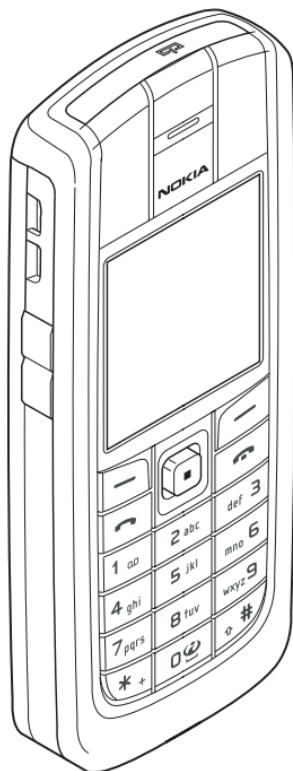


# Nokia 6020b user guide

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EN 9236467

Issue 1

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We, NOKIA CORPORATION declare under our sole responsibility that the product RM-31 is in conformity with the provisions of the following Council Directive: 1999/5/EC.

A copy of the Declaration of Conformity can be found from  
[http://www.nokia.com/phones/declaration\\_of\\_conformity/](http://www.nokia.com/phones/declaration_of_conformity/).

# CE 168

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Manufactured or sold under one or more following US Patents.  
Asterisk (\*) indicates design patents pending.

RE32,580	4558302	4868846	4945633	4969192	5001372
5101175	5151946	5173927	5212834	5230091	5241583
5311151	5317283	5331638	5335362	5353328	5371481
5378935	5384782	5396657	5400949	5416435	5442521
5446364	5479476	5526366	5553125	5557639	5565821
5570369	5581244	5600708	5625274	5677620	5692032
5729541	5760568	5794142	5802465	5809413	5818437
5827082	5839101	5844884	5845219	5870683	5884103
5889770	5907823	5912570	5914690	5914796	5917868
5920826	5953541	5956332	5956625	5956633	5966378
5977887	5987137	5991857	6006114	6011554	6011853
6014551	6014573	6026161	6035189	6038238	6043760
6047196	6049796	6050415	6055439	6060193	6069923
6072787	6081732	6084920	6084962	6094587	6097964
6105784	6112099	6115617	6119180	6121846	6128509
6138091	6140966	6144243	6144676	6148209	6151485
6151507	6163609	6164547	6167248	6185295	6188909
6249584	6259312	6266330	6272361	6282436	6292668
6295286	6311054	6314166	6324389	6324412	6347218
6363259	6370362	6370389	6377820	6381468	6392660
6400958	6453179	6463278	6470470	6487397	6522670
6198928	4969192	5266782	5390223	5444816	5487084
5640395	5664053	5699482	5701392	5722074	5754976
5805301	5835889	5857151	5859843	5862178	5898925
5930233	5946651	5960354	5960389	5963901	6005857
6011971	6031827	6118775	6128322	6137789	6167248
6285888	6356759	6377803	6430163	6438370	6456237
6170073	6178535	6195338	6199035	6240076	6266321

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# FOR YOUR SAFETY

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Read these simple guidelines. Not following them may be dangerous or illegal.  
Read the complete user guide for further information.



## SWITCH ON SAFELY

Do not switch the phone on when wireless phone use is prohibited or when it may cause interference or danger.



## ROAD SAFETY COMES FIRST

Obey all local laws. Always keep your hands free to operate the vehicle while driving. Your first consideration while driving should be road safety.



## INTERFERENCE

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



## SWITCH OFF IN HOSPITALS

Follow any restrictions. Switch the phone off near medical equipment.



## SWITCH OFF IN AIRCRAFT

Follow any restrictions. Wireless devices can cause interference in aircraft.



## SWITCH OFF WHEN REFUELLED

Don't use the phone at a refuelling point. Don't use near fuel or chemicals.



## SWITCH OFF NEAR BLASTING

Follow any restrictions. Don't use the phone where blasting is in progress.



## USE SENSIBLY

Use only in the normal position as explained in the product documentation. Don't touch the antenna unnecessarily.



## QUALIFIED SERVICE

Only qualified personnel may install or repair this product.



## ENHANCEMENTS AND BATTERIES

Use only approved enhancements and batteries. Do not connect incompatible products.

**WATER-RESISTANCE**

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

**BACK-UP COPIES**

Remember to make back-up copies or keep a written record of all important information stored in your phone.

**CONNECTING TO OTHER DEVICES**

When connecting to any other device, read its user guide for detailed safety instructions. Do not connect incompatible products.

**EMERGENCY CALLS**

Ensure the phone is switched on and in service. Press **■** as many times as needed to clear the display and return to the start screen. Key in the emergency number, then press **■**. Give your location. Do not end the call until given permission to do so.

# General information

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## ■ About your device

The wireless device described in this guide is approved for use on the EGSM 900, GSM 1800 and GSM 1900 network. Contact your service provider for more information about networks.

When using the features in this device, obey all laws and respect privacy and legitimate rights of others.



**Warning:** To use any features in this device, other than the alarm clock, the device must be switched on. Do not switch the device on when wireless device use may cause interference or danger.

Your device and its enhancements may contain small parts. Keep them out of the reach of small children.

For availability of approved enhancements, please check with your dealer. When you disconnect the power cord of any enhancement, grasp and pull the plug, not the cord.

## ■ Overview of the functions of the phone

The Nokia 6020b phone provides many functions that are practical for daily use, such as a calendar, a clock, an alarm clock and a built-in camera. Your phone supports:

- Multimedia messaging, see Multimedia messages (MMS) on page 36.
- Instant messages, see Instant messages (Chat) on page 40.
- Polyphonic sound (MIDI) that consists of several sound components played at the same time. The phone supports Scalable Polyphonic MIDI (SP-MIDI) format.
- E-mail, see E-mail application on page 45.
- *Audible alerts* to check the battery status and the network status via acoustic signals, see Voice commands on page 64.
- Presence-enhanced contacts, see My presence on page 55.

- EDGE (Enhanced Data rates for GSM Evolution), see (E)GPRS on page 68.
- Push to talk, see Push to talk on page 75.
- Java 2 Micro Edition, J2ME™, see Applications on page 89.
- XHTML browser, see Web on page 93.

## Shared memory

The following features in this device may share memory: contacts, text messages, instant messages and SMS e-mail, voice tags, calendar and notes. Use of one or more of these features may reduce the memory available for the remaining features sharing memory. For example, saving many SMS e-mail may use all of the available memory. Your device may display a message that the memory is full when you try to use a shared memory feature. In this case, delete some of the information or entries stored in the shared memory features before continuing. Some of the features, such as contacts, text messages, instant messages and SMS e-mail may have a certain amount of memory specially allotted to them in addition to the memory shared with other features.

## **■ Nokia PC Suite software**

With the Nokia PC Suite software you can, for example, manage the photos captured with the phone's camera and handle ringing tones and wallpapers. Nokia PC Suite is available on Nokia's Web site at [www.nokia.com](http://www.nokia.com).

## **■ Access codes**

### Security code (5 to 10 digits)

The security code helps to protect your phone against unauthorised use. The pre-set code is 12345. Change the code, and keep the new code secret and in a safe place separate from your phone. To change the code, and to set the phone to request the code, see Security settings on page 71.

If you key in an incorrect security code five times in succession, the phone ignores further entries of the code. Wait for 5 minutes and key in the code again.

### **PIN and PIN2 codes (4 to 8 digits), module PIN, and signing PIN**

- The PIN (Personal Identification Number) code, supplied with your SIM card, helps to protect your SIM card against unauthorised use. See Security settings on page 71.
- The PIN2 code may be supplied with the SIM card and is required to access some functions, such as call counters.
- The module PIN is required to access the information in the security module of your SIM card. See Security module on page 98.
- The signing PIN is required for the digital signature. See Digital signature on page 100.

### **PUK and PUK2 codes (8 digits)**

The PUK (Personal Unblocking Key) code is required to change a blocked PIN code. The PUK2 code is required to change a blocked PIN2 code.

### **Barring password (4 digits)**

The barring password is required when using the *Call barring service*. See Security settings on page 71.

### **Wallet code (4 to 10 digits)**

The wallet code is required to access the wallet services. For further information, see Wallet on page 85.



**Note:** If the codes or passwords are not supplied with the SIM card, contact your local service provider.

## ■ Network services

To use the phone you must have service from a wireless service provider. Many of the features in this device depend on features in the wireless network to function. These Network Services may not be available on all networks or you may have to make specific arrangements with your service provider before you can utilize Network Services. Your service provider may need to give you additional instructions for their use and explain what charges will apply. Some networks may have limitations that affect how you can use Network Services. For instance, some networks may not support all language-dependent characters and services.

Your service provider may have requested that certain features be disabled or not activated in your device. If so, they will not appear on your device menu. Your device may also have been specially configured for your network provider. This configuration may include changes in menu names, menu order and icons. Contact your service provider for more information.

This device supports WAP 2.0 protocols (HTTP and SSL) that run on TCP/IP protocols. Some features of this device, such as multimedia messages, e-mail application, instant messages, presence service, Java games and applications and Internet services require network support for these technologies.

## Configuration settings service

To use some of the network services, such as mobile Internet services, MMS, Instant messages, E-Mail application, or Synchronisation, your phone needs the correct configuration settings. You may receive the settings directly as a configuration message and you need to save the settings on your phone. The service provider may provide a PIN that is needed to save the settings. For more information on the availability of the settings, contact your network operator, service provider, nearest authorised Nokia dealer or visit the support area on the Nokia Web site, [www.nokia.com](http://www.nokia.com).

When you have received a configuration message *Configuration settings received* is displayed. To view the received settings, press **Show**.

- To save the received settings, press **Save**. If the phone asks *Enter settings' PIN*, key in the PIN code for the settings and press **OK**. Set these settings as the default or not. For availability of the PIN code, contact the service provider that supplies the settings.
- To discard the received settings, press **Discard**.

To view and edit the settings see Configuration settings on page 70.

## ■ Downloading content and applications

You may be able to download new content (for example images and video clips) and applications into the phone (network service).

1. Select the download function for example in the *Collection* and *Gallery* menus. To access the download function, see the respective menu descriptions.

A list of bookmarks is shown. Select *More bookmarks* if you want to view the bookmarks available in the *Web* menu.

2. Select the bookmark of the browser page that you want to access. If the connection fails, change the active set of connection settings in the *Web* menu and try the connection again. Follow the instructions provided by the service.

For the availability of different services, pricing and tariffs, contact your network operator and/or the service provider.

Your device may have some bookmarks loaded for sites not affiliated with Nokia. Nokia does not warrant or endorse these sites. If you choose to access them, you should take the same precautions, for security or content, as you would with any Internet site.

## ■ Nokia support on the Web

Check [www.nokia.com/support](http://www.nokia.com/support) or your local Nokia Web site for the latest version of this guide, additional information, downloads, and services related to your Nokia product.

# 1. Getting started

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## ■ Installing the SIM card and the battery

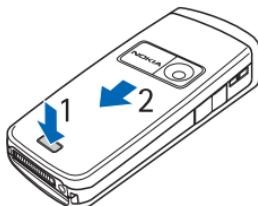
Keep all SIM cards out of the reach of small children. For availability and information on using SIM card services, contact your SIM card vendor. This may be the service provider, network operator, or other vendor.



**Note:** Always switch off the power and disconnect the charger and any other device before removing the cover. Avoid touching electronic components while changing the cover. Always store and use the device with the covers attached.

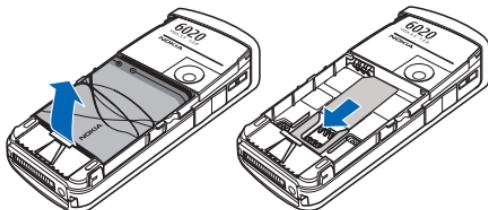
1. To remove the back cover of the phone:

Push the back cover release button (1) and slide the back cover towards the bottom of the phone (2). When the back cover is released, take it off the phone.



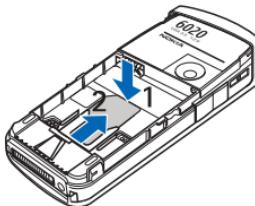
2. Remove the battery by lifting it as shown.

Insert the SIM card into the SIM card holder until it snaps into position.

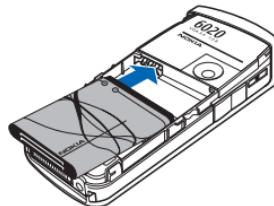


Make sure that the SIM card is properly inserted and that the golden contact area on the card is facing downwards.

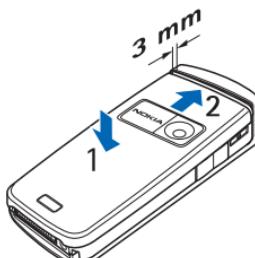
3. To remove the SIM card press the SIM card release (1) and slide the SIM card towards the top of the phone (2).



4. Position the battery with the contacts aligned to the golden contacts of the phone. Insert the battery into the battery slot.



5. Align the back cover on the back of the phone (1) with a gap above the top of the back cover of approximately 3 mm. Push the back cover up to the top of the phone to lock it (2).



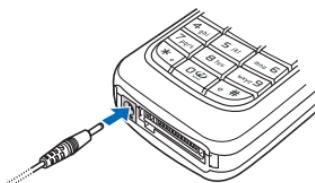
## ■ Charging the battery



**Warning:** Use only batteries, chargers, and enhancements approved by Nokia for use with this particular model. The use of any other types may invalidate any approval or warranty, and may be dangerous.

Check the model number of any charger before use with this device. This device is intended for use when supplied with power from ACP-7 and ACP-12 chargers.

1. Connect the lead from the charger to the socket on the bottom of your phone.
2. Connect the charger to an AC wall socket. If the battery is completely empty, it may take a few minutes before the charging indicator appears on the display or before any calls can be made.



The charging time depends on the charger and the battery used. For example, charging a battery with the ACP-12 charger takes approximately 1 hour and 20 minutes while the phone is in standby mode.

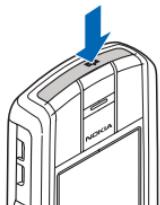
## ■ Switching the phone on and off



**Warning:** Do not switch the phone on when wireless phone use is prohibited or when it may cause interference or danger.

Press and hold the power key  as shown.

Note that if the phone displays *Insert SIM card* even though the SIM card is properly inserted, or *SIM card not supported*, contact your network operator or service provider. Your phone does not support 5-Volt SIM cards and the card may need to be changed.



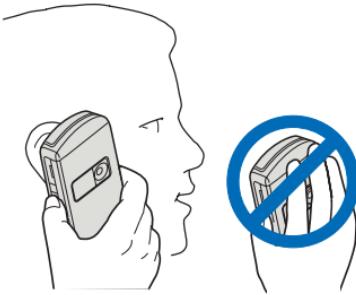
If the phone asks for a PIN or security code, enter the code supplied with your SIM card (displayed as \*\*\*\*), and press **OK**.

See also Access codes on page 11.

## ■ Normal operating position

Your phone has an internal antenna.  
Use the phone only in its normal  
operating position as shown.

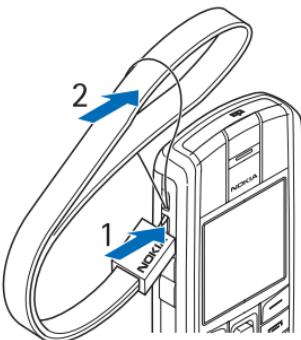
**Note:** As with any other radio  
transmitting device, do not touch the  
antenna unnecessarily when the  
device is switched on. Contact with the  
antenna affects call quality and may  
cause the device to operate at a higher  
power level than otherwise needed.  
Avoiding contact with the antenna  
area when operating the device optimises the antenna performance and the  
battery life.



## ■ Putting on a wrist strap

The upper left edge of the phone  
contains an eyelet for the wrist strap.

Thread the strap as shown in the  
picture and tighten it.



## 2. Your phone

### ■ Keys and connectors

1. Power key 
2. Earpiece
3. Loudspeaker
4. Volume keys
5. Push to talk (PTT) key

To activate push to talk (if available) or voice recorder. See Push to talk on page 75 and Voice recorder on page 75.

6. Left and right Selection keys — and —, middle selection key 

The function of these keys depends on the guiding text shown on the display above the keys. See Standby mode on page 20.

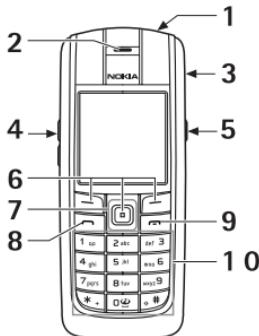
7. 5-way joystick 

Enables scrolling through names, phone numbers, menus or settings.

The 5-way joystick is also used to move the cursor up and down, and left and right when writing text, using the calendar, and in some game applications. Pressing the joystick also functions as the middle selection key, and pressing it briefly selects the function shown on the display above the joystick.

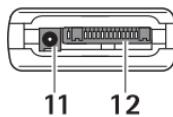
In standby mode, the joystick functions as a shortcut. Move the joystick right to access push to talk (if available) or the calendar, left to start writing an SMS message, up to activate the camera and down to access the list of contacts.

8.  dials a phone number, and answers a call. In standby mode, it shows the list of the most recently called numbers.
9.  ends an active call. Exits from any function.
10.  enter numbers and characters.  
\*  and #  are used for various purposes in different functions.



## 11. Charger connector

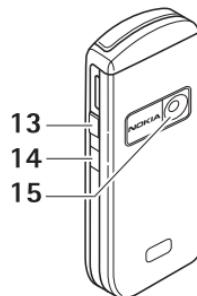
Pop-Port™ connector used, for example, for headsets and the data cable.



## 12. PTT key to make a push to talk call (only if available) or to activate the voice recorder.

## 13. Infrared (IR) port

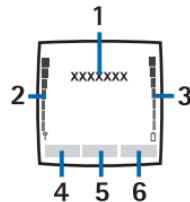
## 14. Camera lens



## ■ Standby mode

When the phone is ready for use, and you have not keyed in any characters, the phone is in standby mode.

1. Shows the name of the network or the operator logo.
2. Shows the signal strength of the cellular network at your current location.
3. Shows the battery charge level.
4. The left selection key in standby mode is **Go to**.



Press **Go to** to view the functions in your personal shortcut list. Select a function to activate it. Press **Options** and select **Select 'Go to' options** to view the list of available functions that you can add. Scroll to the desired function and press **Mark** to add it to the shortcut list. To remove a function from the list, press **Unmark**. Select **Organise 'Go to' options** to rearrange the functions on your personal shortcut list. Select the desired function and press **Move**, then select where you want to move the function. See also **Go to options** on page 64.

5. The middle selection key in standby mode is **Menu**.
6. The right selection key in standby mode is **Names** to access the **Contacts** menu or another shortcut to a function you can select. See **Personal shortcuts** on page 63. Or the key has an operator-specific name to access an operator-specific web site.

## Wallpaper

You can set your phone to display a background picture, wallpaper, when the phone is in standby mode. See Display settings on page 64.

## Screen saver

You can set your phone to display a screen saver, when the phone is in standby mode. See Display settings on page 64.

## Power saving

For power saving, a digital clock view overwrites the display when no phone function has been used for a certain period of time. Press any key to deactivate the screen saver. If you have not set the time, 00:00 is displayed.



## Essential indicators

-  You have received one or several text, picture or multimedia messages. See Reading and replying to an SMS message or an SMS e-mail on page 34 or Reading and replying to a multimedia message on page 38.
-  The phone has registered a missed call. See Call register on page 51.
-  or  Your phone is connected to the instant messaging service and the availability status is online or offline, respectively. See Connecting to and disconnect from the instant messaging service on page 41.
-  You have received one or several instant messages and you are connected to the instant messaging service. See Connecting to and disconnect from the instant messaging service on page 41.
-  The phone's keypad is locked. See Keypad lock (Keyguard) on page 22.

- ❖ The phone does not ring for an incoming call or text message when *Incoming call alert* is set to *Off* and *Message alert tone* is set to *Off*. See Tone settings on page 63.
- ⌚ The alarm clock is set to *On*. See Alarm clock on page 83.
- ⌚ When the (E)GPRS connection mode *Always online* is selected and the (E)GPRS service is available, the indicator is shown on the top left of the display. See (E)GPRS connection on page 68.
- ⌚ When the (E)GPRS connection is established, the indicator is shown on the top left of the display. See (E)GPRS connection on page 68 and Browsing the pages of a service on page 94.
- ⌚ The (E)GPRS connection is suspended (on hold), for example if there is an incoming or outgoing call during the (E)GPRS dial-up connection.
- ☎ The loudspeaker has been activated, see Options during a call on page 24.
- ☎ Calls are limited to a closed user group. See Security settings on page 71.
- ⌚, ☎, ☎ or ☎ A headset, handsfree, loopset or music stand is connected.
- ⌚ Push to talk connection is active or suspended.

## ■ Keypad lock (Keyguard)

You can lock the keypad to prevent the keys from being accidentally pressed.

Press **Menu** or **Unlock** and then **\*** + within 1.5 seconds to lock or unlock the keypad. To answer a call when the keyguard is on, press **.** During a call, the phone can be operated normally. When you end or reject the call, the keypad will automatically be locked. For *Automatic keyguard*, see Phone settings on page 66.

When the keypad lock is on, calls still may be possible to the official emergency number programmed into your device.

### 3. Call functions

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#### ■ Making a call

1. Key in the phone number, including the area code. If you key in an incorrect character, press **Clear** to delete it.

For international calls, press \* + twice for the international prefix (the + character replaces the international access code) and then key in the country code, the area code without the leading 0, if necessary, and the phone number.

2. Press **Call** to call the number.
3. Press **End** to end the call or to cancel the call attempt.

#### Making a call using the contacts

To search for a name or phone number that you have saved in **Contacts**, see Searching for a contact on page 54. Press **Call** to call the number.

#### Last number redialling

In standby mode, press **Call** once to access the list of up to 20 numbers you last called or attempted to call. Scroll to the number or name that you want, and press **Call** to call the number.

#### Calling your voice mailbox

In standby mode, press and hold **1**  , or press **1**  and **Call**.

If the phone asks for the voice mailbox number, key it in and press **OK**. See also Voice messages on page 47.

#### Speed dialling a phone number

Assign a phone number to one of the speed-dialling keys, from **2**  to **wxyz**  , see Speed dials on page 60. Call the number in either of the following ways:

- Press the speed-dialling key that you want and then press **Call**.
- If **Speed dialling** is set to on, press and hold a speed-dialling key until the call is started. See Call settings on page 65.

## ■ Answering or rejecting an incoming call

Press  to answer an incoming call and press  to end the call.

Press  to reject an incoming call. If you press **Silence**, only the ringing tone is muted. Then either answer or reject the call.

## Call waiting

During a call, press  to answer the waiting call. The first call is put on hold. Press  to end the active call. To activate the *Call waiting* function, see Call settings on page 65.

## ■ Options during a call

Many of the options that you can use during a call are network services. For availability, contact your network operator or service provider.

Press **Options** during a call for some of the following options:

*Mute* or *Unmute*, *Contacts*, *Menu*, *Record*, *Lock keypad*, *Auto volume on* or *Auto volume off*, *Loudspeaker* or *Handset*, and the network services *Answer* and *Reject*, *Hold* or *Unhold*, *New call*, *Send DTMF* (to send tone strings), *Swap* (to switch between the active call and the call on hold), *Transfer* (to connect a call on hold to an active call and disconnect yourself), *Conference* (to set up a conference call), *Private call* (to discuss privately in a conference call), *End call*, and *End all calls*.



**Warning:** Do not hold the device near your ear when the loudspeaker is in use, because the volume may be extremely loud.

## ■ Writing text

You can key in text using traditional or predictive text input.

When you are writing text, predictive text input is indicated by  and traditional text input by  at the top left of the display. The character case is indicated by **Abc**, **abc**, or **ABC**. You can change the character case by pressing                     <img alt="Text input icon"

## Setting predictive text input on or off

When writing text, press **Options** and select *Dictionary*.

- To set predictive text input on, select a language in the dictionary options list. Predictive text input is only available for the languages on the list.
- To revert to traditional text input, select *Dictionary off*.

## Using predictive text input

You can key in any letter with a single key press. Predictive text input is based on a built-in dictionary to which you can also add new words.

1. Start writing a word using the keys **2 abc** to **wxyz 9**. Press each key only once for a single letter. The word changes after each keystroke.

**Example:** To write Nokia when the English dictionary is selected, press **mno 6**, **mno 6**, **5 jkl**, **4 ghi** and **2 abc**.

For more instructions on writing text, see *Tips for writing text* on page 26.

2. When you have finished writing the word and it is correct, confirm it by adding a space with **0 #** or by moving the joystick up, down, left or right. Moving the joystick also moves the cursor.

If the word is not correct, press **\*** + repeatedly or press **Options** and select *Matches*. When the word that you want appears, confirm it.

If the ? character is displayed after the word, the word you intended to write is not in the dictionary. To add the word to the dictionary, press **Spell**, key in the word (traditional text input is used) and press **Save**. When the dictionary becomes full, the new word replaces the oldest one that was added.

3. Start writing the next word.

### Writing compound words

Key in the first part of the word and move the joystick to the right, then write the last part of the word.

## Using traditional text input

Press a number key, 2 abc to 9 wxyz, repeatedly until the desired character appears. Not all characters available under a number key are printed on the key. The characters available depend on the language selected in the *Phone language* menu, see Phone settings on page 66.

- If the next letter you want is located on the same key as the present one, wait until the cursor appears, or move the joystick up, down, left or right and then key in the letter.
- The most common punctuation marks and special characters are available under the number key \* +.

For more instructions on writing text, see Tips for writing text on page 26.

## Tips for writing text

The following functions may also be available for writing text:

- To insert a space, press .
- Move the cursor to the left, right, down or up with the joystick.
- To insert a number while in letter mode, press and hold the desired number key.
- To delete a character to the left of the cursor, press **Clear**. Press and hold **Clear** to delete the characters more quickly. To delete all the characters at once when writing a message, press **Options** and select **Clear text**.
- To quickly set predictive text input on or off when writing text, press and hold **Options**.
- To insert a word when using predictive text input, press **Options** and select **Insert word**. Write the word using traditional text input and press **Save**. The word is also added to the dictionary.
- To insert a special character when using traditional text input, press \* +, or when using predictive text input, press and hold \* +, or press **Options** and select **Insert symbol**. Select the character and press **Use**.

- To insert a smiley when using traditional text input, press \* + twice, or when using predictive text input, press and hold \* + and press \* + again, or press **Options** and select *Insert smiley*. Select a smiley and press **Use**.

The following options are available when writing text messages:

- To insert a number while in letter mode, press **Options** and select *Insert number*. Key in the phone number or search for it in *Contacts* and press **OK**.
- To insert a name from *Contacts*, press **Options** and select *Insert contact*. To insert a phone number or a text item attached to the name, press **Options** and select *View details*.

## 4. Using the menu

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The phone offers you an extensive range of functions, which are grouped into menus.

### ■ Accessing a menu function

1. To access the menu, press **Menu**.
2. Use the joystick to scroll through the menu and select, for example, *Settings* by pressing **Select**. To change the menu view, see *Menu view* in Display settings on page 64.
3. If the menu contains submenus, select the one that you want, for example *Call settings*.
4. If the selected submenu contains further submenus, repeat step 3. Select the next submenu, for example *Anykey answer*.
5. Select the setting of your choice.
6. Press **Back** to return to the previous menu level, and **Exit** to exit the menu.

## ■ List of menu functions

### • Messages



1. Create message
  1. Text message
  2. Multimedia msg.
  3. Flash message
2. Inbox
3. Outbox
4. Sent items
5. Saved items
  1. Text messages
  2. Multimedia msgs.
6. Instant messages
  1. Login
  2. Saved convers.
  3. Connect. settings
7. E-mail<sup>1</sup>
  1. Create e-mail
  2. Retrieve
  3. Disconnect
  4. Inbox
  5. Other folders
8. Voice messages
  1. Listen to voice messages
  2. Voice mailbox number
9. Info messages
  1. Info service
  2. Topics
  3. Language
  4. Info topics saved on SIM card
  5. Read<sup>2</sup>
10. Service commands
11. Delete messages

### 12. Message settings

1. Text messages
2. Multimedia msgs.
3. E-mail messages
4. Other settings

### 13. Message counter

### • Call register



1. Missed calls
2. Received calls
3. Dialled numbers
4. Delete recent call lists
  1. All
  2. Missed
  3. Received
  4. Dialled
5. Call duration
  1. Last call duration
  2. Received calls' duration
  3. Dialled calls' duration
  4. All calls' duration
  5. Clear timers
6. GPRS data counter
  1. Data sent in last session
  2. Data received in last session
  3. All sent data
  4. All received data
  5. Clear counters
7. GPRS connection timer
  1. Duration of last session
  2. Duration of all sessions
  3. Clear timers
8. Positioning

---

1. In some countries this function may not be available.
2. This menu is shown only if any info messages are received.

• **Contacts**

1. Search
2. Add new contact
3. Delete
4. My presence
5. Subscribed names
6. Copy
7. Settings
  1. Memory in use
  2. Contacts view
  3. Memory status
8. Speed dials
9. Voice tags
10. Service numbers<sup>1</sup>
11. My numbers<sup>2</sup>
12. Caller groups<sup>2</sup>



• **Operator menu<sup>3</sup>**

• **Settings**

1. Profiles
  1. General
  2. Silent
  3. Meeting
  4. Outdoor
  5. My style 1
  6. My style 2
2. Themes
  1. Select theme
  2. Theme downloads



3. Tone settings

1. Incoming call alert
2. Ringing tone
3. Ringing volume
4. Vibrating alert
5. Message alert tone
6. Instant message alert tone
7. Keypad tones
8. Warning tones
9. Alert for
10. Push to talk settings

4. Personal shortcuts

1. Right selection key
2. Select 'Go to' options
3. Organise 'Go to' options
4. Voice commands

5. Display settings

1. Wallpaper
2. Screen saver
3. Colour schemes
4. Menu view
5. Operator logo

6. Time and date settings

1. Clock
2. Date
3. Auto-update of date & time

---

1. Shown if supported by your SIM card. For availability, contact your network operator or service provider.
2. If Info numbers, Service numbers or both are not supported, the number of this menu item changes accordingly.
3. If this menu is not shown the subsequent menu numbers change accordingly. The name depends on the network operator.

- 7. Call settings
  - 1. Automatic volume control
  - 2. Call divert
  - 3. Anykey answer
  - 4. Automatic redial
  - 5. Speed dialling
  - 6. Call waiting
  - 7. Summary after call
  - 8. Send my caller ID
  - 9. Line for outgoing calls<sup>1</sup>
- 8. Phone settings
  - 1. Phone language
  - 2. Memory status
  - 3. Automatic keyguard
  - 4. Cell info display
  - 5. Welcome note
  - 6. Operator selection
  - 7. Confirm SIM service actions
  - 8. Help text activation
  - 9. Start-up tone
- 9. Connectivity
  - 1. Infrared
  - 2. GPRS
- 10. Enhancement settings<sup>2</sup>
  - 1. Headset
  - 2. Handsfree
  - 3. Loopset
- 11. Configuration settings
  - 1. Default configuration settings
  - 2. Activate default in all applications
  - 3. Preferred access point
  - 4. Personal configuration settings
- 12. Security settings
  - 1. PIN code request
  - 2. Call barring service
  - 3. Fixed dialling
  - 4. Closed user group
  - 5. Security level
  - 6. Access codes
- 13. Restore factory settings

- **Gallery**

- 1. Images
- 2. Video clips
- 3. Themes
- 4. Graphics
- 5. Tones
- 6. Recordings



- **Media**

- 1. Camera
- 2. Voice recorder



- **Push to talk<sup>1</sup>**

- 1. Switch PTT on
- 2. Callback inbox
- 3. Group list
- 4. Contacts list
- 5. Add group
- 6. PTT Settings
- 7. Config. Settings
- 8. Web




---

- 1. For availability, contact your network operator or service provider.
- 2. This menu is shown only if the phone is or has been connected to a compatible enhancement available for the phone.

- **Organiser**

1. Alarm clock
  1. Alarm time
  2. Repeat alarm
  3. Alarm tone
2. Calendar
3. To-do list
4. Notes
5. Wallet
6. Synchronisation



- **Applications**

1. Games
  1. Select game
  2. Game downloads
  3. Memory
  4. App. settings
2. Collection
  1. Select application
  2. App. downloads
  3. Memory
3. Extras
  1. Calculator
  2. Countdown timer
  3. Stopwatch



- **Web**

1. Nokia.com
2. Home
3. Bookmarks
4. Download links
  1. Tone downloads
  2. Graphic downloads
  3. Game downloads
  4. Video downloads
  5. Theme downloads
  6. App. downloads
5. Last web addr.
6. Service inbox
7. Settings
  1. Configuration settings
  2. Appearance settings
  3. Security settings
  4. Service inbox settings
8. Go to address
9. Clear the cache



- **SIM services<sup>1</sup>**



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1. Only shown if supported by your SIM card. The name and contents vary depending on the SIM card.

## 5. Menu functions

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### ■ Messages

The message services can only be used if they are supported by your network or your service provider and you have subscribed to them. Also appropriate settings need to be in place.



To select the font size for reading and writing messages, press **Menu**, and select *Messages*, *Message settings*, *Other settings* and *Font size*.



**Note:** When sending messages, your phone may display the words *Message sent*. This is an indication that the message has been sent by your device to the message centre number programmed into your device. This is not an indication that the message has been received at the intended destination. For more details about messaging services, check with your service provider. Only devices that offer compatible features can receive and display messages. The appearance of a message may vary depending on the receiving device.



**Important:** Exercise caution opening messages. Messages may contain malicious software or otherwise be harmful to your device or PC.

### Text messages (SMS)

Using the short message service (SMS) your phone can send and receive multi-part messages, which consist of several ordinary text messages (network service). Invoicing may be based on the number of ordinary messages that are required for a multi-part message.

Before you can send a message, you need to save some message settings. See *Settings for text and SMS e-mail messages* on page 48.

You can also send and receive text messages that contain pictures. A picture message can be a multi-part message.

The text messages function uses shared memory, see *Shared memory* on page 11.

## Writing and sending messages

Your device supports the sending of text messages beyond the character limit for a single message. Longer messages will be sent as a series of two or more messages. Your service provider may charge accordingly. Characters that use accents or other marks, and characters from some language options like Chinese, take up more space limiting the number of characters that can be sent in a single message.

1. Press **Menu**, and select *Messages*, *Create message* and *Text message*.
2. Key in a message. See Writing text on page 24. To insert text templates or a picture into the message, see Templates on page 35.
3. To send the message, press **Send** or .

The messages that you have sent will be saved in the *Sent items* folder if the setting *Save sent messages* is set to *Yes*. See Settings for text and SMS e-mail messages on page 48. Text messages are indicated with .

4. Enter the recipient's phone number or search for the phone number in *Contacts*. Press **OK** to send the message.

## Options for sending a message

After you have written a message, press **Options** and select *Sending options*. With *Send to many* you can send the message to several recipients and to send a message as an SMS e-mail (network service), select *Send as e-mail*. With *Sending profile* you can use a predefined message profile to send the message. To define a message profile, see Settings for text and SMS e-mail messages on page 48.

## Reading and replying to an SMS message or an SMS e-mail

When you have received a message or an SMS e-mail, the indicator  and the number of new messages followed by *messages received* are shown.

The blinking  indicates that the message memory is full. Before you can receive new messages, delete some of your old messages in the *Inbox* folder.

1. Press **Show** to view the new message, or press **Exit** to view it later.

If more than one message has been received, select the one that you want to read. An unread text message or SMS e-mail is indicated by .

2. While reading a message, press **Options** and select an option, for example, to delete, forward or edit the message as a text message or an SMS e-mail, rename the message you are reading or to move it to another folder. Select *Copy to calendar* to copy text at the beginning of the message to your phone's calendar as a reminder note for the current day. Select *Message details* to view, if available, the sender's name and phone number, the message centre used, and the date and time of receipt. Select *Use detail* to extract numbers, e-mail addresses and Web site addresses from the current message.

When reading a picture message, select *Save picture* to save the picture in the *Templates* folder.

3. Select **Reply** and the message type to reply to a message.

When replying to an SMS e-mail, confirm or edit the e-mail address and subject first. Then write your reply message.

4. To send the message, press **Send**, and press **OK** to send the message to the displayed number.

## Inbox and sent items folders

The phone saves incoming text and multimedia messages in the *Inbox* folder. Sent text messages are saved in the *Sent items* folder.

## Templates

Your phone includes text templates, indicated by , and picture templates, indicated by .

To access the template list, press **Menu**, and select *Messages*, *Saved items*, *Text messages* and *Templates*.

- To insert a text template into the message or the SMS e-mail that you are writing or replying to, press **Options**. Select *Use template* and select the template that you want to insert.
- To insert a picture into the text message that you are writing or replying to, press **Options**. Select *Insert picture* and select a picture to view it. Press **Insert** to insert the picture into your message. The

 indicator in the header of the message indicates that a picture has been attached. The number of characters that you can enter in a message depends on the size of the picture.

To view the text and the picture together before sending the message, press **Options** and select *Preview*.

## Saved items folder and My folders

To organise your messages, you can move some of them to the *Saved items* folder, or add new folders for your messages. While reading a message, press **Options**. Select *Move*, scroll to the folder that you want to move the message to and press **Select**.

To add or delete a folder, press **Menu**, and select *Messages*, *Saved items*, *Text messages* and *My folders*. To add a folder if you have not saved any folder, press **Add**. Otherwise, press **Options** and select *Add folder*. To delete a folder, scroll to the folder that you want to delete, press **Options** and select *Delete folder*.

## Multimedia messages (MMS)

A multimedia message can contain text, sound and a picture or a video clip. The phone supports multimedia messages that are up to 100 KB in size. If the message contains a picture, the phone scales it down to fit the display area. The wireless network may limit the size of MMS messages. If the inserted picture exceeds this limit, the device may make it smaller so that it can be sent by MMS.

The multimedia message function uses shared memory, see Shared memory on page 11.

If *Allow multimedia reception* is set to *Yes* or *In home network*, your operator or service provider may charge you for every message you receive. The default setting to receive multimedia messages is generally on. See Settings for multimedia messages on page 48.

Multimedia messaging supports the following formats:

- Picture: JPEG, GIF, WBMP, BMP and PNG.

- Sound: Scalable Polyphonic MIDI (SP-MIDI), AMR audio and monophonic ringing tones.
- Video clips in 3gp format with SubQCIF and QCIF resolution and AMR audio.

The phone does not necessarily support all variations of the aforementioned file formats. If a received message contains any unsupported elements, they may be replaced with the file name and the text *Object format not supported*.

Note that you are not able to receive any multimedia messages if you have a call in progress, or a game or another Java application running. Because delivery of multimedia messages can fail for a variety of reasons, do not rely solely upon them for essential communications.

### Writing and sending a multimedia message

To set the settings for multimedia messaging, see Settings for multimedia messages on page 48. To check availability and to subscribe to the multimedia messaging service, contact your network operator or service provider.

Copyright protections may prevent some images, ringing tones and other content from being copied, modified, transferred or forwarded.

1. Press **Menu**, and select *Messages*, *Create message* and *Multimedia msg..*
2. Key in a message. See Writing text on page 24.
  - To insert a file in the message, press **Options**, select *Insert* and select the desired option from the Gallery or select *Calendar note* or *Business card*.

To move the text component to the top or bottom of the message, press **Options** and select *Place text first* or *Place text last*.

- Your phone supports the sending and receiving of multimedia messages that contain several pages (slides). To insert a slide in the message, press **Options**, and select *Insert* and *Slide*. Each slide can contain text, one image and one sound clip.

If the message contains several slides, you can open the desired one by pressing **Options** and selecting *Previous slide*, *Next slide* or

*Slide list*. To set the interval between the slides, select *Slide timing*.

- The following options may also be available: *Delete* to delete an image, slide or sound clip from the message, *Preview* or *Save message*. In *More options* the following options may be available: *Insert contact*, *Insert number*, *Message details* and *Edit subject*.

3. To send the message, press *Send* and select *Phone number*, *Send to e-mail* or *Send to many*.
4. Enter the recipient's phone number or e-mail address or search for it in *Contacts*.

While the multimedia message is being sent,  is displayed and you can use other functions on the phone. If there is an interruption while the message is being sent, the phone tries to resend it a few times. If this fails, the message will remain in the *Outbox* folder and you can try to resend it later.

The messages that you have sent will be saved in the *Sent items* folder if the setting *Save sent messages* is set to *Yes*. See Settings for multimedia messages on page 48. Multimedia messages are indicated with .

## Reading and replying to a multimedia message

When your phone is receiving a multimedia message,  is displayed. When the message has been received,  and *Multimedia message received* are shown.

1. Press *Show* to view the message, or press *Exit* to view it later. If more than one message has been received, select the one that you want to read. An unread multimedia message is indicated by .
2. Scroll to view the message. Press *Options* and some of the following options may be available: *Play presentation*, *View text*, *Open image*, *Open sound clip*, *Open video clip*, *Save image*, *Save sound clip*, *Save video clip*, *Details*, *Delete message*, *Reply*, *Reply to all*, *Forward to no.*, *Forward to e-mail*, *Forward to many*, *Edit*, *Message details*.

See also options in *Gallery*, see *Gallery* on page 72.

## Inbox, Outbox, Saved and Sent items folders

The phone saves the received multimedia messages in the *Inbox* folder. Multimedia messages that have not yet been sent are moved to the *Outbox* folder. The multimedia messages that you wish to send later can be saved in the *Saved items* folder. The multimedia messages that have been sent are saved in the *Sent items* folder of the *Multimedia msgs.* submenu if the setting *Save sent messages* is set to *Yes*. See Settings for multimedia messages on page 48.

## Multimedia messages memory full

When you have a new multimedia message waiting and the memory for the messages is full,  blinks and *Multimedia memory full, view waiting msg.* is shown. To view the waiting message, press *Show*. To save the message, press *Options*, select *Save message* and delete old messages by first selecting the folder and then the old message to be deleted. To discard the waiting message, press *Exit* and *Yes*. If you press *No*, you can view the message.

## Flash messages

Flash messages are text messages that are instantly displayed upon reception.

### Writing a flash message

Press *Menu*, and select *Messages*, *Create message* and *Flash message*. Write your message. The maximum length of a flash message is 70 characters. To insert a blinking text into the message, select *Insert blink char* from the options list to set a marker. The text behind the marker blinks until a second marker is inserted.

### Receiving a flash message

A received flash message is not automatically saved. To read the message, press *Read*. Press *Options* and select *Use detail* to extract phone numbers, e-mail addresses and website addresses from the current message. To save the message, press *Save* and select the folder in which you want to save the message.

## Instant messages (Chat)

Instant messaging (Chat) is a way of sending short, simple text messages that are delivered over TCP/IP protocols to online users (network service). Your contact list shows you when the contacts on the list are online and available to participate in an instant messaging conversation.

Before you can use instant messaging, you need to subscribe to the service. For availability, charging and subscription to the service, contact your service provider, from whom you also receive your unique ID and password and the settings for instant messaging. For required settings, see Instant messaging settings on page 45. The icons and texts on the display may vary depending on the instant messaging service.

You can use the other functions of the phone while you have an active instant messaging session in the background.

Instant messaging uses shared memory, see Shared memory on page 11.

### Basic steps for instant messaging

- To enter the instant messaging menu (offline), see Entering the instant messaging menu on page 41.
- To connect to the service (online), see Connecting to and disconnect from the instant messaging service on page 41.
- To start a conversation with a contact, see *IM contacts* in Starting an instant messaging conversation on page 41.

To create your own contact lists, see Contacts for instant messaging on page 43.

- To join a public group, see *Groups* in Starting an instant messaging conversation on page 41.

To join an instant messaging group via an invitation message, see Accepting or rejecting an invitation on page 42.

To create your own group, or to join or delete a public group, see Groups on page 44.

- To edit your own information, see Editing your own settings on page 43.

- To search users and groups, see *Search* in Starting an instant messaging conversation on page 41.
- To read a message, see Reading an instant message on page 43.
- To write and send messages during an active session, see Participating in a conversation on page 43.
- To view, rename or delete saved conversations, select *Saved convers.* when you have entered the *Instant messages* menu.
- To block or unblock contacts, see Blocking and unblocking messages on page 44.
- To disconnect from the service, see Connecting to and disconnect from the instant messaging service on page 41.

### Entering the instant messaging menu

To enter the *Instant messages* menu while still offline, press **Menu**, and select *Messages* and *Instant messages*. Activate a service and select *Login* to connect to the service; *Saved convers.* to view, erase or rename the conversations that you have saved during a session, or *Connect settings* to access the settings needed for a connection.

### Connecting to and disconnect from the instant messaging service

To connect to the service, enter the *Instant messages* menu, activate a service and select *Login*. Select one of the available sets. If necessary key in the *User ID*: and the *Password*:. When the phone has successfully connected, *Logged in* is displayed.

 **Tip:** To set the phone to automatically connect to the instant messaging service when you enter the *Instant messages* menu, connect to the service, select *My settings*, *Automatic login* and *On IM start-up*.

To disconnect from the service, select *Logout*.

### Starting an instant messaging conversation

Enter the *Instant messages* menu and connect to a service. You can select:

- **Conversations** to view the list of new and read messages or invitations to instant messaging during the active session. Scroll to the message or invitation that you want and press **Open** to read the message.
  -  indicates new and  read instant messages.
  -  indicates new and  read group messages.
  -  indicates invitations.
- **IM contacts** includes the contacts that you have added. Scroll to the contact to whom you would like to send instant messages and press **Chat** or press **Open** if a new message is shown in the list.

If you have received a new message from a contact, it is indicated with .

  -  indicates the online and  the offline contacts in the phone's contacts memory.  indicates a blocked contact, see Blocking and unblocking messages on page 44.
- **Groups** and **Public groups**. The list of bookmarks to public groups provided by the service provider is displayed. To start a conversation, scroll to a group and press **Join**. Enter the screen name that you want to use in the conversation. When you have successfully joined in the group conversation, the phone shows **Joined group**: and the group name. To create a private group, see Groups on page 44.
- **Search** and select **Users** or **Groups** to search for other users or public groups on the network. To start the session when you have found the user or the group that you want, press **Options** and select **Chat** or **Join group**.

To start a session from Contacts, see Viewing the subscribed names on page 58.

### Accepting or rejecting an invitation

When you have connected to the service and you receive a new invitation, **New invitation received** is displayed. Press **Read** to read it. If more than one invitation is received, the number of messages followed by **new invitations received** is displayed. Press **Read**, scroll to an invitation that you want and press **Open**. Press **Accept**, to join the

private group conversation, or press **Options** and select **Reject** or **Delete** to reject or delete the invitation.

### Reading an instant message

When you have connected to the service and you receive a message from a person who is not taking part in the conversation, **New instant message** is displayed. Press **Read** to read it. If more than one message is received, the number of messages followed by **new instant messages** is displayed. Press **Read**, scroll to a message and press **Open**.

New messages received during an active session are held in the **Conversations** of the **Instant messages** menu. If the message is from a person whose contact information is missing from the contact list in **IM contacts**, the sender's ID is shown. If the contact information can be found in the phone's memory for contacts and the phone recognises it, the sender's name is shown. To save a new contact in the phone's memory, press **Options** and select **Save to contacts** and enter the name of the person, or **Add to contact**.

### Participating in a conversation

Join or start a session by pressing **Write**. Write your message and press **Send** or  to send it. If you press **Options**, some of the following options are available: **View conversation**, **Save to contacts**, **Add to contact**, **Group members**, **End conversation**, **Dictionary**.

### Editing your own settings

Enter the **Instant messages** menu and connect to the service. Select **My settings** to view and edit your own availability information or screen name. Select **Availability** and **Available for all** or **Avail. for contacts** (or **Appear offline**) to allow all the other users or only the contacts on your contact list to see that you are online when you have connected to the service. When you are connected to the service,  indicates that you are online and  that you are not visible to others.

### Contacts for instant messaging

To add contacts to the instant messaging contacts list, connect to the service and select **IM contacts**. If the contacts list is empty the phone displays **Contact list empty. Copy contacts from server?** to retrieve

available contacts from the server. Otherwise press **Options** and select *Add contact*, or if you have no contacts added, press **Add**. Select *Enter ID manually*, *Search from serv.*, *From contacts*, or *Copy from server* to add a new contact. When the contact is added, the phone displays *Added to IM contacts*: and the contact name.

Scroll to a contact, and press **Chat** to start a session or press **Options** and select *Contact info*, *Edit name*, *Block contact* (or *Unblock contact*), *Add contact*, *Remove contact*, *Copy to server*, or *Availability alerts*.

## Blocking and unblocking messages

Connect to the service and select *Conversations* or *IM contacts*.

Highlight the contact in the contacts list from whom you want to block incoming messages. Press **Options**, select *Block contact* and press **OK**.

To unblock the messages, connect to the service and select *Blocked list*. Scroll to the contact from whom you want to unblock the messages and press **Unblock**.

## Groups

You can create your own private groups for a session, or use the public groups provided by the service provider. The private groups exist only during an active session. You can add to a private group only the contacts that are in your contact list and thus in the phone's contacts memory. If the server you are logged onto does not support group services all group-related menus are dimmed.

### Public groups

You can bookmark public groups that your service provider may maintain. Connect to the service, select *Groups* and *Public groups*. Scroll to a group that you want to chat with and press **Join**. If you are not in the group, key in your screen name as your nickname for the group. If you press **Options**, you can select *Delete group* to delete a group from your group list.

### Creating a private group

Connect to the service, select *Groups* and *Create group*. Key in the name for the group and the screen name that you want to use for the group. You can use another screen name in another group. Mark your private

group members from the contacts list and key in an invitation to newly added members.

## Instant messaging settings

You may receive the settings as a configuration message from the service provider. See Configuration settings service on page 13. To key in the settings manually, see Configuration settings on page 70. For instant messaging and presence settings, contact your service provider.

To enter the *Instant messages* menu while still offline, press **Menu**, and select *Messages* and *Instant messages*. Activate a service and select *Connect settings*. Select *Configuration* and select the set you would like to activate. Select *Account* and choose the account you want to use. Select *User ID* to view or to edit the user ID. Select *Password* to enter the password.

## E-mail application

The e-mail application allows you to access the compatible e-mail account that you use in the office or at home, via the phone (network service). You can write, send, and read e-mail with your phone. Your phone supports POP3 and IMAP4 e-mail servers.

The e-mail application uses shared memory, see Shared memory on page 11.

Before you can send and retrieve any e-mail, you may need to do the following:

- Obtain a new e-mail account or use the current one. For availability of your e-mail account contact your e-mail service provider.
- For the settings required for the e-mail application, contact your e-mail service provider. To receive the e-mail settings as a configuration message, see Configuration settings service on page 13.
- To set the e-mail settings on your phone, press **Menu** and select *Messages*, *Message settings* and *E-mail messages*. See Settings for e-mail application on page 49.

## Writing and sending an e-mail

1. Press **Menu** and select *Messages, E-mail*, and *Create e-mail*.
2. Key in the recipient's e-mail address, a subject and the e-mail message.
3. Press **Send** and select *Send now*.

## Downloading e-mail from your e-mail account

1. Press **Menu** and select *Messages, E-mail* and *Retrieve* to download e-mail that have been sent to your e-mail account. Or:  
Press **Menu** and select *Messages* and *E-mail*, press **Options** and select *Retrieve and send* to download new e-mail and to send e-mail that have been saved in the *Outbox* folder.
2. Your phone attempts to make a connection to the e-mail service. A status bar is shown while your phone is downloading e-mail to your phone.
3. Press **Select** to view the new message in the *Inbox*, or press **Back** to view it later. An unread text message is indicated by .

## Reading and replying to an e-mail

Press **Menu**, select *Messages, E-mail* and *Inbox*. While reading the message, press **Options** to see the options available for this message.

To reply to an e-mail, press **Reply** and select *Original text* or *Empty screen*. Confirm or edit the e-mail address and subject, then write your reply. To send the message, press **Send** and select *Send now*.

## Inbox and Other folders (Drafts, Archive, Outbox and Sent items)

Your phone saves e-mail that you have downloaded from your e-mail account in the *Inbox* folder. *Otherfolders* contains the folders: *Drafts* for saving unfinished e-mail, *Archive* for organising and saving your e-mail, *Outbox* for saving e-mail that have not been sent, and *Sent items* for saving e-mail that have been sent.

## Deleting e-mail

To delete e-mail, press **Menu** and select *Messages* and *E-mail*, press **Options** and select *Delete messages*. To delete all messages from a

folder, select the folder from which you want to delete the messages and press **Yes**. To delete all messages from all folders, select **All messages** and press **Yes**. Note that deleting an e-mail from your phone does not delete it from the e-mail server.

## Voice messages

The voice mailbox is a network service and you may need to subscribe to it. For more information and for the voice mailbox number, contact your service provider.

Press **Menu**, and select **Messages** and **Voice messages**. To call your voice mailbox, select **Listen to voice messages**. To key in, search for or edit your voice mailbox number, select **Voice mailbox number**.

If supported by the network, the indicator  will show new voice messages. Press **Listen** to call your voice mailbox number.

 **Tip:** Pressing and holding **1**  calls your voice mailbox if you have the number set.

## Info messages

With the info message network service you may be able to receive messages on various topics. For details, contact your service provider.

## Service commands

Press **Menu**, and select **Messages** and **Service commands**. Key in and send service requests (also known as USSD commands), such as activation commands for network services, to your service provider.

## Deleting all messages from a folder

To delete all messages from a folder, press **Menu**, and select **Messages** and **Delete messages**. Select the folder from which you want to delete the messages and press **OK** to confirm the query.

If the folder contains unread messages, the phone will ask whether you want to delete them also.

## Message settings

The message settings affect the sending, receiving and viewing of messages.

### Settings for text and SMS e-mail messages

Press **Menu**, and select *Messages*, *Message settings*, *Text messages*.

Select *Sending profile*. If more than one message profile set is supported by your SIM card, select the set that you want to change. Each setting has the following settings: *Message centre number* (delivered by your service provider), *Messages sent via*, *Message validity*, *Default recipient number* (text messages) or *E-mail server* (e-mail), *Delivery reports*, *Use GPRS*, *Reply via same centre* (network service) and *Rename sending profile*.

Select *Save sent messages*. Select *Yes* to set the phone to save sent multimedia messages in the *Sent items* folder. If you select *No*, the sent messages are not saved.

### Settings for multimedia messages

If *Allow multimedia reception* is set to *Yes* or *In home network*, your operator or service provider may charge you for every message you receive. The default setting to receive multimedia messages is generally on.

Press **Menu**, and select *Messages*, *Message settings* and *Multimedia msgs..* Select

- *Save sent messages*. Select *Yes* to set the phone to save sent multimedia messages in the *Sent items* folder. If you select *No*, the sent messages are not saved.
- *Delivery reports* to ask the network to send delivery reports about your messages (network service).
- *Scale image down* to define the image size when you insert the image into the multimedia message.
- *Default slide timing* to define the default time for slides in multimedia messages.
- *Allow multimedia reception*. Choose *No*, *Yes* or *In home network* to use the multimedia service. If *Allow multimedia reception* is set to

Yes or *In home network*, your operator or service provider may charge you for every message you receive. The default setting to receive multimedia messages is generally on.

- *Incoming multimedia messages*. Select *Retrieve* to automatically allow the reception of multimedia messages, *Retrieve manually* to allow the reception of multimedia message only after being prompted or *Reject* to prevent the reception of multimedia messages.
- *Configuration settings*. Select *Configuration* and select the default service provider for retrieving multimedia messages. Select *Account* to see the accounts provided by the service provider. If more than one account is displayed choose the one that you want to use. You may receive the settings as a configuration message from the service provider. See Configuration settings service on page 13. To key in the settings manually see Configuration settings on page 70.
- *Allow adverts* to choose if you allow the reception of messages defined as advertisements. This setting is not shown if *Allow multimedia reception* is set to *No*.

## Settings for e-mail application

You may receive the e-mail application settings as a configuration message from the service provider. See Configuration settings service on page 13. To key in the settings manually see Configuration settings on page 70.

Select each of the settings individually and key in all the required settings. Contact your e-mail service provider for the settings.

Press **Menu** and select *Messages*, *Message settings*, and *E-mail messages*. Select

- *Configuration* and select the set that you would like to activate.
- *Account* to see the accounts provided by the service provider. If more than one account is displayed choose the one that you want to use.
- *My name*. Key in your name or nickname.
- *E-mail address*. Key in e-mail address.

- *Include signature*. You can define a signature that is automatically added to the end of your e-mail, when you write your message.
- *Reply-to address*. Key in the e-mail address to which you want the replies to be sent.
- *SMTP user name*. Key in the name that you want to use for outgoing mails.
- *SMTP password*. Key in the password that you want to use for outgoing mails.
- *Display terminal window*. Select *Yes* to perform manual user authentication for Intranet connections.
- *Incoming server type*. Select either *POP3* or *IMAP4* depending on the type of e-mail system that you are using. If both types are supported, select *IMAP4*.
- *Incoming mail settings*

If you have selected *POP3* as the incoming server type, the following options are shown: *Retrieve e-mails*, *POP3 user name*, *POP3 password* and *Display terminal window*.

If you have selected *IMAP4* as the incoming server type, the following options are shown: *Retrieve e-mails*, *Retrieval method*, *IMAP4 user name*, *IMAP4 password* and *Display terminal window*.

## Common settings

Press **Menu** and select *Messages*, *Message settings*, *Other settings* and *Font size* to select the font size for reading and writing messages.

## Message counter

To view how many messages you have sent and received, press **Menu** and select *Messages*, *Message counter*. Select *Sent messages* or *Received messages* or select *Clear counters* to clear the counters.

## ■ Call register

The phone registers the phone numbers of missed, received and dialled calls, push to talk addresses of one-to-one push to talk calls and the approximate length of your calls.



The phone registers these items only if the network supports these functions, and the phone is switched on and within the network service area.

When you press **Options** in the *Missed calls*, *Received calls* and *Dialled numbers* menus, you can view the date and the time of the call, edit or delete the phone number from the list, save the number in *Contacts*, or send a message to the number. Select *Delete recent call lists* to delete the recent calls lists.

### Recent calls lists

Press **Menu**, and select *Call register* and then select

- *Missed calls* to view the list of up to 20 phone numbers from which somebody has tried to call you (network service). The number in front of the (name or) phone number indicates the amount of call attempts from that caller.



**Tip:** When a note about missed calls is displayed, press **List** to access the list of phone numbers. Scroll to the number that you would like to call back and press **■**.

- *Received calls* to view the list of up to 20 phone numbers from which you have most recently accepted or rejected calls (network service).
- *Dialled numbers* to view the list of up to 20 phone numbers that you have most recently called or attempted to call.



**Tip:** In standby mode, press **■** once to access the list of dialled numbers. Scroll to the number or name that you want, and press **■** to call the number.

- *Delete recent call lists* to delete the recent calls lists. Select whether you want to delete all the phone numbers in the recent calls lists, or

only those numbers in the missed calls, received calls or dialled numbers lists. You cannot undo this operation.

## Counters and timers for calls, data and messages



**Note:** The actual invoice for calls and services from your service provider may vary, depending upon network features, rounding off for billing, taxes and so forth. Some timers may be reset during service or software upgrades.

Press **Menu**, and select *Call register* and then select *Call duration*, *GPRS data counter* or *GPRS connection timer* for approximate information on your recent communications.

## Positioning information

Some networks allow position requests (network service). *Positioning* allows you to view the received position requests from the network operator. Contact your network operator or service provider to subscribe to and agree upon the delivery of location information.

Press **Menu**, and select *Call register*, *Positioning* and then *Position log* to see a list of received position requests.

## **Contacts**

You can save names and phone numbers (Contacts) in the phone's memory and in the SIM card's memory.



- The phone's memory may save names with numbers and text notes about each name. You can also save an image for a certain number of names. Contacts use shared memory, see Shared memory on page 11.
- Names and numbers saved in the SIM card's memory, are indicated by .

In dynamic contacts you can publish your current availability status to communicate to anyone who has access to this service and who is requesting this information. See My presence on page 55.

## Selecting settings for contacts

Press **Menu** and select **Contacts** and **Settings**. Select

- **Memory in use** to select the SIM card or phone memory to use for your contacts. To recall names and numbers from both memories for contacts, select **Phone and SIM**. In that case, the names and numbers will be saved in the phone memory.
- **Contacts view** to select how the names, numbers and images in contacts are displayed.
- **Memory status** to view how much memory is available in the selected memory for contacts.

## Saving names and phone numbers (Add contact)

Press **Menu** and select **Contacts** and **Add new contact**. Key in the name and the phone number. When the name and number are saved, press **Done**.



**Tip:** Quick save In standby mode, key in the phone number and press **Save**. Key in the name, press **OK** and **Done**.

## Saving multiple numbers or items per name

You can save different types of phone numbers and short text items per name in the phone's internal memory for contacts.

The first number saved is automatically set as the default number and it is indicated with a frame around the number type indicator, for example . When you select a name from contacts, for example to make a call, the default number is used unless you select another number.

1. Make sure that the memory in use is either **Phone** or **Phone and SIM**.
2. Scroll to the name saved in the phone's internal memory for the contact to which you want to add a new number or text item, and press **Details**.
3. Press **Options** and select **Add number**, **Add detail** or **Add image**.
4. To add a number or detail, select one of the number types or text types, respectively, or select an image from **Gallery**.

If you select the text type *User ID*: select *Search* to search for an ID by a mobile phone number or an e-mail address in the server of the operator or service provider if you have connected to the presence service. See My presence on page 55. If only one ID is found, it is automatically saved. Otherwise, to save the ID, press *Options*, and select *Save*. To key in the ID, select *Enter ID manually*. Key in the ID and press **OK** to save it.

To change the number or text type, select *Change type* in the options list. Note that you cannot change the type of an ID when it is on the *IM contacts* or in the *Subscribed names* list.

To set the selected number as the default number, select *Set as default*.

5. Key in the number or text item and press **OK** to save it.
6. Press **Back** and then **Exit** to return to standby mode.

## Adding an image to a name or number in contacts

You can add an image in supported format to a name or number saved in the phone's internal memory.

Move the joystick down in standby mode, scroll to the contact that you want to add an image to and press *Details*. Press *Options* and select *Add image*. The phone opens the list of folders in the *Gallery*. Scroll to the desired image, press *Options* and select *Save to contacts*. A copy of the image is added to the contact.

## Searching for a contact

Press **Menu** and select *Contacts* and *Search*, or to quickly find a contact name, move the joystick down in standby mode. You can key in the first characters of the name you are searching for in the pop-up window.

In addition the following options in the *Contacts* menu may also be available:

- *Add new contact* and *Delete*.
- *Copy* to copy names and phone numbers from the phone's contact directory to the SIM card's memory, or vice versa.

- *Settings* to select how the names and numbers in contacts are displayed. Select *Memory status* to view the free and used memory capacity.
- *Speed dials* to assign a number to a speed dialling key. To activate speed dialling see Call settings on page 65.
- *Service numbers* to call the service numbers of your service provider if the numbers are included on your SIM card (network service).
- *My numbers* to view the phone numbers assigned to your SIM card. Only shown, if the numbers are included on your SIM card.
- *Caller groups* to arrange the names and phone numbers saved in the memory into caller groups with different ringing tone.

## Editing or deleting details

Search for the contact that you want to edit or delete and press **Details**. Scroll to the name, number, text item or image that you want to edit or delete and press **Options**.

- To edit a name, number or text item or to change image, select *Edit name*, *Edit number*, *Edit detail* or *Change image*.

Note that you cannot edit or delete an ID when it is in *IM contacts* or in the *Subscribed names* list.

- To delete a number or text item, select *Delete number* or *Delete detail*.
- To delete an image attached to the contact, select *Delete image*. Deleting an image from contacts does not delete it from *Gallery*.

## My presence

With the presence service (network service) you can share your presence status with other users, for example your family, friends and colleagues with compatible devices and access to the service. Presence status includes your availability, status message and personal logo. Other users who have access to the service and who are requesting your information are able to see your status. The requested information is shown in *Subscribed names* in the viewer's *Contacts* menu. You can personalise

the information that you want to share with others and control who can see your status.

Before you can use presence, you need to subscribe to the service. To check the availability, for charging details and to subscribe to the service, contact your service provider, from whom you also receive your unique ID and password and the settings for the service. To set the required settings for the presence service, see Instant messaging settings on page 45. While you have connected to the presence service, you can use the other functions of the phone, and the presence service is active in the background.

Press **Menu** and select *Contacts* and *My presence*. Select

- *Connect to 'My presence' service* (or *Disconnect*).
- *My current presence* to change your presence status. Select
  - *View current presence* and select *Private pres.* or *Public pres.*.
  - *My availability* to set your availability status to *Available* indicated by , or to *Busy* indicated by , or to *Not available* indicated by .
  - *My presence message* and key in the text to be shown to other persons or press **Options** and select *Previous msgs.* and select an old message as the status message.
  - *My presence logo* to select your personal logo from the *Graphics* folder in the gallery. If you select the *Default*, the logo is not published.
  - *Show to* to select the groups to whom you want to show your presence status or if not to show it at all.

Select *Private and public* and contacts in your private list are able to see all your presence information: availability, status message and logo. Other contacts can see only your availability.

Select *Private viewers* and the contacts in your private list can see all your presence information (availability, status message and logo). Other users will not see any information.

If you select *No one*, no one can see your presence information.

- *Viewers* and select

- *Current viewers* to view all the persons who have subscribed to your presence information.
- *Private list* is a list of the persons who are allowed to view all your presence information, including availability, status message and logo. You can manage your own private list. Other persons who are not in the private list, can see only your availability.
- *Blocked list* to view all the persons you have blocked from viewing your presence information.
- *Settings* and select
  - *Show current presence in idle* to show the current status indicator in standby mode.
  - *Synchronise with profiles* to select whether you want to update your *My presence message* and *My availability* manually or automatically by linking them to the currently active profile. See also Profiles on page 62. Note that you cannot link a personalised status logo to a Profile.
  - *Connection type* to select if the phone connects automatically to the service when the phone is switched on.
  - *IM and my presence settings*, see Instant messaging settings on page 45.

## Subscribed names

You can create a list of contacts whose presence status information you want to be aware of. You can view the information if the contacts allow you to view it and if it is not prevented by the contact or network. You can view these subscribed names either by scrolling through the contacts or via the *Subscribed names* menu.

Ensure that the memory in use is either *Phone* or *Phone and SIM*.

To connect to the Presence service, press **Menu** and select *Contacts*, *My presence* and *Connect to 'My presence' service*.

## Adding contacts to the subscribed names

1. Press **Menu** and select *Contacts* and *Subscribed names*. If you have not connected to the Presence service, the phone asks if you want to connect now.
2. If you have no contacts on your list, press **Add**. Otherwise, press **Options** and select *Subscribe new*. The list of your contacts is shown.
3. Select a contact from the list and if the contact has an user ID saved, the contact is added to the subscribed names list. If there is more than one ID, select one of them. After subscription of the contact, *Subscription activated* is shown.

## Viewing the subscribed names

See also Searching for a contact on page 54 to view the presence information.

1. Press **Menu** and select *Contacts* and *Subscribed names*.

The status information of the first contact on the subscribed names list is displayed. The information that the person wants to give to others may include text and some of the following icons:

 ,  or  indicate that the person is either available, discreet or not available.

 indicates that the person's presence information is not available.

2. Press **Details** to view the details of the selected contact, or press **Options** and select

- *Subscribe new* to add a new contact to the list of subscribed names.
- *Chat* to start a conversation.
- *Send message* to send a text message to the selected contact.
- *Send SMS e-mail* to send an e-mail to the selected contact.
- *Send bus. card* to send a business card to the selected contact.
- *Unsubscribe* to remove the selected contact from the list of subscribed names.

## Unsubscribing a contact

- To unsubscribe a contact from the *Contacts* list, move the joystick down in standby mode and scroll to the contact that you want to unsubscribe. Press **Details** and **Details** again, select the ID and press **Options**. To unsubscribe, select *Unsubscribe* and press **Yes** to confirm.
- To unsubscribe via the *Subscribed names* menu, see Viewing the subscribed names on page 58.

## Copying contacts

You can copy names and phone numbers from the phone's memory to your SIM card's memory and vice versa. Note that any text items saved in the phone's internal memory, such as e-mail addresses, will not be copied to the SIM card.

Press **Menu** and select *Contacts* and *Copy*. Select the copying direction, *From phone to SIM card* or *From SIM card to phone*.

If you select *One by one*, scroll to the name that you want to copy and press **Copy**.

*Default numbers* is shown if you copy from the phone to the SIM card. Only the default numbers will be copied.

To choose whether you want to keep or delete the original names and numbers, select *Keep original* or *Move original*.

If you select *All* or *Default numbers*, press **Yes** when *Copy contacts?* or *Move contacts?* is displayed.

## Sending and receiving a business card

You can send and receive a person's contact information from a compatible device as a business card. When you have received a (MMS) business card, press **Show** (, **Play**) and **Save** to save the business card in the phone's memory. To discard the business card, press **Exit** and then **Yes**.

To send a business card, search for the name and phone number you want to send from contacts, press **Details** and **Options** and select **Send**

*bus. card.* Select *Via infrared*, *Via text message* (network service) or *Via multimedia* (network service).

## Speed dials

To assign a number to a speed-dialling key, press **Menu** and select *Contacts* and *Speed dials* and scroll to the speed-dialling key number that you want.

Press *Assign*, or if a number has already been assigned to the key, press *Options* and select *Change*. Press *Search*, and select first the name and then the number that you want to assign. If the *Speed dialling* function is off, the phone asks whether you want to activate it. See also *Speed dialling* in Call settings on page 65.

To make a call using the speed-dialling keys, see Speed dialling a phone number on page 23.

## Voice dialling

You can make a phone call by saying a voice tag that has been added to a phone number. Any spoken word(s), such as a person's name(s), can be a voice tag. You can add up to ten voice tags.

Before using voice tags, note that:

- Voice tags are not language-dependent. They are dependent on the speaker's voice.
- You must say the name exactly as you said it when you recorded it.
- Voice tags are sensitive to background noise. Record voice tags and use them in a quiet environment.
- Very short names are not accepted. Use long names and avoid similar names for different numbers.



**Note:** Using voice tags may be difficult in a noisy environment or during an emergency, so you should not rely solely upon voice dialling in all circumstances.

## **Adding and managing voice tags**

Save or copy in the phone's memory the contacts to which you want to add a voice tag. You can also add voice tags to the names in the SIM

card, but if you replace your SIM card with a new one, you first need to delete the old voice tags before you can add new ones.

Voice tags use shared memory, see Shared memory on page 11.

1. In standby mode, move the joystick down.
2. Scroll to the contact to which you want to add a voice tag and press **Details**. Scroll to the phone number you want and press **Options**.
3. Select **Add voice tag**.
4. Press **Start**, and say clearly the word(s) you want to record as a voice tag. After recording, the phone plays the recorded tag. A symbol  appears after the phone number with a voice tag.

To check the voice tags, press **Menu** and select **Contacts** and **Voice tags**. Scroll to the contact with the voice tag that you want, and press **Select** to see the options to listen to, delete or change the recorded voice tag.

### **Making a call by using a voice tag**

In standby mode, press and hold the right selection key. A short tone is heard and **Speak now** is displayed. Say the voice tag clearly. The phone plays the recognised voice tag and then dials the phone number of the voice tag after 1.5 seconds.

## **Service numbers**

Your service provider may have included service numbers in your SIM card. These menus are only shown if supported by your SIM card.

## **My numbers**

The phone numbers assigned to your SIM card are saved in **My numbers** if this is allowed by the card. To view the numbers, press **Menu** and select **Contacts** and **My numbers**. Scroll to the desired name or number, and press **View**.

## **Caller groups**

You can arrange the names and phone numbers saved in **Contacts** into caller groups. For each caller group, you can set the phone to sound a specific ringing tone and show a selected graphic on the display when

the phone recognises a call from a phone number in the group. To set the phone to ring only upon calls from phone numbers belonging to a selected caller group, see *Alert for* in Tone settings on page 63.

Press **Menu** and select *Contacts* and *Caller groups* and select the desired caller group. Select:

- *Group name*, key in a new name for the caller group and press **OK**.
- *Group ringing tone* and select the ringing tone for the group.
- *Group logo* and select *On* to set the phone to display the group logo, *Off* not to display it, or *View* to view the logo.
- *Group members* to add a name to the caller group, press **Add**. Scroll to the name you want to add to the group and press **Add**. To remove a name from a caller group, scroll to the name that you want to remove, and press **Options** and select *Remove contact*.

## ■ Settings



### Profiles

Your phone has various setting groups, profiles, for which you can customise the phone tones for different events and environments. Personalise the profiles to your own liking and activate a profile to use it. Available profiles are *General*, *Silent*, *Meeting*, *Outdoor*, *My style 1*, and *My style 2*.

Press **Menu**, and select *Settings* and *Profiles*. Scroll to a profile and press **Select**.

- To activate the selected profile, select *Activate*.
- To personalise the profile, select *Personalise*. Select the setting you want to change and make the changes.
- To set the profile to be active until a certain time up to 24 hours, select *Timed* and set the time for the profile setting to end. When the time set for the profile expires, the previous profile that was not timed becomes active.



**Tip:** To change the profile quickly in standby mode, press the power key  , scroll to the profile that you want to activate and press **Select**.

## Themes

A theme is a package that may include a screen saver, a wallpaper image, a ringing tone and a colour scheme to customise your phone for different events and environments. Themes are stored in *Gallery*.

Press **Menu**, and select *Settings* and *Themes*. To activate a theme, select *Select theme* to view the *Themes* folder in *Gallery*. Open the folder and scroll to a theme. Press *Options* and select *Apply theme*. See also *Gallery* on page 72. To download new themes, select *Theme downloads*. See *Downloading* on page 97.

## Tone settings

You can change the settings of the selected active profile.

Press **Menu**, and select *Settings* and *Tone settings*. Select and change *Incoming call alert*, *Ringing tone*, *Ringing volume*, *Vibrating alert*, *Message alert tone*, *Instant message alert tone*, *Keypad tones* and *Warning tones*. You can find the same settings in the *Profiles* menu, see *Profiles* on page 62.

Select *Alert for* to set the phone to ring only upon calls from phone numbers that belong to a selected caller group. Scroll to the caller group you want to select or choose *All calls* and press **Mark**.

## Personal shortcuts

With personal shortcuts you get quick access to frequently used phone functions.

### Right selection key

Press **Menu**, and select *Settings*, *Personal shortcuts* and *Right selection key* to allocate one phone function from a predefined list to the right selection key. See also *Standby mode* on page 20. This menu is not shown in some operator variants.

## Go to options

You can allocate phone functions from a predefined list to the left selection key.

Press **Menu**, and select *Settings* and *Personal shortcuts*. Select *Select 'Go to' options* to choose the functions that you want to appear in the shortcut list. Select *Organise 'Go to' options* to rearrange the functions on your personal shortcut list. See also Standby mode on page 20.

## Voice commands

You can have phone functions which can be activated by saying a voice tag. Up to five functions can be selected for voice tag.

Press **Menu**, and select *Settings*, *Personal shortcuts* and *Voice commands*. Select the function folder that you want, scroll to the function to which you want to add a voice tag and press **Add**. A voice tag is indicated with  .

To add a voice command, refer to the instructions in section Adding and managing voice tags on page 60.

To activate a voice command, refer to the instructions in section Making a call by using a voice tag on page 61.

Among the functions you can activate by *Voice commands* are *Audible alerts* to check the battery status or the network status via acoustic signals (beeps):

one beep → low

two beeps → rather low

three beeps → rather strong

four beeps → strong

different tone → no network coverage

## Display settings

Press **Menu**, and select *Settings* and *Display settings*.

- Select *Wallpaper* to set your phone to display a background image, known as wallpaper, when the phone is in standby mode.

- Select *Colour schemes* to change the colour in some display components, for example indicators and signal and battery bars, and the background image that appears when using a menu function.
- Select *Menu view* to set the way the phone displays the main menu.
- Select *Operator logo* to set your phone to display or hide the operator logo.
- Select *Screen saver* and *Selects. saver* to choose an animation or a still image as screen saver from *Gallery*. Select in *Time-out* the time after which the screen saver will be activated. Select *On* to activate the screen saver.

Independent of the screen saver settings, for power saving purposes, a digital clock view will be activated when no function of the phone has been used for a certain time. See Power saving on page 21.

## Time and date settings

Press **Menu**, and select *Settings* and *Time and date settings*.

Select *Clock* to set the phone to show the clock in standby mode, adjust the clock and select the time zone and the time format.

Select *Date* to set the phone to show the date in standby mode, set the date, and select the date format and date separator.

Select *Auto-update of date & time* (network service) to set the phone to automatically update the time and date according to the current time zone.

## Call settings

Press **Menu**, and select *Settings* and *Call settings*. Select

- *Automatic volume control* and the phone will automatically adjust the speaker volume according to the background noise.
- *Call divert* (network service) to divert your incoming calls. For details, contact your service provider.
- *Anykey answer* and *On* and you can answer an incoming call by briefly pressing any key, except  , selection keys — and —, the PTT key and .

- *Automatic redial* and *On* and your phone will make a maximum of ten attempts to connect the call after an unsuccessful call attempt.
- *Speed dialling* and *On* and the names and phone numbers assigned to the speed-dialling keys, from 2<sup>abc</sup> to 9<sup>wxyz</sup>, can be dialled by pressing and holding the corresponding number key.
- *Call waiting* and *Activate* and the network will notify you of an incoming call while you have a call in progress (network service). See Call waiting on page 24.
- *Summary after call* and *On* and the phone will briefly display the approximate duration and cost (network service) of the call after each call.
- *Send my caller ID* (network service) and select *Yes* or *Set by network*.
- *Line for outgoing calls* (network service) to select phone line 1 or 2 for making calls. This option is only shown if supported by your SIM card.

## Phone settings

Press **Menu**, and select *Settings*, *Phone settings*. Select

- *Phone language* to set the display language of your phone. If you select *Automatic* the phone selects the language according to the information on the SIM card.
- *Memory status* to view how much memory is available in the phone's memory.
- *Automatic keyguard* to set the keypad of your phone to lock automatically after a pre-set time delay when the phone is in standby mode and no function of the phone has been used. Select *On* and you can set the time from 5 seconds to 60 minutes.

When the keyguard is on, calls still may be possible to the official emergency number.

- *Cell info display* and *On* to receive information from the network depending on the network cell used (network service).
- *Welcome note* and key in the note you would like to be shown briefly when the phone is switched on. To save the note, press **Save**.

- *Operator selection* and *Automatic* and the phone automatically selects one of the cellular networks available in your area. With *Manual*, you can select a network that has a roaming agreement with your home network operator.
- *Confirm SIM service actions*. See SIM services on page 101.
- *Help text activation* to set the phone to show or hide the help texts.
- *Start-up tone* to set the phone to play or not to play a start-up tone when the phone is switched on.

## Connectivity

You can connect the phone to a compatible device via infrared and you can also define the settings for (E)GPRS dial-up connections.

### **Infrared**

You can set up the phone to receive data through its infrared (IR) port. To use an IR connection, the device with which you want to establish a connection must be IrDA compliant. You can send or receive data such as business cards, graphics, images, sound clips, videos and calendar notes to or from a compatible phone or data device (for example, a computer) via the IR port of your phone.

Do not point the IR (infrared) beam at anyone's eye or allow it to interfere with other IR devices. This device is a Class 1 Laser product.

### **Sending and receiving data via IR**

1. Ensure that the IR ports of the sending and receiving devices are pointing at each other and that there are no obstructions between the devices.
2. To activate the IR port of your phone to receive data via IR, press *Menu*, and select *Settings*, *Connectivity* and *Infrared*.
3. The user of the sending phone selects the desired IR function to start data transfer.

If data transfer is not started within two minutes after the activation of the IR port, the connection is cancelled and has to be started again.

## IR connection indicator

- When  is shown continuously, the IR connection is activated and your phone is ready to send or receive data via its IR port.
- When  blinks, your phone is trying to connect to the other device or a connection has been lost.

## (E)GPRS

General Packet Radio Service (GPRS) is a network service that allows mobile phones to be used for sending and receiving data over an Internet Protocol (IP)-based network. GPRS is a data bearer that enables wireless access to data networks such as the Internet.

EGPRS (Enhanced GPRS), also known as EDGE (Enhanced Data Rates for Global Evolution), is similar to GPRS. EDGE is a radio interface modulation technique which increases GPRS data rates. For more information on the availability of EGPRS and data transfer speed, contact your network operator or service provider.

The applications that may use (E)GPRS are MMS, Instant messaging, browsing sessions, e-mail, remote SyncML, Java application downloading, push to talk and the PC dial-up (for example, Internet and e-mail).

Before you can use (E)GPRS technology, contact your network operator or service provider for availability of and subscription to the (E)GPRS service and save the (E)GPRS settings for each of the applications used over (E)GPRS. For information on pricing, contact your network operator or service provider.

Note that when you have selected GPRS as a data bearer, the phone uses EGPRS instead of GPRS if this is available in the network. You cannot select between EGPRS and GPRS but for some applications you may be able to select either GPRS or *GSM data* (CSD, circuit switched data).

## (E)GPRS connection

Press *Menu*, and select *Settings*, *Connectivity*, *GPRS* and *GPRS connection*.

- Select *Always online* to set the phone to automatically register to an (E)GPRS network when you switch the phone on.

- Select *When needed* and the (E)GPRS registration and connection are established when an application using (E)GPRS needs it and closed when you end the application.

## (E)GPRS modem settings

You can connect the phone via infrared or a data cable connection to a compatible PC and use the phone as a modem to enable (E)GPRS connectivity from the PC.

To define the settings for (E)GPRS connections from your PC, press **Menu**, and select *Settings*, *Connectivity*, *GPRS* and *GPRS modem settings*.

- Select *Active access point* and activate the access point that you want to use.
- Select *Edit active access point* to change the access point settings.
  - Select *Alias for access point*. Key in the name that you would like for the activated access point and press **OK**.
  - Select *GPRS access point*. Key in the access point name (APN) to establish a connection to an (E)GPRS network and press **OK**. Contact your network operator or service provider for the APN.

You can also set the (E)GPRS dial-up service settings (access point name) on your PC using the Nokia Modem Options software, see PC Suite on page 102. If you have set the settings both on your PC and on your phone, note that the PC's settings will be used.

## Enhancement settings

The enhancement settings menu is shown only if the phone is or has been connected to a compatible mobile enhancement, such as chargers and handsfree units.

Press **Menu**, and select *Settings* and *Enhancement settings*. You can select an enhancement menu if the corresponding enhancement is or has been connected to the phone. Depending on the enhancement, you can select some of the following options:

- *Default profile* to select the profile that you want to be automatically activated when you connect to the selected enhancement. You can select another profile while the enhancement is connected.
- *Automatic answer* to set the phone to answer an incoming call automatically after 5 seconds. If the *Incoming call alert* is set to *Beep once* or *Off*, automatic answer will not be in use.
- *Lights* to set the lights permanently *On*. Select *Automatic* to set the lights on for 15 seconds after a keypress.
- When the phone is connected to the full car kit, select *Ignition detector* and *On* to automatically switch off the phone approximately 20 seconds after you have switched off the car's ignition.

## Configuration settings

Some of the network services need to have the correct configuration settings on your phone. Get the settings from your SIM-card, a service provider as a configuration message or key in your personal settings manually. Configuration settings from up to ten different service providers can be stored in the phone and can be managed within this menu.

To save the configuration settings received by a configuration message sent by a service provider, see Configuration settings service on page 13.

Press **Menu**, and select *Settings*, *Configuration settings*. Select

- *Default configuration settings* to view the list of service providers stored on the phone (the default service provider is highlighted) and to select another service provider as default. Scroll to a provider and press **Details** to view the list with supported applications. To delete a service provider from the list, press **Options** and select *Delete*.
- *Activate default in all applications* to set the applications to use the settings from the default service provider.
- *Preferred access point* to select another access point. Normally the access point from your preferred network operator is to be used.

## Keying in the settings manually

To enter, view and edit the settings manually, press **Menu**, and select *Settings*, *Configuration settings* and *Personal configuration settings*.

To add a new configuration, press **Add new** or press **Options** and select *Add new*. Choose one of the application types from the list and key in all the necessary settings. To activate the settings, press **Back** and **Options** and select *Activate*.

To view or to edit the user-defined settings select the application that you want to view and select the setting to edit.

## Security settings

When calls are restricted, calls still may be possible to the official emergency number programmed into your device.

Press **Menu**, and select *Settings* and *Security settings*. Select

- *PIN code request* to set the phone to request your PIN code every time the phone is switched on. Some SIM cards do not allow the PIN code request to be turned off.
- *Call barring service* (network service) to restrict incoming calls to and outgoing calls from your phone. A barring password is required.
- *Fixed dialling* to restrict your outgoing calls to selected phone numbers if this function is supported by your SIM card.
- *Closed user group* (network service) to specify the group of people whom you can call and who can call you.
- *Security level*. Select *Phone* and the phone will request the security code whenever a new SIM card is inserted into the phone.  
Select *Memory* and the phone will request the security code when the SIM card's memory is selected and you want to change the memory in use.
- *Access codes* to change the security code, PIN code, PIN2 code or barring password.
- *Code in use* to specify whether the UPIN or PIN code should be active.

## Restore factory settings

To reset some of the menu settings to their original values, press **Menu**, and select *Settings* and *Restore factory settings*.

## ■ **Operator menu**

This menu lets you access a portal to services provided by your network operator. This menu is operator specific. The name and the icon depend on the operator. For more information, contact your network operator.

The operator can update this menu with a service message. For more information, see *Service inbox* on page 97.

## ■ **Gallery**

In this menu, you can manage graphics, images, video clips, recordings and tones. These files are arranged in folders.



Your phone supports a digital rights management (DRM) system to protect acquired content. A piece of content, for example a ringing tone, can be protected and associated with certain usage rules, for example number of usage times and a certain usage period. The rules are defined in the content's activation key which can be delivered either together with the content or independently depending on the service provider. You may be able to update these activation keys. Always check the delivery terms of any content and activation key before acquiring them, as they may be subject to a fee.

Copyright protections may prevent some images, ringing tones, and other content from being copied, modified, transferred or forwarded.

1. Press **Menu** and select *Gallery*. A list of folders is shown. *Images*, *Video clips*, *Themes*, *Graphics*, *Tones* and *Recordings* are the original folders on the phone.
2. Scroll to the desired folder and press **Open** to view a list of files in the folder or press **Options** and one of the options may be available: *Delete folder*, *Move*, *Rename folder*, *Downloads*, *Details*, *Type of view*, *Sort*, *Add folder*, *Memory status* and *Activation key list*.

3. If you have opened a folder, select the file that you want to view and press **Open**. If **Themes** was selected before, scroll to a theme and press **View** to open the theme package.

Select and open a file, or press **Options** and use one of the following functions that may be available for the selected file:

**Delete, Send, Edit image, Move, Rename, Set as wallpaper, Set as ring tone, Apply theme, Details, Type of view, Sort, Delete all, Open in sequence, Mute audio (Unmute audio), Set contrast, Add folder, Memory status, Activate content and Activation key list.**

## ■ Media



### Camera

You can take photos or record video clips with the phone's built-in camera. The camera produces pictures in JPEG format and the video clips in 3GP format.

The Nokia 6020b device supports an image capture resolution of 640 x 480 pixel. The image resolution in these materials may appear different.

#### Taking a photo or a video clip

Press **Menu**, and select **Media, Camera**. The live image appears on the display, and you can use the display as a viewfinder. Move the joystick to the left or to the right to change the camera mode: **Standard photo, Portrait photo** or **Video**, or if the lighting is dim for taking photos to **Night mode**. If you want to add the photo to a name or a phone number saved in contacts, select **Portrait photo**.

- To take a photo, press **Capture**. A shutter sound is heard. The phone saves the photo in the **Images** folder of the **Gallery** menu.

If you want to send the photo as a multimedia message, press **Send**.

Or select **Back** to take another photo, or press **Options** and select, for example, an option to rename or zoom the saved photo, to set the contrast, to see the details, to set the photo as wallpaper, to open the gallery or to delete it.



**Tip:** You can activate the self-timer of the camera for one picture at a time. Put the camera in photo mode, press **Options** and select **Self-timer**. Press **Start**, and after the timeout, the camera takes the photo. While the self-timer is running, a beeping sound is heard.

- To start recording a video clip, press **Record**. When you are recording a video clip, the remaining recording time is shown on the top of the display.

To pause the recording, press **Pause** and to resume the recording, press **Continue**. To stop the recording, press **Stop**. The phone saves the recording in the **Video clips** folder of the **Gallery** menu. To view the recorded video clip, press **Play**.

Select **Back** to start recording a new video clip, or press **Options** and select, for example, an option to delete or rename the saved video clip, to set the contrast, or to see the details, to send it as a multimedia message, or to open the gallery, or to mute/unmute the microphone.

## Camera settings

Press **Menu**, and select **Media, Camera**. Press **Options** and depending on the active camera mode the following options may appear: **Change mode**, **Self-timer**, **Mute/Unmute**, **Open gallery**, or **Settings** to adjust the camera settings:

- **Default mode** to define the default camera mode.
- **Image quality** to define how much the photo file will be compressed when saving the image. Select **High**, **Normal** or **Basic**. **High** provides the best image quality but uses more memory.
- **Video clip length** to select the length of the video clips that you record. The maximum length of a video clip is approximately 50 seconds in duration, depending on conditions. Only video clips that are of default length or shorter can be sent in a multimedia message.
- **Camera sounds** to set the shutter sound and the self-timer tone to **On** or **Off**.

- **Default title** to define the title that will be used when saving a photo or a video clip. If you select **Automatic**, the default title will be used, or if you select **My title**, you can key in or edit a new title.

## Voice recorder

You can record pieces of speech, sound or an active call for up to 5 minutes. For example, this is useful when recording a name and phone number for writing down later.

The recorder cannot be used when a data call or GPRS connection is active.

### Recording

1. Press **Menu**, select **Media** and **Voice recorder**.



**Note:** If push to talk is not available in your network service, you can also press the PTT key to activate the **Voice recorder**.

2. To start the recording, select **Record**. To start the recording during a call, press **Options**, and select **Record**. While recording a call, all parties to the call will hear a faint beeping sound every 5 seconds.
3. To end the recording, press **Stop**. The recording will be saved in the **Recordings** folder of the **Gallery** menu.
4. To listen to the latest recording, select **Play last recorded**.
5. To send the latest recording, select **Send last recorded**. The recording can be sent via IR or MMS.

### List of recordings

Press **Menu**, and select **Media**, **Voice recorder** and **Recordings list**. The list of folders in the **Gallery** is shown. Open **Recordings** to see the list with recordings.

## ■ Push to talk

Push to talk over cellular is a two-way radio service available over a GSM/GPRS cellular network (network service). Push to talk provides direct voice communication connected with the push of the PTT key.



You can use push to talk to have a conversation with one person or with a group of people having compatible devices. When your call is connected, the person or group you are calling does not have to answer the phone. Besides the GPRS counters, the phone registers only one-to-one calls in the recent call lists in *Call register*. The participants should confirm the reception of any communications where appropriate as there is no other confirmation whether the recipient(s) have heard the call.

To check availability and costs, and to subscribe to the service, contact your network operator or service provider. Roaming services may be more limited than for normal calls.

If the push to talk service is not available from your provider, the PTT key of your phone will activate the *Voice recorder*.

Before you can use the push to talk service, you must define the required push to talk service settings.

While you are connected to the push to talk service, you can use the other functions of the phone. The push to talk over cellular service is not connected to traditional voice communication, and therefore many of the services available for traditional voice calls (for example, voice mailbox) are not available for push to talk over cellular communications.

## Push to talk menu

Press **Menu**, and select *Push to talk*. The push to talk menu selection list is shown.

- To connect to or disconnect from the push to talk service, select *Switch PTT on* or *Switch PTT off*.
- To view the received callback requests, select *Callback inbox*.
- To view the list of push to talk groups, select *Group list*.
- To view the list of contacts to which you have added the push to talk address, select *Contacts list*.
- To add a new push to talk group to the phone, select *Add group*.
- To set the push to talk settings for use, select *PTT settings*.

- To set the required settings for the push to talk connection, select *Settings* and then *Configuration settings*.
- To open the browser and to connect to the push to talk network portal provided by the service provider, select *Web*.

## Connecting to and disconnecting from the push to talk service

- To connect to the push to talk service, press *Menu*, and select *Push to talk*, and *Switch PTT on*.  indicates the push to talk connection.  indicates that the service is temporarily unavailable. The phone automatically tries to reconnect to the service until you disconnect from the push to talk service. If you have added group(s) to the phone, you are automatically joined to the active (*Default* or *Listened*) groups, and the name of the default group is displayed in standby mode.
- To disconnect from the push to talk service, select *Switch PTT off*.

## Callback requests

If you make a one-to-one call and do not get a response, you can send a request for the person to call you back.

When someone sends you a callback request, *Callback request received* is displayed in standby mode. When you receive a callback request from someone who is not in your contacts list, you can save the name to your contacts.

### Sending a callback request

- To send a callback request from the contacts list in the *Push to talk* menu, select *Contacts list*. Scroll to a contact, press *Options*, and select *Send callback*.
- To send a callback request from the *Contacts*, press the scroll key down in standby mode, and scroll to the desired contact. Press *Details*, scroll to the push to talk address, press *Options*, and select *Send callback*.

- To send a callback request from the group list in the *Push to talk* menu, select *Group list*, and scroll to the desired group. Press *Options*, select *Active members*, scroll to the desired contact, press *Options*, and select *Send callback*.
- To send a callback request from the callback request list in the *Push to talk* menu, select *Callback inbox*. Scroll to a contact, press *Options*, and select *Send callback*.

#### Responding to a callback request

1. To open the *Callback inbox*, press *View*. The list of nicknames of the persons who have sent you callback requests is shown.
2. To make a one-to-one call, press the PTT key.
3. To send a call request back to the sender, press *Options*, and select *Send callback*.

To delete the request, press *Delete*.

#### Saving the callback request sender

1. To open the *Callback inbox*, press *View*. The list of nicknames of the persons who have sent you callback requests is shown.
2. To view the sender's push to talk address, press *Options*, and select *View PTT address*.

To save a new contact or to add the push to talk address to a contact, press *Options*, and select *Save as* or *Add to contact*.

## Making and receiving a push to talk call

Set the phone to use either loudspeaker or earpiece for push to talk communication. When the earpiece is selected, you can use the phone normally by holding it to your ear.



**Warning:** Do not hold the device near your ear when the loudspeaker is in use, because the volume may be extremely loud.

When connected to the push to talk service, you can make or receive group calls or one-to-one calls. One-to-one calls are calls you make to only one person.

## Making a group call

- To make a call to the default group, press the PTT key. A tone sounds indicating that the access is granted, and the phone displays your nickname and group name.
- To make a call to a non-default group, select *Group list* in the push to talk menu, scroll to the desired group, and press the PTT key.
- Press and hold the PTT key the entire time you are talking, and hold the phone in front of you so that you can see the display. When you have finished, release the PTT key. Talking is allowed on a first-come, first-served basis. When someone stops talking, the first person to press the PTT key can talk next.

## Making a one-to-one call

- To start a one-to-one call from the list of contacts to which you have added the push to talk address received from the service provider, select *Contacts list*. Scroll to a contact, and press the PTT key.

You can also select the contact from the *Contacts* list.

- To start a one-to-one call from the list of push to talk groups, select *Group list*, and scroll to the desired group. Press *Options*, select *Active members*, scroll to the desired contact, and press the PTT key.
- To start a one-to-one call from the list of callback requests you have received, select *Callback inbox*. Scroll to the desired nickname, and press the PTT key.

## Receiving a group or a one-to-one call

- A short tone notifies you of an incoming group and one-to-one call. When receiving a group call, the group name and the nickname of the caller are displayed. When receiving a one-to-one call from a person whose information you have saved in *Contacts*, the saved name is displayed if identified; otherwise, only the nickname of the caller is displayed.
- You can either accept or reject an incoming one-to-one call if you have set the phone to first notify you of the one-to-one calls.
- If you press the PTT key to try to respond to a group while another member is talking, you hear a queuing tone and *Queuing* is displayed

as long as you press the PTT key. Press and hold the PTT key, and wait for the other person to finish, then you can talk.

## Adding one-to-one contacts

You can save the names of persons to whom you often make one-to-one calls.

- To add a push to talk address to a name in the *Contacts*:

Press the scroll key down in standby mode, scroll to the desired contact, and press **Details**. Press **Options** and select *Add detail* and *PTT address*.

- To add a contact to the push to talk contacts list:

To add the push to talk contact, open the push to talk menu, and select *Contacts list*. Press **Options**, and select *Add contact*.

- To add a contact from the group list:

When connected to the push to talk service, select *Group list*, scroll to the desired group, and press **Options**. Select *Active members*, scroll to the member whose contact information you want to save, and press **Options**. Select *Save as* to add a new contact, or *Add to contact* to add a push to talk address to a name in the *Contacts*.

## Creating and setting up groups

When you call a group, all members joined to the group hear the call simultaneously.

Each member in the groups is identified by a nickname, which is shown as a caller identification. Group members can choose a nickname for themselves in each group.

Groups are registered with a URL address. One user registers the group URL in the network by joining the group session the first time.

There are three types of push to talk groups:

- Provisioned groups are closed groups that allow only selected participants provisioned by the service provider to join in the groups.

- Ad hoc groups are groups that the users can create. You can create your own group, and invite members to the group.
- Ad hoc pro groups; you can create your own group from members in a provisioned group. For example, a business can have a closed group, plus separate groups created for certain business functions.

### Adding a group

1. Press **Menu**, and select *push to talk*, *Add group*, and *Guided*.
2. To set the security level for the group, select *Open group* or *Secured group*.

If you select *Secured group*, the phone automatically creates a scrambled part to the group address that the members cannot view when they receive the invitation to the group. Only the person who creates the secured group, can invite more members to the group.

3. Key in the name for the group, and press **OK**.
4. Select the status for the group: *Default*, *Listened*, or *Inactive*. The phone indicates that the group is saved and its status. *Default* and *Listened* are active groups. When you press the PTT key to make a group call, the default group is called if you have not scrolled to any other group or contact.
5. To send an invitation to the group, press **Yes** when the phone requests for sending an invitation. You can send the invitation using a text message or infrared.

The members you invite to the open groups can also invite more members to the group.

### Receiving an invitation

1. When you receive a text message invitation to a group, *Group invitation received*: is displayed.
2. To view the nickname of the person who sent the invitation and the group address if the group is not a secured group, press **View**.
3. To add the group to your phone, press **Save**, and to set the status for the group, select *Default*, *Listened*, or *Inactive*.

To reject the invitation, press **Exit** and **Yes**, or press **View**, **Discard**, and **Yes**.

## Settings for push to talk

There are two kinds of push to talk settings: settings for use and for connecting to the service.

You may receive the settings for connecting to the service as a configuration message from your network operator or service provider, see Configuration settings service on page 13. To key in the settings manually, see Configuration settings on page 70.

To access the settings for connecting to the service, press **Menu**, and select **Push to talk**, **Config. settings**. Select from following:

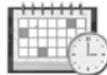
- **Configuration**. Only the configurations that support the push to talk service are shown. Select a service provider, or **Default**, or **Personal config.** for push to talk service. You may receive the push to talk settings as a configuration message, see Configuration settings service on page 13. To key in the configuration settings manually, see Configuration settings on page 70.
- **Account** and select a push to talk service account contained in the active configuration settings.
- Select one by one to set the following: **PTT user name**, **Default nickname**, **PTT password**, **Domain** and **Server address**.

To access the push to talk settings for use, press **Menu**, select **Push to talk** and **PTT settings**. Select from following:

- **1 to 1 calls** and **On** to select the phone to allow the reception of incoming one-to-one calls. If you select **Off**, you can make but not receive one-to-one calls. The service provider may offer some services that override these settings.  
**1 to 1 calls** and **Notify** to set the phone to first notify you of incoming one-to-one calls with a ringing tone.
- **Listened groups** and **On** to activate the listened groups.

- *PTT status in startup* and *Yes* to set the phone to automatically connect to the push to talk service when you switch the phone on.
- *Send my PTT address* and *No* to hide your push to talk address from group and one-to-one calls.

## ■ Organiser



### Alarm clock

You can set the phone to alarm at a desired time. Press **Menu**, and select **Organiser** and **Alarm clock**.

To set the alarm, select *Alarm time*, and enter the alarm time. To change the alarm time when the alarm time is set, select *On*. Select *Repeat alarm* to set the phone to alert you on selected days of the week.

Select *Alarm tone* and select the default alarm tone, personalise the alarm tone by selecting one from the ringing tone list or from Gallery.

### When the alarm time expires

The phone will sound an alert tone, and flash *Alarm!* and the current time on the display, even if the phone was switched off. Press **Stop** to stop the alarm. If you let the phone continue to sound the alarm for a minute or press **Snooze**, the alarm stops for about 10 minutes and then resumes.

If the alarm time is reached while the device is switched off, the device switches itself on and starts sounding the alarm tone. If you press **Stop**, the device asks whether you want to activate the device for calls. Press **No** to switch off the device or **Yes** to make and receive calls. Do not press **Yes** when wireless phone use may cause interference or danger.

### Calendar

The calendar uses shared memory, see Shared memory on page 11.

Press **Menu**, and select **Organiser** and **Calendar**.

The current day is indicated by a frame. If there are any notes set for the day, the day is in bold type. To view the day notes, press **View**. To view a

week, press **Options** and select **Week view**. To view a single note, press **View**.

Other options for the calendar view may be options for creating a note, for deleting, editing, moving and repeating a note and for copying a note to another day, or for sending a note as a note directly to another compatible phone's calendar or as a text message or a multimedia message. In **Settings** you can set the date, time, time zone, date or time format, or the first day of the week. In **Auto-delete notes** you can set the phone to delete old notes automatically after a specified time.

To delete all notes in the calendar, select the month or week view, press **Options** and select **Delete all notes**.

### Making a calendar note

Press **Menu**, and select **Organiser** and **Calendar**. Scroll to the date you want, press **Options** and select **Make a note**. Select one of the following note types:  **Meeting**,  **Call**,  **Birthday**,  **Memo** or  **Reminder**.

### When the phone sounds an alarm for a note

The phone beeps, and displays the note. With a call note  on the display, you can call the displayed number by pressing  . To stop the alarm and to view the note, press **View**. Press **Snooze** and the phone sounds an alarm again after 10 minutes. To stop the alarm without viewing the note, press **Exit**.

## To-do list

You can save a note for a task that you have to do, select a priority level for the note and mark it as done when you have completed it. You can sort the notes by priority or by date. The to-do list uses shared memory, see Shared memory on page 11.

Press **Menu**, and select **Organiser** and **To-do list**.

Press **Add note** to make a note. Key in the note and press **Save**. Select the priority for the note. The phone automatically sets the deadline without an alarm for the note. To change the deadline, view the note and select the deadline option.

Or scroll to a note and press **View** or press **Options**. To add a new note, select **Add**. For example, you can also view and delete the selected note and delete all the notes that you have marked as done. You can sort the notes by priority or by deadline, send a note to another phone, save a note as a calendar note, or access the calendar. While viewing a note, you can also, for example, select an option to edit the selected note, edit the deadline or priority for the note, or mark the note as done.

## Notes

You can use this application for writing and sending notes to compatible devices via MMS. The Notes application uses shared memory, see Shared memory on page 11.

Press **Menu** and select **Organiser** and **Notes**. The phone will ask you to set the date and time, if they have not already been set when you start to write a note. To add a note, press **Add note** or press **Options** and select **Make a note**. Key in the note and select **Save**. Or scroll to a note press **View** or press **Options** to see the options for notes.

## Wallet

In **Wallet** you can save personal information, for example, credit card numbers and addresses. The data that are saved in the wallet can easily be retrieved while browsing to automatically fill in data fields, for example, when making purchases and the service supports wallet functionality. You can also save access codes to mobile services that request a user name and password.

The data in the wallet are protected with a wallet code that you can define when you access wallet for the first time. At **Create wallet code**: key in the code and press **OK** to confirm it and at **Verify wallet code**: key in the code again and press **OK**. See also Wallet code (4 to 10 digits) on page 12.

If you want to delete all the content of the wallet and the wallet code, key in \*#7370925538# (\*#res wallet# in letters) in standby mode. You also need the phone's security code, see Access codes on page 11.

To add the content into the wallet menu, and to edit it, access the wallet menu. To use the content of the wallet in a mobile service, access the wallet via the browser, see Web on page 93.

## Accessing the wallet menu

To access the wallet menu, press **Menu**, select *Organiser* and *Wallet*. Key in your wallet code and press **OK**, see Wallet settings on page 87.

Select *Wallet profiles* to create card combinations, *Cards* to save personal card information, *Tickets* to save the notifications of e-tickets that you have bought via a mobile service, *Receipts* to save receipts of mobile purchases, *Personal notes* to save all kinds of personal information that you want to keep protected by the wallet PIN code, or *Settings*, see Wallet settings on page 87.

## Saving card details

Access the wallet and select *Cards*. Select the card type to save details: *Payment cards*, *Loyalty cards*, *Access cards*, *User info cards*, or *Address cards*. If no card is added, press **Add new**, otherwise, press **Options** and select **Add new**. Fill in the fields for the details and press **Done**.

If supported by your service provider, you can also receive card information to your phone as a configuration message. You will be notified as to which category the card belongs to. For availability of receiving card information as configuration settings, contact the card issuer or service provider.

## Personal notes

You can save personal notes, for example, account numbers, passwords, codes or notations.

Access the wallet and select *Personal notes*. Press **Options** and you can view, add, edit a selected note and sort notes either by name or date or delete notes. When viewing a note, you can edit or delete the selected note. The option *Send via text msg.* is for copying the note as a text message and *Copy to calendar* is for copying the note to the calendar as a memo. *Use detail* is for extracting numbers, e-mail addresses and web addresses from a note.

## Creating a wallet profile

When you have saved your personal card details, you can combine them together into a wallet profile. You can use the profile to retrieve wallet data from different cards while browsing.

1. Access the wallet and select *Wallet profiles*.
2. To create a new wallet profile if no profile is added, press **Add new**. Otherwise, press **Options** and select **Add new**.
3. Fill in the following fields and press **Done**. Select *Select payment card next*, *Select loyalty card next*, *Select access card next*, *Select user info card next*, *Select billing address next*, *Select shipping address next*, *Select receipt delivery address next*, *Select receipt delivery method next* and *Wallet profile name*:

## Wallet settings

Access the wallet and select *Settings*. Select *Change code* to change the wallet code. Select *RFID* to set the RFID ID with the *RFID code* and *RFID type*. (RFID = Radio Frequency Identification, technology to conduct commercial transactions using your phone).

## Guidelines for paying for your purchases with the wallet

- To do your shopping, access the desired service site that supports the wallet. The service needs to support the Electronic Commerce Modelling Language specification. See Making a connection to a service on page 94.

Choose the product that you want to buy and carefully read all information provided before your purchase.

The text may not fit within a single screen. Therefore, make sure to scroll through and read all of the text before your purchase.

- To pay for the items that you wish to buy, the phone asks whether you want to use wallet or not. The phone also asks for your wallet PIN code.
- Select the card that you want to pay with from the Payment cards list. Provided that the data form you receive from the service provider supports the Electronic Commerce Modelling Language

specification, the phone automatically fills in the credit card information or the wallet profile from the wallet.

- Approve the purchase, and the information is forwarded.
- You may receive an acknowledgement or a digital receipt of the purchase.
- To close the wallet, select *Close wallet*. If you do not use the wallet for 5 minutes, it will be automatically closed.

A cache is a memory location that is used to store data temporarily. If you have tried to access or have accessed confidential information requiring passwords, empty the cache after each use. The information or services you have accessed is stored in the cache.

To empty the cache, see Cache memory on page 98.

## Synchronisation

Synchronisation allows you to save your calendar and contacts data on a remote Internet server (network service) or on a compatible PC. If you have saved data on the remote Internet server, you can synchronise your phone by starting the synchronisation from your phone. You can also synchronise the data in your phone's contacts, calendar and notes to correspond to the data of your compatible PC by starting the synchronisation from your PC.

The contact data in your SIM card will not be synchronised.

### **Synchronising from your phone**

Before synchronising from your phone via internet, you need to subscribe to a synchronisation service and get the configuration settings from your provider. For more information on availability and the synchronisation service settings, contact your service provider.

To start the synchronisation from your phone:

1. Activate the connection settings you need for the synchronisation. See Settings for the synchronisation from your phone on page 89.
2. Press **Menu**, select *Organiser*, *Synchronisation*, *Server sync*. Select *Data to be synchronised* and mark the data to be synchronised and

press **Done**. Then select **Synchronise**. The marked data of the active set will be synchronised after confirmation.

### Settings for the synchronisation from your phone

You may receive the synchronisation settings as a configuration message from the service provider. For more information on availability and the synchronisation service settings, contact your service provider. For receiving the settings as a configuration message, see Configuration settings service on page 13. To key in the settings manually, see Configuration settings on page 70.

Press **Menu**, select **Organiser**, **Synchronisation** and **Server sync** and **Sync settings**. Select **Configuration** and scroll to the service provider whose settings you would like to activate and press **Select**. Select **Account** to see the accounts provided by the service provider. If more than one account is displayed choose the one you want to use.

### Synchronising from your compatible PC

To synchronise contacts, the calendar and the notes from your PC, use a data cable. You also need the PC Suite software of your phone installed on the PC. Start the synchronisation from the PC using PC suite.

Ensure that the phone is in standby mode and that the time and date are set.

## ■ Applications



### Games and applications

Your phone software may include some games and Java applications specially designed for this Nokia phone.

### Launching a game or an application

Press **Menu**, and select **Applications**, then **Games** and **Select game**, or **Collection** and **Select application**. Scroll to a game or an application and press **Open** or press **□**.

The following options may be available for games and applications:

- **Delete** to delete the game or application from the phone.

- *Details* to give additional information about the game or application.
- *Update version* to check if a new version is available for download from the services (network service).
- *Web page* to provide further information or additional data from an Internet page. This feature needs to be supported by the network.
- *App. access* to restrict the game or application from accessing the network to prevent you from accruing unexpected costs. Select *Communication* and *Network access*, *Messaging* or *Connectivity*, or select *Phone access* or *Auto-start*. Select in each category, if available, one of the following permissions: *Ask every time*, *Ask first time only*, *Always allowed*, *Not allowed*.

## Game and application downloads

Your phone supports J2ME™ Java applications. Make sure that the application is compatible with your phone before downloading it.

Press **Menu**, and select *Applications*, *Games* and *Game downloads* or *Collection* and *App. downloads*. The list of available bookmarks is shown. Select *More bookmarks* to access the list of bookmarks in the *Web* menu, see Bookmarks on page 96.

Select a bookmark to connect to the desired service. For the availability of different services, pricing and tariffs, contact your service provider.

 **Important:** Only install and use applications and other software from sources that offer adequate security and protection against harmful software.

Note that when downloading an application, it may be saved in the *Games* menu instead of the *Applications* menu.

## Game settings

Press **Menu**, and select *Applications*, *Games* and *App. settings* to set sounds, lights and shakes for games.

## Memory status for games and applications

To view the amount of memory available for game and application installations (third shared memory), press **Menu**, and select *Applications*, *Games* or *Collection* and then *Memory*.

The games and applications use shared memory, see Shared memory on page 11.

## Calculator

The calculator in your phone adds, subtracts, multiplies, divides, calculates the square and the square root and converts currency values.



**Note:** This calculator has limited accuracy and is designed for simple calculations.

Press **Menu**, and select *Applications*, *Extras* and *Calculator*. When '0' is displayed on the screen, key in the first number in the calculation, press  $\text{. } \#$  for a decimal point. Press **Options** and select *Add*, *Subtract*, *Multiply*, *Divide*, *Square*, *Square root* or *Change sign*. Key in the second number. To get the answer, press **Equals**. To start a new calculation, first press and hold **Clear**.

### Performing a currency conversion

Press **Menu**, and select *Applications*, *Extras* and *Calculator*. To save the exchange rate, press **Options** and select *Exchange rate*. Select either of the displayed options. Key in the exchange rate, press  $\text{. } \#$  for a decimal point, and press **OK**. The exchange rate remains in the memory until you replace it with another one. To perform the currency conversion, key in the amount to be converted, press **Options** and select *In domestic* or *In foreign*.

## Countdown timer

Press **Menu**, and select *Applications*, *Extras* and *Countdown timer*. Key in the alarm time in hours, minutes and seconds and press **OK**. If you wish, write your own note text which is displayed when the time expires, and press **Start** to start the countdown timer.

To change the countdown time, select *Change time*. To stop the timer, select *Stop timer*.

If the alarm time is reached when the phone is in standby mode, the phone sounds a tone and flashes the note text if it is set or else *Countdown time up*. Stop the alarm by pressing any key. If no key is

pressed, the alarm automatically stops within 30 seconds. To stop the alarm and to delete the note text, press **Exit**.

## Stopwatch

You can measure time, take intermediate times or lap times using the stopwatch. During timing, the other functions of the phone can be used. To set the stopwatch timing in the background, press .

Using the stopwatch or allowing it to run in the background when using other features increases the demand on battery power and reduces the battery life.

### Time observation and time splitting

1. Press **Menu**, and select *Applications*, *Extras*, *Stopwatch* and *Split timing*. You can select *Continue* if you have set the timing in the background.
2. Press **Start** to start the time observation. Press **Split** every time you want to take an intermediate time. The intermediate times are listed below the running time on the display. Scroll to view the times.
3. Press **Stop** to stop the time observation.
4. To save the times, press **Save**. Or press **Options** and you can start the time observation again or reset the times without saving it.

### Lap times

Press **Menu**, and select *Applications*, *Extras*, *Stopwatch* and *Lap timing*.

Press **Start** to start the time observation and **Lap** to take a lap time.

Press **Stop** to stop the lap timing. To save the times, press **Save** and enter a name. Or press **Options** and you can save or reset the lap times.

### Viewing and deleting times

Press **Menu**, and select *Applications*, *Extras* and *Stopwatch*.

If the stopwatch is not reset, you can select *Show last* to view the most recent measured time. Select *View times* and select the time set that you want to view.

To delete the saved times, select *Delete times*. Select *Delete all* and press **OK**, or select *One by one*, scroll to the times you want to delete, press **Delete** and press **OK**.

## ■ Web

You can access various mobile Internet services with your phone's browser.



Check the availability of these services, pricing and tariffs with your network operator and/or the service provider.

With your phone's browser you can view the services that use Wireless Mark-Up Language (WML) or extensible HyperText Mark-up Language (XHTML) on their pages. Appearance may vary due to screen size. Note that you may not be able to view all the details of the Internet pages.



**Important:** Use only services that you trust and that offer adequate security and protection against harmful software.

### Basic steps for accessing and using services

1. Save the service settings that are required to access the service that you want to use. See Setting up the phone for a service on page 93.
2. Make a connection to the given service. See Making a connection to a service on page 94.
3. Start browsing the pages of the service. See Browsing the pages of a service on page 94.
4. Once you are finished browsing, end the connection to the service. See Disconnect from a service on page 95.

### Setting up the phone for a service

Your phone may have stored some service settings. Additional settings may be received as a configuration message from the service provider that offers the service that you want to use. To receive the service settings as a configuration message, see Configuration settings service on page 13 and Configuration settings on page 70.

For more information and for the appropriate settings, contact your service provider.

## Making a connection to a service

Make sure that the service settings of the service you want to use are activated. To activate the settings, press **Menu**, and select **Web, Settings** and **Configuration settings**. Select **Configuration** and select the configuration set you want to activate.

Make a connection to the service. There are several ways to connect:

- Open the start page, for example, the home page of the service provider: press **Menu**, and select **Web** and **Home**, or in standby mode press and hold .
- Select a bookmark of the service: press **Menu**, and select **Web, Bookmarks**, and select a bookmark. If the bookmark does not work with the current active service settings, activate another set of service settings and try again.
- Select the last URL: press **Menu**, and select **Web, Last web addr.**.
- Key in the address of the service: press **Menu**, and select **Web** and then **Go to address**. Key in the address of the service and press **OK**.

## Browsing the pages of a service

After you have made a connection to the service, you can start browsing its pages. The function of the phone keys may vary in different services. Follow the text guides on the phone display. For more information, contact your service provider.

Note that if GPRS is selected as the data bearer, the indicator  is shown on the top left of the display during browsing. If you receive a call or a text message, or make a call during an (E)GPRS connection, the indicator  will be shown on the top left of the display to indicate that the (E)GPRS connection is suspended (on hold). After a call, for example, the phone tries to reconnect the (E)GPRS connection.

## **Using the phone keys while browsing**

- Use the joystick to browse through the page.
- To select a highlighted item, press , or press **Options** to select the option for opening the link.

- To enter letters and numbers, press the keys  -  and to enter special characters, press the key \* ..

## Options while browsing

Press **Options** and the following options may be available. The service provider may also offer other options. Select *Shortcuts, Home, Add bookmark, Bookmarks, History, Page options, Download links, Save to folder, Other options, Reload, Quit*.

A cache is a memory location that is used to store data temporarily. If you have tried to access or have accessed confidential information requiring passwords, empty the cache after each use. The information or services you have accessed is stored in the cache. To empty the cache, see Cache memory on page 98.

## Direct calling

The browser supports functions that you can access while browsing. You can make a voice call, send DTMF tones while a voice call is in progress, and save a name and a phone number from a page.

## Disconnect from a service

To quit browsing and to end the connection, press **Options** and select **Quit**. When *Quit browsing?* is shown, press **Yes**.

Alternatively, press  twice, or press and hold 

## Appearance settings of the browser

While browsing, press **Options** and select *Other options* and *Appear. settings*, or in standby mode, press **Menu**, and select *Web, Settings* and *Appearance settings*. Select

- *Text wrapping*. Select *On* and the text continues on the next line. If you select *Off*, the text will be abbreviated.
- Select *Font size* and choose a size.
- *Show images*. Select *No* and any pictures appearing on the page are not shown.

- *Alerts* and select *Alert for unsecure connection* and *Yes* to set the phone to alert when a secure connection changes to an insecure one during browsing. Select *Alert for unsecure items* and *Yes* to set the phone to alert when a secure page contains an insecure item. Note that these alerts do not guarantee a secure connection. For more information, see Browser security on page 98.
- *Character encoding* to select the character set that the phone uses for showing browser pages that do not include that information or to select whether to always use UTF-8 encoding when sending a Web address to a compatible phone.

## Cookies

A cookie is data that a site saves in your phone's browser cache memory. The data can be, for example, your user information or your browsing preferences. Cookies will be saved until you clear the cache memory, see Cache memory on page 98.

While browsing, press *Options* and select *Other options*, *Security* and *Cookie settings*, or in standby mode, press *Menu*, and select *Web*, *Settings*, *Security settings* and *Cookies*. Select *Allow* or *Reject* to allow the phone to or prevent the phone from receiving cookies.

## Bookmarks

You can save page addresses as bookmarks in the phone's memory.

1. While browsing, press *Options* and select *Bookmarks*, or in standby mode, press *Menu*, and select *Web* and *Bookmarks*.
2. Scroll to the bookmark that you want to use and press *Select* to make a connection to the page associated with the bookmark.  
Or select *Options* to view the title and the address of the selected bookmark, edit or delete the selected bookmark, or send it directly to another phone as a bookmark, or as a text message, or create a new bookmark.

Your device may have some bookmarks loaded for sites not affiliated to Nokia. Nokia does not warrant or endorse these sites. If you choose to access them, you

should take the same precautions, for security or content, as you would with any Internet site.

## Receiving a bookmark

When you have received a bookmark (sent as a bookmark) **1 bookmark received** is displayed. Press **Show** to view the bookmark. To save the bookmark, press **Save**, or press **Options** and select **View** to see the details or **Delete** to discard it.

## Downloading

To download more tones, graphics, games, videos, themes or applications to your phone (network service), press **Menu**, and select **Web** and **Download links**. Select **Tone downloads**, **Graphic downloads**, **Game downloads**, **Video downloads**, **Theme downloads** or **App. downloads**.



**Important:** Only install and use applications and other software from sources that offer adequate security and protection against harmful software.

For the availability of different services, pricing and tariffs, contact your network operator and/or service provider.

## Service inbox

The phone is able to receive service messages (pushed messages) sent by your service provider (network service). Service messages are notifications of, for example, news headlines, and they may contain a text message or an address of a service.

To access the **Service inbox** in standby mode, when you have received a service message, press **Show**. If you press **Exit** the message is moved to the **Service inbox**. To access the **Service inbox** later, press **Menu**, and select **Web** and **Service inbox**.

To access the **Service inbox** while browsing, press **Options** and select **Other options** and **Service inbox**. Scroll to the message that you want, press **Retrieve** to activate the browser and download the marked content or press **Options** and select **Details** to display detailed information on the service notification, or select **Delete** to delete it.

## Service inbox settings

Press **Menu**, and select **Web**, **Settings** and **Service inbox settings**. Select **Service messages** and **On** (or **Off**) to set the phone to receive (or not to receive) service messages.

Select **Message filter** and **On** to set the phone to receive service messages only from content authors approved by the service provider. To view the list of the approved content authors, select **Trusted channels**.

Select **Automatic connection**. If you have set the phone to receive service messages and select **On**, the phone will automatically activate the browser from standby mode when the phone has received a service message. If you select **Off**, the phone will activate the browser only after you have selected **Retrieve** when the phone has received a service message.

## Cache memory

The information or services that you have accessed are stored in the cache of your phone. A cache is a buffer memory, which is used to store data temporarily. To empty the cache while browsing, press **Options** and select **Other options** and **Clear the cache**, or in standby mode, press **Menu**, and select **Web**, and **Clear the cache**.

## Browser security

Security features may be required for some services, such as banking services or online shopping. For such connections you need security certificates and possibly a security module which may be available on your SIM card. For more information, contact your service provider.

## Security module

The security module can contain certificates as well as private and public keys. The purpose of the security module is to improve security services for applications requiring browser connection, and it allows you to use a digital signature. The certificates are saved in the security module by the service provider.

Press **Menu** and select *Web*, *Settings*, *Security settings* and *Security module settings*. Select from following options:

- *Security module details* to show the security module title, its status, manufacturer and serial number.
- *Module PIN request* to set the phone to request the module PIN when using services provided by the security module. Key in the code and select *On*. To disable the module PIN request, select *Off*.
- *Change module PIN* to change the module PIN, if allowed by the security module. Enter the current module PIN code, then enter the new code twice.
- *Change signing PIN*. Select the signing PIN that you want to change. Enter the current PIN code, then enter the new code twice.

See also Access codes on page 11.

## Certificates

There are three kinds of certificates: server certificates, authority certificates and user certificates.

- The phone uses a server certificate to create a connection with improved security to the content server. The phone receives the server certificate from the service provider before the connection is established and its validity is checked using the authority certificates saved in the phone. Server certificates are not saved.

The security indicator  is displayed during a connection if the data transmission between the phone and the content server is encrypted.

The security icon does not indicate that the data transmission between the gateway and the content server (or place where the requested resource is stored) is secure. The service provider secures the data transmission between the gateway and the content server.

- Authority certificates are used by some services, such as banking services, for checking the validity of other certificates. Authority certificates can either be saved in the security module by the service provider, or they can be downloaded from the network, if the service supports the use of authority certificates.

- User certificates are issued to users by a Certifying Authority. User certificates are required, for example, to create a digital signature and they associate the user with a specific private key in a security module.



**Important:** Note that even if the use of certificates makes the risks involved in remote connections and software installation considerably smaller, they must be used correctly in order to benefit from increased security. The existence of a certificate does not offer any protection by itself; the certificate manager must contain correct, authentic, or trusted certificates for increased security to be available. Certificates have a restricted lifetime. If Expired certificate or Certificate not valid yet is shown even if the certificate should be valid, check that the current date and time in your device are correct.

Before changing any certificate settings, you must make sure that you really trust the owner of the certificate and that the certificate really belongs to the listed owner.

## Digital signature

You can make digital signatures with your phone if your SIM card has a security module. The signature can be traced back to you via the private key on the security module and the user certificate that was used to perform the signature. Using the digital signature can be the same as signing your name to a paper bill, contract or other document.

To make a digital signature, select a link on a page, for example, the title of the book that you want to buy and its price. The text to sign (possibly including amount, date, etc.) will be shown.

Check that the header text is *Read* and that the digital signature icon



**Note:** If the digital signature icon does not appear, there is a security breach, and you should not enter any personal data such as your signing PIN.

To sign the text, read all of the text first and select *Sign*.

The text may not fit within a single screen. Make sure to scroll through and read all of the text before signing.

Select the user certificate you want to use. Key in the signing PIN (see General information on page 10) and press *OK*. The digital signature

icon will disappear, and the service may display a confirmation of your purchase.

## ■ SIM services

In addition to the functions available on the phone, your SIM card may provide additional services that you can access in this menu which is shown only if it is supported by your SIM card. The name and contents of the menu depend on the SIM card.



For availability, rates and information on using SIM services, contact your SIM card vendor, network operator, service provider or other vendor.

Depending on the operator you can set the phone to show you the confirmation messages sent between your phone and the network when you are using the SIM services by selecting the option *Yes* within the menu *Confirm SIM service actions*, in *Phone settings*.

Note that accessing these services may involve sending messages or making a phone call for which you may be charged.

## 6. PC Connectivity

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You can send and receive e-mail, and access the Internet when your phone is connected to a compatible PC via an IR connection or a data cable connection. You can use your phone with a variety of PC connectivity and data communications applications. With PC Suite you can, for example, synchronise contacts, calendar and notes between your phone and the compatible PC or a remote Internet server (network service).

You may find more information and downloadable files, for example PC suite, in the support area on the Nokia website, [www.nokia.com](http://www.nokia.com).

### ■ PC Suite

PC Suite contains the following applications (in alphabetical order):

- **HTML Help** to support the application usage.
- **Nokia 6020b data modem drivers** enable you to use your phone as a modem.
- **Nokia Application Installer** to install J2ME Java applications from a compatible PC to the phone, for example games and dictionaries.
- **Nokia Connection Manager** to select the connection type between the PC and phone.
- **Nokia Contacts Editor** to edit contacts in your phone.
- **Nokia Content Copier** to back up and restore personal data between your phone and a compatible PC. Supports also content transfer to another compatible Nokia phone.
- **Nokia Image Converter** to make images in supported formats usable for multimedia messages or wallpaper and to transfer them to your phone.
- **Nokia Modem Options** contains settings for HSCSD and GPRS connections.

- **Nokia Multimedia Player** to for playing sounds, images, videos and multimedia messages on the PC. Multimedia Player allows you to view multimedia received on your phone or via e-mail.
- **Nokia PC Sync** to synchronise contacts, calendar and to-do notes between your phone and a compatible PC.
- **Nokia Phone Browser** to view the contents of the Gallery folder of your phone on a compatible PC. You can browse picture and audio files and also modify files in the phone's memory and transfer files between your phone and PC.
- **Nokia Phone Editor** to send text messages and edit the contacts in your phone.
- **Nokia Settings Manager** to edit and send your browser bookmarks or update the connection sets to your phone.
- **Nokia Sound Converter** to optimise polyphonic ringing tones in supported formats to be compatible with your phone and to transfer them to your phone.
- **Nokia Text Message Editor** to read, write and send SMS directly from a PC.

Copyright protections may prevent some images, ringing tones, and other content from being copied, modified, transferred or forwarded.

### (E)GPRS, HSCSD and CSD

With your phone you can use the (E)GPRS (Enhanced GPRS), GPRS (General Packet Radio Service), HSCSD (High Speed Circuit Switched Data) and CSD (Circuit Switched Data, *GSM data*) data services.

For availability and subscription to data services, contact your network operator or service provider.

Note that the use of HSCSD services consumes the phone's battery faster than normal voice or data calls. You may need to connect the phone to a charger for the duration of the data transfer.

See (E)GPRS modem settings on page 69.

## ■ Using data communication applications

For information on using a data communication application, refer to the documentation provided with it.

Note that making or answering phone calls during a computer connection is not recommended as it might disrupt the operation.

For better performance during data calls, place the phone on a stationary surface with the keypad facing downward. Do not move the phone by holding it in your hand during a data call.

## 7. Battery information

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### ■ Charging and Discharging

Your device is powered by a rechargeable battery. The full performance of a new battery is achieved only after two or three complete charge and discharge cycles. The battery can be charged and discharged hundreds of times but it will eventually wear out. When the talk and standby times are noticeably shorter than normal, buy a new battery. Use only Nokia approved batteries, and recharge your battery only with Nokia approved chargers designated for this device.

Unplug the charger from the electrical plug and the device when not in use. Do not leave the battery connected to a charger. Overcharging may shorten its lifetime. If left unused, a fully charged battery will lose its charge over time. Temperature extremes can affect the ability of your battery to charge.

Use the battery only for its intended purpose. Never use any charger or battery that is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object such as a coin, clip, or pen causes direct connection of the positive (+) and negative (-) terminals of the battery. (These look like metal strips on the battery.) This might happen, for example, when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F). A device with a hot or cold battery may not work temporarily, even when the battery is fully charged. Battery performance is particularly limited in temperatures well below freezing.

Do not dispose of batteries in a fire! Dispose of batteries according to local regulations. Please recycle when possible. Do not dispose as household waste.

## 8. Technical Information

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Weight	90 grams (3.2 ounces) incl. BL-5B battery
Battery	760 mAh Li-Ion Battery
Networks	Wireless networks GSM 850, 1800 and 1900
Size	Volume: 4.6 cubic inches (76 ccm) Length: 4.6 in (106 mm) Width: 1.7 in (44 mm) Thickness: 0.8 in (20 mm)
Frequency range (Rx)	GSM 850: 869- 894 MHz GSM1800: 1805 - 1865 MHz GSM1900: 1930 - 1990 MHz
Frequency range (Tx)	GSM 850: 824 - 894 MHz GSM 1800: 1710 - 1785 MHz GSM1900: 1850 - 1910 MHz
Tx output power	2 W (max)
Battery voltage	3.7 V DC
Number of channels	299
Memory size	16 MB flash memory 3 MB RAM
Operating temperature	59 °F to 77 °F (15 °C to 25 °C)

# CARE AND MAINTENANCE

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Your device is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you protect your warranty coverage.

- Keep the device dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, remove the battery and allow the device to dry completely before replacing it.
- Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device other than as instructed in this guide.
- Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.
- Do not paint the device. Paint can clog the moving parts and prevent proper operation.
- Use a soft, clean, dry cloth to clean any lenses (such as camera, proximity sensor and light sensor lenses).
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications, or attachments could damage the device and may violate regulations governing radio devices.
- Use chargers indoors.
- Always create a backup of data you want to keep (such as contacts and calendar notes) before sending your device to a service facility.

All of the above suggestions apply equally to your device, battery, charger, or any enhancement. If any device is not working properly, take it to the nearest authorized service facility for service.

# ADDITIONAL SAFETY INFORMATION

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Your device and its enhancements may contain small parts. Keep them out of the reach of small children.

## ■ Traffic Safety

Do not use a hand-held telephone while driving a vehicle. Always secure the phone in its holder; do not place the phone on the passenger seat or where it can break loose in a collision or sudden stop.

Remember road safety always comes first!

## ■ Operating environment

Remember to follow any special regulations in force in any area and always switch off your device when its use is prohibited or when it may cause interference or danger. Use the device only in its normal operating positions. This device meets RF exposure guidelines when used either in the normal use position against the ear or when positioned at least 7/8 inch (2.2 cm) away from the body. When a carry case, belt clip or holder is used for body-worn operation, it should not contain metal and should position the device the above-stated distance from your body.

Parts of the device are magnetic. Metallic materials may be attracted to the device, and persons with a hearing aid should not hold the device to the ear with the hearing aid. Always secure the device in its holder, because metallic materials may be attracted by the earpiece. Do not place credit cards or other magnetic storage media near the device, because information stored on them may be erased.

In order to transmit data files or messages, this device requires a good quality connection to the network. In some cases, transmission of data files or messages may be delayed until such a connection is available. Ensure the above separation distance instructions are followed until the transmission is completed.

## ■ Medical devices

Operation of any radio transmitting equipment, including wireless phones, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to determine if they are adequately shielded from external RF energy or if you have any questions. Switch off your device 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.

### **Pacemakers**

Pacemaker manufacturers recommend that a minimum separation of 6 in. (15.3 cm) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers should:

- always keep the device more than 6 in. (15.3 cm) from their pacemaker when the device is switched on;
- not carry the device in a breast pocket; and
- hold the device to the ear opposite the pacemaker to minimise the potential for interference.

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

### **Hearing aids**

Some digital wireless devices may interfere with some hearing aids. If interference occurs, consult your service provider.

### **■ Vehicles**

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles such as electronic fuel injection systems, electronic antiskid (antilock) braking systems, electronic speed control systems, air bag systems. For more information, check with the manufacturer or its representative of your vehicle or any equipment that has been added.

Only qualified personnel should service the device, or install the device in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty that may apply to the device. Check regularly that all wireless device 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 device, its parts, or enhancements. For vehicles equipped with an air bag, remember that air bags inflate with great force. Do not place objects, including installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

## ■ Aircrafts

Using your device while flying may be prohibited. Switch off your device before boarding an aircraft. The use of wireless teledevices in an aircraft may be dangerous to the operation of the aircraft, disrupt the wireless telephone network, and may be illegal.

## ■ Potentially explosive environments

Switch off your device when in any area with a potentially explosive atmosphere and obey all signs and instructions. Potentially explosive atmospheres include areas where you would normally be advised to turn off your vehicle engine. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Switch off the device at refuelling points such as near gas pumps at service stations. Observe restrictions on the use of radio equipment in fuel depots, 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), and areas where the air contains chemicals or particles such as grain, dust or metal powders.

## ■ Emergency calls



### Important:

Wireless phones, including this device, operate using radio signals, wireless networks, landline networks, and user-programmed functions. Because of this, connections in all conditions cannot be guaranteed. You should never rely solely on any wireless device for essential communications like medical emergencies.

### To make an emergency call:

1. If the device is not on, switch it on. Check for adequate signal strength. Some networks may require that a valid SIM card is properly inserted in the device.
2. Press  as many times as needed to clear the display and ready the device for calls.
3. Key in the official emergency number for your present location. Emergency numbers vary by location.
4. Press the  key.

If certain features are in use, you may first need to turn those features off before you can make an emergency call. If the device is in offline or flight mode you must change the profile to activate the phone function before you can make an emergency call. Consult this guide or your service provider for more information. When making an emergency call, give all the necessary information as accurately as possible. Your wireless device may be the only means of communication at the scene of an accident. Do not end the call until given permission to do so.

## ■ Certification information (SAR)

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

Your mobile device is a radio transmitter and receiver. It is designed and manufactured not to exceed the limits for exposure to radio frequency (RF) energy adopted by the governments of the USA through the Federal Communications Commission (FCC) and Canada through Industry Canada (IC). These limits establish permitted levels of RF energy for the general population. The guidelines are based on 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 guidelines for mobile devices employ a unit of measurement known as the Specific Absorption Rate or SAR. The SAR limit adopted by the USA and Canada is 1.6 watts/ kilogram (W/kg) averaged over one gram of tissue. The limit incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements. Tests for SAR are conducted using standard operating positions with the device transmitting at its highest certified power level in all tested frequency bands. The actual SAR level of an operating device can be well below the maximum value because the device is designed to use only the power required to reach the network. That amount changes depending on a number of factors such as how close you are to a network base station.

The highest SAR value reported to the FCC and IC for this device type when tested for use at the ear is 0.80 W/kg, and when properly worn on the body is 0.60 W/kg. SAR information on file with the FCC can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID PPIRM-31. SAR values reported in other countries may vary depending on differences in reporting and testing requirements and the network band. Additional SAR information may be provided under product information at <http://www.nokia.com>.

## APPENDIX

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### ■ A message from the CTIA

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Safety is the most important call you will ever make.

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

Tens of millions of people in the U.S. today take advantage of the unique combination of convenience, safety and value delivered by the wireless telephone. Quite simply, the wireless phone gives people the powerful ability to communicate by voice--almost anywhere, anytime--with the boss, with a client, with the kids, with emergency personnel or even with the police. Each year, Americans make billions of calls from their wireless phones, and the numbers are rapidly growing.

But an important responsibility accompanies those benefits, one that every wireless phone user must uphold. When driving a car, driving is your first responsibility. A wireless phone can be an invaluable tool, but good judgment must be exercised at all times while driving a motor vehicle--whether on the phone or not.

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

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

When it comes to the use of wireless phones, safety is your most important call.

#### Wireless phone "Safety Tips"

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

times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip--dial only a few numbers, check the road and your mirrors, then continue.

7. Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix--they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
8. Use your wireless phone to 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.
9. 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!
10. 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.
11. 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.

For more information, please call 1-888-901-SAFE.

For updates: <http://www.wow-com.com/consumer/issues/driving/articles.cfm?ID=85>

## ■ A message from the U.S. Food and Drug Administration to all users of mobile phones

© July 18, 2001 For updates: <http://www.fda.gov/cdrh/phones>.

Consumer Update on Wireless Phones

U.S. Food and Drug Administration

### 1. Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radiofrequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other

researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

## **2. What is FDA's role concerning the safety of wireless phones?**

- 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

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

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 subject of the safety questions discussed in this document.

### **3. What kinds of phones are the subject of this update?**

The term wireless phone refers here to hand-held wireless phones with built-in antennas, often called cell mobile or PCS phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user's head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called cordless phones, which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.

### **4. What are the results of the research done already?**

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

## 5. 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.

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

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF).

FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues.

FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIAfunded 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.

**7. How can I find out how much radiofrequency energy exposure I can get by using my wireless phone?**

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects. Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

**8. What has FDA done to measure the radiofrequency energy coming from wireless phones?**

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques, sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue-simulating model of the human

head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different

laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

**9. What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone?**

If there is a risk from these products--and at this point we do not know that there is--it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna.

Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

**10. What about children using wireless phones?**

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children

was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

## **11. What about wireless phone interference with medical equipment?**

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allows 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 accompanied 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.

## **12. Where can I find additional information?**

For additional information, please refer to the following resources:

- FDA web page on wireless phones  
<http://www.fda.gov/cdrh/phones/index.html>
- Federal Communications Commission (FCC) RF Safety Program  
<http://www.fcc.gov/oet/rfsafety>
- International Commission on Non-Ionizing Radiation Protection  
<http://www.icnirp.de>

- World Health Organization (WHO) International EMF Project  
<http://www.who.int/emf>
- National Radiological Protection Board (UK)  
<http://www.nrpb.org.uk/>

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For updates: <http://www.fda.gov/cdrh/phones>