, press the **Start** soft key and select **Organizer** → **Voice Notes**.

Recording a voice note

1. Hold your phone's microphone near your mouth or other source of sound.
2. Press the **Record** soft key to make your recording.
3. Press the **Stop** soft key to stop recording.

Your phone automatically saves the voice note and lists the note on the voice note list.

Reviewing a voice note

On the voice note list, select the note you want to review. Recording plays. During playback, you can adjust the sound volume by pressing /.

Setting a voice note as the ringtone

1. On the voice note list, scroll to a voice note.
2. Press the **Menu** soft key and select **Set As Ringtone**.
3. Press the **OK** soft key.

Deleting a voice note

1. On the voice note list, scroll to a voice note.
2. Press the **Menu** soft key and select **Delete**.
3. Press the **Yes** soft key to confirm the deletion.

Alarms

You can use the alarm clock to set a wake-up alarm or set an alarm to remind you of an appointment.

To open Alarms:

On the Home screen, press the **Start** soft key and select **Organizer** → **Alarms**.

Setting a wake-up alarm

1. On the Alarm screen, select **Wake up alarm**.
2. Check a box, enter the time for the wake-up alarm to sound, and select the days when the wake-up alarm rings in the week viewer.

Use the Navigation keys to move through each field. You can set the wake-up alarm at 3 different times.

3. Select a melody for the alarm in the **Tone** field.
4. Select a time interval to resume the alarm after in the **Snooze** field.
5. Press the **Done** soft key.

Setting an alarm

1. On the Alarm screen, select one of **Alarm 1** to **Alarm 9**.
2. Set each alarm option.
3. Press the **Done** soft key.

Stopping an alarm

- When an alarm rings, press the **Dismiss** soft key to stop it, or press the **Snooze** soft key to set the alarm to ring again after the specified snooze interval.
- To deactivate an alarm, select the one you want from the Alarm screen, select **Off** on the **Alarm Activation** line.



World Clock

You can set up the world clock with the time zones you want, and then check the current time of the city you need at any time.

1. On the Home screen, press the **Start** soft key.
2. Select **Organizer** → **World Clock**.
3. Select the clock you want.
4. Press the Left or Right key to move the time zone line.
To apply daylight savings to the currently selected time zone, select **Summer Time**.
5. Press the **Done** soft key to save the selected time zone.
To remove an assigned time zone, press the **Menu** soft key and select **Clear**.
6. Repeat from step 2 to add time zones.

Multimedia

Camera

With the built-in camera of your phone, you can take photos or record videos of people or events while on the move. Your phone produces JPEG photos and 3GP videos.

To open Camera:

From any screen, press the **Start** soft key and then the **More** soft key, and select **Camera**.

Taking photos

When you access Camera mode, the image to be captured appears.

1. Adjust the image to be captured.
 - Press the Up or Down key to zoom in or out.
 - Press the Left or Right key to adjust the brightness of the image.
 - Press the **Menu** soft key to access the camera options. See page 109.
 - Use the number keypad to adjust the image quickly. See page 110.
2. Press  or  to take a photo.
3. Press the **Save** soft key to save the photo.

The photo is saved to the location specified in the **Default Storage** option. After saving the photo, the camera automatically returns to Photo Preview mode.

Setting camera options

You can customise the camera settings. Once you change the camera settings, the corresponding icons display at the top of the photo preview screen.

On the preview screen, press the **Menu** soft key.

- **Camcorder**: switches to Camcorder mode.
- **Shooting Mode**: changes the camera shooting mode.

Single Shot: takes a normal single shot.

Multi Shot: takes a series of stills. You can select the default number of photos the camera will take in the **Camera** menu in **Options**.

Mosaic Shot: takes a series of stills and saves them in one frame. You can select the default layout in the **Camera** menu in **Options**.

- **Size**: allows you to select an image size.
- **Quality**: allows you to select an image quality.
- **White Balance**: allows you to select the white balance mode to adjust the colour balance of photos.
- **Timer**: selects the length of time for the camera to delay before taking a photo.
- **Effect**: changes the colour tone for photos or applies a special effect to photos.
- **Frame**: selects a decorative frame.
- **Options**: changes the default settings for Camera. See page 113.

Using the keypad shortcuts

You can use the keypad to customise your camera settings when you are in the photo preview screen.

- : switches to Camcorder mode.
- : changes the shooting mode by changing the number of photos or the layout.
- : changes the image size.
- : changes the image quality.
- : changes the white balance.
- : selects the length of time delay before taking a photo.
- : changes the colour tone or applies a special effect.
- : allows you to add a decorative frame to the photo.
- : accesses camera setting options.

Viewing photos

To view photos you have taken, press the **My Photo** soft key in Camera mode. The list of the photos in the currently selected memory appears. For further details, see page 125.

Recording video clips

1. From Camera mode, press  to switch to Camcorder mode. The image to be recorded appears.
2. Press  to switch between the front and rear camera lens.

3. Adjust the image to be recorded.
 - Press the Up or Down key to zoom in or out on your subject.
 - Press the Left or Right key to adjust the brightness of the image.
 - Press the **Menu** soft key to access the camcorder options. See page 111
 - Use the number keypad to adjust the image quickly. See page 112.
4. To start recording, press  or . The timer on the top left of the screen shows you the elapsed time.
 Press the **Pause** or **Resume** soft key to pause and resume recording.
5. To stop recording, press  or .
6. Press the **Save** soft key to save the video clip.
 The video clip is saved to the location specified in the **Default Storage** option. After saving the video, the camcorder automatically returns to Video Preview mode.

Setting camcorder options

You can customise the camcorder settings. Once you change the video settings, the corresponding icons display at the top of the video preview screen.

On the video preview screen, press the **Menu** soft key.

- **Camera**: switches to Camera mode.
- **Recording Mode**: select a video recording mode. Select **Limit for MMS** to record a video suitable for an MMS or e-mail message. Select **Normal** to record a video within the limit of the currently available memory.

- **Size:** allows you to select a video frame size.
- **Quality:** allows you to select an image quality.
- **White Balance:** allows you to select the white balance mode to adjust the colour balance of videos.
- **Timer:** selects the length of time for the phone to delay before recording a video.
- **Effect:** changes the colour tone for videos or applies a special effect to videos.
- **Audio Record Off/Audio Record On:** selects whether or not you record a video with audio.
- **Options:** changes the default settings for Camera. See page 113.

Using the keypad shortcuts

You can use the keypad to customise your video settings when you are on the video preview screen.

- : switches to Camera mode.
- : changes the recording mode.
- : changes the frame size.
- : changes the image quality.
- : changes the white balance.
- : selects the length of time delay before starting recording a video.
- : changes the colour tone or applies a special effect.
- : mutes or unmutes audio.
- : accesses camera setting options.

Playing video clips

To view the video clips you have recorded, press the **My Video** soft key in Camcorder mode. The list of the video clips in the currently selected memory appears. For further details, see page 125.

Changing the default camera settings

To customise the default camera settings, press the **Menu** soft key and select **Options**.

The following options are available:

- **General:** You can customise the general settings for the Camera program.

Icon display: allows you to the camera to display icons on the preview screen.

Auto Save: allows you to sets the camera to save a photo or video after capturing.

Storage card: allows you to select where you want to store your photos or video clips.

Time Out: allows you to set the period of time the camera waits before turning itself off when it is not used.

- **Camera:** You can customise the settings for Camera mode.

Multi shot: allows you to set the number of photos and the shooting speed.

Mosaic shot: allows you to select the layout and shutter release mode.

Default Prefix: allows you to change the default prefix of photo names.

Shutter Sound: allows you to select sounds for the shutter release, zooming, and brightness adjustment.

- **Camcorder:** You can customise the settings for Camcorder mode.
Default Prefix: allows you to change the default prefix of video names.
Sound: allows you to enable or disable the sound effect when recording begins or ends.
- **Shortcut:** You can check view the functions assigned to the keys in Camera mode or Camcorder mode.

Windows Media Player

Your phone is equipped with Microsoft Windows Media Player 10. With Windows Media Player, you can play Windows Media Audio, Windows Media Video, and MP3 audio files that are stored on your phone, on a memory card, or on the Web.

To open Windows Media Player:

On the Home screen, press the **Start** soft key and select **Windows Media**.

Preparing media files

You can copy media files from your desktop computer to the phone using the Windows Media Player or ActiveSync. You can also copy media files using a memory card.

Note: If you have stored too many files in memory, the operation speed of the system slows down. Using an optional memory card helps you clear up this problem and lets you enjoy more music files.

About DRM, licences, and protected files

Some digital media files, such as songs downloaded from online stores, are encrypted to prevent the files from being unlawfully distributed or shared. Content providers use a technology called Digital Rights Management (DRM), to encrypt the files. During the encryption process, the content provider creates a licence which specifies how and when the file can be used.

For example, a content provider could create a licence that allows you to play a certain file on your computer, but not on your phone. Or, a licence that allows you to play a certain file on your phone, but only for a month, or perhaps only a certain number of times. Files that have licences associated with them are called protected files.

Copying media files using ActiveSync

1. Connect your phone to a computer and start synchronisation by referring to page 42.
2. Open the file directory on the phone by clicking **Explore** from the Microsoft ActiveSync window.
3. Drag the media files you want to copy and drop them into a folder.

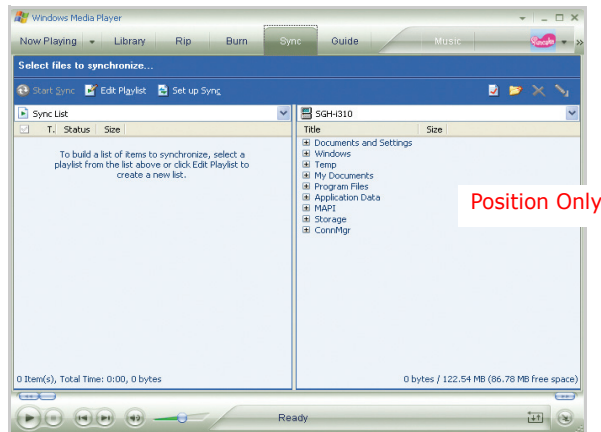
Windows Media Player automatically retrieves the media files from the folder where the files are copied and you can search them from the Library screen. If the media files do not appear in Library, update the library by pressing the **Menu** soft key and selecting **Update Library**.

Copying media files using the Windows Media Player program on your computer

You can use the desktop Windows Media Player to copy media files. Using the desktop Windows Media Player ensures that licences are copied with protected files.

Make sure that you have Windows Media Player 10 or later versions on your desktop computer. Depending on the version of your Windows Media Player, the procedure to copy files may vary.

1. Connect your phone to the desktop computer and start synchronisation.
2. Open Windows Media Player on the computer.
3. Click the **Sync** tab.



4. Click **Edit Playlist**.
5. Select the media files you want to synchronise from the left pane of the window.

6. Click **OK**.
7. Select the saving location from the right pane.
8. Click  to select the quality level you want and click **OK**.
9. Click **Start Sync**.

The selected files are converted and copied to the location you selected in step 7.

Using libraries

A library is a file list provided by Samsung Player to retrieve media files in the phone's memory. To access libraries, press the **Menu** soft key from the player screen and select **Library**.

The library screen contains categories, such as My Playlists, My Music, and My Videos. From the library screen, you can sort your content by criteria, such as artist name, album title, or genre.

On the library screen, you can use the following options by pressing the **Menu** soft key:

- **Queue Up**: adds the selected file to the end of the current play list.
- **Delete from Library**: deletes the selected file or all files from the library.
- **Now Playing**: opens the current play list.
- **Library**: Allows you to select the library that you want to view; for example, the library of files stored on your phone or on the memory card.
- **Update Library**: adds new files to the library by searching your phone or a memory card.

- **Open File:** allows you to find and play files that are stored on your phone or a memory card, but those are not in the library.
- **Open URL:** allows you to specify a URL address for a streaming service.
- **Properties:** displays information about the selected file.
- **Player:** closes the Library screen and displays the player screen.

Playing music and video files

If you have copied media files to your phone's memory or memory card, you can play them from Media Player.

Playing media files from a library

1. On the library screen, if necessary, press the **Menu** soft key, select **Library**, and select the memory from which you want to retrieve files.
2. Press the **Menu** soft key and select **Update Library**.
3. When libraries have been updated, press the **Done** soft key.
4. Select a category.
5. Scroll to the library you want to play and press the **Play** soft key.

If the file does not appear in a library, on the Library screen, press the **Menu** soft key and select **Open File**. Then select the file you want to play.

The player screen appears and the selected file plays.

Use the following options during playback:

- To adjust the Windows Media volume, press the Up or Down key. You can view the volume level on the screen.
- To adjust the earpiece volume, press /.
- To move backward in a file, press and hold the Left key.
- To move forward in a file, press and hold the Right key.
- To access the next file, press the Right key.
- To access the previous file, press the Left key.
- To pause or resume playback, press  or .
- To play the files in the play list randomly or repeatedly, press the **Menu** soft key and select **Shuffle/Repeat** → an option.
- To view the video on a full screen, press the **Menu** soft key and select **Full Screen**.
- To stop playback, press the **Menu** soft key and select **Stop**.

Playing media files on a network

1. On the Library screen, press the **Menu** soft key and select **Open URL**.
2. Enter a URL address in the **URL** field, or scroll to one of the URL address that you have used from the **History** field.
3. Press the **OK** soft key.

Note: To play media streaming, you must be connected to a network. For more information on creating a remote connection between your phone and a network, see page 148.

Setting up a play list

You can add media files on the Library screen to a temporary play list. It lists the currently playing file, as well as any files that have been queued up to play next.

Creating a play list

1. On the library screen, select the category you want and scroll to the file you want to play.

If the file does not appear on the list, press the **Menu** soft key and select **Update Library**.

2. Press the **Menu** soft key and select **Queue Up** to add the file to the play list.
3. Repeat steps 1 and 2 to add more files.
4. Press  to return to the player screen.
5. Press  or  to start playing the files.
6. To save the play list, press the **Now Playing** soft key and then the **Menu** soft key, and select **Save Playlist**.
7. Enter the list name and press the **Save** soft key. The list is saved in the My Playlists library.

Opening the play list

On the player screen, press the **Now Playing** soft key. You can use various options by pressing the **Menu** soft key.

Editing the play list

- To change the play order, press the **Menu** soft key and select **Move Up** or **Move Down**.

- To delete the selected files, press the **Menu** soft key and select **Remove from Playlist**.
- To clear the play list, press the **Menu** soft key and select **Clear Now Playing**.

Changing the Windows Media Player settings

You can customise the appearance and functionality of Windows Media Player. On the player screen, press the **Menu** soft key and select **Options**.

You can use the following options:

- **Playback:** Select the options for playback. You can select the way time is displayed on the player screen, or whether or not to pause playback when you launch another program, and resume playback after a phone call.
- **Video:** Select the viewing options for playing videos on a full screen.

Note: If there is a problem while playing MP4 files, deselect the **Shrink to fit window** option. The problem occurs because the file has been resized.

- **Network:** Change the connections speed and protocol for playing music and streaming video.
- **Library:** Select whether the player screen or the Library screen is displayed when you open Windows Media Player.
- **Skins:** Change the appearance of the player screen by selecting a new skin.
- **Buttons:** Assign Windows Media Player functions to the keys on your phone to quickly control playback without having to use the menus.

Pod Cast

In Pod Cast, you access enjoy online music services and create your own play list.

To open Pod Cast:

On the Home screen, press the **Start** soft key and select **Pod Cast**.

Subscribing to the Pod Cast service

From the Podcast screen, scroll to **Podcasts**, press the **Menu** soft key and select **Subscribe to Pod Cast**. When you are connected to the corresponding website, follow the onscreen instructions to complete the subscription process.

Accessing music services

From the Podcast screen, select **Podcasts**. You are connected to the corresponding website. Enjoy online music services as you want.

To update the music libraries with the latest information, press the **Menu** soft key and select **Update Library**.

Creating a play list

You can create your own play lists with your favourite music or smart play lists which filters music files according to your preferences.

1. Press the **Menu** soft key and select **New** → a play list type.

2. Enter a title for the play list.

For a smart play list, press the **Menu** soft key and add rules or limits to filter music files.

3. Press the **Ok** or **Done** soft key.
4. Add music files, if necessary.

Changing Pod Cast settings

To change the properties of Pod Cast, press the **Menu** soft key and select **View options** or **Preference**. You can specify information to be displayed on the play lists or display and update properties of the play lists in Pod Cast.

RSS Reader

RSS reader allows quick and easy syndication of news, headlines, and more. It will keep you up to date with the latest news, tools, resources and developments of this widely supported specification.

To open RSS Reader:

On the Home screen, press the **Start** soft key and select **RSS Reader**. The news channel list appears.

Reading the latest news

1. From the news channel list, press the **Update** soft key.
The phone connects to the network and updates the news channel list with the latest information.
2. Press the **Done** soft key to return to the channel list.

3. Select the new channel you want.
4. Select the headline in which you have a interest. The Internet Explorer launches and you can view to the corresponding news website.

Exporting or importing channels

You can export a channel as an OPML file format or import OPML files from other sources.

To export a channel:

1. Scroll to a channel from the list.
2. Press the **Menu** soft key and select **OPML** → **Export**.
3. Enter a file name and press the **OK** soft key.

The file is saved in My Documents.

To import a channel:

1. Scroll to the folder to which you want to import a channel.
2. Press the **Menu** soft key and select **OPML** → **Import**.
3. Select the file to import.

Changing RSS reader settings

Press the **Menu** soft key and select **Options** to access the following options:

- **Feed update settings/All updated settings:** You can change the settings for channel updates
- **Page expiration:** You can change the settings for deleting expired pages.

Contents Manager

This program allows you to access all of your pictures, sound clips, and video clips stored in your phone's directory or on a memory card.

To open Contents Manager:

On the Home screen, press the **Start** soft key and then the **More** soft key, and select **Contents Manager**. The file folders display.

Viewing a picture

1. From the file folder list, select **My Pictures**.
2. Select the thumbnail image of the picture you want.
3. Press the Left or Right key to view other pictures.

While viewing a picture, you can use the following options:

- To zoom in or out, press the **Zoom** soft key to switch to Zoom mode, and then press the **+** or **-** soft key.
- To edit the picture, press the **Menu** soft key and select **Edit Image**. You can then access the editing tool options by pressing the **Menu** soft key.
- To set the picture as wallpaper for the Home screen or caller ID image for a contact card, press the **Menu** soft key and select **Set As** → an option.
- To print the picture with a Bluetooth-compatible printer, press the **Menu** soft key and select **Print via Bluetooth**. You must first connect the phone to a printer.

Viewing pictures as a slide show

You can view all of your pictures as a slide show, a sequential presentation of each image in the current album.

Press the **Menu** soft key and select **Play slideshow**. The slide show begins on a full screen.

- To pause or resume the slide show, press .
- To manually scroll through the pictures, press the Left or Right key.
- To stop the slide show and return to the previous screen, press .

Playing a sound or video clip

1. From the file folder list, select **My Sound, Notes, My Videos**. In **Notes**, you can access your voice recordings.
2. Select the thumbnail image of the sound or video clips you want. The file plays in Windows Media.

Searching for a file

You can quickly search for a file by entering its name.

1. From the file folder list, select a folder.
2. Press the **Menu** soft key and select **Search**.
3. Enter the file name and select the file type and location.
4. Press the **Search** soft key. The phone searches the file folders and lists all matching files.
5. Press the **Open** soft key to access the file.

Beaming a file

You can send a file to another phone via an active Bluetooth connection.

Open a folder, if necessary, and scroll to the file you want. Press the **Menu** soft key and select **Send** → **via Bluetooth**. For details, see page 145.

Copying or moving a file

1. From the file folder list, open the folder you want and scroll to the file you want.
2. Press the **Menu** soft key and select **Edit** → **Copy/Move**.
3. Select the folder to which you want to copy or move the file.

Deleting a file

1. From the file folder list, open the folder you want and scroll to the file you want.
2. Press the **Menu** soft key and select **Delete**.
3. Press the **Yes** soft key to confirm the deletion.

Customising Contents Manager settings

From the file folder list, press the **Menu** soft key and select **Options** to access the following options:

- **View by**: allows you to select a sort category or view mode of folders.
- **SlideShow**: allows you to set up properties of a slide show.

- **Shortcuts:** shows shortcut keys available in Contents Manager.
- **About:** shows copyright information.

Extra programs

Games

Your phone includes fun games, such as Bubble Breaker and Solitaire in Games. You can also download and play new Java games.

To open Games:

On the Home screen, press the **Start** soft key and then the **More** soft key, and select **Games**.

Bubble Breaker

The object of Bubble Breaker is to clear out all the balls. The rule is that you may only clear out adjacent same-coloured balls. The score depends on clear out every balls.

Playing a game

1. On the Start screen, select **Bubble Breaker**.
2. Navigate to the ball you want to clear and press .
- The group will be outline, and the score for that selection will be shown.
3. Press  to accept that selection. The selected balls are cleared out.

Press the **Menu** soft key and select **Statistics** to view statistics or information about the game.

You can customise the game options such as play sounds, game style, or ball colour by pressing the **Menu** soft key and selecting **Options**.

Solitaire

The object of Solitaire is to use all the cards in the deck to build up the four suit stacks in ascending order, beginning with aces.

Playing a game

1. On the Start screen, select **Solitaire**.
2. Move any aces on the seven stacks to the four card spaces at the top of the screen and then make any other available plays.

To move cards, press the number or character of the card to move and then press the number or character of the stack to which you want to move the card.

Note: Pressing the Up key moves a card to one of the four stacks in the upper right corner of the screen if it belongs there.

3. When you have made all available plays, press the **Draw** soft key to turn over cards.

Calculator

The calculator allows you to perform general mathematical functions, such as addition, subtraction, multiplication, and division.

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Accessories** → **Calculator**.
3. Enter the numbers and operations (+, -, /, or x).
4. To execute the calculation, press .

Smart Converter

In Smart Converter, you can perform unit conversions.

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Accessories** → **Smart Converter**.
3. Select a converter type.
4. Select an original unit and enter the value to be converted in the upper unit field.

Press  to add a decimal point. Your phone only can display up to 15 digits after the decimal point.

In the temperature converter, press  to change the temperature to below or above zero.

5. Select a target unit from the lower unit field. The equivalent value appears.

Notes:

- To reverse the unit fields for continuous conversions, press the **Menu** soft key and select **Reverse**.
 - For the currency converter, you may need to change currency rates. Press the **Menu** soft key and **View rates**.
-

Stopwatch

You can measure elapsed time interval.

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Accessories** → **Stopwatch**.
3. Press the **Start** soft key to start the timer.
4. Press the **Record** soft key to check an interval.
You can do this step for a total of 99 intervals.
5. Press the **Stop** soft key to stop the stopwatch.

Voice Assist

Voice Assist is a speech recognition program that enables you to launch programs or dial contacts by speaking an associated command into the microphone.

Voice tips

- Speak clearly, naturally, and continuously.
- If you are in a very noisy environment, use the headset. If you are not using the headset, address the internal microphone at the bottom of the phone at a distance of about 10 to 20 cm from your mouth.
- Speak when Voice Assist is ready to listen, as indicated by the progress bar and after an audible beep.
- If Voice Assist does not clearly hear what you said, try repeating your voice command. If problems persist, try the Sensitivity setting to optimise the speech engine for your voice.

Using Voice Assist functions

On the Home screen, press the **Start** soft key and then the **More** soft key, and select **Voice Assist**.

Dialling a number

You can make a phone call by saying the name that has been assigned to a contact in the phone's memory or the SIM card.

Note: To use the Name Dial feature, the name that you want to dial must be in the phone's memory or the SIM card.

1. On the Voice Assist screen, after a voice prompt followed by a short beep, say "Name Dial".
2. On the Name Dial screen, after a voice prompt followed by a short beep, say a name in the following manner: "<First Name + Last Name>"

If Voice Assist does not hear anything until the progress bar moves to the end, you will be asked to repeat the command up to 3 times.

Note: You can say "Call" and then a person's name stored in the phone's memory or on the SIM card.

Your phone recognises your command and displays a list of one or more names on the confirmation screen.

3. Say "Next" until you hear the name you want or scroll to the one you want, and press the **Ok** soft key.
4. Say "Next" until you hear the number you want or scroll to the one you want, and press the **Ok** soft key. The phone dials the currently selected number.

Searching for contacts

You can retrieve contact information for any name in the phone's memory or the SIM card by saying that name. Your phone displays the information.

1. On the Voice Assist screen, after a voice prompt followed by a short beep, say "Name Search".
2. On the Name Search screen, after a voice prompt followed by a short beep, say a name in the following manner: "<First Name + Last Name>"

3. Say "Next" until you hear confirms the name you want or scroll to the one you want, and press the **Ok** soft key.

Your phone recognises your command and displays a list of one or more names in the confirmation screen.

Opening programs by voice

You can use your voice to launch programs that exist in **Start** menu.

1. On the Voice Assist screen, after a voice prompt followed by a short beep, say a program name in the following manner: "Open <Program>".
2. Say "Next" until you hear confirms the program you want or scroll to the one you want, and press the **Ok** soft key.

Your phone recognises your command and displays a list of one or more programs in the confirmation screen.

Customising the Voice Assist settings

You can customise the various settings for using Voice Assist by pressing the **Settings** soft key on the Voice Assist screen.

- **Timeout:** Adjust the maximum time limit for the phone to wait for your commands.
- **Voice Guides:** Select for more comprehensive voice prompts and responses.
- **Quick Launch:** Select to skip the confirmation.
- **Sensitivity:** Adjust the sensitivity in which your phone distinguishes the current voice and noise. Change the setting if your phone has difficulty recognising your voice.

Picsel Viewer

Picsel Viewer allows you to view documents on your phone without any file-conversion or loss of content.

To view a document, you must transfer documents from a PC. If you have installed the memory card, you can view the files stored in it.

By default, Picsel Viewer supports the most common desktop document formats, such as .doc, .xls, .ppt, .pdf, and .wmf.

Note: Some document formats, such as .xls and .ppt, are not transformed into their corresponding file types when you copy them to your phone by using ActiveSync, so that you cannot view the documents in the directory. To avoid this case, change the conversion setting on the ActiveSync screen on your computer.

To open Picsel Viewer:

On the Home screen, press the **Start** soft key and then the **More** soft key, and select **Picsel Viewer**.

Viewing a document

When you open Picsel Viewer, the file directory of the phone displays.

1. Select the folder containing the document you want.

If you have installed a memory card, **Storage Card** appears to allow you to access files on the memory card.

To go back to the upper level directory, select .

2. Select the document you want to open.

Adobe PDF: , Microsoft Word: , Microsoft Power Point: , Microsoft Excel: , Plain Text: , JPEG/BMP/GIF/PNG: 

Using options in a document view

From a document view, you can use the number keypad to quickly perform an option. These are the keys you can use and options assigned to each key.

- **Switching view mode:** To switch between Panning and Zooming mode, press .
- **Panning:** To pan to a different part of the document, press the Navigation keys to move to the direction you want in Panning mode. You can also press , , , or , respectively.
- **Zooming:** To zoom in or out, press the Navigation keys in Zooming mode.
- **Fitting to width:** To fit the width of the page on screen, press the **Menu** soft key and select **Page** → **Fit to width**. You can also press .
- **Navigating:** To navigate the pages, press the **Menu** soft key and select **Page** → **Next Page**, **Previous Page**, **First Page**, or **Last Page**. You can also press , , , or , respectively.
- **Rotating:** To rotate the screen 90 degrees clockwise, press the **Menu** soft key and select **Page** → **Rotate**. You can also press .

Viewing History

The history view shows you previously visited documents as a small thumbnail-image of the document, and the document's name, location, and the date of your visiting.

To open the history view, press the **Menu** soft key and select **History**.

To access any of the documents from the history view, select the thumbnail of that page.

Viewing the Favourites list

For your favourite documents, you can keep a list in Favourites. This looks similar to the history view but includes only those pages you have explicitly added. Before viewing the Favourites list, first you must add the pages to the Favourites list.

To add the current page to the Favourites list:

1. Press the **Menu** soft key and select **Favourites** to access the Favourites list.
2. Press the **Add/Delete** soft key and select **Add**.
3. Enter the name you want and press the **OK** soft key.

To open a favourite page:

Access the Favourites list and select the thumbnail of the page you want.

Changing Picsel Viewer settings

On the Picsel Viewer screen, press the **Menu** soft key and select **Settings**. The following options are available:

- **Preferences:** Set the period after which the thumbnail pictures and descriptions of pages are removed from the history memory. To clear the history list, select **Clear History**.
- **Files:** Select the file types which can be displayed on the Picsel Viewer screen. Select **All** to select all file formats.
- **Help:** Access the Help screen for using Picsel Viewer.
- **About:** Access information about the developers of Picsel Viewer.



Download Agent

In Download Agent, you can update your phone's OS images.

To update OS images:

1. On the Home screen, press the **Start** soft key and then the **More** soft key.
2. Select **Accessories** → **Download Agent**.
3. Scroll to the image package file and press the **Install** soft key.

File Explorer

The File Explorer program allows you to open an explorer window similar to a desktop Windows based system. The explorer window allows you to navigate through your phone to locate the desired folders and files.

You can also quickly manage, delete, copy, or edit any files and folders on your phone.

Note: If you turn off the phone after storing some files in any folders, except for the Storage folder, using ActiveSync, all of the files in those folders will be deleted. Store important files in the Storage folder to prevent them from being deleted.

Accessing files

1. On the Home screen, press the **Start** soft key and then the **More** soft key, and select **File Explorer**.

The list of the folders in the phone's memory displays.

2. Scroll to the folder that you want to view.
3. Select an item to open it.

Using file management options

From the file directory, press the **Menu** soft key to access the following options:

- **Send:** Send a file as part of an MMS or e-mail message.
- **Beam:** Send a file via Bluetooth.
- **Edit:** Access file editing options, such as **Cut**, **Copy**, **Paste**, and **Delete**.

- **Properties:** Access the file or folder properties.
- **View:** Change the view mode of File Manager.
- **Sort By:** Change the sort order of the File Manager.
- **My Device:** Access the file directory of your phone.
- **My Documents:** Access the **My Documents** folder.

Task Manager

Your phone is a multi-tasking device. It can run more than one program at the same time. However, multi-tasking may cause hang-ups, freezing, memory problems, and additional power consumption. To avoid these problems, end unnecessary programs using Task Manager.

To open Task Manager:

On the Home screen, press and hold . You can also press the **Start** soft key and then the **More** soft key, and select **Utilities** → **Task Manager**. The list of all the programs currently running on your phone appears.

Managing running programs

- To activate a program, press the **Menu** soft key and select **Activate**.
- To close a program, press the **Stop** soft key. To close all programs, press the **Menu** soft key and select **Stop All**.
- To refresh the program list, press the **Menu** soft key and select **Refresh**.

Checking the battery status

You can check the remaining battery power level. Press the **Menu** soft key and select **Battery**.

Checking the storage memory

You can check the memory in use for storing files and running programs in your phone or on a memory card. On the Task Manager screen, press the **Menu** soft key and select **Storage**.

Getting connected

You can use your phone to exchange information with other mobile devices as well as your desktop computer, a network, or the Internet. You have the following connection options:

- Exchange information between devices with Bluetooth capabilities without a physical connection.
- Connect the phone to your computer using a USB connection to use the phone as a modem, data sync device or external memory disk.
- Connect to your Internet service provider (ISP) or the network at your company. Once connected, you can send or receive e-mail and instant messages, and browse the Internet or intranet.



Beaming with Bluetooth

Bluetooth is a short-range wireless communications technology. Devices with Bluetooth capabilities can exchange data over a distance of about 10 metres without requiring a physical connection.

You do not need to line up the phone with another device to beam information with Bluetooth.

Activating Bluetooth mode

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Connections** → **Bluetooth**.
3. Check boxes to activate the Bluetooth feature and allow other devices to detect your phone.
4. Press the **Done** soft key.

Setting Bluetooth profiles

You can change the settings for each Bluetooth profile available on your phone.

On the Home screen, press the **Start** soft key, and select **Settings** → **More...** → **Connections** → **Bluetooth Profiles**. The following options are available:

- **Headset Setting**: Change the settings for a profile for connecting to a Bluetooth headset.
- **BPP Setting**: Change the settings for a profile for connecting to a Bluetooth printer.
- **OBEX Setting**: Change the settings for a profile for connecting to a Bluetooth file server.
- **My Information**: Set the display name for your phone and check the phone's address.

Searching for and pairing with a Bluetooth device

1. On the Bluetooth screen, press the **Menu** soft key and select **Devices**.
2. To search for a new device, select **Add new device...**
3. Wait for the phone to search for Bluetooth devices.
4. Select a device to connect to the phone.
5. Enter a Bluetooth password and press the **Next** soft key. This password is used just once and you do not need to memorise it.

When the owner of the other device enters the same password, pairing is finished.

Note: Some devices, especially headsets or hands-free car kits, may have a fixed Bluetooth PIN, such as **0000**. If the other device has one, you must enter the code.

6. Enter a display name for the other device and press the **Next** soft key.
7. Check the available services and press the **Done** soft key.

Using the device options

When you press the **Menu** soft key from the device list, you can access the following options:

- **Add new device:** allows you to search for any devices.
- **Edit:** allows you to change the name of the connectable device.
- **Delete:** allows you to delete the device.

Receiving data with Bluetooth

1. When a notification that a remote device is trying to connect to your phone, press the Bluetooth password entered from the device and press the **Done** soft key.
2. When prompted to receive an incoming data, press the **Yes** soft key.

Sending data with Bluetooth

1. Locate the item you want to send in a program, such as **Calendar**, **Contacts**, **Contents Manager**, or **File Explorer**.

2. Scroll to the item.
3. Press the **Menu** soft key and a Bluetooth sending option, depending on the application you accessed.
4. Search for and pair with the device by following from step 2 on page 144.

The phone searches for devices within range and displays a list of available devices.
5. Select the device you want to start sending data.
6. Press the **OK** soft key when sending has been complete.

Connecting to an FTP server

You can connect your phone to a file server, which can be a mobile phone or computer, and exchange files with the server.

1. From the Home screen, press the Start soft key and then the **More** soft key.
2. Select **Utilities** → **OBEX FTP**.
3. Press the **Menu** soft key and select **Connect**.

The phone searches for available devices and shows the results.
4. Select the device you want.
5. Enter a Bluetooth password and press the **Next** soft key.
6. When your phone is connected to the server, copy files to and from the server.

Connecting to a computer via USB

You can select how the phone functions when connected to a computer via the USB port.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Connections** → **More...** → **USB**.
3. Select one of the following functions for USB connections:
 - **Mass Storage**: The phone is perceived as an external memory device.
 - **ActiveSync**: The phone communicates with a computer via ActiveSync.
4. Press the **Done** soft key.

Internet Sharing

Using Internet Sharing, you can set your phone to be used as an external modem for another device or computer when connected via the USB port or Bluetooth.

Note: If you have an active GPRS connection, for example a WAP connection, you must first terminate the connection before attempting Internet access via Internet Sharing.

1. For a USB connection, plug the PC data cable into the phone and the USB port on your computer.
2. On the Home screen, press the **Start** soft key and then the **More** soft key twice.
3. Select **Internet Sharing**.

4. If you access this program for the first time, press the **OK** soft key.
5. Select the PC connection and network connection types.
6. Press the **Connect** soft key to activate Internet Sharing.
7. For the first Bluetooth connection, press the **Yes** soft key, and then connect the phone via Bluetooth from the computer.

Notes:

- When Internet Sharing is activated, you cannot use ActiveSync.
 - When Windows Service Pack 2 is used, Internet access using Internet Sharing is more stable.
-

Connecting to the Internet or your network

You can use the **Connections** settings to create dial-up, Virtual Private Network (VPN), GPRS, and proxy connections so that you can connect to the Internet or your corporate network. By using a data connection, you can browse the Internet, download e-mails, chat by using MSN[®] Messenger, or synchronise remotely with an Exchange Server. Check with your service provider to see if a data connection has already been set up for you, and if over-the-air configuration is supported.

Creating a dial-up connection

You can create a dial-up connection to connect remotely to the Internet, a Wireless Application Protocol (WAP)

network, or your corporate network. Then, when you open a program that is configured to use this connection, the phone uses it to automatically connect to the network.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Connections** → **Dial-up**.
3. Press the **Menu** soft key and select **Add**.
4. Enter the requested information.
 - **Description:** Enter a name for the connection.
 - **Connects to:** Select a type of network for which the connection will be used.
 - **Phone number:** Enter the dial-up number you use to connect to the network.
 - **User name:** Enter your network user name.
 - **Password:** Enter your password.
 - **Domain:** Enter the domain name, if required.

Note: If you are not sure about the information to enter, ask your service provider.

5. When you have finished, press the **Done** soft key.

Creating a GPRS connection

If you subscribe to General Packet Radio Services (GPRS), you can set up a GPRS connection to gain access to your corporate network or the Internet. This is faster than a dial-up connection.

You can also use your phone as a GPRS modem for a desktop computer.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Connections** → **GPRS**.
3. Press the **Menu** soft key and select **Add**.
4. Enter the requested information.
 - **Description:** Enter a name for the connection.
 - **Connects to:** Select a network type for which the connection will be used.
 - **Access point:** Enter the information provided by your system administrator.
 - **User name:** Enter your user name for the GPRS network.
 - **Password:** Enter your password.
 - **Primary DNS:** Enter the primary domain naming system (DNS) address.
 - **Secondary DNS:** Enter the secondary DNS address.
 - **IP address:** Enter the Internet Protocol (IP) address.

Note: If you are not sure about the information to enter, ask your network administrator.

5. When you have finished, press the **Done** soft key.

Creating a proxy connection

You can use a proxy connection to gain access to the Internet over an existing connection to your corporate network.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Connections** → **More...** → **Proxy**.
3. Press the **Menu** soft key and select **Add**.
4. Enter the requested information.
 - **Description**: Enter a name for the connection.
 - **Connects from**: Select the type of network from which you will connect.
 - **Connects to**: Select the type of network to which you will connect.
 - **Proxy (name:port)**: Enter the proxy server name and port number in the form.
 - **Type**: Select a network type for which the proxy connection will be used.
 - **User name**: Enter your user name for the network to which you will connect.
 - **Password**: Enter your password.

Note: If you are not sure about the information to enter, ask your service provider.

5. When you have finished, press the **Done** soft key.

Creating a VPN connection

If your company has set up a virtual private network (VPN), you can create a VPN connection to gain access to your corporate network over an Internet connection.

1. On the Home screen, press the **Start** soft key.
2. Select **Settings** → **More...** → **Connections** → **More...** → **VPN**.
3. Press the **Menu** soft key and select **Add**.
4. Enter the requested information.
 - **Description:** Enter a name for the connection.
 - **VPN type:** Select the type of VPN.
 - **Server:** Enter the VPN server name.
 - **Connects from:** Select the type of network from which you will connect to VPN (typically **The Internet**).
 - **Connects to:** Select the type of network to which you will connect (typically **Work**).
 - **User name:** Enter your user name for the VPN.
 - **Password:** Enter your password.
 - **Domain:** Enter the domain name, if required.
 - **IPSec authentication:** If you selected **IPSec/L2TP** for **VPN type**, select the type of authentication.
 - **IPSec Pre-shared key:** If you selected **Pre-Shared Key** for IPSec authentication, enter the shared key.

Note: If you are not sure about the information to enter, ask your network administrator.

5. When you have finished, press the **Done** soft key.

Setting up data connections

After creating connection profiles, you can assign a profile to each network type.

1. On the Connections screen, press the **Menu** soft key and select **Advanced**.
2. Select a connection profile in each network.
3. Press the **Done** soft key.

Adding a URL exception

Some URL addresses for web pages on your company intranet may use periods, for example: intranet.companyname.com. To view these pages in Internet Explorer, you must create a URL exception.

Note: You do not need to create URL exceptions for Internet URL addresses.

1. On the Connections screen, press the **Menu** soft key and select **Advanced**.
2. Press the **Menu** soft key and select **Work URL Exceptions**.
3. Press the **Menu** soft key and select **Add**.
4. Enter the URL pattern and press the **Done** soft key. Separate multiple URL patterns with a semicolon.

Changing the data connection options

On the Advanced screen, press the **Menu** soft key and select **Options** to access the following options:

- **Redial attempts:** Select the redial attempt to connect the Internet or your network after an unsuccessful connection.
- **Idle disconnect after:** Select the length of time your phone waits for connecting to the Internet or your network after the specified period, your phone will disconnect from the Internet or your network.
- **My desktop connects to:** Select the type of network to which your desktop computer will connect.

Troubleshooting

■ ■ General problems

Problem	Description & Solution
"Invalid or missing SIM card. You can still make emergency calls if your service provider supports it" displays	Check that the SIM card has been correctly installed.
"No network coverage," "Error unable to connect. No network coverage." or "Message sending failed" displays	• The network connection has been 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.
The bars next to  disappear	• If you have just turned on your phone, wait for about 2 minutes, until your phone finds the network and receives a signal from the network. • If you are in a tunnel or in an elevator, the phone may not be able to receive the network signal properly. Move to an open place. • This may appear when you move between different service areas. It is normal.
The display is not clear	In direct sunlight, you may not be able to see the display clearly. Moving to a place with different lighting should solve this problem.

Problem	Description & Solution
White lines appear on the display	This may happen if you turn on the phone after a long period of disuse, or after removing the battery without turning off the phone. This is not related to the phone's life or performance. The display should correct itself shortly.
"PIN code" appears	• You are using your phone for the first time. You must enter the Personal Identification Number (PIN) supplied with the SIM card. • The PIN check feature has been enabled. Each time the phone is switched on, the PIN has to be entered. To disable this feature, press the Start soft key, select Settings → More... → Security → Disable SIM PIN, and enter the PIN.
"PUK Required" appears	The PIN code was entered incorrectly three times in succession and the SIM card is now blocked. Enter the PUK supplied by your service provider.
I forgot the password, PIN, reset password, or PUK codes	If you forget or lose the phone password, contact your phone dealer. If you forget or lose a PIN or PUK code, or if you have not received such a code, contact your network provider. For information about passwords, contact your access point provider, for example, a commercial Internet Service Provider (ISP), service provider, or network operator.

Call problems

Problem	Description & Solution
I have entered a number but it was not dialed	• Be sure that you have pressed . • Check if your wireless connection to your mobile service provider is switched on and the signal from the network is unobstructed. • You may have set an outgoing call barring option.
My correspondent cannot reach me	• Be sure that your phone is switched on ( pressed for more than one second) • Check if your wireless connection to your mobile service provider is switched on and the signal from the network is unobstructed. • You may have set an incoming call barring option.
My correspondent cannot hear me speaking	• Be sure that you have switched on the microphone. • Make sure that the phone is close enough to your mouth. The microphone is located at the bottom of the phone.
The audio quality of the call is poor	• Adjust the voice volume by pressing /. • Check the signal strength indicator on the display (); the number of bars indicates the signal strength, from strong to weak. • Try moving the phone slightly or moving closer to a window if you are in a building.

Problem	Description & Solution
Calls to and from the phone are not connected properly, and are easily disconnected	• Signals from the network are weak. Move to another area. • Touching the antenna area on the top of the phone may lower the call quality. Be careful not to touch the antenna area while using the phone.

Power and charging problems

Problem	Description & Solution
The phone malfunctions or does not function	Remove the battery and then replace it. Turn on the phone. If the problem persists, contact a Samsung service representative.
The battery's standby time is shorter than expected	• Batteries are subject to wear and tear. Standby time may grow shorter as time passes. • Leaving a fully charged battery in a cold or hot place for a long period of time may reduce battery life. • Standby time depends on where you use the phone. The actual time may vary from the battery's specifications.
Is it OK if I leave the phone connected to the power outlet after it is fully charged	We recommend that you disconnect the phone from the adapter or unplug the adapter from the power outlet.

Problem	Description & Solution
The phone becomes hot	This may happen when you are on the phone or when you use programs, such as games, the Internet, or the camera, because the phone needs more power at those times. This does not affect the phone's life or performance.
The battery level seem sufficient, but the phone does not turn on	• Remove the battery from the phone and reinstall it. Then turn on the phone. • Clean the metal contacts both on the battery and on the phone. Reinstall the battery and turn on the phone.
The phone turns off when the adapter is connected	Dust on the contacts may cause unexpected power-off or charging problems. Clean the metal contacts both on the battery and on the phone.

Program problems

Problem	Description & Solution
"Not enough memory to perform operation. Delete some data first." or "Memory low. Delete some data." displays	To view what kind of data you have and how much memory the different data groups consume, press the Start soft key and then the More soft key, and select Utilities → Task Manager . Press the Menu soft key and select Battery . Delete old items from programs. If necessary, make a backup copy of your data using ActiveSync or the memory card.

Problem	Description & Solution
WAP Browser	
"Unable to connect. Verify your Dial-up or proxy settings, and try again." displays	Insert proper browser settings. Contact your service provider for instructions.
Internet Explorer	
"Your Internet connection is not configured properly. Please verify your settings in Data Connections." displays	Insert proper browser settings. Contact your service provider for instructions.
The phone is unable to connect to the Internet	• Check if you have set up and are connected to an Internet service provider. • Check if your wireless connection to your mobile service provider is switched on and the signal from the GPRS network is not obstructed. • Verify with your service provider that your user name and password are correct. • Verify with your Internet service provider that the network you are trying to connect is available, or try to connect it from another PC.

Problem	Description & Solution
Camera	
Images seem smudged	Check if the camera lens protection window is clean.
Contacts	
No number is dialled when you recall a contact card	• Check if a number has been stored in the contact card. • Re-store the number, if necessary.
Bluetooth	
I cannot end a Bluetooth connection	If another device is connected to your phone, you can end the connection by deactivating Bluetooth. Go to Bluetooth and deselect Turn on Bluetooth .
I cannot find my friend's Bluetooth-enabled device	• Be sure that both have activated Bluetooth. • Be sure that the distance between the two devices is not over 10 metres or that there are no walls or other obstructions between the devices. • Be sure that the other device is in the discoverable mode. • Be sure that both devices are compatible.
I cannot discover the remote Bluetooth stereo headset	• Be sure that the Bluetooth functionality on the phone is turned on. • Be sure that the remote Bluetooth stereo headset is in the discoverable mode. • Be sure that the remote Bluetooth device has the capability to act as a stereo headset.

Problem	Description & Solution
I cannot connect to the remote Bluetooth stereo headset	Ensure that the correct passkey was entered on the phone during the connection with the headset. Most Bluetooth headsets have a fixed passkey that would be mentioned in their user's guide. You would need to enter the passkey when establishing a connection with the headset.
I cannot listen to music on the remote Bluetooth stereo headset	• Ensure that you are connected to the Bluetooth stereo headset. • Ensure that the song that you are playing is one of the supported formats. • Check the battery levels on the Bluetooth stereo headset. • Ensure that the phone and headset are within range of each other. The maximum distance between the two should not be more than 10 metres.
There are breaks in the music being played on the remote Bluetooth stereo headset	You may observe breaks if there are walls that separate the phone and the Bluetooth stereo headset.
Call History	
The call history appears empty	You may have activated a filter, and no communication events fitting that filter have been logged. To see all events, press the Start soft key and select Call History . Press the Menu soft key and select Filter → No Filter .

Problem	Description & Solution
Messaging	
I cannot select a contact card when creating a message	If the contact card does not have a phone number or e-mail address, you cannot select it. Add the missing information to the contact card in Contacts .
PC connectivity	
Problems occur when connecting the phone to a PC	Make sure that ActiveSync is installed and running on your PC. See the user's guide for ActiveSync on the CD-ROM. For further information on ActiveSync, see the help function on ActiveSync or visit www.microsoft.com .

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

- the model and serial numbers of your phone
- your warranty details
- a clear description of the problem

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

Regulatory notices

■ ■ Exposure to radio frequency(RF) signals

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

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

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

and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

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

For body operation

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

The minimum distance for this model phone is written in the FCC certification information from the body. 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.ctia.org>
U.S. Food and Drug

Administration (FDA)<http://www.fda.gov/cdrh/consumer>
World Health Organization (WHO)<http://www.who.int/peh-emf/en>

Precautions when using batteries

- Never use any charger or battery that is damaged in any way.
- Use the battery only for its intended purpose.
- If you use the phone near the network's base station, it uses less power; talk and standby time are greatly affected by the signal strength on the cellular network and the parameters set by the network operator.
- Battery charging time depends on the remaining battery charge and the type of battery and charger used. The battery can be charged and discharged hundreds of times, but it will gradually wear out. When the operation time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.
- If left unused, a fully charged battery will discharge itself over time.
- Use only Samsung-approved batteries and recharge your battery only with Samsung-approved chargers. When a charger is not in use, disconnect it from the power source. Do not leave the battery connected to a charger for more than a week, since overcharging may shorten its life.
- Extreme temperatures will affect the charging capacity of your battery: it may require cooling or warming first.

- Do not leave the battery in hot or cold places, such as in a car in summer or winter conditions, as you will reduce the capacity and lifetime of the battery. Always try to keep the battery at room temperature. A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Li-ion batteries are particularly affected by temperatures below 0°C (32°F).
- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes a direct connection between the + and - terminals of the battery (metal strips on the battery), for example when you carry a spare battery in a pocket or bag. Short-circuiting the terminals may damage the battery or the object causing the short-circuiting.
- Dispose of used batteries in accordance with local regulations. Always recycle. Do not dispose of batteries in a fire.

Road safety

Your wireless phone gives you the powerful ability to communicate by voice, almost anywhere, anytime. But an important responsibility accompanies the benefits of wireless phones, one that every user must uphold.

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

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

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

2. When available, use a hands-free device. If possible, add an extra layer of convenience and safety to your wireless phone with one of the many hands-free accessories available today.

3. Position your wireless phone within easy reach. Be able to access your wireless phone without removing your eyes from the road. If you get an incoming call at an inconvenient time, let your voicemail answer it for you.

4. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow, ice and even heavy traffic can be hazardous.

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

6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary. If you need to make a call while moving, dial only a few numbers, check the road and your mirrors, then continue.

7. Do not engage in stressful or emotional conversations that may be distracting. Make the people with whom you are talking aware that you are driving and suspend conversations that have the potential to divert your attention from the road.

8. Use your wireless phone to call for help. Dial the emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!

9. Use your wireless phone to help others in emergencies. If you see a car accident, crime in progress or other serious emergency where lives are in danger, call the emergency number, as you would want others to do for you.

10. Call roadside assistance or a special nonemergency wireless assistance number when necessary. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured, or a vehicle you know to be stolen, call roadside assistance or any other special nonemergency wireless number.



Operating environment

Remember to follow any special regulations in force in any area and always switch off your phone whenever it is forbidden to use it, or when it may cause interference or danger.

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

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

Electronic devices

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

Pacemakers

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

Persons with pacemakers:

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

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

Hearing aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may wish to consult your hearing aid manufacturer to discuss alternatives. Other Medical Devices If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist

you in obtaining this information. Switch off your phone in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

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

Posted facilities

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

Potentially explosive environments

Switch off your phone when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Users are advised to switch off the phone while at a refueling point (service station).

Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas

where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Emergency calls

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

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

To make an emergency call:

1. If the phone is not on, switch it on.
2. Key in the emergency number for your present location (for example, 112 or any other official emergency number). Emergency numbers vary by location.
3. Press . If certain features are in use (call barring, for example), you may first need to deactivate those features before you can make an emergency call. Consult this document and your local cellular service provider.

When making an emergency call, remember to give all the necessary information as accurately as possible.

Remember that your phone may be the only means of communication at the scene of an accident; do not end the call until given permission to do so.

FCC Notice and Cautions

FCC Notice

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Battery march Park, Quincy, MA 02269, Attn: Publication Sales Division.

Cautions

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

Only use approved batteries, antennas and chargers. The use of any unauthorized accessories may be dangerous and void the phone warranty if said accessories cause damage or a defect to the phone.

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



Other important safety information

- Only qualified personnel should service the phone or install the phone in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless phone equipment in your vehicle is mounted and operating properly.

- Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the phone, its parts, or accessories.
- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch off your phone before boarding an aircraft. The use of wireless phones in aircraft may be dangerous to the operation of the aircraft, and is illegal.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.

Care and maintenance

Your phone is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfill any warranty obligations and allow you to enjoy this product for many years.

- Keep your phone and all its parts and accessories out of the reach of small children and pets. They may accidentally damage these things or choke on small parts.
- Keep the phone dry. Precipitation, humidity, and liquids contain minerals that will corrode electronic circuits.
- Do not use the phone with a wet hand. Doing so may cause an electric shock to you or damage to the phone.

- Do not use or store the phone in dusty, dirty areas, as its moving parts may be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When the phone warms up to its normal operating temperature, moisture can form inside the phone, which may damage the phone's electronic circuit boards.
- Do not drop, knock, or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone. Wipe it with a soft cloth slightly dampened in a mild soap-and-water solution.
- Do not paint the phone. Paint can clog the device's moving parts and prevent proper operation.
- Do not put the phone in or on heating devices, such as a microwave oven, a stove, or a radiator. The phone may explode when overheated.
- When the phone or battery gets wet, the label indicating water damage inside the phone changes colour. In this case, phone repairs are no longer guaranteed by the manufacturer's warranty, even if the warranty for your phone has not expired.
- If your phone has a flash or light, do not use it too close to the eyes of people or animals. This may cause damage to their eyes.
- Use only the supplied or an approved replacement antenna. Unauthorized antennas or modified accessories may damage the phone and violate regulations governing radio devices.

- If the phone, battery, charger, or any accessory is not working properly, take it to your nearest qualified service facility. The personnel there will assist you, and if necessary, arrange for service.

Acknowledging special precautions and the FCC and Industry Canada Notice

Cautions

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

FCC compliance information

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- 1.This device may not cause harmful interference, and
- 2.This device must accept any interference received, including interference that may cause undesired operation.

Information to user

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Appendix A: CERTIFICATION INFORMATION (SAR)

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

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

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

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate (SAR). The SAR limit set by the FCC is 1.6 W/kg. SAR Tests are conducted using standard operating positions accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

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

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

GSM850 Head: 0.945 W/kg, Body-worn: 1.41 W/kg;
GSM1900 Head: 0.317 W/kg, Body-worn: 0.299 W/kg.

WCDMA850 Head: 0.729 W/kg, Body-worn: 0.696 W/kg;
WCDMA1900 Head: 0.773 W/kg, Body-worn: 0.361 W/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 A3LSGHI607.

Appendix B: Guide to safe and responsible wireless phone use

Cellular Telecommunications & Internet Association

"Safety is the most important call you will ever make."

A guide to safe and responsible wireless phone use

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

But an important responsibility accompanies those benefits, one that every wireless phone user must uphold.

When driving a car, driving is your first responsibility. A wireless phone can be an invaluable tool, but good judgment must be exercised at all times while driving a motor vehicle whether on the phone or not.

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

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

Wireless phone “safety tips”

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

1. Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.

2. When available, use a hands free device. A number of hands free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.

3. Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voicemail answer it for you.

4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.

5. Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to do" list while driving a car, you are not watching where you are going. It's common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.

6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip-dial only a few numbers, check the road and your mirrors, then continue.

7. Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix-they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.

8. Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations-with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!

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

10. Call roadside assistance or a special wireless non emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

Careless, distracted individuals and people driving irresponsibly represent a hazard to everyone on the road. Since 1984, the Cellular Telecommunications Industry Association and the wireless industry have conducted educational outreach to inform wireless phone users of their responsibilities as safe drivers and good citizens. As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones. And, as we take to the roads, we all have a responsibility to drive safely.

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

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



Appendix C: Consumer update on wireless phones

U.S. Food and Drug Administration

1. What kinds of phones are the subject of this update?

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

developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless phones," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures well within the FCC's compliance limits.

2. Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radio frequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

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

Under the law, FDA does not review the safety of radiation emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take

action if wireless phones are shown to emit radio frequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;
- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency Federal Communications Commission
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration
- The National Institutes of Health participates in some interagency working group activities, as well.

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

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

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.

4. 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.

5. 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.

6. 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.

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

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

8. What about wireless phone interference with medical equipment?

Radio frequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other

groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI.

FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a compatible phone and a compatible hearing aid at the same time. This standard was approved by the IEEE in 2000.

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

9. What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radio frequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day.

These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

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

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many

factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

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

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

FCC RF Safety Program:

<http://www.fcc.gov/oet/rfsafety/>

Environmental Protection Agency (EPA):

<http://www.epa.gov/radiation/>

Occupational Safety and Health Administration's (OSHA):

<http://www.osha-slc.gov/SLTC/radiofrequencyradiation/index.html>

National Institute for Occupational Safety and Health (NIOSH):

<http://www.cdc.gov/niosh/topics/emf/>

World health Organization (WHO):

<http://www.who.int/peh-emf/>

International Commission on Non-Ionizing Radiation Protection:

<http://www.icnirp.de>

Health Protection Agency (UK)

<http://www.hpa.org.uk/radiation/>*

*US Food and Drug Administration <http://www.fda.gov/cellphones>