RM-165 User Guide

DRAFT

Export Controls
This device may contain commodities, technology or software subject to export laws and regulations from the US and other countries. Diversion contrary to law is prohibited.

FCC/INDUSTRY CANADA NOTICE
Your device may cause TV or radio interference (for example, when using a telephone in close proximity to receiving equipment). The FCC or Industry Canada can require you to stop using your telephone if such interference cannot be eliminated. If you require assistance, contact your local service facility. This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by Nokia could void the user's authority to operate this equipment.

Model number: Nokia 8800d
Hereinafter referred to as Nokia 8800 Sirocco Edition

924XXXX/Issue 1

Contents

For your safety

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 REFUELING
Do not use the phone at a refuelling point. Do not use near fuel or chemicals.

SWITCH OFF NEAR BLASTING
Follow any restrictions. Do not use the phone where blasting is in progress.

USE SENSIBLY
Use only in the normal position as explained in the product documentation. Do not 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 the end key as many times as needed to clear the display and return to the start screen. Enter the emergency number, then press the call key. Give your location. Do not end the call until given permission to do so.

■ About your device

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

Your product represents superior design and craftsmanship, and comes with stainless steel covers and a glass display treated for scratch resistance. Therefore, handle your phone with due care.

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

When you take and use images or video clips, obey all laws and respect local customs as well as 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.

■ 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. 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 text messages, multimedia messages, instant messages, e-mail, mobile Internet services, content and application downloads, and synchronization with remote Internet server, require network support for these technologies.

■ Shared memory

The following features in this device may share memory: contacts, text and instant messages, e-mail, voice tags, calendar, to-do notes, Java™ games and applications, and note application. Use of one or more of these features may reduce the memory available for the remaining features sharing memory. For example, saving many Java applications 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 Java applications, may have a certain amount of memory specially allotted to them in addition to the memory shared with other features.

Note that gallery files share a different memory. For further information see "Gallery," p. 67.

■ Enhancements

A few practical rules about accessories and enhancements:

- Keep all accessories and enhancements out of the reach of small children.
- When you disconnect the power cord of any accessory or enhancement, grasp and pull the plug, not the cord.
- Check regularly that enhancements installed in a vehicle are mounted and are operating properly.
- Installation of any complex car enhancements must be made by qualified personnel only.

General information

Model number: Nokia 8800d
Hereinafter referred to as Nokia 8800 Sirocco Edition

■ Your phone package

In your package you will find the following items:

- Your Nokia 8800 Sirocco Edition phone
- Two Nokia Batteries BP-6X
- Nokia Compact Charger AC-3
- Nokia Desk Stand DT-16
- Nokia Headset HS-15
- Nokia Bluetooth Headset HS-64W
- Nokia Carrying Pouch CP-104
- Suede cleaning cloth
- User guide
- Story booklet
- CD-ROM

The items supplied with your phone and available enhancements may be different, depending on your region or service provider. If your package does not include all the listed items above, please contact your retailer.

Before you can use your phone, you need to insert the SIM card, and insert and charge the battery. See "Install SIM card and battery," p. 15.

To avoid scratches, your device has to be carried in its carrying pouch. Do not use the cleaning cloth for other objects than your phone.

■ Overview of functions

Your phone provides many functions that are practical for daily use, such as a calendar, a clock, an alarm clock, a radio, a music player, and a built-in camera. Your phone also supports the following functions:

- Enhanced data rates for GSM evolution (EDGE), see "Packet data," p. 59.
- Extensible hypertext mark-up language (XHTML), see "Web," p. 81.
- E-mail application, see "E-mail application," p. 35.
- Java 2 Platform, Micro Edition (J2ME™), see "Applications," p. 79.
- Bluetooth wireless technology, see "Bluetooth wireless technology," p. 58.
- Synchronization of data from another phone without having a SIM card inserted, see "Data transfer with a device," p. 61.
- Plug and play online service to get the configuration settings, see "Switch the phone on and off," p. 17, and "Configuration," p. 64.

■ Access codes

Security code

The security code (5 to 10 digits) helps to protect your phone against unauthorized use. The preset code is 12345. To change the code, and to set the phone to request the code, see "Security," p. 65.

PIN codes

The PIN (personal identification number) code and the UPIN (universal personal identification number) code (4 to 8 digits) help to protect your SIM card against unauthorized use. See "Security," p. 65.

The PIN2 code (4 to 8 digits) may be supplied with the SIM card and is required for some functions.

The module PIN is required to access the information in the security module. See "Security module," p. 86.

The signing PIN is required for the digital signature. See "Digital signature," p. 88.

PUK codes

The PUK (personal unblocking key) code and the UPUK (universal personal unblocking key) code (8 digits) is required to change a blocked PIN code and UPIN code, respectively. The PUK2 code (8 digits) is required to change a blocked PIN2 code.

Barring password

The barring password (4 digits) is required when using the call barring service. See "Security," p. 65.

■ Configuration settings service

To use some of the network services, such as mobile Internet services, MMS, or remote Internet server synchronization, your phone needs the correct configuration settings. You may be able to receive the settings directly as a configuration message. After receiving the settings you need to save them on your phone. The service provider may provide a PIN that is needed to save the settings. For more information on availability, contact your network operator, service provider, nearest authorized Nokia dealer, or visit the support area on the Nokia website, www.nokia.com/support.

When you have received a configuration message, **Configuration settings received** is displayed.

To save the settings, select **Show** > **Save**. If the phone requests **Enter settings' PIN:**, enter the PIN code for the settings, and select **OK**. To receive the PIN code, contact the service provider that supplies the settings. If no settings are saved yet, these settings are saved and set as default configuration settings. Otherwise, the phone asks **Activate saved configuration settings?**.

To discard the received settings, select **Exit**, or **Show** > **Discard**.

To edit the settings, see "Configuration," p. 64.

■ Download content

You may be able to download new content (for example themes, tones, and video clips) to the phone (network service). Select the download function (for example, in **Gallery**). To access the download function, see the respective menu descriptions. For the availability of different services, pricing, and tariffs, contact your service provider.

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

■ Nokia Care Premium Service

As a Nokia 8800 Sirocco Edition phone owner, you are entitled to Nokia Care Premium Service for 24 months from the date of the purchase. This includes (in selected countries*):

- 24-month warranty** for your Nokia 8800 Sirocco Edition phone

- Priority repair service** at selected Nokia Care points. Check www.nokia.com/support or your local Nokia Web site for the selected Nokia Care points that offer priority repair service or call to Nokia Care (for the phone numbers check the following list). Naturally you may also visit other Nokia Care point in your area for standard repair service.

- Unparalleled Nokia Care Contact Center support at the local call rate. For your local Nokia Care Contact Center phone number and the operational hours, check the following list.

Country	Local phone number for Nokia Care Premium Service	Operating hours (local time)	Country	Local phone number for Nokia Care Premium Service	Operating hours (local time)
Austria	0810 281 900	Mon-Sat 9-21	Luxembourg	034 208 08 193	Mon-Fri 9-21
Belgium	070 70 77 70	Mon-Fri 9-21	Malta	0574 519334	Mon-Fri 9-21
Czech	841 11 44 55	Mon-Fri 9-18	Netherlands	0900 202 60 55	Mon-Fri 9-21

Country	Local phone number for Nokia Care Premium Service	Operating hours (local time)	Country	Local phone number for Nokia Care Premium Service	Operating hours (local time)
Cyprus	210 6142844	Mon–Fri 8–17	Norway	22 97 1717	Mon–Fri 9–21
Denmark	35 444 222	Mon–Fri 9–21	Poland	022 654 00 43	Mon–Fri 9–18
Estonia	611 9901	Mon–Fri 9–17	Portugal	808 780 780	Mon–Fri 9–18
Finland	0303 8286	Mon–Fri 9–21	Romania	021 407 75 05	Mon–Fri 9–18
France	08 11 00 45 67	Mon–Fri 9–21	Russia	+7(495) 727 2222	Mon–Fri 8–20
Germany	0180 501 502 0	Mon–Fri 9–21	Slovakia	(02) 850 111 561	Mon–Fri 9–18
Greece	210 6142 844	Mon–Fri 8–17	Spain	902 404 414	Mon–Fri 9–21, Sat 9–16
Hungary	06 40 505 505	Mon–Fri 9–18	Sweden	077 66 22 222	Mon–Fri 9–21
Ireland	1890 946 245	Mon–Fri 9–21	Switzerland	0848 100010	Mon–Sat 9–21
Italy	848 690 691	Mon–Fri 9–21	Turkey	0 212 337 17 17	Mon–Sun 9–18
Latvia	7320603	Mon–Fri 9–17	UK	0870 600 6012	Mon–Fri 9–21
Lithuania	8 700 55559	Mon–Fri 9–17	Ukraine	8 800 50 101 50	Mon–Sun 9–20

*Services may vary for each country. Check www.nokia.com/support or your local Nokia Web site for details.

**Based on Nokia end user warranty terms. In Europe, the 24–month warranty is applicable in the following countries: European Union member states, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Iceland, Israel, Kazakhstan, Former Yugoslav Republic of Macedonia, Moldova, Mongolia, Norway, Romania, Russia, Serbia and Montenegro, Switzerland, Turkey, Ukraine.

■ Nokia support on the Web

Check 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. Get started

■ Install SIM card and battery

Always switch the device off and disconnect the charger before removing 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.

This device is intended for use with BP-6X battery.

The SIM card and its contacts can easily be damaged by scratches or bending, so be careful when handling, inserting, or removing the card.

To remove the back cover of the phone, push the sideways release buttons (1), and slide the back cover to remove it from the phone (2).
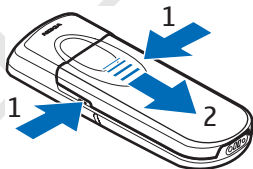
Remove the battery as shown (3).
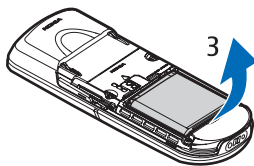
Insert the SIM card (4). Make sure that the SIM card is properly inserted and that the contact area on the card is facing downwards.
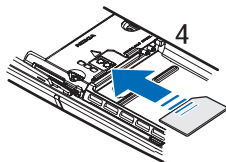
Replace the battery (5). Observe the battery contacts. Always use original Nokia batteries. See "Nokia battery authentication," p. 92.
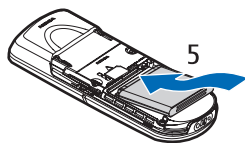
Slide the back cover into its place (6).
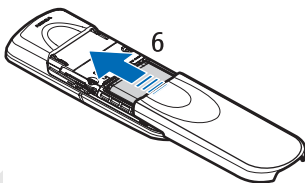
■ Charge the battery

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 the AC-3 charger.

For availability of approved enhancements, please check with your dealer.

Connect the lead from the charger to the socket the bottom of your phone.

Connect the charger to a wall socket.

If the battery is completely discharged, it may take a few minutes before the charging indicator appears on the display or before any calls can be made.
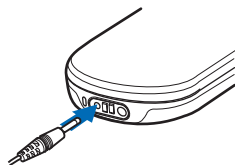
The charging time depends on the charger and the battery used. For example, charging a BP-6X battery with the AC-3 charger takes approximately 3 hours while the phone is in the standby mode.

Desk stand DT-16

The desk stand allows you to charge the phone battery and the spare battery at the same time. The desk stand can be supplied with power

from the AC-3 or AC-4 charger. The charge level of the phone battery is indicated on the phone display.

The white indicator light around the bottom of the desk stand shows the charging status of the inserted spare battery:

- The light pulses slowly when the desk stand is empty, when only the phone is inserted (the phone battery is fully charged or being charged), or when both the phone and the spare battery are inserted, and the spare battery is fully charged.

- The light is continuously on when the spare battery is being charged. The spare battery will be charged if the phone is not inserted, or if the phone battery is fully charged.

- To turn the light on or off, press and hold the button on the back of the desk stand.

- If the light is not shown even though you have not turned it off by pressing the button, the charger connected to the desk stand may not be compatible or the spare battery temperature may be too high. Check the compatibility of the charger, and use only compatible Nokia chargers. If the spare battery temperature is too high, it will not be charged. When the temperature of the spare battery returns to normal, charging starts, and the light turns on again.

■ Switch 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.

If the phone asks for a PIN or a UPIN code, enter the code (for example, displayed as ****), and select **OK**.

When you switch on your phone for the first time, and the phone is in the standby mode, p. 20, you are asked to get the configuration settings from your service provider (network service). Confirm or decline the query. See **Connect to service provider support**, p. 65, and "Configuration settings service," p. 11.

Set the time, zone, and date

Enter the local time, select the time zone of your location in terms of the time difference with respect to Greenwich Mean Time (GMT), and enter the date. See "Time and date," p. 56.

■ Open the keypad

To open the keypad, slide the phone as shown.
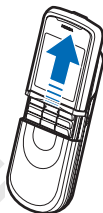
■ Antenna

Your device has an internal antenna.

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 optimizes the antenna performance and the battery life.
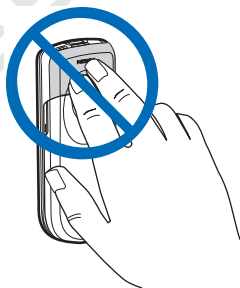
2. Your phone

■ Keys and parts

- Power key (1)
- Camera lens (2)
- Loudspeaker (3)
- Battery cover release buttons (4)
- Earpiece (5)
- Left selection key (6)
- Right selection key (7)
- Call key (8)
- End key (9)
- Scroll key (10)
- Middle selection key (11)
- Keypad (12)

- Microphone (13)
- Charger connector (14)
- Enhancements connector (15)

- Headset HS-15, rotating clip
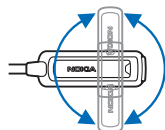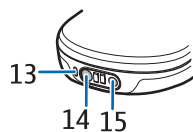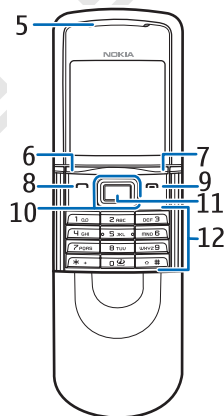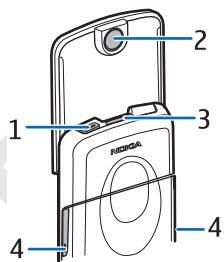
■ Standby mode

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

- Name of the network or the operator logo (1)
- Signal strength of the local cellular network (2)
- Battery charge level (3)
- Function of the left selection key is **Go to** (4) or a shortcut to another function. See "Left selection key," p. 56.
- Function of the middle selection key is **Menu** (5)
- Function of the right selection key is **Names** (6) to access the **Names** menu or another shortcut to a function that you selected. See "Right selection key," p. 57. Operator variants may have an operator-specific name to access an operator specific Web site.
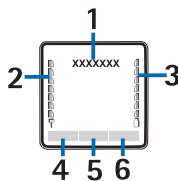
Shortcuts

- To access the list of dialed numbers, press the call key once. Scroll to the number or name that you want and to call the number, press the call key.
- To open the web browser, press and hold **0**.
- To call your voice mailbox, press and hold **1**.
- Use the scroll key as a shortcut. See "Navigation key," p. 57.
- To change from any profile to the silent profile and back to the general profile, press and hold **#**.
- To change the profile, open the list of profiles: briefly press the power key, and select the desired profile from the list.

Power saving features

Your phone has features that save battery power in standby mode if the phone is not active. These features may be activated or not. See "Power saver," p. 55 and "Sleep mode," p. 56.

Indicators

✉   You have unread messages.

➜☎   The phone registered a missed call. See "Call log," p. 53.

⊸0   The keypad is locked. See "Keypad lock (keyguard)," p. 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 "Tones," p. 54.

❧   The alarm clock is set to **On**. See "Alarm clock," p. 74.

G, E   When the packet data connection mode **Always online** is selected and the packet data service is available, the indicator is shown. Refer to "Packet data," p. 59.

G, E   A GPRS or EGPRS connection is established.

⏾, ⏾   The GPRS or EGPRS connection is suspended (on hold).

✦   Bluetooth connection indicator. See "Bluetooth wireless technology," p. 58.

■ Flight mode

You can deactivate all radio frequency functionality and still have access to offline games, calendar, and phone numbers. Use the flight mode in radio sensitive environments—on board aircraft or in hospitals. When the flight mode is active, ✈ is shown.

Select **Menu** > **Settings** > **Profiles** > **Flight** > **Activate** or **Personalise**.

To deactivate the flight mode, select any other profile.

In the flight mode you can make an emergency call. Enter the emergency number, press the call key, and select **Yes** when asked **You must select another profile to be able to make a call. Exit flight profile?** The phone attempts to make an emergency call.

When the emergency call ends, the phone automatically changes to the general profile mode.

■ Keypad lock (keyguard)

You can lock the keypad to prevent accidental keypresses.

- To lock the keypad and the power key, close the slide, and press **Lock**; or select **Menu** and press ✻ within 3.5 seconds.

- To unlock the keypad, open the slide; or select **Unlock** > **OK** within 1.5 seconds. If the **Security keyguard** is set **On**, enter the security code when requested.

To answer a call when the keyguard is on, press the call key. When you end or reject the call, the keypad is automatically locked.

For **Automatic keyguard** and **Security keyguard**, see "Phone," p. 63.

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

3. Call functions

■ Make a call

1. Enter the phone number, including the area code. To delete an incorrect character, select **Clear**.

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

2. To call the number, press the call key.

3. To end the call or to cancel the call attempt, press the end key, or close the slide.

Make a call using names

To search for a name or phone number that you have saved in **Contacts**, see "Search for a contact," p. 49. Press the call key to call the number.

Last number redialing

To access the list of up to 20 numbers you last called or attempted to call, press the call key once in the standby mode. To call the number, select the number or name, and press the call key.

■ Speed dialing

Assign a phone number to one of the speed-dialing keys, **2** to **9**. See "Speed dialing," p. 52. Call the number in either of the following ways:

• Press a speed-dialing key, then the call key.

• If **Speed dialling** is set to **On**, press and hold a speed-dialing key until the call is started. See **Speed dialling** in "Call," p. 62.

■ Enhanced voice dialing

You can make a phone call by saying the name that is saved in the contact list of the phone. A voice command is added automatically to all entries in the contact list of the phone.

Voice commands are language-dependent. To set the language, see **Voice playback language** in "Phone," p. 63.

If an application is sending or receiving data using a packet data connection in GSM, end the application before you use voice dialing.

1. In the standby mode, press and hold the right selection key. A short tone is played, and **Speak now** is displayed.

   If you are using a compatible headset with the headset key, press and hold the headset key to start the voice dialing.

2. Say the voice command clearly. If the voice recognition is successful, a list with matches is shown. The phone plays the voice command of the match on the top of the list. After about 1.5 seconds, the phone dials the number. If the result was not the correct one, select manually another entry from the list.

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

Using voice commands to carry out a selected phone function is similar to voice dialing. See "Voice commands," p. 57.

■ Answer or reject a call

To answer an incoming call, press the call key, or open the slide. To end the call, press the end key, or close the slide.

To reject an incoming call when the slide is open, press the end key.

To mute the ringing tone, select **Silence**. Then answer or reject the call.

> **Tip:** If the **Divert if busy** function is activated to divert the calls (for example, to your voice mailbox), rejecting an incoming call also divert the call. See "Call," p. 62.

If a compatible headset supplied with the headset key is connected to the phone, press the headset key to answer and end a call.

Call waiting

To answer a waiting call during an active call, press the call key. The first call is put on hold. To end the active call, press the end key.

To activate the **Call waiting** function, see "Call," p. 62.

■ 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.

To increase or decrease the volume during a call, press the scroll key right or left.

Select **Options** and from the following:

Mute or **Unmute**, **Contacts**, **Menu**, **Record**, **Lock keypad**, **Loudspeaker** or **Handset**, and the network services **Hold** or **Unhold**, **Answer** and **Reject**, **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 make a conference with up to five persons), **Add to conference**, **Private call** (to have a private conversation), **End call**, **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.

4. Write text

To enter text (for example, when writing a message), use traditional or predictive text input. When using traditional text input, press a number key, **1** to **9**, repeatedly until the desired character appears. Using predictive text input you can enter a letter with a single keypress.

When you write text, ⎘ appears at the top left of the display, indicating predictive text input, and ⎘ appears, indicating traditional text input. **Abc** , **abc** , or **ABC** appears next to the text input indicator, indicating the character case. To change the character case, press **#**. **123** indicates number mode. To change from the letter to number mode, press and hold **#**, and select **Number mode**.

■ Settings

To set the writing language to a language other than that selected in **Phone language**, select **Options** > **Writing language**. Predictive text input is only available for the languages on the list.

To set the predictive text input option, select **Options** > **Prediction on**, to set traditional text input option select **Options** > **Prediction off**.

■ Predictive text input

Predictive text input allows you to write text quickly using the phone keypad and a built-in dictionary.

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

2. When you finish writing the correct word, add a space to confirm it by pressing **0**.

   If the word is not correct, press ***** repeatedly, or select **Options** > **Matches**. When the word that you want appears, select **Use**.

   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, select **Spell**. Enter the word (traditional text input is used), and select **Save**.

Writing compound words

Enter the first part of the word. Confirm it by pressing the scroll key right. Write the last part of the word and confirm the word.

■ Traditional text input

Press a number key, **1** to **9**, 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 selected writing language. See "Settings," p. 26.

If the next letter you want is located on the same key as the present one, wait until the cursor appears, or press any of the scroll keys, and enter the letter.

The most common punctuation marks and special characters are available under the number key **1**.

5. Navigate the menus

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

■ Access a menu function

1. To access the menu, select **Menu**.

   To change the menu view, select **Options** > **Main menu view** > **List** or **Grid**.

   To rearrange the menu, scroll to the menu you want to move, and select **Options** > **Organise** > **Move**. Scroll to where you want to move the menu, and select **OK**. To save the change, select **Done** > **Yes**.

2. Scroll through the menu, and select, for example, **Settings**.

3. If the menu contains submenus, select the one that you want, for example, **Call**.

4. If the selected menu contains further submenus, select the one that you want, for example, **Anykey answer**.

5. Select the setting of your choice.

6. To return to the previous menu level, select **Back**. To exit the menu, select **Exit**.

The menus, submenus, and setting options are numbered. To access them, shortcut numbers can be used.

To access the menu, select **Menu**. Enter quickly, within 2 seconds, the shortcut number of the menu function you want to access. To access the menu functions in menu level 1, enter **0** and **1**.

6. Messaging

The message services can only be used if they are supported
by your network or your service provider.

> **Note:** When sending messages, your device may display the words
> **Sending message**. This is an indication that the message has been sent
> by your device to the message center 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.

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

Only devices that have compatible features can receive and display messages.
The appearance of a message may vary depending on the receiving device.

■ Text messages (SMS)

Using the short message service (SMS) you can send and receive
multipart messages (network service) that can contain pictures.

Before you can send any text, picture, or e-mail message, you must save
your message centre number. See "Message settings," p. 45.

To check SMS e-mail service availability and to subscribe to the service,
contact your service provider. To save an e-mail address in **Contacts**, see
"Save numbers, items, or an image," p. 49.

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.

An indicator at the top of the display shows the total number of characters left
and the number of messages needed for sending. For example, 673/2 means that
there are 673 characters left and that the message will be sent as a series of two
messages.

Write and send a message

1. Select **Menu** > **Messaging** > **Create message** > **Text message**.
2. Enter the recipient's phone number in the **To:** field. To retrieve a phone number from **Contacts**, select **Add** > **Contact**. To send the message to multiple recipients, add the desired contacts one by one. Scroll right to add new contacts manually in the **To:** field. To send the message to persons in a group, select **Contact group** and the desired group. To retrieve the contacts to which you recently sent messages, select **Add** > **Recently used**. To retrieve the contacts from the Call log, select **Add** > **Open Log**.

   To send a text message to an e-mail address, enter the e-mail address in the **To:** field.

3. Scroll down, and write your message in the **Message:** field. See "Write text," p. 26.

   To insert a template into the message, select **Options** > **Use template**.

4. To send the message, select **Send**; or press the call key. See "Send a message," p. 32.

Read and reply to a message

1 message received, or the number of new messages with **messages received** is shown when you receive a message.

1. To view a new message, select **Show**. To view it later, select **Exit**.

   ![icon] is shown if you have unread messages in **Inbox**. To access an unread message in the inbox, select **Menu** > **Messaging** > **Inbox**. If more than one message is received, select the message that you want to read.

2. To view the list of available options while reading a message, select **Options**.

3. To reply to a message, select **Reply** > **Text message**, **Multimedia**, or **Audio message**.

   Scroll down, and write your message in the **Message:** field. See "Write text," p. 26.

If you want to change the message type for your reply message, select **Options** > **Change msg. type**.

4. To send the message, select **Send**; or press the call key.

■ SIM messages

SIM messages are specific text messages that are saved to your SIM card. You can copy or move those messages to the phone memory, but not vice versa.

To read SIM messages, select **Menu** > **Messaging** > **Options** > **SIM messages**.

■ Multimedia messages

Note: Only devices that have compatible features can receive and display multimedia messages. The appearance of a message may vary depending on the receiving device.

To check availability and to subscribe to the multimedia messaging network service, contact your service provider. See "Multimedia message," p. 46.

A multimedia message can contain text, sound, images, video clips, a business card, and a calendar note. If the message is too large, the phone may not be able to receive it. Some networks allow text messages that include an Internet address where you can view the multimedia message.

You cannot receive multimedia messages during a call or an active browsing session over GSM data. Because delivery of multimedia messages can fail for various reasons, do not rely solely upon them for essential communications.

Write and send a message

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.

1. Select **Menu** > **Messaging** > **Create message** > **Multimedia**.
2. Enter your message.

Your phone supports multimedia messages that contain several pages (slides). A message can contain several slides. A slide can contain text, one image, one sound clip, one calendar note and one business card; or text and a video clip. A message can contain only one calendar note and one business card. A slide can contain text, one image, and one sound clip; or text and a video clip. To insert a slide in the message, select **Insert** >**Slide**; or select **Options** > **Insert** > **Slide**.

To insert a file in the message, select **Insert** or **Options** > **Insert**.

You can obtain images and video clips from the **Gallery**, or to take them directly from the viewfinder, select **Options** > **Insert** > **Image** > **New Image** or **Options** > **Insert** > **Video clip** >**New video clip**.

3. To view the message before sending it, select **Options** > **Preview**.

4. To send the message, select **Options** > **Send**; or press the call key. See "Send a message," p. 32.

5. Enter the recipient's phone number in the **To:** field. To retrieve a phone number from **Contacts**, select **Add** > **Contact**. To send the message to multiple recipients, add the desired contacts one by one. To send the message to persons in a group, select **Contact group** and the desired group. To retrieve the contacts to which you recently sent messages, select **Add** > **Recently used**. To retrieve the contacts from the call log, select **Add** > **Open Log**.

To send a multimedia message to an e-mail address, enter the e-mail address in the **To:** field.

Send a message

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

When you finish writing your message, select **Send**, or press the call key, to send the message. The phone saves the message in the **Outbox** folder, and sending starts. If you select **Save sent messages** > **Yes**, the sent message is saved in the **Sent items** folder. See "General," p. 45.

> **Note:** When the phone sends the message, the animated is shown. This is an indication that the message has been sent by your device to the message center 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.

It takes more time to send a multimedia message than to send a text message. While the message is being sent, you can use other functions on the phone. If an interruption occurs while the message is being sent, the phone tries to resend the message a few times. If these attempts fail, the message remains in the **Outbox** folder. You can try to resend it later.

Cancel message sending

When the phone saves a message in the **Outbox** folder, **Sending message** or **Sending messages** is displayed. To cancel the text message sending, select **Cancel**.

To cancel the sending of the multimedia messages in the **Outbox** folder, scroll to the desired message, and select **Options** > **Cancel sending**.

Play and reply to a message

> **Important:** Exercise caution when opening messages. Multimedia message objects may contain malicious software or otherwise be harmful to your device or PC.

Multimedia message received or the number of new messages with **messages received** is displayed when you receive a new multimedia message.

1. To read the message, select **Show**. To view it later, select **Exit**.

   is shown if you have unread messages in **Inbox**. To access unread messages in the inbox, select **Menu** > **Messaging** > **Inbox**. Scroll to the message that you want to view, and select it.

2. To view the whole message if the received message contains a presentation, select **Play**.

   To view the files in the presentation or the attachments, select **Options** > **Objects** or **Attachments**.

3. To reply to the message, select **Options** > **Reply** > **Text message**, **Multimedia**, or **Audio message**. Write the reply message.

   If you want to change the message type for your reply message, select **Options** > **Change msg. type**. The new message type may not support all the content that you have added.

4. To send the message, select **Send**; or press the call key. See "Send a message," p. 32.

■ Audio messages

With this menu, use the multimedia message service to create and send a voice message in a convenient way. Multimedia messaging service must be activated before you can use audio messages.

Create and send a message

1. Select **Menu** > **Messaging** > **Create message** > **Audio message**. The recorder opens. To use the recorder, see "Recorder," p. 72.

2. To view the available options, select **Options**.

3. Enter the recipient's phone number in the **To:** field. To retrieve a phone number from **Contacts**, select **Add** > **Contact**. To send the message to multiple recipients, add the desired contacts one by one. To send the message to persons in a group, select **Contact group** and the desired group. To retrieve the contacts to which you recently sent messages, select **Add** > **Recently used**. To retrieve the contacts from the call log, select **Add** > **Open Log**.

   To send a multimedia message to an e-mail address, enter the e-mail address in the **To:** field.

4. To send the message, select **Send**.

Listen and reply to a message

When your phone receives an audio message, **1 audio message received** is displayed. To open the message, select **Play**; or if more than one message is received, select **Show** > **Play**. To listen to the message later, select **Exit**.

 is shown if you have unread audio messages in **Inbox**. To access unread messages in the inbox, select **Menu** > **Messaging** > **Inbox**.

■ Memory full

When you are receiving a message, and the memory for the messages is full, **Memory full. Unable to receive messages.** is shown. To first delete old messages, select **OK** > **Yes** and the folder. Scroll to the desired message, and select **Delete**. If one or more messages are marked, select **Mark**. Mark all the messages you want to delete, and select **Options** > **Delete marked**.

To free phone memory, delete photos, ringing tones, or other data in the phone memory.

■ Folders

The phone saves received messages in the **Inbox** folder.

Messages that have not yet been sent are saved in the **Outbox** folder.

To set the phone to save the sent messages in the **Sent items** folder, see **Save sent messages** in "General," p. 45.

To edit and send messages that you have written and saved in the **Drafts** folder, select **Menu** > **Messaging** > **Drafts**.

You can move your messages to the **Saved items** folder. To organize your **Saved items** subfolders, select **Menu** > **Messaging** > **Saved items** > **Saved messages** or a folder that you add. To add a new folder for your messages, select **Options** > **Add folder**. To delete or rename a folder, scroll to the desired folder, and select **Options** > **Delete folder** or **Rename folder**.

Your phone has templates. To create a new template, save or copy a message as a template. To access the template list, select **Menu** > **Messaging** > **Saved items** > **Templates**.

■ E-mail application

The e-mail application uses a packet data connection (network service) to allow you to access your e-mail account. This e-mail application is

different from the SMS e-mail function. To use the e-mail function on your phone, you need a compatible e-mail system.

You can write, send, and read e-mail with your phone. You can also save and delete the e-mail on a compatible PC. Your phone supports POP3 and IMAP4 e-mail servers.

Before you can send and retrieve any e-mail messages, you must do the following:

- Obtain a new e-mail account or use your current account. To check the availability of your e-mail account, contact your e-mail service provider.

- Check your e-mail settings with your network operator or e-mail service provider. You may receive the e-mail configuration settings as a configuration message. See "Configuration settings service," p. 11. You can also enter the settings manually. See "Configuration," p. 64.

  To activate the e-mail settings, select **Menu** > **Messaging** > **Message settings** > **E-mail messages**. See "E-mail," p. 47.

This application does not support keypad tones.

Setting Wizard

The setting wizard will start automatically if no e-mail settings are defined in the phone. To enter the settings manually, select **Menu** > **Messaging** > **E-mail** > **Options** > **Manage accounts** > **Options** > **New**.

The **Manage accounts** options allow you to add, delete, and change the e-mail settings. Make sure that you have defined the correct preferred access point for your operator. See "Configuration," p. 64. The e-mail application requires an Internet access point without a proxy. WAP access points normally include a proxy and do not work with the e-mail application.

Write and send an e-mail

You can write your e-mail message before connecting to the e-mail service; or connect to the service first, then write and send your e-mail.

1. Select **Menu** > **Messaging** > **E-mail** > **Write new e-mail**.

2. If more than one e-mail account is defined, select the account from which you want to send the e-mail.

3. Enter the recipient's e-mail address.

4. Write a subject for the e-mail.

5. Write the e-mail message. See "Write text," p. 26.

   To attach a file to the e-mail, select **Options** > **Attach file** and a file from **Gallery**.

6. To send the e-mail message immediately, select **Send** > **Send now**.

   To save the e-mail in the **Outbox** folder to be sent later, select **Send** > **Send later**.

   To edit or continue writing your e-mail later, select **Options** > **Save as draft**. The e-mail is saved in **Outboxes** > **Drafts**.

   To send the e-mail later, select **Menu** > **Messaging** > **E-mail** > **Options** > **Send now** or **Send & check e-mail**.

Download e-mail

1. To download e-mail messages that have been sent to your e-mail account, select **Menu** > **Messaging** > **E-mail** > **Check new e-mail**.

   If more than one e-mail account is defined, select the account from which you want to download the e-mail.

   The e-mail application only downloads e-mail headers at first.

2. Select **Back**.

3. Select **Inboxes**, the account name, and the new message, and select **Retrieve** to download the complete e-mail message.

To download new e-mail messages and to send e-mail that has been saved in the **Outbox** folder, select **Options** > **Send & check e-mail**

Read and reply to e-mail

Important: Exercise caution when opening messages. E-mail messages may contain malicious software or otherwise be harmful to your device or PC.

1. Select **Menu** > **Messaging** > **E-mail** > **Inboxes**, the account name, and the desired message.

2. While reading the message, select **Options** to view the available options.

3. To reply to an e-mail, select **Reply** > **Original text** or **Empty message**. To reply to many, select **Options** > **Reply to all**. Confirm or edit the e-mail address and subject, then write your reply.

4. To send the message, select **Send** > **Send now**.

E-mail folders

Your phone saves e-mail that you have downloaded from your e-mail account in the **Inboxes** folder. The **Inboxes** folder contains the following folders: "Account name" for incoming e-mail, **Archive** for archiving e-mail, **Custom 1—Custom 3** for sorting e-mail, **Junk** in which all spam e-mail is stored, **Drafts** for saving unfinished e-mail, **Outbox** for saving e-mail that has not been sent, and **Sent items** for saving e-mail that has been sent.

To manage the folders and their e-mail content, select **Options** to view the available options of each folder.

Spam filter

The e-mail application allows you to activate a built-in spam filter. To activate and define this filter, select **Options** >**Spam filter** >**Settings** in the main e-mail idle screen. The spam filter allows the user to put specific senders on a black or white list. Black list sender messages are filtered to the **Junk** folder. Unknown and White list sender messages are downloaded into the account inbox. To blacklist a sender, select the e-mail message in the **Inboxes** folder and **Options** > **Blacklist sender**.

■ Instant messaging (IM)

You can take text messaging to the next level by experiencing instant messaging (network service) in a wireless environment. You can engage in IM with friends and family, regardless of the mobile system or

platform (like the Internet) they are using, as long as you all use the same IM service.

Before you can start using IM, you must first subscribe to your wireless service provider's text messaging service and register with the IM service you want to use. You must also obtain a user name and password before you can use IM. See "Register with an IM service," p. 39 for more information.

Depending on both your IM service provider and your wireless service provider, you may not have access to all of the features described in this guide.

You may receive the configuration settings for IM service as a configuration message. See "Configuration settings service," p. 11. You can also enter the settings manually. See "Configuration," p. 64. The icons and texts on the display may vary, depending on the IM service.

While you are connected to the IM service, you can use the other functions of the phone, and the IM conversation remains active in the background. Depending on the network, the active IM conversation may consume the phone battery faster, and you may need to connect the phone to a charger.

Register with an IM service

You can register to an IM service over the Internet. During the registration process, you will have the opportunity to create the user name and password of your choice. For more information about signing up for IM services, contact your wireless service provider.

Access

To access the **Instant messages** menu while still offline, select **Menu** > **Messaging** > **Instant messages** (**Instant messages** may be replaced by another term depending on the service provider). If more than one set of connection settings for IM service is available, select the one you want. If there is only one set defined, it is selected automatically.

The following options are available:

Login — to connect to the IM service. To set the phone to automatically connect to the IM service when you switch on the phone; in the login session, scroll to **Automatic login:** and select **Change** >**On,** or select **Menu** > **Messaging** > **Instant messages**, connect to the IM service, and select **Options** > **Settings** > **Automatic login** > **On phone start-up**.

Saved conversations — to view, erase, or rename the conversations that you saved during an IM session

Connect. settings — only the configurations that support IM service are shown. Select a service provider, Default or Personal config.

To activate the settings for the IM service, select from the following options:

Configuration — select the set that you would like to activate.

Account — select an account provided by the service provider.

User ID — enter the ID that you want to use to connect to IM service.

Password — enter the password that you want to use to connect to IM service.

Connect

To connect to the IM service, access the **Instant messages** menu, select the IM service, if needed, and select **Login**. When the phone has successfully connected, **Logged in** is displayed.

To disconnect from the IM service, select **Options** >**Logout**.

Sessions

When connected to the IM service your status as seen by others is shown in a status line: **My status: Online**, **My status: Busy** or **Status: App. offl.** — to change own status, select **Change**.

Below the status line there are three folders containing your contacts and showing their status: **Convers.**, **Online** and **Offline**. To expand the folder highlight it and select **Expand** (or press scroll right), to collapse the folder select **Collapse** (or press scroll left).

Conversations — shows the list of new and read instant messages or invitations to IM during the active IM session.

🔄 indicates a new group message.

🔄 indicates a read group message.

🔄 indicates a new instant message.

🔄 indicates a read instant message.

🔄 indicates an invitation.

The icons and texts on the display may vary, depending on the IM service you have selected.

Online — shows the number of contacts that are online.

Offline — shows the number of contacts that are offline.

To start a conversation, expand the **Online** or the **Offline** folder and scroll to the contact with whom you would like to chat and select **Chat**. To answer an invitation or to reply to a message, expand the **Conversations** folder, and scroll to the contact to whom you would like to chat, and select **Open**. To add contacts, see "Add IM contacts," p. 42.

Groups > **Public groups** (not visible if groups are not supported by the network) — the list of bookmarks to public groups provided by the service provider is displayed. To start a IM session with a group, scroll to a group, and select **Join**. Enter the screen name that you want to use as your nickname in the conversation. When you have successfully joined the group conversation, you can start a group conversation. You can create a private group. See "Groups," p. 43.

Search > **Users** or **Groups** — to search for other IM users or public groups on the network by phone number, screen name, e-mail address, or name. If you select **Groups**, you can search for a group by a member in the group, or by group name, topic, or ID.

Options > **Chat** or **Join group** — to start the conversation when you have found the user or the group that you want.

Accept or reject an invitation
In the standby mode, when you are connected to the IM service and you receive a new invitation, **New invitation received** is displayed. To read it, select **Read**. If more than one invitation is received, scroll to the invitation you want, and select **Open**. To join the private group conversation, select **Accept**, and enter the screen name you want to use

as your nickname. To reject or delete the invitation, select **Options** > **Reject** or **Delete**.

Read an instant message

In the standby mode, when you are connected to the IM service, and you receive a new message that is not a message associated with an active conversation, **New instant message** is displayed. To read it, select **Read**.

If you receive more than one message, the number of messages followed by **new instant messages** is displayed. Select **Read**, scroll to a message, and select **Open**.

New messages received during an active conversation are held in **Instant messages** > **Conversations**. If you receive a message from someone who is not in **IM contacts**, the sender ID is displayed. To save a new contact that is not in the phone memory, select **Options** > **Save contact**.

Participate in a conversation

To join or start an IM session, write your message; and select **Send**, or press the call key. Select **Options** to view the available options.

If you receive a new message during a conversation from a person who is not taking part in the current conversation, ▤ is displayed, and the phone sounds an alert tone.

Write your message; and select **Send**, or press the call key. Your message is displayed, and the reply message is displayed below your message.

Add IM contacts

When connected to the IM service, in the IM main menu select **Options** > **Add contact**.

Select **By mobile number**, **Enter ID manually**, **Search from serv.**, or **Copy from server** (depending on service provider). When the contact is successfully added, the phone confirms it.

Scroll to a contact. To start a conversation, select **Chat**.

Block or unblock messages

When you are in a conversation and want to block messages, select **Options** > **Block contact**. A confirmation query is shown, select **OK** to block messages from this contact.

To block messages from a specific contact in your contacts list, scroll to the contact in **Conversations**, **Online** or **Offline** and select **Options** > **Block contact** > **OK**.

To unblock a contact, in the IM main menu select **Options** > **Blocked list**. Scroll to the contact you want to unblock and select **Unblock** > **OK**.

Groups

You can create your own private groups for an IM conversation, or use the public groups provided by the service provider. The private groups exist during an IM conversation only, and the groups are saved on the server of the service provider. If the server you are logged onto does not support group services, all group-related menus are dimmed.

Public

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

To search for a group, select **Groups** > **Public groups** > **Search groups**. You can search for a group by a member in the group, by group name, topic, or ID.

Private

Connect to the IM service, and from the main menu select **Options** > **Create group**. Enter the name for the group and the screen name that you want to use as your nickname. Mark the private group members in the contacts list, and write an invitation.

■ Voice messages

The voice mailbox is a network service, and you may need to subscribe to it. For details, contact your service provider.

To call your voice mailbox, select **Menu** > **Messaging** > **Voice messages** > **Listen to voice messages**. To enter, search for or edit your voice mailbox number, select **Voice mailbox number**.

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

■ Info messages

With the **Info messages** network service, you can receive messages on various topics from your service provider. To check availability, topics, and the relevant topic numbers, contact your service provider.

■ Service commands

Select **Menu** > **Messaging** > **Service commands**. Write and send service requests (also known as USSD commands) to your service provider, such as activation commands for network services.

■ Delete messages

To delete one or more messages from your folders, select **Menu** > **Messaging** > **Delete messages** > **By message** and scroll to the folder from which you want to delete the message. Scroll to the message you want to delete, and select **Delete**. If you want to delete more than one message, select **Options** > **Mark**, and then scroll to the next message, and select Mark again. When you have marked all the messages you want to delete, select **Options** > **Delete marked**.

To delete all messages from a folder, select **Menu** > **Messaging** > **Delete messages** > **By folder** and the folder from which you want to delete the messages. Select **Yes**, and if the folder contains unread messages, the phone asks whether you want to delete them also. Select **Yes** again.

To delete all messages from all folders, select **Menu** > **Messaging** > **Delete messages** > **All messages**, the phone asks whether you want to delete all messages from all folders. Select **Yes**.

■ Message settings

General

General settings are common for text and multimedia messages.

Select **Menu** > **Messaging** > **Message settings** > **General settings** and from the following options:

Save sent messages > **Yes** — to set the phone to save the sent messages in the **Sent items** folder

Overwriting in Sent items — to select whether overwriting is allowed when messages are sent and the memory is full

Font size — to select the font size used in messages

Graphical smileys > **Yes** — to set the phone to replace character-based smileys with graphical ones

Text message and SMS e-mail

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

Select **Menu** > **Messaging** > **Message settings** > **Text messages** and from the following options:

Delivery reports > **Yes** — to ask the network to send delivery reports about your messages (network service)

Message centres > **Add centre** — to set the phone number and name of the message center that is required for sending text messages. You receive this number from your service provider. If you select a message center stored on the SIM card, you can view the SIM message center information.

Message centre in use — to select the message center in use

E-mail message centres > **Add centre** — to set the phone numbers and name of the e-mail center for sending SMS e-mail. If you select an e-mail center stored on the SIM card, you can view the SIM e-mail center information.

E-mail centre in use — to select the SMS e-mail message center in use

Message validity — to select the length of time for which the network attempts to deliver your message

Messages sent via — to select the format of the messages to be sent: **Text**, **Paging**, or **Fax** (network service)

Use packet data > **Yes** — to set packet data as the preferred SMS bearer

Character support > **Full** — to select all characters in the messages to be sent as viewed

Reply via same centre > **Yes** — to allow the recipient of your message to send you a reply using your message center (network service)

Multimedia message

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

You may receive the configuration settings for multimedia messaging as a configuration message. See "Configuration settings service," p. 11. You can also enter the settings manually. See "Configuration," p. 64.

Select **Menu** > **Messaging** > **Message settings** > **Multimedia msgs.** and from the following options:

Delivery reports > **Yes** — to ask the network to send delivery reports about your messages (network service)

Image size (multimedia) — to define the default image size used in multimedia messages

Default slide timing — to define the default time between slides in multimedia messages

Allow multimedia reception — to receive or block the multimedia message, select **Yes** or **No.** If you select **In home network,** you cannot receive multimedia messages when you are outside your home network.

The default setting of the multimedia message service is generally **In home network**.

Incoming multimedia messages — to allow the reception of multimedia messages automatically, manually after being prompted, or to reject the reception. This setting is not shown if **Allow multimedia reception** is set to **No**.

Allow adverts — to receive or reject advertisements. This setting is not shown if **Allow multimedia reception** is set to **No**, or **Incoming multim. msgs.** is set to **Reject**.

Configuration settings > **Configuration** — only the configurations that support multimedia messaging are shown. Select a service provider, **Default**, or **Personal config.** for multimedia messaging. Select **Account** and a multimedia messaging service account contained in the active configuration settings.

E-mail

The settings affect the sending, receiving and viewing of e-mail.

You may receive the configuration settings for the e-mail application as a configuration message. See "Configuration settings service," p. 11. You can also enter the settings manually. See "Configuration," p. 64.

To activate the settings for the e-mail application, select **Menu** > **Messaging** > **Message settings** > **E-mail messages** and from the following options:

Configuration — to select the set that you would like to activate

Account — to select an account provided by the service provider

My name — to enter your name or nickname

E-mail address — to enter your e-mail address

Include signature — to define a signature that is automatically added to the end your e-mail when you write your message

Reply-to address — to enter the e-mail address to which you want the replies to be sent

SMTP user name — to enter the name that you want to use for outgoing mail

SMTP password — to enter the password that you want to use for outgoing mail

Display terminal window > **Yes** — to perform manual user authentication for intranet connections

Incoming server type — to 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 — to select available options for **POP3** or **IMAP4**

7. Contacts

You can save names and phone numbers (contacts) in the phone memory and in the SIM card memory.

The phone memory may save contacts with numbers and text items. You can also save an image for a certain number of names.

Names and numbers saved in the SIM card memory are indicated by 回.

■ Search for a contact

Select **Menu** > **Contacts** > **Names**. Scroll through the list of contacts or enter the first letter of the name you are searching for.

■ Save names and phone numbers

Names and numbers will be saved in the used memory. Select **Menu** > **Contacts** > **Names** > **Options** > **Add new contact**. Enter the last name, first name, the phone number and select **Save**.

■ Save numbers, items, or an image

In the phone memory for contacts you can save different types of phone numbers, and short text items per name.

The first number you save is automatically set as the default number, and it is indicated with a frame around the number type indicator (for example, 回). When you select a name (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 **Phone** or **Phone and SIM**.

2. Scroll to the name to which you want to add a new number or text item, and select **Details** > **Options** > **Add detail**.

3. To add a number, select **Number** and one of the number types.

   To add another detail, select an available option.

To change the number type, scroll to the desired number, and select **Options** > **Change type**. To set the selected number as the default number, select **Set as default**.

4. Enter the number or text item; to save it, select **Save**.

5. To return to the standby mode, select **Back** > **Exit**.

■ Move or copy contacts

You can move or copy contacts from the phone contact memory to the SIM card memory, or vice versa. The SIM card memory can save names with one phone number attached to them.

To move or copy contacts one by one, select **Menu** > **Contacts** > **Names**. Scroll to the contact, and select **Options** > **Move contact** or **Copy contact**.

To move or copy marked contacts, select **Menu** > **Contacts** > **Names**. Scroll to a contact, and select **Options** > **Mark**. Mark all other contacts, and select **Options** > **Move marked** or **Copy marked**.

To move or copy all contacts, select **Menu** > **Contacts** > **Move contacts** or **Copy contacts**.

■ Edit contact details

Search for the contact you want to edit, and select **Details**. To edit a name, number, text item, or to change the image, select **Options** > **Edit**. You cannot edit an ID when it is on the **IM contacts** or **Subscribed names** list.

■ Synchronize all

Synchronize your calendar, contacts data, and notes with a remote Internet server (network service). For details see "Synchronize from a server," p. 61.

■ Delete contacts or details

To delete all the contacts and the details attached to them from the phone or SIM card memory, select **Menu** > **Contacts** > **Delete all**

contacts > **From phone mem.** or **From SIM card**. Confirm with the security code.

To delete a contact, search for the desired contact, and select **Options** > **Delete contact**.

To delete a number, text item, or an image attached to the contact, search for the contact, and select **Details**. Scroll to the desired detail, and select **Options** > **Delete** and from the available options. Deleting an image from contacts does not delete it from **Gallery**.

■ Business cards

You can send and receive a person's contact information from a compatible device that supports the vCard standard as a business card.

To send a business card, search for the contact whose information you want to send, and select **Details** > **Options** > **Send business card** > **Via multimedia**, **Via text message**, or **Via Bluetooth**.

When you have received a business card, select **Show** > **Save** to save the business card in the phone memory. To discard the business card, select **Exit** > **Yes**.

■ Settings

Select **Menu** > **Contacts** > **Settings** and from the following options:

Memory in use — to select the SIM card or phone memory for your contacts. Select **Phone and SIM** to recall names and numbers from both memories. In that case, when you save names and numbers, they are saved in the phone memory.

Contacts view — to select how the names and numbers in **Contacts** are displayed

Name display — to select whether the contact's first or last name is displayed first

Font size — to set the font size for the list of contacts

Memory status — to view the free and used memory capacity

■ Groups

Select **Menu** > **Contacts** > **Groups** to arrange the names and phone numbers saved in the memory into caller groups with different ringing tone and a group image.

■ Speed dialing

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

Select **Assign**, or if a number has already been assigned to the key, select **Options** > **Change**. Select **Search**, the name, and then the number 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," p. 62.

To make a call using the speed-dialing keys, see "Speed dialing," p. 23.

■ Info, service, and my numbers

Select **Menu** > **Contacts**, and the following functions may be available:

Info numbers — to call the information numbers of your service provider if the numbers are included on your SIM card (network service)

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, if the numbers are included on your SIM card

8. Call log

To view the information on your calls, select **Menu** > **Log** > **Missed calls**, **Received calls**, or **Dialled numbers**. To view your recent missed and received calls and the dialed numbers chronologically, select **Call log**. To view the contacts to whom you most recently sent messages, select **Message recipients**.

To view the approximate information on your recent communications, select **Menu** > **Log** > **Call duration**, **Packet data counter**, or **Packet data conn. timer**.

To view how many text and multimedia messages you have sent and received, select **Menu** > **Log** > **Message log**.

Note: The actual invoice for calls and services from your service provider may vary, depending on network features, rounding off for billing, taxes, and so forth.

Note: Some timers, including the life timer, may be reset during service or software upgrades.

■ Positioning information

The network may send you a location request. You can ensure that the network will deliver location information of your phone only if you approve it (network service). Contact your network operator or service provider to subscribe and to agree upon the delivery of location information.

To accept or reject the location request, select **Accept** or **Reject**. If you miss the request, the phone automatically accepts or rejects it according to what you have agreed with your network operator or service provider. The phone displays **1 missed position request**. To view the missed location request, select **Show**.

To view the information on the 10 most recent privacy notifications and requests or to delete them, select **Menu** > **Log** > **Positioning** > **Position log** > **Open folder** or **Delete all**.

9. Settings

■ Profiles

Your phone has various setting groups, called profiles, for which you can customize the phone tones for different events and environments.

Select **Menu** > **Settings** > **Profiles**. Scroll to a profile, and select it.

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

■ Themes

A theme contains many elements for personalizing your phone, such as wallpaper, screen saver, and a ringing tone.

Select **Menu** > **Settings** > **Themes** and from the following options:

Select theme — to set a theme in your phone. A list of folders in **Gallery** opens. Open the **Themes** folder, and select a theme.

Theme downloads — to open a list of links to download more themes

■ Tones

You can change the settings of the selected active profile.

Select **Menu** > **Settings** > **Tones**. Select and change the available settings. You can find the same settings when personalizing profiles in the **Profiles** menu, see "Profiles," p. 54.

To set the phone to ring only upon calls from phone numbers that belong to a selected caller group, select **Menu** > **Settings** > **Tones** > **Alert for:**. Scroll to the caller group you want or **All calls**, and select **Mark**.

■ Display

With display settings you can personalize your phone display view.

Standby mode settings

Select **Menu** > **Settings** > **Display** > **Standby mode settings** and from the following options:

Wallpaper — to set your phone to display an image or a slide as wallpaper when the phone is in the standby mode. Select **Wallpapers** > **Image** or **Slide set**, scroll to the folder from which you want to select the image or slide set, and select the image or slide set you want.

Slide animation — to set slide animation **On** or **Off**.

Standby mode font colour — to select the color for the texts on the display in the standby mode

Operator logo — to set your phone to display or hide the operator logo

Cell info display > **On** — to receive information from the network operator depending on the network cell used (network service).

To download more graphics, select **Menu** > **Settings** > **Display** > **Standby mode settings** > **Wallpaper** > **Graphic downloads**.

Screen saver

To select a screen saver from **Gallery**, select **Menu** > **Settings** > **Display** > **Screen saver** > **Screen savers** and from the options available. To download more screen savers, select **Graphic downloads**. To select the time after which the screen saver is activated, select **Time-out**. To activate the screen saver, select **On**.

Power saver

To save some battery power, select **Menu** > **Settings** > **Display** > **Power saver** > **On**. A digital clock is displayed when no function of the phone is used for a certain time.

Sleep mode

To save most battery power, select **Menu** > **Settings** > **Display** > **Sleep mode** > **On**. The display turns completely black when no function of the phone is used for a certain time.

Font size

To set the font size for reading and writing messages, and viewing contacts and Web pages, select **Menu** > **Settings** > **Display** > **Font size**.

■ Time and date

To change the time, time zone, and date settings, select **Menu** > **Settings** > **Time and date** > **Clock**, **Date**, or **Auto-update of date & time** (network service).

When traveling to a different time zone, select **Menu** > **Settings** > **Time and date** > **Clock** > **Time zone** and the time zone of your location in terms of the time difference with respect to Greenwich Mean Time (GMT) or Universal Time Coordinated (UTC). The time and date are set according to the time zone and enable your phone to display the correct sending time of received text or multimedia messages. For example, GMT -5 denotes the time zone for New York (USA), 5 hours west of Greenwich/London (UK).

■ My shortcuts

With personal shortcuts you can quickly access to often used functions of the phone.

Left selection key

To select a function from the list for the left selection key, select **Menu** > **Settings** > **My shortcuts** > **Left selection key**.

If the left selection key is **Go to** to activate a function, in the standby mode select **Go to** and the desired function on your personal shortcut list. To change the functions in your personal shortcut list, select **Options** and from the following options:

Select options — to add a function to the shortcut list, or to remove one. Scroll to the function, and select Mark or Unmark.

Organise — to rearrange the functions on your personal shortcut list. Scroll to the function you want to move, and select Move. Scroll to where you want to move the function, and select OK.

Right selection key

To set one phone function from a predefined list to the right selection key, select Menu > Settings > My shortcuts > Right selection key. This menu may not be shown, depending on your service provider.

Navigation key

To assign other phone functions from a predefined list to the navigation key (scroll key), select Menu > Settings > My shortcuts > Navigation key.

Voice commands

You can call contacts and carry out phone functions by saying voice commands. Voice commands are language-dependent. To set the language, see Voice playback language in "Phone," p. 63.

The phone voice commands are active by default. Select Menu > Settings > My shortcuts > Voice commands and a phone function. Scroll to a function. 𝕾 indicates that the voice tag is activated. To play the activated voice command, select Play. To use voice commands, see "Enhanced voice dialing," p. 23.

To manage the voice commands, scroll to a phone function, and select from the following options:

Edit or Remove — to change or deactivate the voice command of the selected function. When you edit the voice tag text, the phone associates it to a new virtual voice tag.

Add all or Remove all — to activate or deactivate voice commands to all functions in the voice commands list. Add all or Remove all is not shown if all voice commands are active or inactive.

■ Connectivity

You can connect your phone to compatible devices using Bluetooth wireless technology, for example, connect to a Bluetooth stereo headset and a PC at the same time. You can also define the settings for packet data dial-up connections.

Bluetooth wireless technology

This device is compliant with Bluetooth Specification 2.0 with Enhanced Data Rate (EDR) supporting the following profiles: dial-up networking, hands-free, headset, generic object exchange, object push, file transfer, audio/video distribution transport protocol, generic audio/video distribution, advanced audio distribution, audio/video control transport protocol, audio/video remote control, SIM access. To ensure interoperability between other devices supporting Bluetooth technology, use Nokia approved enhancements for this model. Check with the manufacturers of other devices to determine their compatibility with this device.

There may be restrictions on using Bluetooth technology in some locations. Check with your local authorities or service provider.

Features using Bluetooth technology, or allowing such features to run in the background while using other features, increase the demand on battery power and reduces the battery life.

Bluetooth wireless technology allows you to connect the phone to a compatible Bluetooth device up to 10 meters. Since devices using Bluetooth wireless technology communicate using radio waves, your phone and the other devices do not need to be in direct line-of sight, although the connection can be subject to interference from obstructions such as walls or from other electronic devices.

Set up a Bluetooth connection

Select **Menu** > **Settings** > **Connectivity** > **Bluetooth**. Select from the following options:

Bluetooth > **On** or **Off** — to activate or deactivate the Bluetooth function. indicates an active Bluetooth connection.

Search for audio enhancements — to search for compatible Bluetooth audio devices. Select the device that you want to connect to the phone.

Paired devices — to search for any Bluetooth device in range. Select **New** to list any Bluetooth device in range. Scroll to a device, and select **Pair**. Enter the Bluetooth passcode of the device to pair (associate) the device to your phone. You only must give this passcode when you connect to the device for the first time. Your phone connects to the device, and you can start data transfer.

Bluetooth wireless connection

Select **Menu** > **Settings** > **Connectivity** > **Bluetooth**. To check which Bluetooth connection is currently active, select **Active device**. To view a list of Bluetooth devices that are currently paired with the phone, select **Paired devices**.

Select **Options** to access some of the following functions depending on the status of the device and the Bluetooth connection. Select **Assign short name**, or **Auto-conn. without confirmation** > **Yes** to set the phone automatically to connect to a paired Bluetooth device.

Bluetooth settings

To define how your phone is shown to other Bluetooth devices, select **Menu** > **Settings** > **Connectivity** > **Bluetooth** > **My phone's visibility** or **My phone's name**.

We recommend to use the setting **Hidden** in **My phone's visibility**. Always accept only Bluetooth communication from others that you agree with.

Packet data

Enhanced general packet radio service (EGPRS), packet data, is a network service that allows mobile phones to send and receive data over an Internet protocol (IP)-based network. It enables wireless access to data networks such as the Internet.

The applications that may use packet data are MMS, video streaming, browsing sessions, e-mail, remote SyncML, Java application downloading, and the PC dial-up.

To define how to use the service, select **Menu** > **Settings** > **Connectivity** > **Packet data** > **Packet data connection** and from the following options:

When needed — to set the packet data connection to established when an application needs it. The connection will be closed when the application is terminated.

Always online — to set the phone to automatically connect to a packet data network when you switch the phone on. ⎿ or ⴹ indicates that the GPRS or EGPRS service is available. If you receive a call or a text message or make a call during a packet data connection, ⴹ or ⴹ indicates that the GPRS or EGPRS connection is suspended (on hold).

Modem settings

You can connect the phone using Bluetooth wireless technology to a compatible PC and use the phone as a modem to enable EGPRS connectivity from the PC.

To define the settings for connections from the PC, select **Menu** > **Settings** > **Connectivity** > **Packet data** > **Packet data settings** > **Active access point**, activate the access point you want to use, and select **Edit active access point**. Select **Alias for access point**, and enter a nick name for the currently selected access point. Select **Packet data access point**, and enter the access point name (APN) to establish a connection to a packet data network.

You can also set the dial-up service settings (access point name) on your PC using the Nokia Modem Options software. See "PC Suite," p. 90. If you have set the settings both on the PC and on your phone, the PC settings are used.

Data transfer and synchronization

Synchronize your data from calendar, notes, and contacts with another compatible device (for example, a mobile phone), a compatible PC, or a remote Internet server (network service).

Partner list
To copy or synchronize data from your phone, the name of the device and the settings must be in the list of partners in transfer contacts. If

you receive data from another device, for example, a compatible mobile phone, the partner is automatically added to the list, using the contact data from the other device. **Server sync** and **PC sync** are the original items in the list.

To add new partner to the list, for example a new device, select **Menu** > **Settings** > **Connectivity** > **Data transfer** > **Options** > **Add transfer contact** > **Phone sync** or **Phone copy**, and enter the settings according to the transfer type.

To edit the copy and synchronize settings, select a contact from the partner list, and select **Options** > **Edit**.

To delete a selected partner, select **Options** > **Delete**.

Data transfer with a device

For synchronization Bluetooth wireless technology is used. The other device is in the standby mode.

To start a data transfer, select **Menu** > **Settings** > **Connectivity** > **Data transfer** and the transfer partner from the list, other than **Server sync** and **PC sync**. According to the settings, the selected data will be copied or synchronized.

Synchronize from a PC

To synchronize data from calendar, notes, and contacts from a compatible PC, use Bluetooth wireless technology. You also need Nokia PC Suite software of your phone installed on the PC.

Synchronize the data in the phone contacts, calendar, and notes to correspond with the data of your compatible PC by starting the synchronization from the PC.

Synchronize from a server

To use a remote Internet server you have to subscribe to a synchronization service. For more information and the settings required for this service, contact your service provider. You may receive the settings as a configuration message. See "Configuration settings service," p. 11 and "Configuration," p. 64.

If you have saved data on the remote Internet server, to synchronize your phone, start the synchronization from your phone.

Select **Menu** > **Settings** > **Connectivity** > **Data transfer** > **Server sync**. Depending on the settings, select **Initialising sync** or **Initialising copy**.

Synchronizing for the first time or after an interrupted synchronization may take up to 30 minutes to complete if the contacts or calendar are full.

■ Call

Select **Menu** > **Settings** > **Call** and from the following options:

Call divert (network service) — to divert your incoming calls. You may not be able to divert your call if some call barring functions are active. See **Call barring service** in "Security," p. 65.

Anykey answer > **On** — to answer an incoming call by briefly pressing any key, except the power, the left and right selection keys, or the end key.

Automatic redial > **On** — to set your phone to make a maximum of 10 attempts to connect the call after an unsuccessful call attempt.

Speed dialling > **On** — Select the names and phone numbers assigned to the speed-dialing keys, **2** to **9**. To dial, press and hold the corresponding number key.

Call waiting > **Activate** — to set the network to notify you of an incoming call while have a call in progress (network service). See "Call waiting," p. 25.

Summary after call > **On** — to briefly display the approximate duration and cost (network service) of the call after each call

Send my caller ID (network service) > **Yes**, or **Set by network**

Line for outgoing calls (network service) — to select the phone line 1 or 2 to make calls, if supported by your SIM card

Slide call handling — to set the phone to answer calls when you open the slide or end the calls when you close it

■ Phone

Select **Menu** > **Settings** > **Phone** and from the following options:

Language settings > **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.

Language settings > **SIM language**, to select the USIM card language.

Language settings > **Voice playback language** — to set a language for the voice playback. See "Enhanced voice dialing," p. 23 and "Voice commands," p. 57.

Memory status — to view the free memory and the used memory for each function in the list

Automatic keyguard — to set the keypad of your phone to lock automatically after a pre-set time delay when the phone is in the 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.

Security keyguard — to set the phone to ask for the security code when you unlock the keyguard. Enter the security code, and select **On**.

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

Welcome note — to enter the note you would like to be shown briefly when the phone is switched on

Operator selection > **Automatic** — to set the phone automatically to select 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," p. 89.

Help text activation — to select whether the phone shows help texts

Start-up tone — to select whether the phone plays a start-up tone when the phone is switched on.

Flight query —to select whether **Activate flight profile?** appears every time the phone is switched on if the flight mode was set before switching off the device. See "Flight mode," p. 21.

■ Enhancement

This menu is shown only if the phone is or has been connected to a compatible mobile enhancement.

Select **Menu** > **Settings** > **Enhancements**. You can select an enhancement menu if the corresponding enhancement is or has been connected to the phone. Depending on the enhancement, select from the following options:

Default profile — to select the profile that you want to be automatically activated when you connect to the selected enhancement

Automatic answer — to set the phone to answer an incoming call automatically after 5 seconds. If **Incoming call alert** is set to **Beep once** or **Off**, automatic answer is off.

Text phone > **Use text phone** > **Yes** — to use the text phone settings instead of headset or loopset settings

■ Configuration

You can configure your phone with settings that are required for certain services to work correctly. The services are browser, multimedia messaging, remote Internet server synchronization, e-mail application, and streaming. Get the settings from your SIM card, from a service provider as a configuration message or enter your personal settings manually. Configuration settings from up to 10 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," p. 11.

Select **Menu** > **Settings** > **Configuration** and from the following options:

Default configuration settings — to view the service providers saved in the phone. Scroll to a service provider, and select **Details** to view the applications that the configuration settings of this service provider supports. To set the configuration settings of the service provider as

default settings, select **Options** > **Set as default**; to delete configuration settings, select **Delete**.

Activate default in all applications — to activate the default configuration settings for supported applications

Preferred access point — to view the saved access points. Scroll to an access point, and select **Options** > **Details** to view the name of the service provider, data bearer, and packet data access point or GSM dial-up number.

Connect to service provider support — to download the configuration settings from your service provider.

Device manager settings — to allow or prevent the phone from receiving phone software updates. This option may not be available, depending on your phone.

Personal configuration settings — to add new personal accounts for various services manually and to activate or delete them. To add a new personal account if you have not added any, select **Add**; otherwise, select **Options** > **Add new**. Select the service type, and select and enter each of the required parameters. The parameters differ according to the selected service type. To delete or activate a personal account, scroll to it, and select **Options** > **Delete** or **Activate**.

■ Security

When security features that restrict calls are in use (such as call barring, closed user group, and fixed dialing) calls still may be possible to the official emergency number programmed into your device.

Select **Menu** > **Settings** > **Security** and from the following options:

PIN code request — to set the phone to ask for your PIN code every time the phone is switched on. Some SIM cards do not allow the code request to be turned off.

PIN2 code request — to select whether the PIN2 code is required when using a specific phone feature which is protected by the PIN2 code. Some SIM cards do not allow the code request to be turned off.

Call barring service — to restrict incoming calls to and outgoing calls from your phone (network service). 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 — to specify a group of people whom you can call and who can call you (network service)

Security level > **Phone** — to set the phone to ask for the security code whenever a new SIM card is inserted into the phone. If you select **Security level** > **Memory**, the phone asks for the security code when the SIM card 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 select whether the PIN code or UPIN code should be active

Authority certificates or **User certificates** — to view the list of the authority or user certificates downloaded into your phone. See "Certificates," p. 87.

Security module settings — to view **Security module details**, activate **Module PIN request**, or change the module PIN and signing PIN. See also "Access codes," p. 10.

■ Restore factory settings

To reset some of the menu settings to their original values, select **Menu** > **Settings** > **Restore factory settings**. Enter the security code. Note that the data you have entered or downloaded are not deleted, for example, the names and phone numbers saved in contacts.

10. Operator menu

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

The operator can update this menu with a service message. For more information, refer to "Service inbox," p. 85.

11. Gallery

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

Your phone supports an activation key system to protect acquired content. 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, music (including ringing tones), and other content from being copied, modified, transferred or forwarded.

To see the list of folders, select **Menu** > **Gallery**.

To see the available options of a folder, select a folder and **Options**.

To view the list of files in a folder, select a folder and **Open**.

To see the available options of a file, select a file and **Options**.

12. Media

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

■ Camera

You can take photos or record video clips with the built-in 2-megapixel camera. The camera produces images in .jpg format and video clips in .3gp format. You can digitally zoom up to eight times.

When taking and using images or video clips, obey all laws and respect local customs as well as privacy and legitimate rights of others.

Take an image

To open the camera viewfinder, select **Menu** > **Media** > **Camera**. If **Video** is selected as the default mode, scroll left or right.

To zoom in or out, scroll up or down.

To take an image, select **Capture**.

Select **Options** to set **Night mode on** if the lighting is dim, **Self-timer on** to activate the self-timer, **Img. sequence on** to take up to 8 images in a fast sequence. The higher the resolution, the fewer images you can take sequentially.

Select **Options** > **Settings** >**Image preview time** and a preview time to display the taken images on the display. During the preview time, select **Back** to take another image or **Send** to send the image as a multimedia message.

The phone saves the image in **Gallery** >**Images**.

To take another photo, select **Back**. To send the image as a multimedia message, select **Options** > **Send**.

This device supports an image capture resolution of 1600 x 1200 pixels. The image resolution in these materials may appear different.

Record a video clip

Select **Menu** > **Media** > **Camera**. To select the video mode, scroll left or right. To pause the recording, select **Pause**; to resume the recording, select **Contin.**. To stop the recording, select **Stop**. The phone saves the recording in **Gallery** > **Video clips**.

Camera options

To use a filter, select **Options** > **Effects** and from the available options.

To change the white balance, select **Options** > **White balance** and from the available options.

To change the camera and video settings, select **Options** > **Settings**.

■ Media player

With the media player you can view, play, and download files, such as images, audio, video, and animated images. You can also view compatible streaming videos from a network server (network service).

Select **Menu** > **Media** > **Media player** > **Open gallery**, **Bookmarks**, **Go to address**, or **Media downloads**.

Setup for a streaming service

You may receive the configuration settings required for the streaming as a configuration message from the network operator or service provider. See "Configuration settings service," p. 11. To enter the settings manually, see "Configuration," p. 64.

Select **Menu** > **Media** > **Media player** > **Streaming settings** and from the following options:

Configuration — Only the configurations that support streaming are shown. Select a service provider, **Default**, or **Personal config.**.

Account — A streaming service account is contained in the active configuration settings.

You can adjust the fast forwarding and rewind time step intervals used when streaming. Select **Menu** > **Media** > **Media player** > **FF/Rew interval** and the interval you want.

■ Music player

Your phone includes a music player for listening to music tracks, recordings, or other MP3, AAC, or WMA sound files that you have transferred to the phone with the Nokia Audio Manager application. Music files are automatically detected and added to the default track list.

Play music tracks

1. Select **Menu** > **Media** > **Music player**. The details of the first track on the default track list are shown.

   To use the graphical keys, ▶ , ◄◄ , ▶▶ , or ■ , on the display, scroll left or right to the desired key, and select it.

2. To play a track, scroll to the track that you want, and select ▶ .

   To skip to the beginning of the next track, select ▶▶ . To skip to the beginning of the previous track, select ◄◄ twice.

   To rewind the current track, select and hold ◄◄ . To fast forward the current track, select and hold ▶▶ . Release the key at the position you want.

3. To stop playing, select ■ .

   > **Warning:** Listen to music at a moderate level. Continuous exposure to high volume may damage your hearing. Do not hold the device near your ear when the loudspeaker is in use, because the volume may be extremely loud.

Music player settings

In the **Music player** menu, the following options may be available:

Volume — To change the volume level, scroll left or right.

Play via bluetooth — Make a connection to an audio enhancement using a Bluetooth connection.

Track list — View all the tracks available on the track list. To play a track, scroll to the desired track, and select **Play**. Select **Options** > **Refresh all tracks** or **Change track list** — Refresh the track list (for example, after adding new tracks to the list) or change the track list that is shown

when you open the **Music player** menu if several track lists are available in the phone.

Play options > **Random** > **On** — Play the tracks in the track list in random order. Select **Repeat** > **Current track** or **All tracks** to play the current track or the entire track list repeatedly.

Media equaliser — Open the list of media equalizer sets. See "Equalizer," p. 73.

Send — Send the selected file using MMS or a Bluetooth connection.

Web page — Connect to a browser service related to the current track. This function is only available when the address of the service is included in the track.

Music downloads — Download music to your phone.

Memory status — View the free and used memory capacity.

■ Radio

The FM radio depends on an antenna other than the wireless device. A compatible headset or enhancement needs to be attached to the device for the FM radio to function properly.

⚠ **Warning:** Listen to music at a moderate level. Continuous exposure to high volume may damage your hearing. Do not hold the device near your ear when the loudspeaker is in use, because the volume may be extremely loud.

Select **Menu** > **Media** > **Radio**. To use the graphical keys ▲ , ▼ , ◄◄ , or ▶▶ on the display, scroll left or right to the desired key, and select it.

Save radio stations

1. To start the radio station search, select and hold ◄◄ or ▶▶ . To change the radio frequency in 0.05-MHz steps, briefly press ◄◄ or ▶▶ .
2. To save the radio station to a memory location, 1 to 9, press and hold the corresponding number key. To save the station in the memory location from 10 to 20, press briefly **1** or **2**, and press and hold the desired number key, **0** to **9**.
3. Enter the name of the radio station, and select **OK**.

Listen to the radio

Select **Menu** > **Media** > **Radio**. To scroll to the desired station, select ▲ or ▼ , or press the headset key; or to select a radio station location, briefly press the corresponding number keys.

Select **Options** and from the following options:

Switch off — to turn off the radio

Volume — to change the volume level, scroll left or right

Save station — to save a new radio station

Stations — Select the list of saved radio stations. To delete or rename a radio station, scroll to the desired station, and select **Options** > **Delete station** or **Rename**.

Loudspeaker or **Headset** — Listen to the radio using the loudspeaker or headset. Keep the headset connected to the phone. The lead of the headset functions as the radio antenna.

Set frequency — Enter the frequency of the desired radio station.

You can normally make a call or answer an incoming call while listening to the radio. During the call, the volume of the radio is muted.

When an application using a packet data or HSCSD connection is sending or receiving data, it may interfere with the radio.

■ Recorder

You can record pieces of speech, sound, or an active call. This is useful when recording a name and phone number for writing them down later.

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

Record sound

1. Select **Menu** > **Media** > **Recorder**.

   To use the graphical keys (● , ❚❚ , or ■) on the display, scroll left or right to the desired key, and select it.

2. To start the recording, select ● . To start the recording during a call, select **Options** > **Record**. While recording a call, all parties to the call hear a faint beeping sound approximately every 5 seconds. When

recording a call, hold the phone in the normal position near to your ear.

3. To end the recording, select ■ . The recording is saved in **Gallery** > **Recordings**.

4. To listen to the latest recording, select **Options** > **Play last recorded**.

5. To send the last recording using Bluetooth wireless technology, or a multimedia message, select **Options** > **Send last recorded**.

List of recordings

Select **Menu** > **Media** > **Recorder** > **Options** > **Recordings list**. The list of folders in the **Gallery** is shown. Open **Recordings** to see the list with recordings. Select **Options** to see file options in the **Gallery**. See "Gallery," p. 67.

■ Equalizer

You can control the sound quality when using the music player by amplifying or attenuating frequency bands.

Select **Menu** > **Media** > **Equaliser**.

To activate a set, scroll to one of the equalizer sets, and select **Activate**.

To view, edit, or rename a selected set, select **Options** > **View**, **Edit**, or **Rename**. Not all sets can be edited or renamed.

13. Organizer

■ Alarm clock

You can set the phone to alarm at a desired time. Select **Menu** > **Organiser** > **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**. To set the phone to alert you on selected days of the week, select **Repeat alarm**.

To select the alarm tone or set a radio station as the alarm tone, select **Alarm tone**. If you select the radio as an alarm tone, connect the headset to the phone. The phone uses the last station you listened to as the alarm, and the alarm plays through the loudspeaker. If you remove the headset or switch off the phone, the default alarm tone replaces the radio.

To set a snooze time-out, select **Snooze time-out**.

Stop the alarm

The phone sounds an alert tone, and flashes **Alarm!** and the current time on the display, even if the phone was switched off. To stop the alarm, select **Stop**. If you let the phone continue to sound the alarm for a minute or select **Snooze**, the alarm stops for the selected snooze time-out, 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 select **Stop**, the device asks whether you want to activate the device for calls. Select **No** to switch off the device or **Yes** to make and receive calls. Do not select **Yes** when wireless phone use may cause interference or danger.

■ Calendar

Select **Menu** >**Organiser** > **Calendar**.

The current day is indicated by a frame. Select **Options** and from the following options:

Week view — to see a week view of the calendar

Make a note — to make a note. Select one of the following note types: Meeting, Call, Birthday, Memo or Reminder, and then fill in the fields for the note type selected.

Go to date — to go to a specified day in the calendar

Go to today — to go to todays date in the calendar

Settings — to set the date, time and other settings for the calendar

Go to to-do list — to go to the to-do list

If there are any notes set for a day, when you enter the calendar, the day is in bold type. To view the day notes, select **View**. To delete all notes in the calendar, select the month or week view, and select **Options** > **Delete all notes**.

Other options for the calendar day view are delete, edit, move, or repeat a note; copy a note to another day; send a note with Bluetooth wireless technology; or send a note to the calendar of another compatible phone as a text message or multimedia message. In **Options** >**Settings**, besides setting the date and time, you can also set the time zone, the date and time formats, a calendar tone, the default view and what day the starts on. In the **Auto-delete notes** option you can set the phone to delete old notes automatically after a specified time.

A note alarm

The phone beeps and displays the note. With a call note on the display, to call the displayed number, press the call key. To stop the alarm and to view the note, select **View**. To stop the alarm for 10 minutes, select **Snooze**. To stop the alarm without viewing the note, select **Exit**.

■ To-do list

To save a note for a task that you must do, select **Menu** > **Organiser** > **To-do list**.

To make a note if no note is added, select **Add**; otherwise, select **Options** > **Add**. Write the note, and select the priority, the deadline, the alarm type for the note, and **Save**.

To view a note, scroll to it, and select **View**.

You can also select an option to 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 as a text message or a multimedia message, save a note as a calendar note, or access the calendar.

While viewing a note, you can also select an option to edit the deadline or priority for the note, or mark the note as done.

■ Notes

To use this application to write and send notes, select **Menu** > **Organiser** > **Notes**. To make a note if no note is added, select **Add**; otherwise, select **Options** > **Make a note**. Write a note, and select **Save**.

Other options for notes include deleting and editing a note. While editing a note, you can also exit the text editor without saving the changes. You can send the note to compatible devices using a text message, a multimedia message, or Bluetooth wireless technology.

■ 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.

Select **Menu** > **Organiser** > **Calculator**. When 0 is displayed on the screen, enter the first number in the calculation, press **#** for a decimal point. Select **Options** >**Add**, **Subtract**, **Multiply**, **Divide**, **Square**, **Square root**, or **Change sign**. Enter the second number. For a total, select

Equals. As many times as it is necessary, select **Options** and the option again. To start a new calculation, select and hold **Clear**.

Perform a currency conversion

Select **Menu** > **Organiser** > **Calculator**. To save the exchange rate, select **Options** > **Exchange rate**. Select either of the displayed options. Enter the exchange rate, press **#** for a decimal point, and select **OK**. The exchange rate remains in the memory until you replace it with another one. To perform the currency conversion, enter the amount to be converted, select **Options** > **In domestic**, or **In foreign**.

■ Countdown timer

Select **Menu** > **Organiser** > **Countd. timer**. Enter the alarm time in hours, minutes, and seconds, and select **OK**. If you wish, write your own note text that is displayed when the time expires. To start the countdown timer, select **Start**. 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 the standby mode, the phone sounds a tone and flashes the note text if it is set or **Countdown time up**. To stop the alarm, press any key. If no key is pressed, the alarm automatically stops within 30 seconds. To stop the alarm and to delete the note text, select **Exit**. To restart the countdown timer, select **Restart**.

■ Stopwatch

To measure time, take intermediate times, or take 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 the end key.

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.

Select **Menu** > **Organiser** > **Stopwatch** and from the following options:

Split timing — to take intermediate times. To start the time observation, select **Start**. Select **Split** when you want to take an intermediate time. To stop the time observation, select **Stop**. To save the measured time, select **Save**. To start the time observation again, select **Options** > **Start**. The new time is added to the previous time. To reset the time without

saving it, select **Options** > **Reset**. To set the stopwatch timing in the background, press the end key.

Lap timing — to take lap times. To set the stopwatch timing in the background, press the end key.

Continue — to view the timing that you have set in the background

Show last — to view the most recently measured time if the stopwatch is not reset

View times or **Delete times** — to view or delete the saved times

14. Applications

■ Games

Your phone software includes some games.

Launch a game

Select **Menu** > **Applications** > **Games**. Scroll to the desired game, and select **Open**.

For options related to a game, see "Other application options," p. 79.

Game downloads

Select **Menu** > **Applications** > **Options** > **Downloads** > **Game downloads**. The list of available bookmarks is shown.

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

Game settings

To set sounds, lights, and shakes for the game, select **Menu** > **Applications** > **Options** > **Application settings**.

■ Collection

Your phone software includes some Java applications specially designed for this Nokia phone.

Launching an application

Select **Menu** > **Applications** > **Collection**. Scroll to an application, and select **Open**.

Other application options

Delete — to delete the application or application set from the phone

Details — to give additional information about the application

Update version — to check if a new version of the application is available for download from **Web** (network service)

Web page — to provide further information or additional data for the application from an Internet page. This feature must be supported by the network. It is only shown if an Internet address has been provided with the application.

Application access — to restrict the application from accessing the network. Different categories are shown. Select in each category, if available, one of the following permissions: **Ask every time** and the phone asks always for net access, **Ask first time only** and the phone asks on first attempt to net access, **Always allowed** to allow the net access, or **Not allowed** to not allow the net access.

Download an application

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

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

You can download new Java applications in different ways:

Select **Menu** > **Applications** > **Options** > **Downloads** > **App. downloads**, and the list of available bookmarks is shown. Select the appropriate bookmark to connect to the desired page. For the availability of different services, pricing, and tariffs, contact your service provider.

Use the game download function. See "Game downloads," page 79.

Use the Nokia Application Installer from PC Suite to download the applications to your phone.

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.

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

15. Web

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

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

Check the availability of these services, pricing, tariffs, and instructions with your service provider.

With the phone browser you can view the services that use wireless markup language (WML) or extensible hypertext markup language (XHTML) on their pages. Appearance may vary due to screen size. You may not be able to view all details of the Internet pages.

■ Access and use services

1. Save the service settings that are required to access the service that you want to use. See "Set up browsing," p. 81.

2. Make a connection to the service. See "Connect to a service," p. 81.

3. Start browsing the pages of the service. See "Browse pages," p. 82.

4. When you finish browsing, end the connection to the service. To disconnect, see "Options while browsing," p. 83.

■ Set up browsing

You may receive the configuration settings required for browsing as a configuration message from the network operator or service provider that offers the service that you want to use. See "Configuration settings service," p. 11. You can also enter all the configuration settings manually. See "Configuration," p. 64.

■ Connect to a service

Ensure that the correct configuration settings of the service that you want to use are activated.

1. To select the settings for connecting to the service, select **Menu** > **Web** > **Settings** > **Configuration settings**.

2. Select **Configuration**. Only the configurations that support browsing service are shown. Select a service provider, **Default**, or **Personal config.** for browsing. See "Set up browsing," p. 81.

3. Select **Account** and a browsing service account contained in the active configuration settings.

4. Select **Display terminal window** > **Yes** to perform manual user authentication for intranet connections.

Make a connection to the service in one of the following ways:

- Select **Menu** > **Web** > **Home**; or in the standby mode, press and hold **0**.
- To select a bookmark of the service, select **Menu** > **Web** > **Bookmarks**.
- To select the last URL, select **Menu** > **Web** > **Last web address**.
- To enter the address of the service, select **Menu** > **Web** > **Go to address**. Enter the address of the service, and select **OK**.

■ Browse pages

After you make 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.

If packet data is selected as the data bearer, 回 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 a packet data connection, 🖎 indicates that the packet data connection is suspended (on hold). After a call the phone tries to reconnect the packet data connection.

Browse with phone keys

To browse through the page, scroll in any direction.

To select a highlighted item, press the call key, or select **Select**.

To enter letters and numbers, press the **0** to **9** keys. To enter special characters, press *****.

Options while browsing

Select from the following options:

Shortcuts — to open a new list of options that are specific to the page. This option is only available if the page contains shortcuts.

Home — to return to your start page

Add bookmark — to save the page as a bookmark

Bookmarks — to access the list of bookmarks. See "Bookmarks," p. 83.

Go to address — to enter the address of a new service

Page options — to show the list of options for the active page

History — to get a list showing the last visited URLs

Downloads — to access the list of available download services

Other options — to show a list of other options

Reload — to reload and update the current page

Quit — to disconnect from a service

The service provider may also offer other options.

Direct calling

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

■ Bookmarks

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

1. While browsing, select **Options** > **Bookmarks**; or in the standby mode, select **Menu** > **Web** > **Bookmarks**.
2. Scroll to a bookmark, and select it, or press the call key to make a connection to the page associated with the bookmark.

3. Select **Options** to view, edit, delete, or send the bookmark; to create a new bookmark; or to save the bookmark to a folder.

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.

Receive a bookmark

When you have received a bookmark that is sent as a bookmark, **1 bookmark received** is displayed. To view the bookmark, select **Show**.

■ Appearance settings

While browsing, select **Options** > **Other options** > **Appearance settings**, or in the standby mode, select **Menu** > **Web** > **Settings** > **Appearance settings** and from the following options:

Text wrapping > **On** — to set the text to continue on the next line on the display. If you select **Off**, the text is abbreviated.

Font size — to set the font size

Show images > **No** — to hide pictures on the page. This can speed up the browsing of pages that contain a lot of pictures.

Alerts > **Alert for unsecure connection** > **Yes** — to set the phone to alert when a secure connection changes to an unsecure one during browsing

Alerts > **Alert for unsecure items** > **Yes** — to set the phone to alert when a secure page contains an unsecure item. These alerts do not guarantee a secure connection. For more information, see "Browser security," p. 86.

Character encoding > **Content encoding** — to select the encoding for the browser page content

Character encoding > **Unicode (UTF–8) web addresses** > **On** — to set the phone to send a URL as a UTF-8 encoding. You may need this setting when you access a Web page created in foreign language.

JavaScript > **Enable** — to enable the Java scripts

■ Security settings

Cookies

A cookie is data that a site saves in the cache memory of your phone. Cookies are saved until you clear the cache memory. See "Cache memory," p. 86.

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

Scripts over secure connection

You can select whether to allow the running of scripts from a secure page. The phone supports WML scripts.

While browsing, to allow the scripts, select **Options** > **Other options** > **Security** > **WMLScript settings**; or in the standby mode, select **Menu** > **Web** > **Settings** > **Security settings** > **WMLScripts over secure connection** > **Allow**.

■ Service inbox

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

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

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

Service inbox settings

Select **Menu** > **Web** > **Settings** > **Service inbox settings**.

To set whether you want to receive service messages, select **Service messages** > **On** or **Off**.

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

To set the phone to automatically activate the browser from the standby mode when the phone has received a service message, select **Automatic connection** > **On**. If you select **Off**, the phone activates the browser only after you select **Retrieve** when the phone has received a service message.

■ Cache memory

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 while browsing, select **Options** > **Other options** > **Clear the cache**; in the standby mode, select **Menu** > **Web** > **Clear the cache**.

■ Browser security

Security features may be required for some services, such as online banking or 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 improves security services for applications requiring a browser connection, and allows you to use a digital signature. The security module may contain certificates as well as private and public keys. The certificates are saved in the security module by the service provider.

Select **Menu** > **Web** > **Settings** > **Security settings** > **Security module settings** and from the following options:

Security module details — to show the security module title, status, manufacturer, and serial number

Module PIN request — to set the phone to ask for the module PIN when using services provided by the security module. Enter 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 — to change the signing PIN code for the digital signature. Select the signing PIN you want to change. Enter the current PIN code, then enter the new code twice.

See also "Access codes," p. 10.

Certificates

> **Important:** 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.

There are three kinds of certificates: server certificates, authority certificates, and user certificates. You may receive these certificates from your service provider. Authority certificates and user certificates may also be saved in the security module by the service provider.

To view the list of the authority or user certificates downloaded into your phone, select **Menu** > **Settings** > **Security settings** > **Authority certificates** or **User certificates**.

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.

Digital signature

You can make digital signatures with your phone if your SIM card has a security module. 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 you want to buy and its price. The text to sign, which may include the amount and date, is shown.

Check that the header text is Read and that the digital signature icon ▣ is shown.

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, then select Sign.

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

Select the user certificate you want to use. Enter the signing PIN (see "Access codes," p. 10), and select OK. The digital signature icon disappears, and the service may display a confirmation of your purchase.

16. SIM services

Your SIM card may provide additional services that you can access. This menu 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 and information on using SIM services, contact your SIM card vendor. This may be the service provider, network operator or other vendor.

To set the phone to show you the confirmation messages sent between your phone and the network when you are using the SIM services, select **Menu** > **Settings** > **Phone** > **Confirm SIM service actions** > **Yes**.

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

17. PC connectivity

■ PC Suite

You can send and receive e-mail, and access the Internet when your phone is connected to a compatible PC through a Bluetooth wireless technology connection. You can use your phone with a variety of PC connectivity and data communications applications.

With PC Suite you can synchronize contacts, calendar and to-do notes, and notes between your phone, and the compatible PC, or a remote Internet server (network service).

You may find more information about PC suite on the CD delivered with your phone, and, for example, downloadable files in the support area on the Nokia Web site, www.nokia.com/support.

■ Packet data, HSCSD, and CSD

With your phone you can use the packet data, HSCSD (high-speed circuit switched data), and CSD (circuit switched data, **GSM data**) services. For availability and subscription to data services, contact your network operator or service provider.

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

See "Packet data," p. 59.

■ Data communication applications

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

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.

18. Battery information

■ 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, replace the battery. Use only Nokia approved batteries, and recharge your battery only with Nokia approved chargers designated for this device.

If a replacement battery is being used for the first time or if the battery has not been used for a prolonged period, it may be necessary to connect the charger and then disconnect and reconnect it to start the charging.

Unplug the charger from the electrical plug and the device when not in use. Do not leave fully charged battery connected to a charger, since overcharging may shorten its lifetime. If left unused, a fully charged battery will lose its charge over time.

If the battery is completely discharged, it may take a few minutes before the charging indicator appears on the display or before any calls can be made.

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 as they may explode. Batteries may also explode if damaged. Dispose of batteries according to local regulations. Please recycle when possible. Do not dispose as household waste.

■ Nokia battery authentication

Always use original Nokia batteries for your safety. To check that you are getting an original Nokia battery, purchase it from an authorized Nokia dealer, look for the Nokia Original Enhancements logo on the packaging, and inspect the hologram label using the following steps:

Successful completion of the four steps is not a total assurance of the authenticity of the battery. If you have any reason to believe that your battery is not an authentic original Nokia battery, you should refrain from using it, and take it to the nearest authorized Nokia service point or dealer for assistance. Your authorized Nokia service point or dealer will inspect the battery for authenticity. If authenticity cannot be verified, return the battery to the place of purchase.

Authenticate hologram

1. When looking at the hologram on the label, you should see the Nokia connecting hands symbol from one angle and the Nokia Original Enhancements logo when looking from another angle.

2. When you angle the hologram left, right, down, and up, you should see 1, 2, 3, and 4 dots on each side respectively.

3. Scratch the side of the label to reveal a 20-digit code, for example, 12345678919876543210. Turn the battery so that the numbers are facing upwards. The 20-digit code reads starting from the number at the top row followed by the bottom row.
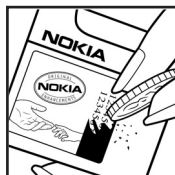
4. Confirm that the 20-digit code is valid by following the instructions at www.nokia.com/batterycheck.

To create a text message enter the 20-digit code, for example, 12345678919876543210, and send to +44 7786 200276.

To create a text message,

- For countries in Asia Pacific, excluding India: Enter the 20-digit code, for example, 12345678919876543210, and send to +61 427151515.
- For India only: Enter Battery followed by the 20-digit battery code, for example, Battery 12345678919876543210, and send to 5555.

National and international operator charges will apply.

You should receive a message indicating whether the code can be authenticated.

What if your battery is not authentic?

If you cannot confirm that your Nokia battery with the hologram on the label is an authentic Nokia battery, please do not use the battery. Take it to the nearest authorized Nokia service point or dealer for assistance. The use of a battery that is not approved by the manufacturer may be dangerous and may result in poor performance and damage to your device and its enhancements. It may also invalidate any approval or warranty applying to the device.

To find out more about original Nokia batteries, visit www.nokia.com/battery.

19. Technical Information

Weight	139 grams (3.1 ounces) incl. BP-6X battery
Battery	700 mAh Li-Ion Battery
Networks	Wireless networks GSM 900, 1800 and 1900
Size	Volume: 4.1 cubic inches (68 ccm) Length: 4.2 in (107 mm) Width: 1.8 in (45 mm) Thickness: 0.7 in (17 mm)
Frequency range (Rx)	GSM 900: 925 - 960 MHz GSM1800: 1805 - 1880 MHz GSM1900: 1930 - 1990 MHz
Frequency range (Tx)	GSM 900: 880 - 915 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	GSM 900: 174 GSM 1800: 374 GSM1900: 299
Memory size	16 MB flash memory 16 MB RAM
Operating temperature	59 °F to 77 °F (15 °C to 25 °C)

Care and maintenance

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.
- Do not touch the main display with hard or angular materials. Objects like earrings or jewellery may scratch the display.
- 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. Unauthorized 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

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

■ 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 1.5 centimeters (5/8 inch) 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.

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

Parts of the device are magnetic. Metallic materials may be attracted to the device. Do not place credit cards or other magnetic storage media near the device, because information stored on them may be erased.

■ 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 15.3 centimeters (6 inches) be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers should do the following:

- Always keep the device more than 15.3 centimeters (6 inches) from the pacemaker
- Not carry the device in a breast pocket
- Hold the device to the ear opposite the pacemaker to minimize the potential for interference.

If you suspect interference, switch off your device, and move the device away.

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, and 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.

Using your device while flying in aircraft is 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 refueling 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 the end key as many times as needed to clear the display and ready the device for calls.

3. Enter the official emergency number for your present location. Emergency numbers vary by location.

4. Press the call 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 the 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 MOBILE DEVICE MEETS GUIDELINES FOR EXPOSURE TO RADIO WAVES.

Your mobile device is a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves recommended by international guidelines. These guidelines were developed by the independent scientific organization ICNIRP and include safety margins designed to assure the protection 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 stated in the ICNIRP guidelines is 2.0 watts/kilogram (W/kg) averaged over 10 grams of tissue. 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 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 under the ICNIRP guidelines for use of the device at the ear is 0.36 W/kg.

Use of device accessories and enhancements may result in different SAR values. SAR values may vary depending on national reporting and testing requirements and the network band. Additional SAR information may be provided under product information at www.nokia.com.

Your mobile device is also designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA) and Industry Canada. These requirements set a SAR limit of 1.6 W/kg averaged over 1 gram of tissue. The highest SAR value reported under this standard during product certification for use at the ear is 0.36 W/kg and when properly worn on the body is 0.27 W/kg. Information about this device model can be found at http://www.fcc.gov/oet/fccid by searching the equipment authorization system using FCC ID: QTKRM-165.

APPENDIX

■ 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

■ Message from the FDA

The U.S. Food and Drug Administration (FDA) provides the following consumer information about wireless phones.

See http://www.fda.gov/cellphones/ for updated information.

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.

What is FDA's role concerning the safety of wireless phones?

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

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

• Support needed research into possible biological effects of RF of the type emitted by wireless phones;

• Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and

• Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health.

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

• National Institute for Occupational Safety and Health

• Environmental Protection Agency

• Federal Communications Commission

• Occupational Safety and Health Administration

• National Telecommunications and Information Administration

The National Institutes of Health participates in some interagency working group activities, as well.

FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones.

FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the primary subject of the safety questions discussed in this document.

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

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF). FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues. FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

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.

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.

Do hands-free kits for wireless phones reduce risks from exposure to RF emissions?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that hands-free kits reduce risks. Hands-free kits can be used with wireless phones for convenience and comfort. These systems reduce the absorption of RF energy in the head because the phone, which is the source of the RF emissions, will not be placed against the head. On the other hand, if the phone is mounted against the waist or other part of the body during use, then that part of the body will absorb more RF energy. Wireless phones marketed in the U.S. are required to meet safety requirements regardless of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.

Do wireless phone accessories that claim to shield the head from RF radiation work?

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF absorption use special phone cases, while others involve nothing

more than a metallic accessory attached to the phone. Studies have shown that these products generally do not work as advertised. Unlike "hand-free" kits, these so-called "shields" may interfere with proper operation of the phone. The phone may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal trade Commission (FTC) charged two companies that sold devices that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

How does FCC Audit Cell Phone RF?

After FCC grants permission for a particular cellular telephone to be marketed, FCC will occasionally conduct "post-grant" testing to determine whether production versions of the phone are being produced to conform with FCC regulatory requirements. The manufacturer of a cell phone that does not meet FCC's regulatory requirements may be required to remove the cell phone from use and to refund the purchase price or provide a replacement phone, and may be subject to civil or criminal penalties. In addition, if the cell phone presents a risk of injury to the user, FDA may also take regulatory action. The most important post-grant test, from a consumer's perspective, is testing of the RF emissions of the phone. FCC measures the Specific Absorption Rate (SAR) of the phone, following a very rigorous testing protocol. As is true for nearly any scientific measurement, there is a possibility that the test measurement may be less than or greater than the actual RF emitted by the phone. This difference between the RF test measurement and actual RF emission is because test measurements are limited by instrument accuracy, because test measurement and actual use environments are different, and other variable factors. This inherent variability is known as "measurement uncertainty." When FCC conducts post-grant testing of a cell phone, FCC takes into account any measurement uncertainty to determine whether regulatory action is appropriate. This approach ensures that when FCC takes regulatory action, it will have a sound, defensible scientific basis.

FDA scientific staff reviewed the methodology used by FCC to measure cell phone RF, and agreed it is an acceptable approach, given our current understanding of the risks presented by cellular phone RF emissions. RF emissions from cellular phones have not been shown to present a risk of injury to the user when the measured SAR is less than the safety limits set by FCC (an SAR of 1.6 w/kg). Even in a case where the maximum measurement uncertainty permitted by current measurement standards was added to the maximum permissible SAR, the resulting SAR value would be well below any level known to produce an acute effect. Consequently, FCC's approach with measurement uncertainty will not

result in consumers being exposed to any known risk from the RF emitted by cellular telephones.

FDA will continue to monitor studies and literature reports concerning acute effects of cell phone RF, and concerning chronic effects of long-term exposure to cellular telephone RF (that is, the risks from using a cell phone for many years). If new information leads FDA to believe that a change to FCC's measurement policy may be appropriate, FDA will contact FCC and both agencies will work together to develop a mutually-acceptable approach.

Updated July 29, 2003