

# Nokia 9500 Communicator User Guide

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9230978  
Issue 2

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## For your safety

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Read these simple guidelines. Not following them may be dangerous or illegal. Your device has a separate GSM radio and wireless LAN radio. Switching off the device by pressing the power key on the device cover switches off both radios. Note, however, that switching off the device or using the offline profile does not prevent you from establishing a new wireless LAN connection. Therefore, remember to comply with any applicable safety requirements when establishing and using a wireless LAN connection. Read the complete user guide for further information.



### SWITCH ON SAFELY

Do not switch the device 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 devices may be susceptible to interference, which could affect performance.



### SWITCH OFF IN HOSPITALS

Follow any restrictions. Switch the device 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 device at a refuelling point. Don't use near fuel or chemicals.



### SWITCH OFF NEAR BLASTING

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



### USE SENSIBLY

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



### QUALIFIED SERVICE

Only qualified personnel may install or repair this product.



### ENHANCEMENTS AND BATTERIES

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



### WATER-RESISTANCE

Your device 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.





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

## ■ ABOUT YOUR DEVICE

The wireless devices described in this guide are approved for use on the RA-2: EGSM 900/1800/1900 and RA-3: GSM 850/1800/1900 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:** Do not switch the device on when wireless device use may cause interference or danger.

## ■ NETWORK SERVICES

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

Your service provider may have requested that certain features be disabled or not activated in your device. If so, they will not appear on your device menu. Contact your service provider for more information.

This device supports WAP 2.0 protocols (HTTP and SSL) that run on TCP/IP protocols. Some features of this device, such as multimedia messages and Web browser require network support for these technologies.

## ■ Shared memory

The following features in this device may share memory: contacts, text messages, multimedia messages, ringing tones, audio files, calendar and to-do notes, files saved from any application (for example, office documents, images, audio files, and video clips), and downloaded applications. Use of one or more of these features may reduce the memory available for the remaining features sharing memory. For example, saving many images 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.

## ■ Enhancements, batteries, and chargers

Check the model number of any charger before use with this device. This device is intended for use when supplied with power from ACP-12, AC-1, and LCH-12.



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

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

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

# 1. Getting started

The Nokia 9500 Communicator offers you various business applications, such as e-mail, office tools, and Web browsing, and flexible and fast network connections with integrated wireless LAN and EGPRS (EDGE).

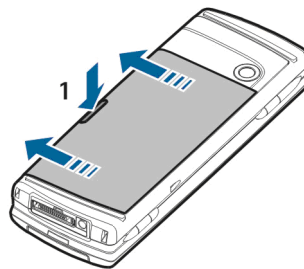
## ■ Installing the SIM card, battery, and memory card

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.

Use only compatible MultiMediaCards (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.

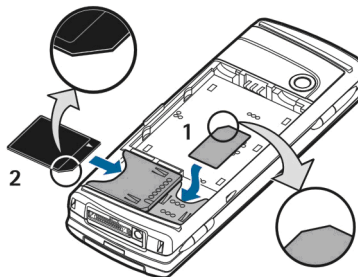
1. Always switch the device off and disconnect the charger before removing the battery.


With the back of the device facing you, press the back cover release button (1), and slide the cover in the direction of the arrows.



2. Insert the SIM card into the SIM card slot (1).

Make sure that the beveled corner of the SIM card is pointing towards the camera lens and the contact area on the card is facing downwards.

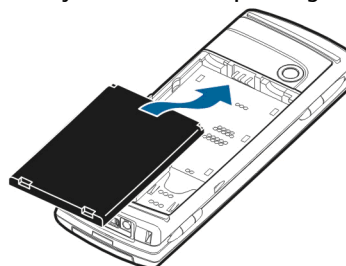


3.  **Note:** Before you use an existing compatible memory card with your Nokia 9500 Communicator, you must convert the memory card with Data mover and reinstall the applications that you previously installed to the memory card. However, do not reinstall any pre-installed applications for the Nokia 9210 Communicator. Your Nokia 9500 Communicator contains a later version of these applications, and these later versions must be used with the Nokia 9500 Communicator.

Slide the memory card into the memory card slot (2).

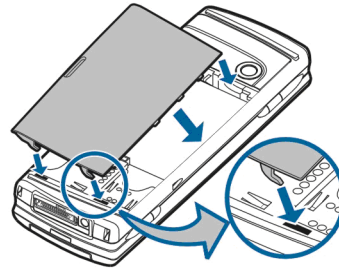
Make sure that the beveled corner of the memory card is pointing towards the SIM card slot and the contact area is facing downwards. Note that the back cover must be in place for the device to recognize the memory card. You can remove a memory card after you have removed the back cover even when the battery is inserted. Do not remove the memory card in the middle of an operation such as saving a file to the memory card as this may damage the memory card as well as the device, and data stored on the card may be corrupted.


4. Insert the battery. Align the contacts of the battery with the corresponding connectors on the battery compartment.



5. Insert the locking catches of the back cover into the corresponding slots, and slide the cover into place.





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

You can remove a memory card after you have removed the back cover even when the battery is inserted.

### ■ Charging the battery

1. Connect the charger to an AC wall outlet.
2. Connect the power cord to the bottom of the device. [See Figure Keys and connectors on page 11.](#) The battery indicator bar starts scrolling. If the battery is totally discharged, it may take a few minutes before the charging indicator is shown. The device can be used while charging.
3. When the battery is fully charged, the bar stops scrolling. Disconnect the charger from the device and then from the AC outlet.

### ■ Switching the device on and off

To switch the device on, press and hold the power key. The communicator can be used without the phone functions when a SIM card is not inserted or when the [Offline](#) profile is selected.



If the device asks for a PIN or security code, enter the code, and press [OK](#).

To switch the device off, press and hold the power key.

Your device has a separate GSM radio and wireless LAN radio. Switching off the device by pressing the power key on the device cover switches off both radios. Note, however, that switching off the device or using the offline profile does not prevent you from establishing a new wireless LAN connection. Therefore, remember to comply with any applicable safety requirements when establishing and using a wireless LAN connection. [See Setting the offline profile on page 22.](#)



**Tip:** When you switch the phone on, it may recognize the SIM card provider and configure the correct text message, multimedia message, and GPRS settings automatically. If not, contact your service provider for the correct settings.



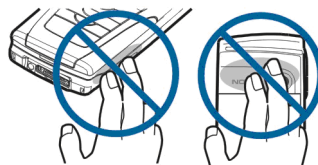
**Tip:** If you have removed the battery and inserted it back rapidly, you may need to press the power key before the device starts up.

The communicator interface starts up first after the battery is inserted. You cannot switch on the cover phone immediately after the battery has been inserted, you must wait until the communicator interface has started.

Your device has two internal antennas.



**Note:** As with any other radio transmitting device, do not touch either of the antennas 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. Not touching the antenna area during a phone call optimises the antenna performance and the talktime of your device.



Normal position: See the diagram below for normal use of the device at the ear for voice calls. [See Operating environment on page 102.](#)



## ■ Access codes

The device uses several access codes to protect against unauthorized use of the device and the SIM card.

You need the following access codes:

- PIN and PIN2 code — The PIN (Personal Identification Number) code protects your SIM card against unauthorized use and is usually supplied with the SIM card. The PIN2 code may be supplied with some SIM cards, and is required to access some functions, such as fixed dialing.

After three consecutive incorrect PIN code entries, the PIN code is blocked, and you must unblock it with a PUK (Personal Unblocking Key) code before you can use the SIM card again. The PIN2 code may be supplied with some SIM cards, and is required to access some functions, such as fixed dialing number. If the codes are not supplied with the SIM card, contact the service provider for your SIM card.

- Lock code — The lock code protects your device against unauthorized use. The default lock code is 12345. Change the code, and keep the new code in a safe place, separate from your device.
- PUK and PUK2 codes — The PUK (Personal Unblocking Key) code is required to change a blocked PIN code. The PUK2 code is required to change a blocked PIN2 code. If the codes are not supplied with the SIM card, contact the service provider for your SIM card.
- *Restriction password* — The restriction password is needed when using the Call restriction service. [See Changing the restriction password on page 65.](#)

Some applications of the device use passwords and user names to protect against unauthorized use of the Internet and its services. These passwords are changed in the settings of the applications.

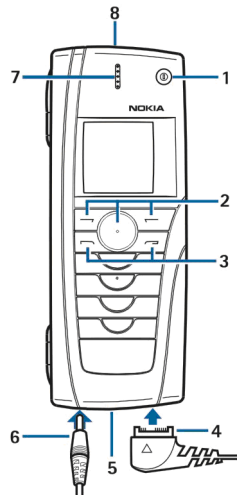
## ■ First start-up

The first time you switch your device on, you need to set some basic settings. You can change the settings later. Open the cover and follow the instructions on the communicator display.




1. Select the language for the device, and press *OK*.
2. Select your home city from the list, and press *OK*. You can browse for a city by starting to type the name of the city, or using the scroll or arrow keys. It is important to select the correct city, because scheduled calendar entries that you create can change when the home city is changed.
3. Set the time and date, and press *OK*.
4. Press *OK* to create your own contact card.
5. Enter your contact card information, and press *OK*.
6. Press *OK*.

The default folders, such as *C:\My files\* and its subfolders, are created during the first start-up. Note that if you change the language of the device later, folder names do not change.

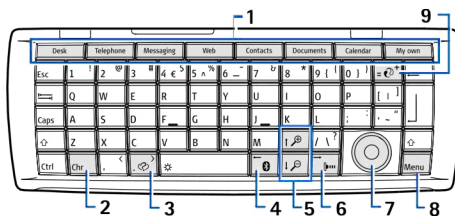
## ■ Keys and connectors









**Keys and connectors**

- 1 — Power key .
- 2 — Scroll key, left and right selection keys. Press the center of the scroll key, or press either selection key to perform the function shown above it. The phone volume can be controlled with the scroll key during a call.
- 3 — Call key (on the left, ) , End key (on the right, .
- 4 — PopPort™ connector for the USB data cable, headset, and loopset.
- 5 — Infrared port and microphone.
- 6 — Charger connector.
- 7 — Earpiece.
- 8 — Loudspeaker for hands-free phone calls and other audio usage.

## ■ Communicator interface



**Communicator keyboard**

- 1 — Application buttons. Each button starts the corresponding application, except My own key, which you can configure to open any application. Press Ctrl+My own key to select the application you want the My own key to open. Note that you can open these applications from Desk, too.
- 2 — Character key. Opens a character table where you can select special characters. Press Chr+keys with green symbols to access characters and functions behind key combinations.
- 3 — Help key. To get support using your device, press Chr+.
- 4 — Bluetooth key. To activate Bluetooth, press the Chr+. To deactivate, press the Chr+ again.
- 5 — The Zoom keys. Pressing Chr+zoom keys makes the fonts and some icons larger or smaller.
- 6 — Infrared key. To activate infrared, press Chr+. To deactivate, press the Chr+ again.
- 7 — Scroll key. Press the scroll key left, right, up, or down to scroll through different lists. Press the center of the scroll key to select or to perform the function of an underlined command button.
- 8 — Menu key. Press the Menu key to open the menu or in multipage dialogs to move from one page to another.
- 9 — Sync key. Establish a connection, and press Chr+ to synchronize your device with a compatible PC.



**Tip:** You can use the arrow keys or the scroll key to move on the menus and the display, for example in the Web application. The left arrow key is on the Bluetooth key (4), the up and down arrow keys on the zoom keys (5), and the right arrow key on the infrared key (6).



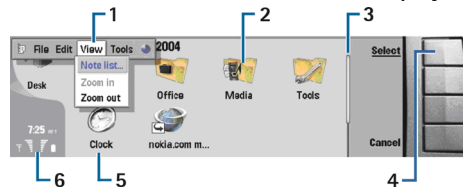
**Tip:** Press Esc to cancel selections and close dialogs.

## Getting started



**Tip:** Press the backspace key to delete items such as calendar entries and messages. Press backspace to delete characters on the left side of the cursor, or Shift+backspace to delete characters on the right side of the cursor.

The communicator display turns on when you open the cover. The application that was active the last time the device was used is shown on the display. When you close the cover, the communicator display turns off.



**Desk main view**

1 — Menu. Press the Menu key to open the menu. You can use the scroll key or the arrow keys to move in the menu, and press the enter key to select a menu option.

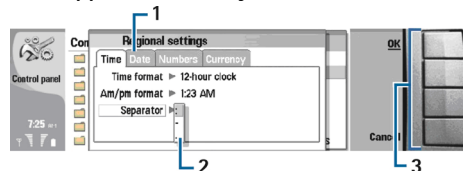
2 — Folder. You can group applications, shortcuts, and notes to different folders. [See Creating new groups on page 20.](#)

3 — Scroll bar. For example, if you have a long file in *Documents*, the scroll bar helps you estimate where you are in the file, and how much of the file you can see. The longer the scroll bar, the more you can see of the file.

4 — Command buttons. The commands on the right side of the display correspond to the command buttons. Note that when a command is dimmed, it cannot be used.

5 — Application. To open an application from *Desk*, select the application, and press *Open* or the enter key.

6 — Indicator area. The indicator area shows application and system-related information.



**Multipage dialog**

1 — Dialog pages. You can move from one page to another by pressing the menu key.

2 — Selection list. You can view different options in a selection list, and select one of them.

3 — Command buttons. You can use the command buttons to perform functions on a dialog page, or in a selection list.

If there is more than one frame on the display, the selected frame is always highlighted. You can move between the frames by pressing the tab key.



**Tip:** Press Chr+the tab key to switch between open applications. Press Chr+the tab key again to move in the list.

### About the display

A small number of missing, discolored, or bright dots may appear on the screen. This is a characteristic of this type of display. Some displays may contain pixels or dots that remain on or off. This is normal, not a fault.

### About the Menu key

The communicator keyboard has a Menu key. Press the Menu key to access the various menu options. The options available depend on the application you are in. The chosen option affects the item that is currently selected or open. In multipage dialogs you can use the Menu key to move from one page to another.

### Scrolling and making selections

Use the arrow keys or the scroll key to move the cursor and make selections on the communicator interface.

#### Scrolling on the communicator interface

There are four separate arrow keys that you can use for scrolling. Scrolling means that you move up, down, left and right in the application groups on Desk, in an application, in the text, or in the Menu. The scroll key functions similarly to the arrow keys, but you can also press the scroll key down to open files or perform the function of an underlined command button.

#### Making selections

To select text left of the cursor, press and hold the Shift key, and press the left arrow key until you have selected the text. To select text right of the cursor, press and hold the Shift key, and press the right arrow key until you have selected the text.

To select different items, such as messages, files, or contacts, press the arrow keys up, down, left or right to scroll to the item you want.

To select items one by one, scroll to the first item, press and hold the Ctrl key, scroll to the next item, and press space bar to select it.

## Getting started


To select an object in a file, for example an attachment in a document, move the cursor onto the object so that square markers appear on each side of the object.


To select a cell in a worksheet, move the cursor to the cell you want. To select an entire row, move the cursor to the first cell of the first column on that row, and press Shift+the left arrow key. To select an entire column, move the cursor to the first cell of the column you want to select, and press Shift+the up arrow key.

## Common actions in several applications

You can find the following actions in several applications:

To switch between open applications, press Menu, select , and select the application.

To change the profile, press Menu, select , and scroll to the profile you want. To modify the profile settings, such as the ringing tones, select the profile and press *Edit*.

To activate a profile for a certain time, press Menu, select , and select the desired profile. Press *Timed*, and set the time (up to 24 hours) when you want the profile setting to end. When the end time is reached, the previous profile, which was not timed, becomes active.

To save a file, press Menu, and select *File* → *Save*. There are different save options depending on the application you use.

To send a file, press Menu, and select *File* → *Send*. You can send a file as an e-mail, fax, short message, or multimedia message; or send them using infrared or Bluetooth.

To add a shortcut, press Menu, and select *File* → *Add to Desk*. Scroll to the group to which you want to add the shortcut, and press *Select*. After you have selected the group, press *OK*. For example, you can add shortcuts to files or Web pages.

To print to a compatible printer, press Menu, and select *File* → *Printing*. You can preview items that you want to print, or edit the way printed pages look.

To cut, copy, and paste, press Menu, and select *Edit*, and *Cut*, *Copy*, and *Paste*.

To delete a file, press Menu, and select *Edit* → *Delete*.



To zoom in or out, press Menu, and select *View* → *Zoom* and the zoom type you want. You can also press Chr+zoom keys to zoom in or out.


To insert special characters to text, press the Chr key.



**Tip:** To generate special characters by using certain unmarked keys, for example "a" or "o", press and hold the Chr key and simultaneously press a letter key. The first special character matching the letter key is displayed. Press the letter key again, and the second special character is shown in the place of the first one, and so on, until the first character is shown again.

## ■ Cover phone

To view the most recently dialed numbers, press . Scroll to a number or name, and press  again to call the number.

To call your voice mailbox (network service), press and hold .


To view received text messages, press the scroll key right.

To open the contacts list, press the scroll key down.

To activate the camera, press the scroll key up.


To write and send text messages, press the scroll key left.

To change the profile, press the power key briefly, and scroll to the profile you want. Press *Select* to activate the profile.


To switch between two phone lines (network service), press and hold .

## Display indicators


 The signal strength of the cellular network at your current location. The higher the bar, the stronger the signal.


 The battery charge level. The higher the bar, the stronger the charge in the battery.

 You have received a message.


 You have locked the cover phone keypad.

 You have selected the silent profile, and the device does not ring for an incoming call or message.


 Bluetooth is activated.

 You have an active infrared connection. If the indicator blinks, your device is trying to connect to the other device, or the connection has been lost.

## Getting started


 You have selected all your calls to be forwarded to another number.

**1** and **2** Indicates the phone line that you have selected in the *Settings* → *Call settings* → *Line for outgoing calls* menu, if you have subscribed to two phone lines (network service).


 The timed profile is active. You can modify the profile settings, such as the ringing tones, in *Control panel*. [See Profile settings on page 62.](#)


 You have missed a phone call.


### Keypad lock (Keyguard)


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

Use the keypad lock (keyguard) to prevent the keys on the cover phone from being accidentally pressed.

To lock the keypad, press the center of the scroll key and .

To unlock the keypad, press the center of the scroll key and .

To lock the system, press the center of the scroll key and . Note that you have to define a lock code with which you can lock and unlock the system.

To unlock the system, press the center of the scroll key and . Key in the lock code and press **OK**.

### Volume control




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

To adjust the volume level during a call, press the scroll key left or right.

To adjust the volume level when using the loudspeaker, open *Telephone*, and scroll left or right with the scroll key.

### Instructions in your device

To view instructions on the applications in your device, press **Chr+** . The device help contains detailed instructions, which you conveniently carry with you all the time.

### Using the CD-ROM

The sales package CD-ROM is compatible with Windows 98SE, Windows ME, Windows 2000, and Windows XP. The CD-ROM should launch itself after you have inserted it into the CD-ROM drive of a compatible PC. If not, open Windows Explorer, right-click the CD-ROM drive where you inserted the CD-ROM, and select AutoPlay.

You can find the extended User Guide for Nokia 9500 Communicator and some additional guides in the CD-ROM.

You can also install the Nokia PC Suite and read the User's Guide for Nokia PC Suite from the CD-ROM. Note that Nokia PC Suite can be used only with Windows 2000 and Windows XP.

### Nokia support on the Web

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

### Stickers in the sales package

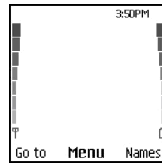
The stickers in the sales package contain important information for service and customer support purposes. The sales package also includes instructions on how you should use these stickers.

### Transferring data from other devices

There are several ways to transfer data, such as contacts or calendar information, to your Nokia 9500 Communicator from compatible devices. [See Data and software management on page 78.](#)

## 2. Cover phone

With the cover phone, you can, for example, take photos, make and receive calls, and change profiles. Most of these features are also available in the communicator interface.



**Cover phone display, standby mode**

For more advanced tasks, use the communicator interface which you can access by opening the cover. If you open the cover during a call, the loudspeaker is activated. You can also use the applications during a call.

### ■ Making a call

To make and receive calls, the cover phone must be switched on, the device must have a valid SIM card installed, and you must be located in a service area of the cellular network.

A GPRS connection is put on hold during voice calls.

To make a call, key in the phone number, including the area code. If you key in an incorrect character, press *Clear*.



**Tip:** For international calls, press **\*+** twice to add the + character that replaces the international access code, and key in the country code, area code (omit the leading 0, if necessary), and phone number.

To call the number, press the Call key. To end the call or cancel the call attempt, press the End key.



**Tip:** To adjust the volume during a call, press the scroll key right to increase or left to decrease the volume.

To make a call using the saved contacts, scroll down in standby mode. Key in the first letters of the saved name. Scroll to the name, and press the Call key.



**Tip:** You can save new contacts in the *Contacts* menu in the phone or in the *Contacts directory* dialog in the communicator interface.

To call a recently dialed number, in standby mode, press the Call key to view up to 20 numbers that you have last called or attempted to call. Scroll to the desired number or name, and press the Call key.

To call a phone number using 1-touch dialing when you have assigned the number to one of the keys **2abc** to **9wxyz**, do as follows: Press the desired number key and the Call key in standby mode, or if the *1-touch dialing* function is set on, press and hold the number key in standby mode until the call is started. To assign a phone number to a number key, press **Menu** in standby mode, and select *Contacts* → *1-touch dialing*. To set the *1-touch dialing* function on, press **Menu** in standby mode, and select *Settings* → *Call settings* → *1-touch dialing*.

To call your voice mailbox (network service), in standby mode, press and hold **100**, or press **100** and the Call key.

### ■ Answering a call

To answer a call, press the Call key.

To decline the call, press the End key. The call is forwarded if you have activated a call forward option such as *Forward if busy*.

To mute a ringing tone instead of answering a call, press **Silence**.

To answer a new call during a call when the *Call waiting* function is activated, press the Call key or *Answer*. The first call is put on hold. To end the active call, press the End key.

### ■ Options during a call

You can press *Options* for some of the following functions during a call: *Mute/Unmute*, *End call*, *End all calls*, *Contacts*, *Menu*, *Hold/Unhold*, *New call*, *Answer*, *Decline*, and *Lock keys*.

Other options during a call may include:

- *Conference* — Allows you to merge an active and a held call into a conference call (network service).
- *Private call* — Allows you to converse privately with a selected participant during a conference call (network service).
- *Swap* — Allows you to alternate between an active and a held call (network service).
- *Touch tones* — Allows you to send touchtone strings, for example, passwords. Key in the string or search for it in *Contacts*, and press **Tones**.


Note that you can key in the wait character w and the pause character p by repeatedly pressing **\*+**.







## Cover phone

- **Transfer calls** — Allows you to connect the held call to the active call and disconnect yourself from the call (network service).

### ■ Writing text

You can key in text, for example, when you write a text message. Press a number key repeatedly until the desired character appears. If the next letter is located on the same key as the present one, wait until the cursor is shown (or press the scroll key left, right, up, or down to end the time-out period), and key in the letter. The characters available depend on the language selected for writing text. To insert a space, press .

- To delete a character to the left of the cursor, press **Clear**. To delete the characters quickly, press and hold **Clear**.
- To change the character case, press .
- To change between letter and number mode, press and hold .
- To insert a number in letter mode, press and hold the desired number key.
- To insert a special character, press  repeatedly.

Alternatively, press , scroll to the desired character, and press **Insert**.

### ■ Accessing the menu functions

The cover phone offers a set of menu functions.

Most of these functions are provided with a brief help text. To view the help text, scroll to the menu function, and wait for about 15 seconds. You must activate help texts in **Settings** → **Telephone settings** before they are shown.








#### Accessing a menu function

To access a function by scrolling, press **Menu** in standby mode, scroll to the desired main menu, for example, **Settings**, and press **Select**. Scroll to a submenu, for example, **Call settings**, and press **Select**. Scroll to a setting, and press **Select**.

To access a function by using a menu shortcut, press **Menu** in standby mode, and within 2 seconds, key in the shortcut number of the menu, submenu, and setting that you want to use. The shortcut number is shown at the top right of the display.

To return to the previous menu level, press **Back**. To exit the menu from the main menu list, press **Exit**. You can also exit the menu by pressing the End key.

#### Menu structure

|  |  |
|--|--|
| <b>Messages</b>       | 1 <i>Write message</i> , 2 <i>Folders</i> , 3 <i>Voice messages</i> , 4 <i>Service commands</i>  |
| <b>Call register</b>  | 1 <i>Missed calls</i> , 2 <i>Received calls</i> , 3 <i>Dialed numbers</i> , 4 <i>Delete recent call lists</i> , 5 <i>Call duration</i>   |
| <b>Contacts</b>       | 1 <i>Find</i> , 2 <i>Add contact</i> , 3 <i>Delete</i> , 4 <i>Settings</i> , 5 <i>1-touch dialing</i> , 6 <i>Service numbers</i> (shown if supported by your SIM card), 7 <i>Own numbers</i> (shown if supported by your SIM card) |
| <b>Profiles</b>       | Contains setting groups (profiles) that you can activate. Only one profile can be active at a time.  |
| <b>Settings</b>       | 1 <i>Call settings</i> , 2 <i>Telephone settings</i> , 3 <i>Security settings</i> , 4 <i>Display settings</i> , 5 <i>Time and date settings</i> , 6 <i>Right select key</i>  |
| <b>Camera</b>         | Allows you to activate the camera and define its settings. <a href="#">See Camera on page 56.</a>  |
| <b>SIM services</b>   | Allows you to use the additional functions available on your SIM card. This menu is only available if supported by your SIM card.  |

### ■ Messages

Your device supports the sending of text messages beyond the normal 160-character limit. If your message exceeds 160 characters, it will be sent as a series of two or more messages.

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

Note that using special (Unicode) characters such as ã, à, á, take up more space.

If there are special characters in your message, the indicator may not show the message length correctly. Before the message is sent, the device tells you if the message exceeds the maximum length allowed for one message.



## Cover phone

Press **Menu**, and select *Messages*.

You can write other types of messages on the communicator interface. [See Messaging on page 25.](#)

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. To write a text message, select *Write message*, and write the message. To send the message, press the Call key or *Send*, and enter the recipient's phone number, or press *Find* to search for it in the contacts list. If you press *Options* while writing the message, you can, for example, send the message to several recipients, or save the message for later use.



**Tip:** To access the short message editor in standby mode, press the scroll key left.

To view the contents of a text message folder, select *Folders* and the desired folder. To create a new folder, press *Options* in the folder list and select *Add folder*.



**Tip:** To open the Inbox folder in standby mode, press the scroll key right.

To define or edit your voice mailbox number (network service), select *Voice messages* → *Voice mailbox number*. Key in the number, or search for it in the contacts list. You can obtain the voice mailbox number from your service provider or network operator.

To listen to your voice messages (network service), select *Voice messages* → *Listen to voice messages*.

To send a service command to your service provider (network service), select *Service commands*. Write the command, and press the Call key or *Send*.

## ■ Call register

You can view the phone numbers of missed, received, and dialed calls, and the approximate length of your calls.

The phone saves missed and received calls only if the network supports these functions and if the phone is switched on and within the network service area.

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

You can also view recent calls information on the communicator interface. [See Viewing dialed, received, and missed calls on page 22.](#)

## ■ Contacts

You can view and manage the names and phone numbers (contacts) that you have saved in the phone memory or the SIM card.

In the phone memory, you can save names with several phone numbers. The number of names that you can save depends on the amount of information you have saved for each name.

In the SIM card memory, you can save one phone number for each name.

You can also use the more extensive *Contacts* application on the communicator interface.

### Shortcuts to the contacts list

You can also access the contacts list in the following ways:

In standby mode, press **Names** (if available), or press **Go to**, and select *Contacts*.

In standby mode, scroll down to the desired name, press **Details**, and scroll to a number.

During a call, press *Options*, and select *Contacts*.

### Searching for, adding, and deleting contacts

To search for a contact, in standby mode, press **Menu**, and select *Contacts* → *Find*, or press the scroll key down in standby mode. Key in the first letters of the desired name. Scroll to the desired name, and press **Details**. Scroll through the phone numbers added to the name.

To save a name and phone number in the selected memory, press **Menu**, and select *Contacts* → *Add contact*. Key in the first name, and press **OK**. If you are using the telephone memory, key in the second name, and press **OK**. Key in the phone number, including the area code, and press **OK**. Select the number type, and press *Select* → **Done**.



**Tip:** To use the phone number while abroad, press  twice (for the + character), and key in the country code, area code (omit the leading zero, if necessary), and phone number.



**Tip:** To quickly save a name and phone number in standby mode, key in the phone number, and press **Save**. Key in the first name, and press **OK**. Key in the second name, and press **OK** → **Done**.

## Cover phone

To save multiple numbers per name when the selected memory is *Phone*, in standby mode, scroll down to the name to which you want to add a number, and press **Details**. Press **Options**, and select *Add number* to add a new phone number to the name.

To delete contacts and all the numbers attached to them, in standby mode, press **Menu**, and select *Contacts* → *Delete*. Select *One by one* or *Delete all*.

To delete a single number added to a name, in standby mode, scroll down to the desired name, and press **Details**. Scroll to the number that you want to delete, press **Options**, and select *Delete number*.

To edit a name or number, in standby mode, scroll down to the desired name, and press **Details**. Press **Options**, and select *Edit name* or *Edit number*. Edit the name or number, and press **OK**.

## Settings for the contacts

In standby mode, press **Menu**, and select *Contacts* → *Settings*, and one of the following options:

- *Memory in use* — To select the memory that you want to use for your contacts.
- *Contacts view* — To select how the contacts are shown.

## 1-touch dialing

To assign a number to a 1-touch dialing key, press **Menu** in standby mode, select *Contacts* → *1-touch dialing*, and scroll to the 1-touch dialing key number that you want.

Press **Assign** → **Find**, and select the name and the number that you want to assign.

If a phone number has already been assigned to the key, press **Options**, and select *Change* to change the phone number or *Delete* to remove the assignment.

## Other functions

In standby mode, press **Menu**, and select *Contacts* and one of the following:

- *Service numbers* — You can call the numbers that your service provider may have included in your SIM card (network services).
- *Own numbers* — You can view the numbers assigned to your SIM card if this is allowed by the card. Contact your service provider for details.

## ■ Profiles

Press **Menu**, and select *Profiles*.

To change the profile, select the desired profile, and select *Select*.

To activate a profile for a certain time, select the desired profile and *Timed*. Set the time (up to 24 hours) when you wish the profile setting to end. When the end time is reached, the previous profile, which was not timed, becomes active.

 **Tip:** To activate a profile in standby mode, briefly press the power key, and select the desired profile.

You can edit the profile settings in the communicator interface of your device. [See Profile settings on page 62.](#)

## ■ Settings

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

To adjust call settings, scroll to *Call settings*, and select:

- *Call forward* (network service) — select to direct your incoming calls to another number such as your voice mailbox.

For details, contact your service provider. Options not supported by your SIM card or your network operator may not be shown.



Select the option you want. For example, select *Forward if busy* to forward voice calls when your number is busy or when you decline an incoming call.

To set the forwarding setting to on, select *Activate*, the desired phone number (a voice mailbox or another number), and the timeout after which the call is forwarded if this is available for the forwarding option. To set the forwarding option to off, select *Cancel*, or to check whether the forwarding option is activated or not, select *Check status* if this is available for the forwarding option. Several forwarding options may be active at the same time.

You can see the corresponding indicators in standby mode.

- *Anykey answer* — select *On* if you want to answer an incoming call by briefly pressing any key except the power key, the selection keys, and the End key.

## Cover phone

- **Automatic redial** — select *On* to set the phone to make a maximum of 10 more attempts to connect the call after an unsuccessful call attempt.
- **1-touch dialing** — select *On* if you want to call the names and phone numbers assigned to the 1-touch dialing keys  to  by pressing and holding the corresponding key.
- **Call waiting** — select *Activate* to request the network to notify you when you receive a new call during a call (network service).
- **Send my caller ID** — select *Yes* to show your phone number to the person you are calling (network service). If you select *Default*, the device will use the setting that you have agreed with your service provider.
- **Line for outgoing calls** (network service) — select the phone line 1 or 2 for making calls. If you select *Line 2* and have not subscribed to this network service, you are not able to make calls. However, calls on both lines can be answered regardless of the selected line. For example, you can have a private and a business line. You can also prevent the line selection, if supported by your SIM card.



**Tip:** In standby mode, you can switch between the phone lines by pressing and holding .


To adjust phone settings, scroll to *Telephone settings*, and select:

- **Cell info display** — to set the device to indicate when you use it in a cellular network based on Micro Cellular Network (MCN) technology (network service).
- **Network selection** — to set the device to automatically select a cellular network available in your area. If you select *Manual*, you can select a network that has a roaming agreement with your home service provider.
- **Confirm SIM service actions** — to set the phone to show confirmation messages that are sent between your phone and your service provider when you use SIM card services.

Note that accessing these services may involve sending a text message or making a phone call. You may be charged for these services.

- **Help text activation** — to set the phone to show help texts that guide you in using the menu functions of the cover phone.
- **Start-up tone** — to play a tone when the cover phone is switched on.

To adjust phone security settings, scroll to *Security settings*, and select:

- **PIN code request** — to set the phone to request your PIN code every time the phone is switched on. Note that some SIM cards do not allow this setting to be changed.
- **Call restriction service** — to restrict calls (network service).  
Select the desired all restriction option and set it on (*Activate*) or off (*Cancel*), or check whether the option is active (*Check status*).
- **Access codes** — to change the security code, PIN code, PIN2 code, or barring password.
- **Lock if SIM card is changed** — to set the device to ask for the lock code when an unknown SIM card is inserted into your device. The device maintains a list of SIM cards that are recognized as the owner's cards.
- **Lock system** — to lock the device. To unlock the device, press *Unlock* →  in standby mode. [See Defining device lock settings on page 64.](#)

To adjust phone display settings, scroll to *Display settings*, and select:

- **Color schemes** — to choose the color for some parts of the phone display, such as the indicators for the signal strength and battery charge level.
- **Operator logo** — to display or hide the operator logo.
- **Screen saver timeout** — to set the period after which the screen saver is activated.

To adjust the time and date settings, scroll to *Time and date settings*.

To set the function for the right selection key in standby mode, scroll to *Right select key*, and select the desired function from the list.

## ■ Camera

[See Camera and Images on page 56.](#)

### 3. Desk

*Desk* is a starting point from which you can open all applications in the device or on a memory card. Use the scroll key or arrow keys to move up and down on the screen.



Desk shows all applications that are installed in your device. When you install new applications, they are shown on Desk as well. Most applications are grouped in default groups, which are *Personal*, *Office*, *Media*, and *Tools*. If you have applications on a memory card, those are shown on Desk or in one of the groups, depending on the application.


The applications are grouped in the default groups as follows:


- the *Personal* group: *Telephone*, *Contacts*, *Messaging* and *Calendar*
- the *Office* group: *Documents*, *Sheet*, *Presentations*, *File manager*, and *Calculator*
- the *Media* group: *Web*, *Images*, *Voice rec.*, *Music player*, and *RealPlayer*
- the *Tools* group: *Control panel*, *Backup*, *Sync*, *Data transfer*, *Modem*, *Device manager*, *Cell broadcast*, and *Help*

To open an application or group, or activate a shortcut, select the application, group, or shortcut, and press *Open*.

To remove an application, go to *Desk* → *Tools* → *Control panel* → *Data management* → *Application manager*.

To write a note, press *Write note*.

 **Tip:** To write a note in Desk main view, you can also press *Desk*.

 **Tip:** The notes are saved to the location you are in. For example, tips that are created from the *Office* group are saved in that group. You can view a list of all notes in *Desk*: press *Menu*, and select *View* → *Note list...*

You can add your own shortcuts to *Desk* from most applications. The shortcuts can open a document or a Web page.

To add a shortcut to *Desk*, press *Menu*, and select *File* → *Add to Desk*. Scroll to the group you want to add the shortcut to, select the group, and press *OK*.

To remove a shortcut or note, press *Menu*, and select *File* → *Delete*.

To change the order of application, shortcut, or note icons, select the icon, press *Menu*, and select *File* → *Move*. Move the icon to its new location using the scroll key or arrow keys, and press *Place here*. You cannot move an application, shortcut or note to groups.

To increase or decrease the size of the icons, press *Menu*, and select *View* → *Zoom in* or *Zoom out*.

To add or change a background image, press *Menu*, and select *Tools* → *Display settings...* Select the *Desk* page, and set *Wallpaper* to *Yes*. In the *Image file* field, press *Change* to browse for an image. Scroll an image, and press *OK*.

 **Tip:** You can set a background image for the cover phone display on the *Cover* page of the same dialog.

To change the icon or name of a group, application, shortcut, or note, select the item, press *Menu*, and select *File* → *Properties*. Scroll to *Icon*, and press *Change*. Scroll to a new icon, and press *Done*. Scroll to *Name*, enter the new name, and press *Done*.

#### ■ Managing groups

You can group applications, shortcuts, or notes into different groups on *Desk*. You can have the same application or shortcut in several groups.

To open a group, select the group, and press *Open*.

To move an application, a shortcut, or a note to a different group, select an item, press *Menu*, and select *File* → *Show in groups...* The current group is marked. Scroll to a new group, select the group, and press *Done*.

#### ■ Creating new groups

You can group applications, shortcuts, or notes to different groups in *Desk*. You cannot create a group inside a group, for example, you cannot create a group inside the *Office* group.

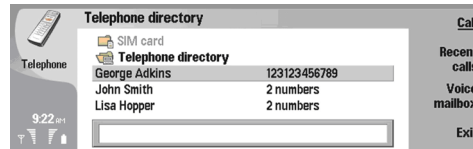
To create a new group, press *Menu*, and select *File* → *New group...* Enter a name for the group, and press *OK*.

## 4. Telephone

In *Telephone*, you can view the contacts you have stored in the telephone directory, SIM card, or memory card. You can also make phone calls, view recent calls, contact voice mailboxes, and define call settings.



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



### ■ Making a call

To make and receive calls, the cover phone must be switched on, the device must have a valid SIM card installed, and you must be located in a service area of the cellular network.

To make a call, go to *Telephone*, type the phone number, or select the contact from the list, and press *Call*.

To adjust the volume of the active call, press *Audio controls*. Press *Volume +* to increase the volume or *Volume -* to decrease it. Press *Done* when the volume is set.

To view calls you have recently made, answered, or missed, press *Recent calls*, and select *Dialed calls*, *Received calls*, or *Missed calls*. To move from one dialog page to another, press *Menu*. To call a number, scroll to the number, and press *Call*.

To check your voice mail (network service), press *Voice mailbox*.

Note that a GPRS connection is put on hold during voice calls.

### ■ Answering a call

You can see the name and telephone number of the incoming call (if allowed by the caller), or just the number if the number is not included in your Contacts directory.

To answer the call, press *Answer*.



**Tip:** If you want to have a private telephone conversation, use the hands-free set or close the device cover.

To switch between an active call and a call on hold (network service), select the call that is on hold with the arrow keys, and press *Activate*.

To mute the ringing tone, press *Silence*.

To decline the call, press *Decline*.

### ■ 1-touch dialing

1-touch dialing allows you to make a call by pressing a number key and the Call key when the device cover is closed.

Press *Menu*, and select *Settings* → *1-touch dials...*

To assign a number key to a phone number, scroll to an 1-touch dialing key, and press *Add number*. Select the desired number from the Contacts directory.

To delete the phone number assigned to a number key, scroll to the 1-touch dialing key, and press *Remove number*.

To modify a phone number assigned to a number key, scroll to the 1-touch dialing key, and press *Change number*. Select the desired number from the Contacts directory.

### ■ Making a conference call

In a conference call, you and up to five persons can hear each other simultaneously.

To make a conference call (network service), make a call, or answer an incoming call. During the call, make another call, or answer another incoming call, and press *Conference call*.

To view a list of conference call participants, press *Conference commands*.

To mute a conference call, press *Mute*.

To remove a participant from the conference call, scroll to the participant in the list, and press *Drop*.

To have a private phone call with a participant, scroll to the participant in the list, and press *Private call*.

## ■ Viewing dialed, received, and missed calls

You can view calls that you have recently dialed, received, or missed.

The phone saves missed and received calls only if the network supports these functions and if the phone is switched on and within the network service area.

Press [Recent calls](#), and select [Dialed calls](#), [Received calls](#), or [Missed calls](#).

To move from one dialog page to another, press [Menu](#).

You can also view call information in the Log. [See Log on page 24](#).

To call a number, select a call in the list, and press [Call](#).

To remove all calls from the list, press [Clear all](#).

To save the phone number of the call in your Contacts directory, select the number in the list, and press [Add to Contacts](#).

## ■ Sending touchtones

You can send touchtones during an active call to control your voice mailbox or other automated phone services.

To send a touchtone sequence, make a call, wait until the other end answers, press [Menu](#), and select [Call...](#) → [Send touch tone...](#) Select a predefined touchtone sequence, or type it.



**Tip:** You can attach touchtone sequences to contact cards. Go to [Contacts](#), open a contact card, press [Add field](#), and select [DTMF](#).

To insert a pause of about 2 seconds before, or between, touchtones, press the [p](#) key.

To set the device to send the touchtones only after you press [Send tone](#) during a call, press the [w](#) key.



**Tip:** You can also send tones by pressing the number keys. When the device cover is closed, you can press number keys on the phone keypad to send tones.

## ■ Setting the offline profile

The offline profile prevents you from accidentally switching on your phone, using Bluetooth, sending or receiving messages, and it also closes any Internet connection which may be in operation when the offline profile is selected. Note, however, that the offline profile does not prevent you from establishing a new wireless LAN connection. Therefore, remember to comply with any applicable safety requirements when establishing and using a wireless LAN connection.



**Important:** In offline profile you cannot make (or receive) any calls, or use other features that require GSM network coverage. To make any calls, you must first activate the phone function by changing the profile. You may, however, be able to make an emergency call in offline profile by pressing the power key on the cover of the device and then entering the official emergency number. This can be done using the cover phone interface only, not the communicator interface. If the device has been locked, enter the lock code to activate the phone function. When the device is locked, calls may still be possible to the official emergency number.

Making an emergency call in offline profile or when the device is locked requires that the device recognizes the number to be an official emergency number. It may be advisable to change the profile or unlock the device by entering the lock code before you make the emergency call.

To activate the offline profile, go to [Telephone](#), press [Menu](#), and select  → [Offline](#).

To allow full communication again, press [Menu](#), and select  → [Exit Offline profile](#) → [OK](#). Then switch on the cover phone.



**Tip:** You can activate the offline profile in any application menu, or from the cover phone.

## ■ Call forwarding

You can forward incoming calls to your voice mailbox or to another phone number.

To forward voice calls, go to [Telephone](#), press [Menu](#), and select [Settings](#) → [Voice call forwarding](#).

Select one of the following forwarding options:

- [Forward all calls](#) — to forward all incoming calls
- [Forward if busy](#) — to forward incoming calls when you have an active call
- [Forward if out of reach](#) — to forward calls when the phone is either switched off or out of network coverage
- [Forward if not answered](#) — to forward calls after a certain time period. Define the time you let the phone ring before forwarding the call in the [Time delay](#) field.



**Tip:** To activate [Forward if busy](#), [Forward if out of reach](#), and [Forward if not answered](#) in a single action, scroll to [Forward if not available](#), and press [Change](#).

To check the current forwarding status, scroll to the forwarding option, and press [Check status](#).



## Telephone

To stop forwarding voice calls, press *Cancel all*.

### ■ Call restriction

You can restrict incoming or outgoing calls, and international calls (network service).

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

To restrict voice calls, go to *Telephone*, and select *Settings* → *Voice call restriction*.

Select one of the following restriction options:

- *Outgoing calls* — to prevent making voice calls with your device
- *Incoming calls* — to restrict incoming calls
- *International calls* — to prevent calling to foreign countries or regions
- *Incoming calls when roaming* — to restrict incoming calls when outside your home country
- *International except home country* — to prevent calls to foreign countries or regions, but to allow calls to your home country

To use the call restriction service, you need the restriction password that you receive from your service provider when you subscribe to the service.

To check the status of voice call restriction, scroll to the restriction option, and press *Check status*.

To stop voice call restriction, press *Cancel all*.

### ■ Call, network, and phone line settings

In the *Other settings* dialog you can define various settings related to calls and network services.

Go to *Telephone*, press Menu, and select *Settings* → *Other settings*.

#### Call settings

In the *Other settings* dialog, select *Call*.

To show your phone number to the recipients of your calls (network service), scroll to *Send my caller ID*, press *Change*, and select *On*.

To set the phone to briefly show the approximate duration of the last call, scroll to *Summary after call*, press *Change* and select *On*.

To set the device to redial the number if it was busy at the first call attempt, scroll to *Automatic redial*, press *Change*, and select *On*.

#### Network settings

In the *Other settings* dialog, select *Network*.

To select a cellular network manually, scroll to *Network selection*, press *Change*, and select *Manual*. Select one of the networks available in your location.



**Tip:** Manual selection is useful when you know that one network costs less than another, or that it has more bandwidth.

To set the device to select the network automatically, scroll to *Network selection*, press *Change*, and select *Automatic*.

To use the call waiting service (network service), scroll to *Call waiting*, press *Change*, and select *On*. When you receive a new call during a call, a sound and a note notify you of the new call.



**Tip:** Press *Check status* to find out if call waiting is in use.

#### Advanced settings

You can restrict calls to certain numbers and select the phone line you want to use.

When fixed dialling is activated, calls still may be possible to the official emergency number programmed into your device.

In the *Other settings* dialog, select *Advanced*.

To allow calls only to certain numbers (fixed dialling), scroll to *Fixed dialling number*, press *Change*, and select *On*. Even when fixed dialling is in use, you can browse the numbers saved in the device memory. If your SIM card does not support fixed dialling, you cannot use this function.

To modify the list of fixed dialling numbers, scroll to *Fixed dialling number*, and press *Number list*.



**Tip:** With fixed dialling, you can, for example, restrict calls to certain areas. In this case, type the area code in the *Number* field.

## Telephone

To change the phone line for outgoing calls (network service), scroll to *Telephone line in use*, press *Change*, and select the phone line. To be able to use this function, you need a SIM card that supports the alternate line service and a subscription to two phone lines.

To prevent the phone line selection, scroll to *Block line selection*, press *Change*, and select *Yes*.

### ■ Voice mailbox settings

You can define the phone number of a voice mailbox and a touchtone sequence that you want to use with the mailbox (network service).

Press Menu, and select *Settings* → *Voice mailboxes...*

To define a phone number of the voice mailbox, scroll to *Number*, and type the phone number. You can obtain the number of the voice mailbox service from your service provider.



**Tip:** If you want to use your voice mailbox abroad, add the plus sign and the country or region code to the phone number.

To define a touchtone sequence for the voice mailbox, scroll to *Touch tone*, and type the tone sequence.

### ■ Log

In the *Log*, you can view information, such as sent and received text messages and made and received calls, about the communication history of a device.

To access the Log, press Menu, and select *Tools* → *Log*.



**Shortcut:** You can press Shift+Ctrl+L to open the Log in most applications.

To use the *From/To* information, press *Use*. You can answer text messages, faxes, or calls or add the caller or sender of a message to your contacts by pressing the appropriate button.

To select the type of communication that you want to view, for example, only phone calls, press *Filter by type*.

To view Log events by direction, select *View* → *Filter by direction...* You can, for example, view all communication, or view only incoming communication, outgoing communication, or missed communication.

To sort the Log information in a different order, press Menu, and select one of the two options in *View* → *Sorting order*

To view detailed information about a communication event, press *Details*. For example, you can see the type, direction, and subject of a message, or the phone number of the caller or sender of a message.

To clear the contents of the Log, press Menu, and select *Tools* → *Clear log...*

To specify how long log events remain in the Log before they are deleted, press Menu, and select *Tools* → *Log duration...*

To copy a number from Log, press Menu, and select *File* → *Copy number*. You can paste the number to a new contact card or message.

To view the amount of data sent and received with GPRS or wireless LAN, press Menu, and select *Tools* → *GPRS data counter* or *WLAN data counter*.



## 5. Messaging

In *Messaging*, you can create, send, receive, view, edit, and organize text messages, multimedia messages, e-mail messages, fax messages, and special text messages containing data, such as settings or bookmarks of Web pages. You can also receive messages and data using Bluetooth or Infrared, receive service messages, cell broadcast messages, and send service commands.

Before you can send or receive messages:

- The cover phone must be switched on, the device must have a valid SIM card installed, and you must be located in a service area of the cellular network. The device cover can either be open or closed.
- The network you are using must support fax calls, data calls, and the Short Message Service if you want to use these.
- The fax, data and Short Message Service must be activated for your SIM card.
- The Internet access point (IAP) settings must be defined. [See Internet setup on page 66.](#)
- The e-mail settings must be defined. [See E-mail account settings on page 29.](#)
- The short message settings must be defined. [See Text message settings on page 31.](#)
- The multimedia message settings must be defined. [See Multimedia message account settings on page 33.](#)

Contact your service provider, network operator or Internet service operator for the correct settings.



**Tip:** When you take your Nokia 9500 Communicator into use, it may recognize the SIM card provider and configure the correct text message, multimedia message, and GPRS settings automatically. You may need to contact your network operator to activate multimedia messages and GPRS before they become available.

### ■ Messaging center

The main view of Messaging has two frames: the list of folders on the left, and the messages from the selected folder on the right. Press the tab key to move between the frames.



#### Folders in the Messaging main view:

- **Inbox** — contains all received messages except e-mails and SIM card and cell broadcast messages. E-mail messages are stored in the remote mailbox.
- **Outbox** — contains messages waiting to be sent.
- **Drafts** — stores draft messages that have not been sent.
- **Sent** — stores messages that have been sent, except those sent using Bluetooth.

Any remote mailboxes that you define are shown last in the list of folders.

#### Writing and reading messages

To view a message, select the message, and press *Open*.

To expand a folder to full display size, press *Open folder*.

To write a new message, press *Write message*. Select the type of message, and press *OK*.

To reply to the sender and all recipients of an e-mail, press Menu, and select *Write* → *Reply to all*.

To forward a message, press Menu, and select *Write* → *Forward*. Note that it may not be possible to forward all messages.

To retrieve messages from your SIM card, press Menu, and select *Receive* → *SIM messages*. SIM messages are text messages, that have been stored on your SIM card.

You may not be able to print all message types, for example multimedia messages or other special message types.

To sort messages in a specific order, press Menu, and select one of the options in the *View* → *Sort by* menu.

To print a message, press Menu, and select *File* → *Printing* → *Print...*

To change the page layout before printing, press Menu, and select *File* → *Printing* → *Page setup...*

#### Managing messages

To create a new folder for messages, press Menu, and select *File* → *New folder*. Enter a *Folder name*, select where the folder should be created, and press *Create*. Note that you cannot create subfolders in Inbox, Outbox, or Sent folders, except in IMAP4

## Messaging

remote Outbox, and Sent folders when online. IMAP 4 is a standard protocol for accessing e-mail on your remote server. With IMAP4, you can conduct searches, create, delete and manage messages and folders on the server.

To rename a folder, select the folder, press Menu, and select *File* → *Rename folder*. Enter the new name, and press *Rename*. Note that you can only rename folders that you have created.

To move a message, select the message, press Menu, and select *Edit* → *Move*. Scroll to a new folder, and press *Move*. If you want to move the message to a subfolder, select the main level folder, and press *Expand*.

To search for messages, press Menu, and select *Edit* → *Find...* Enter the text for which you want to search, and press *Find*.

To refine your search, press *Options*.

### Avoiding low memory

You should regularly delete messages from Inbox and Sent folders, and delete retrieved e-mail from the device memory to free up memory space.

To delete e-mails from the device, press Menu, and select *Tools* → *Delete e-mails locally...* Press *Change*, and select the e-mail you want to delete. For example, you can delete all e-mail or only e-mail that was received more than two weeks ago. Press *Delete now* to delete the e-mails.



**Tip:** Use this method to delete e-mail only from the device. The original e-mail remains on the server. If you delete e-mails with the *Delete* command button in Messaging, the messages you delete are permanently deleted from your remote mailbox the next time you go online.

To delete e-mail both from the device and from the remote server, open an e-mail, and press *Delete*.

To empty the *Sent* folder automatically, press Menu, and select *Tools* → *Sent items storage...* Set *Delete sent items* to *automatically*, and enter the number of days after which the messages are deleted.

### RIM BlackBerry

This is the feature definition. It is a factual definition of the feature.

BB cshelp 2

BB cshelp 3

BB cshelp 4

BB cshelp 5

BB cshelp 6

BB cshelp 7

BB cshelp 8

BB cshelp 9

BB cshelp 10

BB cshelp 11

BB cshelp 12

BB cshelp 13

### ■ E-mail

To write and read e-mail, go to [Messaging](#).

The Nokia 9500 Communicator mail system is compliant with Internet standards SMTP, IMAP4 (rev 1), and POP3.

To receive and send mail, you must set up a remote mailbox service. This service may be offered by an Internet service provider, a network service provider, or your company.

Before you can send, receive, retrieve, reply to, and forward mail on your device, you must do the following:

- You must configure an Internet access point (IAP) correctly. [See Internet setup on page 66.](#)
- You must define your mail settings correctly. [See E-mail account settings on page 29.](#)

Follow the instructions from your remote mailbox and Internet service providers. Contact your network and Internet service providers or operator for the correct settings.

## Working online and offline

Working online means working with your device connected to a remote mailbox through an Internet connection. When online, you can delete, rename, or create new folders in your remote mailbox. When you work offline, which means that your device is not connected to a remote mailbox, you can delete only messages, not folders.

Note that any changes you make in the remote mailbox folders while offline take effect in your remote mailbox the next time you go online and synchronize.

If you delete an e-mail from your device when offline, the e-mail will be deleted from the remote mailbox the next time you connect to the mailbox. You can delete a message from your device to save memory. [See Avoiding low memory on page 26.](#)

Managing your e-mail offline enables you to save in connection costs and work in conditions that do not allow a data connection. If you work in conditions where one connection becomes unavailable, you can change the connection.

### Changing the Internet connection

If your connection becomes unavailable, you may need to change the connection.

To use another connection, press **Menu**, and select **Tools** → **Change connection**. Scroll to a new connection, and press **Connect**. Note that you must select an e-mail account and be online before you can change the connection, and that the connection is changed only for that account.

You are asked for confirmation if your current connection becomes unavailable, if you have not set the device to change connection automatically. [See E-mail account settings on page 29.](#)

To use another connection, scroll to the connection you want to use, and press **Change**.

To go online after selecting a new connection, press **Connect**.

## Writing and sending e-mail

Press **Write message**, select **E-mail**, and press **OK**.

To write new e-mail, press **Recipient**. Select the recipient of the message from the **Contacts directory**, and press **To**. Enter a subject and the message, and press **Send**. You can also enter the recipient's e-mail address in the **To** field. Note that e-mail addresses cannot contain accented characters such as Å, Ä, or É.



**Tip:** If you select the primary recipient of the e-mail from the Contacts directory, you can also select other recipients using the **Cc** (the recipient is shown to all other recipients) and **Bcc** (the recipient is hidden from all other recipients) buttons.

To set the sending time or adjust other delivery settings, press **Menu**, and select **Tools** → **Sending options...**

You can send documents, images, and other files as e-mail attachments.

To attach a file to an e-mail, press **Insert file**.



**Tip:** All e-mail is stored in the **Outbox** before sending. Unless your e-mail is sent immediately, you can open the Outbox and suspend and resume sending or open the e-mail.

To store the e-mail in the **Drafts** folder without sending it, press **Close**.

Start writing or editing an e-mail, press **Menu**, and select **Tools** → **Preferences...**

To change the font type or size of the text, select the appropriate field, and press **Change**. Select the new font type or font size, and press **OK**.

## Sending options

To define sending options for the e-mail you are writing, press **Menu**, and select **Tools** → **Sending options...**

Select the **Message** page.

To set the importance of your e-mail, select **Priority**, and press **Change**.

To define the e-mail type, select **Message type**, and press **Change**.

Select from these options:

- **Plain text (no MIME)** — Select when the receiving e-mail system cannot display messages sent in the regular Internet e-mail format, MIME.
- **Plain text** — Select to use the regular Internet e-mail format, MIME. The MIME format allows, for example, including images as attachments to the message.
- **Formatted text (HTML)** — Select to use enhanced text formatting options, such as bold, italic, underline, or bullets. If the receiving e-mail system does not support HTML, the message is shown as plain text without the formatting.

To receive a note when the recipient has opened the e-mail, select **Request read report**, press **Change**, and select **Yes**. Note that some e-mail servers may not support read reports, or the user may have turned the read receipt sending off.

Select the **Delivery** page.

## Messaging

To change the e-mail account you use to send the e-mail, select *E-mail account in use*, and press *Change*. Select the new account, and press *OK*.

To set the time you want to send the e-mail, select *Send e-mail*, and press *Change*.

Select from these options:

- *Immediately* — to send the e-mail immediately during the current connection
- *Upon request* — to store the e-mail in the *Outbox*, from which you can send it later
- *During next connection* — to send the e-mail the next time you establish a connection.

### Retrieving e-mail

E-mail addressed to you is not automatically received by your device, but by your remote mailbox. To read your e-mail, you must first connect to the remote mailbox and then select the e-mails you wish to retrieve into your device. Connection to a remote mailbox is established using data call, GPRS, wireless LAN, or IP passthrough. [See Connectivity on page 82.](#)

Note that e-mail that you mark as deleted when offline will also be deleted from the remote mailbox server when the device is online again. You can delete local e-mail without deleting remote mailbox files. [See Avoiding low memory on page 26.](#)

To retrieve e-mail from a remote server, scroll to your mailbox, and press *Retrieve e-mail*.

Select:

- *Mail headers (stay online)* — to retrieve only the sender, date and subject information.
- *Messages* — to retrieve entire e-mails without the attachments.
- *Messages and attachments* — to retrieve all e-mails and the attachments they contain.
- *Ask before retrieving* — to confirm whether the device should retrieve mails.

Press *Retrieve* to go online and retrieve the mails.

If you have created subfolders in your IMAP4 mailboxes, you can view those folders with your device. To be able to view folders in your IMAP4 mailbox, establish an Internet connection, press Menu, and select *Receive* → *Folder subscriptions...*. Note that you can only subscribe to folders in your IMAP4 mailboxes.

To view a remote folder, select a folder, and press *Subscribe*. Every time you go online the subscribed folders are updated. Note that this may take a lot of time if the folders are large.

To update the list of folders, press *Update list*.

### Reading and replying to e-mail

To reply to an e-mail, press *Reply*.



**Tip:** If an e-mail contains Web addresses, e-mail addresses, or phone or GSM numbers, you can use them. For example, you can select a Web address or a phone number, and press the appropriate command button to open the Web page, send e-mail or call the number.

To add new contacts to your Contacts directory, select the sender or a recipient from the header fields, press Menu, and select *Tools* → *Add to Contacts...*



**Tip:** If you reply to an e-mail that contains attached files, the attachments are not included in the reply. If you forward the received e-mail, attachments are included.

To forward an e-mail, press Menu, and select *File* → *Forward*.

To print an e-mail, press Menu, and select *File* → *Printing* → *Print...*

### E-mail attachments



**Important:** E-mail messages may contain viruses or otherwise be harmful to your device or PC. Do not open any attachment if you are not sure of the trustworthiness of the sender

To open an attachment, select the attachment, and press *Open*.

To save an attachment, select the attachment, and press *Save*.

To delete an attachment, select the attachment, and press *Delete locally*. Note that a copy of the attachment remains on the e-mail server.

### Changing e-mail replying and viewing preferences

Open a received e-mail, and press *Preferences...*

To include the text of the received e-mail in your replies, select *Include message in reply*, press *Change*, and select *Yes*.

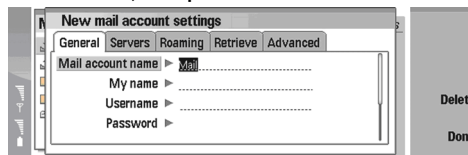
To define the font type or size of text, select the appropriate field, and press *Change*. Choose the new font type or size, and press *OK*.

## E-mail account settings

Any changes you make to e-mail settings affect the way your e-mail is sent and received.

Press Menu, select *Tools* → *Account settings...*, and press *Create new*.

Scroll to the type of account that you want to create, and press *OK*.



Define the following on the *General* page:

- *E-mail account name* — Enter a descriptive name for the connection. Note that the maximum length of the name is 25 characters.
- *My name* — Enter your name.
- *Username* — Enter your user name, given to you by your service provider.
- *Password* — Enter your password. If you leave this field blank, you will be prompted for a password when you try to connect to your mailbox.
- *My e-mail address* — Enter the e-mail address given to you by your service provider. The address must contain the @ character. Replies to your messages are sent to this address.
- *Internet access* — Select the Internet access point that you want to use.
- *Default account* — If you have created several e-mail accounts, select the e-mail account you want to use as the default account.



**Tip:** You can move from one dialog page to another by pressing the Menu key.

Define the following on the *Servers* page:

- *E-mail account type* — Select the e-mail protocol your remote mailbox service provider recommends. Note that this setting can be selected only once and cannot be changed if you have saved or exited from the mailbox settings.



**Tip:** POP3 is a version of Post Office Protocol, a standard protocol for receiving e-mail from your remote server. With POP3, you can check your remote mailbox and download your e-mail. IMAP4 is a version of Internet Message Access Protocol, a standard protocol for accessing e-mail on your remote server. With IMAP4, you can conduct searches, create, delete and manage messages and folders on the server.

- *Outgoing e-mail server* — Enter the IP address or host name of the computer that sends your e-mail.
- *Incoming e-mail server* — Enter the IP address or host name of the computer that receives your e-mail.
- *Use SMTP authentication* — Select whether the SMTP (Simple Mail Transfer Protocol) server requires authentication, and enter the SMTP user name and password.

Define the following on the *Roaming* page:

- *Change connection automatically* — Select whether you want the device to switch between connections automatically if connection to the primary Internet access point is lost.
- *Second access, Third access, and Fourth access* — Define the other possible Internet access options.

Define the following on the *Retrieve* page:

- *Retrieve* — Select whether you want to retrieve only the e-mail header information such as sender, subject and date, e-mails, or e-mails with their attachments.
- *Max. size of e-mail* — Define how large e-mails are retrieved to your device.
- *Sync. e-mails in Inbox* — Select the number of e-mails you want to download from the remote server to your Inbox.
- *Sync. e-mails in folders* — Select the number of e-mails you want to download from the remote server to your folders.

Define the following on the *Advanced* page:

- *Default e-mail type* — Select whether to sent e-mail as *Plain text*, *Plain text (no MIME)* if the receiving e-mail system cannot display e-mail sent in the regular Internet format, or *Formatted text (HTML)* to be able to use enhanced text formatting options.
- *Send e-mail* — Select *Immediately* to send the e-mail as soon as possible, *During next connection* to send it the next time you retrieve e-mail, or *Upon request* to store the e-mail in the Outbox, from where you can send it later.
- *Include signature* — Select whether you want to use a signature. Select *Use my contact card* to use the contact card in the device, or *Custom* to use a signature file that you can create for the e-mail account.
- *Request read report* — Select whether you want to receive a note when the recipient has opened your e-mail.
- *Allow report requests* — Select whether you want the sender of the e-mail to receive a note that you have read the e-mail.
- *Copy to my e-mail address* — Select whether you want to receive a copy of every e-mail you send.

## Messaging

- **Secure login (APOP)** — Select whether you want to use a POP3 secure login system, if the POP3 server you use supports this system.
- **Incoming secure connection** — Select whether you want to use encryption to make the incoming connection secure. Secure connection is used with POP3 and IMAP4 protocols to secure the connection to a remote mailbox. Note that the remote server must support secure connections for this function to work.
- **Outgoing secure connection** — Select whether you want to use encryption to make the outgoing connection secure. Secure connection is used with the SMTP protocol to secure the connection to a remote mailbox. Note that the remote server must support secure connections for this function to work.
- **IMAP4 folder path** — Enter the path to the IMAP4 inbox location in case the server cannot open it automatically. Normally you do not need to define the path.

To edit an existing account, select the account type that you want to edit, and press **Edit**.

### ■ Text messages

Your device supports the sending of text messages beyond the normal 160-character limit. If your message exceeds 160 characters, it will be sent as a series of two or more messages.

In the navigation bar, you can see the message length indicator counting backwards from 160. For example, 10 (2) means that you can still add 10 characters for the text to be sent as two messages.

Note that using special (Unicode) characters such as ð, â, á, ì take up more space.

If there are special characters in your message, the indicator may not show the message length correctly. If **Confirm multipart messages** is set to **Yes**, then before the message is sent, the device tells you if the message exceeds the maximum length allowed for one message. [See Text message settings on page 31.](#)

Press **Write message**, select **Text message**, and press **OK**.

To write a new text message, press **Recipient** to select the recipients of the message, or enter the recipients' GSM phone numbers in the **To:** field. If you enter more than one number, separate the numbers with a semicolon or by pressing the Enter key after each number. Write the message, and press **Send**. You can see the number of characters that are left in the character counter. Note that a text message can only contain unformatted text.

To set the sending time or modify other delivery settings, press **Sending options**.



**Tip:** All text messages are stored in the Outbox until they are sent. Unless the text message is sent immediately, you can open the Outbox and suspend or resume the sending of the message.

To print the text message, press **Menu**, and select **File** → **Printing** → **Print...**

### Sending options for a text message

To set sending options for the current text message, press **Sending options** in the text message editor. To move from one dialog page to another, press the **Menu** key.

On the **Sending options** page, define the following:

- **Service center in use** — Select the message center to deliver the message.
- **Delivery report** — Select whether to view the status of the sent text message in Log.
- **Send text message** — Select when to send the text message. If you select **Upon request**, you must select the message in Outbox, and press **Send** to send it. If you select **Scheduled**, you must define the date and time when the message will be sent.

To set sending options for all text messages, press **Menu** in the main view of Messaging, and select **Tools** → **Account settings...** Select **Text message**, and press **Edit**.

To set sending options for the current text message, press **Sending options** in the text message editor. To move from one dialog page to another, press the **Menu** key.

On the **Advanced** page, define the following:

- **Validity period** — Select how long the message center stores a text message if a recipient cannot be reached. **Maximum** is the maximum value allowed by the message center. Note that the network must support this feature.
- **Reply via same center** — Select whether the reply to your message should be sent using the same message center number your message used.
- **Message conversion** — Select whether to convert the text message into a fax, e-mail, or paging. Change this option only if you are sure that the message center can convert text messages into these other formats. Contact your network operator for more information.
- **Concatenation** — Select **No** to send text messages longer than 160 characters as several messages. Select **Yes** to send text messages that are longer than 160 characters as several messages, and allow them to be received as one long message by compatible devices. Sending a message over 160 characters may be more expensive than one message.



## Messaging

To set sending options for all text messages, press Menu, and select *Tools* → *Account settings...* Select *Text message*, and press *Edit*.

### Replying to text messages

To respond to received text messages, open the message, and press *Reply*.

To call the sender of the text message, press *Call sender*.



**Tip:** If the text message that you received contains a hyperlink, select the hyperlink, and press *Open Web address* to open the browser. If the text message that you received contains a number, place the cursor on the number, and press *Call number* to call the number.

### Text message settings

To define general sending options for text messages, press Menu, and select *Tools* → *Account settings...* Select *Text message*, and press *Edit*. To move from one dialog page to another, press the Menu key.

On the *General* page, define the following:

- *Service center in use* — Select the message center to deliver the messages.
- *Delivery report* — Select whether to view the status of the sent text messages in Log.
- *Send text message* — Select when to send the text messages. If you select *Upon request*, you must select a message in Outbox and press *Send* to send it.
- *Validity period* — Select how long the message center stores messages if a recipient cannot be reached. Note that the network must support this feature.

On the *Concatenation* page, define the following:

- *Concatenation* — Select *No* to send text messages longer than 160 characters as several messages. Select *Yes* to send text messages that are longer than 160 characters as several messages, and allow them to be received as one long message by compatible devices. Sending a message over 160 characters may be more expensive than one message.
- *Confirm multipart messages* — Select whether you want to see a confirmation note when you try to send text messages exceeding 160 characters.

On the *Advanced* page, define the following:

- *Reply via same center* — Select whether the reply to your message should be sent using the same message center number your message used.
- *Include original in reply* — Select whether to copy the text from a received text message to your reply.
- *Preferred connection* — Select whether to send the text message by GSM network or GPRS. Note that the message will be sent through GPRS only if GPRS is available. If GPRS is not available, the message will be sent through GSM.

You can also edit text message options in *Desk* → *Tools* → *Control panel* → *Messaging*.

### Modifying message center settings

To view message centers, press Menu, and select *Tools* → *Account settings...* Select *Text message*, and press *Edit*. In *General*, press *Service centers*.

To edit message centers, press *Edit*, and enter the *Service center name* and *Service center number*.

To add new message centers, press *New*, and enter the *Service center name* and *Service center number*.

To delete message centers, scroll to a center, and press *Delete*.

### Managing messages on the SIM card

Text messages may be stored on your SIM card.

To view text messages on the SIM card, press Menu, and select *Receive* → *SIM messages*.

To open a text message — on the SIM card, select the message, and press *Move*. The message is moved to the Inbox and deleted from the SIM card. Press *Close* to exit the SIM messages dialog. In Inbox, select the message, and press *Open*.

To copy a text message from the SIM card, select the message, and press *Copy*. The message is copied to the Inbox, and the original remains on the SIM card.

To remove a text message from the SIM card, select the message, and press *Delete*.

### Picture messages



**Note:** Picture message function can be used only if it is supported by your network operator or service provider. Only devices that offer picture message features can receive and display picture messages.

To view a picture message, select the message in *Messaging*, and press *Open*.

To reply to the sender, press *Reply via text msg.*. Note that the picture is not included in the reply.

To forward a picture message, press *Forward*. Press *Recipient* to select a recipient, write the message text, and press *Send*. Note that the picture message text cannot be longer than 120 characters.

### ■ Multimedia messages



**Note:** Only devices that offer compatible multimedia message or e-mail features can receive and display multimedia messages.

The appearance of a multimedia message may vary depending on the receiving device.

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

### Creating and sending multimedia messages

A multimedia message can contain text, images, or sound or video clips.

Note that this function can be used only if it is supported by your network operator or service provider.

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

Before you can send and receive multimedia messages on your device, you must have your multimedia message settings defined correctly. Contact your service provider for the correct settings. [See Multimedia message account settings on page 33.](#)

To create a multimedia message, press *Write message*, scroll to *Multimedia message*, and press *OK*. Press *Recipient* to select the recipients of the message, or enter the recipients' GSM phone numbers or e-mail addresses in the *To:* field. If you enter more than one number, separate the numbers with a semicolon or by pressing the Enter key after each number. Enter a subject, and create the message. After the message is ready, press *Send*.



**Tip:** You can also create multimedia messages directly from several applications, such as *Images* and *File manager*.

To add multimedia objects to a message, press *Insert*. You can insert images, sound clips, and video clips, and create page breaks in your message. Select the type of multimedia object you want to add, and press *Insert*.



**Tip:** A multimedia message may contain several pages. If the cursor is in the *To:*, *Cc:*, or *Subject:* field when you add a page, the new page becomes the first page of the message. Otherwise, the new page is added after the page where the cursor is. Each page can contain only one video or one sound clip.

To add special effects to images in multimedia messages, press *Menu*, and select *Options* → *Transition settings...*. You can specify the length of time an image is displayed and the style in which a new object is opened. You have to be in advanced editing mode.

To preview a multimedia message before sending it, press *Menu*, and select *View* → *Preview*.

To delete a multimedia object, select the object you want to delete, press *Menu*, and select *Edit* → *Delete* and the appropriate menu option.

To delete a page, scroll to the page, press *Menu*, and select *Edit* → *Delete* → *Page*.

You must be in the advanced editing mode to use most editing functions. Press *Menu*, and select *Options* → *Upgrade editing mode*.

To change the position of text in relation to images, press *Menu*, and select *Tools* → *Slide layout*. Select *Text right* or *Text left*.

To edit the type, color, and formatting of text, select the text, press *Menu*, and select *Options* → *Text format...*. You can also select the formatting before you start writing.

To change the background color of a multimedia message, press *Menu*, and select *Options* → *Background color...*. Press *Change*, scroll to a new color, and press *OK*. Press *Done*.

To change the sending options of a multimedia message, start to create or edit a message, press *Menu*, and select *Options* → *Sending options...*. You can select whether to receive delivery reports and how long the messaging center tries to send messages.

Set the following options:

- *Receive report* — Select whether you want to receive a notification when the message has been successfully delivered to the recipient. Receiving a delivery report of a multimedia message that has been sent to an e-mail address may not be possible.
- *Validity period* — Select how long the messaging center tries to send the message. If the recipient of a message cannot be reached within the validity period, the message is removed from the multimedia messaging center. Note that the network must support this feature. *Maximum* is the maximum amount of time allowed by the network.



## Receiving multimedia messages



**Important:** Multimedia message objects may contain viruses or otherwise be harmful to your device or PC. Do not open any attachment if you are not sure of the trustworthiness of the sender.

Multimedia messages are received in your Inbox, and you can open or reply to them as to other messages.

You can receive multimedia messages containing objects unsupported by your device, but you cannot view them. You can, however, try to forward these messages to another device that supports such objects..

To view a list of multimedia attachments in a message, press Menu, and select *Tools* → *Objects...*

To save a multimedia object, select the object, and press *Copy to*.

To play a multimedia object, select the object, and press *Open*.

## Multimedia message account settings

On the *Send* page, define the following settings:

- *Internet access* — Select the Internet access point (IAP) connection you want to use for sending messages.
- *Homepage* — Enter the address of the multimedia messaging center.
- *Receive report* — Select whether you want to receive a notification when the message has been successfully delivered to the recipient. Receiving a delivery report of a multimedia message that has been sent to an e-mail address may not be possible.
- *Sending time* — Select when you want the multimedia message to be sent.
- *Validity period* — Select how long the messaging center tries to send the message. If the recipient of a message cannot be reached within the validity period, the message is removed from the multimedia messaging center. *Maximum* is the maximum amount of time allowed by the network. Note that the network must support this feature.

On the *Receive* page, define the following settings:

- *Multimedia reception* — Select whether you want to receive multimedia messages always, only in your home network, or do not want to receive them at all.
- *On receiving messages* — Select *On* if you want to receive multimedia messages. The reception of multimedia messages is on by default. Select *Deferred* if you want the multimedia messaging center to save the messages to be retrieved later. Change this setting to *On* when you want to retrieve the messages. Select *Reject* if you want to reject multimedia messages. The multimedia messaging center will delete the messages.
- *Receive advertisements* — Select whether you want to receive messages defined as advertisements.
- *Receive anonymous messages* — Select whether you want to receive messages from unknown senders.

On the *General* page, define the following settings:

- *Compress images* — Select whether you want to compress images that you include in your multimedia messages. Compression may make the multimedia message size smaller.

## ■ Fax

To send a fax, press *Write message*. Scroll to *Fax*, and press *OK*. Press *Recipient*, and select the recipient from the *Contacts directory*. You can also enter the number yourself. Write the message, and press *Send*.

To change the font and format of fax text, press Menu, and select *Format* → *Font...*, *Formatting*, or *Alignment*.

To add a document, sheet or image to a fax, press *Insert object*. Note that it may not always be possible to insert a document to a fax. If you want to send a document as a fax, use the *File* → *Send* → *Via fax* option in *Documents*.

To print a fax, press Menu, and select *File* → *Printing* → *Print...* Check that the printing settings are correct, and press *Print*.

## Setting sending options for a fax

To change the fax sending options, start writing a fax, press Menu, and select *Tools* → *Sending options...*

On the *Fax cover page*, you can define what the first page of the fax looks like. Note that if you change the fax cover page, information you have already entered in the header of the current fax may be removed.

In *Send fax*, you can define when the fax is sent. Note that if you select *Upon request*, you must open Outbox and send the fax from there.

To view a received fax, select the fax, and press *Open*. Press the arrow keys to scroll the fax.

To rotate a fax, press *Rotate*.

To zoom in or out, press *Zoom in* or *Zoom out*.

## Saving a received fax

In the *Range selection* dialog, you can select the section of the fax you want to export to another picture file format.

To save a multipage fax, open the fax, press Menu, and select *File* → *Export...* Select *Whole document* to save the fax as a whole, *Current page* to save the page you are on, *Selected* to save a section that you selected, or *User defined*: to enter the page numbers of the pages you want to save.

## Editing fax settings

Press Menu, and select *Tools* → *Account settings...* Select *Fax*, and press *Edit*.

On the *General* page, define the following:

- *Fax cover page* — Select whether to use a header or cover page for a fax. Select *Template 1* to create a separate cover page, *Full template* to use a cover page that includes all the contact information of both the sender and the recipient, your remarks on the fax content, and the date, *Header* to display the sender and the recipient information and the date, or *None* for no cover page.
- *Send fax* — Select when to send the messages. If you select *Upon request*, you must select a message in Outbox, and send the fax from there.

On the *Advanced* page, define the following:

- *Resolution* — Select the resolution for your sent and received faxes.
- *ECM* — Select whether erroneous fax pages are automatically corrected during sending. Note that also the receiving device has to support ECM.
- *Resend* — Select whether to resend *All pages* or only the *Missed pages* if any fax pages failed to be sent.

To edit settings for fax forwarding or fax restriction, press *Fax forwarding* or *Fax restriction*.

## Receiving faxes from a remote fax box

You can retrieve faxes from a remote fax box using fax polling, if available in the network. It allows you to make a fax call to a fax machine and then receive information by fax.

To receive faxes from a remote fax box through fax polling, press Menu, and select *Receive* → *Dial fax poll*. Enter the fax box number, and press *Call*.

## ■ Special message types

The device can receive different types of messages, for example, text messages that contain data, operator logos, ringing tones, bookmarks, or Internet access or e-mail account settings.

The device can also receive service messages. Service messages are notifications of, for example, news headlines and may contain a text message or a link. For availability and subscription, contact your service provider.

## Receiving operator logos

To set a received operator logo as the new operator logo, open the message that contains the operator logo, and press *Save*. If you already have an operator logo, press *Replace* to confirm that you want to replace your current logo.

To delete the message that contains the operator logo, press *Delete*.

## Receiving ringing tones

To listen to a ringing tone, open the message that contains the tone, and press *Play*.

To save a ringing tone, press *Save*. If you already have a ringing tone with the same name, the new ringing tone is renamed with a number after the name.

## Receiving configuration messages



**Tip:** Configuration messages contain different settings, for example Internet access point settings, e-mail account or multimedia messaging settings, or voice mailbox or message center numbers, sent to you by a service provider.

To view a configuration message, select the message, and press *Open*.

To accept the settings, open the message, and press *Save*.

## Receiving e-mail notifications

To view an e-mail notification, select the message, and press *Open*.



**Tip:** An e-mail notification is a message containing information on the number of new e-mail messages in your mailbox.

### Opening password-protected messages

To view a message that is protected with a password, select the message, and press *Open*. Enter the correct password, and press *OK*. The password is usually supplied by the creator of the message, for example, the operator.

### Viewing bookmark messages

To view a message that contains a bookmark, select the message, and press *Open*.



**Tip:** A bookmark contains a name and an address for a Web page.

To save a bookmark, press *Save*.

### Viewing configuration details

To view information on the configuration settings that you have received in a text message, open the message, and press *Details*.



**Tip:** To save the settings, close the details dialog, and press *Save*.

Note that you may not be able to view the details of all configuration settings you receive.

### Renaming settings

If you try to save received settings with a name that already exists, you can select whether to replace or rename the settings.

To save the settings with another name, enter the new name, and press *Rename*.

Note that you may not be able to rename all settings.

### Receiving provisioning settings

To view a message that contains connectivity settings, select the message, and press *Open*. If the device asks for a password, enter your password, and press *OK*. Note that after three incorrect passwords, the message is deleted.

To accept the settings and configure your device, press *Save*. If you receive trusted server settings (basic connectivity settings and the location of the server) from your service provider, the settings are saved automatically, and an information message is placed to your Inbox..

## ■ Cell broadcast

In areas where the cell broadcast service is available (network service), you can receive messages on various topics from your service provider, such as weather or traffic conditions. For available topics and relevant topic numbers, contact your service provider. Note that a packet data (GPRS) connection may prevent cell broadcast reception. Contact your network operator for the correct GPRS settings.

Go to *Desk* → *Tools* → *Cell broadcast*.

To open a cell broadcast message, select a topic, and press *Read*.



**Tip:** To search for topics, enter a name or a number of a topic in the search field.

To receive a specific topic, select the topic, and press *Subscribe*. To stop receiving topics, select the topic, and press *Unsubscribe*.

To stop receiving cell broadcast messages, press *Reception off*. To start receiving cell broadcast messages again, press *Reception on*.

To add, edit, or remove topics, press Menu, and select one of the *Topic* → *More options* menu options.

To create a blank topic list, press Menu, select *List* → *Edit lists*, and press *New*. Enter a name for the topic list, and press *OK*.

To create a topic list from selected topics, press Menu, select *Topic* → *Add selected topics to list*, and press *New*. Enter a name for the topic list, and press *OK*.

To define the automatic detection of new topics, press Menu, and select *Tools* → *Settings* → *Add new topics automatically to list*.

To define the language of the received messages, press Menu, and select *Tools* → *Settings*. Scroll to *Language*, and select a language.

## 6. Web

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To connect to the World Wide Web:

- You must configure the Internet access point and Internet connection settings. [See Internet setup on page 66.](#)
- If you are using a data call or a GPRS connection, your wireless network must support data calls or GPRS, and the data service must be activated for your SIM card.

Contact your service provider for the correct settings.

The best way to browse Web pages is to use both the keyboard shortcuts and the pointer. Move the pointer on the page with the scroll key. Scroll the page up, down, left or right with the arrow keys. You can also use the tab key to select elements on a page.



To open a Web page, press [Open Web address](#), enter the address of the page, and press [Go to](#). Note that if you are not online, you need to establish a connection.



**Tip:** To open a link, move the pointer on the link, and press the scroll key.

To add a page that you are viewing to your bookmarks, press Menu, and select [Tools](#) → [Add to bookmarks](#).

To maximize a Web page in the display or return it to normal display, press Menu, and select [View](#) → [Full screen mode](#). In full screen mode, press any of the command buttons to display the commands.

To adjust Web page content to the screen horizontally, press Menu, and select [View](#) → [Fit to screen](#).

To save a Web page without images, press Menu, and select [File](#) → [Save as...](#)

To save an image, press Menu, and select [File](#) → [Save](#) → [Save image as...](#)

To save a Web page with frames, select the frame, press Menu, and select [File](#) → [Save](#) → [Save frame as...](#)

To print a Web page, press Menu, and select [File](#) → [Printing](#) → [Print...](#)

To open a new window, press Menu, and select [File](#) → [Open](#) → [New window](#).

To switch between open windows, press [Switch window](#).

To close extra windows, press Menu, and select [View](#) → [Window list...](#) Scroll to the window that you want to close, and press [Close window](#).

To disconnect from the Internet, press Menu, and select [File](#) → [Disconnect](#).



**Tip:** Move the pointer on top of an image or link, and press Shift+the scroll key. A pop-up menu appears, allowing you to save or load images or open links in new windows.

To save a cookie to your device, press [Accept](#). A cookie is a file containing information such as personal settings for a Web page.

To refuse a cookie, press [Refuse](#).

To view a list of Web pages and Web addresses that you have visited or tried to visit, press Menu, and select [Information](#) → [History list](#). You can scroll the list using the scroll keys or arrow keys.

To clear the list, press [Clear list](#).

### ■ Downloading files

To download a file, move the pointer to the link to the file, and press Enter. You can see the name, type and size of the file, the Web address to the file, and the application your device uses to open the file.

To download and save a file, press [Save](#).

To download and open a file in the corresponding application, press [Save and open](#).

To view details of downloads in progress, press Menu, and select [View](#) → [Downloads...](#)

To pause a download, select the download, and press [Pause](#).

To cancel a download, select the download, and press [Cancel download](#).

To remove the completed downloads from the list, press [Delete downloads](#).

## ■ Clearing the cache

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 clear the cache, press Menu, and select *Tools* → *Clear* → *Clear cache*.

## ■ Managing bookmarks

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.

To view a list of bookmarks, press *Bookmarks*.

To create a new bookmark, press *New bookmark*, enter the name and address of the bookmark, and press *OK*.

To open a bookmarked page, scroll to the bookmark, and press *Go to*.

To edit the name and address of a bookmark, scroll to the bookmark, and press *Edit*.

To create a new folder for bookmarks, press Menu, and select *Bookmarks* → *Insert new folder....* Enter the name of the folder, and press *OK*.

To rename a folder for bookmarks, select the folder, press Menu, and select *Bookmarks* → *Rename folder....* Enter the name of the folder, and press *OK*.

To save your bookmarks as a Web page, press Menu, and select *Bookmarks* → *Export as HTML....*

## ■ Changing browser settings

To change the browser settings, press Menu, and select *Tools* → *Settings....*

Select the *General* page to edit:

- *Home page address* — Enter the address of the first page that opens when you open the browser. Press *Use current* if you want to use the page that you have opened as a home page.
- *Show images* — Select whether you want to view all images on a Web page, no images on a Web page, or only those images that have already been saved to the cache memory.
- *Frame options* — Select whether you want to view all frames on a Web page at the same time or one by one.
- *Load in new window* — Select the page that you want to open when you open a new browser window.

Select the *Services* page to edit:

- *Use cookies* — Select whether you want to accept all cookies, no cookies, or want the device to confirm every time a Web page tries to save a cookie.



**Tip:** A cookie is a file containing information such as personal settings for a Web page.

- *Enable plug-ins* — Select whether you want to expand browser functionality with pre-installed plug-ins that enable the use of Flash animations and other enhancements.
- *Enable JavaScript* — Select whether you want the Web pages that you open to use JavaScript™.
- *Enable automatic redirection* — Select whether you want to automatically move to another Web page if you try to open a Web page with a redirection command.

Select the *Advanced* page to edit:

- *Maximum cache size* — Select how much space you want to allocate to the cache memory.



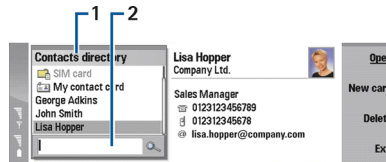
**Tip:** A cache is a memory location that is used to store data temporarily. If you have tried to access or have accessed confidential information requiring passwords, empty the cache after each use.

- *Empty cache on exit* — Select whether you want to empty the cache when you close the browser.
- *Empty history list on exit* — Select whether you want to empty the list of visited Web pages when you close the browser.
- *Delete cookies on exit* — Select whether you want to remove all cookies from the device when you close the browser.
- *Use proxy configuration script* — Select whether you want to use a proxy configuration script. If used, it will override proxy settings set for each Internet access point.
- *Script address* — Enter the address for proxy configuration script.

## 7. Contacts

You can use the *Contacts* application to create, edit, and manage all contact information, such as phone numbers and addresses.

The main contact database is in the communicator's memory. You can also store contacts in the SIM card and in databases on a memory card inserted in the device.



The left frame of the *Contacts* main view (*Contacts directory*) shows the contents of the currently open contact database (1). The available contact databases are shown at the top of the list.

Below the list there is a search box for finding entries (2).

The right frame of the *Contacts* main view shows the contents of the contact card or contact group that you have selected from the *Contacts directory* list.

Contact card information is also used by, for example, the *Telephone* application.

### ■ Managing contact cards

To open a contact database, scroll to the desired database in the *Contacts directory* list, and press *Open*. Note that if you select the SIM card database, not all menu options are available.

To create a new contact card using the default template, press *New card*, type the contact information, and press *Done*. The card is added to the selected contact database.



**Tip:** To use the phone number abroad, add a plus (+) character before the country code.

To open a contact card in the selected database, scroll to the contact in the *Contacts directory* list, and press *Open*.

To search for an existing contact card from the selected database, type the first letters of the contact in the search field below the *Contacts directory* list, scroll to the desired contact, and press *Open*.

To call a contact, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to the phone number, and press *Call*.

To create a new contact card using a certain template, press Menu, and select *File* → *New card* and the template you want to use.

To delete an existing contact card, scroll to the contact in the *Contacts directory* list, and press *Delete* and then *Delete*.

To send a text or multimedia message to a contact, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to a mobile phone number, and press *Write text message* or *Write MMS*.

To send a fax to a contact, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to a fax number, and press *Write fax*.

To send an e-mail message to a contact, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to the e-mail address, and press *Write e-mail*.

To copy all the contacts of a database, scroll to the database in the *Contacts directory* list, press *Copy all*, and select the database where you want to copy the contact information.

To go to a Web address included in a contact card, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to the Web address, and press *Go to*.

To create a new database in your memory card, press Menu, and select *File* → *More options* → *New database*.

To exit the *Contacts* application, press *Exit*.

### ■ Editing contact cards

In the contact card view, you can create, view, modify, and delete the contents of contact cards and contact card templates. To open a contact card for editing, scroll to a contact in the *Contacts directory* list, and press *Open*.

To add a field to the contact card, press *Add field*.



## Contacts

To rename a field in the contact card, scroll to the field, and press *Rename field*. If you are not allowed to rename the field, *Rename field* is dimmed.

To delete a field from the contact card, scroll to the field, and press *Delete field*.

To change the default template for new contact cards, press Menu, select *Tools* → *Settings* → *General* → *Default template*, press *Change*, and select the template.

To attach an image to the contact card, press Menu, and select *Card* → *Insert picture*. OR Scroll to the empty image frame, and press *Insert picture*.

To change the image in the contact card, scroll to the image, and press *Change picture*.

To delete the image from the contact card, press Menu, and select *Card* → *Remove picture*. OR Scroll to the image, and press *Remove picture*.

To assign a certain ringing tone to a contact, press Menu, select *Card* → *Ringing tone*, and press *Change*.

To attach touchtones to a contact card, press *Add field*, select *DTMF*, and type a touchtone sequence.

To save the contact card and return to the *Contacts* main view, press *Done*.

To delete a contact card, press Menu, select *File* → *Delete card*.

### ■ Creating and editing contact card templates

Templates include a set of fields that the device uses when you create or view a contact card.

Templates do not apply to contact cards in the SIM card, because the layout of a SIM contact card is fixed.

To create a new template, go to *Contacts directory*, press Menu, select *Tools* → *Card templates*, and press *New*.

To modify a template, go to *Contacts directory*, press Menu, select *Tools* → *Card templates* and the template, and press *Open*. To modify a field, scroll to it, and press *Rename field* or *Delete field*. To add a field, press *Add field*. To save the changes to the fields and exit the contact card template, press *Done*.

To delete the template, press Menu, and select *File* → *Delete template*. If you delete the default template, the next template in the list becomes the new default template.

### ■ My contact card



**Tip:** You can use the information in *My contact card* as your electronic business card. You can send your business card as a message or using an infrared or Bluetooth connection, or use it on the fax header or cover page.

To modify the fields in your contact card, scroll to a field, and press *Rename field*, *Delete field*, or *Add field*.

To attach an image to your contact card, press Menu, and select *Card* → *Insert picture*, or scroll to the empty image frame, and press *Insert picture*.

To change the image in your contact card, scroll to the image, and press *Change picture*.

To delete the image from your contact card, press Menu, and select *Card* → *Remove picture*, or scroll to the image, and press *Remove picture*.

To save the changes and exit *My contact card*, press *Done*.

### ■ Sending contact cards

In *Contacts directory*, you can send contact cards as business cards in vCard or Nokia Compact Business Card format to compatible devices using the SMS, MMS, or e-mail service or an infrared or Bluetooth connection.

To open *Contacts directory*, go to *Contacts*.

#### Sending a contact card

Go to *Contacts*, scroll to a contact in the *Contacts directory* list, press Menu, and select *File* → *Send*.

To send a contact card as a business card to a compatible device, type the recipient's name in the *To:* field, or press *Recipient* to select the name from the contacts directory. To send the business card, press *Send*. Note that if you select SMS as the sending method, contact cards will be sent without images.

To save the business card message as a draft, press Menu, and select *File* → *Save*. The message is saved in the Drafts folder of the *Messaging* application.

To delete the business card, press Menu, and select *File* → *Delete*.

To add the message as a shortcut to *Desk*, press Menu, and select *File* → *Add to Desk...*

To undo the previous action, press Menu, and select *Edit* → *Undo*.

## Contacts

To edit the recipients, press Menu, select *Edit* → *Cut* to cut the selected text into the clipboard, *Copy* to copy the selected text into the clipboard, or *Paste* to paste the text from the clipboard to the *To:* field.


To open the next or previous message in the Drafts folder, press Menu, select *View* → *Next message* or *Previous message*.

To check the recipient names from the contact database, press Menu, select *Tools* → *Check names*. The letters that you have typed in the *To:* field are matched to the contact database. If only one match is found, it is added to the *To:* field. If several matches are found, you can select the correct one from a list.


### ■ Creating and editing contact groups

With contact groups you can send the same message to a group of people at the same time.

To create a contact group, press Menu in *Contacts directory*, and select *File* → *New group...* Scroll to *Group name*, and give a name for the group. To add a member to the group, press *Add member*, scroll to a contact in the list, and press *Add*. To select multiple contacts, press Shift and the scroll key.


 **Tip:** If you want to restrict incoming calls to a certain group of people, for example, while in a meeting, you can create a contact group that only includes those people. [See Profile settings on page 62.](#)

To open a contact group, scroll to a contact group in the *Contacts directory* list, and press *Open*.

 **Tip:** To attach an image to the contact group, press Menu, and select *Group* → *Insert picture*.

To remove a member from a contact group, open the group in the *Contacts directory* list, scroll to the member, and press *Remove member*.

### ■ Managing contacts saved in the SIM card

 **Tip:** The SIM card contains information identifying you as the network user. The length of the name and the phone number that you can save depends on the SIM card.

To save a new contact in your SIM card, open the SIM card directory, and press *New contact*. An empty SIM contact card opens. Type the contact's name and phone number or fax number.

To edit a contact saved in the SIM card, scroll to the contact in the *Contacts directory* list, and press *Open*.

To delete a contact from the SIM card, scroll to the contact in the *Contacts directory* list, and press *Delete*.

To call a contact, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to the phone number, and press *Call*.

To send a text or multimedia message to a contact, scroll to the contact in the *Contacts directory* list, move to the right window, scroll to a mobile phone number, and press *Write text message* or *Write MMS*.

To copy the contents of the SIM card directory to another contact database, scroll to the SIM directory in the *Contacts directory* list, and press *Open* → *Copy all*. Select the database where you want to copy the contact information.

To change the sorting order of the names in the SIM card directory, press Menu, select *View* → *Sort by* → *Name*, or *SIM location*.

### ■ Copying and moving contacts to different databases

You can copy or move selected contacts from one database to another.

To keep a copy of the contact card in the original database, select *Copy to* and the contact database where you want to copy the contact.

To move the contact card from the original database, select *Move to* and the contact database where you want to move the contact. No copy of the contact card remains in the original database.

The primary contact database is in the device. You can also store contact information in the databases of your SIM and memory cards. The *Contacts directory* only displays one database at a time. To view the contents of a different database, select the database in the *Contacts directory*, and press *Open*.

If you select the SIM card database, only the name and numbers of the contact cards can be copied. If the contact card includes more than one phone or fax number, each number is placed in a separate SIM memory location.

### ■ Contact card settings

You can select the default template for contact cards, the order in which you want the names displayed in the *Contacts directory* list, the address format used in contact cards, and the format of the business cards that you send.



## C o n t a c t s

To select the default contact card template, go to *Contacts*, press Menu, select *Tools* → *Settings* → *General* → *Default template*, and press *Change*. Select the template from the list, and press *OK*. You cannot use a different template after you have created the contact card. You can, however, add, delete, or rename the contact information fields of the contact card.

To change the order of names according to which contacts are listed in *Contacts directory*, go to *Contacts*, press Menu, select *Tools* → *Settings* → *General* → *Name display*, and press *Change*. Select *First name Last name* or *Last name, First name*, and press *OK*.

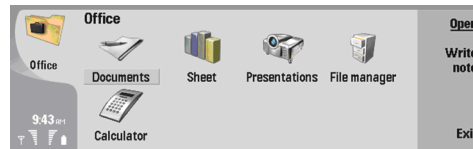
To change the display format of the addresses in contact cards, go to *Contacts*, press Menu, select *Tools* → *Settings* → *General* → *Default country/region*, and press *Change*. The address formats are defined according to the standard format used in each country or region. Select the new country or region with the new address format from the list, and press *OK*.

To select the sending format for business cards, go to *Contacts*, press Menu, select *Tools* → *Settings* → *General* → *Sending format via text message*, and press *Change*. Select *vCard* to use the vCard format or *Compact* to use the compressed format, and press *OK*.

## 8. Documents

In *Documents*, you can write new and edit existing text documents. You can insert and view images and other files in the documents.

*Documents* is one of the applications available in the *Office* group. *Office* also contains *Sheet* and *Presentations* applications, *Calculator*, and *File manager* application for file and folder management. To open the *Office* group, select *Desk* → *Office*, and press *Open*.



You can open, edit, and save documents created with Microsoft Word for Windows versions 97 and later. Note that not all features and formatting of the original documents will be supported. The original document must not be password protected. Documents created with other versions of Microsoft Word may only be viewed.

### ■ Working with documents

Move within the document with the scroll key, and select text by pressing Shift+scroll key left right, up, or down.



**Tip:** The menu contains many options that are familiar from other text editing applications.

To create a new document, open the *Documents* application and start writing in the new document that is opened, or press Menu, and select *File* → *New document* → *Blank document...* Write text or paste it from another document.

To open an existing document, press Menu, and select *File* → *Open...* Browse for the folder where the file is saved.



**Tip:** To open recently used documents, press Menu, and select *File* → *Recent documents*.

To copy or cut selected text, press Menu, and select *Edit* → *Copy* or *Cut*. To paste the text, go to the document where you want to add the text, press Menu, and select *Edit* → *Paste*.

To paginate a document, press Menu, and select *Tools* → *Paginate*. This command divides the document into pages and updates the page numbering.

To insert page breaks or line breaks into a document, press Menu, and select *Insert* → *Page break* or *Line break*.

To count words, press Menu, and select *Tools* → *Word count*.

To search for text in the document, press Menu, and select *Edit* → *Find...* Enter the text you are looking for, and press *Find*. To refine the search criteria, press *Options*. To replace the found item with something else, press *Replace*, enter the replacement text, and press *Replace*.

To save and close a document, press *Exit*. If you have modified the file, press *Save* to save the document with a default file name. Press *Save as* to specify the file name and location, or press *Discard changes* to close the application without saving any changes.

To view the structure of a document, press Menu, and select *View* → *Outline...* The document is structured by different levels of headings. Heading 1 is the top level, Heading 2 comes second, and so on. Body text is not shown in the document outline.

To view more levels in the document outline, press *Expand*. To hide the lower levels, press *Collapse*. To jump to a particular heading in the document, select the heading, and press *Go to*.

To hide or make text markers visible, press Menu, and select *Tools* → *Preferences...* On the *Basic options* page, you can define whether tab, space, and paragraph marks are shown in the document. On the *Advanced options* page, you can define whether forced line breaks, nonbreaking spaces, and hard hyphen marks are shown in the document.

To open a particular page in a document, press Menu, and select *Tools* → *Go to page...* In the *Go to* dialog, you can see how many pages there are in the document and select a page you want to jump to. Enter the page number, and press *Done*.

### ■ Formatting documents

You can modify the style of a document on a font and paragraph level. You can use different fonts, font sizes, and styles. You can apply different predefined or user-defined styles by either modifying particular pieces of text separately, or by using a template on which the style of the text is based.

To format text, select the text, press Menu, and select *Format* → *Font...*, *Formatting*, *Bullets...*, or *Paragraph*. Select the appropriate formatting option. For example, you can add bold, italic, and underline formatting, change the font size and color, and add bullets and borders.

## Documents

To edit or create a new paragraph style, press *Style*. Select the style you want to edit, and press *Edit*. Press *New* to create a new style. Give the new style a name, and specify the font, bullet, border, and spacing properties.

To change the paragraph style, move the cursor inside a paragraph, and press *Style*. Select the new style, and press *Set*.

### ■ Inserting and editing objects

Objects in text documents are not links, but embedded attachments, which may increase the file size of the document dramatically. Some object types are displayed as icons only.

To insert an object into a document, press *Insert object*. Select from the list the type of object you want to insert. Press *Insert new* to open the corresponding editor and create a new object or press *Insert existing* to open a list of existing files. Only those files that can be inserted are listed. Select a file, and press *OK*.

To resize an image, select the image, press Menu, and select *Edit* → *Object* → *Object details...* On the *Scaling* page, you can specify the width and height of the image, or resize the image by a specific percentage. On the *Cropping* page, you can crop the image. Note that you cannot resize icons.

To open an object for viewing or editing, select the object, and press the enter key.

To remove an object from a document, select the object, and press the backspace key.

### ■ Viewing tables

Tables are shown as icons when the document has been created with Microsoft Word for Windows. Such tables can be opened for viewing in a separate view.

To view tables in a document, select the table icon, and press the enter key.

To copy the table, press *Copy*.

To exit the table view, press *Close*.

### ■ Using templates

You can use templates and save documents as templates. For example, you may have a company template which defines a particular layout.

To save a document as a template, press Menu, and select *File* → *Save* → *Save as template...*

To select a template, press Menu, and select *File* → *New document* → *Use template...* Browse for the folder where the template is saved.

## 9. Sheet

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In *Sheet* you can store your data in a file that is called a workbook. Each workbook contains at least one worksheet. A workbook can also contain charts; a chart sheet is a sheet containing a chart that is based on data from a worksheet.

Go to *Desk* → *Office* → *Sheet*.

### ■ Workbooks

To create a new workbook, press Menu, and select *File* → *New workbook*.

To open an existing workbook, press Menu, and select *File* → *Open*. Browse for the folder where the file is saved.



**Tip:** To open recently used workbooks, press Menu, and select *File* → *Recent workbooks*.

### ■ Working with worksheets

To insert data into cells, move to the cell with the scroll key, and enter the information.

To select an entire row in a worksheet, move the cursor to the first cell on that row, and press Shift+scroll key left. To select an entire column, move the cursor to the first cell of the column, and press Shift+scroll key up.

To format worksheets, select the cell or cells you want to format, press Menu, and select *Format* and an appropriate menu option. You can change the font and number formats, and adjust alignment, row height, and column width. To format borders or the background color of a cell, select *Format* → *Cell appearance* → *Borders* or *Background color*.

To add a new worksheet into a workbook, press Menu, and select *Insert* → *New worksheet*.

To switch to another worksheet, press Menu, and select *View* → *Worksheets*, or *Sheets/Charts* if the workbook contains at least one chart. Select the worksheet, and press *OK*.

To keep rows visible when scrolling, select the row below the area that you want to remain visible. To keep columns visible, select the column to the right of the area that you want to remain visible. Press Menu, and select *View* → *Freeze panes*.

To search for data, press Menu, and select *Edit* → *Find*. Enter the text or numbers you want to find, and press *Find*. To search the worksheet according to certain criteria, press *Options*.

To rename a worksheet, press Menu, and select *Format* → *Rename worksheet*. Enter the new name, and press *Done*.

### ■ Working with cells

To clear contents or formatting from cells, select the cells, and press *Clear*. If you select *Formats*, the formatting of the selected cells is removed, but the content remains. The default style is used. If you select *Contents*, the content of the selected cells is deleted, but the formatting stays the same. *All* clears both formatting and contents of the selected cells.

To insert cells, select the area where you want to insert new cells, press Menu, and select *Insert* → *Cells*. You can insert cells above (*Shift cells down*) or to the left (*Shift cells right*) of the selected range. If you have selected only one cell, only one new cell is inserted, and if you have selected a range of cells, a corresponding range of blank cells is inserted. To insert a new row or column, select *Entire row* or *Entire column*, and press *OK*.

To select a range of cells, press Menu, and select *Edit* → *Select*. To select the entire worksheet, select *Entire worksheet* in the *Range* field.



**Tip:** To select column A, select *Reference*, move to the *Reference* field and type A:A. Similarly, to select columns from A to C, type A:C. To select row 1, type 1:1. To select columns from A to C and rows 2 and 3, type A2:C3.

To select the cells you have named on the worksheet, press Menu, and select *Edit* → *Select*. Select *Named cells* in the *Range* field, and select the cell in the *Named area* field. Once you have selected the cell, press *Done*.

To rearrange the order of cells, select the cells, press Menu, and select *Tools* → *Sort* → *Top to bottom* or *Left to right*. On the *1st column* or *1st row* page, select the direction of sorting, and to sort by case, select *Yes* in the *Case sensitive* field. If you have selected more than one row or column, move to the second and third page to sort the next column or row.

To insert a function into a selected cell, press *Insert function* in the worksheet. Functions are used to automate calculations. You can choose from different function categories, and each category has a set of functions. For example, MIN finds the lowest value in the numeric contents of a selected range of cells, AVERAGE calculates the average of the values, and SUM adds the values together. Once you have selected a function, press *Done*. The function is inserted into the selected worksheet cell. On the worksheet, press *Point reference*, select the cells you want to include in the function with Shift+scroll key, and press *OK*.



**Example:** You want to add up the numbers in cells C2 to C6 and have the results appear in cell C7. Select cell C7, and press *Insert function*. Select the function SUM, press *OK*, and press *Done*. Press *Point reference*, select the cell range C2 to C6 with Shift+scroll key, and press *OK*. The sum appears in cell C7.

To name a cell, select the cells you want to name, press Menu, and select *Insert* → *Name* → *Add*. Enter the name for the cell or range of cells. The coordinates of the cells you have selected on the worksheet are automatically inserted in the *Value* field. You can enter new coordinates to change the cell selection. You can also enter numbers or letters for use in different functions.



**Tip:** You can use cell names to make calculating functions easier to understand. For example, cells named Rent and Groceries could be subtracted from a cell named Salary when calculating the money left for leisure activities after monthly living costs.

## ■ Creating and modifying chart sheets

Chart sheets contain charts based on information from worksheets. When you change the information on a worksheet, the chart is updated simultaneously.

To create a chart sheet, select the worksheet cells that contain the information you want to include in the chart, press Menu, and select *Insert* → *New chart*. Select the chart type, make the chart two or three-dimensional, change the color of the background and axis, or add a title to the chart.

To change the range of cells on which the chart is based, press *Sheets/Charts*, select the worksheet your chart is based on, and press *OK*. Select a new range of cells, press Menu, and select *View* → *Sheets/Charts*. Select the chart sheet, and press *OK*. On the chart sheet, press Menu, and select *Tools* → *Replace data*. Press *Replace ranges* to confirm the change.

To replace chart sheet data, press *Sheets/Charts*. Select the worksheet, and press *OK*. Edit the information in the worksheet, and press *OK*. Press Menu, and select *View* → *Sheets/Charts*. Select the chart, and press *OK*.

To change the general appearance of a chart, press *Chart settings*. You can select the chart type, make the chart three-dimensional, and change the color of the background and axis. You can also change the title shown in the chart.

To format a chart in more detail, press *Select object*. Select the object you want to edit, and press *OK*. Press the enter key to open a dialog where you can modify the relevant settings.



**Tip:** You can also select chart sheet objects by pressing the tab key.

To switch to another chart sheet in the same workbook, press *Sheets/Charts*. Select the chart, and press *OK*.

To delete a chart sheet, press Menu, and select *Chart* → *Delete chart*.

## ■ List of functions

Functions are used to automate calculations. [See Working with cells on page 44.](#)

|   |   |
|---|---|
| ABS(number)                               | Returns the absolute value of a number.                         |
| ACOS(number)                              | Returns the arccosine of a number.                              |
| ADDRESS(row,column,paragraph,A1,pagename) | Returns a reference to a row of a table.                        |
| ASIN(number)                              | Returns the arcsine of a number.                                |
| ATAN(number)                              | Returns the arctangent of a number.                             |
| ATAN2 (x_num,y_num)                       | Returns the arctangent from x- and y-coordinates.               |
| AVERAGE(number1,number2,...)              | Returns the average of its arguments.                           |
| CELL(type of info,reference)              | Returns information about position, formatting and contents.    |
| CHAR(number)                              | Returns the character for the number.                           |
| CHOOSE(index_num,value1,value2,...)       | Chooses a value from a list of values.                          |
| CODE(text)                                | Returns the number of the first character.                      |
| COLUMN(reference)                         | Returns the column number of the reference.                     |
| COLUMNS(array)                            | Returns the number of columns in a reference.                   |
| COMBIN(value1,value2,...)                 | Returns the number of combinations for a given number of items. |
| COS(number)                               | Returns the cosine of a number.                                 |
| COUNT(value1,value2,...)                  | Counts how many numbers are in the list of arguments.           |
| COUNTA(value1,value2,...)                 | Counts how many values are in the list of arguments.            |
| COUNTBLANK(range)                         | Counts the number of blank cells within a range.                |

|   |   |
|---|---|
| DATE(year,month,day)                                | Returns the serial number of a particular date.   |
| DATEVALUE(date_text)                                | Converts a date in the form of text to a serial number.   |
| DAY(serial_number)                                  | Converts a serial number to a day of the month.   |
| DDB(cost,salvage,life,period,factor)                | Returns the depreciation of an asset for a specified period using the double-declining balance method or some other method you specify. |
| DEGREES(angle)                                      | Converts radians to degrees.  |
| ERROR.TYPE(error_val)                               | Returns a number corresponding to an error type.  |
| EXACT(text1,text2)                                  | Checks if two text values are identical.  |
| EXP(number)   | Returns e raised to the power of a given number.  |
| FACT(number)  | Returns the factorial of a number.  |
| False( )  | Returns the logical value FALSE.  |
| FIND(find_text,within_text,start_num)               | Finds one text value within another (case-sensitive) one.   |
| FV(rate,nper,pmt,pv,type)                           | Returns the future value of an investment.  |
| HLOOKUP(lookup_value,table_array,row_index_num,...) | Looks in the top row of an array and returns the value of the indicated cell.   |
| HOURL(serial_number)                                | Converts a serial number to an hour.  |
| IF(logical_test,value_if_true,value_if_false)       | Specifies a logical test to perform.  |
| INDEX(reference,row_num,column_num)                 | Uses an index to choose a value from a reference.   |
| INDIRECT(reference,A1)                              | Returns the reference of a text.  |
| INT(number)   | Rounds a number down to the nearest integer.  |
| IRR(value,guess)                                    | Returns the internal rate of return for a series of cash flows.   |
| ISBLANK(value)                                      | Returns TRUE if the value is blank.   |
| ISERR(value)  | Returns TRUE if the value is any error except #N/A.   |
| ISERROR(value)                                      | Returns TRUE if the value is any error value.   |
| ISLOGICAL(value)                                    | Returns TRUE if the value is a logical value.   |
| ISNA(value)   | Returns TRUE if the value is the #N/A error value.  |
| ISNONTEXT(value)                                    | Returns TRUE if the value is non text.  |
| ISNUMBER(value)                                     | Returns TRUE if the value is a number.  |
| ISTEXT(value)                                       | Returns TRUE if the value is a text.  |
| LEFT(text,num_chars)                                | Returns the leftmost characters from a text value.  |
| LEN(text)   | Returns the number of characters in a text string.  |
| LN(number)  | Returns the natural logarithm of a number.  |
| LOG10(number)                                       | Returns the base-10 logarithm of a number.  |
| LOOKUP( )   | Returns a value either from a one-row or one-column range, or from an array.  |
| LOWER(text)   | Converts text to lowercase.   |
| MAX(number1,number2,...)                            | Returns the maximum value in a list of arguments.   |
| MID(text,start_num,num_chars)                       | Returns a specific number of characters from a text string.   |
| MIN(number1,number2,...)                            | Returns the minimum value in a list of arguments.   |
| MINUTE(serial_number)                               | Converts a serial number to a minute.   |
| MOD(number,divisor)                                 | Returns the remainder from division.  |
| MONTH(serial_number)                                | Converts a serial number to a month.  |

|  |   |
|--|---|
| N(value)                                       | Returns a value converted to a number.  |
| NOW( )   | Returns the serial number of current date and time.   |
| NPV(rate,value1,value2,...)                    | Returns the net present value of an investment based on a series of periodic cash flows and a discount rate.                        |
| OFFSET(reference,rows,cols,height,width)       | Returns a reference to a range that is a specified number of rows and columns from a cell or range of cells.                        |
| PERMUT(number, number_chosen)                  | Returns the number of permutations for a given number of items.   |
| PI( )  | Returns the value of pi.  |
| PMT(rate,nper,pv,fv,type)                      | Returns the periodic payment for an annuity.  |
| POWER(number,power)                            | Returns the result of a number raised to a power.   |
| PRODUCT(number1,number2,...)                   | Multiplies its arguments.   |
| PROPER(text)                                   | Capitalises the first letter in each word of a text value.  |
| PV(rate,nper,pmt,fv,type)                      | Returns the present value of an investment.   |
| RADIANS(angle)                                 | Converts degrees to radians.  |
| RAND( )  | Returns a random number between 0 and 1.  |
| RATE(nper,pmt,pv,fv,type,guess)                | Returns the interest rate period of an annuity.   |
| REPLACE(old_text,start_num,num_chars,new_text) | Replaces characters within text.  |
| REPT(text,number_times)                        | Repeats text a given number of times.   |
| RIGHT(text,num_chars)                          | Returns the last character or characters from a text value.   |
| ROUND(number,num_digits)                       | Rounds a number to a specified number of digits.  |
| ROW(row)                                       | Returns the row number of the specified row.  |
| ROWS(array)                                    | Returns the number of rows in a reference.  |
| SECOND(serial_number)                          | Converts a serial number to a second.   |
| SIGN(number)                                   | Returns the character for the number.   |
| SIN(number)                                    | Returns the sine of the given angle.  |
| SLN(cost,salvage,life)                         | Returns the straight-line depreciation of an asset for one period.  |
| SQRT(number)                                   | Returns a positive square root.   |
| STDEV(number1,number2,...)                     | Estimates standard deviation based on a sample.   |
| STDEVP(number1,number2,...)                    | Calculates standard deviation based on the entire population.   |
| STRING( )                                      | Converts a number to text according to the given format string.   |
| SUM(number1,number2,...)                       | Adds its arguments.   |
| SUMPRODUCT(array1,array2,...)                  | Returns the sum of the multiplied arrays.   |
| SUMSQ(array1,array2)                           | Returns the sum of the squares.   |
| SYD(cost, salvage, life, per)                  | Returns the sum-of-years' digits depreciation of an asset for a specific period.  |
| T(value)                                       | Converts its arguments to text.   |
| TAN(number)                                    | Returns the tangent of a number.  |
| TERM( )  | Calculates the number of payments for an investment, given the periodic payment amount P, the interest rate R, and future value FV. |
| TIME(hour,minute, second)                      | Returns the serial number of a particular time.   |



S h e e t

|   |   |
|---|---|
| TIMEVALUE(time,text)                                | Converts a time in the form of text to a serial number.                     |
| TODAY( )  | Returns a serial number of the current date.                                |
| TRIM(text)  | Removes spaces from text.   |
| TRUE( )   | Returns the logical value TRUE.   |
| TRUNC(number, num_digits)                           | Truncates a number to an integer.   |
| TYPE(field)   | Returns a number which depends on the content of the selected field.        |
| UPPER(text)   | Converts text to uppercase.   |
| VALUE(text)   | Converts a text argument to a number.                                       |
| VAR(number1,number2,...)                            | Estimates variance based on a sample.                                       |
| VARP(number1,number2,...)                           | Calculates variance based on the entire population.                         |
| VLOOKUP(lookup_value,table_array,col_index_num,...) | Searches for a value in the leftmost column of a table and returns a value. |
| YEAR(serial_number)                                 | Converts a serial number to a year.   |

## 10. Presentations

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In *Presentations*, you can open, view, edit, and save presentations created with Microsoft PowerPoint 97 or later. You can also create new presentations. Note that not all features and formatting of the original files are supported.

Go to *Desk* → *Office* → *Presentations*.

### ■ Viewing presentations

To open an existing presentation, press Menu, and select *File* → *Open...*, or press Ctrl+O. Browse for the folder where the file is saved. You can scroll the slide up and down, left and right with the scroll key.



**Tip:** To open a recently viewed presentation, press Menu, and select *File* → *Recent presentations*.

To move between slides, press *Next* and *Previous*. To move directly to a specific slide, press Menu, and select *Tools* → *Go to slide...* Select the slide from the list, and press *Go*.

To zoom the view, press Menu, and select *View* → *Zoom*.



**Tip:** You can also zoom in and out by pressing Chr and the magnifying glass keys.

To view slides in full screen mode, press Menu, and select *View* → *Full screen mode*. In full screen mode, press any of the command buttons to display the commands. You can also use Ctrl+T to switch between the full screen and normal screen modes.

### Viewing slide shows

Special effects or animation in a presentation are shown in a slide show. Note that not all special effects or animations are supported.

To start a slide show, press Menu, and select *View* → *Slide show* → *View show*.

To set slide show options, press Menu, and select *View* → *Slide show* → *Show unsupported objects* or *Show animations*.

To move between slides in a slide show, press Menu, and select *Show* → *Next* and *Previous*. To select the first or last slide, press Menu, and select *Show* → *First slide* or *Last slide*. To move to a specific slide, press Menu, and select *Tools* → *Go to slide...* Select the slide from the list, and press *Go*.

To end the slide show, press Menu, and select *Show* → *End show*.

### Showing slide shows with a data projector

You can show slide shows with a compatible data projector, or other compatible projection system. The slide show is transferred to the data projector using, for example, a Bluetooth connection.

To be able to show slide shows with a compatible data projector, you need to install the drivers of the data projector. If the drivers are not installed, the menu options are not visible. For more information, check with the data projector manufacturer or its representative.

To show slide shows with a data projector, select the presentation, press Menu, and select *View* → *Slide show* → *Show on external display*. To start the slide show, press Menu, and select *View* → *Slide show* → *View show*. Note that no special effects or animations are supported. If the presentation contains notes, they are only visible on the communicator display.



**Tip:** If you have not selected a data projector earlier, the *External display* dialog opens. Select a data projector, press *Connect*, then *Done*.



**Tip:** If you switch from the slide show view to another view during the show, for example, to outline view, the presentation is no longer displayed on the external view. To continue showing the slide show with a data projector, switch back to the slide show view.

To change the data projector, press Menu, and select *View* → *Slide show* > *External display settings...* In the *External display* dialog, select a device from the list, and press *Connect*, then *Done*.

To stop showing a slide show with a data projector, press Menu, select *View* → *Slide show*, and deselect *Show on external display*.

### ■ Creating presentations

To create a new presentation, press Menu, and select *File* → *New presentation*. Activate a text field by pressing the tab key, and start writing. When you are ready, press *OK*, and move to the next text field. If you want to use a template, press Menu, and select *File* → *New presentation* → *Use template...* Browse for the folder where the template is saved.

## Presentations



**Tip:** To move the text field inside the slide, select the text field with the tab key, and press the scroll key left, right, up, or down. To move the text field with smaller steps, press Ctrl+scroll key left, right, up, or down. Similarly, you can move other objects, such as pictures or autoshapes.

To insert a new slide into a presentation, select the slide after which you want to add the slide, and press *Insert slide*. Select the layout you want to use in the new slide, and press *Insert*.

To insert images or autoshapes into a presentation, press Menu, and select *Insert* → *Picture...* or *Autoshape...*. Browse for the folder where the image is saved, or select an autoshape from the list, and press *Insert*.



**Tip:** To change the size of an object, press Shift+scroll key left, right, up, or down. To change the size with smaller steps, press Ctrl+Shift+scroll key left, right, up, or down.

To insert a text box into a presentation, press Menu, and select *Insert* → *Text box*. Enter the text, and press *OK*.



**Tip:** The menu contains further text formatting options: press Menu, and select *Format* and a menu option. You can change the font and number formats, add bullets, and adjust alignment.

To save a presentation, press Menu, and select *File* → *Save* → *Save presentation* or *Save as...*. The file is saved in PPT format.

To format an object you have inserted into a slide, select the object, press Menu, and select *Format* → *Object...*. You can resize the object and rotate it. Note that not all objects, such as images or tables, can be rotated.

### ■ Inserting tables

To insert a table into a presentation, press Menu, and select *Insert* → *Table* → *Insert table...*. Select the number of rows and columns you want to have in the table, and press *Insert*.

To select cells in a table, select the table by pressing the tab key, then press the enter key. Press the tab key to select cells.

To add rows or columns to a table, select a cell, press Menu, and select *Insert* → *Table* → *Insert column* or *Insert row*. A new column is inserted to the left of the selected cell, and a new row is inserted above the selected cell.

To remove rows or columns from a table, select a cell in the row or column you want to remove, press Menu, and select *Insert* → *Table* → *Delete column* or *Delete row*.

### ■ Working with different views

*Presentations* consists of different views that help you when creating presentations.

To switch between the different views, press Menu, and select *View* → *Slide*, *Notes*, *Outline*, or *Slide master*.

#### Outline view

The outline view displays the text content of the presentation slides, and is used for organizing the content.

To open the outline view, press Menu, and select *View* → *Outline*.

To view the slide content, press *Expand*. To hide the content, press *Collapse*. To open a slide for editing, select the slide, and press the enter key.

To change the order of slides, select the slide you want to move, and press *Move*. Scroll up and down to move the position marker to a new location, and press *OK*.

To remove slides, select the slide you want to remove, and press *Delete*.

#### Notes view

In the notes view, you can read notes that have been attached to slides in the presentation. You can also add your own notes.

To open the notes view, press Menu, and select *View* → *Notes*. To move between the slides, press *Next* and *Previous*.

To add a note, activate a text field by pressing the tab key, and start writing in the text field. When you are ready, press *OK*, and move to the next slide if needed.

#### Slide master view

The slide master is a slide that controls certain text characteristics that are common to all slides in a presentation. When you want to change the look of your slides, change the slide master instead of changing each slide individually.

To open the slide master view, press Menu, and select *View* → *Slide master*. Activate a text field by pressing the tab key, and start writing. When you are ready, press *OK*, and move to the next text field.

## 11. Calendar

In *Calendar*, you can create and view scheduled events and appointments. You can also set alarms to calendar entries.



Calendar, Month view

You can synchronize your calendar data with a compatible computer using PC Suite on the product CD-ROM. For information on synchronization, see the PC Suite guide.

You can also synchronize calendar data with compatible phones. [See Data transfer on page 79.](#)


### ■ Creating calendar entries

There are four types of calendar entries:

- Meeting entries are entries that have a specific date and time.
- Memo entries are related to the whole day, not to a specific time of day. Memo entries do not appear in the Weekly time schedule view.
- Anniversary entries remind you of birthdays and special dates. They are repeated every year.
- To-do notes remind you of things to do. They can be prioritized and organized into to-do lists.

To create a calendar entry, select the date, press Menu, and select *File* → *New entry*. Select the type of entry you want to create. Note that available settings for meeting, memo, anniversary, and to-do note entries vary.

Define the settings on the following pages:

- *Details* page — You can enter a description and specify a date for the entry. To set a specific start and end time, select *Yes* in the *Timed* field.
- *Notes* page — You can enter extra information for the calendar entry. The icon  is added to the entry.
- *Alarm* page — You can set an alarm for the entry. Select the *Set alarm* field and *Yes*. Enter the alarm time and the number of days before the entry you want the alarm to go off. If you have a meeting entry that is linked to a specific time, enter in the *Time before* field the amount of time before the meeting you want the alarm to go off. Note that you can set an alarm for a to-do note only if you have set a due date on the *Details* page.
- *Repeat* page — You can specify whether you want the entry to be repeated and when. Define the repeat type, frequency, and possible ending date.
- *Status* page — You can define a color and symbol for the entry, define status, as well as specify whether you want to synchronize the entry. If the status of an entry is uncertain, mark it as *Tentative*. You can cross out an entry if it has been completed. Crossing out an entry does not remove it from the calendar. If you select *Private* in the *Synchronization* field, the details of the entry will not be shown to others when you connect to a network and synchronize your calendar.



**Tip:** Another way to create a calendar entry is to start typing your entry when you have opened *Calendar*. As you enter characters, the default entry dialog opens.












**Tip:** Make sure you have selected the correct city in the *Clock* application, because scheduled calendar entries may change when the current city is changed and is on another time zone.

To open and edit an entry, select the entry, and press *Edit*. Edit the details on the various pages.

### Calendar icons

The following icons are used in *Calendar*:

-  Alarm
-  Anniversary
-  Note
-  Memo
-  Repeating entry
-  Tentative entry
-  To-do note
-  To-do note with high importance
-  To-do note with low importance

● Untimed entry

## Managing calendar entries

To cross out an entry or mark it as tentative, select the entry, press Menu, and select *Entry* → *Crossed out* or *Tentative*. Crossing out an entry does not remove it from the calendar.

To send a calendar entry, press Menu, and select *File* → *Send*. Select the method of sending.

To add a received calendar entry to your calendar, open the message that contains the calendar entry, and press *Add to calendar*.

To define default entry settings, press Menu, and select *Entry* → *Default settings*. Select an entry type, and enter the values you would most commonly use.

To change the type of an open entry, press Menu, and select *Entry* → *Change entry type....* Select the new entry type from the list, and press *Select*.

To delete a calendar entry, select the entry, and press the backspace key. Press *OK* to confirm the deletion.

To move or delete several calendar entries, press Menu, and select *Tools* → *Move/Delete....* To either move all the suggested entries to a different file or delete them from the device, press *OK*. To define further criteria, press *Options*. You can specify whether calendar entries are deleted or moved to a file, the type of entries to be removed, and restrict the removal to a specific time period.



**Tip:** You can also use shortcuts to delete or move calendar entries. To cut, press Ctrl+X; to copy, press Ctrl+C; and to paste, press Ctrl+V.

To search for calendar entries, press Menu, and select *Tools* → *Find entry....* Enter the search keywords included in the description of the entry you are looking for, and press *Find*. Press *Done* → *Find* to start searching. In the *Find results* view, you can modify the found entry and open the previously open calendar view.

To refine the search criteria, press Menu, select *Tools* → *Find entry....*, and press *Options*. On the *Details* page, you can refine the search, and restrict the target groups of the search on the basis of common properties.

You can also restrict the search to a particular time period:

- *Whole calendar* — Includes all entries in the search.
- *From today* — Searches for entries in the future. Enter the *Until* date.
- *Until today* — Searches for entries in the past. Enter in the *From* field the date from which you want to begin the search.
- *User defined* — Allows you to set your own time period for the search. Enter the dates in the *From* and *Until* fields.

## Calendar settings

To modify general calendar settings, press Menu, and select *Tools* → *General settings....* On the *General* page, you can choose the view that opens when you open the *Calendar* application, and define where you want untimed entries to appear in calendar views. On the *Preferred views* page, you can change the order in which calendar views are listed. If you select *No* for a calendar view, it is shown last in the list or not shown at all when you change views by pressing the Calendar application key repeatedly.

## Calendar views

To switch between the different calendar views, press *Change view* in any calendar view. Select a type of view from the list, and press *Select*.



**Tip:** Press the Calendar application key repeatedly to browse the calendar views. Only preferred views are shown. To set the preferred views, press Menu, and select *Tools* → *General settings... → Preferred views*.

To edit calendar views, select a calendar view, press Menu, and select *View* → *View settings....*

For more instructions on editing the settings of a view, see the Help function in the device.

To open a specific date in the calendar view, press *Go to date*, enter the date, and press *OK*. To go to today's date, press *Today*. To view the date in the Month view, press *Browse*.



**Tip:** To go to today's date in most calendar views, press the space bar on the keyboard.

## Month view

In the *Month* view, you can browse the days of one month on the left frame, and view the entries for those days on the right frame. Today's date is marked with a colored rectangle, days that have scheduled events are marked in bold and blue, and the currently selected date is highlighted.

To switch between the days of the month and day's entries, press the tab key.

## Week view

The *Week* view shows the events for the selected week in seven day boxes. Today's date is marked with a colored rectangle.



**Tip:** To quickly select a different date in day and week views, press the tab key, select the desired date, and press the enter key.



**Tip:** To change the starting day of the week, select *Desk* → *Tools* → *Control panel* → *General* → *Regional settings*. Select the *Date* page and the *First day of the week* field.

## Day view

The *Day* view shows the events for the selected day. Entries are grouped into time slots according to their starting time. To view the previous or next day, scroll left or right.

## Weekly time schedule view

The *Weekly time schedule* view shows the reserved hours for the selected week. Only timed entries are shown. If a time box contains entries, the bar across the bottom of the weekly time schedule shows the details of the entry. The numbers to the right of the entry description indicate the number of entries in that time box. For example, 1/3 means that you are seeing the details of the first of three entries. If a time box contains more than one entry, press the tab key to view a list of all entries.



**Tip:** You can select different bar colors for different types of entries. For example, use a green bar for hobbies and a red bar for business trips to get a quick overview of your activities during a week. To define a color for an entry, select the entry, and press *Edit*. Select the *Status* page, and *Color/Symbol marking* field.

## Year schedule view

The *Year schedule* view shows the timetable for the selected year. Only entries with colors are shown. If there are several colors for the day, only one can be shown.

## Anniversaries view

The *Anniversaries* view shows the anniversaries for four months at a time. No other entries are shown.



**Tip:** To change the number of months shown in the anniversary view, press *Menu*, and select *View* → *View settings...*

## To-do lists view

In the *To-do lists* view, you can view and create lists that contain to-do notes. The page number in the upper right corner indicates the position of the to-do list among other to-do lists. For example, 1/6 means that you are viewing the first to-do list out of six. To view the previous or next list, scroll left or right. To see a list of all to-do lists, press the tab key.

To create a new to-do list, press *Menu*, and select *File* → *New to-do list...* On the *Details* page, enter the name, position, and sorting order of the to-do list. On the *Visibility* page, define whether to-do notes are visible in to-do lists only or in all calendar views, and the time position in which you want the to-do notes displayed in calendar views.

## ■ Calendar files

You can have more than one calendar file in use.

To create a new calendar file, press *Menu*, and select *File* → *More options* → *New calendar...* Select a location for the calendar file and enter a name for it. Press *OK*.

To open another calendar, press *Menu*, and select *File* → *More options* → *Open calendar...*

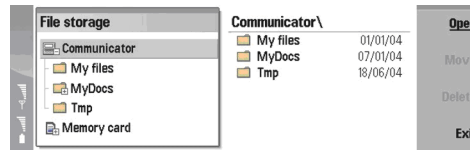
To save the currently open calendar file as a new file, press *Menu*, and select *File* → *More options* → *Save as...* Select a location for the new file and enter a name for it. Press *OK*.


To add the contents of a calendar file to the currently open calendar, press *Menu*, and select *File* → *More options* → *Import...* Browse for the calendar file whose contents you want to import.

## 12. File manager


In *File manager*, you can manage the contents and properties of files and folders.

Go to *Desk* → *Office* → *File manager*.




On the left frame of the File manager view, you can browse and select folders. To expand and collapse folders, press the scroll key right and left. On the right frame you can open subfolders and files. To move up one folder level, select , and press *Open*. To move from one frame to another, press the tab key.

### ■ Managing files and folders


To open a folder, select the folder, and press *Open*. A view of all the subfolders and files of the parent folder opens. To open a subfolder, select the folder, and press *Open*. To open the upper-level folder, select , and press *Open*. Press *Close folder* to return to the main view.

To open a file, select the file, and press *Open*. The appropriate application opens the file. Note that you can open only one file at a time.

 **Tip:** To view hidden files, press Menu, and select *View* → *Show all files*.

To create a new file or folder, move to the location where you want to create the new file or folder, press Menu, and select *File* → *New folder* or *New file...* Enter the name, and press *OK*.

To move or copy files or folders, select the file or folder, press Menu, and select *Edit* → *Cut* or *Copy*. Then move to the location where you want to place the file or folder, press Menu, and select *Edit* → *Paste*.

 **Tip:** You can also move files or folders by pressing *Move*.

To rename files or folders, select the file or folder, press Menu, and select *File* → *Rename*. Enter the new name, and press *Rename*. It is recommended that you do not change the names of the default folders. Default folders are folders that the device creates during the first start-up, such as *C:\My files\* and *C:\My files\Templates\*.

To delete files or folders, select the file or folder, and press *Delete*.


To view and modify properties of a file, folder, or drive, select the file, folder, or drive, press Menu, and select *File* → *Properties...* To prevent the file or folder from being edited, select the *Read-only* field, and select *Yes*. To change a file into hidden state, select the *Hidden* field and *Yes*.

To add a shortcut to Desk, select the file or folder, press Menu, and select *File* → *Add to Desk...* Select the application groups to which you want to add the shortcut.

To sort files and folders, press Menu, and select *View* → *Sort by* or *Sorting order*. Select one of the available options.

To send a file, select the file, press Menu, and select *File* → *Send*. Select the method of sending.

To modify *File manager* settings, press Menu, and select *Tools* → *Settings...* You can define whether you want to be able to browse the system directory and all its folders and files in *File manager*.

 **Tip:** It is advisable to hide the system directory so that you cannot accidentally delete or move important system files and risk causing software to malfunction.

To search for files and folders, press Menu, and select *Tools* → *Find...* Enter the text that is included in the name of the file or folder you are looking for, and press *Find*. To change the location or refine the search criteria, press *Options*. To find files and folders, use the following options:

- wildcards: ? for any character and \* for any string
- operators: AND, OR, NOT
- quotes: for example, "mobile phone" searches only for this phrase

In the *Results of Find* view, you can open and delete the files and folders found, as well as move, copy, rename, and sort them.



## ■ Memory card security

To protect the memory card with a password, press Menu, and select *Memory card* → *Security* → *Change password...* Enter the current password (if already set); then enter the new password, confirm it, and press *OK*. The password is up to 8 characters long, and it is asked for each time someone tries to access the memory card.



**Tip:** The password is case-sensitive, and you can use upper and lowercase letters. You can also use numbers.

To remove the memory card password, press Menu, and select *Memory card* → *Security* → *Remove password...* Enter the current password, and press *Remove*.

To format a memory card, press Menu, and select *Memory card* → *Format memory card...* All memory card data is permanently deleted.

To back up or restore data to or from a memory card, press Menu, and select *Memory card* → *Backup to memory card...* or *Restore from memory card...*

## 13. Camera and Images

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### ■ Camera

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

The camera lens is on the back of the device, and the display of the cover phone works as a viewfinder. The camera produces pictures in JPEG format and video clips in 3GPP format.

To open the Camera application, switch on the phone, and select **Menu** → *Camera* on the cover phone.



**Tip:** To quickly open the camera viewfinder, press the scroll key up in standby mode. To quickly change the camera mode, for example, to video mode, press the scroll key left or right.

You can view and modify photos in *Images*. [See Images on page 57.](#)

### Taking a picture

1. On the cover phone, press **Menu** → *Camera*.
2. If the light is dim, press **Options** → *Change mode*, and select *Night mode*. Select *Portrait photo* to take smaller pictures that take up less memory and can be attached to contact cards.
3. Use the display as a viewfinder, aim at your subject, and press **Capture**. The device saves the photo in the default folder, or in the folder you have defined in *Control panel*.



**Tip:** To zoom in or out before taking a picture, press the scroll key up or down.

4. If you do not want to keep the saved photo, press **Delete**. Press **Back** to return to the viewfinder to take another picture. Press **Options**, and select *Open in Images* to view the photo in the communicator interface.

You can change the folder where the pictures are saved. [See Camera folders on page 61.](#)

To adjust the brightness or contrast, press **Options** and select *Brightness* or *Contrast*. Press the scroll key left or right to decrease or increase the brightness or contrast.

To set the picture you have taken as wallpaper, press **Options** → *Set as wallpaper*. Select *Desk* if you want the picture to appear in the Desk view, and select *Cover* if you want to add a background image to the cover phone display.

### Recording a video clip

1. On the cover phone, press **Menu** → *Camera*.
2. Press **Options**, and select *Change mode* → *Video*.
3. To start recording a video clip, press **Record**. The remaining recording time is shown on the top of the display. To pause the recording, press **Pause**; to resume the recording, press **Continue**.
4. To stop the recording, press **Stop**. The device saves the recording in the default folder, or in the folder you have defined in *Control panel*.
5. If you do not want to keep the saved video clip, press **Delete**. Press **Back** to return to the viewfinder to record another video clip. Press **Options** and select *Open in RealPlayer* to view the video clip in the RealPlayer application.

You can change the folder where the video clips are saved. [See Camera folders on page 61.](#)

To mute or unmute the microphone, press **Options**, and select *Mute* or *Unmute*.

To adjust the brightness or contrast, press **Options**, and select *Brightness* or *Contrast*. Press the scroll key left or right to decrease or increase the brightness or contrast.

### Camera settings

To edit the camera settings, press **Options**, and select *Settings*.

Define the following:

- *Image quality* — Define how much the photo will be compressed when saving the image. *High* provides the best image quality but takes more memory.
- *Video clip length* — Select the length of the video clips that you record. The maximum length of a video clip is approximately 1 hour, depending on the available memory. *Default* records video clips up to 100 KB, which is about 10 seconds long. Only video clips that are of default length or shorter can be sent in a multimedia message.
- *Camera sounds* — Define whether you want the camera to make a shutter sound when taking pictures.
- *Default title* — Define the title that is used when saving a photo or video clip. If you select *Automatic*, the default title is used. If you select *My title*, you can key in a new title, or edit an existing one.

## ■ Images

Go to *Desk* → *Media* → *Images*.

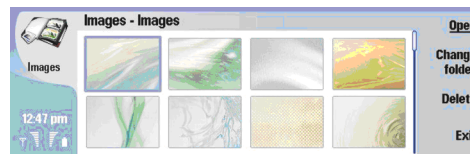


Image browser view

*Images* consists of two different views:

- In the image browser view you can, for example, organize, delete, and rename images stored in your device or memory card. The images can be displayed either as thumbnails or as a list of file names.
- In the image viewer, which opens when you select an image in the image browser view and press *Open*, you can view, edit, and send individual images. Note that TIFF and animated GIF files cannot be edited.

The following file formats are supported: JPEG, BMP, PNG, GIF 87a/89a, and TIFF/F (monochrome). The device does not necessarily support all variations of the aforementioned file formats.

### Viewing images

To open an image for viewing, select an image in the image browser view, and press *Open*. The image opens in the image viewer.

To open the next or previous image for viewing, press Menu, and select *Go to* → *Next image* or *Previous image*, or press Ctrl+F for the next image or Ctrl+B for the previous image.

To enlarge or reduce the viewed image on the display, press Menu, and select *View* → *Zoom* → *Zoom in* or *Zoom out*.

To view the image in full screen size, press *Full screen*. To return to normal view, press Menu, select *View*, and unselect *Full screen*. If you want the images to always open in full screen size, press Menu, and select *Tools* → *Settings...* In the *Always open image in full screen* field, select *Yes*.



**Tip:** To switch between the full screen and normal view, press Ctrl+T. In full screen mode, press any of the command buttons to display the commands.

### Editing images

To rotate an image, select an image, and press *Open*. Press Menu, and select *Tools* → *Rotate*. The image is rotated clockwise by 90 degrees.

To flip an image horizontally or vertically, select an image, and press *Open*. Press Menu, and select *Tools* → *Flip* → *Flip horizontally* or *Flip vertically*.

To crop an image, select an image, and press *Open*. Press Menu, and select *Tools* → *Crop...* Press + or - to increase or decrease the size of the selected area, or press Ctrl and scroll up, down, left, or right to change the shape of the selected area. To move the area selector inside the image, scroll up, down, left, or right. Press *Crop* to crop the image. The extra space around the area selector is removed.

To resize an image, select an image, and press *Open*. Press Menu, and select *Tools* → *Resize...* Select a percentage, or select *Custom size*, and define the size yourself. If you want to zoom the image so that there are no empty margins at the sides of the screen, select *Best fit*. This option is useful when, for example, creating wallpaper for *Desk*. Note that the aspect ratio of the image cannot be changed when you select *Best fit*.

### Managing image files

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

To view detailed information about an image, select an image, press Menu, and select *File* → *Properties...* Name, size, and format of the file; the time and date the file was last modified; and the resolution of the image in pixels are displayed. To prevent the image from being modified, select the *Attributes* page, and select *Read-only* and *Yes*.

To send an image, select the image, press Menu, and select *File* → *Send*, and the method to send.

To change the file format, select an image, and press *Open*. Press Menu, and select *File* → *Save* → *Save as...* Press *Change*. Select the new file format, and press *Done*. Press *OK* to save the file.

To rename an image, select an image, press Menu, and select *File* → *Rename...* Enter a new name, and press *OK*.

To make a copy of an image, select the image, press Menu, and select *File* → *Duplicate...*

To view images as a list of file names or as thumbnails, press Menu, and select *View* → *Show as* → *Thumbnails* or *List*.

## Camera and Images

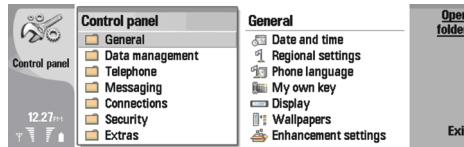
To set an image as wallpaper, select the image, press Menu, and select *Tools* → *Set as wallpaper*. Select *Desk* if you want the image to appear in the Desk view, and select *Cover* if you want to add the background image to the cover phone display.

To add an image to a contact card, select an image, press Menu, and select *Tools* → *Add to contact card...*. Press + or - to increase or decrease the size of the selected area. To move the area selector inside the image, scroll up, down, left, or right. Press Menu, and select an option to zoom, rotate, or flip the image. When the image is ready, press *Add*. Select the contact card to which the image is added, and press *Done*.

## 14. Control panel

In *Control panel*, you can define and modify various settings of your device. Modifying these settings affects the operation of your device across several applications.

Go to *Desk* → *Tools* → *Control panel*.



Control panel, main view

To open an application in *Control panel*, select one of the folders in the left frame, then the appropriate item in the right frame.

To zoom in on the Control panel view, press Menu, and select *View* → *Zoom in*.

### ■ General

Go to *Desk* → *Tools* → *Control panel* → *General*.

#### Date and time

You can change the time and date used by applications such as *Calendar* and *Clock*.

To set the current time and date, select *General* → *Date and time*, select the *Time* and *Date* fields, and enter the numbers. When setting the date, you can also press *Browse* to open a month grid where you can select a date.

To update date and time automatically, select *General* → *Date and time*. In the *Auto time update* field, select *On*. The time, date, and time zone information is updated to your device from the mobile phone network (network service). If the time zone changes, the current city also changes in the *Clock* application, and starting and ending times of your calendar entries are shown in local time. For the setting to take effect, the phone needs to be restarted.



**Tip:** Check any alarms and scheduled calendar entries, as these may be affected by *Auto time update*.

To use daylight saving, select *General* → *Date and time*. In the *Daylight-saving* field, select *On* to use the system's daylight saving time. Note that you cannot activate daylight saving if you have selected *On* in the *Auto time update* field.



**Tip:** To change the time and date format, select *General* → *Regional settings*. Modify the settings on the *Time* and *Date* pages.

#### Regional settings

You can define the format for the local time, date, numbering, and currency.

To define regional settings, select *General* → *Regional settings*, and select the appropriate page.

##### Time page

Define the following:

- *Time format* — Select the 12-hour or 24-hour clock system.
- *am/pm format* — If you selected the 12-hour clock format in the previous field, choose the way the 12-hour clock is expressed.
- *Separator* — Select the symbol that separates hours and minutes.

##### Date page

Define the following:

- *Date format* — Choose the order of days, months, and years.
- *Separator* — Select the symbol that separates days, months, and years.
- *First day of the week* — Change the first day of the week.
- *Working days* — Define which are the working days of the week.

##### Numbers page

Define the following:

- *Decimal point* — Select the sign that is used as a decimal point.
- *Thousands separation* — Select whether you want to use separation between thousands.

## Control panel

- *Thousands separator* — Select the sign that is used to separate thousands and hundreds.
- *Measurement units* — Select either metric or nonmetric units for length measurement.

### Currency page

Define the following:

- *Currency symbol* — Enter the symbol for the used currency.
- *Decimal places* — Define the number of decimal figures used in currency numbers.
- *Symbol position* — Define the position and spacing of the currency symbol and the number of currency units.
- *Negative value format* — Define how a negative amount of currency is expressed.

### Device language

To change the language of the device, select *General* → *Device language*. Select the new language from the list, and press *Done*. Press *Reboot* to restart the device.

### My own key

To select the application that opens when you press the My own key, select *General* → *My own key*. Press *Select*, select the application, and press *Done*.

### Display

To define the contrast and brightness of the display, select *General* → *Display*.

Define the following:

- *Contrast level* — Press + or - to increase or decrease the difference between the lightest and darkest areas on the screen.
- *Brightness* — Press + or - to increase or decrease the amount of white the colors contain.
- *Brightness period* — Select a time period after which the display is dimmed if the device remains inactive.
- *Screen saver* — Select a time period after which the display is automatically switched off if there have been no key presses within that time.



**Tip:** You can adjust brightness also by pressing Chr+space bar.

To define the color set for the dialogs and controls, select *General* → *Display*. On the *Color* page, select the *Color palette* field, select one of the color sets, and press *Done*.

To define the cursor speed and acceleration, select *General* → *Display*, and select the *Cursor settings* page. Specify how fast the cursor moves, and how much it accelerates as you move it faster.

### Wallpapers

To change the background image of the communicator interface, select *General* → *Wallpapers*. Select the *Desk* page, and in the *Wallpaper* field, select *Yes*. Select the *Image file* field, and press *Change*. Pre-installed wallpapers are shown in the *Select wallpaper* dialog. To search for other files, press *Browse*. Note that by default only image files are shown. To view other types of files, press *Show all files*. To view the selected image, press *Preview*.

Similarly, you can change the background image of the cover phone display on the *Cover* page.

### Enhancement settings

To let the device answer phone calls automatically when an enhancement is in use, select *General* → *Enhancement settings*, select *Headset*, *Loopset*, or *Car kit* from the list, and press *Edit*. In the *Automatic answer* field, select *On*.

To select the profile that is activated when you attach an enhancement to your device, select *General* → *Enhancement settings*, select *Headset*, *Loopset*, *Car kit*, or *TTY* from the list, and press *Edit*. Change the profile in the *Default profile* field. To select the currently active profile, select *Active*.

To keep the light of the cover phone switched on when the device is attached to a car kit, select *General* → *Enhancement settings*, select *Car kit* from the list, and press *Edit*. In the *Cover display lights* field, select *Always on*.

To activate the TTY (teletypewriter), select *General* → *Enhancement settings*, select *TTY* from the list, and press *Edit*. In the *TTY active* field, select *Yes*.

## ■ Data management

Go to *Desk* → *Tools* → *Control panel* → *Data management*.

## Application manager

In *Application manager*, you can view the details of installed applications or remove them from your device. You can also specify installation settings.

You cannot install applications in *Application manager*. See [Installing applications and software on page 80](#).

When you open *Application manager*, the *Installed software* page lists all of the software packages that have been installed, with their name, version number, type, and size.

To view the details of an installed software package, select *Data management* → *Application manager*, and select the *Installed software* page. Select an application or a component from the list, and press *Details*.

To uninstall applications or components, select *Data management* → *Application manager*. Select the software from the list, press *Remove*, and confirm the removal. Note that some software packages update existing software, and after the installation you may only be able to remove the whole software package, not the update.

Note that if you remove software, you can only reinstall it by using the original software package file, or by restoring a full backup that contains the removed software package. If you remove a software package, you may no longer be able to open files created with that software. If another software package depends on the software package that you removed, the other software package may stop working. Refer to the documentation of the installed software package for details.

To view the installation log, select *Data management* → *Application manager*, and select the *Install log* page. A list shows what software has been installed and removed, and the date of installation or removal. If you encounter problems with the device after installing a software package, you can use this list to find out which software package may be the cause of the problem. The information in this list may also help to pinpoint problems that are caused by software packages that are incompatible with each other.

To save the contents of the installation log, select *Data management* → *Application manager*, and select the *Install log* page. Press *Copy*, and open the application where you want to paste the contents.

## Modifying installation settings

To modify installation settings, select *Data management* → *Application manager*, and select the *Preferences* page. You can select options related to software installation.

- *Delete source file after installation* — If you select *Yes*, the software package installation file is deleted from the device after installation. If you download software packages using the Web browser, this may help to reduce the amount of storage space required. If you want to store the software package file for possible reinstallation, do not select this option, or make sure that you have a copy of the software package file stored on a compatible PC or on a CD-ROM.
- *Enable online cert. checking* — If you select *Yes*, the certificate of the file is verified during installation.
- *Web address for cert. checking* — Enter the Web address of the site that checks online certificates.
- *Preferred language* — If the software package contains several language versions of the software, select the language version that you want to install.
- *Install application* — Specify what kind of applications you want installed. If you select *Only certified*, only applications with validated certificates can be installed. Note that this setting applies only to Symbian operating system applications (SIS files).

## Setting Java application security settings

To modify the security settings of a Java application, select *Data management* → *Application manager*, and select the *Installed software* page. Select a Java application from the list, and press *Details*. On the *Network permissions* and *Privacy permissions* pages, you can allow or restrict access to certain functions of the application.

## Camera folders

To change the folders where photos and video clips are saved, select *Data management* → *Camera folders*. In the *Images* field, select a folder for photos, and in the *Video* field, select a folder for your video clips. The photos you take and the video clips you record are saved automatically in these folders.

## Backup

See [Backup on page 78](#).

## Memory

To view memory consumption, select *Data management* → *Memory*. You can view the amount of free memory and the memory consumption of different items on your device and memory card.

To switch between device memory and memory card statistics, select *Data management* → *Memory*, and press *Device* or *Memory card*.





**Tip:** To avoid memory getting low, you should regularly delete or transfer data to a memory card or PC.

## Messaging tools

To automatically empty the Sent folder in *Messaging*, select *Data management* → *Messaging tools*, and select *Sent items storage*. Set *Delete sent items* to *automatically*, and enter the number of days after which the device empties the folder.

To delete messages from the device, select *Data management* → *Messaging tools*. Select *Delete e-mails locally*, and select the e-mail you want to delete. For example, you can delete all e-mail, or only e-mails that are more than two weeks old. Press *Delete now* to delete the messages.

[See Avoiding low memory on page 26.](#)

## ■ Telephone

*Desk* → *Tools* → *Control panel* → *Telephone*.

- *1-touch dials* — [See 1-touch dialing on page 21.](#)
- *Voice call forwarding* — [See Call forwarding on page 22.](#)
- *Voice call restriction* — [See Call restriction on page 23.](#)
- *Voice mailboxes* — [See Voice mailbox settings on page 24.](#)
- *Other settings* — [See Call, network, and phone line settings on page 23.](#)

## Profile settings

You can adjust and customize the device tones for different events, environments, or caller groups.

To modify a profile, select *Telephone* → *Profile settings*. Select a profile in the list, and press *Edit*. To create a new profile, press *New*. Define the settings on the different pages of the *Profile settings* dialog. Note that not all settings can be changed for all profiles.

Define the following:

- *Name* — You can rename a profile, and give it any name you want. The *Normal* and *Offline* profiles cannot be renamed.
- *Ringling type* — If you select *Ascending*, the ringing volume starts from level one and increases level by level to the set volume level.
- *Ringling tone* — Press *Change* to select a ringing tone from the list. If the sound file is located on the memory card or in another folder, press *Browse* to search for the file. To listen to the selected tone, press *Play*. If you have two alternate phone lines in use, you can specify a ringing tone for each line.
- *Personal tones* — Select *On* if you want to use the personal ringing tones of callers that you have set in *Contacts*.
- *Clock alarm* — Select an alarm tone that is used with the alarm clock. Similarly, you can specify an alarm tone for calendar alarms and received text, multimedia, and fax messages.
- *Keyboard tone* — Set the volume level of the communicator keyboard.
- *Telephone keys tone* — Set the volume level of the phone keypad.
- *Notification tones* — Set the tones made by the device when, for example, the battery is running out of power.
- *Play ringing tone for* — You can set the phone to ring only upon calls from phone numbers that belong to a selected contact group. Phone calls coming from outside that group will have a silent alert.

## Data call and fax call diverting (network service)

Call diverting allows you to direct your incoming data and fax calls to another phone number.

To divert data or fax calls, select *Telephone* → *Data call forwarding* or *Fax call forwarding*.

Define the following:

- *Forward all calls* — When activated, all incoming calls are diverted.
- *Forward if busy* — When activated, incoming calls are diverted if you are engaged in another call.
- *Forward if out of reach* — When activated, incoming calls are diverted when the device is switched off or outside the network service area.
- *Forward if not answered* — When activated, incoming calls are diverted if you do not answer them within a certain time period.
- *Forward if not available* — In a single action, this option activates the following: *Forward if busy*, *Forward if out of reach*, and *Forward if not answered*.

To check whether the divert is active, select *Telephone* → *Data call forwarding* or *Fax call forwarding*, select the divert option, and press *Check status*.

To cancel all data or fax call diverts, select *Telephone* → *Data call forwarding* or *Fax call forwarding*, and press *Cancel all*.

## ■ Messaging

Go to *Desk* → *Tools* → *Control panel* → *Messaging*.

[See Editing fax settings on page 34.](#)

[See Multimedia message account settings on page 33.](#)

[See Text message settings on page 31.](#)

### Service message

To edit reception and authentication settings for service messages, select *Messaging* → *Service message*. In the *Reception:* field, select *Yes* if you want to receive all service messages to your Inbox. Select *No* to ignore all service messages.

## ■ Connections

Go to *Desk* → *Tools* → *Control panel* → *Connections*.

- *Internet setup* — [See Internet setup on page 66.](#)
- *Bluetooth* — [See Bluetooth on page 83.](#)

### Wireless LAN

To view the status of the wireless LAN connection, select *Connections* → *Wireless LAN*. On the *Status* page you can view the connection status, network name, and connection security and quality.

To view information on networks, wireless LAN access points, or ad hoc networks, select *Connections* → *Wireless LAN*, and select the *Networks* page. In the *Display* field, select the network item you want, and press *View details*.

- *Networks* — Select this to view the all the wireless LAN networks that can be accessed, and the signal strength of that network.
- *Access points* — Select this to view the wireless LAN access points that are currently in range and available, and the radio frequency channel they are using.
- *Ad hoc networks* — Select this to view available ad hoc networks.

To view details on EAP (extensible authentication protocol) security modules, select *Connections* → *Wireless LAN*, and select the *Security* page. The page contains a list of the installed EAP modules that are used in a wireless LAN to relay port access requests between wireless devices, wireless LAN access points, and authentication servers. Select a module, and press *View details*. Each of these modules can be modified together with Internet access points.

### Specifying wireless LAN settings

You can change settings that are common to all wireless LAN connections.

To modify general wireless LAN settings, select *Connections* → *Wireless LAN*, and select the *Settings* page.

Define the following:

- *Background scan interval* — Specify how often you want the device to scan for available networks. To reduce battery consumption, select *Never*. The wireless LAN icon is displayed in the indicator area when a network is found.
- *Simultaneous Bluetooth usage* — Select *Allowed* if you want to be able to use a Bluetooth connection during a wireless LAN connection.

To modify advanced wireless LAN settings, select *Connections* → *Wireless LAN*. Select the *Settings* page, and press *Advanced settings*. Press *OK*.

Define the following:

- *Automatic configuration* — Select *Off* if you want to specify the advanced wireless LAN settings manually. Do not change the settings manually unless you are sure how each setting affects system performance. System performance may drop dramatically if automatic settings are not used.
- *Ad hoc channel* — Specify the radio frequency channel on which you want to set up an ad hoc network. Select *Automatic* if you want to be allocated an available channel automatically.
- *Long retry limit* — Specify the maximum number of transmission attempts of a frame whose size is greater than the RTS (request to send) threshold.
- *Short retry limit* — Specify the maximum number of transmission attempts of a frame whose size is less than or equal to the RTS threshold.
- *RTS threshold* — Determines the data packet size at which the wireless LAN access point issues a request to send before sending the packet.
- *TX power level* — Specify the power level used when transmitting data.

To use the original factory settings, press *Restore defaults*.

## Creating a basic Internet access point for a wireless LAN

You can quickly create an Internet access point that contains all the basic settings. An Internet access point is needed to connect to the Internet.

To create a basic Internet access point, select [Connections](#) → [Wireless LAN](#), and select the [Networks](#) page. Select the network or wireless LAN access point for which you want to create the Internet access point, and press [Create access point](#). Press [OK](#), and you are asked for the WEP key or WPA settings if required by the network. If the network does not require these security settings, you are shown details on the new Internet access point. Press [OK](#).

For instructions on modifying the WEP key or EAP module settings, see the Help function in the device.

You can also create an Internet access point in more detail. See [Setting up an Internet access point for a wireless LAN on page 68](#).

## Cable setup

To specify how the data cable is used, select [Connections](#) → [Cable setup](#).

Select from the following options:

- [PC Suite connection](#) — Select this to use the data cable to connect to PC Suite.
- [IP passthrough](#) — Select this to connect your device to a compatible PC and use the Internet or network connection of the PC.
- [IP passthrough overrides PC Suite](#) — Select this to automatically terminate a PC Suite connection via data cable when you connect your device to a compatible PC and use the Internet or network connection of the PC.

## RealPlayer settings

To access streaming data, such as real-time audio and video, you must set network and proxy settings for the RealPlayer application.

To modify RealPlayer settings, select [Connections](#) → [RealPlayer settings](#).

On the [Network](#) and [Proxy](#) pages, define the following:

- [Connection timeout](#): — Specify how long RealPlayer waits before reporting a network connection failure. Increase the time if you frequently receive a time-out error.
- [Server timeout](#): — Specify how long RealPlayer waits for a response from the media server before disconnecting.
- [Port range](#): — Specify the port range that is used for receiving data.
- [Use proxy](#): — Select [Yes](#), if your Internet service provider requires that a proxy server is used to connect to the Internet.
- [Host address](#): — Enter the proxy server address.
- [Port](#): — Enter the port number of the proxy server.

## ■ Security

Go to [Desk](#) → [Tools](#) → [Control panel](#) → [Security](#).

### Device security

You can modify the security settings for the PIN code, automatic locking of the device, and changing of the SIM card. You can also change the PIN code, PIN2 code, lock code, and restriction password.

Avoid using codes that are similar to emergency numbers, such as 112, to prevent accidental dialling of the emergency number.

Codes are shown as asterisks. When changing a code, enter the current code, and then the new code twice.

### Defining device lock settings



**Important:** In offline profile you cannot make (or receive) any calls, or use other features that require GSM network coverage. To make any calls, you must first activate the phone function by changing the profile. You may, however, be able to make an emergency call in offline profile by pressing the power key on the cover of the device and then entering the official emergency number. This can be done using the cover phone interface only, not the communicator interface. If the device has been locked, enter the lock code to activate the phone function. When the device is locked, calls may still be possible to the official emergency number.

Making an emergency call in offline profile or when the device is locked requires that the device recognizes the number to be an official emergency number. It may be advisable to change the profile or unlock the device by entering the lock code before you make the emergency call.

To define device lock settings, select [Security](#) → [Device security](#), and select the [Device lock](#) page.

Define the following:

## Control panel

- **Autolock period** — You can set a time-out after which the device is automatically locked and can be used only if the correct lock code is entered. When the device is locked, calls may still be possible to the official emergency number programmed into your device. You can also answer incoming calls.
- **Lock code** — Press **Change** to change the lock code. The new code must be 5 to 10 digits long. The preset code is 12345. To avoid unauthorized use of your device, change the lock code. Keep the new code secret and in a safe place separate from your device.
- **Lock if SIM card is changed** — You can set the device to ask for the lock code when an unknown SIM card is inserted into your device. The device maintains a list of SIM cards that are recognized as the owner's cards.
- **Allow remote locking** — If you set this option to **Yes**, you can lock the device by sending a predefined text message from another phone.

To create a remote locking message, select **Security** → **Device security**. Set the option **Allow remote locking** to **Yes**, enter your lock code, and enter text for the remote locking message in the **Message** field. Confirm the message, and press **Done**. The remote locking message is case-sensitive and can be 5 to 20 characters or digits long. Press **Reboot** to restart the device and for the changes to take effect.



**Tip:** If you use a memory card with no password, the memory card will be locked when you lock your device with the remote locking message. To remove the memory card password, select **Desk** → **Office** → **File manager**, press **Menu**, and select **Memory card** → **Security** → **Remove password...** Enter the remote locking message as your password, and press **Remove**. If the remote locking message is longer than 8 characters, the first 8 characters of the message are used as the memory card password.

### Defining PIN code settings

To define PIN code settings, select **Security** → **Device security**, and select the **PIN codes** page.

Define the following:

- **PIN code request** — If you set this option to **On**, the PIN code is requested each time the phone is switched on. Note that this setting cannot be changed if the phone is switched off or if there is no valid SIM card inserted. Note also that some SIM cards do not allow you to turn off the PIN code request.
- **PIN code** — Press **Change** to change the PIN code. The PIN code must be 4 to 8 digits long. Changing the PIN code requires that **PIN code request** is selected, the device is on, and that there is a valid SIM card inserted.
- **PIN2 code** — Press **Change** to change the PIN2 code. The PIN2 code must be 4 to 8 digits long. The PIN2 code is required to access some functions, such as the fixed dialing settings, which must be supported by your SIM card.

### Changing the restriction password

To change the password used for restricting voice, fax, and data calls, select **Security** → **Device security**, and select the **Call restriction** page. Select the **Restriction password** field, and press **Change**. Enter the current code, and then the new code twice. The restriction password must be four digits long.

### Certificate manager



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

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

Digital certificates may be used for:

- connecting to an online banking service or another site or remote server to transfer confidential information
- reducing the risk of viruses or other malicious software, and checking the authenticity of software when downloading and installing it

### Managing certificates

Personal certificates are certificates that are issued to you. They are listed on the **User** page.

Authority certificates are on the **Other** page. They are used by some services, such as banking, for checking the validity of other certificates.

To add certificates, select **Security** → **Certificate manager**. Press **Add** to add a new certificate. You can then browse for the certificate file. Press **Delete** to remove a selected certificate.

To check the authenticity of a certificate, select **Security** → **Certificate manager**. Select a certificate, and press **View details**. The **Issued to:** field identifies the owner of this certificate. Make sure that this is the name of the party to whom the certificate belongs. The **Fingerprint:** field uniquely identifies the certificate. Contact the help desk or customer service of the

## Control panel

owner of the certificate and ask for the MD5 fingerprint of the certificate. Compare the fingerprint with the one shown in the dialog to check whether they match .



**Tip:** Check the authenticity of a certificate each time you add a new certificate.

To change the trust settings of a certificate, select *Security* → *Certificate manager*. Select the certificate, press *View details*, and press *Trust settings*. Depending on the certificate, a list of the applications that can use the selected certificate is shown. Select an application field, and change the value to *Yes* or *No*. Note that you cannot change the trust settings of a personal certificate.

To change the private key store password, select *Security* → *Certificate manager*, select the *Password* page, and press *Change password*. Enter the current password, press *OK*, and enter the new password twice. You need the private key store password when using personal certificates. The private key store contains the secret keys that come with personal certificates.

## ■ Extras

Go to *Desk* → *Tools* → *Control panel* → *Extras*.

### About product

To view the version number of the software, select *Extras* → *About product*, and scroll to the bottom of the dialog.

### Location privacy

Some networks allow others to request the position of your device (network service). Note that a separate positioning module is needed for this service.

To set the device to accept or reject all position requests, select *Extras* → *Location privacy*, and select the *Verification policy* field. Select *Accept all* or *Decline all*.

### Location request log

To view the location request log, select *Extras* → *Location request log*. The log shows a list of received location requests, displaying the name or phone number of the requester, time and date, and whether the request was accepted.

## ■ Internet setup

Go to *Desk* → *Tools* → *Control panel*, and select *Connections* → *Internet setup*.

To connect to the Internet, you need an Internet access point.

For connecting to the Internet over GPRS, the device has predefined, default Internet access point settings. You can create new Internet access points yourself, or you may receive your Internet access point settings in a message from your service provider. This might reduce the number of settings you need to enter yourself, or eliminate the need altogether.

The exact values for the settings are usually provided by your service provider. Follow the instructions given to you by your service provider very carefully.



**Tip:** You may need to set up several Internet access points, depending on the sites you want to access. For example, browsing the Web may require one setup, and accessing your company intranet may require another connection.

### Setting up an Internet access point

1. Select *Connections* → *Internet setup*.
2. Press *New*. You can use an existing Internet access point as a basis for the new one: after you have pressed *New*, press *Yes*. Select the access point from the list, and press *OK*.
3. Define the settings.
  - *Internet settings name* — Enter a descriptive name for the connection.
  - *Internet settings type* — Select the connection type. Depending on which connection you select, only certain settings will be available during the setup process.
  - *Network ID* — Select the network ID according to the destination network you want to access with the Internet access point. You can rename, and create new network IDs. Using the correct network ID ensures that the data traffic is routed directly to the desired destination network. Especially VPN (virtual private network) software may restrict data traffic for a certain destination network. Network ID can be used to filter Internet access points when establishing an Internet connection.
  - *GPRS access point name* (for GPRS only) — If you are not using a default Internet access point, define a name for the access point. You can obtain the name from your network operator or service provider.
  - *Telephone number* (for GSM data only) — Type the modem telephone number of the Internet access point.

## Control panel

- **Password prompt** — Change this to *Yes* if you must write a new password every time you log on to a server, or if you do not want to save your password to the device.
  - **User name** — Type a user name if required by the service provider. The user name may be needed to make a data connection, and is usually provided by the service provider. The user name is often case-sensitive.
  - **Password** — A password may be needed to connect to the Internet, and is usually provided by the service provider. The password is often case-sensitive.
4. After defining the settings, press *Advanced* to define advanced settings, if necessary. Otherwise, press *Finish* or *Done* to exit the setup wizard.

## Configuring advanced Internet access point settings

Press *Advanced* when you have finished setting up the basic Internet access point settings. The pages and options available depend on the connection type you have selected.

### IP configuration page

Note that the two protocols (IPv4 and IPv6) require slightly different settings.

- **Network type** (for GPRS only) — For a GPRS connection you must specify which protocol you want to use.
- **Auto retrieve IP** — If you select *Yes*, the IP address is obtained automatically from the server. This setting is also called dynamic IP address.
- **IP address** — The IP address of the device. If the IP address is obtained automatically, you are not required to enter details here.
- **Auto retrieve DNS** — If you select *Yes* for the IPv4 protocol, the DNS (domain name server) address is obtained automatically from the server. The respective value for the IPv6 protocol is *Well known*. DNS is an Internet service that translates domain names such as *www.nokia.com* into IPv4 addresses like *192.100.124.195*, or IPv6 addresses like *3ffe:2650:a640:1c2:341:c39:14*. If you select *No* for the IPv4 protocol, or *Manual* for the IPv6 protocol, you must specify the IP addresses for the primary and secondary DNS servers.

### Proxies page

You may want to use a proxy to quicken access to the Internet. Some Internet service providers require the use of Web proxies. Contact your Internet service provider to determine proxy details.

If you have made an Internet connection to your company's intranet, and are unable to retrieve Web pages from the general Internet, you may need to set up a proxy server to retrieve Web pages outside your company's intranet.

Define the following:

- **Proxy protocol** — Select the protocol type of the proxy. You can set different proxy settings for each protocol.
- **Use proxy server** — Select *Yes* to use the proxy server.
- **Proxy server** — Enter the IP address of the proxy server, or the domain name. Example domain names are: *company.com* and *organisation.org*.
- **Port number** — The number of the proxy port. The port number is related to the protocol. Common values are 8000 and 8080, but vary with every proxy server.
- **No proxy for** — Define the domains for which the HTTP or HTTPS proxy is not needed.

### Data call page

Define the following:

- **Connection type** — Define the GSM data call type. To use *High speed*, the service provider must support this feature, and if necessary, activate it for your SIM card.
- **Remote modem type** — Define whether the device uses an analog or digital connection. This setting depends on both your GSM network operator and Internet service provider, because some GSM networks do not support certain types of ISDN connections. For details, contact your Internet service provider. If ISDN connections are available, they establish connections more quickly than analog methods.
- **Modem speed** — This option allows you to limit the maximum connection speed. Higher data rates may cost more, depending on the service provider. The speed represents the maximum speed at which your connection will operate. During the connection, the operating speed may be less, depending on network conditions.
- **Modem initialization** — You can control your device using modem AT commands. If required, enter characters specified by your service provider.

### Script page

A script can automate the connection between the device and the server. Contact your Internet service provider to find out whether you need a script.

Define the following:

- **Use login script** — If you select *Yes*, you can write or import a login script. You can edit the script in the *Login script* field.



## Control panel

- **Show terminal window** — If you select *Yes*, once a connection is established, you see the execution of the script.

### Other page

Define the following:

- **Use callback** — Select *Yes* if you have a service that dials back to your device when you establish an Internet connection.
- **Callback type** — Ask your Internet service provider for the correct setting. *Server number* refers to the standard Microsoft callback, and *Server number (IETF)* refers to a callback approved by the Internet Engineering Task Force. Select *Number* to use a number that you define in the *Callback number* field.
- **Callback number** — Enter the data call phone number of your device, which the callback server uses.
- **Allow plain text login** — Select *No*, if you never want to send your password as plain text without encryption. Note that this option only affects PPP connections; e-mail and Web passwords are not encrypted. Some Internet service providers require that this option is set to *Yes*.
- **Use PPP compression** — Select *Yes* to speed up the data transfer, if it is supported by the remote PPP server. If you have problems establishing a connection, select *No*.

### Setting up an Internet access point for a wireless LAN

Your device has a predefined Internet access point for a wireless LAN, but you can create new Internet access points yourself.

1. Select **Connections** → **Internet setup**.
2. Press **New**. You can use an existing Internet access point as a basis for the new one: after you have pressed **New**, press *Yes*. Select the access point from the list, and press **OK**.
3. Define the settings.
  - **Internet settings name** — Enter a descriptive name for the Internet access point.
  - **Internet settings type** — Select **Wireless LAN** as the connection type.
  - **Network ID** — Select the network ID according to the destination network you want to access with the Internet access point. You can rename and create new network IDs. Using the correct network ID ensures that the data traffic is routed directly to the desired destination network. Especially VPN (virtual private network) software may restrict data traffic for a certain destination network. Network IDs can be used to filter Internet access points when establishing an Internet connection.
  - **Network mode** — If you select the **Infrastructure** mode, devices can communicate with each other and with wired LAN devices through a wireless LAN access point. If you select the **Ad hoc** mode, devices can send and receive data directly with each other. No wireless LAN access point is needed.
  - **Network name** — Type the network name (SSID - service set identifier) as defined by the system administrator, or press **Change**, and select one from the list. In the ad hoc mode, the users themselves name the wireless LAN. If you do not specify the network name here, you are asked to select a network when you establish a wireless LAN connection.
  - **Security mode** — You must select the same security mode that is used in the wireless LAN access point. If you select **WEP** (wired equivalent privacy) or **WPA** (Wi-Fi protected access), you must configure additional settings, too.
4. After defining the settings, press **Advanced** to define advanced settings, if necessary. Otherwise, press **Finish** or **Done** to exit the setup wizard.

### Configuring advanced Internet access point settings

Press **Advanced** when you have finished setting up the basic Internet access point settings.

The pages and options available depend on the settings you have chosen. Ask your system administrator for the correct values.

### IP configuration page

Note that the two protocols (IPv4 and IPv6) require slightly different settings.

- **Auto retrieve IP** — If you select *Yes*, the IP address is obtained automatically from the server. This setting is sometimes also called dynamic IP address. If you select *No*, you must specify the IP address, subnet mask, and default gateway in the fields below.
- **Auto retrieve DNS** — If you select *Yes* for the IPv4 protocol, or **DHCP** for the IPv6 protocol, the primary and secondary DNS (domain name server) addresses are obtained automatically from the server. DNS is an Internet service that translates domain names such as *www.nokia.com* into IPv4 addresses such as *192.100.124.195*, or IPv6 addresses like *3ffe:2650:a640:1c2:341:c39:14*. If you select *No* for the IPv4 protocol, or **Manual** for the IPv6 protocol, you must specify the IP addresses for the primary and secondary DNS servers.

### Proxies page

You may want to use a proxy to quicken access to the Internet. Note also that some Internet service providers require the use of Web proxies. Contact your Internet service provider to determine proxy details.

If you have made an Internet connection to your company's intranet, and are unable to retrieve Web pages from the general Internet, you may need to setup a proxy server to retrieve Web pages outside your company's intranet.



## Control panel

Define the following:

- **Proxy protocol** — Select the protocol type of the proxy. You can set different proxy settings for each protocol.
- **Use proxy server** — Select **Yes** to use the proxy server.
- **Proxy server** — Enter the IP address of the proxy server, or the domain name. Example domain names are: company.com and organisation.org.
- **Port number** — The number of the proxy port. The port number is related to the protocol. Common values are 8000 and 8080, but vary with every proxy server.
- **No proxy for** — Define the domains for which the HTTP or HTTPS proxy is not needed.

### WPA page

In the **WPA mode** field, select **EAP** if you want to use an EAP module for authentication. If you select **Pre-shared key**, type the password (also called a master key) in the field below. Note that the same key must be entered in the wireless LAN access point.

### EAP page

You can configure various EAP (extensible authentication protocol) modules that are used for authentication and data encryption. Note that corresponding values must be entered in the wireless LAN access point. EAP authentication is only available if you have selected **WPA** or **802.1x** as the security mode.

For instructions on editing the EAP module settings, see the Help function in the device.

### WEP page

You can create up to four WEP keys. Corresponding values must be entered in the wireless LAN access point.

- **WEP authentication** — Select **Open** or **Shared** as a means of authentication between the wireless device and the wireless LAN access point.
- **WEP key in use** — Select the WEP key you want to use with the Internet access point you are creating.
- **Key #1 length** — Select the appropriate key length. Supported key lengths are 40, 104, and 232 bits. The more bits there are in the key, the higher the level of security. WEP keys consist of a secret key and a 24-bit initialization vector. For example, some manufacturers refer to the 104-bit key as a 128-bit key (104+24). Both keys offer the same level of encryption and are therefore interoperable.
- **Key #1 type** — Select whether you want to enter the WEP key data in hexadecimal format (**HEX**) or in text form (**ASCII**).
- **Key #1 data** — Enter the WEP key data. The number of characters you can enter depends on the key length you have chosen. For example, keys that are 40 bits long always consist of 5 alphanumeric characters or 10 hexadecimal characters.

### EAP modules

EAP modules are used in a wireless LAN to authenticate wireless devices and authentication servers.

Note that the network must support this feature.

### Modifying the EAP-SIM settings

To use EAP-SIM authentication, the cover phone must be switched on, and the device must have a valid SIM card installed.

To modify EAP-SIM settings for the Internet access point, select **Connections** **Internet setup**. Select a wireless LAN Internet access point from the list, and **Edit** → **Advanced**. Select the **EAP** page. Select EAP-SIM from the list, and press **Configure**.

Define the following:

- **Use manual user name** — This setting overrides the user name in the initial identity response in a case when the server requires that the user performs the initial identification with a predefined user name, for example, with a Windows user name. If you select **Yes** but leave the **User name** field empty, a random user name is generated for initial identity response.
- **Use manual realm** — This setting overrides the realm of the initial identity response in a case when the server requires that the user performs the initial identification with a predefined realm. If you select **No**, the realm is derived from the IMSI (international mobile subscriber identity).
- **Use identity privacy** — The EAP-SIM can have the server send a pseudonym identity for future authentications. This identity prevents the user's IMSI from being sent.
- **Maximum reauthentication count** — The EAP-SIM can have the server send the wireless device a reauthentication identity that can be used to speed up the upcoming authentications. You can specify how many times a single reauthentication mechanism can be used until full authentication must be performed. If the reauthentications mechanisms are used too many times, security may be compromised because the SIM card is not used in reauthentication.

### Modifying the EAP-TLS settings

To modify the EAP-TLS settings for an Internet access point, select **Connections** → **Internet setup**. Select a wireless LAN Internet access point from the list, and press **Edit** → **Advanced**. Select the **EAP** page. Select EAP-TLS from the list, and press **Configure**.

On the **User certificates** page, select which personal certificates are used for user authentication when using this Internet access point. This page shows all the installed personal certificates on the device. The certificates are enabled by default. To disable a certificate, select the certificate, and press **Disable**.

## Control panel

On the [CA certificates](#) page, select which authority certificates are valid for server verification in wireless LAN authentication when using this Internet access point. This page shows all the installed authority certificates on the device. All certificates are enabled by default. To disable a certificate, select the certificate, and press [Disable](#).

On the [Cipher suites](#) page, select which TLS (transport layer security) cipher suites you want to use with this Internet access point. To enable a selected cipher suite, press [Enable](#).

On the [Settings](#) page, you can define additional settings related to EAP-TLS. For instructions on modifying these settings, see the Help function in the device.

### Modifying the EAP-PEAP settings

To modify the EAP-PEAP settings for an Internet access point, select [Connections](#) → [Internet setup](#). Select a wireless LAN Internet access point from the list, and press [Edit](#) → [Advanced](#). Select the [EAP](#) page. Select EAP-PEAP from the list, and press [Configure](#).

On the [User certificates](#) page, select the personal certificates for user authentication when using this Internet access point. This page lists all personal certificates installed on the device. The certificates are enabled by default. To disable a certificate, select the certificate, and press [Disable](#). On the [CA certificates](#) page, select which authority certificates are valid for server verification in wireless LAN authentication when using this Internet access point. This page shows all the installed authority certificates on the device. All certificates are enabled by default. To disable a certificate, select the certificate, and press [Disable](#).

On the [Cipher suites](#) page, select which TLS (transport layer security) cipher suites you want to use with this Internet access point. To enable a selected cipher suite, press [Enable](#).

On the [EAP types](#) page, select and configure the authentication methods you want to run inside the EAP-PEAP method. Press [Priority](#), and then [Move up](#) and [Move down](#) to change the priority order of the tunneled EAP types.

On the [Settings](#) page, you can define additional settings related to EAP-PEAP. For instructions on modifying these settings, see the Help function in the device.

### Modifying the EAP-LEAP settings

To modify the EAP-LEAP settings for an Internet access point, select [Connections](#) → [Internet setup](#). Select a wireless LAN Internet access point from the list, and press [Edit](#) → [Advanced](#). Select the [EAP](#) page. Select EAP-LEAP from the list, and press [Configure](#). If you enter your user name in the [Username](#) field, you need not give the user name during an authentication session. If you do not want to be asked for the password, select [No](#) in the [Password prompt](#) field, and enter the password in the [Password](#) field.

Note that if you select [No](#) in the [Password prompt](#) field, the password is stored in the device, and this decreases the level of security.

## Configuring Internet connection settings

These settings affect all Internet connections.

To configure common Internet connection settings, select [Connections](#) → [Internet setup](#). Select the [Idle](#) page, and define the time period after which the connection ends automatically and returns to standby mode if not used. You can specify a different time for each connection type, but the setting affects all Internet access points using that connection type.

Some Internet connections may appear inactive, but they may still be sending and receiving data in the background. These connections may postpone the closing of the connection.

Select the [Other](#) page, and define the settings.

- [Ask before connecting](#) — If you select [Yes](#), a dialog appears every time you connect to the Internet, asking you to confirm the connection or to change the Internet access point.
- [GPRS operating mode](#) — Select [Always on](#) to keep the GPRS connection in alert mode and to switch the packet data transfer on quickly when needed. If you select [On when needed](#), the device uses a GPRS connection only when you start an application or action that needs it. Note that if there is no GPRS coverage and you selected [Always on](#), the device will periodically try to establish a GPRS connection.

To change the priority of Internet access points, select [Connections](#) → [Internet setup](#). Press [Priority](#), select an Internet access point, and press [Move up](#) or [Move down](#). When you establish a data connection, the access points are searched for in the order you have specified.

## Selecting an Internet access point

When you establish an Internet connection, you are asked to select the Internet access point you want to use for that connection. In the [Network connection](#) dialog, select an Internet access point from the list, and press [Connect](#). Before connecting, you can filter the list of access points according to the network type. To view all Internet access points, select [All networks](#). To view Internet access points that are currently available, press [Show available](#). For example, if you are using the [Offline](#) profile, no GPRS or GSM Internet access points are shown in the list.

## Control panel



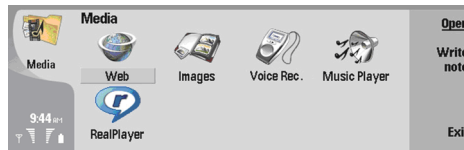
**Tip:** The *Network connection* dialog opens only if you have selected *Yes* in the *Ask before connecting* field in the general Internet access point settings. To check the status of the setting, select *Desk* → *Tools* → *Control panel*, and *Connections* → *Internet setup* → *Other* page.



**Tip:** If you have problems in establishing a wireless LAN connection, try selecting *Not allowed* for the *Simultaneous Bluetooth usage* option: go to *Desk* → *Tools* → *Control panel* → *Connections* → *Wireless LAN* → *Settings*. This prevents simultaneous Bluetooth technology and wireless LAN use, and also turns off the wireless LAN power saving in your device. Note that the power consumption increases when a wireless LAN connection is used if you select *Not allowed*.

## 15. Media applications

Go to *Desk* → *Media*.



### ■ RealPlayer

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

Go to *Desk* → *Media* → *RealPlayer*.

*RealPlayer* plays video, sound, and media from the Internet. *RealPlayer* plays many formats, including: MPEG-4, MP4 (not streaming), 3GP, RV, RA, RAM, and RM.

*RealPlayer* does not necessarily support all the variations of a media file format.

### Playing media clips

You can play video clips and sound files that are stored in device memory or on a memory card, transferred to your device from e-mail or compatible PC, or streamed to your device over the Internet.

The progress bar displays the playing time, position, and length of a media clip. During playback, video pauses while the main menu or any dialog is displayed. Video is centered horizontally and vertically in the video area. If video is too large to fill either the whole width or height of the video area, the video is resized before rendering to preserve the original aspect ratio.



To play streaming media, browse to a media file on the Internet, and press *Play*. If a network connection problem causes a playback error, *RealPlayer* will attempt automatically to reconnect to the Internet access point.

To play stored media, press *Play*. Playback stops automatically.

To stop playback or streaming, press *Stop*. Buffering or connecting to a streaming site stops, playback of a clip stops, and the clip rewinds to the beginning. The clip remains selected in the media clip list.

To view the video clip in full-screen size, press *Menu*, and select *View* → *Full screen*. This changes the size of the video area to normal or full screen.

To save a media clip, press *Menu*, and select *File* → *Save clip as...*. To save an Internet connection link, press *Menu*, and select *File* → *Save link as...*

To change the size of a video clip, press *Menu*, and select *View* → *Zoom in* or *Zoom out*. Zooming increases the size of the video to cover the maximum video area possible while the aspect ratio is maintained, or returns the video to its original size.

To close *RealPlayer*, press *Exit*. Buffering or connecting to a streaming site stops and playback of a clip stops.



**Tip:** To add a shortcut to a media clip, press *Menu*, and select *File* → *Add to Desk...* This creates a shortcut to the selected media clip. You cannot make a shortcut to an unsaved file.

### Adjusting media volume

To change media volume, scroll up or down.

To turn off the sound, press *Set volume* → *Mute*. Press *Unmute* to turn on sound.

### Sending media clips

You can select media clips to attach to a message, a document, or a slide presentation.

To send a media clip, press *Menu*, and select *File* → *Send*. Select a method to send the clip to another device, and press *Insert*.

To cancel insert, press *Cancel*. The media clip does not return to the original application, and you may select another clip.

## ■ Music player



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

Go to *Desk* → *Media* → *Music player*.

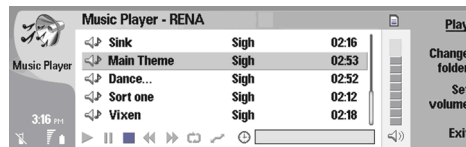
*Music player* can play and organize music tracks and sound files. *Music player* supports several sound formats: MP3, WAV, MIDI, AMR, and AAC.

### Listening to music



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

*Music player* displays a music track list, volume, shuffle and repeat indicators, the current active mode, and a progress bar. The progress bar shows the playing time, position, and length of a track.



To select a music track, scroll up or down in the music track list.

To play a music track, or tracks in the current folder, press *Play*. Playback stops automatically when the last track in the playing order is complete.

To sort music tracks, press *Menu*, and select *View* → *Sort by*. List tracks in the current folder by name, file name, date, or size. Sorting affects the playing order of tracks in the current folder.

To select the previous or next track, press *Menu*, and select *Go to* → *Previous track* or *Next track*. The selected track is based on the current sort order.

To play music tracks again, press *Menu*, and select *Playback* → *Repeat*. This loops playback of tracks in the current folder from the last track in the playing order back to the first track.

To play music in random order, select a folder, press *Menu*, and select *Playback* → *Random*.



**Tip:** When a track plays, scroll left to seek backward or right to seek forward.

## Managing music tracks

To save music, press *Menu*, and select *File* → *Save as...* Save music on a memory card or in phone memory.

To change music folders, press *Menu*, and select *File* → *Change folder...* Use the dialog to select a new folder. New folder contents are scanned, and music tracks are displayed in the track list.

To add a shortcut to music, press *Menu*, and select *File* → *Add to Desk...* This creates a shortcut to the selected music track. You cannot create a shortcut to an unsaved file.

To change text size, press *Menu*, and select *Edit* → *Zoom in* or *Zoom out*. This changes the size of the list view text.

## Sending music

You can send music as a message.

To send a track, press *Menu*, and select *File* → *Send*. Select a method to send the selected music track to another device. Press *Insert*. A music track can be sent as a message attachment.

To select a folder, press *Change folder...* Use the dialog to select a new folder.

To cancel insert, press *Cancel*. The track does not return to the original application, and you may select another track.

## ■ Voice recorder

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

Go to *Desk* → *Media* → *Voice rec.*

*Voice rec.* can record a telephone conversation or voice memo, save the voice recording as a sound clip, play your clip or other sound files, and edit sound files. *Voice rec.* can play the following formats: WAV, AMR, AU, and compressed GSM.

### Opening the voice recorder

You can open *Voice rec.* and select a file, or create a shortcut that opens *Voice rec.* automatically and plays a sound clip.



To select a voice recording, press Menu, and select **File** → **Open...**. The Open file dialog is displayed, the current folder contents are scanned, and voice recordings are listed.

To add a shortcut to a voice recording, press Menu, and select **File** → **Add to Desk...**. This creates a shortcut to the selected voice recording. You cannot create a shortcut to an unsaved file.

### Recording a phone call or voice memo

You can record a phone conversation or a voice memo. **Voice rec.** automatically creates a compressed sound clip in either WAV or AMR format.

To record a voice memo, press Menu, and select **File** → **New clip**, and press **Record**. **Voice rec.** begins to record all sound that enters the external microphone. When you complete recording, select **Stop**. Press Menu, and select **File** → **Save** → **Save clip**. Type a name for the voice recording, and press **OK**.

To record a phone call, begin the call. When the call recipient answers, press Menu, and select **File** → **New clip**, and press **Record**. **Voice rec.** begins to record, and both parties will hear a tone every five seconds to indicate that the telephone conversation is recorded. When you complete recording, select **Stop**. Press Menu, and select **File** → **Save** → **Save clip**. Type a name for the voice recording and select **OK**.

To continue recording at the end of a voice recording, select a voice recording, and press **Record**. Recording continues at the endpoint of the previous recording.

To cancel a save, when you are asked to save your voice recording, the cancel command stops the current action and returns to the previous action. The discard command erases the voice recording from device memory.



**Tip:** The maximum length of a voice recording depends on the storage space available in device memory or on a memory card.

### Playing a voice recording

You can play and pause a voice recording. You can save a voice recording that you made, or play and save a voice recording that you received inside a message. **Voice rec.** can play several formats: WAV, AU, AMR, and compressed GSM.

The progress bar displays the playing time, position, and length of a voice recording.

To listen to a voice recording, press **Play**. Scroll left to seek backward or right to seek forward.

To pause a voice recording, press **Pause**. Playback resumes when you press **Play**.

To play a voice recording again, press Menu, and select **Playback** → **Repeat**. The voice recording will repeat.



**Tip:** Voice recordings that you receive or record are temporary files. You must save the files that you want to keep.

### Sending a voice recording

You can send a voice recording from your device to another device through infrared or Bluetooth, as its own e-mail message, or in a multimedia message.

To send a voice recording to another device with infrared, make sure that infrared is active on the receiving device. Select a voice recording, press Menu, select **File** → **Send**, and use the infrared option. An infrared connection is established automatically, and the voice recording is sent to the receiving device.

To transfer a voice recording with Bluetooth, make sure that Bluetooth is active on the receiving device. Select a voice recording, press Menu, select **File** → **Send**, and use the Bluetooth option. Activate Bluetooth on your device, search for the receiving device, select the receiving device from the list of available devices, and select Send. If the devices are paired and authorized, or if a passcode is confirmed, the voice recording is transferred to the receiving device when an active Bluetooth connection is established.

To send a voice recording as an e-mail, select a voice recording, press Menu, select **File** → **Send**, and use the mail option. The Mail application opens automatically, and the voice recording is ready to send as an attachment to your e-mail message.

To insert a voice recording into a multimedia message, select a voice recording, press Menu, select **File** → **Send**, and use the multimedia message option. The MMS application is launched automatically, and the voice recording is ready to send as an attachment to your multimedia message.

## 16. Calculator

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In *Calculator*, you can make calculations, and save the results to the calculator memory for later use. The *Desk calculator* can be used for basic calculations, and the *Scientific calculator* for more advanced calculations.



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

Go to *Desk* → *Office* → *Calculator*.

### ■ Making calculations

To make a calculation, enter the first number of the calculation. Press the tab key, and select a function from the function map. Enter the second number of the calculation, and press the enter key.

Note that the calculator performs operations in the order you enter them. Parentheses cannot be used to change the order of operations.

To switch between the desk and scientific calculator, press Menu, and select *View* → *Desk calculator* or *Scientific calculator*.

To make a number positive or negative, write the number, and press *m* on the keyboard.

To print a calculation, press Menu, and select *Printing* → *Print*.



**Tip:** To preview a page before printing, press Menu, and select *Print preview* → *Printing* in the menu.

To change the layout of the page, press Menu, and select *Page setup*.

### ■ Using the scientific calculator

Press Menu, and select *View* → *Scientific calculator*.

To make a calculation, enter the first number of the calculation. Press the tab key, and select a function from the function map. Enter the second number of the calculation, scroll to = in the function map, and press the enter key.

To invert a function, press *i* on the keyboard, and select the function.

To change the angle unit, press Menu, select *Tools* → *Angle unit*, and select *Degrees*, *Radians*, or *Grads*. You can see the current angle unit in the field where you enter the numbers.

### ■ Saving numbers to memory

You can save 26 different numbers, unfinished calculations, or final results of calculations for later use.

1. Press Ctrl+S. An arrow appears next to the value.
2. Press Shift + the letter that you want to assign to the value. The letter appears next to the arrow.
3. Press the enter key to store the value.

To use a saved value, enter the letter that you have assigned to the value, and continue the calculation normally.

To clear all values saved in the memory, press Ctrl+D.

### ■ Setting the number format in Calculator

To change the number format, press Menu, and select *Tools* → *Number format*.

Select:

- *Normal* — to keep the default number format
- *Fixed* — to set a fixed number of decimal places
- *Scientific* — to set a fixed number of significant figures



## 17. Clock

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In *Clock*, you can view the date and time of your home and destination city, and manage clock alarms.

Go to *Desk* → *Clock*.

### ■ Using world clock

To set the date and time, press Menu, and select *Tools* → *Date and time...*



**Tip:** You can also update date and time automatically (network service). You can select this setting in Control panel. See [Date and time on page 59](#).

To switch between the home and destination city information, press the tab key.

To change a city, select either the home or destination city, and press *Change city*.



**Tip:** If you change the home city, the clock and calendar entries are updated. This is useful for example when you want to attend phone conferences.

To view and manage alarms, press *Alarm clock*.

To change the clock type, press Menu, and select *View* → *Clock type*, and select *Analog* or *Digital*.



**Tip:** To change to the one-clock view which shows only your home city information, press Menu, and select *View* → *Remote city details*.

### ■ Using Alarm clock

To set an alarm, press *New alarm*, and enter the alarm time.

To modify an alarm, press *Edit alarm*.

To remove an alarm, press the backspace key.

When the alarm sounds, press *Stop* on the communicator interface or *Exit* on the cover phone to turn it off. Press *Snooze* to postpone the alarm. Even though the cover phone is switched off when the alarm time is reached, the alarm sounds and an alarm note is shown on the cover phone. Press *View* to read the alarm note.

### ■ Alarms and reminders

When an alarm set in clock or calendar goes off, an alarm note appears.

To postpone an alarm, press *Snooze*.



**Tip:** The default snooze time is ten minutes.

To silence an alarm and keep the alarm note on the display, press *Mute*.

To silence an alarm and close the alarm note, press *Stop*.

If you do not turn off an alarm, the alarm stops automatically after 15 minutes. The alarm note remains on the display.

### ■ Cities and countries

#### Changing cities

To change a city, select the city that you want to change, and press *Change city*. Select the new city from the list, and press *Select*.

You can see the location of the city on the map.



**Tip:** Start typing in the search field to search for a city.



**Tip:** Press Menu, and select *File* → *New city...* to add a new city to the list.

Note that changing the home city may change the general system time of your device.

#### Locating cities on the world map

To set the position of a city, select *File* → *New city...* or *Edit* → *City details...*, and press *Set position*. On the map, scroll to the location of the city you want, and press *OK*.

### Creating and editing country entries

To create new or edit existing countries, select *File* → *New country/region...* or *Edit* → *Country/Region details...* Enter the new *Country/Region* name, select the *Dialing code* field, and enter the new number.

Note that if you are editing an existing country, you can also edit the capital city.

### Creating and editing city entries

To create or edit city entries, select *File* → *New city...*, and enter the name of the city.

You can also define the following settings:

- *Country/Region* — Select a country from the list.
- *Area code* — Enter the code that is used when making a phone call to the city.
- *Daylight-saving zone* — Select a daylight saving time zone.
- *GMT offset* — Select the time difference between a city and Greenwich Mean Time.
- *Latitude* and *Longitude* — Enter the coordinates of a city, or press *Set position* to locate a city on the world map.

## 18. Data and software management

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Your communicator offers you several applications for managing your personal data, such as contacts and calendar information and e-mail.

### ■ Data mover

You can use *Data mover* to transfer certain data, such as contacts and settings, from your Nokia 9200 series Communicator to your Nokia 9500 Communicator with infrared or a memory card. Before you start, make sure that there is enough free memory in your devices or memory card for the transfer. Note that if there is less than 2 MB of free memory in the Nokia 9500 Communicator, you cannot start the transfer.

Do not use the Nokia 9500 Communicator when using Data mover. If possible, switch off the cover phone. Make sure you have enough battery power, or connect the device to a charger.



**Note:** Before you use an existing compatible memory card with your Nokia 9500 Communicator, you must convert the memory card with Data mover and reinstall the applications that you previously installed to the memory card. However, do not reinstall any pre-installed applications for the Nokia 9210 Communicator. Your Nokia 9500 Communicator contains a later version of these applications, and these later versions must be used with Nokia 9500 Communicator.

Note that there may be additional steps, depending on the type of information that you want to transfer, the method of transfer you want to use, the amount of free memory on your previous communicator or memory card, or the number of successful or unsuccessful transfers you have made previously. Make sure that the infrared ports of the devices are facing each other.

1. Go to *Desk* → *Tools* → *Data mover*. If there is data on a memory card, insert it to your Nokia 9200 series Communicator. Press *Continue transfer*.
2. Activate infrared in both devices, make sure that the infrared ports of the devices are facing each other, and press *Continue*. An infrared connection is established between the devices.
3. Press *Send data collector* to send the Data collector to your Nokia 9200 series Communicator. Data collector is sent as an infrared message to your Inbox. To install Data collector, press *Open* in the 9200 series Communicator. If *Open* is not available, press *Save* to save the installation file, and open it from File manager. The Data collector starts automatically after installation. If you have already installed the tool, press *Connect data coll.* in your Nokia 9500 Communicator.
4. In the Nokia 9500 Communicator, select the data you want to transfer from your Nokia 9200 series Communicator. You can transfer calendar and contact information, messages, settings, documents, and images. Some files, such as business card messages and e-mail messages not stored in the *Inbox*, are not transferred.
5. Press *Transfer infrared* or *Transfer mem. card*, depending on the method of transfer you want to use.
6. Press *Start transfer*. If the transfer process is interrupted, restart Data mover, and continue the transfer. If the problem happens again, there may be a problem with the data you are trying to transfer. Start the data transfer process again, but do not select to transfer data that seems to be causing the problem.
7. Press *OK* after the transfer to finish the transfer process.
8. Press *Exit* to exit, or *Convert mem. card* to convert a memory card for use in your Nokia 9500 Communicator.

Note that the transfer may take some time.

### ■ Backup

It is advisable to take backups of your device data regularly.

Go to *Desk* → *Tools* → *Backup*.

Before you start backing up or restoring data:

- Close all other applications.
- If possible, switch off the cover phone.
- Make sure you have enough battery power.

To back up data to a memory card, press *New backup*. Enter a name for the backup, and select whether you want to perform a full or partial backup. *Full backup* copies all data. If you select *Partial backup*, specify which items you want to include in the backup. Press *Start backup*.



**Tip:** You can also back up data in the *File manager* and *Control panel* applications.

To restore backup data from the memory card, select a backup, and press *Restore*. Select whether you want to restore all backup data or selected items only. If you select *Partial backup*, specify which items you want to restore. Press *Start restore*.

## ■ Data transfer

If you have a Nokia 9500 Communicator and another device that supports data transfer, you can use [Data transfer](#) to synchronize your calendar and contacts entries between the two devices.

For information on compatible devices, contact your dealer, operator, or service provider.

Go to [Desk](#) → [Tools](#) → [Data transfer](#).

1. Press [New](#) to create a new synchronization profile.
2. Select the content you want to synchronize, and press [Next](#).
3. Select the connection type, and press [Select](#). If you select infrared as the connection type, the synchronization is started immediately.
4. If you selected Bluetooth as the connection type, press [Search](#) to search for the device you want to synchronize with. To stop the search, press [Stop](#).
5. Scroll to the device you want to synchronize with, and press [Select](#). The synchronization is started.

To view the synchronization log, press Menu, and select [File](#) → [Synchronization log](#).

## ■ Sync

The [Sync](#) application enables you to synchronize your calendar or contacts with various calendar and address book applications on a compatible computer or remote Internet server. Your settings (what data is synchronized, what connection method is used) are saved to a synchronization profile, which is then used while synchronizing.

The application uses SyncML technology for remote synchronization. For information on SyncML compatibility, contact the supplier of the applications with which you want to synchronize your device.

Go to [Desk](#) → [Tools](#) → [Sync](#).

### Synchronizing calendar and contacts information

1. Connect your device to a compatible PC. You can use infrared, Bluetooth, or a cable connection. [See Connectivity on page 82.](#)
2. Press [Sync](#). If you selected Bluetooth, the device searches for available devices for synchronization. Press [Stop](#) to end the search, and [Select](#) to select a device with which you want to synchronize.
3. Follow the instructions on the display.

There is an existing profile for Nokia PC Suite, and the basic setup is done with Nokia PC Suite. You need to edit these predefined settings only if the settings have been changed.

You may also receive the synchronization settings as a special message from your service provider.

### Creating a new profile

1. Press [New](#). A profile creation wizard opens, helping you to define the correct settings. If a profile already exists, press Menu, and select [File](#) → [New](#).
2. Define the following options:
  - [Profile name](#) — Enter a descriptive name for the profile.
  - [Connection type](#) — Select [Bluetooth](#), [Infrared](#), or [Data cable](#) to synchronize with a computer, or [Internet](#) to synchronize with a server on the Internet.
  - [Access point](#) — If you selected [Internet](#) as the connection type, select an Internet access point.
  - [Host address](#) — If you selected Internet as the connection type, enter the address of the synchronization server.
  - [Port](#) — If you selected Internet as the connection type, enter the port number for the synchronization server.
  - [User name](#) — Enter your user ID for the synchronization server.
  - [Password](#) — Enter your password for the synchronization server.
  - [Confirm password](#) — Repeat the password for the synchronization server.
3. Select contacts, calendar entries, or e-mail to synchronize.
4. Enter the paths to the databases on your device and on the remote server, and select the [Synchronization type](#). Select [Normal](#) to synchronize information from the device to the remote server and back, [One-way to telephone](#) to synchronize information from the remote server to the device, or [One-way from telephone](#) to synchronize information from the device to the remote server.
5. Select whether you want to use the profile you created as a default synchronization profile.

If you want to return to the default settings for PC Suite, press Menu, and select [Tools](#) → [Reset PC Suite profile](#).

To edit an existing profile, select the profile, and press [Edit](#).

To set one of the existing synchronization profiles as the default profile, select the profile, press Menu, and select [File](#) → [Tools](#) → [Set as default](#).

To synchronize all database contents between the device and the server, press Menu, and select *File* → *Sync* → *Slow sync*. Note that this ignores the synchronization type set for a profile.

To delete a profile, select the profile, and press the backspace key.

To delete the database from the device, and replace it with the database on the server, press Menu, and select *File* → *Sync* → *Replace telephone data*.

To delete the database from the server, and replace it with the database on the device, press Menu, and select *File* → *Sync* → *Replace server data*.

After you have synchronized your device with a compatible computer, you can view a synchronization log.

To open the synchronization log, select a profile, and press *Log*. The log shows, for example, the date and time of the synchronization, and lists possible synchronization errors.

For additional information on synchronizing, see the User's Guide for Nokia PC Suite or the help for Nokia PC Sync.

### ■ Nokia PC Suite

Nokia PC Suite offers you a set of programs for managing your Nokia 9500 Communicator. For example, you can synchronize your contacts and calendar information, e-mail, and to-do items between the device and a compatible PC using Nokia PC Sync, manage device folders using Nokia Phone Browser, back up and restore personal data using Nokia Content Copier, and install applications using Nokia Application Installer.

For additional instructions on how to install and use the PC Suite, see the User's Guide for Nokia PC Suite on CD-ROM, or helps in the Nokia PC Suite applications.

To use Nokia PC Suite, you need to connect your device to a compatible PC using the DKU-2 (USB) cable, Bluetooth, or infrared. [See Connectivity on page 82.](#)

Install Nokia PC Suite from CD-ROM or from [www.nokia.com](http://www.nokia.com). Note that Nokia PC Suite can only be used with Windows 2000 and Windows XP.

- If you want to use cable, connect the cable to a compatible PC, and then to the device.
- If you want to use Bluetooth, pair the device and a compatible PC, and set the PC as authorized. [See Pairing with a device on page 83.](#)
- If you want to use infrared, activate infrared on your device. [See Infrared on page 84.](#) Activate infrared on the compatible PC, if necessary.

You need to install DKU-2 (USB) drivers for cable connection, and you may need to install or update Bluetooth or infrared drivers if you want to use the device as a modem. See the sales package CD-ROM, [www.nokia.com](http://www.nokia.com) and the User's Guide for Nokia PC Suite for details.

### ■ Installing applications and software



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

You can install two types of applications and software to your device:

- Applications and software specifically intended for the Nokia 9500 Communicator or compatible with the Symbian operating system. These software installation files have the extension .SIS.
- J2ME™ applications compatible with the Symbian operating system. The Java™ application installation files have the extensions .JAD or .JAR.

Installation files may be transferred to your device from a compatible computer, downloaded during browsing, or sent to you in a multimedia message, as an e-mail attachment, or with Bluetooth. If you use PC Suite for Nokia 9500 Communicator to transfer a file, save the file in the C:\nokia\installs folder in your device. If you use Microsoft Windows Explorer to transfer a file, save the file on a memory card (local disk).

During installation, the device checks the integrity of the package to be installed. The device shows information about the checks being carried out, and you are given options to continue or cancel the installation.

[See Certificate manager on page 65.](#)

### Installing Symbian software

When you install an update or repair to an application, you must have the original or a full backup to restore the application. To restore the original application, remove the application, and install it again from the original installation file or the backup copy.

To install software, search the device memory or memory card for the installation file, select the file, and press the enter key to start the installation. For example, if you received the installation file as an e-mail attachment, go to your mailbox, open the e-mail, select an installation file, and press the enter key to start the installation.

Use the Application manager to remove software. [See Application manager on page 61.](#)

### Installing Java™ applications

1. Search the device memory or memory card for the installation file, select the file, and press the enter key to start the installation. For example, if you received the installation file as an e-mail attachment, go to your mailbox, open the e-mail, select an installation file, and press the enter key to start the installation.
2. Confirm the installation. The .JAR file extension is required for installation. If it is missing, the device may ask you to download it. If there is no access point defined, you will be asked to select one. When you download the .JAR file, you may need to enter a user name and password to access the server. You can obtain these from the application provider.
3. The device informs you when installation is complete.



**Tip:** When browsing Web pages, you can download an installation file and install it immediately. Note, however, that the connection runs in the background during installation.

### ■ Java™

You can install and run Java™ applications on your device. [See Installing applications and software on page 80.](#)

The Java platform for the Nokia 9500 Communicator is J2ME™. You can search for Java applications with the browser, download through the Internet, and store them in the Applications folder.

To manage your Java applications, use the [Application manager](#).

J2ME on your device supports two Java environments: MIDP and Personal Profile.



**Tip:** For development information, visit [www.forum.nokia.com](http://www.forum.nokia.com). Forum Nokia contains the Series 80 Developer Platform, Java Software Development Kit (SDK), tools, technical notes, and applications.

### Java MIDP

The Java Mobile Information Device Profile environment supports the following APIs:

- Java CLDC 1.1 — hot spot implementation that is part of the Symbian OS
- Java MIDP 2.0 — security that assigns Java applications to the following domains: manufacturer, operator, trusted third party, or untrusted
- Java WMA — wireless messaging
- Java Mobile Media — multimedia for mobile devices
- Java Bluetooth — Bluetooth connectivity and Bluetooth Push for Java applications
- Nokia UI — interfaces for sound and graphics
- Java DRM — definitions of how content may be used
- Java File — file server services
- Java PIM — access to contents of the phonebook, calendar entries, and to-do list items

### Java PP

The Java Personal Profile environment supports the following APIs:

- Java CDC 1.0 — additional device connectivity
- Java Foundation Profile 1.0 — network and input/output support
- Java Personal Profile 1.0 — Java UI standard interface specifications and AWT for interfaces, graphics, and images
- Java UI — standard Java interface specifications
- JDBC — access for Java applications to a relational database

## 19. Connectivity

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There are several different connectivity types you can use with your device. You can use wireless connectivity methods such as wireless LAN, Bluetooth or infrared, or a USB (Universal Serial Bus) cable connection for PC Suite or IP passthrough.

### ■ Wireless LAN

You can define access points for wireless LAN to use it for Internet access for applications that need to connect to the Internet. [See Wireless LAN on page 63.](#)

#### Setting up an ad hoc network

With 3rd party applications, ad hoc networks allow wireless stations to communicate directly with each other without any wireless LAN access points. One user creates the ad hoc network and other users then join the network.

You must first create an Internet access point for the ad hoc network.

#### To create an Internet access point for an ad hoc network

1. Select *Desk* → *Tools* → *Control panel*, and select *Connections* → *Internet setup*.
2. Press *New*. You can use an existing access point as a basis for the new one: after you have pressed *New*, press *Yes*, choose the access point from the list, and press *OK*.
3. Define the settings.
  - *Internet settings name* — Give a descriptive name for the connection.
  - *Internet settings type* — Select wireless LAN as the connection type.
  - *Network ID* — Select the network ID according to the destination network you want to access with the Internet access point. You can rename, and create new network IDs. Using the correct network ID ensures that the data traffic is routed directly to the desired destination network. Especially VPN (virtual private network) software may restrict data traffic for a certain destination network.
  - *Network mode* — Select *Ad hoc*.
  - *Network name* — Give the network a name.
  - *Security mode* — Select *WEP* if you want to use a WEP (wired equivalent privacy) key for authentication.
4. If you selected *WEP* as a security mode, you need to configure these settings, too.
  - *WEP key index* — Select the a number for the WEP key.
  - *WEP key length* — Select the appropriate key length. Supported key lengths are 40, 104, and 232 bits. The more bits there are in the key, the higher the level of security.
  - *WEP key type* — Select whether you want to enter the WEP key data in hexadecimal format (*HEX*) or in text form (*ASCII*).
  - *WEP key data* — Enter the WEP key data. The number of characters you can enter depends on the key length you have chosen. For example, keys that are 40 bits long, consist of 5 alphanumeric characters, or 10 hexadecimal characters.
5. Press *Finish* or *Done* when you have configured all the settings. If you need to configure advanced settings, press *Advanced*. [See Configuring advanced Internet access point settings on page 68.](#)

### ■ Cable connection

You can connect your device to a compatible PC using a DKU-2 (USB) cable. Connect the cable to the bottom of the device. [See Figure Keys and connectors on page 11.](#)

You can also connect the cable to the desk stand of the device. Note that if you connect the cable to the desk stand, the connector of the cable must be connected upside down.

Note that you must install the DKU-2 driver to your PC before you can use a cable connection. See the sales package CD-ROM or [www.nokia.com](http://www.nokia.com) for details.

#### IP passthrough

You can also use a cable for *IP passthrough*, where the device uses the Internet connection of a computer. You can use IP passthrough as you use any Internet access point, for example for browsing or remote synchronization.

Note that you cannot use IP passthrough at the same time as Nokia PC Suite. You can define cable connection settings in *Control panel*. [See Cable setup on page 64.](#)

Note that you cannot activate modem if you select *IP passthrough* in cable connection settings. You must use *PC Suite connection*, or *IP passthrough overrides PC Suite* with no active IP passthrough connection.



## ■ Bluetooth

This device is compliant with Bluetooth Specification 1.1 supporting the following profiles: Generic Access Profile, Serial Port Profile, Dial-Up Networking Profile, Generic Object Exchange Profile, Object Push profile, File Transfer Profile, and Handsfree 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 using Bluetooth technology, or allowing such features to run in the background while using other features, increase the demand on battery power and reduce the battery life.

Bluetooth technology enables cost-free wireless connections between electronic devices within a maximum range of 10 metres. A Bluetooth connection can be used to send images, videos, texts, business cards, calendar notes, or to connect wirelessly to devices using Bluetooth technology, such as computers.

Since devices using Bluetooth technology communicate using radio waves, your device and the other devices do not need to be in direct line-of-sight. The two devices only need to be within a maximum of 10 metres of each other, although the connection can be subject to interference from obstructions such as walls or from other electronic devices.

When you activate Bluetooth for the first time, you are asked to give a name to your device.

### Bluetooth settings

To modify the Bluetooth settings, select *Desk* → *Tools* → *Control panel*, and select *Connections* → *Bluetooth*. Select the *Settings* page.

Define the following:

- *Bluetooth active* — Select *Yes* to enable Bluetooth. If you select *No*, all active Bluetooth connections are ended, and Bluetooth cannot be used for sending or receiving data.
- *My telephone's visibility* — Select *Shown to all* if you want your device to be found by other Bluetooth devices. If you select *Hidden*, your device cannot be found by other devices.
- *My Bluetooth name* — Define a name for your device. The maximum length of the name is 247 characters.

If you have set Bluetooth as active and changed your visibility to *Shown to all*, your device and its name can be seen by other Bluetooth device users.



**Tip:** To activate or deactivate Bluetooth, press **Chr+**.

Note that if Bluetooth was turned off as a result of entering *Offline* profile, you must re-enable Bluetooth manually.

### Sending data with Bluetooth

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

There can be only one active Bluetooth connection at a time.

1. Open an application where the item you want to send is stored. For example, to send a photo to another device, open the *Images* application.
2. Select the item you want to send, press **Menu**, and select *File* → *Send* → *Via Bluetooth*.
3. If you have searched for Bluetooth devices earlier, a list of the devices that were found previously is shown first. You can see a device icon and the device name. To start a new search, press *Search again*. To interrupt the search, press *Stop*.
4. Select the device you want to connect with, and press *Select*.
5. If the other device requires pairing before data can be transmitted, you are asked to enter a passcode. Create your own passcode (1-16 characters long, numeric), and agree with the owner of the other Bluetooth device to use the same code. The passcode is used only once, and you do not have to memorize it. Devices that do not have a user interface have a preset passcode. After pairing, the device is saved to the *Paired devices* page.
6. When the connection has been established successfully, the note *Sending...* is shown.

### Receiving data with Bluetooth

If you want to receive data using Bluetooth, set Bluetooth to be active and selected the option *Shown to all*.

When you receive data with Bluetooth from a device that is not authorized, you are first asked if you want to accept the Bluetooth message. If you accept, the item is placed in the *Inbox* folder in the *Messaging* application.

### Pairing with a device

Pairing means authentication. Pairing with a device makes device searches quicker and easier.

## Connectivity

Go to *Desk* → *Tools* → *Control panel*, and select *Connections* → *Bluetooth*.


To pair with a device, select the *Paired devices* page. Press *New*, then *Start* to start a device search. Select the device you want to pair with, and press *Pair*. Enter the passcode, and press *OK*.



**Tip:** The users of the devices using Bluetooth technology should agree together on the passcode, and use the same passcode for both devices in order to pair them. Devices that do not have a user interface have a preset passcode.

To cancel pairing, select the *Paired devices* page. Select the device whose pairing you want to cancel, and press *Delete*.

To assign a short name for a paired device, select the *Paired devices* page. Select the device whose name you want to change, and press *Edit*. In the *Assign short name* field, you can define a short name (nickname, alias) to help you recognize a certain device. This name is stored in the device memory and cannot be seen by other Bluetooth device users.


To set a device to be authorized or unauthorized, select the *Paired devices* page. Select the device, and press *Edit*. Move to the *Device authorized* field, and select *Yes*. Connections between your device and the other device can be made without your knowledge. No separate acceptance or authorization is needed. Select *Yes* for your own devices, for example, your PC, or devices that belong to someone you trust. The icon  is added next to authorized devices in the list of paired devices. If you select *No*, connection requests from this device need to be accepted separately every time.

To connect to a Bluetooth device, select the *Paired devices* page. Select the device from the list, press *Edit*, and press *Connect*. Note that this option is available only with audio devices that require a more stable Bluetooth connection, for example, Bluetooth headsets or car kits. Such devices must support the Bluetooth 1.1 specification and Handsfree profile. To end the connection to the selected device, press *Disconnect*.


### Ending a Bluetooth connection

A Bluetooth connection is disconnected automatically after sending or receiving data. Only with the PC Suite, and some enhancements such as headsets, the connection may be maintained even if it is not actively used.

### Checking the status of the Bluetooth connection

 Bluetooth is active.


 When the icon is blinking, your device is trying to connect to the other device.

 When the icon is shown continuously, the Bluetooth connection is active.

### ■ Infrared

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

You can use infrared for sending and receiving files from other infrared devices.

1. Make sure that the infrared ports of the devices face each other. The positioning of the devices is more important than angle or distance.
2. Press *Chr*+.

To end the infrared connection, press *Chr*+ again.

### ■ Modem

You can use the device as a modem together with a compatible computer.

Go to *Desk* → *Tools* → *Modem*.

#### Before you can use your device as a modem:

- You need the appropriate data communications software on your computer.
- You must subscribe to the appropriate network services from your service provider or Internet service provider.
- You must have the appropriate drivers installed on your computer. You need to install DKU-2 (USB) drivers for cable connection, and you may need to install or update Bluetooth or infrared drivers.
- It is recommended that you have Nokia Modem Options installed on your computer.

See [www.nokia.com](http://www.nokia.com) and the User's Guide for Nokia PC Suite for details.

To connect the device to a compatible computer using an infrared connection, press *Activate*. To disconnect, press *Disable*.



**Tip:** To use the device as a modem using a Bluetooth or cable connection, you must connect the device to a compatible computer, and activate the modem from the computer.

Note that you may not be able to use some of the other communication features when the device is used as a modem.

## ■ Printing

You can print files to compatible printers in most applications. Before starting to print, make sure that your device is properly connected to the printer.

To print a file to a compatible printer, press Menu, and select *File* → *Printing* → *Print...*. Check that the settings are correct, and press *Print*.

To change the printing settings, press *Options*.

To preview a file before printing, press Menu, select *File* → *Printing* → *Print...*, and press *Preview*. To start printing to a compatible printer, press *Print*. To modify the document size, margins, headers, footers or pagination, press *Page setup*.

### Setting printing options

To change the file printing options, press Menu and select *File* → *Printing* → *Print...*, and press *Options*.

On the *Connection* page, set the following:

- *Connection type* — Select the method you want to use to connect to the printer.
- *Printer* — Select the correct printer. If you select Hewlett-Packard, select the printer driver here, and the printer in *Desk* → *Tools* → *Control panel* → *Extras*.

On the *Document* page, set the following:

- *Number of copies* — Select how many copies you want to print.

Press *Done* to save the options.

### Defining page setup

To change the page size and orientation, press Menu, and select *File* → *Printing* → *Page setup...*. Select the *Size* tab.

To change the page size, scroll to *Page size*, and select a new size. Note that your printer may not be able to print all of the different options. The numbers in the *Width* and *Height* fields change according to the page size you select.

To define a customized page size, enter the numbers in the *Width* and *Height* fields.

To change the orientation of the printed page, scroll to *Orientation*. In *Portrait*, the height is larger than the width. In *Landscape*, the width is larger than the height.

To define the margins of a page, press Menu, and select *File* → *Printing* → *Page setup...*. Select the *Margins* tab, scroll to each margin field, and enter a number.

To see view the new margins, close the *Page setup* dialog, press Menu, and select *File* → *Printing* → *Print preview*. Your printer may not be able to properly print documents with very narrow margins.

To define a header for a page, press Menu, and select *File* → *Printing* → *Page setup...*. Select the *Header* page, and enter the text for the header. Press *Insert* to use a file name, object, page numbers, time, or date in the header.

To change the appearance of the text, press *Format*.

To move the header closer to or farther away from the top of the page, scroll to *Distance from top of page* and enter a number. Your printer may not be able to print documents with very narrow margins properly.

To define a footer for a page, press Menu, and select *File* → *Printing* → *Page setup...*. Select the *Footer* tab, and enter the text for the footer. Press *Insert* to use a file name, object, page numbers, time, or date in the footer.

To change the appearance of the text, press *Format*.

To move the footer closer to or farther away from the bottom of the page, scroll to *Distance from bottom margin* and enter a number.

To select the first page number, scroll to *Start numbering at*, and enter the number. You would usually start with either 1 or 0.

To exclude the header or the footer from the first page, scroll to *Include header on first page* or *Include footer on first page*, press *Change*, and select *No*.

Press *Done* to save the settings.

Press the Menu key to move from one dialog page to another.

### Problems with printing

Your device shows a note if you cannot connect the device to a compatible printer.

Here are some starting points for troubleshooting:

- Printer - check that the printer is switched on and online, print a test page, try to print while directly connected to the printer, verify that the printer works with other wireless devices, or check that the printer is supported by your device.

## Connectivity

- Infrared - check that infrared is activated, the infrared ports of the device and the printer face each other, and there are no bright lights shining on either port.
- Bluetooth - check that Bluetooth is activated and your device can locate Bluetooth devices other than the printer, and the device and printer are within range.
- Wireless LAN - check that wireless LAN is activated and the wireless LAN settings are correct, the wireless printer is compatible with your device, and verify other wireless LAN devices can find your wireless printer.

### Managing mobile printing settings

To manage the printing settings when printing to a compatible Hewlett-Packard printer, go to *Desk* → *Tools* → *Control panel* → *Extras* → *HP printer selection*. Set the following:

- *Printer model* — Select the printer you want to use.
- *Quality mode* — Select the quality of the print, depending on the printing qualities supported by your printer. *Normal* is for 600 dpi printing, *Draft* is for fast, 300 dpi printing, *Best* is for 1200 dpi printing, and *Maximum* is for 2400/4800 dpi printing. To save ink or to increase the speed of printing, select the *Normal* or *Draft*.
- *Media type* — Select the type of printing medium.
- *Color mode* — Select whether to print in color or greyscale, depending on your printer.

### ■ Remote configuration (network service)

The *Device manager* application helps you configure connection settings, for example, e-mail, multimedia messaging, or Internet settings.

Go to *Desk* → *Tools* → *Device manager*.

The remote configuration connection is usually started by the server when device settings need to be updated.

To start a configuration session, select a profile from the list, and press *Connect*. If no remote configuration profiles have been defined, you must first create a new profile.

To disable configuration, select a profile, press Menu, and select *Tools* → *Disable configuration*. You cannot receive configuration settings from any of the configuration servers for which you have a profile.

When the configuration session has ended, you can view status information.

To open the configuration log, select a profile, and press *Configuration log*. The log file shows the latest configuration status of the selected profile.

### Creating a new configuration server profile

The configuration server profile contains the settings for the remote server. You can create several profiles if you need to access multiple servers.

You may receive the configuration server profile settings as a special message from your service provider.

1. If you have no profiles defined, press *New*, otherwise press Menu, and select *File* → *New*.
2. If you already have profiles defined, choose whether you want to copy the values from an existing profile to be used as the basis for the new profile.
3. The *Profile settings* dialog opens.

Define the following settings on the different pages of the dialog:

- *Server name* — Type a name for the configuration server.
- *Server ID* — Type the unique ID to identify the configuration server. Contact your service provider or system administrator for the correct value.
- *Password* — Write a password to identify your device to the server. Confirm the password.
- *Active* — Select *Yes* to allow the server to initiate a configuration session.
- *Accepted* — Select *Yes* if you do not want the server to ask for your confirmation when it initiates a configuration session.
- *Connection type* — Select how you want to connect to the server.
- *Access point* — Select the access point you want to use for the data connection to the server.
- *Host address* — Type the URL address of the server. Contact your service provider or system administrator for the correct value.
- *Port* — Type the port number of the server. Contact your service provider or system administrator for the correct value.
- *User name* — Enter your user ID for the configuration server. Contact your service provider or system administrator for your correct user ID.
- *Password* — Type your password for the configuration server. Confirm it in the *Confirm password* field. Contact your service provider or system administrator for the correct password.

## Connectivity

To edit the configuration profile settings, select the profile, and press *Edit*.

To delete a profile, select the profile, and press the backspace key.



**Tip:** If you have deleted or modified the predefined PC Suite profile, you can restore it by pressing Menu, and selecting *Tools* → *Reset PC Suite profile*.

### ■ Data connections

This device supports packet data (GPRS), high-speed data calls (HSCSD), GSM data calls, and wireless LAN connections.

#### Wireless local area network (wireless LAN)

There may be restrictions on using wireless LAN in some locations. Check with your local authorities or service provider. Features using wireless LAN, or allowing such features to run in the background while using other features, increase the demand on battery power and reduce the battery life.

Your device is approved for use in a wireless LAN. You can use wireless LAN to send and receive e-mail, and connect your device to the Internet.

Your device supports the following wireless LAN features:

- IEEE 802.11b standard
- Data rates of up to 11 Mbit/s
- Operation at a frequency of 2.4 GHz using direct sequence spread spectrum (DSSS) radio technology
- Wired equivalent privacy (WEP) data encryption with keys up to 232 bits.
- Wi-Fi protected access (WPA)

Note that the WEP and WPA functions can be used only if they are supported by the network.

If you move the device to another location within the wireless LAN and out of range of a wireless LAN access point, the roaming functionality can automatically connect your device to another access point that belongs to the same network. As long as you remain within range of access points that belong to the same network, your device can stay connected to the network.



**Tip:** A wireless LAN connection is established when you create a data connection using a wireless LAN Internet access point. The active wireless LAN connection is ended when you end the data connection.

Your device enables different types of communication in a wireless LAN. There are two operating modes to choose from: infrastructure and ad hoc.

- The infrastructure operating mode allows two kinds of communication: wireless devices communicate with each other through a wireless LAN access point or wireless devices communicate with a wired LAN device through a wireless LAN access point.

The advantage of the infrastructure operating mode is that you can have more control over network connections because they pass through an access point. A wireless device can access the services that are available in a regular wired LAN: company database, e-mail, the Internet, and other network resources, for example.

- With third party applications, you can send and receive data directly with each other in the ad hoc operating mode, for example, to print. No wireless LAN access point is required. Simply make the necessary configurations and start communicating. Ad hoc networking is easy to set up, but communication is limited to devices that are within range.

[See Setting up an Internet access point for a wireless LAN on page 68.](#)

[See Setting up an ad hoc network on page 82.](#)

#### Packet data (general packet radio service, GPRS)

GPRS enables wireless access for mobile phones to data networks (network service). GPRS uses packet data technology where information is sent in short bursts of data over the mobile network. The benefit of sending data in packets is that the network is occupied only when sending or receiving data. As GPRS uses the network efficiently, it allows for quick data connection set up and fast data transmission speeds.

You must subscribe to the GPRS service. For availability and subscription to GPRS, contact your network operator or service provider.

Enhanced GPRS (EGPRS) is similar to GPRS, but it enables faster connection. For more information on the availability of EGPRS and data transfer speed, contact your network operator or service provider. Note that when you have selected GPRS as a data bearer, the device uses EGPRS instead of GPRS if this is available in the network.

Note that during a voice call, you cannot establish a GPRS connection, and an existing GPRS connection is put on hold.

### High-speed data calls (high-speed circuit switched data, HSCSD)

HSCSD enables data transmission rates up to 43.2 kb/s, which is four times faster than standard data rates of the GSM network. HSCSD is comparable to the speed of many computer modems that communicate with fixed telephone networks.

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

Note that sending data with HSCSD may drain the battery faster than normal voice or data calls, as the device may send data more frequently to the network.

### GSM data calls

A GSM data call enables data transmission rates of up to 14.4 kb/s. For availability and subscription to data services, contact your network operator or service provider.

### ■ Connection manager

In *Conn. manager*, you can view details on active network connections, and you can end connections.

Go to *Desk* → *Tools* → *Conn. manager*.

To view detailed information about network connections, select the connection from the list, and press *Details*. The type of information shown depends on the network connection type.

To end a network connection, select the connection from the list, and press *Disconnect*.

To end all active network connections simultaneously, press Menu, and select *Tools* → *Disconnect all*.

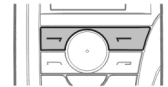
To view the amount of data sent and received with GPRS or wireless LAN, press Menu, and select *Counters* → *GPRS counter* or *WLAN counter*.

To view information about the IP address, press Menu, and select *Tools* → *IP address*. The IP address information is shown only when the network connection has been established, not while it is being activated.

## 20. Personalizing your device

- Covers - You can change the front covers of your device.
- Cover selection keys - You can change the functions that are shown above the left and right selection keys.
- Desk - You can organize the applications, shortcuts, and notes to folders, and create new folders on Desk.
- My own key - You can configure the My own key to open your favorite application.
- Background images - you can set a background image to your cover display and communicator display. [See Wallpapers on page 60](#). There are several wallpapers ready to use, and you can also use your own pictures as background images.
- Color palette - You can change the color palette of your device.

The left selection key in standby mode is **Go to**. You can use the key as a shortcut to your favorite functions. To activate a function, scroll to it, and press **Select**.



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

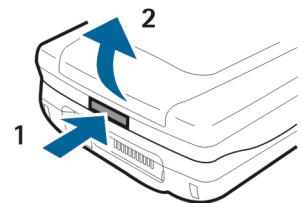
To rearrange the functions in the list, press **Options**, and select **Organize**. Scroll to the function that you want to move, press **Move**, and select where you want to move the function.

### Changing the front cover and key mat

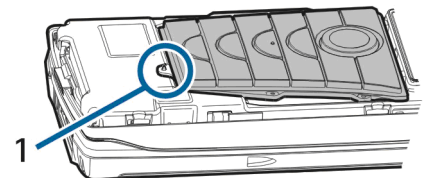


**Note:** Before removing the cover, always switch off the power and disconnect the charger and any other device. Avoid touching electronic components while changing the covers. Always store and use the device with the covers attached.

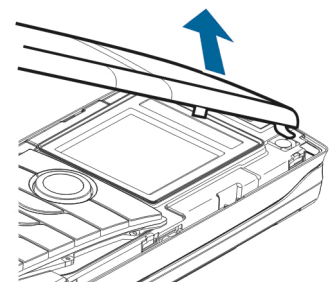
1. Press the front cover release button (1), and lift the front cover (2) in the direction of the arrow. Start at the bottom part of the device, and end by releasing the locking catches at the top of the device.



2. Remove the key mat. A small nib (1) holds the key mat in place.



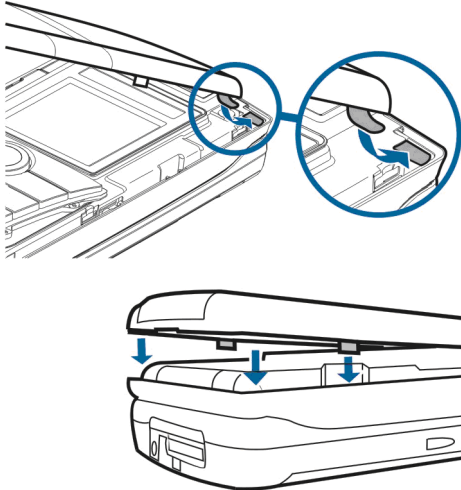
3. Lift the front cover in the direction of the arrow.



4. To replace the key mat, align it with the nib, and press it into place.
5. To replace the front cover, align the locking catches with the top of the device at a low angle, and press the front cover down until it locks into place.



Personalizing your device





## 21. Shortcuts

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Here are some of the available keyboard shortcuts in your device. Shortcuts can make the use of the applications more efficient.

There are several different shortcut combinations that you can use:

- Shortcuts with Ctrl+key give you access to the Menu functions. For example, pressing Ctrl+N creates a new window in Web, a new contact card in Contacts or a new message in Messaging.
- Additional characters and symbols are most often inserted by the Shift+key combination. For example, pressing Shift+a number key can insert quotation marks, exclamation points or parentheses.
- Certain functions can be activated with the Chr+key combinations. For example, pressing Chr+ opens additional information about your current task, or pressing Chr+ can activate and deactivate infrared.



**Tip:** Many shortcuts are also displayed next to menu options in applications.

### ■ General shortcuts

|                   |   |
|-------------------|---|
| Ctrl+A            | Select all  |
| Ctrl+C            | Copy  |
| Ctrl+D            | Delete  |
| Ctrl+F            | Find  |
| Ctrl+I            | Sort  |
| Ctrl+M            | Move  |
| Ctrl+N            | New   |
| Ctrl+O            | Open  |
| Ctrl+P            | Print   |
| Ctrl+S            | Save  |
| Ctrl+T            | Full screen   |
| Ctrl+V            | Paste   |
| Ctrl+X            | Cut   |
| Ctrl+Z            | Undo  |
| Shift+Ctrl+E      | Zoom  |
| Shift+Ctrl+G      | Next  |
| Shift+Ctrl+L      | Log   |
| Shift+Ctrl+P      | Previous  |
| Shift+Ctrl+S      | Save as   |
| Shift+Ctrl+U      | Page setup  |
| Shift+Ctrl+V      | Print preview   |
| Shift+Ctrl+Z      | Edit  |
| Shift+Backspace   | Delete text from right                                  |
| Ctrl+Telephone    | Open the Recent calls view in the telephone application |
| Chr+alphabet      | Insert an accented character                            |
| Chr+Tab           | Switch between open applications                        |
| Chr+Telephone key | Redial the last dialed number                           |
| Chr+Messaging key | Retrieve mail   |
| Shift+Ctrl+Chr+S  | Screenshot  |

## Shortcuts

### ■ Application-specific shortcuts

#### Desk application

|                 |                                      |
|-----------------|--------------------------------------|
| Ctrl+P          | Properties                           |
| Shift+Ctrl+M    | Go to the Personal application group |
| Shift+Ctrl+S    | Show in groups                       |
| Ctrl+My own key | Configure the My own key             |

#### Clock

|              |                                |
|--------------|--------------------------------|
| Ctrl+B       | Cancel the alarm               |
| Ctrl+E       | View city details              |
| Ctrl+K       | Alarm settings                 |
| Ctrl+T       | Set the date and time          |
| Shift+Ctrl+A | Alarm clock                    |
| Shift+Ctrl+E | View country or region details |
| Shift+Ctrl+N | Add a new city                 |
| Shift+Ctrl+Q | Set the clock type             |
| Shift+Ctrl+T | Remote city details            |
| Shift+Ctrl+W | World clock                    |

#### Telephone

|              |                           |
|--------------|---------------------------|
| Ctrl+P       | View serial number (IMEI) |
| Shift+Ctrl+B | Call restriction          |
| Shift+Ctrl+M | Voice mailboxes           |
| Shift+Ctrl+O | Other settings            |
| Shift+Ctrl+P | Profile settings          |
| Shift+Ctrl+S | 1-touch dials             |
| Shift+Ctrl+V | Call forwarding           |

#### Contacts

|              |  |
|--------------|--|
| Ctrl+K       | Settings                                     |
| Ctrl+M       | Belongs to groups (in an open contact card)  |
| Ctrl+N       | New contact card                             |
| Ctrl+P       | Database properties                          |
| Ctrl+R       | Ringtone (in an open contact card)           |
| Ctrl+T       | Card templates                               |
| Shift+Ctrl+B | New database                                 |
| Shift+Ctrl+C | Copy to                                      |
| Shift+Ctrl+D | Remove the picture (in an open contact card) |
| Shift+Ctrl+M | Move to                                      |
| Shift+Ctrl+N | Create a new group                           |
| Shift+Ctrl+O | Insert a picture (in an open contact card)   |

#### Messaging

|        |   |
|--------|---|
| Ctrl+B | Retrieve new messages   |
| Ctrl+G | Retrieve mail   |
| Ctrl+I | Sort by (sorts by the property you have already selected, for example date or sender) |

## Shortcuts

|               |  |
|---------------|--|
| Ctrl+L        | Go online, or go offline if a connection is active |
| Ctrl+Q        | Properties   |
| Ctrl+R        | Reply  |
| Ctrl+T        | Expand folder contents                             |
| Ctrl+U        | Disconnect   |
| Ctrl+Y        | Change the connection                              |
| Shift+Ctrl+A  | Retrieve all messages                              |
| Shift+Ctrl+B  | Retrieve the selected messages                     |
| Shift+Ctrl+E  | Rename the selected folder                         |
| Shift+Ctrl+F  | Forward the selected message                       |
| Shift+Ctrl+N  | Create a new folder                                |
| Shift+Ctrl+R  | Reply to all                                       |
| Shift+Ctrl+S  | Sent items storage                                 |
| Shift+Ctrl+T  | Account settings                                   |
| Shift+Ctrl+Z  | Delete messages locally                            |
| Chr+Messaging | Retrieve mail                                      |

### Calendar

|               |   |
|---------------|---|
| Ctrl+A        | Create a new anniversary                  |
| Ctrl+E        | Create a new memo                         |
| Ctrl+G        | Go to date                                |
| Ctrl+K        | Edit view settings                        |
| Ctrl+N        | Create a new meeting                      |
| Ctrl+Q        | Change view                               |
| Ctrl+S        | Create a new to-do note                   |
| Ctrl+T        | Edit the date and time                    |
| Shift+Ctrl+A  | Set anniversary as the default entry type |
| Shift+Ctrl+C  | Crossed out entry                         |
| Shift+Ctrl+D  | Move or delete the selected object        |
| Shift+Ctrl+E  | Set meeting as the default entry type     |
| Shift+Ctrl+K  | Edit general settings                     |
| Shift+Ctrl+M  | Import entries                            |
| Shift+Ctrl+O  | Set to-do note as the default entry type  |
| Shift+Ctrl+P  | Properties                                |
| Shift+Ctrl+R  | Set memo as the default entry type        |
| Shift+Ctrl+T  | Tentative entry                           |
| Ctrl+Calendar | Open the current day in the Day view      |
| Calendar key  | Change view                               |

### Documents

|              |                            |
|--------------|----------------------------|
| Ctrl+B       | Bold                       |
| Ctrl+G       | Go to page                 |
| Ctrl+I       | Italics                    |
| Ctrl+U       | Underline                  |
| Shift+Ctrl+A | Format paragraph alignment |

## Shortcuts

|              |                                     |
|--------------|-------------------------------------|
| Shift+Ctrl+B | Format bullets                      |
| Shift+Ctrl+D | Format borders                      |
| Shift+Ctrl+F | Format the font                     |
| Shift+Ctrl+G | Format the style                    |
| Shift+Ctrl+J | View details of the selected object |
| Shift+Ctrl+K | Preferences                         |
| Shift+Ctrl+N | Format line spacing                 |
| Shift+Ctrl+O | Insert an object                    |
| Shift+Ctrl+Y | Format tabs                         |
| Shift+Ctrl+Z | Edit the selected object            |

### Sheet

|              |                              |
|--------------|------------------------------|
| Ctrl+H       | Rename the worksheet         |
| Ctrl+M       | Freeze panes                 |
| Ctrl+Q       | View worksheets              |
| Ctrl+W       | Insert a new worksheet       |
| Ctrl+Y       | Insert cells                 |
| Shift+Ctrl+A | Format cell alignment        |
| Shift+Ctrl+B | Format cell borders          |
| Shift+Ctrl+C | Insert a new chart           |
| Shift+Ctrl+D | Delete the cell              |
| Shift+Ctrl+F | Format the font              |
| Shift+Ctrl+G | Insert a page break          |
| Shift+Ctrl+H | Format row height            |
| Shift+Ctrl+I | Insert a function            |
| Shift+Ctrl+N | Format numbers               |
| Shift+Ctrl+O | Settings                     |
| Shift+Ctrl+P | Format cell background color |
| Shift+Ctrl+R | Recalculate                  |
| Shift+Ctrl+T | Show title                   |
| Shift+Ctrl+W | Format column width          |
| Shift+Ctrl+X | Clear the cell               |

### Presentations

|              |                            |
|--------------|----------------------------|
| Ctrl+T       | Full screen mode           |
| Shift+Ctrl+A | Format the alignment       |
| Shift+Ctrl+F | Format the font            |
| Shift+Ctrl+J | Format the selected object |
| Shift+Ctrl+V | View a slide show          |
| Enter key    | Start text editing         |
| Esc key      | Cancel text editing        |

### File manager

|        |  |
|--------|--|
| Ctrl+E | Expand view  |
| Ctrl+H | Show all files   |
| Ctrl+I | Sort by (the property you have already selected, for example name or date) |

## Shortcuts

|              |  |
|--------------|--|
| Ctrl+N       | New file   |
| Ctrl+O       | Collapse view  |
| Ctrl+P       | Properties   |
| Ctrl+R       | Rename the selected object   |
| Ctrl+U       | Move up one level  |
| Shift+Ctrl+B | Back up to memory card   |
| Shift+Ctrl+I | Sorting order (the order you have already selected, for example ascending) |
| Shift+Ctrl+K | Settings   |
| Shift+Ctrl+N | Create a new folder  |
| Shift+Ctrl+Q | Change memory card password  |
| Shift+Ctrl+R | Restore from memory card   |

### Calculator

|              |                       |
|--------------|-----------------------|
| Ctrl+B       | Subtract              |
| Ctrl+F       | Flip layout           |
| Ctrl+I       | Add                   |
| Ctrl+R       | Recall                |
| Ctrl+Y       | Function map          |
| Shift+Ctrl+C | Clear all             |
| Shift+Ctrl+D | Desk calculator       |
| Shift+Ctrl+S | Scientific calculator |

### Web

|              |                                      |
|--------------|--------------------------------------|
| Ctrl+B       | Add to bookmarks                     |
| Ctrl+E       | Close the browser                    |
| Ctrl+G       | Back                                 |
|              | Go to bookmark (in bookmark view)    |
| Ctrl+H       | Go to home page                      |
| Ctrl+I       | Load all images                      |
|              | Insert new folder (in bookmark view) |
| Ctrl+K       | Settings                             |
| Ctrl+M       | Fit to screen                        |
| Ctrl+N       | Open a new window                    |
| Ctrl+R       | Reload                               |
| Ctrl+T       | Full screen mode                     |
| Ctrl+U       | Disconnect                           |
| Ctrl+W       | View window list                     |
| Ctrl+Y       | Change the connection                |
| Ctrl+Z       | Stop                                 |
| Shift+Ctrl+B | Bookmarks                            |
|              | Edit bookmark (in bookmark view)     |
| Shift+Ctrl+D | View downloads                       |
| Shift+Ctrl+F | Reload frame                         |
| Shift+Ctrl+G | Forward                              |
| Shift+Ctrl+I | Rename folder (in bookmark view)     |

## Shortcuts

|              |                  |
|--------------|------------------|
| Shift+Ctrl+O | Open a file      |
| Shift+Ctrl+R | Reload all       |
| Shift+Ctrl+S | Save frame as... |
| Shift+Ctrl+T | View title bar   |

### Images

|        |                                     |
|--------|-------------------------------------|
| Ctrl+B | Previous image (with an image open) |
| Ctrl+F | Next image (with an image open)     |
| Ctrl+R | Rotate image (with an image open)   |
| Ctrl+T | Full screen (with an image open)    |

### Voice recorder

|              |          |
|--------------|----------|
| Ctrl+L       | Repeat   |
| Ctrl+M       | Mute     |
| Ctrl+R       | Rename   |
| Shift+Ctrl+K | Settings |

### Music player

|        |  |
|--------|--|
| Ctrl+B | Previous track                                   |
| Ctrl+F | Next track                                       |
| Ctrl+I | Sort by (the property you have already selected) |
| Ctrl+L | Repeat all                                       |
| Ctrl+M | Mute   |

### RealPlayer

|              |  |
|--------------|--|
| Ctrl+B       | Previous clip (with a video clip open) |
| Ctrl+F       | Next clip (with a video clip open)     |
| Ctrl+M       | Mute (with a video clip open)          |
| Ctrl+R       | Repeat once (with a video clip open)   |
| Ctrl+T       | Full screen (with a video clip open)   |
| Shift+Ctrl+K | Settings                               |
| Shift+Ctrl+S | Save clip as (with a video clip open)  |

### Device manager

|              |         |
|--------------|---------|
| Shift+Ctrl+C | Connect |
|--------------|---------|



## 22. Data transmission

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This device employs the data transmission capabilities of the GSM and WLAN networks to send multimedia messages, short messages and e-mail, and to establish connections with remote computers, for example.

Wireless data connections can be made from most locations where your device operates, but it is recommended that you move the device to a location where the strongest possible wireless signal can be obtained. When the signal is strong, data transmission is efficient. Wireless data communications may perform differently from data communications transmitted over wires. This is due to the inherent characteristics of the wireless environment. Wireless connections may experience "noise", low or lost signals, and distortions.

### ■ Noise

Radio interference from electronic appliances and equipment, as well as from other phones may affect the quality of wireless data transmission.

### ■ Roaming

As the device user moves from one network cell or WLAN access point coverage area to another, the signal strength of the channel may drop. The network may hand over the user to a coverage area and frequency where the signal is stronger. Network roaming may also occur when the user is stationary, due to varying network traffic loads. Such roaming may cause slight delays in transmission.

### ■ Electrostatic discharge

A discharge of static electricity from a finger or a conductor may cause erroneous functions in electrical devices. The discharge may result in distorted display and unstable software operation. Wireless connections may become unreliable, data may become corrupted, and transmission halted. In this case you need to end the existing call (if any), switch off the device (if on) and remove the battery. Then replace the battery and establish a new wireless connection.

### ■ Dead spots and dropouts

Dead spots are areas where radio signals cannot be received. Dropouts occur when the device user passes through an area where the radio signal is blocked or reduced by geographical features or large structures.

### ■ Signal impairment

Distance and obstacles can cause signals to become out-of-phase. They can also cause reflected signals. Both situations result in a loss of signal strength.

### ■ Low signal strength

Due to either distance or obstacles, the radio signal strength from a WLAN access point or a cell site may not be strong enough or stable enough to provide a reliable data connection for communication. Therefore, to ensure the best possible communication, remember the following points:

- The data connection works best when the device is in a stationary position. Attempting wireless data communication while in a moving vehicle is not recommended.
- Do not place the device on a metal surface.
- Check on the device display that the signal strength is sufficient. Moving the device within a room, especially towards a window, may result in a stronger signal. If a signal is not strong enough to support a voice call, data connection should not be attempted until you can find a location with better signal reception.

## 23. Nokia original enhancements

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An extensive range of enhancements is available for your device. Select the enhancements that accommodate your specific communication needs.

Compatible enhancements:

- Wireless Boom Headset HS-4W
- Headset HS-5
- Boom Headset HDB-4
- Retractable Headset HS-10
- Stereo Headset HDS-3
- Radio Headset HS-2R
- Inductive Loopset LPS-4
- Headrest hands-free BHF-3
- Mobile Holder CR-6
- Antenna Coupler AD-13
- Mobile Charger LCH-12
- Memory Card DTS-64
- Memory Unit MMC 128MB
- Connectivity Cable DKU-2
- Connectivity Desk Stand DT-4
- Image Frame SU-4
- Image Frame SU-7
- Battery BP-5L

For availability of the enhancements, check with your local dealer. A few practical rules for enhancements operation:

- Keep the enhancements out of reach of small children.
- When you disconnect the power cord of any accessory, grasp and pull the plug, not the cord.
- Check regularly that all mobile phone equipment in a vehicle is mounted and operating properly.

Use only batteries, chargers, and enhancements approved by the phone manufacturer. The use of any other type may invalidate any approval or warranty applying to the phone, and may be dangerous.

### ■ Battery

#### Technical information

| Type  | Tech  | Capacity | Talk time       | Standby         |
|-------|-------|----------|-----------------|-----------------|
| BP-5L | Li-Po | 1300 mAh | Up to 4-6 hours | Up to 4-6 hours |

Variation in talk time and standby time may occur, depending on the SIM card, network and usage settings, and the style and environment of use.

Nokia original enhancements

### ■ Boom Headset HDB-4

This small and lightweight headset has a beautiful and distinctive Nokia design. It provides excellent audio quality. You can answer or end calls by pressing the button on the headset microphone.



## Battery information

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

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

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

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

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

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

## CARE AND MAINTENANCE

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

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

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

## Additional safety information

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### ■ 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
- hold the device to the ear opposite the pacemaker to minimise the potential for interference.
- If you have any reason to suspect that interference is taking place, switch off your device immediately.

### Hearing aids

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

### ■ Vehicles

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

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

### ■ Potentially explosive environments

Switch off your device when in any area with a potentially explosive atmosphere and obey all signs and instructions. Potentially explosive atmospheres include areas where you would normally be advised to turn off your vehicle engine. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Switch off the device at refuelling points such as near gas pumps at service stations. Observe restrictions on the use of radio equipment in fuel depots, storage, and distribution areas, chemical plants or where blasting operations are in progress. Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), and areas where the air contains chemicals or particles such as grain, dust or metal powders.

### ■ Operating environment

Remember to follow any special regulations in force in any area and always switch off your device when its use is prohibited or when it may cause interference or danger. Use the device only in its normal operating positions. This device meets RF exposure guidelines when used either in the normal use position against the ear or when positioned at least 5/8 inch (1.5cm) away from the body. When a carry case, belt clip, or holder is used for body-worn operation, it should not contain metal and should position the device the above-stated distance from your body.

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



### ■ 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.

## Additional safety information

To make an emergency call:

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

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

## ■ CERTIFICATION INFORMATION (SAR)

### THE NOKIA 9500 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 RA-2 is 0.52 W/kg and for device type RA-3 is 0.52 W/kg. Your phone's device type is listed on the label located under the battery.

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](http://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 types RA-2 and RA-3 have also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use at the ear is 0.92 W/kg for device type RA-2 and 0.99 W/kg for device type RA-3 and when properly worn on the body is 1.53 W/kg for device type RA-2 and 1.15 W/kg for device type RA-3. Information about these 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 PDNRA-2 for device type RA-2 or FCC ID PDNRA-3 for device type RA-3.



## Technical information

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### Characteristic Value

| Feature         | Specification   |
|-----------------|---|
| Weight          | 230 g with battery Li-Po 1300 mAh   |
| Size            | Length: 5.83 in (148 mm)<br>Width: 2.20 in (56 mm)<br>Thickness: 0.95 in (24 mm)        |
| Frequency range | RA-2 EGSM 900/1800/1900<br>RA-3 GSM 850/1800/1900                                       |
|                 |   |
| Memory          | 192 MB total in device<br>128 MB application<br>64 MB execution<br><2 GB MMC and RS-MMC |

## Nokia One-Year Limited Warranty

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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, 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. 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

## Nokia One-Year Limited Warranty

repair the same defect, Nokia at its option, will provide a 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). 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) 287-6612 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.

Patent list

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# Appendices

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## ■ Appendix A Message from the CTIA

### (Cellular Telecommunications & Internet Association) to all users of mobile phones

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

1

Safety is the most important call you will ever make.

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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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!
- Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
- Call roadside assistance or a special wireless non-emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

Careless, distracted individuals and people driving irresponsibly represent a hazard to everyone on the road. Since 1984, the Cellular Telecommunications Industry Association and the wireless industry have conducted educational outreach to inform wireless phone users of their responsibilities as safe drivers and good citizens. As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones. And, as we take to the roads, we all have a responsibility to drive safely. The wireless industry reminds you to use your phone safely when driving.

For more information, please call 1-888-901-SAFE. For updates: [www.wow-com.com/consumer/issues/driving/articles.cfm?ID=85](http://www.wow-com.com/consumer/issues/driving/articles.cfm?ID=85)

## ■ Appendix B Message from the FDA

### Message from the FDA

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- Do wireless phones pose a health hazard? The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radio frequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the standby 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 radio frequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists. Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following: Support needed research into possible biological effects of RF of the type

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## Appendices

emitted by wireless phones; Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health. FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group: National Institute for Occupational Safety and Health Environmental Protection Agency Federal Communications Commission Occupational Safety and Health Administration National Telecommunications and Information Administration The National Institutes of Health participates in some interagency working group activities, as well. FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones. FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the subject of the safety questions discussed in this document.

- What kinds of phones are the subject of this update? The term wireless phone refers here to hand-held wireless phones with built-in antennas, often called cell mobile or PCS phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user's head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called cordless phones, which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.
- What are the results of the research done already? The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health. Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.
- What research is needed to decide whether RF exposure from wireless phones poses a health risk? A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.
- 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.
- How can I find out how much radiofrequency energy exposure I can get by using my wireless phone? All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects. Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.
- What has FDA done to measure the radiofrequency energy coming from wireless phones? The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques, sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue-simulating model of the human head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.
- What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone? If there is a risk from these products--and at this point we do not know that there is--it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure. If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna. Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.
- What about children using wireless phones? The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.
- What about wireless phone interference with medical equipment? Radio frequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI. FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a compatible phone and an accompanied hearing aid at the same time. This standard was approved by the IEEE in 2000. FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.
- Where can I find additional information? For additional information, please refer to the following resources:  
FDA web page on wireless phones <http://www.fda.gov/cdrh/phones/index.html> <http://www.fda.gov/cdrh/phones/index.html>  
Federal Communications Commission (FCC) RF Safety Program <http://www.fda.gov/cdrh/phones/index.html>  
International Commission on Non-Ionizing Radiation Protection <http://www.icnirp.del> World Health Organization (WHO) International EMF Project <http://www.who.int/emf>

## **A p p e n d i c e s**

National Radiological Protection Board (UK) <http://www.nrpb.org.uk/>  
2004 For updates: <http://www.fda.gov/cdrh/phones>



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