RM-181 User Guide

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9249741
Issue 1

DECLARATION OF CONFORMITY
Hereby, NOKIA CORPORATION declares that this RM-181 product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
A copy of the Declaration of Conformity can be found from http://www.nokia.com/phones/declaration_of_conformity/.

CE 0434

The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end-of life. This applies to your device but also to any enhancements marked with this symbol. Do not dispose of these products as unsorted municipal waste. For more information, see product Eco-Declaration or country specific information at www.nokia.com.

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DRAFT

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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.

9249741/Issue1

DRAFT

Contents

For your safety..... 6

General information..... 9
Access codes..... 9
Configuration settings service..... 10
Download content..... 10
Nokia support..... 10

1. Get started..... 11
Install SIM card and battery..... 11
Insert a microSD card..... 12
Remove the microSD card..... 12
Charge the battery..... 13
Open the slide phone..... 13
Switch the phone on and off..... 13
Antenna..... 14
Headset..... 14
Phone strap..... 15

2. Your phone..... 16
Keys and parts..... 16
Standby mode..... 16
Flight mode..... 18
Keypad lock (keyguard)..... 19
Functions without a SIM card..... 19

3. Call functions..... 19
Make a call..... 19
Answer or reject a call..... 21
Options during a call..... 21

4. Write text..... 22
Traditional text input..... 22
Predictive text input..... 22

5. Navigate the menus..... 23

6. Messaging..... 24
Text message..... 24
Multimedia message..... 25
Postcards..... 27
Flash messages..... 27
Nokia Xpress audio messaging..... 28
Memory full..... 28
Folders..... 29
E-mail application..... 29
Instant messaging..... 32
Voice messages..... 36
Info messages..... 36
Service commands..... 36
Delete messages..... 36
SIM messages..... 36
Message settings..... 37

7. Contacts..... 39
Search for a contact..... 40
Save names and phone numbers..... 40
Save details..... 40
Copy or move contacts..... 40
Edit contact details..... 41
Synchronize all..... 41
Delete contacts..... 41
Business cards..... 42
Settings..... 42
Groups..... 42
Speed dials..... 42
Info, service, and my numbers..... 43

8. Call log..... 43
Positioning information..... 44

9. Settings..... 44
Profiles..... 44
Themes..... 44
Tones..... 45
Display..... 45
Time and date..... 46
My shortcuts..... 46
Connectivity..... 47

DRAFT

Call 52
Phone 53
Enhancements 54
Configuration 54
Security 55
Phone software updates 56
Restore factory settings 57

10. Operator menu 58

11. Gallery 58
Print images 58
Memory card 59

12. Media 60
Camera and video 60
Media player 61
Music player 62
Radio 63
Voice recorder 65
Equalizer 65
Stereo widening 66

13. Push to talk 66
PTT channels 66
Switch PTT on and off 68
Make and receive a PTT call 68
Callback requests 70
Add a one-to-one contact 71
PTT settings 71
Configuration settings 72
Web 72

14. Organizer 73
Alarm clock 73
Calendar 73
To-do list 74
Notes 74
Calculator 75
Countdown timer 75
Stopwatch 75

15. Sensor 76

16. Applications 77
Launch a game 77
Launch an application 78
Application options 78
Download an application 78

17. SIM services 79

18. Web 79
Set up browsing 79
Connect to a service 80
Browse pages 80
Bookmarks 81
Appearance settings 81
Security settings 82
Download settings 82
Service inbox 83
Cache memory 83
Browser security 84

19. PC connectivity 85
Nokia PC Suite 86
Packet data, HSCSD, and CSD 86
Bluetooth 86
Data communication applications . 86

20. Battery information 87
Charging and discharging 87
Nokia battery authentication 88

21. Technical Information 90

Care and maintenance 91

Additional safety information 92

APPENDIX 96
A message from the CTIA 96
A message from the FDA 98

DRAFT

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 REFUELLING
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.

DRAFT

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 850, and GSM 1800 and 1900 networks. Contact your service provider for more information about networks.

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

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

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

DRAFT

device may also have been specially configured for your network provider. This configuration may include changes in menu names, menu order and icons. Contact your service provider for more information.

This device supports WAP 2.0 protocols (HTTP and SSL) that run on TCP/IP protocols. Some features of this device, such as multimedia messaging (MMS), browsing, e-mail application, instant messaging, remote synchronization, and content downloading using the browser or MMS, require network support for these technologies.

Shared memory

The following features in this device may share memory: gallery, contacts, text messages, multimedia messages, and instant messages, e-mail, 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 text messages, may have a certain amount of memory specially allotted to them in addition to the memory shared with other features.

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.

DRAFT

General information

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. 55.

PIN codes

The personal identification number (PIN) code and the universal personal identification number (UPIN) code (4 to 8 digits) help to protect your SIM card against unauthorized use. See "Security," p. 55.

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. 84.

The signing PIN is required for the digital signature. See "Digital signature," p. 85.

PUK codes

The personal unblocking key (PUK) code and the universal personal unblocking key (UPUK) 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. If the codes are not supplied with the SIM card, contact your local service provider for the codes.

Barring password

The barring password (4 digits) is required when using the *Call barring service*. See "Security," p. 55.

DRAFT

Configuration settings service

To use some of the network services, such as mobile Internet services, MMS, Nokia Xpress audio messaging, or remote Internet server synchronization, your phone needs the correct configuration settings. For more information on availability, contact your network operator, service provider, nearest authorized Nokia dealer, or visit the support area on the Nokia Web site, www.nokia.com/support.

When you have received the settings as a configuration message, and the settings are not automatically saved and activated, *Configuration sett. received* is displayed.

To save the settings, select Show > Save. If required, enter the PIN code supplied by the service provider.

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

Download content

You may be able to download new content (for example, themes) to the phone (network service). You may also be able to download updates of phone software (network service). See "Phone," p. 53, *Phone updates*.

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 support

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.

On the Web site, you can get information on the use of Nokia products and services. If you need to contact customer service, check the list of local Nokia Care contact centers at www.nokia.com/customerservice.

For maintenance services, check your nearest Nokia service center at www.nokia.com/repair.

DRAFT

1. Get started

Install SIM card and battery

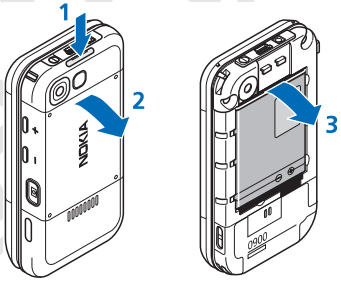
Always switch the device off and disconnect the charger before removing the battery.

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

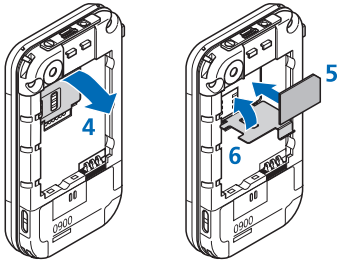
For availability and information on using SIM card services, contact your SIM card vendor. This may be the service provider, network operator, or other vendor.

This device is intended for use with BL-5B battery. Always use original Nokia batteries. See "Nokia battery authentication," p. 88.

To remove the back cover of the phone, push the back cover release button (1), and detach the back cover away from the phone (2). Remove the battery as shown (3).



Open the SIM card holder (4), and insert the SIM card properly into the holder (5). Close the SIM card holder (6).



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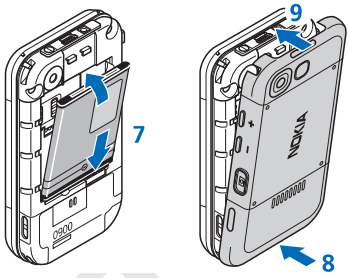
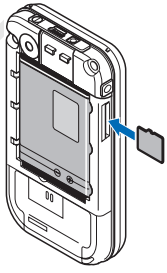
Replace the battery (7). Slide the back cover into its place (8, 9).



Insert a microSD card

Keep all microSD memory cards out of the reach of small children.

1. Remove the back cover of the phone.
2. Insert the card into the microSD card slot with the contact surface facing backwards, and press it until it locks into place.
3. Close the back cover of the phone.



Use only compatible microSD cards with this device. Other memory cards, such as reduced size multimedia cards, do not fit in the microSD card slot and are not compatible with this device. Using an incompatible memory card may damage the memory card as well as the device, and data stored on the incompatible card may be corrupted.

Use only microSD cards approved by Nokia for use with this device. Nokia utilizes the approved industry standards for memory cards but not all other brands may function correctly or be fully compatible with this device.

Remove the microSD card

Important: Do not remove the microSD card in the middle of an operation when the card is being accessed. Removing the card in the middle of an operation may damage the memory card as well as the device, and data stored on the card may be corrupted.

1. Make sure that no application is currently accessing the microSD memory card.

DRAFT

2. Remove the back cover of the phone.
3. Press the microSD card slightly in to release the lock, and remove the microSD card from the slot.

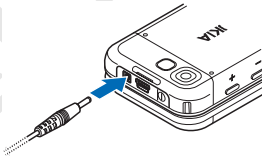
Charge the battery

Check the model number of any charger before use with this device. This device is intended for use when supplied with power from an AC-3 or AC-4 charger.

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.

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

Connect the charger to a wall socket and the lead from the charger to the socket on the bottom of your phone.



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 used. Charging a BL-5B battery with the AC-3 charger takes approximately 3 hours while the phone is in the standby mode.

Open the slide phone

To open the slide of the phone, push the upper part of the phone up.

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. See "Keys and parts," p. 16. If the phone asks for a PIN or a UPIN code, enter the code (displayed as ****), and select OK.

DRAFT

Set the time 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. 46.

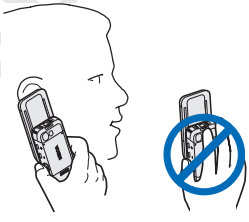
Plug and play service

When you switch on your phone for the first time, and the phone is in the standby mode, you may be asked to get the configuration settings from your service provider (network service). Confirm or decline the query. See "*Connect to service provider support*," p. 55, and “Configuration settings service,” p. 10.

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.



Headset

The headset in the sales box has been approved by Nokia for use with this device. Always listen to music at a moderate level. Please be advised to pay special attention to volume level in case you connect any other headsets to the device.

Do not connect products that create an output signal as this may cause damage to the device. Do not connect any voltage source to this connector.

DRAFT

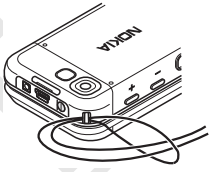
Audio adaptor

Use an audio adaptor AD-50 to connect a headphone with a 3.5-mm plug to your phone. If the adaptor is connected to the phone the earpiece of the phone will be disconnected.

Please note that the adaptor does not support a microphone line.

Phone strap

Thread a strap through the eyelet of the phone as shown in the picture and tighten it.



DRAFT

2. Your phone

Keys and parts

Earpiece (1)

Music player, start, pause (2)

Enhancements connector (3)

Call key (4)

Left, middle, and right selection keys (5)

End key (6)

Scroll keys (7)

Keypad (8)

Charger connector (9)

USB connector (10)

Power key (11)

Phone strap eyelet (12)

Camera lens (13)

Volume up/ PTT key (14)

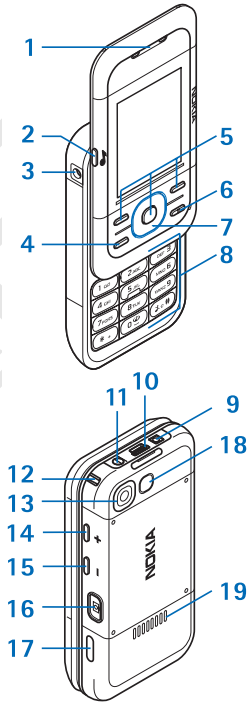
Volume down (15)

Camera key (16)

Infrared port (17)

Selfportrait viewfinder (18)

Loudspeaker (19)

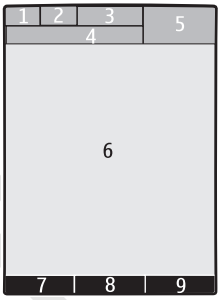


Standby mode

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

DRAFT

Display



Signal strength of the cellular network (1)

Battery charge status (2)

Indicators (3)

Network name or operator logo (4)

Clock (5)

Main screen (6)

Function of left selection key (7) is Go to or a shortcut to another function. See "Left selection key,"p. 46.

Function of middle selection key (8) is Menu.

Function of right selection key (9) is Names or a shortcut to another function. See "Right selection key," p. 46. Operator variants may have an operator-specific name.

Active standby

In the active standby mode there is a list of selected phone features and information on the screen that you can directly access. To switch it on or off, select Menu > *Settings* > *Display* > *Active standby* > *Active standby mode* > *On* or *Off*.

In the standby mode, scroll up or down to activate the navigation in the list, and select Select or View. Left and right arrows at the beginning and end of a line indicate that further information is available by scrolling left or right. To end the active standby mode, select Exit.

To organize and change the active standby mode, activate the navigation mode, and select Options and from the available options.

Indicators

You have unread messages.

You have unsent, canceled, or failed messages.

The phone registered a missed call.

DRAFT

, Your phone is connected to the instant messaging service, and the availability status is online or offline.

You received one or several instant messages.

The keypad is locked.

The phone does not ring for an incoming call or text message.

The alarm clock is activated.

The countdown timer is running.

The stopwatch is running.

G, E The phone is registered to the GPRS or EGPRS network.

, A GPRS or EGPRS connection is established.

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

A Bluetooth connection is active.

, Push-to-talk connection is active or suspended.

2 If you have two phone lines, the second phone line is selected.

All incoming calls are diverted to another number.

The loudspeaker is activated, or the music stand is connected to the phone.

Calls are limited to a closed user group.

The timed profile is selected.

, , , or
A headset, hands-free, loopset, or music stand enhancement is connected to the phone.

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.

DRAFT

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 **Exit flight profile?** The phone attempts to make an emergency call.

Keypad lock (keyguard)

To prevent the keys from being accidentally pressed, close the phone, and select **Lock** within 3.5 seconds.

To unlock the keypad, select **Unlock** > **Ok**, or open the phone. If the security keyguard is activated, enter the security code if requested.

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

For *Security keyguard*, see "Phone," p. 53.

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

Functions without a SIM card

Several functions of your phone may be used without installing a SIM card (for example, the data transfer with a compatible PC or another compatible device). Some functions appear dimmed in the menus and cannot be used.

For an emergency call, some networks may require that a valid SIM card is properly inserted in the device.

3. Call functions

Make a call

1. Enter the phone number, including the area code.

   For international calls, press * twice for the international prefix (the + character replaces the international access code), enter the

DRAFT

country code, the area code without the leading 0, if necessary, and the phone number.

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

   To increase the volume in a call, press **+** and to decrease, press **–** .

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

To search for a name or phone number that you have saved in *Contacts*, see "Search for a contact," p. 40. Press the call key to call the number.

To access the list of dialed numbers, press the call key once in the standby mode. To call the number, select a 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 dials," p. 42. 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 begins. See *Speed dialling* in "Call," p. 52.

Enhanced voice dialing

You can make a phone call by saying the name that is saved in the contact list of the phone. Voice commands are language-dependent. To set the language, see *Voice recognition language* in "Phone," p. 53.

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.

1. In the standby mode, press and hold the right selection key, or press and hold the volume down key. A short tone is played, and *Speak now* is displayed.
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. If the result is not the correct one, scroll to another entry.

DRAFT

Using voice commands to carry out a selected phone function is similar to voice dialing. See *Voice commands* in "My shortcuts," p. 46.

Answer or reject a call

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

To reject an incoming call, press the end key. To mute the ringing tone, select **Silence**.

Call waiting

To answer the waiting call during an active call (network service), 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. 52.

Options during a call

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

During a call, select **Options** and from the following options:

Call options are *Mute* or *Unmute*, *Contacts*, *Menu*, *Lock keypad*, *Record*, *Voice clarity*, *Loudspeaker* or *Handset*.

Network services options are *Answer* or *Reject*, *Hold* or *Unhold*, *New call*, *Add to conference*, *End call*, *End all calls*, and the following:

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 call

Private call —to discuss privately in a conference call

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

DRAFT

4. Write text

To enter text (for example, when writing messages), use traditional or predictive text input. When you write text, press and hold **Options** to toggle between traditional text input, indicated by , and predictive text input, indicated by . Not all languages are supported by predictive text input.

The character cases are indicated by Abc, abc, and ABC. To change the character case, press **#**. To change from the letter to number mode, indicated by 123, press and hold **#**, and select *Number mode*. To change from the number to the letter mode, press and hold **#**.

To set the writing language, select **Options** > *Writing language*.

Traditional text input

Press a number key, **1** to **9**, repeatedly until the desired character appears. The characters available depend on the selected writing language. If the next letter you want is located on the same key as the present one, wait until the cursor appears and enter the letter. The most common punctuation marks and special characters are available under the number key **1**.

Predictive text input

Predictive text input is based on a built-in dictionary to which you can also add new words.

1. Start writing a word using the keys, **2** to **9**. Press each key only once for one letter.
2. When you finish writing the word and it is correct, to confirm it by adding a space, press **0**.

   If the word is not correct, press ***** repeatedly, and select the word from the list.

   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,

DRAFT

select Spell. Enter the word using traditional text input, and select Save.

To write compound words, enter the first part of the word, and press the scroll key right to confirm it. Write the last part of the word, and confirm the word.

3. Start writing the next word.

5. Navigate the menus

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

1. To access the menu, select Menu.

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

   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 an option (for example, *Settings*).
3. If the selected menu contains further submenus, select the one that you want (for example, *Call*).
4. If the selected menu contains further submenus, repeat step 3.
5. Select the setting of your choice.
6. To return to the previous menu level, select Back. To exit the menu, select Exit.

DRAFT

6. Messaging

You can read, write, send, and save text, multimedia, e-mail, audio, and flash messages and postcards. All messages are organized into folders.

Text message

With the short message service (SMS) you can send and receive text messages, and receive messages that can contain pictures (network service).

Before you can send any text or SMS e-mail message, you must save your message center number. See "Message settings," p. 37.

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 details," p. 40.

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 2 messages.

Write and send a message

1. Select **Menu** > *Messaging* > *Create message* > *Text message*.
2. Enter one or more phone numbers or e-mail addresses in the *To:* field. To retrieve a phone number or e-mail address from a memory, select **Add**.
3. For a SMS e-mail, enter a subject in the *Subject:* field.
4. Write your message in the *Message:* field.

DRAFT

5. To send the message, select **Send**. See "Message sending," p. 26.

Read and reply to a message

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

   To read the message later, select **Menu** > *Messaging* > *Inbox*.
2. To reply to a message, select **Reply** and the message type.
3. Write the reply message.
4. To send the message, select **Send**. See "Message sending," p. 26.

Multimedia message

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.

A multimedia message can contain some attachments.

To check availability and to subscribe to the multimedia messaging service (MMS, network service), contact your service provider. See "Message settings," p. 37.

Write and send a multimedia message

The wireless network may limit the size of multimedia messages. If the inserted image 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. Write your message. To add a file, select **Insert** and from the options.
3. To view the message before sending it, select **Options** > *Preview*.
4. To send the message, select **Send**. See "Message sending," p. 26.
5. Enter one or more phone numbers or e-mail addresses in the *To:* field. To retrieve a phone number or e-mail address from a memory, select **Add**.
6. To send the message, select **Send**. See "Message sending," p. 26.

DRAFT

Write and send a multimedia plus message

The wireless network may limit the size of MMS messages. If the inserted image exceeds this limit, the device may make it smaller so that it can be sent by MMS.

Any content can be added to the multimedia plus message. Such content might be images, video clips, sound clips, business cards, calendar notes, themes, streaming links, or even unsupported files (for example, files received with an e-mail).

1. Select **Menu** > *Messaging* > *Create message* > *Multimedia plus*.
2. Enter one or more phone numbers or e-mail addresses in the *To:* field. To retrieve a phone number or e-mail address from a memory, select **Add**.
3. Enter a subject and write your message.
4. To add a file, select **Insert** and from the options.
5. To view the message before sending it, select **Options** > *Preview*.
6. To send the message, select **Send**. See "Message sending," p. 26.

Message sending

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

To send the message, select **Send**. The phone saves the message in the *Outbox* folder, and the sending starts.

Note: When the phone is sending 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.

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

DRAFT

Read 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.

1. To view a received message, select **Show**. To view it later, select **Exit**.
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* and the message type.
4. Write the reply message.
5. To send the message, select **Send**. See "Message sending," p. 26.

Postcards

With the postcard messaging service (network service), create and send postcards that may contain an image and a greeting text. The postcard is sent to the service provider using multimedia messaging. The service provider prints the postcard and sends it to the postal address given with the message. MMS must be activated before this service can be used.

Before you can use the postcard service you must subscribe to the service. To check the availability, and costs, and to subscribe to the service, contact your network operator or service provider.

To send a postcard, select **Menu** > *Messaging* > *Create message* > *Postcard*. Fill in the address, mandatory editor fields are marked by a *. Scroll to the image field, select **Insert** and an image from the gallery, or *New image* to insert a recent image; then write your greeting text. To send the message, select **Send**.

Flash messages

Flash messages are text messages that are instantly displayed upon reception. Flash messages are not automatically saved.

DRAFT

Write a message

Select **Menu** > *Messaging* > *Create message* > *Flash message*. Enter the recipient's phone number and write your message. To have a blinking text, select **Options** > *Insert blink char.*. The text behind the marker blinks.To end the blinking text range set a second marker.

Receive a message

A received flash message is indicated with *Message:* and a few words from the beginning of the message. To read the message, select **Read**. To extract numbers and addresses from the current message, select **Options** > *Use detail*. To save the message, select **Save** and the folder in which you want to save it.

Nokia Xpress audio messaging

You can use the MMS to create and send a audio message in a convenient way. MMS must be activated before you can use audio messages.

Create a message

1. Select **Menu** > *Messaging* > *Create message* > *Audio message*. The recorder opens. To use the recorder, see "Voice recorder," p. 65.
2. Speak your message.
3. Enter one or more phone numbers in the *To:* field, or select **Add** to retrieve a number.
4. To send the message, select **Send**.

Listen to a message

To open a received audio message, select **Play**; or if more than one message is received, select **Show** > **Play**. To listen to the message later, select **Exit**.

Memory full

When you receive a message, and the memory for the messages is full, *Memory full. Unable to receive msgs.* is shown. To first delete old

DRAFT

messages, select **OK** > **Yes** and the folder. Scroll to the desired message, and select **Delete**. If more messages are to be deleted, select **Mark**. Mark all the messages you want to delete, and select **Options** > *Delete marked*.

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 settings," p. 37.

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*. To add a folder, 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 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. Your phone supports POP3 and IMAP4 e-mail servers. This application does not support keypad tones.

Before you can send and retrieve any e-mail messages, you must 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.

DRAFT

Check your e-mail settings with your e-mail service provider. You may receive the e-mail configuration settings as a configuration message. See "Configuration settings service," p. 10.

To activate the e-mail settings, select **Menu** > *Messaging* > *Message settings* > *E-mail messages*. See "E-mail messages," p. 39.

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.

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, write the subject, and enter the e-mail message. To attach a file from *Gallery*, select **Options** > *Attach file*.
4. To send the e-mail message, 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*.

DRAFT

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** > *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. 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.
3. 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* where 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.

DRAFT

Spam filter

To activate and define a spam filter, select **Options** > *Spam filter* > *Settings* in the main e-mail idle screen. The spam filter allows you 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

With instant messaging (IM) (network service) you can send short, simple text messages to online users. You have to subscribe to a service and register with the IM service you want to use. For more information about signing up for IM services, contact your service provider.

To set the required settings for the IM service, see *Connect. settings* in "Access," p. 32. The icons and texts on the display may vary, depending on the IM service.

Note: Depending on your IM service, you may not have access to all of the features described in this guide.

Access

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. Select from the following options:

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, select *Automatic login:* > *On*, or select **Menu** > *Messaging* > *Instant messages*, connect to the IM service, and select **Options** > *Settings* > *Automatic login* > *On*.

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

Connect. settings — to edit the settings needed for messaging

DRAFT

Connect

To connect to the service, access the instant messages menu, select the IM service, if needed, and select *Login*.

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

Sessions

When connected to the service, your status, as seen by others, is shown in a status line: *Status: Online*, *My status: Busy* or *Status: App. off.* — 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, scroll to 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 depends on the IM service.

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, scroll to the contact to whom you would like to chat, and select **Open**. To add contacts, see "Add IM contacts," p. 35.

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

DRAFT

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. 35.

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

If you receive a new invitation, to read it, select **Read**. If more than one invitation is received, select an invitation and **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

If 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 more than one message is received, select a message and **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**.

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**. Your message is displayed, and the reply message is displayed below your message.

DRAFT

Add IM contacts

When connected to the IM service, in the IM main menu, select **Options** > *Add contact* > *By mobile number*, *Enter ID manually*, *Search from serv.*, or *Copy from server* (depending on service provider).

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*.

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 use the public groups provided by the service provider, or create your own private groups for an IM conversation.

Public

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

To search for a group, select *Groups* > *Public groups* > *Search groups*.

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.

DRAFT

Voice messages

The voice mailbox is a network service to which you may need to subscribe. For more information 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, indicates new voice messages. To call your voice mailbox number, select **Listen**.

Info messages

You can receive messages on various topics from your service provider (network service). For more information, contact your service provider. Select **Menu** > *Messaging* > *Info messages* and from the available options.

Service commands

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

Delete messages

To delete messages, select **Menu** > *Messaging* > *Delete messages* > *By message* to delete single messages, *By folder* to delete all messages from a folder, or *All messages*.

SIM messages

SIM messages are specific text messages that are saved to your SIM card. You can copy or move those messages from the SIM to the phone memory, but not vice versa. To read SIM messages, select **Menu** > *Messaging* > **Options** > *SIM messages*.

DRAFT

Message settings

General settings

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 > *Allowed* — to set the phone to overwrite the old sent messages with the new ones when the message memory is full. This setting is shown only if you set *Save sent messages* > *Yes*.

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 messages

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

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-mails.

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

DRAFT

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 GPRS as the preferred SMS bearer

Character support > *Full* — to select all characters in the messages to be sent as viewed. If you select *Reduced*, characters with accents and other marks may be converted to other characters.

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

Multimedia messages

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. 10. You can also enter the settings manually. See "Configuration," p. 54.

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 plus) — to set the image size in multimedia plus messages.

Image size (multimedia) — to set the image size in multimedia messages.

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

Allow multimedia reception > *Yes* or *No* — to receive or block the multimedia message. If you select *In home network*, you cannot receive multimedia messages when outside your home network. The default setting of the multimedia message service is generally *In home network*. The availability of this menu depends on your phone.

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*.

DRAFT

Allow adverts — to receive or reject advertisements. This setting is not shown if *Allow multimedia reception* is set to *No*, or *Configuration settings* 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 MMS account contained in the active configuration settings.

E-mail messages

The settings affect the sending, receiving, and viewing of e-mail. You may receive the settings as a configuration message. See "Configuration settings service," p. 10. You can also enter the settings manually. See "Configuration," p. 54.

Select **Menu** > *Messaging* > *Message settings* > *E-mail messages* and from the following options:

Configuration — to select the set that you want 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

Login information — to enter information according to the server type

Incoming mail settings — to select the maximum number of mails that shall be retrieved

Outgoing mail settings (SMTP) — to enter SMTP (simple mail transfer protocol) information and setting options used when sending e-mail

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

7. Contacts

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

DRAFT

The phone memory may save contacts with additional details, such as various phone numbers and text items. You can also save an image for a limited number of contacts.

The SIM card memory can save names with one phone number attached to them. The contacts saved in the SIM card memory are indicated by .

Search for a contact

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

Save names and phone numbers

Names and numbers are saved in the used memory. To save a name and phone number, select **Menu** > *Contacts* > *Names* > **Options** > *Add new contact*.

Save details

In the phone memory you can save different types of phone numbers, a tone or a video clip, and short text items for a contact.

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

Make sure that the memory in use is *Phone* or *Phone and SIM*. See "Settings," p. 42.

Search for the contact to which you want to add a detail, and select **Details** > **Options** > *Add detail*. Select from the options available.

Copy or move contacts

To copy or move a contact from the phone contact memory to the SIM card memory, or vice versa, select **Menu** > *Contacts* > *Names*. Select the contact to copy or move and **Options** > *Copy contact* or *Move contact*.

DRAFT

To copy or move several contacts, select the first contact to copy or move and **Options** > *Mark*. Mark the other contacts, and select **Options** > *Copy marked* or *Move marked*.

To copy or move all contacts from the phone contact memory to the SIM card memory, or vice versa, select **Menu** > *Contacts* > *Copy contacts* or *Move contacts*.

The SIM card memory can save names with one phone number attached to them.

Edit contact details

Search for the contact, and select **Details**. To edit a name, number, or text item or to change the image, select **Options** > *Edit*. 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*.

Synchronize all

Synchronize your calendar, contacts data, and notes with a remote Internet server (network service). For details see "Synchronize from a server," p. 51.

Delete contacts

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*.

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 options available.

DRAFT

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 bus. card*.

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 tones and group images.

Speed dials

To assign a 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** and the contact you want to

DRAFT

assign. If the *Speed dialling* function is off, the phone asks whether you want to activate it. See also *Speed dialling* in "Call," p. 52.

To make a call using the speed-dialing keys, see "Speed dialing," p. 20.

Info, service, and my numbers

Select **Menu** > *Contacts* and from one of these submenus:

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

The phone registers your missed, received, and dialed calls if the network supports it and the phone is switched on and within the network service area.

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.

Some timers may be reset during service or software upgrades.

DRAFT

Positioning information

The network may send you a positioning request (network service). Contact your service provider to subscribe and to agree upon the delivery of positioning information.

To accept or reject the positioning 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 positioning 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*, the desired profile and from the following options:

Activate — to activate the selected profile

Personalise — to personalize the profile. Select the setting you want to change, and make the changes.

Timed — to set the profile to be active until a certain time (up to 24 hours) and set the end time. When the time set for the profile expires, the previous profile that was not timed becomes active.

Themes

A theme contains elements for personalizing your phone.

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

DRAFT

Select theme — to set a theme. 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 tone settings of the selected active profile.

Select **Menu** > *Settings* > *Tones*. You can find the same settings in the *Profiles* menu. See *Personalise* in "Profiles," p. 44.

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

Select **Options** > *Save* to save the settings or *Cancel* to leave the settings unchanged.

If you select the highest ringing tone level, the ringing tone reaches its highest level after a few seconds.

Display

Select **Menu** > *Settings* > *Display* and from the available options:

Wallpaper — to add the background image in the standby mode

Active standby — to switch the active standby mode on or off and to organize and personalize the active standby mode.

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

Navigation key icons — to display the icons of the current navigation key shortcuts in the standby mode when active standby is off

Slide animation — to set your phone to display an animation and sound a tone when you open and close the phone depending on the theme

Screen saver > *On* — to set your phone to display a screen saver. To download more screen savers, select *Graphic downloads*. To set the time after which the screen saver is activated, select *Time-out*.

Power saver — to save some battery power. The date and a digital clock are displayed when no function of the phone is used for a certain time.

DRAFT

Font size — to set the font size for messaging, contacts, and web pages

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

Cell info display > *On* — to display the cell identity, if available from the network

Time and date

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

When traveling to a different time zone, select **Menu** > *Settings* > *Time and date* > *Time* > *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 get quick access to often used functions of the phone.

Left selection key

To select a function from the list, 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** > **Options** and from the following options:

Select options — to add a function to the shortcut list or to remove one

Organise — to rearrange the functions on your personal shortcut list

Right selection key

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

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

To call contacts and carry out phone functions, say the voice commands. Voice commands are language-dependent. To set the language, see *Voice recognition language* in "Phone," p. 53.

To select the phone functions to activate with a voice commands, select **Menu** > *Settings* > *My shortcuts* > *Voice commands* and a folder. Scroll to a function. indicates that the voice tag is activated. To activate the voice tag, select **Add**. To play the activated voice command, select *Playback*. To use voice commands, see "Enhanced voice dialing," p. 20.

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

Add all or *Remove all* — to activate or deactivate voice commands to all functions in the voice commands list

Connectivity

You can connect the phone to a compatible device using a Bluetooth wireless technology, infrared, or a USB data cable connection. You can also define the settings for EGPRS dial-up connections.

Bluetooth wireless technology

This device is compliant with Bluetooth Specification 2.0 + EDR supporting the following profiles: generic access, network access, generic object exchange, hands-free, headset, object push, file transfer, dial-up networking, SIM access, and serial port. 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.

DRAFT

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 reduce the battery life.

Bluetooth technology allows you to connect the phone to a compatible Bluetooth device within 10 meters (32 feet). Since devices using Bluetooth 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* and from the following options:

Bluetooth > *On* or *Off* — to activate or deactivate the Bluetooth function. indicates that Bluetooth is activated.

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. Select a device and **Pair**. Enter an agreed Bluetooth passcode of the device (up to 16 characters) to pair (associate) the device to your phone. You must only 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 devices*. To view a list of Bluetooth devices that are currently paired with the phone, select *Paired devices*.

Bluetooth settings

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

DRAFT

If you are concerned about security, turn off the Bluetooth function, or set *My phone's visibility* to *Hidden*. Always accept only Bluetooth communication from others with whom you agree.

Infrared

You can set up the phone to send and receive data through its infrared (IR) port to or from a IRDA compatible phone or data device.

Do not point the IR beam at anyone's eyes or allow it to interfere with other IR devices. Infrared devices are Class 1 laser products.

When sending or receiving data, ensure that the IR ports of the sending and receiving devices are pointing at each other and that there are no obstructions between the devices.

To activate or deactivate the IR port of your phone, select **Menu** > *Settings* > *Connectivity* > *Infrared*.

If data transfer is not started within 2 minutes after the activation of the IR port, the connection is cancelled and must be started again.

IR connection indicator

When is shown continuously, the IR connection is activated, and your phone is ready to send or receive data through its IR port.

When blinks, your phone is trying to connect to the other device, or a connection has been lost.

Packet data

General packet radio service (GPRS) is a network service that allows mobile phones to send and receive data over an Internet protocol (IP)-based network.

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.

DRAFT

Always online — to set the phone to automatically connect to a packet data network when you switch the phone on

Modem settings

You can connect the phone using Bluetooth wireless technology or USB data cable connection to a compatible PC and use the phone as a modem to enable GPRS connectivity from the PC.

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

You can also set the EGPRS dial-up service settings (access point name) on your PC using the Nokia Modem Options software. See "Nokia PC Suite," p. 86. If you have set the settings both on your PC and on your phone, the PC settings are used.

Data transfer

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

Your phone allows data transfer with a compatible PC or another compatible device when using the phone without a SIM card.

Transfer contact list

To copy or synchronize data from your phone, the name of the device and the settings must be in the list of transfer contacts. If you receive data from another device (for example, a compatible mobile phone), the corresponding transfer contact 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 a new transfer contact to the list (for example, a mobile phone), select **Menu** > *Settings* > *Connectivity* > *Data transfer* > **Options** > *Add*

DRAFT

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 transfer contact list and **Options** > *Edit*.

To delete a transfer contact, select it from the transfer contact list and **Options** > *Delete*.

Data transfer with a compatible device

For synchronization use Bluetooth wireless technology or a cable connection. The other device must be activated for receiving data.

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

Synchronize from a compatible PC

To synchronize data from calendar, notes, and contacts, install the Nokia PC Suite software of your phone on the PC. Use Bluetooth wireless technology or a USB data cable for the synchronization, and start the synchronization from the PC.

Synchronize from a server

To use a remote Internet server, 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. 10 and "Configuration," p. 54.

To 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.

DRAFT

USB data cable

You can use the USB data cable to transfer data between the phone and a compatible PC or a printer supporting PictBridge. You can also use the USB data cable with Nokia PC Suite.

To activate the phone for data transfer or image printing, connect the data cable. Confirm *USB data cable connected. Select mode.*, and select from the following options:

Nokia mode — to use the cable for PC Suite

Printing & media — to use the phone with a PictBridge compatible printer or with your compatible PC

Data storage — to connect to a PC that does not have Nokia software and use the phone as a data storage device

To change the USB mode, select **Menu** > *Settings* > *Connectivity* > *USB data cable* > *Nokia mode*, *Printing & media*, or *Data storage*.

■ Call

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

Call divert — to divert your incoming calls (network service). You may not be able to divert your calls if some call barring functions are active. See *Call barring service* in "Security," p. 55.

Voice clarity > *Active* — to enhance speech intelligibility especially in noisy environments

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

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

Speed dialling > *On* — to dial the names and phone numbers assigned to the speed-dialing keys, **2** to **9**, by pressing and holding the corresponding number key

DRAFT

Call waiting > *Activate* — to have the network notify you of an incoming call while you have a call in progress (network service). See "Call waiting," p. 21.

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

Send my caller ID > *Yes* — to show your phone number to the person you are calling (network service). To use the setting agreed upon with your service provider, select *Set by network*.

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

Slide call handling — to set the phone to answer calls when you open the phone and to end calls when you close the phone

Phone

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

Language settings — To set the display language of your phone, select *Phone language*. *Automatic* selects the language according to the information on the SIM card. To select the USIM card language, select *SIM language*. To set a language for voice commands, select *Voice recognition language*.

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

Automatic keyguard — to lock the keypad automatically after a preset time delay when the phone is in the standby mode and no function of the phone has been used. Select *On*, and set the time.

Welcome note — to write the note that is shown when the phone is switched on

Flight query > *On* — The phone asks every time when it is switched on whether the flight profile shall be used. With flight profile all radio connections are switched off. The flight profile should be used in areas sensitive to radio emissions.

DRAFT

Phone updates — to receive phone software updates from your service provider (network service). This option may not be available, depending on your phone. See "Phone software updates," p. 56.

Operator selection > *Automatic* — to set the phone to automatically select one of the cellular networks available in your area. With *Manual* you can select a network that has a roaming agreement with your service provider.

Confirm SIM service actions — See "SIM services," p. 79.

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

Start-up tone > *On* — The phone plays a tone when it is switched on.

Enhancements

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

Select **Menu** > *Settings* > *Enhancements*. Select an enhancement, and depending on the enhancement, 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.

Lights — to set the lights permanently *On*. Select *Automatic* to set the lights on for 15 seconds after a key press.

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 function correctly. Your service provider may also send you these settings. See "Configuration settings service," p. 10.

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

DRAFT

Default configuration settings — to view the service providers saved in the phone. To set the configuration settings of the service provider as default settings, select **Options** > *Set as default*.

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. See "Phone software updates," p. 56.

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 new*; 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 dialling) 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 and *UPIN code request* — to set the phone to ask for your PIN or UPIN 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.

DRAFT

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. When the fixed dialing is on, GPRS connections are not possible except while sending text messages over a GPRS connection. In this case, the recipient's phone number and the message center number must be included in the fixed dialing list.

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 *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, UPIN 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. 84.

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. 9.

Phone software updates

Your service provider may send phone software updates over the air directly to your device (network service). This option may not be available, depending on your phone.

Warning: If you install a software update, you cannot use the device, even to make emergency calls, until the update is completed and the device is restarted. Be sure to backup data before accepting a software update.

DRAFT

Settings

To allowed or disallow phone software updates, select **Menu** > *Settings* > *Configuration* > *Device manager settings* > *Service provider software updates* and following options:

Always allow — to perform all software downloads and updates automatically

Always reject — to reject all software updates

Confirm first — to perform software downloads and updates only after your confirmation (default setting)

Request a software update

Select **Menu** > *Settings* > *Phone* > *Phone updates* to request available phone software updates from your service provider. Select *Current software details* to display the current software version and check whether an update is needed. Select *Download phone software* to download and install a phone software update. Follow the instructions on the display.

Install a software update

Select *Install software update* to start the installation, when the installation was cancelled after the download.

The software update may take several minutes. If there are problems with the installation, contact your service provider.

Restore factory settings

To reset some of the menu settings to their original values, select **Menu** > *Settings* > *Restore factory sett.*. Enter the security code. The names and phone numbers saved in *Contacts* are not deleted.

DRAFT

10. Operator menu

This menu lets you access a portal to services provided by your network operator. The name and the icon depend on the operator. For more information contact your network operator. The operator can update this menu with a service message. For more information, see "Service inbox," p. 83.

11. Gallery

In this menu you can manage images, video clips, music files, themes, graphics, tones, recordings, and received files. These files are stored in the phone memory or an attached microSD memory card and may be 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.

To view the folders of the memory card when moving a file, scroll to the memory card, and press the scroll key right.

Print images

XpressPrint

Your device supports Nokia XPressPrint. To connect it to a compatible printer use a data cable or send the image using Bluetooth to a printer supporting Bluetooth technoloy. See "Connectivity," p. 47.

DRAFT

You can print images that are in the jpg format. The images taken with the camera are automatically saved in the jpg format.

Select the image you want to print and **Options** > *Print*.

Memory card

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

You can use the microSD memory card to store your multimedia files such as video clips, music tracks, and sound files, images, and messaging data.

Some of the folders in *Gallery* with content that the phone uses (for example, Themes) may be stored on the memory card.

To insert and remove the microSD memory card, see "Insert a microSD card," p. 12 and "Remove the microSD card," p. 12.

Format the memory card

When a memory card is formatted, all data on the card is permanently lost. Some memory cards are supplied preformatted and others require formatting. Consult your retailer to find out if you must format the memory card before you can use it.

To format a memory card, select **Menu** >*Gallery* or *Applications*, the memory card folder , and **Options** > *Format mem. card* > **Yes**.

When formatting is complete, enter a name for the memory card.

Lock the memory card

To set a password to lock your memory card to help prevent unauthorized use, select **Options** > *Set password*. The password can be up to eight characters long.

The password is stored in your phone and you do not have to enter it again while you are using the memory card on the same phone. If you want to use the memory card on another phone, you are asked for the password. To delete the password, select **Options** > *Delete password*.

DRAFT

Check memory consumption

To check the memory consumption of different data groups and the available memory for installing new applications or software on your memory card, select **Options** > *Details*.

12. Media

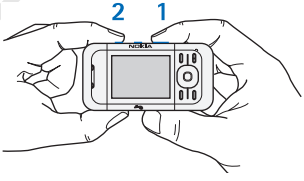
When taking and using images or video clips, obey all laws and respect local customs as well as privacy and legitimate rights of others.

Camera and video

You can take images or record video clips with the built-in camera.

Take an image

To access the still image function, press the camera key (1) in the standby mode; if the video function is on, scroll left or right.



To take an image in landscape format, hold the phone in a horizontal position. To zoom in and out in the camera mode, use the volume keys (2).

To take an image, select **Capture**, or press the camera key. The phone saves images in *Gallery*.

Select **Options** > *Self-timer on* to activate the self-timer, or *Img. sequence on* to take images in a fast sequence. With the highest image size setting, three images are taken in a sequence, with other size settings, five images are taken.

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.

DRAFT

Your device supports an image capture resolution of 640 x 480 pixels. The image resolution in these materials may appear different.

Record a video clip

To access the video function, press and hold the camera key in the standby mode; or if the camera function is on, scroll left or right. To start the video recording, select **Record**. To pause the recording, select **Pause**; to resume the recording, select **Continue**; to stop the recording, select **Stop**. The phone saves images in *Gallery*.

Camera and video options

To use a filter, select **Options** > *Effects* > *False colours*, *Greyscale*, *Sepia*, *Negative*, or *Solarise*.

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* to select or download media.

Select **Menu** > *Media* > *Media player* > *FF/Rew interval* to set the step width for fast forward or rewind.

Configuration for a streaming service

You may receive the configuration settings required for streaming as a configuration message from the service provider. See "Configuration settings service," p. 10. You can also enter the settings manually. See "Configuration," p. 54. To activate the settings, do the following:

1. Select **Menu** > *Media* > *Media player* > *Streaming sett.* > *Configuration*.
2. Select a service provider, *Default*, or *Personal config.* for streaming.

DRAFT

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

Music player

Your phone includes a music player for listening to music tracks or other MP3 or AAC sound files that you have downloaded from the Web or transferred to the phone with the Nokia Music Manager application, which is part of Nokia PC Suite. See "Nokia PC Suite," p. 86.

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

Music files stored in the music folder in the phone memory or on the memory card will automatically be detected and added to the music library during the startup of the phone.

To open the music player, select **Menu** > *Media* > *Music player*.

Playing the music tracks

Warning! Listen to music at a moderate level. Continuous exposure to high volume may damage your hearing.

Operate the music player with the music player key on the phone or with the scroll keys when the music player menu is open.

To start playing, press ♪.

To adjust the volume level, use the volume keys on the side of the phone.

To pause the playing, press ♪.

To rewind the current track, press and hold the scroll key ◀◀. To fast forward the current track, press and hold ▶▶. Release the key at the position you want to continue the music playback.

To skip to the next track, press the scroll key ▶▶|. To skip to the beginning of the previous track, press |◀◀.

To close the music player menu and to continue music playback in the background, press the end key.

To stop the music player, press and hold the end key.

DRAFT

Music player options

In the *Music player* menu select from the following options:

Show tracks — View all available tracks of the active track list and play the desired track. To play a track, scroll to the desired track, and select **Play**.

Music library — View all available tracks ordered according to *Artists*, *Albums*, *Genres*, *Composers*, or *Track lists*. Select *Update library* to refresh the lists. Track lists generated with the Nokia Music Manager you will find under *Track lists* > *My track lists*.

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

Media equaliser — to select or define an equalizer setting

Add to Favourites — to add the current track to the favorite track list

Play via Bluetooth — to connect and play the tracks on an audio accessory using Bluetooth technology

Use tone — to set the currently played music track, for example, as a ringing tone. The availability of this menu depends on your phone.

Send — to send the current track by a multimedia message or using Bluetooth technology

Web page — to access a Web page associated with the currently played track

Music downloads — to connect to a Web service

Memory status — to view the free and used memory capacity

Radio

The FM radio depends on an antenna other than the wireless device's antenna. 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.

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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 frequencies

1. To start the search, select and hold ◀◀ or ▶▶. To change the radio frequency in 0.05 MHz steps, briefly press ◀◀ or ▶▶.
2. To save a frequency to a memory location, 1 to 9, press and hold the corresponding number key. To save a frequency to a 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.

Listen to the radio

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

Select from the following options:

Switch off — to turn off the radio

Save station — to save a new station (shown if a new station is detected)

Loudspeaker or *Headset* — to listen to the radio using the loudspeaker or headset.

Mono output or *Stereo output* — to listen to the radio in monophonic sound or in stereo

Stations — to select the list of saved stations. To delete or rename a station, scroll to the desired station, and select **Options** > *Delete station*, or *Rename*. Select *Visual service ID* to enter a service ID given by the visual radio service provider (network service)

Search all stations — to search for new radio stations

Set frequency — to enter the frequency of the desired radio station

Station directory — to access a Web site with a list of radio stations

DRAFT

Enable visual serv. > *Automatically* — to set whether *Visual Radio* (network service) starts automatically when you turn on the radio. Some radio stations may send text or graphical information that you can view using the Visual Radio application. To check the availability and costs, contact your service provider.

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

Voice recorder

You can record pieces of speech, sound, or an active call, and save them in *Gallery*. This is useful when recording a name and phone number to write 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. When recording a call, hold the phone in the normal position near to your ear. To pause the recording, select .

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

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

   To send the last recording, select **Options** > *Send last recorded*.

   To see the list of recordings in *Gallery*, select **Options** > *Recordings list* > *Recordings*.

Equalizer

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

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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.

Stereo widening

Stereo widening enhances the audio output of stereo enhancements by enabling a wider stereo sound effect. To change the setting, select **Menu** > *Media* > *Stereo widening*.

13. Push to talk

If available, select **Menu** > *Push to talk*.

Push to talk (PTT) over cellular is a two-way radio service available over a GPRS cellular network (network service).

You can use PTT to have a conversation with one person or with a group of people (channel) having compatible devices. While you are connected to the PTT service, you can use the other functions of the phone.

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

Before you can use the PTT service, you must define the required PTT service settings. See "PTT settings," p. 71 and "Configuration settings," p. 72.

PTT channels

A PTT channel comprises a group of people (for example, friends or a workteam) who joined the channel after they where invited to. When you call a channel, all members joined to the channel hear the call simultaneously.

There are different types of PTT channels:

DRAFT

Public channel — Every channel member can invite other persons.

Private channel — Only persons which receive an invitation by the channel creator can join in.

Provisioned channel — A permanent channel is created by the service provider.

You can set the status of each channel to *Active* or *Inactive*.

The number of active channels and the number of members per channel is limited. Contact your service provider for details.

Create a channel

To add a channel, select **Menu** > *Push to talk* > *Add channel*, and enter the settings in the form fields:

Channel name: — Enter a name for the new channel.

Channel status: — Select *Active* to set the channel active or *Inactive* to disable the channel.

Chnl. nickname: — Enter your nick name to be shown the new channel.

Chnl. security: > *Public channel* or *Private channel*

Image: — Select **Change** and an image from the *Gallery* or the *Default graphic* to set a graphic for the new channel.

To send an invitation to the channel, select **Yes** when the phone requests it. The recipient of the invitation is added to the member list of the channel when the invitation is accepted. To send further invitations, select **Menu** > *Push to talk* > *Channel list*, a channel, and **Options** > *Send invitation*. To send the invitation use a text message or IR.

To add a provisioned channel, select **Menu** > *Push to talk* > *Add channel* > **Options** > *Edit add. manually*. Enter the *Channel addr.:* provided by your service provider.

Receive an invitation

1. When you receive a text message invitation to a channel, *Channel invitation received:* is displayed.

DRAFT

2. To view the nickname of the person who sent the invitation and the channel address if the channel is not a private channel, select **View**.
3. To add the channel to your phone, select **Save**.
4. To set the status for the channel, select *Active* or *Inactive*.

To reject the invitation, select **Exit** > **Yes**, or select **View** > **Discard** > **Yes**.

Switch PTT on and off

To connect to the PTT service, select **Menu** > *Push to talk* > *Switch PTT on*, or press and hold the PTT (volume up) key. indicates the PTT connection. indicates that the service is temporarily unavailable. If you have added channels to the phone, you are automatically joined to the active channels.

You may assign a default function to the PTT (volume up) key to open the channel list, the contacts list or a single channel or contact. See "PTT settings," p. 71.

To disconnect from the PTT service, select *Switch PTT off*.

Make and receive a PTT call

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

To make a channel call, a one-to-one call, or a call to multiple recipients, you must hold the PTT (volume up) key as long as you talk. To listen to the response, release the PTT (volume up) key.

You may be able to check the login status of your contacts in **Menu** > *Push to talk* > *Contacts list*. This service depends on your network operator and is only available for subscribed contacts. To subscribe a contact, select **Options** >*Subscribe contact*, or if one or more contacts are already marked, *Subscribe marked*.

or indicate that the person is either available or unknown. indicates that the person wants not to be disturbed, but can receive callback requests. indicates that the person has PTT not switched on.

DRAFT

Make a channel call

To make a call to a channel, select *Channel list* in the PTT menu, scroll to the desired channel, and press and hold the PTT (volume up) key.

Make a one-to-one call

To start a one-to-one call from the list of contacts to which you have added the PTT address, select *Contacts* > *Names* or **Menu** > *Push to talk* > *Contacts list*. Scroll to a contact, and press and hold the PTT (volume up) key.

To start a one-to-one call from the list of PTT channels, select *Channel list*, scroll to the desired channel, and select **Members**. Scroll to the desired contact, and press and hold the PTT (volume up) key.

To start a one-to-one call from the list of callback requests you have received, select *Callback inbox*. Scroll to the desired nickname, and press and hold the PTT (volume up) key.

Make a PTT call to multiple recipients

You can select multiple PTT contacts from the contact list. The recipients receive an incoming call and need to accept the call in order to participate. If supported by your network operator, you also may select contacts with a phone number but without PTT number. For details, contact your network operator.

1. Select **Menu** > *Push to talk* > *Contacts list*, and mark the desired contacts.
2. Press and hold the PTT (volume up) key to start the call. The participating contacts are shown on the display as soon as they join the call.
3. Press and hold the PTT (volume up) key to talk to them. Release the PTT (volume up) key to hear the response.
4. Press the end key to terminate the call.

DRAFT

Receive a PTT call

A short tone notifies you of an incoming PTT call. Information, such as the channel, the phone number, or the nickname (network service) of the caller, is displayed.

You can either accept or reject an incoming one-to-one call if you have set the phone to first notify you of the one-to-one calls.

When you press and hold the PTT (volume up) key while the caller is talking, you hear a queuing tone, and *Queuing* is displayed. Press and hold the PTT (volume up) key, and wait for the other person to finish; then you can talk immediately.

Callback requests

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

Send a callback request

You can send a callback request in the following ways:

To send a callback request from the contacts list in the *Push to talk* menu, select *Contacts list*. Scroll to a contact, and select **Options** > *Send PTT callback*.

To send a callback request from *Contacts*, search for the desired contact, and select **Details**. Scroll to the PTT address, and select **Options** > *Send PTT callback*.

To send a callback request from the channel list in the PTT menu, select *Channel list*, and scroll to the desired channel. Select **Members**, scroll to the desired contact, and select **Options** > *Send PTT callback*.

To send a callback request from the callback request list in the *Push to talk* menu, select *Callback inbox*. Scroll to a contact, and select **Options** > *Send PTT callback*.

Respond to a callback request

When someone sends you a callback request, *Callback request received* is displayed in the standby mode.

DRAFT

To open the *Callback inbox*, select **View**. The list of nicknames of the persons who have sent you callback requests is shown.

To make a one-to-one call, select the desired request, and press and hold the PTT (volume up) key.

To send a call request back to the sender, select **Options** > *Send PTT callback*.

To delete the request, select **Delete**.

To save a new contact or add the PTT address to a contact from a received callback request, select **Options** > *Save as* or *Add to contact*.

Add a one-to-one contact

You can save the names of persons to whom you often make one-to-one calls in the following ways:

To add a PTT address to a name in *Contacts*, search for the desired contact, select **Details** > **Options** > *Add detail* > *PTT address*. A contact will only appear in the PTT contact list, if the PTT address is entered.

To add a contact to the PTT contacts list, select **Menu** > *Push to talk* > *Contacts list* > **Options** > *Add contact*.

To add a contact from the channel list, connect to the PTT service, select *Channel list*, and scroll to the desired channel. Select **Members**, scroll to the member whose contact information you want to save, and select **Options**. To add a new contact, select *Save as*. To add a PTT address to a name in *Contacts*, select *Add to contact*.

PTT settings

Select **Menu** >*Push to talk* > *PTT settings*.

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

PTT key default function — to set the PTT (volume up) key to following functions: *Open contact list*, *Open channel list*, *Call contact/group*.

DRAFT

Select a contact, a group, or *Call PTT channel*; and select a channel. When you press and hold the PTT (volume up) key, the selected function is performed.

Show my login status — to enable or disable the sending of the login status

PTT status in startup > *Yes* or *Ask first*— to set the phone to automatically connect to the PTT service when you switch the phone on

Push to talk when abroad — to switch the PTT service on or off when the phone is used outside of the home network

Send my PTT address > *No* — to hide your PTT address from channel and one-to-one calls

Configuration settings

You may receive the settings for connecting to the service from your service provider. See "Configuration settings service," p. 10. You can enter the settings manually. See "Configuration," p. 54.

To select the settings for connecting to the service, select **Menu** > *Push to talk* > *Configuration settings*. Select from the following options:

Configuration — to select a service provider, *Default*, or *Personal config.* for PTT service. Only the configurations that support the PTT service are shown.

Account — to select a PTT service account contained in the active configuration settings

Other parameters are *PTT user name*, *Default nickname*, *PTT password*, *Domain*, and *Server address*.

Web

Select **Menu** > *Push to talk* > *Web* to access the Internet site of your PTT provider.

DRAFT

14. 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 the radio as the alarm tone, select *Alarm tone*. If you select the radio as an alarm tone, connect the headset to the phone.

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

Stop the alarm

The phone sounds an alert tone 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 time you set in *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. If there are any notes set for the day, the day is in bold type, and the beginning of the note is shown below the calendar. To view the day notes, select **View**. To view a week, select **Options** > *Week view*. To delete all notes in the calendar, select the month or week view, and select **Options** > *Delete all notes*.

DRAFT

In *Settings* you can set the date, time, time zone, date or time format, date separator, default view, or the first day of the week. In *Auto-delete notes*, you can set the phone to delete old notes automatically after a specified time.

Make a calendar note

Select Menu > *Organiser* > *Calendar*. Scroll to the date, and select Options > *Make a note* and one of the following note types: *Meeting*, *Call*, *Birthday*, *Memo*, or *Reminder*. Fill in the fields.

Note alarm

The phone displays the note and if set, sounds a tone. 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 note; otherwise, select Options > *Add*. Fill in the fields, and select Save.

To view a note, scroll to it, and select View. While viewing a note, you can also select an option to edit the attributes. You can also select an option to delete the selected note and delete all the notes that you have marked as done.

Notes

To write and send notes, select Menu > *Organiser* > *Notes*.

To make a note if no note is added, select Add note; otherwise, select Options > *Make a note*. Write the note, and select Save.

DRAFT

Calculator

The calculator in your phone provides basic arithmetic and trigonometric functions, calculates the square and the square root, the inverse of a number, and converts currency values.

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

Select Menu > *Organiser* > *Calculator*. Press # for a decimal point. Scroll to the desired operation or function, or select it from the Options.

To save the exchange rate, select Options > *Exchange rate*. To perform the currency conversion, enter the amount to be converted, and select Options > *In domestic* or *In foreign*.

Countdown timer

To start the countdown timer, select Menu > *Organiser* > *Timer* > *Normal timer*, enter the alarm time, and write a 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*.

To have an interval timer with up to 10 intervals started, first enter the intervals. Select Menu > *Organiser* > *Timer* > *Interval timer*. To start the timer, select *Start timer* > Start.

Stopwatch

You can 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 every time that you want to take an intermediate time. To stop the time observation, select Stop.

To save the measured time, select Save.

DRAFT

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 *Reset*.

Lap timing — to take lap times

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

15. Sensor

With the Sensor application you can express yourself by creating a folio that may contain text, images, media items, and a guestbook. After creating a folio you can scan for other Sensor users. If you find users nearby, you can browse their folios and send Sensor messages, media files, and guestbook entries. Sensor uses Bluetooth technology and it is free of charge.

Note: Most Sensor communication features require all parties to install the Sensor application.

DRAFT

Select **Menu** > *Sensor* and from the available options:

Sensor: inactive or *Sensor: active* — to activate or inactivate the application

Scan now — to find and browse the Sensor folios of others and Bluetooth devices within range. The scanning time and range may vary depending on the environment you are in and the number of Bluetooth devices found.

My folio — to create, edit, and view your folio that other users will see.

My collection — to view downloaded and collected folios of other Sensor users. You can check if any Sensor users are currently nearby and send them messages or write entries to their guestbook. You may choose to block all communication with a user or remove a block that you have previously set.

Messages — to view messages that Sensor users have sent to you

16. Applications

In this menu you can manage applications and games. These files are stored in the phone memory or an attached microSD memory card and may be arranged in folders.

For options to format or lock and unlock the memory card see "Memory card," p. 59.

Launch a game

Your phone software includes some games.

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

To set sounds, lights, and shakes for the game, select **Menu** > *Applications* > **Options** > *App. settings*. For more options, see "Application options," p. 78.

DRAFT

Launch an application

Your phone software includes some Java applications.

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

Application options

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 (network service), if available

App. access — to restrict the application from accessing the network

Download an application

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

Important: 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 and games in different ways.

Use the Nokia Application Installer from PC Suite to download the applications to your phone, or select **Menu** > *Applications* > **Options** > *Downloads* > *App. downloads*; the list of available bookmarks is shown. See "Bookmarks," p. 81.

For the availability of different services, pricing, and tariffs, contact your service provider.

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

DRAFT

17. SIM services

Your SIM card may provide additional services. You can access this menu only if it is supported by your SIM card. The name and contents of the menu depend on the available services.

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.

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.

18. 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.

Set up browsing

You may receive the configuration settings required for browsing as a configuration message from the service provider that offers the service that you want to use. See "Configuration settings service," p. 10. You can also enter all the configuration settings manually. See "Configuration," p. 54.

DRAFT

Connect to a service

Ensure that the correct configuration settings of the service 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. 79.
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*.
- 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.

Browse with phone keys

To browse through the page, scroll in any direction.

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

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

DRAFT

Direct calling

While browsing, you can make a phone call, 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* > *Appear. settings*; or in the standby mode, select **Menu** > *Web* > *Settings* > *Appearance settings* and from the following options:

Text wrapping — to select how the text shall appear on the display

Font size — to set the font size

Show images > *No* — to hide images on the page

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

DRAFT

a secure connection. For more information, see "Browser security," p. 84.

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

Screen size > *Full* or *Small*— to set the screen layout

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. 83.

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 sett.*; or in the standby mode, select **Menu** > *Web* > *Settings* > *Security settings* > *WMLScripts over secure connection* > *Allow*.

Download settings

To automatically save all downloaded files in *Gallery*, select **Menu** > *Web* > *Settings* > *Downloading settings* > *Automatic saving* > *On*.

DRAFT

Service inbox

The phone is able to receive service 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 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.

DRAFT

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.

To view or change the security module settings, select **Menu** > *Settings* > *Security* > *Security module settings*.

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.

DRAFT

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

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 is shown, which may include the amount and date.

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, and 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. The digital signature icon disappears, and the service may display a confirmation of your purchase.

19. PC connectivity

You can send and receive e-mail, and access the Internet when your phone is connected to a compatible PC through a Bluetooth, infrared, or

DRAFT

a data cable connection. You can use your phone with a variety of PC connectivity and data communications applications.

Nokia PC Suite

With Nokia PC Suite you can synchronize contacts, calendar, notes, and to-do notes between your phone and the compatible PC or a remote Internet server (network service). You may find more information and PC Suite on the Nokia Web site at www.nokia.com/support or your local Nokia Web site.

Packet data, HSCSD, and CSD

With your phone you can use the packet data, high-speed circuit switched data (HSCSD), and circuit switched data (CSD, *GSM data*) data services. For availability and subscription to data services, contact your network operator or service provider. See "Modem settings," p. 50.

The use of HSCSD services consumes the phone battery faster than normal voice or data calls.

Bluetooth

Use the Bluetooth technology to connect your compatible Laptop to the Internet. Your phone must have activated a service provider that supports Internet access and your PC has to support Bluetooth PAN (Personal Area Network). After connecting to the network access point (NAP) service of the phone and pairing with your PC your phone automatically opens a packet data connection to the Internet. PC Suite software installation is not necessary when using the NAP service of the phone.

See "Bluetooth wireless technology," p. 47.

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.

DRAFT

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.

20. 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

DRAFT

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.

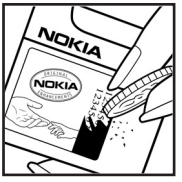
Authenticate hologram

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.

DRAFT

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.

DRAFT

21. Technical Information

Weight	104 grams (3.7 ounces) incl. BL-5B battery
Battery	820 mAh Li-Ion Battery
Networks	Wireless networks GSM 850, 1800 and 1900
Size	Volume: 5.2 cubic inches (85 ccm) Length: 3.6 in (92 mm) Width: 1.9 in (48 mm) Thickness: 0.8 in (21 mm)
Frequency range (Rx)	GSM 850: 869 - 894 MHz GSM 1800: 1805 - 1880 MHz GSM 1900: 1930 - 1990 MHz
Frequency range (Tx)	GSM 850: 824 - 849 MHz GSM 1800: 1710 - 1785 MHz GSM 1900: 1850 - 1910 MHz
Tx output power	2 W (max)
Battery voltage	3.7 V DC
Number of channels	GSM 850: 124 GSM 1800: 374 GSM1900: 299
Memory size	32 MB flash memory 16 MB RAM
Operating temperature	59 °F to 77 °F (15 °C to 25 °C)

DRAFT

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.

DRAFT

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 2.2 centimeters (7/8 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:

DRAFT

- 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.

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

DRAFT

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

DRAFT

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 0.61 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 0.94 W/kg and when properly worn on the body is 0.24 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: PPIRM-181.

DRAFT

APPENDIX

A message from the CTIA

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1250 Connecticut Avenue, NW Suite 800, Washington, DC 20036. Phone: (202) 785-0081

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.

DRAFT

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.

DRAFT

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.

DRAFT

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

DRAFT

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

DRAFT

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.

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