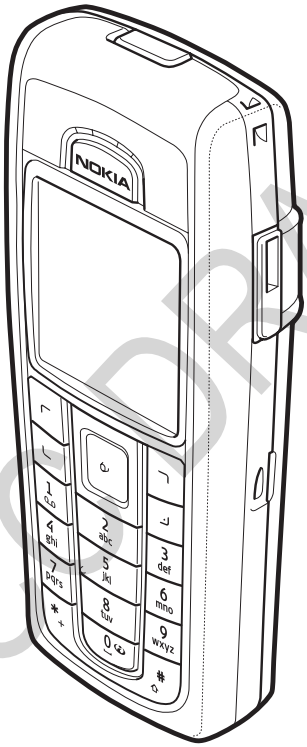
Nokia 6230i User Guide



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Issue 1

LEGAL INFORMATION

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A copy of the Declaration of Conformity can be found from http://www.nokia.com/phones/declaration_of_conformity/.

CE 168

PART NO. XXXXXXXX, ISSUE NO. 1

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

SWITCH OFF NEAR BLASTING
Follow any restrictions. Don't use the phone where blasting is in progress.

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

QUALIFIED SERVICE
Only qualified personnel may install or repair this product.

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

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

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

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

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

About your device

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

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

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

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 nervices. Some networks may not support all language-dependent characters and services.

Your service provider may have requested that certain features be disabled or not activated in your device. If so, they will not appear on your device menu. Your device may also have been specially configured for your network provider. This

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

Gallery files share a different memory, for further information see "Gallery," page 65.

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.

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General information

Phone functions

The Nokia 6230i phone provides many functions that are practical for daily use, such as a calendar, clock, alarm clock, radio, music player, and built-in camera. You can personalize your phone with Nokia Xpress-on™ color covers. Your phone also supports the following functions:

- Enhanced data rates for GSM evolution (EDGE), see "EGPRS," page 60.
- Extensible hypertext markup language (XHTML) browser, see "Web," page 88.
- E-mail application, see "E-mail," page 41.
- Instant messaging, see "Instant messaging," page 36.
- Presence-enhanced contacts, see "My presence," page 49.
- Push to talk (PTT), see "Push to talk," page 72.
- J2ME™ (Java 2 Platform Micro Edition), see "Applications," page 84.
- Bluetooth technology, see "Bluetooth wireless technology," page 58.
- Multimedia card to extend the memory capacity of your phone to store images and video clips.

Access codes

Security code

The security code (5 to 10 digits) helps to protect your phone against unauthorized use. The preset code is 12345. Change the code, and keep the new code secret in a safe place separate from your phone. To change the code, and to set the phone to request the code, see "Security settings," page 64.

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

PIN, PIN2, module PIN, and signing PIN codes

The PIN (personal identification number) code (4 to 8 digits) helps to protect your SIM card against unauthorized use. The PIN code is usually supplied with the SIM

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card. Set the phone to request the PIN code each time the phone is switched on. See "Security settings," page 64.

The PIN2 code (4 to 8 digits) may be supplied with the SIM card and is required to access some functions, such as call counters.

The module PIN is required to access the information in the security module. See "Security module," page 93. The module PIN is supplied with the SIM card if the SIM card has a security module in it.

The signing PIN is required for the digital signature. See "Digital signature," page 95. The signing PIN is supplied with the SIM card if the SIM card has a security module in it.

If you enter an incorrect PIN code three times in succession, the phone may display *PIN blocked* or *PIN code blocked* and ask you to enter the PUK code.

PUK, and PUK2 codes

The PUK (personal unblocking key) code (8 digits) is required to change a blocked PIN code. 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 with the *Call barring service*. See "Security settings," page 64. You can obtain the password from your service provider.

Wallet code

The wallet code (4 to 10 digits) is required to access the wallet services. If you enter an incorrect wallet code three times in succession, the wallet application is blocked for 5 minutes. If you give three more incorrect entries, the time doubles. See "Wallet," page 79.

■ Configuration settings

Before you use multimedia messaging, instant messaging, presence, push to talk, e-mail application, synchronization, streaming, and the browser, you must have the proper configuration settings on your phone. You may receive the settings directly as a configuration message, which you save to your phone. For more

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information on availability, contact your network operator, service provider, or nearest authorized Nokia dealer.

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 received settings, select **Show** > **Save**. If the phone requests *Enter settings' PIN:*, enter the PIN code for the settings, and select **OK**. To receive the PIN code, contact the service provider that supplies the settings.

If no settings are saved yet, these settings are saved and set as default configuration settings. Otherwise, the phone asks Activate saved configuration settings?.

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

Nokia support on the Web

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

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1. Get started

Install the SIM card and battery

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

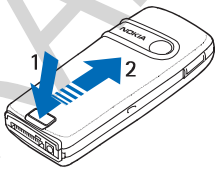
Keep all SIM cards out of the reach of small children. For availability and information on using SIM card services, contact your SIM card vendor. This may be the service provider, network operator, or other vendor.

This device is intended for use with the BL-5C battery.

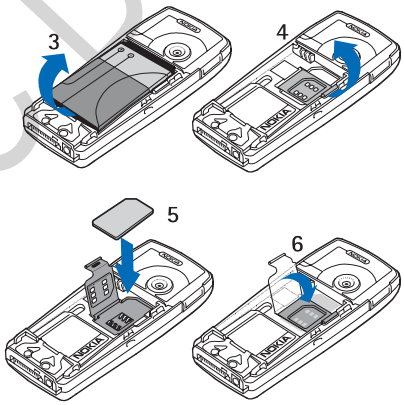
The SIM card and its contacts can easily be damaged by scratches or bending, so be careful when handling, inserting, or removing the card.

To remove the back cover of the phone, do the following:

1. With the back of the phone facing you, push the back cover release button (1).
2. Slide the back cover to remove it from the phone (2).



3. To remove the battery, lift it as shown (3).
4. To release the SIM card holder, gently pull the locking clip of the card holder, and open it (4).
5. Insert the SIM card into the SIM card holder (5). Make sure that the SIM card is properly inserted and that the golden contact area on the card is facing downwards.



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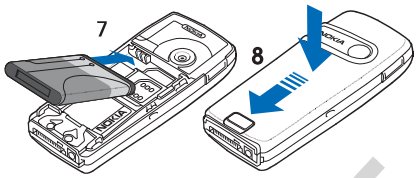
6. Close the SIM card holder (6), and press it until it snaps into position.
7. Replace the battery (7).

   Always use original Nokia batteries. See "Nokia battery authentication guidelines," page 99.



8. Slide the back cover into place (8).

Charge the battery

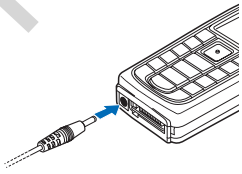
Warning: Use only batteries, chargers, and enhancements approved by Nokia for use with this particular model. The use of any other types may invalidate any approval or warranty, and may be dangerous.

Check the model number of any charger before use with this device. Use this device with ACP-7, ACP-8, ACP-12, and LCH-12 chargers.

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

1. Connect the charger to a wall socket.
2. Connect 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 and the battery used. Charging a BL-5C battery with the ACP-12 charger takes approximately 1 hour and 30 minutes while the phone is in the standby mode.

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.

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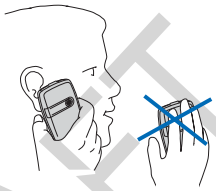
Press and hold the power key as shown.

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

Normal operating position

Use the phone only in its normal operating position.



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.

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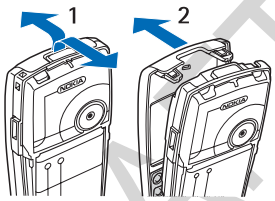
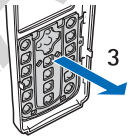
Change the covers

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

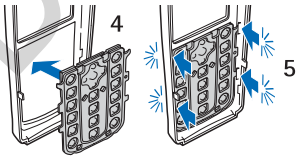
1. Remove the back cover from the phone. See step 1 and 2 in "Install the SIM card and battery," page 15.
2. Beginning at the top of the phone, gently pull the front cover away from the phone (1), and detach the front cover (2).



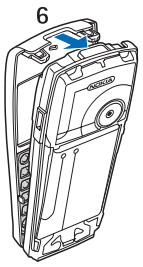
3. To remove the key mat from the front cover, press it gently out (3).



4. Place the key mat in the new front cover (4).
5. Press the key mat gently in (5).



6. To replace the front cover, press it gently on the phone, beginning from the bottom (6).
7. Replace the back cover of the phone. See step 8 in "Install the SIM card and battery," page 15.



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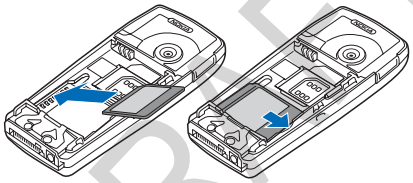
Install a multimedia card

Use only compatible multimedia cards (MMC) with this device. Other memory cards, such as secure digital (SD) cards, do not fit in the MMC 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.

You can use a multimedia card to extend the memory of *Gallery*. See "Gallery," page 65.

1. Remove the back cover and battery from the phone. See "Install the SIM card and battery," page 15.
2. Place the multimedia card in the card holder. Make sure that the multimedia card is properly inserted and that the golden contact area on the card is facing downwards.



3. Replace the battery and back cover of the phone. See step 7 and 8 in "Install the SIM card and battery," page 15.

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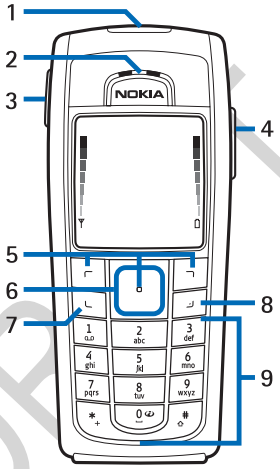
2. Your phone

Keys and connectors



Power key (1)

Earpiece (2)

Volume keys (3)—Hold the volume down key to make a push to talk call. See "Make and receive a PTT call,"page 73.

Loudspeaker (4)

Left selection key, **middle selection** key, and **right selection** key (5)—The function of these keys depends on the guiding text shown on the display above the keys.

4-way navigation key (6)—Scroll up, down, left, and right.

Call key—Dials a phone number and answers a call (7).

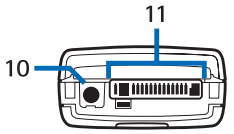
End key—Ends an active call. Exits from any function (8).

Number keys—Enters numbers and characters (9).

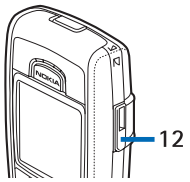
The * and # keys are used for various purposes in different functions.

Charger connector (10)

Pop-Port™ connector used for enhancements such as headsets and the data cable (11).



Infrared (IR) port (12)



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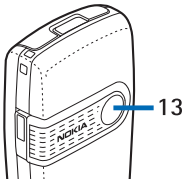
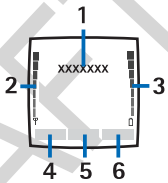
Camera lens on the back cover of the phone (13)



Standby mode

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



Shows the name of the network or the operator logo (1) to indicate in which cellular network the phone is used.

Shows the signal strength of the cellular network at your current location (2).

Shows the battery charge level (3).

The **left selection** key in the standby mode is Go to (4).

To view the functions on your personal shortcut list, select Go to. Select a function to activate it.

To add a function to the shortcut list, select Options > *Select options*, scroll to the function, and select Mark. To remove a function from the list, select Unmark.

To rearrange the functions on your personal shortcut list, select Options > *Organise*, the desired function, Move, and select where you want to move it.

The **middle selection** key (5) in the standby mode is Menu (5)

The **right selection** key (6) in the standby mode may be Names to access the list of contacts in the *Contacts* menu, an operator-specific name to access an operator-specific Web site, or a shortcut to a specific function that you selected. See *Right selection key* in "My shortcuts," page 57.

Power saving

A digital clock view overwrites the display when no function of the phone has been used for a certain period of time. To activate the power saving, see *Power saver* in "Display settings,"page 57. To deactivate the screen saver, press any key.

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Indicators

You received one or several text or picture messages.

You received one or several multimedia messages.

The phone registered a missed call.

or

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

You received one or several instant messages, and you are connected to the instant messaging service.

The keypad is locked.

The phone does not ring for an incoming call or text message when *Incoming call alert* is set to *Off*, or none of the caller groups has been set to alert in the *Alert for* setting, and *Message alert tone* is set to *Off*. See also "Tone settings," page 56.

The alarm clock is set to *On*.

The countdown timer is running.

The stopwatch is running in the background.

The EGPRS connection mode *Always online* is selected, and the EGPRS service is available.

An EGPRS connection is established.

The EGPRS connection is suspended (on hold, for example, if there is an incoming or outgoing call during an EGPRS dial-up connection).

When the IR connection is activated, the indicator is shown continuously.

A Bluetooth connection is active.

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

All incoming calls are diverted to another number.

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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, handsfree, loopset, or music stand enhancement is connected to the phone.

or

A push to talk connection is active or suspended.

Shortcuts in the standby mode

- To access the list of dialed numbers, press the **Call** key once. Scroll to the number or name that you want, and to call the number, press the **Call** key.
- To call your voice mailbox (network service) when you have saved your voice mailbox number in the phone, press and hold the **1** key.
- To make a connection to a browser service, press and hold the **0** key.
- To set shortcut functions for the navigation key; see *Navigation key* in "My shortcuts," page 57.
- To change the profile, open the list of profiles by briefly pressing the **Power** key. Scroll to the desired profile, and select it.

Keypad lock (keyguard)

To prevent the keys from being accidentally pressed, select **Menu**, and press ***** within 1.5 seconds to lock the keypad.

To unlock the keypad, select **Unlock**, and press *****. If the *Security keyguard* is set *On*, select **Unlock**, and enter the security code.

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

For *Automatic keyguard* and *Security keyguard*, see "Phone settings," page 61.

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

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3. Call functions

Make a call

1. Enter the phone number, including the area code. If you entered an incorrect character, select Clear to delete it.

   For international calls, press * twice for the international prefix (the + character replaces the international access code), enter the country code, the area code without the leading 0, if necessary, and the phone number.
2. To call the number, press **Call**.
3. To end the call, or to cancel the call attempt, press the **End** key.

Search for a contact

To search for a name or phone number that you have saved in *Contacts*. See "Search for a contact," page 47. Press **Call** to call the number.

Last number redial

In the standby mode, press **Call** once to access the list of phone numbers you have most recently called or attempted to call. Scroll to the number or name you want, and press **Call**.

Speed dialing

You can assign a phone number to one of the speed-dialing keys, from **2** to **9**. See "Speed dialing," page 53. Call the number in either of the following ways:

- Press the speed-dialing key that you want and **Call**.
- If *Speed dialling* is set to *On*, press and hold a speed-dialing key until the call is started. See "Call settings," page 61.

Answer or reject an incoming call

To answer an incoming call, press **Call**. To end the call, press **End**.

To reject an incoming call, press **End**.

If you select Silence, only the ringing tone is muted. Then either answer or reject the call.

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Tip: If the *Divert if busy* function is activated to divert the calls to your voice mailbox, rejecting an incoming call will also divert the call. See "Call settings," page 61.

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

Call waiting

During a call, press **Call** to answer the waiting call. The first call is put on hold. To end the active call, press **End**.

To activate the *Call waiting* function, see "Call settings," page 61.

Options during a call

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

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

Mute or *Unmute*, *End call*, *End all calls*, *Contacts*, *Menu*, *Hold* or *Unhold*, *New call*, *Record*, *Answer*, and *Reject*.

Conference to make a conference call that allows up to five persons to participate (network service). During a call, make a call to a new participant (*New call*). The first call is put on hold. When the new call has been answered, select *Conference* to include the first participant in the conference call. To have a private conversation with one of the participants, select *Private call* and the desired participant. To rejoin the conference call, select *Add to conference*.

Audio enhancing > *Active* to enhance speech intelligibility especially in noisy environments

Lock keypad to activate the keypad lock.

Send DTMF to send dual tone multifrequency (DTMF) tone strings, such as passwords or bank account numbers. The DTMF system is used by all touch-tone telephones. Enter the DTMF string or search for it in *Contacts*, and select **DTMF**. You can enter the wait character w and the pause character **p** by repeatedly pressing the * key.

Swap to switch between the active call and the call on hold (network service).

Transfer to connect a call on hold to an active call, and disconnect yourself from the calls (network service).

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Loudspeaker to use your phone as a loudspeaker during a call. Do not hold the phone to your ear while using the loudspeaker. To activate or deactivate the loudspeaker, select *Loudspeaker* or *Handset*, or select **Loudsp.** or **Normal**. The loudspeaker is automatically deactivated when you end the call or call attempt, or connect the hands-free unit or headset to the phone.

If you have connected a compatible hands-free unit or the headset to the phone, *Handset* in the options list is replaced with *Handsfree* or *Headset*, and the selection key **Normal** with **Handsf.** or **Heads.**, respectively.

You can use the loudspeaker with the radio or the music player. See "Basic radio functions," page 70 or "Music player," page 67.

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

Write text

You can enter text, when writing messages, using traditional or predictive text input. When using traditional text input, press a number key, **1** to **9**, repeatedly until the desired character appears. In predictive text input you can enter a letter with a single keypress.

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

Settings

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

When writing text, select **Options** > *Prediction sett.*.

- To set predictive text input on, select *Prediction* > *On*.

  To revert to traditional text input, select *Prediction* > *Off*.
- To select the prediction type, select *Prediction* > *Prediction type* > *Normal* or *Word suggestions*. If you select *Normal*, the phone tries to predict the word on the basis of the characters you have entered. If you select *Word suggestions*, the phone tries to predict and complete the word even before you have entered all the characters.

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Tip: To quickly set predictive text input on or off when writing text, press **#** twice, or select and hold Options.

Predictive text input

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

1. Start writing a word using the keys **2** to **9**. Press each key only once for one letter. The phone displays * or the letter if it separately has a meaning as a word. The entered letters are displayed underlined.

   If you select *Word suggestions* as prediction type, the phone starts to predict the word you are writing. After you enter a few letters, and if these entered letters are not a word, the phone tries to predict longer words. Only the entered letters are displayed underlined.

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

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

   If the **?** character is displayed after the word, the word you intended to write is not in the dictionary. To add the word to the dictionary, select Spell. The phone displays the entered letters. Complete the word using traditional text input, and select Save. To add a symbol, select Symbol.

For more instructions for writing text, see "Tips for writing text," page 28.

Traditional text input

Press a number key, **1** to **9**, repeatedly until the desired character appears. Not all characters available under a number key are printed on the key. The characters available depend on the selected writing language. See "Settings," page 26.

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

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

For more instructions for writing text, see "Tips for writing text," page 28.

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Tips for writing text

The following functions may also be available for writing text:

- To insert a space, press **0**.
- To move the cursor to the left, right, down, or up, scroll in the corresponding direction.
- To insert a number while in letter mode, press and hold the desired number key.
- To delete a character to the left of the cursor, select **Clear**. To delete the characters more quickly, select and hold **Clear**.
- To delete all the characters at once when writing a message, select **Options** > *Clear text*.
- To insert a word when using predictive text input, select **Options** > *Insert word*. Write the word using traditional text input, and select **Save**. The word is also added to the dictionary.
- To insert a special character when using traditional text input, press *****. When using predictive text input, press and hold *****, or select **Options** > *Insert symbol*. Scroll to a character, and select **Use**.
- To insert a smiley when using traditional text input, press ***** twice. When using predictive text input, press and hold *****, and press ***** again: or select **Options** > *Insert smiley*. Scroll to a smiley, and select **Use**.

The following options are available when writing text messages:

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

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4. Navigate the menus

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

Access a menu function

Scroll

1. To access the menu, select Menu. To change the menu view, select Options > *Main menu view* > *List*, *Grid*, or *Circular*.
2. Use the **navigation keys** to scroll through the menu.
3. If the selected menu contains further submenus, select the one that you want, for example, *Call settings*.
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.

Shortcuts

The menus, submenus, and setting options are numbered. You can access some of them by using their shortcut number.

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

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5. Menu functions

Messages

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

Note: When sending messages, your device may display the words *Message sent*. This is an indication that the message has been sent by your device to the message centre number programmed into your device. This is not an indication that the message has been received at the intended destination. For more details about messaging services, check with your service provider.

Important: Exercise caution opening messages. Messages may contain malicious software or otherwise be harmful to your device or PC. Only devices that have compatible features can receive and display messages. The appearance of a message may vary depending on the receiving device

Text messages (SMS)

With SMS (short message service) you can send and receive multipart messages made of several ordinary text messages (network service) that can contain pictures.

Before you can send any text, picture, or e-mail message, you must save your message centre number. See "Message settings," page 44.

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 multiple numbers, text items, or an image," page 47.

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.

At the top of the display, is the message length indicator counting backwards from 160. For example, for example, 10/2 means that you can still add 10 characters for the text to be sent as two messages.

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Write and send SMS messages

1. Select **Menu** > *Messages* > *Create message* > *Text message*.
2. Write the message. See "Write text," page 26.

   You can insert text templates or a picture into the message. See "Templates," page 32. Each picture message comprises several text messages. Sending one picture or multipart message may cost more than sending one text message.
3. To send the message, select **Send**, or press **Call**.
4. Enter the recipient's phone number. To retrieve a phone number from *Contacts*, select **Search** > **OK**.

Options

After you have written a message, select **Options** > *Sending options* and one of the following options:

- *Send to many* to send a message to several recipients. The message is sent separately to each recipient, which may cost more than sending one message.
- *Send as e-mail* to send a message as SMS e-mail. Enter the recipient's e-mail address, or search for it in *Contacts*, and select **OK**.
- *Sending profile* to send a message using a predefined message profile, and select a message profile.

  To define a message profile, see "Text and SMS e-mail message settings," page 44.

Read and reply to a message or e-mail

✉ is shown when you have received a message or an e-mail using SMS. The blinking ✉ indicates that the message memory is full. Before you can receive new messages, delete some of your old messages in the *Inbox* folder.

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

   To read the message later, select **Menu** > *Messages* > *Inbox*. If more than one message is received, select the message you want to read. ✉ indicates an unread message.
2. While reading a message, select **Options**. You can select to delete, forward, edit the message as a text message or as an SMS e-mail, move it to another folder, or extract message details. You can also copy text from the beginning of a message to your phone calendar as a reminder note. When reading a picture message, you can save the picture in the *Templates* folder.

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

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

4. To send the message to the displayed number, select **Send** > **OK**.

Templates

Your phone offers you text templates ▭, and picture templates ▭.

1. To access the template list, select **Menu** > *Messages* > *Saved items* > *Text messages* > *Templates*.
2. To create a message using a text (▭) or picture (▭) template, select it and **Options** > *Edit* or *Edit text*.
3. Complete the message.

To insert a text template to the message or to the SMS e-mail that you are writing or replying to, select **Options** > *Use template* and the template you want.

To insert a picture into the text message that you are writing or replying to, select **Options** > *Insert picture*, scroll to a picture, and select **View** > **Insert**. The ▭ indicator in the header of the message indicates that a picture is attached. The number of characters that you can enter in a message depends on the size of the picture.

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

Multimedia messages

The appearance of a multimedia message (MMS)may vary depending on the receiving device. To check availability and to subscribe to the multimedia messaging network service, contact your network operator or service provider. See "Multimedia message settings," page 45.

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

Multimedia messaging supports the following formats:

- Picture—JPEG, GIF, WBMP, BMP, and PNG
- Sound—scalable polyphonic MIDI (SP-MIDI), AMR audio, and monophonic ringing tones

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- Video clips—3GP format with QCIP and SubQCIF image size and AMR, WB AMR, or ACC LC audio

The phone may not support all variations of the file formats.

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

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

Write and send

1. Select **Menu** > *Messages* > *Create message* > *Multimedia msg.*
2. Write the message. See "Write text," page 26.

   To insert a file in the message, select **Options** > *Insert*, and an available option.

   If you select *Image*, *Sound clip*, or *Video clip*, the list of available folders in the *Gallery* is shown. Open a folder, scroll to the desired file, and select **Options** > *Insert*. The file is attached when the file name appears in the message.

   If you select *New sound clip*, *Recorder* opens, and you can start a new recording. When you end the recording, it is added to the message.

   To insert a business card or a calendar note in the message, select **Options** > *Insert* > *Business card* or *Calendar note*.

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

   To open a desired slide if the message contains several slides, select **Options** > *Previous slide* > *Next slide* or *Slide list*.

   To set the interval between the slides, select **Options** > *Slide timing*. To move the text component to the top or bottom of the message, select *Place text first* or *Place text last*.
3. To view the message before sending it, select **Options** > *Preview*.
4. To send the message, select **Send**, or press **Call**, and select *Phone number*.

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To send the message to an e-mail address or to many recipients, select *E-mail address* or *Many*.

5. Enter the recipient's phone number or e-mail address, or search for it in *Contacts*. Select **OK**, and the message is moved to the *Outbox* folder for sending.

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

   If *Save sent messages* > *Yes* is selected, the sent message is saved in the *Sent items* folder. See "Multimedia message settings," page 45. When the message is sent, it is not an indication that the message has been received at the intended destination.

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

Read and reply

Important: Exercise caution opening messages. Messages may contain malicious software or otherwise be harmful to your device or PC. Only devices that have compatible features can receive and display messages. The appearance of a message may vary depending on the receiving device.

The default setting of the multimedia message service is generally on.

When the phone is receiving a multimedia message, the animated is displayed. When the message is received, and the text *Multimedia message received* are shown.

The blinking indicates that the memory for multimedia messages is full. See "Multimedia messages memory full," page 35.

1. To read a received multimedia message, select **Show**; to view it later, select **Exit**.

   To read the message later, select **Menu** > *Messages* > *Inbox*. In the list of messages, indicates an unread message. Scroll to the message that you want to view, and select it.

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2. The function of the middle selection key changes according to the currently displayed attachment in the message.

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

   Otherwise, select **Play** to listen to a sound clip or view a video clip attached to the message. To zoom in on an image, select **Zoom**. To view a business card or a calendar note, select **View**. To open a theme object, select **Open**. To open a streaming link, select **Load**.

3. To reply to the message, select **Options** > *Reply* > *Text message*, or *Multimedia msg.* Write the reply message, and select **Send**. You can send the reply message only to the person who sent you the original message.

4. Select **Options**, and the appropriate choice to open or save the attached file, to view its details, to delete it, or to forward the message.

   After you have sent the reply message, you can edit it and send it to others, or send it as an e-mail.

Multimedia messages memory full

When you have a new multimedia message waiting and the memory for the messages is full, blinks and *Multimedia memory full. View waiting msg.* is shown. To view the waiting message, select **Show**. To save the message, select **Save** . Delete old messages by first selecting the folder and then the old message to be deleted.

To discard the waiting message, select **Exit** > **Yes**. If you select **No**, you can view the message.

Folders

The phone saves received text and multimedia messages in the *Inbox* folder. Multimedia messages that have not yet been sent are moved to the *Outbox* folder. If the settings *Message settings* > *Save sent messages* > *Yes* for text messages, or *Message settings* > *Save sent messages* > *Yes* for multimedia messages is selected, the sent messages are saved in the *Sent items* folder.

To save the text message that you are writing and wish to send later in the *Saved items* folder, select **Options** > *Save message* > *Saved text msgs.*. For multimedia messages, select the option *Save message*. indicates unsent messages.

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To organize your text messages, you can move some of them to *My folders*, or add new folders for your messages. Select *Messages* > *Saved items* > *Text messages* > *My folders*.

To add a folder, select **Options** > *Add folder*. If you have not saved any folders, select **Add**.

To delete or rename a folder, scroll to the desired folder, and select **Options** > *Delete folder* or *Rename folder*.

Instant messaging

Instant messaging (IM) (network service) is a way to send short, simple text messages to online users, delivered over TCP/IP protocols. Your contact list shows you when your contacts are online and available to participate in an IM conversation. When you have written and sent your message, it remains displayed. The reply message appears below your original message.

Before you can use IM, 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, from whom you also receive your unique ID, password, and settings.

To set the required settings for the instant messages service, see *Connect. settings* in "Access the IM menu," page 37. The icons and texts on the display may vary, depending on the IM service.

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

Basic steps for IM

- To access the instant messages menu (offline), see "Access the IM menu," page 37.
- To connect to the IM service (online), see "Connect to and disconnect," page 38.
- To start an IM conversation with a contact, see *IM contacts* in "Start an IM conversation," page 38.

  To create your own instant messages contact lists, see "Contacts for IM," page 40.

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- To join a public IM conversation, see *Groups* in "Start an IM conversation," page 38.
- To join a group IM conversation by accepting an invitation message, see "Accept or reject an IM invitation," page 39.
- To create your own IM groups, or to join or delete a public group, see "Groups," page 41.
- To edit your own information, see "Edit your availability status," page 40.
- To search users and groups, see *Search* in "Start an IM conversation," page 38.
- To read a message for a new IM conversation, see "Read a received IM," page 39.
- To write and send messages during an active IM conversation, see "Participate in an IM conversation," page 39.
- To view, rename, or delete saved conversations, select *Saved convers.* when you have accessed the *Instant messages* menu.
- To block or unblock contacts, see "Block and unblock messages," page 40.
- To disconnect from the IM service, see "Connect to and disconnect," page 38.

Access the IM menu

To access the *Instant messages* menu while still offline, select Menu > *Messages* > *Instant messages*. If more that one set of connection setting for IM service is available, select the desired one. If there is only one set defined, it is selected automatically.

To connect to the IM service, select *Login*. You can set the phone to automatically connect to the IM service when you enter the *Instant messages* menu. See "Connect to and disconnect," page 38.

To view, erase, or rename the conversations that you have saved during an IM conversation, select *Saved convers.*.

To view the settings needed for IM and presence, select *Connect. settings*. You may receive the settings as a configuration message. See "Configuration settings," page 13. To enter the settings manually, see "Configuration settings," page 63.

To select the configuration settings that support IM, select *Configuration* > *Default*, *Personal config.*, or a service provider.

To select an IM account provided by the service provider, select *Account*.

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To enter your user ID received from the service provider, select *User ID*.

To enter the password received from the service provider, select *Password*.

Connect to and disconnect

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

Tip: To set the phone to automatically connect to the IM service when you switch the phone on, select **Menu** > *Messages* > *Instant messages*, connect to the IM service, and select *My settings* > *Automatic login* > *On power-up*.

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

Start an IM conversation

Open the *Instant messages* menu, and connect to the IM service. You can start a conversation in different ways:

Select *Conversations*. The list of new and read messaging sessions or invitations to IM during the active conversation is displayed. Scroll to a message or an invitation, and select **Open**.

indicates new instant messages

indicates read instant messages

indicates new group messages

indicates read group messages

indicates invitations

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

Select *IM contacts*. The contacts that you added to the list are displayed. Scroll to the contact with whom you would like to start IM, and select **Chat**, or if a new contact is shown on the list, select **Open**.

indicates an online contact

indicates an offline contact in the contact memory of the phone.

indicates a blocked contact. See "Block and unblock messages," page 40.

indicates that you have received a new message from a contact.

You can add contacts to the list. See "Contacts for IM," page 40.

Select *Groups* > *Public groups* (dimmed if groups are not supported by the network). The list of bookmarks to public groups provided by the network

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operator or service provider is displayed. To start a conversation, scroll to a group, and select **Join**. Enter the screen name that you want to use as a nickname in the conversation. When you have successfully joined in the group conversation, you can start a group conversation. You can also create a private group. See "Groups," page 41.

Select *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.

To start the conversation when you have found the user or the group that you want, select **Options** > *Chat* or *Join group*.

Start a conversation from Contacts. See "View the subscribed names," page 51.

Accept or reject an IM invitation

In the standby mode, when you are connected to the IM service and you receive a new invitation, *New invitation received* is displayed. To read it, select **Read**. If more than one invitation is received, scroll to an invitation, and select **Open**.

To join the private group conversation, select **Accept**. Enter the screen name that you want to use as a nickname in the conversation.

To reject or delete the invitation, select **Options** > *Reject* or *Delete*. You can write an explanation for the rejection.

Read a received IM

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

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

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

Participate in an IM conversation

To join or start a conversation, select **Write** or start writing.

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Tip: 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.

To send your message, select **Send**, or press **Call**. The message stays on the display, and the reply message appears below your message. If you select **Options**, some of the following options are available: *View conversation*, *Save contact*, *Group members*, *Block contact*, *End conversation*.

Edit your availability status

1. Open the *Instant messages* menu, and connect to the IM service.
2. To view and edit your own availability information or screen name, select *My settings*.
3. To allow all the other IM users to see you as being online, select *Availability* > *Available for all*.

   To allow only the contacts on your IM contact list to see you as being online, select *Availability* > *Avail. for contacts*.

   To appear as being offline, select *Availability* > *Appear offline*.

When you are connected to the IM service, indicates that you are online and that you are not visible to others.

Contacts for IM

You can add contacts to the IM contacts list.

1. Connect to the IM service, and select *IM contacts*.
2. To add a contact to the list, select **Options** > *Add contact*; or if you have no contacts added, select **Add**. Select *Enter ID manually*, *Search from serv.*, *Copy from server*, or *By mobile number*. When the contact is successfully added, the phone confirms it.
3. Scroll to a contact, and to start a conversation, select **Chat**, or select **Options** > *Contact info*, *Block contact* (or *Unblock contact*), *Add contact*, *Remove contact*, *Change list*, *Copy to server*, or *Availability alerts*.

Block and unblock messages

To block messages, connect to the IM service, and select *Conversations* > *IM contacts*, or join or start a conversation. Scroll to the contact from whom you want to block incoming messages, select **Options** > *Block contact* > **OK**.

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

You can also unblock messages from the contact list.

Groups

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

Public groups

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

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

Create a private group

Connect to the IM service, and select *Groups* > *Create group*. Enter the name for the group and the screen name that you want to use. Mark the private group members in the contacts list, and write an invitation.

E-mail

The e-mail application uses EGPRS (network service) to allow you to access your e-mail account from your phone when you are not in the office or at home. This e-mail application is different from the SMS e-mail function. See "Options," page 31. To use the e-mail function on your phone, you need a compatible e-mail system.

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

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

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

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- Check your e-mail settings with your network operator or e-mail service provider. You may receive the e-mail configuration settings as a configuration message. See "Configuration settings," page 13. You can also enter the settings manually. See "Configuration settings," page 63.

  To activate the e-mail settings, select **Menu** > *Messages* > *Message settings* > *E-mail messages*. See "E-mail settings," page 46.

This application does not support keypad tones.

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, and then write and send your e-mail.

1. Select **Menu** > *Messages* > *E-mail* > *Create e-mail*.
2. Enter the recipient's e-mail address, and select **OK**.

   You can also select **Edit**, and enter the e-mail address. To search for the e-mail address in *Contacts*, select **Edit** > **Options** > *Search*.
3. Enter a subject for the e-mail, and select **OK**.

   If you select **Options**, you can select the message editor, add a new recipient, add a copy recipient, or a hidden copy recipient.
4. Write the e-mail message. See "Write text," page 26. The number of characters that you can enter is shown on the top right of the display.
5. To send the e-mail message immediately, select **Send** > *Send now*.

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

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

   To send the e-mail later, select **Menu** > *Messages* > *E-mail* > **Options** > *Send now* or *Retrieve and send*.

Download e-mail

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

   To download new e-mail messages and to send e-mails that have been saved in the *Outbox* folder, select **Menu** > *Messages* > *E-mail* > **Options** > *Retrieve and send*.

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Your phone makes a connection to the e-mail service. A status bar is shown while your phone is downloading e-mail messages to your phone.

2. Select the new message in *Inbox*. To view it later, select **Back**. ✉ indicates an unread message.

Read and reply

1. Select **Menu** > *Messages* > *E-mail* > *Inbox*.
2. While reading the message, select **Options** to view the available options.
3. To reply to an e-mail, select **Reply** > *Original text* or *Empty screen*. Confirm or edit the e-mail address and subject, then write your reply.
4. To send the message, select **Send** > *Send now*.

Inbox and other folders

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

Delete e-mail

To delete e-mail messages, select **Menu** > *Messages* > *E-mail* > **Options** > *Delete messages*.

Deleting an e-mail from your phone does not delete it from the e-mail server.

Voice messages

The voice mailbox is a network service and may require a subscription. For more information and your voice mailbox number, contact your service provider.

To call your voice mailbox, select **Menu** > *Messages* > *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**.

Tip: To call your voice mailbox if the number is set, press and hold **1**.

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Info messages

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

Service commands

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

Delete messages

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

Message settings

Text and SMS e-mail message settings

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

1. Select **Menu** > *Messages* > *Message settings* > *Text messages*, and from the following options:
2. Select *Sending profile*, and if more than one message profile set is supported by your SIM card, select the profile you want to change from the following settings:

   Message centre number to save the phone number of the message center that is required for sending text messages. You receive this number from your service provider.

   Messages sent via to select the message type: *Text*, *E-mail*, *Paging*, or *Fax*.

   Message validity to select the length of time for which the network should attempt to deliver your message.

   Default recipient number to save a default number for sending messages for this profile if you have selected the message type *Text*. Select *E-mail server* to save the e-mail server number if you have selected the message type *E-mail*.

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Delivery reports to ask the network to send delivery reports about your messages (network service).

Use GPRS > *Yes* to set GPRS as the preferred SMS bearer. Also, select *GPRS connection* > *Always online*. See "EGPRS connection," page 60.

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

Rename sending profile to change the name of the selected message profile. The message profile sets are only displayed if your SIM card supports more than one set. You cannot rename the default profile.

3. Select *Save sent messages* > *Yes* to set the phone to save the sent text messages in the *Sent items* folder,.
4. Select *Automatic resending* > *On* to set the phone to automatically resend the message if the initial send attempt does not succeed.

Multimedia message settings

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," page 13. You can also enter the settings manually. See "Configuration settings," page 63.

To select the multimedia message settings, select Menu > *Messages* > *Message settings* > *Multimedia msgs.*. Select from the following settings:

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

Delivery reports to ask the network to send delivery reports about your messages (network service).

Scale image down to define the image size when you insert an image to a multimedia message.

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

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

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Incoming multimedia messages. To allow the reception of multimedia messages automatically or only after being prompted, or to reject the reception, select *Retrieve*, *Retrieve manually*, or *Reject*.

Configuration > *Configuration*. Only the configurations that support multimedia messaging are shown. Select a service provider, *Default*, or *Personal config.* for multimedia messaging.

Select *Account* and a multimedia messaging service account contained in the active configuration settings.

Allow adverts to receive or reject advertisements. This setting is not shown if *Allow multimedia reception* is set to *No*.

E-mail settings

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

You may receive the configuration settings for the e-mail application as a configuration message. See "Configuration settings," page 13. You can also enter the settings manually. See "Configuration settings," page 63.

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

Configuration. Select the set that you would like to activate.

Account. Select an account provided by the service provider.

My name. Enter your name or nickname.

E-mail address. Enter e-mail address.

Include signature. You can define a signature that is automatically added to the end of your e-mail when you write your message.

Reply-to address. Enter the e-mail address to which you want the replies to be sent.

SMTP user name. Enter the name that you want to use for outgoing mail.

SMTP password. Enter the password that you want to use for outgoing mail.

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

Incoming server type. Select either *POP3* or *IMAP4* depending on the type of e-mail system that you are using. If both types are supported, select *IMAP4*.

Incoming mail settings

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

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

Other settings

To select other settings for messages, select **Menu** > *Messages* > *Message settings* > *Other settings*. To change the font size for reading and writing messages, select *Font size*. To set the phone to replace character-based smileys into graphical ones, select *Graphical smileys* > *Yes*.

Contacts

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

The phone memory may save contacts with 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

1. Select **Menu** > *Contacts* > *Names* > **Options** > *Search*.
2. Scroll up or down through the list of contacts, or enter the first characters of the name you are searching for in the pop-up window.

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*. Enter the name and the phone number.

Save multiple numbers, text items, or an image

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

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

1. Make sure that the memory in use is either *Phone* or *Phone and SIM*.
2. Scroll to the name to which you want to add a new number or text item, and select **Options** > *Contact details* > **Options** > *Add detail*.
3. To add a number, select *Number* and a number type.

   To add another detail, select a text type, or an image from *Gallery*.

   To search for an ID from the server of your service provider if you have connected to the presence service, select *User ID* > *Search*. See "My presence," page 49. If only one ID is found, it is automatically saved. Otherwise, to save the ID, select **Options** > *Save*. To enter the ID, select *Enter ID manually*. Enter the ID, and select **OK** to save it.

   To change the number type, scroll to the desired number, and select **Options** > *Change type*. To set the selected number as the default number, select *Set as default*.
4. Enter the number or text item, and to save it, select **OK**.
5. To return to the standby mode, select **Back** > **Exit**.

Copy contacts

Search for the contact you want to copy, and select **Options** > *Copy*. You can copy names and phone numbers from the phone contact memory to the SIM card memory, or vice versa. The SIM card menory can save names with one phone number attached to them.

Edit the contact details

1. Search for the contact you want to edit, select **Options** > *Contact details*, and scroll to the desired name, number, text item, or image.
2. To edit a name, number, or text item, or to change the image, select **Options** > *Edit name*, *Edit number*, *Edit detail*, or *Change image*.

   You cannot edit an ID when it is on *IM contacts* or the *Subscribed names* list.

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Delete contacts or details

To delete all the contacts and the details attached to them from the phone or SIM card memory, select **Menu** > *Contacts* > *Delete all contacts* > *From phone mem.* or *From SIM card*. Confirm with the security code.

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

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

My presence

With the presence service (network service) you can share your presence status with other users with compatible devices and access to the service, such as your family, friends, and colleagues. Presence status includes your availability, status message, and personal logo. Other users who have access to the service and who request your information are able to see your status. The requested information is shown in *Subscribed names* in the viewers' *Contacts* menu. You can personalize the information that you want to share with others and control who can see your status.

Before you can use presence, 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, from whom you also receive your unique ID, password, and the settings for the service. See "Configuration settings," page 63.

While you are connected to the presence service, you can use the other functions of the phone, and the presence service is active in the background. If you disconnect from the service, your presence status is shown to viewers for a period of time, depending on the service provider.

Select **Menu** > *Contacts* > *My presence* and from the following options:

- *Connect to 'My presence' service* or *Disconnect from service* to connect to or disconnect from the service.
- *My current presence* to change your presence status. Select from the following options:

  View current presence > *Private pres.* or *Public pres.* to view your current private or public status.

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My availability to set your availability status to *Available* ( ), or *Busy* ( ), or *Not available* ( ).

My presence message and write the text to be shown to other persons, or select **Options** > *Previous msgs.* and an old message as the status message.

My presence logo to select your personal logo from the *Graphics* folder in *Gallery*. If you select *Default*, the logo is not published.

Show to to select whether to show your presence status to others.

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

If you select *Private viewers*, the contacts in your private list can see all your presence information (availability, status message, and logo). Other users will not see any information. If you select *No one*, no one can see your presence information.

- *Viewers* . Select from the following options:

  Current viewers to view all the persons who have subscribed to your presence information

  Private list is a list of the persons who are allowed to view all your presence information, including availability, status message and logo. You can manage your own private list. Other persons who are not in the private list, can see only your availability.

  Blocked list to view all the persons you have blocked from viewing your presence information.

- *Settings* . Select from the following options:

  Show current presence in idle to show the current status indicator in the standby mode.

  Synchronise with profiles to select whether you want to update your *My presence message* and *My availability* manually or automatically by linking them to the currently active profile. See also "Profiles," page 56. You cannot link a personalized status logo to a Profile.

  Connection type to select if the phone connects automatically to the service when the phone is switched on.

  Presence settings and select from following:

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- *Configuration*. Only the configurations that support presence service are shown. Select a service provider, *Default*, or *Personal config.* for presence service. You may receive the presence service settings as a configuration message. See "Configuration settings," page 13. You can also enter the configuration settings manually. See "Configuration settings," page 63.
- *Account* and select a presence service account contained in the active configuration settings.
- *User ID* to enter your user ID received from the service provider.
- *Password* to enter the password received from the service provider.

Subscribed names

You can create a list of contacts whose presence status information you want to know. You can view the information if it is allowed by the contacts and the network. To view these subscribed names scroll through the contacts or use the *Subscribed names* menu.

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

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

Add contacts to the subscribed names

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

Tip: To subscribe to a contact from the *Contacts* list, search for the contact you want, and select **Options** > *Contact details* > **Options** > *Request presence* > *As subscription*.

If you only want to view the presence information but not to subscribe to a contact, select *Request presence* > *One time only*.

View the subscribed names

To view the presence information, see "Search for a contact," page 47.

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1. Select **Menu** > *Contacts* > *Subscribed names*.

   The status information of the first contact on the subscribed names list is displayed. The information that the person wants to make available to others, may include text and an icon.

   , , or indicate that the person is available, not visible to others, or not available.

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

2. Select **Details** to view the details of the selected contact; or select **Options** and from the following options:

   Subscribe new to add a new contact to the list of subscribed names.

   Chat to start an IM conversation.

   Send message to send a text message, multimedia message, or an e-mail to the selected contact.

   Send bus. card to send a business card of the selected contact.

   Unsubscribe to remove the selected contact from the list of subscribed names.

Unsubscribe a contact

To unsubscribe a contact from the *Contacts* list, select the contact, and **Details** > the user ID > **Options** > *Unsubscribe* > **OK**.

To unsubscribe from the *Subscribed names* menu, see "View the subscribed names," page 51.

Send and receive a business card

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

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

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Speed dialing

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**, the name, and the number you want to assign. If the *Speed dialling* function is off, the phone asks whether you want to activate it. See also *Speed dialling* in "Call settings," page 61.

To make a call using the speed-dialing keys, see "Speed dialing," page 24.

Voice dialing

You can make a phone call by saying a voice tag that has been added to a phone number. Any spoken words, such as a name, can be a voice tag. The number of voice tags you can create is limited.

When using voice tags, note the following:

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

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

Add and manage voice tags

Save or copy to the phone memory the contacts for which you want to add a voice tag. You can also add voice tags to the names in the SIM card, but if you replace your SIM card with a new one, you first must delete the old voice tags before you can add new ones.

1. Search for the contact to which you want to add a voice tag.
2. Select **Details**, scroll to the desired phone number, and select **Options** > *Add voice tag*.
3. Select **Start**, and say clearly the words you want to record as a voice tag. After recording, the phone plays the recorded tag.

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appears after the phone number with a voice tag in *Contacts*.

To check the voice tags, select **Menu** > *Contacts* > *Voice tags*. Scroll to the contact with the voice tag that you want, and select an option to listen to, delete, or change the recorded voice tag.

Make a call with a voice tag

If the phone has an application running that is sending or receiving data using a GPRS connection, you must end the application before voice dialing.

1. In the standby mode, press and hold the volume down key. A short tone is heard, and *Speak now* is displayed.
2. Say the voice tag clearly. The phone plays the recognized voice tag, and dials the phone number of the voice tag after 1.5 seconds.

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

Other functions in Contacts

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

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

  To select how the names and numbers in *Contacts* are displayed, select *Contacts view*.

  To view the free and used memory capacity, select *Memory status*.
- *Groups* to arrange the names and phone numbers saved in the memory into caller groups with different ringing tones and group images
- *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 (This is only shown, if the numbers are included on your SIM card.)

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Call register

The phone registers the phone numbers of missed, received, and dialed calls, and the approximate length of your calls.

The phone registers calls only if the network supports it and the phone is switched on and within the network service area.

Recent calls lists

When you select **Options** in the *Missed calls*, *Received calls*, or *Dialled numbers* menu, you can view the time of the call; edit, view, or call the registered phone number; add it to the memory; or delete it from the list. You can also send a text message. To delete the recent calls lists, select *Delete recent call lists*.

Counters and timers

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

Select Menu > *Call register* > *Call duration*, *GPRS data counter*, *GPRS conn. timer* or *Message counter* for approximate information on your recent communications.

Note: Some timers may be reset during service or software upgrades.

Positioning information

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

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

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

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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*, a profile, and from the following:

Activate to activate the selected profile.

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.

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

To change your presence status information, select *My presence* > *My availability*, or *My presence message*. The *My presence* menu is available if you set *Synchronise with profiles* to *On*. See "My presence," page 49.

Themes

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

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

- *Select theme* to set a theme in your phone. A list of folders in *Gallery* opens. Open the *Themes* folder, and select a theme.
- *Theme downloads* to open a list of links to download more themes. See "Download files," page 92.

Tone settings

You can change the settings of the selected active profile.

Select Menu > *Settings* > *Tones*. Select and change *Incoming call alert*, *Ringing tone*, *Ringing volume*, *Vibrating alert*, *Message alert tone*, *Instant message alert tone*, *Keypad tones*, and *Warning tones*. You can find the same settings in the *Profiles* menu; see "Profiles," page 56.

To set the phone to ring only upon 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.

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Display settings

Select **Menu** > *Settings* > *Display settings*.

To set your phone to display a background image (wallpaper) when the phone is in the standby mode, select *Wallpaper* > *Select wallpaper* and an image from *Gallery*.

To choose an animation or a still image as a screen saver from *Gallery*, select *Screen saver* > *Select s. saver*. In *Time-out*, select the time after which the screen saver is activated. To activate the screen saver, select *On*.

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

To change the color in some display components, such as indicators and signal and battery bars, select *Colour schemes*.

Idle state font colour to select the color for the texts on the display in the standby mode.

To set your phone to display or hide the operator logo, select *Operator logo*.

Time and date settings

Select **Menu** > *Settings* > *Time and date* and from the following options:

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

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

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

My shortcuts

With personal shortcuts you get quick access to often used functions of the phone.

To select a function for the right selection key, select **Menu** > *Settings* > *My shortcuts* > *Right selection key* and select a function from the list. See "Standby mode," page 21. This menu may not shown at the request of your service provider.

To select shortcut functions for the navigation key, select **Menu** > *Settings* > *My shortcuts* > *Navigation key* and the desired navigation key. Select **Change** and a function from the list. To remove a shortcut function from the key, select *(empty)*.

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To reassign a function for the key, select Assign. This menu may not be shown at the request of your service provider.

To activate phone functions by saying a voice tag, select Menu > *Settings* > My shortcuts > *Voice commands* and a folder, scroll to a function to which you want to add a voice tag, and select Add. indicates a voice tag.

To add a voice command, see "Add and manage voice tags," page 53. To activate a voice command, see "Make a call with a voice tag," page 54.

Connectivity

You can connect the phone to a compatible device using an IR, Bluetooth wireless technology connection, or data cable (DKU-2) connection. You can also define the settings for EGPRS dial-up connections.

Bluetooth wireless technology

This device is compliant with Bluetooth Specification 1.1 supporting the following profiles: hands-free, headset, object push profile, file transfer profile, dial-up networking profile, SIM access profile, and serial port profile,.To ensure interoperability between other devices supporting Bluetooth technology, use Nokia approved enhancements for this model. Check with the manufacturers of other devices to determine their compatibility with this device.

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

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

Bluetooth technology allows you to connect the phone to a compatible Bluetooth device within about 33 feet (10 meters). Since devices that use Bluetooth technology communicate use 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

1. Select Menu > *Settings* > *Connectivity* > *Bluetooth*.
2. To activate or deactivate the Bluetooth function, select *Bluetooth* > *On* or *Off*. indicates an active Bluetooth connection.

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3. To search for compatible Bluetooth audio devices, select *Search for audio enhancements*. Select the device that you want to connect to the phone or select *Paired devices* to search for any Bluetooth device in range. Select New to list any Bluetooth device in range. Scroll to a device, and select Pair.
4. Enter the Bluetooth passcode of the device to pair the device to your phone. You need 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 device*. To view a list of Bluetooth devices that are currently paired with the phone, select *Paired devices*.

Select Options to access some of the following functions depending on the status of the device and the Bluetooth connection. Select *Connect* > *Assign short name* or *Auto-conn. without confirmation*.

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*.

Infrared

You can set up the phone to receive data through its infrared (IR) port. To use an IR connection, the device with which you want to establish a connection must be IrDA compliant. You can send or receive data to or from a compatible phone or data device (for example, a computer) through the IR port of your phone.

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

Send and receive data

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

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

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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.

EGPRS

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. GPRS is a data bearer that enables wireless access to data networks such as the Internet.

Enhanced GPRS (EGPRS) is similar to GPRS but enables faster connections. For more information on availability of EGPRS and data transfer speed, contact your network operator or service provider.

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

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

EGPRS connection

Select **Menu** > *Settings* > *Connectivity* > *GPRS* > *GPRS connection* and from the following options:

Always online to set the phone to automatically register to an EGPRS network when you switch the phone on. G indicates that EGPRS service is available.

If you receive a call or a text message or make a call during a EGPRS connection, indicates that the EGPRS connection is suspended (on hold).

When needed to set the EGPRS registration and connection to established when an application using EGPRS needs it and closed when you end the application.

EGPRS modem settings

You can connect the phone using Bluetooth wireless technology, IR, or data cable (DKU-2) connection to a compatible PC and use the phone as a modem to enable EGPRS connectivity from the PC.

To define the settings for EGPRS connections from your PC, select **Menu** > *Settings* > *Connectivity* > *GPRS* > *GPRS modem settings* > *Active access point*,

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activate the access point you want to use, and select *Edit active access point*. Select *Alias for access point*, and enter a name to change the access point settings. Select *GPRS access point*, and enter the access point name (APN) to establish a connection to an EGPRS network.

You can also set the EGPRS dial-up service settings (access point name) on your PC using the Nokia Modem Options software. See "PC Suite," page 96. If you have set the settings both on your PC and on your phone, the PC settings are used.

Call settings

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

To divert your incoming calls, select *Call divert* (network service). You may not be able to divert your calls if some call barring functions are active. See *Call barring service* "Security settings," page 64.

To answer an incoming call by briefly pressing any key (except the **power** key and the **selection** keys) select *Anykey answer* > *On*.

To make a maximum of 10 attempts to connect the call after an unsuccessful call attempt, select *Automatic redial* > *On*.

To enhance speech intelligibility, especially in noisy environments, select *Audio enhancing* > *Active*.

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

To have the network notify you of an incoming call while you have a call in progress (network service), select *Call waiting* > *Activate*. See "Call waiting," page 25.

To briefly display the approximate duration and cost (network service) of the call after each call, select *Summary after call* > *On*.

To send your caller ID, select *Send my caller ID* (network service) > *Yes* or *Set by network*.

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

Phone settings

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

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To set the display language of your phone, select *Phone language*. If you select *Automatic*, the phone selects the language according to the information on the SIM card.

To view the amount of free and used memory for each function in the list, select *Memory status*.

To lock the keypad automatically, select *Automatic keyguard*. Your keypad locks 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 you can set the time from 5 seconds to 60 minutes.

To set the phone to ask for the security code when you unlock the keyguard, select *Security keyguard*. Select *On*, and enter the security code.

Note: When keyguard is on, calls may still be possible to the emergency number programmed into your phone (for example, 911).

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

To write the note you would like to be shown briefly when the phone is switched on, select *Welcome note*.

To set the phone to automatically, select one of the cellular networks available in your area, select *Operator selection* > *Automatic*. If you select *Manual*, contact your network operator or service provider to chek that the network has a roaming agreement with your home network operator.

Confirm SIM service actions. See "SIM services," page 95.

To select whether the phone shows help texts, select *Help text activation*.

To select whether the phone plays a start-up tone when the phone is switched on, select *Start-up tone*.

Enhancement settings

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

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

To select the profile that you want to be automatically activated when you connect to the selected enhancement select, *Default profile*.

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To set the phone to answer an incoming call automatically after five seconds, select *Automatic answer*. If *Incoming call alert* is set to *Beep once* or *Off*, automatic answer will not be in use.

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

To automatically switch off the phone, select *Ignition detector* > *On*. The phone automatically switches off approximately 20 seconds after you switch off the car ignition, when the phone is connected to the full car kit.

To use the text phone settings instead of headset or loopset settings, select *Text phone* > *Use text phone* > *Yes*.

Configuration settings

You can configure your phone with settings that are required for certain services to function correctly. The services are multimedia messaging, IM, synchronization, e-mail application, streaming, push to talk, and browser. Your service provider may also send you these settings. See "Configuration settings," page 13. For information on availability and the appropriate configuration settings, contact your network operator or service provider.

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

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

To set the configuration settings of the service provider as default settings, select **Options** > *Set as default*. To delete configuration settings, select *Delete*.

To activate the default configuration settings for supported applications, select *Activate default in all applications*.

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

To add new personal accounts for various services, and to activate or delete them, select *Personal configuration settings*.

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.

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To delete or activate a personal account, scroll to it, and select **Options** > *Delete* or *Activate*.

Security settings

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

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

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

To restrict incoming calls to and outgoing calls from your phone, select *Call barring service* (network service). A barring password is required.

To restrict your outgoing calls to selected phone numbers (if this function is supported by your SIM card), select *Fixed dialling*.

To specify a group of people whom you can call and who can call you, select *Closed user group* (network service) .

To set the phone to ask for the security code whenever a new SIM card is inserted into the phone, select *Security level* > *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.

To change the security code, PIN code, PIN2 code, or barring password, select *Access codes*.

Restore factory settings

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

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. If this menu is not shown, the other menu numbers change accordingly.

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The operator can update this menu with a service message. For more information, see "Service inbox," page 92.

Gallery

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

Your phone supports an activation key system to protect acquired content. Always check the delivery terms of any content and activation key before acquiring them, as they may be subject to a fee.

The files stored in *Gallery* use a memory that has a capacity of approximately 27 MB in the phone. A compatible multimedia card can be used to extent the memory capacity to store images, themes, graphics, ringing tones, video clips, and sound clips in *Gallery*. It is not possible to store Java games and applications on the multimedia card.

1. To manage the folders and the files, select **Menu** > *Gallery*. A list of folders is shown. *Images*, *Video clips*, *Music files*, *Themes*, *Graphics*, *Tones*, and *Recordings* are the original folders on the phone. If a multimedia card is inserted in the phone, a multimedia card icon is shown.
2. Scroll to the desired folder. To view a list of files in the folder, select **Open**. Select **Options**, and one of the following options may be available:

   Delete folder, *Move*, *Rename folder*, *Details*, *Type of view*, *Sort*, *Add folder*, *Memory status*, *Activation key list*, and *Downloads*.

   With a multimedia card, additional options may be available: *Set password* (to protect the multimedia card against unauthorized use with other devices), *Change password*, *Delete password*, *Rename mem. card*, and *Format mem. card*.

   Formatting your multimedia card will delete all files and folders stored on it.
3. Select the file you want to view, and select **Open**; or select **Options**, and use one of the following functions that may be available for the selected file:

   Delete, *Move*, *Rename*, *Set as wallpaper*, *Set as ring tone*, *Details*, *Type of view*, *Sort*, *Add folder*, and *Memory status*.

   Send to send the selected file using MMS, Bluetooth wireless technology, or IR.

   Delete all to delete all the files and folders in the selected folder.

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Edit image to insert text, a frame, or clip art into the selected picture, or to crop the image.

Open in sequence to view the files in the folder one by one.

Play to listen to or to view a sound or image file in the message.

Zoom to increase the size of the image in the message.

Mute audio or *Unmute audio* to mute or unmute the sound file.

Set contrast to adjust the contrast level of the image.

Activate content to update the activation key of the selected file. The option is only shown if the activation key updating is supported by the file.

Activation key list to view the list of all available activation keys. You can delete the activation keys, for example, delete the expired ones.

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

Media

Camera

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

Take a photo

1. To open the camera viewfinder, select **Menu** > *Media* > *Camera*.
2. To select the camera mode, scroll right or left; or select **Options** > *Change mode* > *Standard photo*, *Portrait photo*, or *Night mode* if the lighting is dim.
3. To zoom in or out, scroll up or down.
4. To take a photo, select **Capture**. The phone saves the photo in *Gallery* > *Images*.
5. To take another photo, select **Back**; to send the photo as a multimedia message, select **Send**.

   Select **Options**, and select from the list of options.

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Record a video clip

Select **Menu** > *Media* > *Camera* > **Options** > *Video* > **Record**. To pause the recording, select **Pause**; to resume the recording, select **Continue**. To stop the recording, select **Stop**. The phone saves the recording in *Gallery* > *Video clips*.

The Nokia 6230i device supports an image capture resolution of 1280x 1024 pixels. The image resolution in these materials may appear different.

Camera settings

Select **Menu** > *Media* > *Camera* > **Options** > *Settings*. You can define *Default mode*, *Image quality*, *Image size*, *Video clip length*, *Video clip quality*, *Camera sounds*, *Default title*, and *Image storage*.

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*.

Set up the phone for a streaming service

You may receive the configuration settings required for streaming as a configuration message from the network operator or service provider. See "Configuration settings," page 13. You can also enter the settings manually. See "Configuration settings," page 63.

To activate the settings, do the following:

1. Select **Menu** > *Media* > *Media player* > *Streaming sett.* > *Configuration*.

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

2. 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, recordings, or other MP3, MP4, or AAC sound files that you have transferred to the phone with the Nokia Audio Manager application. MP3/AAC files are stored in the MMC card or in the *Gallery* folders. Music files stored in the *Music player* folder and in

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another location, such as a folder of the multimedia card, are automatically detected and added to the default track list.

Play the music tracks transferred to the phone

1. Select **Menu** > *Media* > *Music player*.

   The details of the first track on the default track list are shown.

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

2. To play a track, scroll to the track that you want, and select **Play** or .

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

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

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

3. To stop the playing, select **Stop** or .

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

Music player settings

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

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

Track list to view all the tracks available on the track list. To play a track, scroll to the desired track, and select **Play**.

Select **Options** > *Refresh all tracks* or *Change track list* to refresh the track list (for example, after adding new tracks to the list) or to change the track list that is shown when you open the *Music player* menu, if several track lists are available in the phone.

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

Media equaliser to open the list of media equalizer sets. See "Media equalizer," page 71.

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Loudspeaker or *Headset* to listen to the music player through the loudspeaker or a compatible headset connected to the phone.

Tip: When using a headset, to skip to the next track, press the headset key quickly. To stop the playing, press and hold the headset key.

Send to send the selected file using MMS, Bluetooth wireless technology, or an IR connection.

Music downloads to connect to a browser service related to the current track. This function is only available when the address of the service is included in the track.

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.

To listen to the radio, do the following:

1. Select Menu > *Media* > *Radio*. The channel location number, the name of the radio channel (if you have saved the channel), and the frequency of the radio channel are displayed.

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

2. If you have already saved radio channels, select ▲ or ▼ to scroll to the channel you would like to listen to.

   To select a radio channel location, briefly press the corresponding number keys.

Tune a radio channel

1. When the radio is on, select ◀◀ or ▶▶ to change the radio frequency in 0.05 MHz steps, or select and hold ◀◀ or ▶▶ to start the channel search. Searching stops when a channel is found.

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2. To save the channel to a memory location 1 to 9, press and hold the corresponding number key.

   To save the channel in the memory location from 10 to 20, press briefly **1** or **2** and the desired number key **0** to **9**.

3. Enter the name of the channel, and select **OK**.

Basic radio functions

To turn off the radio, select **Options** > *Switch off*.

To save the radio channel you have found, select **Options** > *Save channel*. See "Tune a radio channel," page 69. You can save up to 20 radio channels.

To set whether the visual radio application is used, select **Options** > *Visual radio*. Some radio channels may send text or graphical information that you can view using the visual radio application.

To select the options for visual radio, select **Options** > *Visual radio sett.*. To set whether the visual radio application starts automatically when you turn on the radio, select *Automatically*.

To select the list of saved channels, select **Options** > *Channels*. To delete or rename a channel, or to enter the ID for a visual radio channel, scroll to the desired channel, and select **Options** > *Delete channel*, *Rename*, or *Visual service ID*.

To listen to the radio in monophonic sound or in stereo, select **Options** > *Mono output* or *Stereo output*.

To enter the frequency of the desired radio channel, select **Options** > *Set frequency*.

To listen to the radio using the loudspeaker or headset, select **Options** > *Loudspeaker* or *Headset*. Keep the headset connected to the phone. The lead of the headset functions as the radio antenna.

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

When an application using an EGPRS or HSCSD connection sends or receives data, it may interfere with the radio.

Voice recorder

You can record pieces of speech, sound, or an active call for 60?? minutes. This is useful when recording a name and phone number for writing them down later.

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

Record sound

1. Select **Menu** > *Media* > *Voice recorder*.

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

2. To start the recording, select . To start the recording during a call, select **Options** > *Record*. While recording a call, all parties to the call hear a faint beeping sound approximately every 5 seconds. When recording a call, hold the phone in the normal position near to your ear.
3. To end the recording, select . The recording is saved in *Gallery* > *Recordings*.
4. To listen to the latest recording, select **Options** > *Play last recorded*.
5. To send the last recording using IR, Bluetooth, or a multimedia message, select **Options** > *Send last recorded*.

List of recordings

Select **Menu** > *Media* > *Recorder* > **Options** > *Recordings list*. The list of folders in the *Gallery* is shown. Open *Recordings* to see the list with recordings. Select **Options** to select options for files in the *Gallery*. See "Gallery," page 65.

Define a storage folder

To use a folder other than *Recordings* as the default folder in *Gallery*, select **Menu** > *Media* > *Recorder* > **Options** > *Select memory*. Select a folder from the list.

Media equalizer

To control the sound quality of the music player, amplify or diminish frequency bands.

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

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

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

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Push to talk

Push to talk over cellular (PTT) is a two-way radio service available over a GSM/GPRS cellular network (network service). PTT provides direct voice communication; to connect, push the **volume up** key.

You can use PTT to have a conversation with one person or with a group of people having compatible devices. When your call is connected, the person or group you are calling does not have to answer the phone. The participants should confirm the reception of any communications where appropriate, as there is no other confirmation whether the recipients have heard the call.

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

Before you can use the PTT service, you must define the required PTT service settings. See "PTT settings," page 77.

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

PTT menu

Select Menu > *Push to talk*.

To connect to or disconnect from the PTT service, select *Switch PTT on* or *Switch PTT off*.

To view the received callback requests, select *Callback inbox*.

To view the list of PTT groups, select *Group list*.

To view the list of contacts to which you have added the PTT address received from the service provider, select *Contacts list*.

To add a new PTT group to the phone, select *Add group*.

To set the PTT settings for use, select *PTT settings*.

To set the required settings for the PTT connection, select *Config. settings*.

To open the browser and to connect to the PTT network portal provided by the service provider, select *Web*.

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Connect and disconnect

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

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

Make and receive a PTT call

Set the phone to use the loudspeaker or earpiece for PTT communication. When the earpiece is selected, to use the phone normally, hold it to your ear.

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

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

Make a group call

To make a call to the default group, press the **volume up** key. A tone sounds, indicating that the access is granted, and the phone displays your nickname and group name.

To make a call to a non-default group, select *Group list* in the PTT menu, scroll to the desired group, and press the **volume up** key.

Press and hold the **volume up** key the entire time you are talking, and hold the phone in front of you so that you can see the display. When you have finished, release the **volume up** key. Talking is allowed on a first-come, first-served basis. When someone stops talking, the first person to press the **volume up** key can talk next.

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 list*. Scroll to a contact, and press the **volume up** key.

You can also select the contact from *Contacts*.

To start a one-to-one call from the list of PTT groups, select *Group list*, and scroll to the desired group. Select **Options** > *Active members*, scroll to the desired contact, and press the **volume up** key.

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

Receive a group or one-to-one call

A short tone notifies you of an incoming group and one-to-one call. When receiving a group call, the group name and the nickname of the caller are displayed. When receiving a one-to-one call from a person whose information you have saved in *Contacts*, the saved name is displayed if identified; otherwise, only the nickname of the caller is displayed.

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

If you press the **volume up** key to try to respond to a group while another member is talking, you hear a queuing tone, and *Queuing* is displayed as long as you press the **volume up** key. Press and hold the **volume up** key, and wait for the other person to finish, then you can talk.

Callback requests

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

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

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 callback*.

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

To send a callback request from the group list in the *Push to talk* menu, select *Group list*, and scroll to the desired group. Select **Options** > *Active members*, scroll to the desired contact, and select **Options** > *Send callback*.

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

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Respond to a callback request

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, press the **volume up** key.

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

To delete the request, select Delete.

Save the callback request sender

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

To view the sender's PTT address, select **Options** > *View PTT address*.

To save a new contact or to add the PTT address to a contact, 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, and select **Options** > *Add detail* > *PTT address*.

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 group list, connect to the PTT service, select *Group list*, and scroll to the desired group. Select **Options** > *Active 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*.

Create and set up groups

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

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

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

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There are three types of PTT groups:

- Provisioned groups are closed groups that allow only selected participants provisioned by the service provider to join.
- Ad hoc groups are groups that the users can create. You can create your own group and invite members to the group.
- Ad hoc pro groups are groups you can create from members in a provisioned group. For example, a business can have a closed group and separate groups created for certain business functions.

Add a group

1. Select **Menu** > *Push to talk* > *Add group* > *Guided*.
2. To set the security level for the group, select *Public group* or *Private group*.

   If you select *Private group*, the phone automatically creates a scrambled part to the group address that the members cannot view when they receive the invitation to the group. Only the person who creates the private group can invite more members to the group.
3. Enter the name for the group, and select **OK**.
4. Select the status for the group: *Default*, *Listened*, or *Inactive*. The phone indicates that the group is saved and its status. *Default* and *Listened* are active groups. When you press the **volume up** key to make a group call, the default group is called if you have not scrolled to any other group or contact.
5. To send an invitation to the group, select **Yes** when the phone requests it. You can send the invitation using a text message or IR.

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

Receive an invitation

When you receive a text message invitation to a group, *Group invitation received:* is displayed.

To view the nickname of the person who sent the invitation and the group address if the group is not a private group, select **View**.

To add the group to your phone, select **Save**. To set the status for the group, select *Default*, *Listened*, or *Inactive*.

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

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PTT settings

There are two kinds of PTT settings: settings for connecting to the service, and settings for use.

You may receive the settings for connecting to the service from your network operator or service provider. See "Configuration settings," page 13. You can enter the settings manually. See "Configuration settings," page 13.

To select the settings for connecting to the service, select **Menu** > *Push to talk* > *Config. 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

You can also select from the following options: *PTT user name*, *Default nickname*, *PTT password*, *Domain*, and *Server address*.

To edit the PTT settings for use, select **Menu** > *Push to talk* > *PTT settings*.

To select the phone to allow the reception of incoming one-to-one calls, select *1 to 1 calls* > *On*. 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*.

To activate the listened groups, select *Listened groups* > *On*.

To set the phone to automatically connect to the PTT service when you switch the phone on, select *PTT status in startup* > *Yes*.

To hide your PTT address from group and one-to-one calls, select *Send my PTT address* > *No*.

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*.

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

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

When an alarm expires

The phone sounds an alert tone, and flashes *Alarm!* and the current time on the display, even if the phone was switched off. To stop the alarm, select **Stop**. If you let the phone continue to sound the alarm for a minute or select **Snooze**, the time you have set in *Snooze time-out*, and then resumes.

If the alarm time is reached while the device is switched off, the device switches itself on and starts sounding the alarm tone. If you 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. 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 **Options** > *Delete all notes*.

Other options for the calendar day view may be options for making a note; for deleting, editing, moving, and repeating a note; for copying a note to another day; or for sending a note using IR, Bluetooth, or as a note directly to another compatible phone calendar, or as a text message or a multimedia message. In *Settings* you can set the date, time, time zone, date or time format, or the first day of the week. In the *Auto-delete notes* option 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 you want, select **Options** > *Make a note* and select one of the following note types:

Meeting, *Call*, *Birthday*, *Memo*, or *Reminder*.

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Note alarm

The phone beeps, and displays the note. With a call note ☎ on the display, to call the displayed number, press **Call**. 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

You can save a note for a task that you must do.

Select Menu > *Organiser* > *To-do list*.

To make a note, select Add note. Write the note, and select Save and the priority for the note: *High*, *Medium*, or *Low*. The phone automatically sets the deadline without an alarm for the note. To change the deadline, view the note, and select the deadline option.

You can also view and delete the selected note and delete all the notes that you have marked as done. You can sort the notes by priority or by deadline, send a note to another phone as a text message or a multimedia message, save a note as a calendar note, or access the calendar.

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

Notes

You can use this function for writing and sending notes.

Select Menu > *Organiser* > *Notes*. Select Add note, write the note, and select *Save*.

Other options for notes include viewing, deleting, and editing a note. While editing a note, you can also exit the text editor without saving the changes.

You can send the note to compatible devices through IR, Bluetooth wireless technology, text message, or a multimedia message. If the note is too long to be sent as a text message, the phone asks you to delete the appropriate number of characters from your note.

Wallet

In *Wallet*, you can save personal information, such as credit card numbers, addresses, and access codes to services that require a user name and password.

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You can easily retrieve the information in the wallet to fill in online forms, if the service supports it.

The first time you access the wallet, you define the wallet code that protects your encrypted data. At *Create wallet code:*, enter the code, and select **OK** to confirm. At *Verify wallet code:*, enter the code again, and select **OK**. See also "Wallet code," page 13.

If you want to delete all the content of the wallet and the wallet code, enter *#7370925538# (*#res wallet# in letters) in the standby mode. You also need the security code of the phone; see "Security code," page 12.

To add or edit contents, open the *Wallet* menu. To use the content of the wallet in a mobile service, access the wallet from the browser. See "Web," page 88.

Access the wallet menu

To access the wallet menu, select **Menu** > *Organiser* > *Wallet*. Enter your wallet code, and select **OK**; see "Wallet settings," page 82. Select from the following options:

Wallet profiles—to create card combinations for different services. A wallet profile is helpful if the service asks you to fill in many data items. You can select the appropriate wallet profile instead of selecting different cards separately.

Cards—to save personal card information. You can save payment card, loyalty card, and access card information, such as user name and password combinations for different services, addresses, and user data. See "Save card details," page 80.

Tickets—to save the notifications of e-tickets that you bought through a mobile service. To view the tickets, select **Options** > *View*.

Receipts—to save receipts of mobile purchases.

Personal notes—to save all kinds of personal information that you want to keep protected by the wallet PIN code. See "Personal notes," page 81.

Settings—to modify wallet settings. See "Wallet settings," page 82.

Save card details

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

If supported by your service provider, you can also receive card information to your phone as a configuration message. You are notified of the card category. For

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availability of receiving card information as configuration settings, contact the card issuer or service provider.

Personal notes

You can save personal notes, such as account numbers, passwords, or codes.

Access the wallet, and select *Personal notes*. If no note is added, select **Add new**; otherwise, select **Options** > *Add new*. Enter the note and a title for it.

Select **Options** to edit a selected note; sort notes by name or date; or delete notes.

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

When viewing a note, select **Edit** to edit it. Select **Options**, and select from the following options:

Send via text msg.—to copy the note as a text message or a multimedia message

Copy to calendar—to copy the note to the calendar as a memo

Use detail—to extracting numbers, e-mail addresses and Web addresses from a note

Delete—to delete the note

Create a wallet profile

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

1. Access the wallet, and select *Wallet profiles*.
2. To create a new wallet profile, if no profile is added, select **Add new**. Otherwise, select **Options** > *Add new*.
3. Fill in the following fields, and select **Done**. Some of the fields contain data that is selected from the wallet. You must save this data before you can create a wallet profile.

   Select payment card next and select a card from the payment card list.

   Select loyalty card next and select a card from the loyalty card list.

   Select access card next and select a card from the access card list.

   Select user info card next and select a card from the user data card list.

   Select billing address next and select an address from the address card list.

   Select shipping address next and select an address from the address card list.

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Select receipt delivery address next and select an address from the address card list.

Select receipt delivery method next and select the means of delivery: *To phone number* or *To e-mail address*.

Wallet profile name: enter a name for the profile.

Wallet settings

Access the wallet, and select *Settings*. To change the wallet code, select *Change code*. To set the radio frequency identification (RFID) code and type, select *RFID* > *RFID code* and *RFID type*. RFID is technology that helps secure your commercial transactions.

Make purchases with the wallet

1. Access the desired Web site to do your shopping that supports the wallet. The service must support the Electronic Commerce Modeling Language specification. See "Connect," page 89.

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

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

2. Pay for the items you wish to buy when the phone asks whether you want to use the wallet. The phone also asks for your wallet PIN code.
3. Select the card you want to pay with from the *Payment cards* list. If the data form you receive from the service provider supports the Electronic Commerce Modeling Language specification, the phone automatically fills in the credit card information or the wallet profile from the wallet.
4. Approve the purchase, and the information is forwarded.
5. You may receive an acknowledgement or a digital receipt of the purchase.
6. To close the wallet, select *Close wallet*. If you do not use the wallet for 5 minutes, it closes automatically.

   If you have tried to access or have accessed confidential information requiring passwords (for example your bank account), empty the cache of your phone after each use.

To empty the cache, see "Cache memory," page 93.

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Synchronization

Synchronization allows you to save your calendar and contacts data on a remote Internet server (network service) or on a compatible PC. If you have saved data on the remote Internet server, you can synchronize your phone by starting the synchronization from your phone. To synchronize the data in the contacts of the phone, calendar, and notes to correspond with the data of your compatible PC, starting the synchronization from the PC. The contact data in your SIM card will not be synchronized.

Answering an incoming call during synchronization will end the synchronization and you must restart it.

Synchronize from your phone

Before synchronizing from your phone, you must do the following:

- Subscribe to a synchronization service. For details, contact your service provider.
- Retrieve the synchronization settings from your service provider. See "Settings," page 83.

To start the synchronization from your phone, do the following:

1. Select the configuration settings you need for the synchronization. See "Settings," page 83.
2. Select Menu > *Organiser* > *Synch*> *Server sync* > *Data to be synchronised*. Mark the data to be synchronized.
3. Select Menu > *Organiser* > *Synch* > *Server sync* > *Synchronise*.

   The marked data of the active set is synchronized after confirmation.

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

Settings

You may receive the configuration settings required for synchronization as a configuration message from the network operator or service provider. To manage the configuration settings, see "Configuration settings," page 63.

1. Select Menu > *Organiser* > *Synch*.
2. Select *Server sync* > *Sync settings* and from the following options:

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Configuration—only the configurations that support the synchronization are shown. Select a service provider, *Default*, or *Personal config.* for synchronization.

Account—sSelect a synchronization service account contained in the active configuration settings.

3. Select *PC sync settings* to enter the settings for server alerted synchronization. Set the *User name* and *Password*.

   The user name and password must be the same in the phone and in the PC.

Synchronize from a compatible PC

To synchronize contacts, the calendar, and the notes from a compatible PC, use an IR, Bluetooth, or data cable connection. You also need Nokia PC Suite software of your phone installed on the PC. Start the synchronization from the PC using Nokia PC suite.

Applications

Games

Your phone software includes some games.

Launch a game

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

For game options, see "Other application options," page 85.

Game downloads

Select **Menu** > *Applications* > **Options** > *Downloads* > *Game downloads*. The list of available bookmarks is shown. Select *More bookmarks* to access the list of bookmarks in the *Web* menu. See "Bookmarks," page 91.

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

Game settings

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

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Collection

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

Launching an application

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

Other application options

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

Details—select to give additional information about the application.

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

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

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

Connect via—select for some applications that need specific service settings. Your phone is set to use as default the service settings for the browser.

Download an application

Your phone supports J2ME Java applications. Make sure that the application is compatible with your phone before downloading it. Download content only from sources you trust.

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 in the following ways:

- Select **Menu** > *Applications* > **Options** > *Downloads*> *App. downloads*, and the list of available bookmarks is shown. Select *More bookmarks* to access the list of bookmarks in the *Web* menu. See "Bookmarks," page 91.

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Select the appropriate bookmark to connect to the desired page. If the connection fails, you may not be able to access the page from the service whose connection settings are currently active. In this case, access the *Web* menu, and activate another set of service settings. See "Connect," page 89. Try again to connect to the page.

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

- Select **Menu** > *Web* > *Download links*. Select to download an appropriate application or game. See "Download files," page 92.
- Use the game download function. See "Game downloads," page 84.
- Use the Nokia Application Installer from PC Suite to download the applications to your phone.

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

When downloading an application, it may be saved in the *Games* menu instead of the *Applications* menu. It is not possible to store Java games and applications on the multimedia card.

Calculator

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

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

Select **Menu** > *Applications* > *Extras* > *Calculator*. When **0** is displayed on the screen, enter the first number in the calculation. Press **#** for a decimal point. Select **Options** > *Add*, *Subtract*, *Multiply*, *Divide*, *Square*, *Square root*, or *Change sign*. Enter the second number. For a total, select **Equals**. To start a new calculation, first select and hold **Clear**.

Convert currency

Select **Menu** > *Applications* > *Extras* > *Calculator*. To save the exchange rate, select **Options** > *Exchange rate*. Select either of the displayed options. Enter the exchange rate, press **#** for a decimal point, and select **OK**. The exchange rate remains in the memory until you replace it with another one. To perform the

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currency conversion, enter the amount to be converted, and select **Options** > *In domestic* or *In foreign*.

Note: When you change base currency, you must enter the new rates because all previously set exchange rates are set to zero.

Countdown timer

Select **Menu** > *Applications* > *Extras* > *Countdown timer*. Enter the alarm time in hours, minutes, and seconds; and select **OK**. If you wish, write your own note text that is displayed when the time expires. To start the countdown timer, select **Start**. To change the countdown time, select *Change time*. To stop the timer, select *Stop timer*.

If the alarm time is reached when the phone is in the standby mode, the phone sounds a tone and flashes the note text if it is set or *Countdown time up*. To stop the alarm, press any key. If no key is pressed, the alarm automatically stops within 30 seconds. To stop the alarm and to delete the note text, select **Exit**. To restart the countdown timer, select **Restart**.

Stopwatch

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 **End**.

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** > *Applications* > *Extras* > *Stopwatch*, and select from the following options:

Split timing—to take intermediate times. To start the time observation, press **Start**. Press **Split** every time that you want to take an intermediate time. To stop the time observation, press **Stop**.

To save the measured time, select **Save**.

To start the time observation again, select **Options** > *Start*. The new time is added to the previous time. To reset the time without saving it, select *Reset*.

To set the stopwatch timing in the background, press the end key.

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

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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

Web

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

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

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

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

Access and use

1. Save the service settings that are required to access the service that you want to use. See "Set up browsing," page 88.
2. Make a connection to the service. See "Set up browsing," page 89.
3. Start browsing the pages of the service. See "Browse pages," page 89.
4. When you finish browsing, end the connection to the service. To disconnect, see "Browsing options," page 90.

Set up browsing

You may receive the configuration settings required for browsing as a configuration message from the network operator or service provider that offers the service that you want to use. See "Configuration settings," page 13. You can also enter all the configuration settings manually. See "Configuration settings," page 63.

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Connect

First, verify that the correct configuration settings of the service that you want to use are activated.

1. To select the settings for connecting to the service, select Menu > *Web* > *Settings* > *Configuration*.
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," page 88.

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

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

Secondly, make a connection to the service in one of the following ways:

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

Browse pages

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

If GPRS is selected as the data bearer, G is shown on the top left of the display during browsing. If you receive a call or a text message, or make a call during an EGPRS connection, is shown on the top right of the display to indicate that the EGPRS connection is suspended (on hold). After a call the phone tries to reconnect the EGPRS connection.

Browse with phone keys

Scroll any direction to browse through the page.

To select a highlighted item, press the **Call** key, or select Options to select the option for opening the link.

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

Browsing options

Select from the following options:

Use wallet info—to use the wallet card information from the application if the service page supports the wallet. See "Wallet," page 79.

Home—to return to your start page

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

Add bookmark—to save the page as a bookmark

Bookmarks—to access the list of bookmarks. See "Bookmarks," page 91.

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

History—to get a list showing the last visited URLs

Download links—to show the list of bookmarks for downloading

Save to folder—to save the page as a download link

Other options—to show a list of other options

Reload—to reload and update the current page

Quit—to disconnect from a service

The service provider may also offer other options.

If you have tried to access or have accessed confidential information requiring passwords (for example, your bank account), empty the cache of your phone after each use.

To empty the cache, see "Cache memory," page 93.

Direct calling

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

Appearance settings

While browsing, select **Options** > *Other options* > *Appear. settings*; or in the standby mode, select **Menu** > *Web* > *Settings* > *Appearance settings*..

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

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To set the font size, select *Font size* > *Extra small*, *Small*, or *Medium*.

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

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

To set the phone to alert when a secure page contains an unsecure item, select *Alerts* > *Alert for unsecure items* > Yes. These alerts do not guarantee a secure connection. For more information, see "Browser security," page 93.

To select the encoding for the browser page content, select *Character encoding* > *Content encoding*.

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

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," page 93.

While browsing, select **Options** > *Other options* > *Security* > *Cookies*; or in the standby mode, select **Menu** > *Web* > *Settings* > *Security* > *Cookies*. To allow or prevent the phone 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.

1. While browsing, select **Options** > *Other options* > *Security* > *Script settings*; or in the standby mode, select **Menu** > *Web* > *Settings* > *Security* > *Script over secure connection*.
2. To allow the scripts, select *Allow*.

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*.

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2. Scroll to a bookmark, and select it; or press **Call** 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 save the bookmark, select **Show** > **Save**. To view or delete the bookmark, select **Options** > *View* or *Delete*. To discard the bookmark directly after you have received the bookmark, select **Exit** > **OK**.

Download files

To download more tones, images, games, or applications to your phone (network service), select **Menu** > *Web* > *Download links*, and *Tone downloads*, *Graphic downloads*, *Game downloads*, *Video downloads*, or *App. downloads*.

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

Service inbox

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

To access the *Service inbox* in 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 select **Options**. Select *Retrieve* to activate the browser and download the marked content, *Details* to display detailed information on the service notification, or *Delete* to delete the message.

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Service inbox settings

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

- To set whether you want to receive service message, select *Service messages* > *On* or *Off*.
- To set the phone to receive service messages only from content authors approved by the service provider, select *Message filter* > On. To view the list of the approved content authors, select *Trusted channels*.
- To set the phone to automatically activate the browser from the standby mode when the phone has received a service message, select *Automatic connection* > *On*. If you select *Off*, the phone activates the browser only after you select *Retrieve* when the phone has received a service message.

Cache memory

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

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

Browser security

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

Security module

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

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

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

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Module PIN request—to set the phone to ask for the module PIN when using services provided by the security module. Enter the code, and select *On*. To disable the module PIN request, select *Off*.

Change module PIN—to change the module PIN, if allowed by the security module. Enter the current module PIN code, and the new code twice.

Change signing PIN—to change the signing PIN code for the digital signature. Select the signing PIN you want to change. Enter the current PIN code, and the new code twice.

See also "Access codes," page 12.

Certificates

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

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

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

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

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

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

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Digital signature

You can make digital signatures with your phone if your SIM card has a security module. Using the digital signature can be the same as signing your name to a paper bill, contract, or other document.

To make a digital signature, select a link on a page (for example, the title of the book you want to buy and its price). The text to sign, which may include the amount and date, is shown.

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

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

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

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

Select the user certificate you want to use. Enter the signing PIN (see "Access codes," page 12), and select **OK**. The digital signature icon disappears, and the service may display a confirmation of your purchase.

■ 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.

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

To set the phone to show you the confirmation messages sent between your phone and the network when you use 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.

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6. PC connectivity

You can send and receive e-mail, and access the Internet when your phone is connected to a compatible PC through an IR, Bluetooth, or data cable (DKU-2) connection. You can use your phone with a variety of PC connectivity and data communications applications. 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 (for example, PC suite) at Nokia Web site at www.nokia.com/pcsuite.

PC Suite

PC Suite contains the following applications:

Nokia Application Installer—to install Java applications, such as games and dictionaries, from the PC to the phone

Nokia Audio Manager—to create music for your phone

Nokia Image Converter—to make images in supported formats usable for multimedia messages or wallpaper, and to transfer them to your phone

Nokia Sound Converter—to optimize polyphonic ringing tones in supported formats to be compatible with your phone and to transfer them to your phone

Nokia Content Copier—to back up and restore personal data between your phone and a compatible PC. The application also supports content transfer to another compatible Nokia phone.

Nokia Phone Editor—to send text messages and edit the contacts in your phone

Nokia Phone Browser—to view the contents of the *Gallery* folder of your phone on a compatible PC. You can browse picture and audio files, modify files in the phone memory, and transfer files between the phone and the PC.

Nokia Multimedia Player—to play sounds, images, video, and multimedia messages that you received on your phone on the PC

Nokia PC Sync—to synchronize contacts, calendar, and to-do notes between your phone and a compatible PC

Nokia Modem Options—contains settings for HSCSD and GPRS connections

Nokia Connection Manager—to select the connection type between the PC and the phone

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Nokia 6230 data modem drivers—enable you to use your phone as a modem

Language Selection—to select the language used during an installation of PC Suite and the PC Suite application itself

HTML Help—to support the application usage

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

EGPRS, HSCSD, and CSD

With your phone you can use the enhanced GPRS (EGPRS), general packet radio service (GPRS), 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.

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

See "EGPRS modem settings," page 60.

Data communication

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

Making or answering phone calls during a computer connection is not recommended, as it might disrupt the operation.

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

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7. 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.

Unplug the charger from the electrical plug and the device when not in use. Do not leave a 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.

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 and its ability to charge. Always try to keep the battery between 15°C and 25°C (59°F and 77°F). A device with a hot or cold battery may not work temporarily, even when the battery is fully charged. Battery performance is particularly limited in temperatures well below freezing.

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

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Nokia battery authentication guidelines

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 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 to the left, right, down and up sides of the logo, you should see 1, 2, 3 and 4 dots on each side respectively.

3 Scratch the side of the label to reveal a 20-digit code, e.g. 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 verifying it at the Nokia website. Go to www.nokia.com/batterycheck.

WHAT IF YOUR BATTERY IS NOT AUTHENTIC?

If you cannot confirm that your Nokia battery with the hologram label is an authentic Nokia battery, please do not use the battery. Take it to the nearest

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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.

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Technical information

Feature	Specification
Weight	3.5 oz (99 g) with BL-5C Li-Ion Battery
Size	Volume: 4.6 in^3 (76 cm^3) Length: 4.1 in (103 mm) Width: 1.7 in (44 mm) Thickness: 0.8 in (20 mm)
Frequency range	GSM 900 880–915 MHz (TX) 925–960 MHz (RX) GSM 1800 1710–1785 MHz (TX) 1805–1865 MHz (RX) GSM 1900 1850–1910 MHz (TX) 1930–1990 MHz (RX)
Transmitter output power	Up to 2 W
Memory size	32MB flash memory
Operating temperature	59°F to + 77°F (15°C to + 25°C)

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Nokia One-Year Limited Warranty

Nokia Inc. ("Nokia") warrants that this cellular phone ("Product") is free from defects in material and workmanship that result in Product failure during normal usage, according to the following terms and conditions:

1. The limited warranty for the Product extends for ONE (1) year beginning on the date of the purchase of the Product. This one year period is extended by each whole day that the Product is out of your possession for repair under this warranty.
2. The limited warranty extends only to the original purchaser ("Consumer") of the Product and is not assignable or transferable to any subsequent purchaser/end-user.
3. The limited warranty extends only to Consumers who purchase the Product in the United States of America.
4. During the limited warranty period, Nokia will repair, or replace, at Nokia's sole option, any defective parts, or any parts that will not properly operate for their intended use with new or refurbished replacement items if such repair or replacement is needed because of product malfunction or failure during normal usage. No charge will be made to the Consumer for any such parts. Nokia will also pay for the labor charges incurred by Nokia in repairing or replacing the defective parts. The limited warranty does not cover defects in appearance, cosmetic, decorative or structural items, including framing, and any non-operative parts. Nokia's limit of liability under the limited warranty shall be the actual cash value of the Product at the time the Consumer returns the Product for repair, determined by the price paid by the Consumer for the Product less a reasonable amount for usage. Nokia shall not be liable for any other losses or damages. These remedies are the Consumer's exclusive remedies for breach of warranty.
5. Upon request from Nokia, the Consumer must prove the date of the original purchase of the Product by a dated bill of sale or dated itemized receipt.
6. The Consumer shall bear the cost of shipping the Product to Nokia in Melbourne, Florida. Nokia shall bear the cost of shipping the Product back to the Consumer after the completion of service under this limited warranty.
7. The Consumer shall have no coverage or benefits under this limited warranty if any of the following conditions are applicable:
   a) The Product has been subjected to abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized connections, unauthorized repair, misuse,

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neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of Nokia, including damage caused by shipping.

b) The Product has been damaged from external causes such as collision with an object, or from fire, flooding, sand, dirt, windstorm, lightning, earthquake or damage from exposure to weather conditions, an Act of God, or battery leakage, theft, blown fuse, or improper use of any electrical source, damage caused by computer or internet viruses, bugs, worms, Trojan Horses, cancelbots or damage caused by the connection to other products not recommended for interconnection by Nokia.

c) Nokia was not advised in writing by the Consumer of the alleged defect or malfunction of the Product within fourteen (14) days after the expiration of the applicable limited warranty period.

d) The Product serial number plate or the enhancement data code has been removed, defaced or altered.

e) The defect or damage was caused by the defective function of the cellular system or by inadequate signal reception by the external antenna, or viruses or other software problems introduced into the Product.

8. Nokia does not warrant uninterrupted or error-free operation of the Product. If a problem develops during the limited warranty period, the Consumer shall take the following step-by-step procedure:

a) The Consumer shall return the Product to the place of purchase for repair or replacement processing.

b) If "a" is not convenient because of distance (more than 50 miles) or for other good cause, the Consumer shall ship the Product prepaid and insured to:
Nokia Inc., Attn: Repair Department
795 West Nasa Blvd.
Melbourne, FL 32901

c) The Consumer shall include a return address, daytime phone number and/or fax number, complete description of the problem, proof of purchase and service agreement (if applicable). Expenses related to removing the Product from an installation are not covered under this limited warranty.

d) The Consumer will be billed for any parts or labor charges not covered by this limited warranty. The Consumer will be responsible for any expenses related to reinstallation of the Product.

e) Nokia will repair the Product under the limited warranty within 30 days after receipt of the Product. If Nokia cannot perform repairs covered under this limited warranty within 30 days, or after a reasonable number of attempts to repair the same defect, Nokia at its option, will provide a

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replacement Product or refund the purchase price of the Product less a reasonable amount for usage. In some states the Consumer may have the right to a loaner if the repair of the Product takes more than ten (10) days. Please contact the Customer Service Center at Nokia at the telephone number listed at the end of this warranty if you need a loaner and the repair of the Product has taken or is estimated to take more than ten (10) days.

f) If the Product is returned during the limited warranty period, but the problem with the Product is not covered under the terms and conditions of this limited warranty, the Consumer will be notified and given an estimate of the charges the Consumer must pay to have the Product repaired, with all shipping charges billed to the Consumer. If the estimate is refused, the Product will be returned freight collect. If the Product is returned after the expiration of the limited warranty period, Nokia's normal service policies shall apply and the Consumer will be responsible for all shipping charges.

9. You (the Consumer) understand that the product may consist of refurbished equipment that contains used components, some of which have been reprocessed. The used components comply with Product performance and reliability specifications.
10. ANY IMPLIED WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR USE, SHALL BE LIMITED TO THE DURATION OF THE FOREGOING LIMITED WRITTEN WARRANTY. OTHERWISE, THE FOREGOING LIMITED WARRANTY IS THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. NOKIA SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF ANTICIPATED BENEFITS OR PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF DATA, PUNITIVE DAMAGES, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT OR FACILITIES, DOWNTIME, THE CLAIMS OF ANY THIRD PARTIES, INCLUDING CUSTOMERS, AND INJURY TO PROPERTY, RESULTING FROM THE PURCHASE OR USE OF THE PRODUCT OR ARISING FROM BREACH OF THE WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL OR EQUITABLE THEORY, EVEN IF NOKIA KNEW OF THE LIKELIHOOD OF SUCH DAMAGES. NOKIA SHALL NOT BE LIABLE FOR DELAY IN RENDERING SERVICE UNDER THE LIMITED WARRANTY, OR LOSS OF USE DURING THE PERIOD THAT THE PRODUCT IS BEING REPAIRED.
11. Some states do not allow limitation of how long an implied warranty lasts, so the one year warranty limitation may not apply to you (the Consumer).

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Some states do not allow the exclusion or limitation of incidental and consequential damages, so certain of the above limitations or exclusions may not apply to you (the Consumer). This limited warranty gives the Consumer specific legal rights and the Consumer may also have other rights which vary from state to state.

12. Nokia neither assumes nor authorizes any authorized service center or any other person or entity to assume for it any other obligation or liability beyond that which is expressly provided for in this limited warranty including the provider or seller of any extended warranty or service agreement.
13. This is the entire warranty between Nokia and the Consumer, and supersedes all prior and contemporaneous agreements or understandings, oral or written, relating to the Product, and no representation, promise or condition not contained herein shall modify these terms.
14. This limited warranty allocates the risk of failure of the Product between the Consumer and Nokia. The allocation is recognized by the Consumer and is reflected in the purchase price.
15. Any action or lawsuit for breach of warranty must be commenced within eighteen (18) months following purchase of the Product.
16. Questions concerning this limited warranty may be directed to:
    Nokia Inc.
    Attn: Customer Service
    7725 Woodland Center Blvd., Ste. 150
    Tampa, FL 33614
    Telephone: 1-888-NOKIA-2U (1-888-665-4228)
    Facsimile: (813) 249-9619
    TTY/TDD Users Only: 1-800-24-NOKIA (1-800-246-6542)
17. The limited warranty period for Nokia supplied attachments and accessories is specifically defined within their own warranty cards and packaging.

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Patent information

Manufactured or sold under one or more of the following US patents:

PATENT TABLE PLACED HERE

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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 and enjoy your device for many years.

- Keep the device dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, remove the battery and allow the device to dry completely before replacing it.
- Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device other than as instructed in this guide.
- Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.
- Do not paint the device. Paint can clog the moving parts and prevent proper operation.
- Use a soft, clean, dry cloth to clean any lenses (such as camera, proximity sensor, and light sensor lenses).
- Use 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.

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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. To maintain compliance with radio frequency exposure guidelines only use enhancements approved by Nokia for use with this device. When the device is on and being worn on the body, always use an approved holder or carrying case.

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

Medical devices

Operation of any radio transmitting equipment, including wireless phones, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to determine if they are adequately shielded from external RF energy or if you have any questions. Switch off your device in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Pacemakers

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

- always keep the device more than 6 inches (15.3 cm) from their pacemaker when the device is switched on;
- not carry the device in a breast pocket; and

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- hold the device to the ear opposite the pacemaker to minimize the potential for interference.

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

Hearing aids

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

Vehicles

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

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

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 refuelling points such as near gas pumps at service stations. Observe restrictions on the use of radio equipment in fuel depots, storage, and distribution areas, chemical plants or where blasting operations are in progress. Areas with a potentially explosive atmosphere are

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often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), and areas where the air contains chemicals or particles such as grain, dust or metal powders.

Emergency calls

Important:

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

To make an emergency call:

1. If the device is not on, switch it on. Check for adequate signal strength.

   Some networks may require that a valid SIM card is properly inserted in the device.
2. Press the **End** key as many times as needed to clear the display and ready the device for calls.
3. Enter the official emergency number for your present location. Emergency numbers vary by location.
4. Press the**Call** key.

If certain features are in use, you may first need to turn those features off before you can make an emergency call. If the device is in 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.

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Certification information (SAR)

THE NOKIA 6230i DEVICE MEETS GUIDELINES FOR EXPOSURE TO RADIO WAVES.

Your mobile device is a radio transmitter and receiver. It is designed and manufactured not to exceed the limits for exposure to radio frequency (RF) energy recommended by international guidelines (ICNIRP). These limits establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards and guidelines include a substantial safety margin designed to assure the safety of the public, regardless of age and health and to account for any variations in measurements.

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 international guidelines is 2.0 watts/kilogram (W/kg) averaged over ten grams of tissue. Tests for SAR are conducted using standard operating positions with the device transmitting at its highest certified power level in all tested frequency bands. The actual SAR level of an operating device can be well below the maximum value because the device is designed to use only the power required to reach the network. That amount changes depending on a number of factors such as how close you are to a network base station. The highest SAR value when tested according to international testing procedures for use at the ear for device type RM-72 is 0.70 W/kg.

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

USA and Canada: The SAR limit of USA (FCC) and Canada (IC) is 1.6 W/kg averaged over one gram of tissue. Device type RM-72 has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use at the ear is 0.81 W/kg and when properly worn on the body is 0.62 W/kg. Information about this devices can be found on the FCC's website at <http://www.fcc.gov/oet/fccid> by searching the equipment authorization system using FCC ID: QTKRM-72.

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Message from the CTIA (Cellular Telecommunications & Internet Association) to all users of mobile phones

© 2001 Cellular Telecommunications & Internet Association. All Rights Reserved.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"

Below are safety tips to follow while driving and using a wireless phone which should be easy to remember.

1. Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.

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2. When available, use a hands-free device. A number of hands-free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.
3. Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.
4. Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.
5. Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to do" list while driving a car, you are not watching where you are going. It's common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
6. Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip—dial only a few numbers, check the road and your mirrors, then continue.
7. Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix—they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
8. Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations—with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!
9. Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious

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emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.

10. Call roadside assistance or a special wireless nonemergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

Careless, distracted individuals and people driving irresponsibly represent a hazard to everyone on the road. Since 1984, the Cellular Telecommunications Industry Association and the wireless industry have conducted educational outreach to inform wireless phone users of their responsibilities as safe drivers and good citizens. As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones. And, as we take to the roads, we all have a responsibility to drive safely.The wireless industry reminds you to use your phone safely when driving.For more information, please call 1-888-901-SAFE.
For updates: http://www.wow-com.com/consumer/issues/driving/articles.cfm?ID=85

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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

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- Environmental Protection Agency
- Federal Communications Commission
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

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

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

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

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

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

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

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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

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of whether they are used against the head or against the body. Either configuration should result in compliance with the safety limit.

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

Since there are no known risks from exposure to RF emissions from wireless phones, there is no reason to believe that accessories that claim to shield the head from those emissions reduce risks. Some products that claim to shield the user from RF absorption use special phone cases, while others involve nothing more than a metallic accessory attached to the phone. Studies have shown that these products generally do not work as advertised. Unlike "hand-free" kits, these so-called "shields" may interfere with proper operation of the phone. The phone may be forced to boost its power to compensate, leading to an increase in RF absorption. In February 2002, the Federal trade Commission (FTC) charged two companies that sold devices that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

How does FCC Audit Cell Phone RF?

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

FDA scientific staff reviewed the methodology used by FCC to measure cell phone RF, and agreed it is an acceptable approach, given our current understanding of

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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 (a SAR of 1.6 w/kg). Even in a case where the maximum measurement uncertainty permitted by current measurement standards was added to the maximum permissible SAR, the resulting SAR value would be well below any level known to produce an acute effect. Consequently, FCC's approach with measurement uncertainty will not result in consumers being exposed to any known risk from the RF emitted by cellular telephones.

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

Updated July 29, 2003

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