

10. Messaging

Messaging contains the following applications: Fax, Mail and SMS (Short Message Service).

To start Messaging, press the Messaging application button on the communicator keyboard.

The overall requirements for using fax, mail and SMS, applications are as follows:

- The phone must be turned on.
- The system you are using must support fax calls, data calls, and the Short Message Service.
- The fax, data and Short Message Service service must be activated for your SIM card.
- You must have obtained an Internet Access Point (IAP) from an Internet service provider.
- You must have entered the proper Internet and Mail settings
- The short message center number must be stored in the settings of the SMS application.

 **Tip:** To set Internet settings, see page 173. To set Mail settings, see page 213.

Contact your home service provider for details.

When you connect your communicator to a PC, you can synchronize your e-mails with Microsoft Windows programs. You can also reply to and read remotely Microsoft Windows and Lotus e-mail. For information on synchronization, see 'Mail synchronization with your PC' on page 225 and the PC Suite Guide.

Messaging center

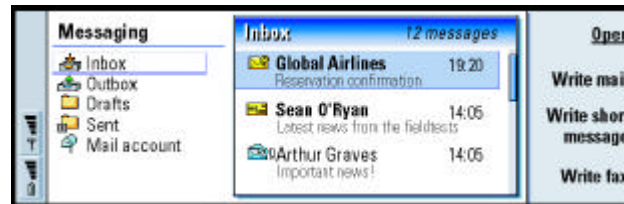


Figure 76

Tip: You can move between the two frames with the Arrows or Tab key.

The main view of Messaging has two frames: on the left is a list of the folders in the Messaging center, and on the right are the messages connected to the currently selected folder.

Folders in the Messaging main view are:

Inbox - Received faxes and short messages. Received mail appears in the Remote mailbox folder.

Outbox - Messages which are waiting to be sent from the communicator.

Drafts - Saved message drafts.

Sent - Messages which have been sent from the communicator.

Any remote mailboxes that you set up appear at the bottom of the folder list.

Open folders and messages

To open a folder, select the left frame in the main view of Messaging, go to the folder and press **Open folder**.

To open a message, in the message list of the main view, go to the message and press **Open**. The message opens in the appropriate viewer, for example, a mail message opens in the mail viewer.

 **Tip:** You can also press Enter to open messages and folders.

Manage folders

You can create your own folders in *Drafts*, in your own folders and in the root of the folder list. You cannot create new folders in *Inbox*, *Outbox* or *Sent*.

- 1 Select the left frame in the main view of the Messaging.
- 2 Press the Menu key and select *File > Folder > Create new folder...*
- 3 Type a name for the new folder.
- 4 Select where you want to create the folder.
- 5 Press **Create**. The new folder appears on the folder list.

 **Tip:** You can create folders to IMAP4 remote mailboxes when online.

To move faxes, mail and short messages from one folder to another, select the file, press the Menu key and select *Edit > Move*

To search faxes, mail and short messages for names, dates, time, or any other pieces of text press the Menu key and select *Tools > Find...* For further details, see 'Search for text' on page 76.

Sort messages and faxes

You can also sort faxes, mail and short messages by various criteria, such as date and size, which affects the way they appear in the different views of Messaging.

Tip: To choose the sorting order, press the Menu key and select *View > Sorting order*. Choose between *Ascending* and *Descending*.

- 1 Open the folder where you want to sort the messages and faxes.
- 2 Press the Menu key and select *View > Sort by*.
- 3 Choose from the following options: *Message type/Sender/Recipient/Subject/Date/Size/Priority*.

Inbox



Figure 77

Tip: To reply to a message in the Inbox, press the Menu key and select *Write > Reply*.

Unread messages appear in bold.

The icons in front of messages indicate message type, priority and possible attachments. Here are some of the icons that you may see:

- new mail in remote mailbox
- new fax
- new short message (SMS)
- new voice mail message
- new message from your system service provider
- new business card

	new calendar invitation
	new ringing tone
	new remote configuration data
	unread mail
	unread mail received from PC by synchronization
	priority high
	priority low
	message contains an attachment

Outbox

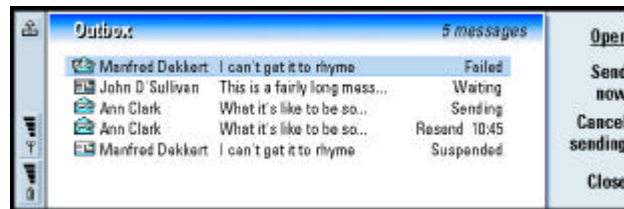


Figure 78

Statuses

Faxes, mail and short messages waiting to be sent from the communicator can have the following statuses in Outbox:

- **Sending** – The fax or short message is currently being sent.

Tip: You can send faxes, mail and short messages immediately, at a predefined time or upon request, depending on a delivery setting. See **Sending options** in the corresponding editors.

■ **Tip:** If the status of a fax, mail or short message is *Suspended*, *Resend* or *Scheduled*, you can open and delete it, or resume sending.

Upon request - The mail, fax, or short message will be sent only if you specifically press **Send now** in the Outbox view.

Waiting - The fax or short message is queuing to be sent and will be sent as soon as possible, for example, when the phone is switched on, signal strength becomes adequate, or the previous phone call ends. In the case of mail messages, *Waiting* shows that the message will be sent the next time you connect to your remote mailbox.

Calling - Outbox is calling the recipient of the fax message.

Preparing - Outbox is rendering a T.4 format fax image; this means that color is converted to black and white.

Failed - One or more pages of a fax or short message failed to be sent.

Suspended - You have suspended the sending of the message or fax. You can resume the sending of a message by pressing **Send now** in the Outbox view.

Resend - The fax or short message failed to be sent but the communicator will retry to send it.

Scheduled - The fax or short message is scheduled to be sent at a specific time.

To cancel the sending of a fax, mail or short message, select it and press **Cancel sending**.

When a message or fax has been successfully sent, it is automatically moved to the Sent folder.

Write and send faxes, mail and short messages

There are two ways you can start creating faxes, mail and short messages in the Messaging application:

- Press any of the following commands in the main view of Messaging: **Write fax**, **Write mail** or **Write short message**.
- Press the Menu key in the main view of Messaging and select *Write > New message...* Then select the appropriate message type.

You can also send faxes, mail and short messages in all the applications where you can find the option *File > Send* after pressing the Menu key.

If you want to save, but not send a fax, mail or short message you have just written in the corresponding editor, press **Close**. The message is saved in the *Drafts* folder. The saved message replaces the previously saved version of the same message. To revert back to the previously saved version of the mail or fax, press the Menu key and select *File > Discard changes*. Note that this is not possible with short messages.

Select recipients

There are two ways to select recipients to your fax, mail and short messages:

● **Note:** A fax can have only one recipient.

- 1 Press **Recipient** in the corresponding message editor. A dialog listing your contacts opens, see figure 79.

■ **Tip:** If you are already writing a message or fax and want to start on a new message, press the Menu key and select *File > New short message* or *New fax*.

■ **Tip:** When you start writing a new fax, mail or short message, a temporary copy of it is automatically stored in the *Drafts* folder. It is removed from *Drafts* and placed in *Outbox* once you press **Send**.

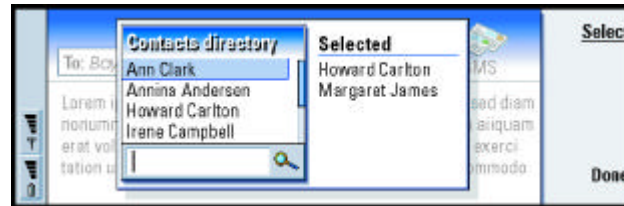


Figure 79

Tip: You can select more than one contact at a time, see 'Select several items at once' on page 72.

Tip: In the case of mail, you need to select the contacts to the appropriate fields in the dialog by pressing **To**, **Cc** or **Bcc**.

- 2 Search for a contact or contacts in the left frame and press **Select**.
The right frame shows the contacts you have already selected; to remove a contact, select it and press **Remove**.
- 3 Press **Done**.
You can also just type in the first letters or the whole name of the recipient into the header of the fax, mail or short message and check if the letters or name match an entry in your contacts database:
 - 1 Type in the name of the recipient into the header of the message.
 - 2 Press the Menu key and select *Tools > Check names*.
 - 3 If the name you have entered matches to more than one name, or if the person has more than one GSM phone number, fax number or mail address, a selection list appears.
Select the correct name, phone number, or address from the list and press **Select**.
Checked recipients are moved to separate lines in the header of the message.
Note that a fax can have only one recipient.
 - 4 To add another recipient to a mail or short message, press Enter after a checked recipient or insert the semicolon ";" as a separator.

To delete a checked recipient, move the cursor to the end of the entry and press backspace.

Avoid low memory

You should regularly delete messages from your Inbox and Sent folders and delete retrieved mail from the communicator memory to free up memory space.

 **WARNING!** If you do not use this method to delete mail messages from your communicator, the messages may also be permanently deleted from your remote mailbox.

To delete downloaded mail messages from the communicator:

- 1 Press the Menu key in the main view of Messaging and select *Tools > Message storage...* A dialog with two pages opens.
- 2 On the *Communicator* page you can choose to delete all mail messages or messages older than a given time period. To delete selected messages, press **Delete now**. Messages are deleted from your communicator's memory, but they are not deleted from your remote mailbox.
On the *Memory* page, you can delete or move messages from the current store. To change the store in use, press **Change**. To move the message storage from communicator's memory to a memory card or vice versa, press **Move**. To delete all the messages in the selected message storage, press **Delete**.

 **WARNING:** Deleting the message storage deletes permanently all messages and mailbox folders and restores all messaging settings to factory defaults.

 **Tip:** Use a PC mail client to move mail messages from your remote inbox to other folders for archiving. If you keep the number of messages in the remote inbox to a minimum, your communicator has more available memory and the mail connection is faster.

 **Tip:** See 'Mail attachments' on page 223 to delete attachments from received mail messages.

● **Note:** If you create a new message store to a memory card and remove the card a new storage must then be created in the internal memory when new messages are received. This leads to a situation where you cannot move messages from one memory storage to another, since only one message store at a time can be in use.

Fax

■ **Tip:** For more advanced word processing, use Document instead of the fax editor.

You can write and send faxes in the fax editor.

You can write documents in the Document or Sheet applications and then send them as faxes. It is also possible to send faxes with embedded images. For details on images, see 'Imaging' on page 271.

Write and send a new fax

- 1 Press **Write fax** in the main view of Messaging. The fax editor opens, see figure 80.

■ **Tip:** You can zoom in the fax editor. Press the Menu key and select *View > Zoom > Zoom in* or *Zoom out*

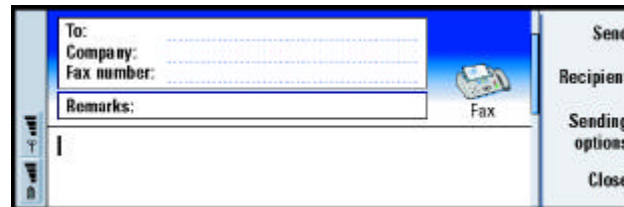


Figure 80

■ **Tip:** To select a recipient, see details on page 205.

- 2 Write the fax.
To format the text, press the Menu key and select *Format*.

- 3 Press **Recipient** to select the recipient. A fax can have only one recipient.
 - 4 If you wish to adjust the sending options of the fax, press **Sending options**. For details, see Fax settings on page 211.
 - 5 Press **Send**.
- **Note:** Voice calls are not possible when a fax is being sent or received.

■ **Tip:** To define a specific date and time when the fax will be sent, select *Scheduled* in the *Send fax* option.

Fax cover page

You can attach a cover page to the fax you are currently creating or editing.

- 1 Press **Sending options** and then select *Fax cover page*.
- 2 Choose one of the following options:
 - None:* The header of the fax will have only the *To:* and *Fax number:* fields.
 - Header:* The header of the fax will have information about the sender and recipient of the fax, and the date of the fax.
 - Template 1:* The header field of the fax will have information about the sender and recipient of the fax and a separate *Remarks:* field.
 - Full template:* The header field of the fax will have more information about the sender and recipient of the fax, the date of the fax and a separate *Remarks:* field.

■ **Tip:** To define the default format of the header in your faxes, as well as whether you want a cover template to be attached to the faxes, see 'Fax settings' on page 211.

You can save and use customized cover templates in the Templates folder using File manager; for more information see page 246. Whatever cover template you use, the available recipient information is filled in automatically.

Receive and read faxes

Faxes are received automatically, provided that this service is available and that the phone is turned on and within system coverage.

■ **Tip:** To forward a received fax, press the Menu key and select *File > Forward*.

 **Tip:** You can zoom and rotate in the fax viewer. Each press of **Rotate** rotates the fax 90 degrees clockwise.

When a new fax is received, you hear a tone – unless the system is set to a silent profile – and an information note is shown on the display.

Press **Open** to view the fax.

To open a fax received earlier, go to the Inbox, select the fax and press **Open**.

● **Note:** If a fax is not received completely due to some failure, it is named *Incomplete fax*

Select and save all or part of a received fax

You can select all or part of a fax and save it in another format for further editing.

To select an area of a fax page:

- 1 Press the Menu key in the fax viewer and select *Tools > Selection frame*. A selection frame appears in the fax viewer.
- 2 Use arrow keys to move the selection frame to the upper-left corner of the area you want to select.
- 3 To change the size of the selection frame, press and hold the Ctrl key and press the Arrows key. To cancel the selection, press the Menu key and select *Tools > Selection frame* again, or just press Esc key.

To save fax in another format

- 1 Press the Menu key in the fax viewer and select *File > Export...* Select the range to be exported. The options are *Whole document* / *Current page* / *Selected* / *User defined*. Press **OK**. A dialog opens.
- 2 Specify the name and location of the new document. To change the format of the new document, press **Change format**.
- 3 Press **OK** to save the exported fax file.

Fax polling

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

Retrieve faxes from a remote fax box

- 1 Press the Menu key in the main view of Messaging and select *Receive > Fax > Dial fax poll*.
- 2 Type in the fax number for the remote fax box, or choose the number by pressing **Recipient**.
- 3 Press **Call** to call the number.

Fax settings

Any changes you make to fax settings affect the way in which your faxes are sent and received.

- 1 Press the Menu key in the main view of Messaging and select *Tools > Account settings...*
- 2 Select *Fax* and press **Edit**. A dialog with two pages opens. Define the following:

Settings page

Fax cover page: Defines whether or not a cover page will be used. The options are *None/ Header/ Template 1/ Full template* - In addition to the options above, the option list may contain other cover templates saved in the Templates folder.

Send fax: Defines when the fax will be sent. The options are *Immediately/Upon request*.

Advanced page

Resolution: The resolution of the sent and received faxes. The options are *High/Standard*.

ECM: Defines whether or not the Error Correction Mode is used when faxes are sent. If set to *On*, any pages containing errors are automatically returned to sender, until the defects are corrected. The options are *On/Off*.

Resend: Defines which pages will be sent again if the fax sending has failed. The options are *All pages/Missed pages*.

Mail

The Nokia 9290 Communicator mail system is compliant with Internet standards SMTP, IMAP4 (rev 1) and POP3.

To be able to receive and send mail, you need to have set up a remote mailbox service. This service may be offered by an Internet service provider, a system service provider, or your company.

 **Tip:** If you press **Write mail** in the main view of Messaging and you have not set up your mail account, you will be prompted to do so.

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

- You must configure an Internet access point (IAP) correctly. See 'Setting up your Internet access point' on page 173
- You must define your Mail settings correctly. See 'Mail settings' on page 213.

 **Note:** Follow the instructions given by your remote mailbox and Internet service providers.

Mail settings

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

To connect to your remote mailbox, you need to define a mail account on your communicator:

- 1 Press the Menu key in the main view of the Messaging center and select *Tools* > *Account settings...*
- 2 Press **Create new**. A selection list of possible account types opens.
- 3 Select *Mail* and press **OK**. A dialog with four pages opens. See figure 81

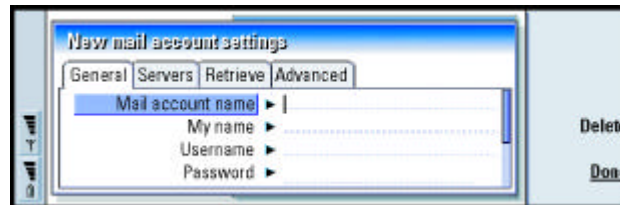


Figure 81

- 4 Define the following:

General page

Mail account name: The name of the remote mailbox. You can type here any name to describe the mailbox.

My name: Type in your name.

Username: Type in your user name.

■ **Tip:** Outgoing mail servers are typically called SMTP servers or hosts and incoming mailservers are called POP3 or IMAP4 servers.

Password: Type in your password. If you leave this field blank, you will be prompted for password when you try to read mail in your remote mailbox.

My mail address: Type in the 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: The IAP connection used for the mailbox. Choose an IAP from the list. To create an IAP, see 'Setting up your Internet access point' on page 173.

Default account: Choose a mail account from the list. When you set up an account for the first time, it will be the default until more accounts are created.

Servers page

Mail account type: Defines the mail protocol your remote mailbox service provider recommends. The options are *POP3* and *IMAP4*.

Outgoing mail server: The IP address or host name of the computer that sends your Internet mail.

Incoming mail server: The IP address or host name of the computer that receives your Internet mail.

Retrieve

Retrieve: Specifies what will be retrieved from the remote mailbox when the connection is established. The options are *Mail headers (stay online)*/*Messages*/*Messages and attachments*. The *Messages* option is available only if the mailbox type is IMAP4.

Max. size of mail: The maximum size of a message which is retrieved. The minimum is 1 KB and maximum 1000 KB.

Sync. mails in Inbox: Specifies the number of message headers to be retrieved from Inbox of the remote mailbox. The options are *All*/*None* or you can define the appropriate number of messages to be retrieved.

Sync. mails in folders: Specifies the number of message headers to be retrieved from the folders of the remote mailbox excluding Inbox. The options are *All*/*None* or you can define the appropriate number of messages to be retrieved.

 **Tip:** If you prefer reading your mail messages and replying to them while connected to your remote mailbox, select *Mail headers (stay online)*. If you prefer to retrieve the messages and disconnect, select *Messages*.

Advanced page

Default mail type: The type of mail that you can write and send from your communicator. The options are *Plain text (no MIME)*/*Plain text*/*Formatted text (HTML)*.

Send mail: How mail is sent from your communicator. The options are *Immediately*/*During next connection*/*Upon request*.

Include signature: Specifies whether your signature is attached to sent mail. The options are *No*/*Use my contact card*/*Custom*. If you choose *Custom*, you can press **Edit signature** to modify the signature file.

Request read report: The options are *Yes/No*. If you choose *Yes* you will receive a notification when the recipient has opened your mail. You can only receive a notification if the recipient's e-mail application supports this feature.

Allow report requests: The options are *Yes/No*. If you choose *No* the sender of a message you receive will not get a notification, when you open the message.

Copy to my mail address: The options are *Yes/No*.

Secure login (APOP): Used with POP3 protocol to encrypt the sending of passwords to remote mail server. The options are *Yes/No*.

Secure connection (TLS): Used with POP3, IMAP4 and SMTP protocols to secure the connection to remote mailbox. The options are *Yes/No*.

IMAP4 folder path: Define the location of the IMAP mail folder here, if not defined automatically. This option is available only if the mailbox type is IMAP4.

Edit an account

- 1 Press the Menu key in the main view of Messaging and select *Tools > Account settings...* A list of accounts opens.
- 2 Select the account you want to edit and press **Edit**.
- 3 Define the settings on the *General*, *Servers*, *Retrieve* and *Advanced* pages explained above.
- 4 Press the Esc key to discard any changes.
Press **Done** to accept the changes you have made.

● **Note:** You cannot edit mailbox settings when online.

Write and send new mail

- 1 Press **Write mail** in the main view of Messaging. The mail editor opens, see figure 82.

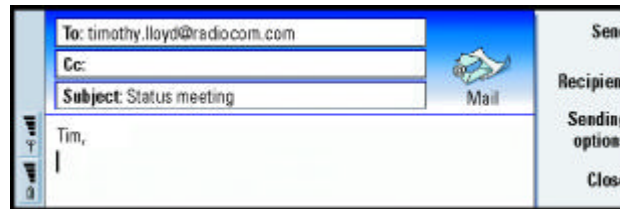


Figure 82

- 2 Write the mail message.
- 3 Press **Recipient** to select the recipient or recipients of the message, or type in the name or mail address into the *To*, *Cc*, and *Bcc* fields. You can move from one insertion field to another by pressing the Tab key.
- 4 If you wish to adjust the sending options of the mail message, press **Sending options**. A dialog with two pages opens, see page 219.
- 5 Press **Send**.

● **Note:** You cannot enter accented characters, such as é or ä, into mail addresses.

Recipients

There are three hierarchy levels of recipients in a mail message:

■ **Tip:** If you cannot send mail from your communicator, check first that your mail address is correct in Mail settings. See page 213.

■ **Tip:** To see how to select recipients, see page 205.

■ **Tip:** You can zoom in the mail editor.

■ **Tip:** To hide or show Cc: and Bcc: fields in the mail editor, press the Menu key and select *View > Show Cc field* or *Show Bcc field*.

To: - Message is sent directly to the recipient. *Cc:* - A copy of the message is sent to the recipient, and the recipient's name is visible to other recipients of the message. *Bcc:* - A copy of the message is sent to the recipient, but the recipient's name is not visible to other recipients of the message.

● **Note:** The addresses you have entered are checked against your contacts database once you press **Send**. Names which do not match with the contacts database, or addresses which do not have '@', should be removed from the address fields.

If a name you have entered in one of the address fields matches a group name, the name is replaced with the mail addresses of the group members.

Style of sent mail

You can format only HTML messages. Press the Menu key and select *Format > Formatting*. This opens the following options for formatting: *Bold*, *Italic*, *Underline* and *Bullets*

■ **Tip:** To format the font for a selected text area, press the Menu key and select *Format > Font...*

To set a preferred font for plain text and HTML mail, press the Menu key and select *Tools > Preferences...*

To align a mail message, press the Menu key and select *Format > Alignment*. This opens the following options: *Left*, *Center* and *Right*.

Sending options

The options in the *Sending options* dialog contain values set in mail settings, as explained on page 219. Press **Sending options** to open the dialog. Any changes you make in this dialog affect only the current mail message you are about to send.

● **Note:** Changing the options in the Sending options dialog affects the format of message when it is opened by the recipient. For example, the format may affect the legibility of the characters.

■ **Tip:** In the case of PC mail message (see page 224), *Priority* and *Mail account in use* are the only options you can change.

Message page

Priority: The priority of a message. The options are *High*/*Normal*/*Low*.

Message type: The type of the message. The options are *Plain text (no MIME)*/*Plain text*/*Formatted text (HTML)*.

Request read report: Specifies whether to add to the outgoing mail, a request for you to receive notification, if the recipient has opened your mail.

Delivery page

Mail account in use:

The remote mail service which is used for sending this message.

● **Note:** Changing the mail account does not change the default options in other fields of this page.

Send mail: When the message will be sent. The options are *Immediately*/*Upon request*/*During next connection*.

Tip: Delete mail regularly from your communicator to free up memory space. For more information, see 'Avoid low memory' on page 207.

Tip: If you do not specify a password when initially connecting to the remote mailbox, a dialog opens. Type in the password and press **OK**.

Retrieve mail

Mail addressed to you is not automatically received by your communicator, but by your remote mailbox. To read your mail, you must first connect to the remote mailbox and then select the messages you wish to retrieve into your communicator. Connection to a remote mailbox is established via a data call.

WARNING! Messages that you mark as deleted when offline will also be deleted from the remote mailbox server, when online. To delete local mail messages without deleting remote mailbox files, see 'Avoid low memory' on page 207.

Connect to a remote mailbox

- 1 Select the remote mailbox in the left frame of the main view of Messaging.
- 2 Press **Retrieve mail**.
- 3 When the connection to the remote mailbox has been established, press the Menu key and select *Retrieve > New* or *Selected* or *All* mail.
- 4 When all the mail you have requested is retrieved, press **Go offline**.

Note: Pressing **Go offline** does not necessarily disconnect the phone, if there are other applications open that use the connection. Press the Menu key and select *File > Disconnect* to hang up.

Subscribe and unsubscribe to remote mailbox folders

- If your remote mailbox is of IMAP4 standard, you can edit and synchronize remote inbox folders in your communicator. To do this, you need to subscribe to the folders and make them visible in your communicator.

- 1 Go online.
- 2 Press the Menu key and select *Receive > Folder subscriptions...* A list of folders in the remote mailbox opens.
- 3 Select the folder.
- 4 Press **Subscribe**. If you have already subscribed to the folder, press **Unsubscribe** to cancel the subscription.
- 5 Press **Go offline** and **Go online** to include the new subscribed folders in the list.

 **Tip:** To create new folders in your remote mailbox, go online, press the Menu key and select *File > Folder*. You can now choose whether to *Create new folder...* or *Rename folder...*

Read mail

You can read, reply to and forward mail in the mail viewer.

To read received messages, select the message in the Inbox and press **Open**.

The mail viewer shows the message in a read-only state, which means that you cannot edit it or the attachments linked to it.

If there is a Web link in the message, you can open it by going to that link and pressing **Use**.

If there is a fax, mail or short message link in the message, you can write a fax, mail or short message by selecting the link and pressing the corresponding command button. This opens the appropriate editor where the recipient field is completed using the fax, mail address or GSM number in the link.

To delete the message, press **Delete**.

 **WARNING!** Messages marked as deleted when offline will also be deleted from the remote mailbox server, when online. To delete local mail messages without deleting remote mailbox files, see 'Avoid low memory' on page 207.

 **Tip:** You can create new contacts from the other recipients of a received mail; press the Menu key and select *Tools > Add to contacts*

■ **Tip:** To forward mail, press the Menu key and select *File > Forward*.

■ **Tip:** To search and replace text in a mail, press the Menu key and select *Edit > Find...*

Reply to mail

- 1 Select the mail message in Inbox and press **Open**. The mail viewer opens.
 - 2 Press **Reply**. The mail editor opens.
If you wish to reply to all the recipients, not just the sender of the mail message, press the Menu key and select *File > Reply to > All recipients*.
 - 3 Edit the message in the mail editor and press **Send**.
- **Note:** When replying to a mail message, HTML messages are included as attachments.

Style of replied to, and forwarded mail

You can edit the style of replied to, and forwarded mail.

- 1 Press the Menu key and select *Tools > Preferences...* A dialog opens.
- 2 Define the following:

Include message in reply: If you choose *Yes*, the original message is included in the reply to the message. The options are *Yes/No*.

HTML normal font: Defines the default font size and family used in HTML messages.
Note that HTML messages may contain tags that change what you set in this option.

HTML font size: Defines the size of the font used in HTML messages.

Plain text font: Defines the font used in plain text messages.

Plain text font size: Defines the size of the font used in plain text messages.

Mail attachments

You can send most documents and messages you write in the other applications of your communicator as mail attachments.

▲ **WARNING!** Mail attachments may contain viruses or they can otherwise be harmful to your communicator or PC. Do not open any attachment, if you are not sure of the trustworthiness of the sender. For more information, see 'Certificate manager' on page 262

Add mail attachments

- 1 Press the Menu key in the mail editor and select *Attachments > Insert file...*
- 2 Search and select the file you wish to attach to the mail.

View and save mail attachments

Attachments always appear at the bottom of an open mail message.

You can view the attachments using the appropriate viewers, if available.

- 1 Open the mail message containing attachments and press **Attachments**. A dialog opens.

Press **Open** to open the attachment for viewing.

Press **Save** to save the attachment.

Press **Delete locally** to delete the attachment from your communicator; the attachment is not deleted from your remote mailbox.

■ **Tip:** To edit mail attachments, press the Menu key and select *Attachments > Edit*. You cannot edit attachments in received mail messages.

■ **Tip:** To open an attachment for viewing, select it with the Arrows key and then press Enter.

Working online and offline

Working online means working with your communicator connected to a remote mailbox via Internet connection.

When you work offline which means that your communicator is not connected to a remote mailbox, you can delete only messages, not folders. When online, you can delete, rename or create new folders in your remote mailbox.

● **Note:** 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. For example, if you delete a mail message from your communicator when offline, the message will be deleted from the remote mailbox the next time you connect to the mailbox.

If you want to delete a message from your communicator to save memory, see 'Avoid low memory' on page 207.

Managing your mail offline enables you to save in connection costs and work in conditions that do not allow data connection, such as on aircraft. For information about using communicator on an aircraft, see 'Flight profile' on page 133. Remember also relevant warnings, see 'Important safety information' on page 309.

PC Mail

Whereas you can send and receive Internet mail over a data call, you cannot send PC mail from the communicator. PC mail is mail you can read, write and edit on your communicator, but which you can send and receive only through a PC, the next time you synchronize your communicator with the PC.

Mail synchronization with your PC

Synchronization is the process of making the contents of your mail messages and mail folders identical on both your communicator and your PC. This is done by copying and combining information between the two machines. For more information, see PC Suite Guide on the sales package CD-ROM.

Mail synchronization copies the messages between your communicator and your PC E-mail program to allow you use either machine for reading and replying to messages.

You can convert Internet mail to PC mail so that it is synchronized with a PC, or convert PC mail to Internet mail so that it can be sent directly from the communicator. All synchronization settings are defined on the PC. The only setting you can do on your communicator is to delete the account you are using.

 **Tip:** Before you can synchronize your mail, you must install PC mail software from the sales package CD-ROM. See 'Install software from the CD-ROM' on page 81.

Create new PC mail

 **Note:** You need to have set a mail account on your remote PC to be able to create new PC mail.

- 1 Press the Menu key in the main view of Messaging and select *Write > New message...* A selection list appears.
- 2 Select *PC mail* and press **OK**.
If you have more than one PC account, a dialog opens indicating which PC account will be used when sending the PC mail. Select the PC account and press **OK**.
- 3 Write the PC mail in the mail editor.

Tip: You can view and edit PC mail just like Internet mail on your communicator.

Tip: PC mail is distinguished from Internet mail by a different icon.

Tip: Your service provider may send you smart messages in the form of short messages; these messages may include, for example, configuration settings. For details, contact your service provider.

Convert to PC or Internet mail

Note: HTML messages cannot be converted since PC mail does not support the sending of HTML messages. You must change the message type to plain text or non-MIME type in the Sending options dialog, before you can convert the message to PC mail. See page 226 for more information.

PC and Internet mail appear together in the folders.

- 1 Select the mail message or messages you wish to convert.
- 2 Press the Menu key and select *Tools > Convert to internet mail* or *Convert to PC mail*, depending on the type of mail you wish to convert.
- 3 If there are multiple PC mail or SMTP services defined, a selection list of available services defined in the messaging server will be shown. Select the service and press **Convert**.

Note: You can convert several mails at the same time, but make sure that the mails are of the same type, either Internet or PC mail.

Short Message Service

The Short Message Service (SMS) enables you to send and receive short messages over the digital wireless system.

Short messages can be sent or received even during voice, data, and fax calls. Messages can be read in any mobile phone that has the capability. If the receiving phone is switched off at the time of sending, the short message center continues to attempt to send the message until the validity period allowed by the system expires.

- **Note:** If you want to send text you have written or edited in another application as a short message, all embedded objects or any rich formatting will be lost. You cannot send attachments as short messages, either.

Write and send a new short message

- **Note:** You cannot change the font, style or format of short messages.

- 1 Press **Write short message** in the main view of Messaging. The SMS editor opens, see figure 83.



Figure 83

- 2 Press **Recipient** to select the recipient, or type the number directly into the header of the message.
- 3 Press the Arrows key to move down to the message field and write the short message.
To view the length of the current message, press the Menu key and select **View > Message length**.

■ **Tip:** When sending a short message that contains special or accented characters to an older mobile phone, the older phone may not be able to view the message. In this case, send the message without special or accented characters.

■ **Tip:** You can zoom in the SMS editor. Press the Menu key and select **View > Zoom > Zoom in** or **Zoom out**.

■ **Tip:** To define a specific date and time when the short message will be sent, select *Scheduled* in the *Send short message* option.

■ **Tip:** Your Inbox shows the date of received short messages and the time of the short messages received on the current day. To view when it was sent, open the message in the SMS viewer.

■ **Tip:** To create a contact card of the sender of a short message, press the Menu key and select *Tools > Add to Contacts...*

■ **Tip:** When replying to a message, you can choose whether you want the text of the received message to be in the reply. Select *No* in *Include original in reply* in SMS settings to minimize the length of the reply.

- 4 If you wish to adjust the sending options of the short message, press **Sending options**. A dialog with two pages, *Sending options* and *Advanced* opens. For details, see SMS settings on page 229.
- 5 Press **Send**.

Receive and read short messages

Short messages are received automatically, provided that this service is available and that the phone is on and within system coverage.

When a new short message arrives, a tone will sound – unless the device is set to a silent profile – and an information note is shown on the display.

The SMS viewer shows the message in a read-only state, which means that you cannot edit it.

Received short messages can also contain some special text strings such as URLs. If a URL is highlighted when you move the cursor over it, you can open the corresponding link by pressing **Use**.

Reply to short messages

Open the message, press **Reply** and write another short message.

If the received message has a reply path, the note *Reply via same center* is shown in the header of the message.

Short messages on the SIM card

To move and copy messages from the SIM card to the Inbox, press the Menu key and select *Receive > Short message > SIM messages*. To move, copy or delete messages, press the corresponding command button.

SMS settings

Any changes you make to SMS settings affect the way in which your short messages are sent and received.

- 1 Press the Menu key in the main view of Messaging and select *Tools > Account settings...*
- 2 Select *Short message* and press **Edit**. A dialog with two pages opens. Define the following:

General page

Press **Service centers**, which opens a dialog where you can define new message centers, as well as edit and delete existing ones. All message centers are listed by name and number.

Service center in use: Defines the service center that is used for delivering the short messages.

Delivery report: If you choose *Yes*, you can view the status of the sent message (*Pending*, *failed*, *Delivered*) in the system log. If you choose *No*, only the status *sent* is shown in the system log.

Send short message: You can select when you want the message to be sent. The options are *Immediately*/*Upon request*/*Scheduled*. When *Scheduled* is selected, you must define a *Date*.

Validity period: If the recipient of a message cannot be reached within the specified validity period, the message is removed from the short message service center. If *Maximum* is chosen, the validity period is set to the maximum value allowed by the message center. Note that the system must support this feature. The options are *1 hour*/*6 hours*/*1 day*/*1 week*/*Maximum*.

 **Tip:** To open the system log, press the Menu key and select *Tools > Log*.

Advanced page

Reply via same center: This system service allows the recipient of your short message to reply using your message center. If you choose *Yes* and the recipient replies to your message, the return message is sent using the same service center number. This requires that the recipient has subscribed to the Short Message Service, is able to a reply to a message, and uses a device which supports this feature. Note also that the system must support this feature.

Include original in reply: Specifies whether text in the received short message is quoted when you make a reply. If you choose *Yes*, the contents of the message body are copied to a new short message.

Concatenation: If set to *No*, messages longer than 160 characters are sent as several short messages. If set to *Yes*, messages that are longer than 160 characters are sent as several messages, but if the recipient has a Nokia communicator, the messages are received as one long message.

11. Office

Office contains the Document, Sheet, and Presentation viewer applications, which are all compatible with Microsoft Windows. Office also contains a File manager application for file and folder management tasks like moving, copying, and renaming files and folders.

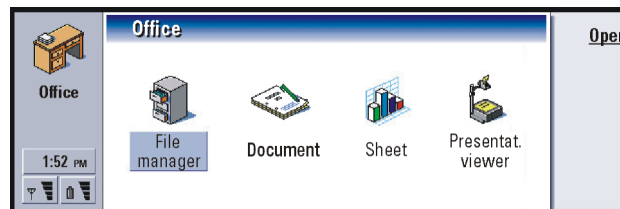


Figure 84

Document

You can use Document to write new and edit existing text documents. You can insert and view images and other files in the documents. You can also send and receive documents as fax, SMS, mail, PC mail, or via infrared.

Document can open documents created with recent versions of Microsoft Word for Windows. Note that not all features and formatting of the original documents will be supported. Documents made with other versions of Microsoft Word may only be viewed. You can also save documents made with the communicator in Microsoft Word format. For information on other file format conversions, see the PC Suite Guide on sales package CD-ROM.

Tip: You can use the clipboard command shortcuts Ctrl+x, Ctrl+c, and Ctrl+v to cut, copy, and paste text.

Create a new document

When you open the Document application, a new document is opened. You can start writing immediately.

You can modify the style of a document on a font and a 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 (see page 234).

Change fonts

- 1 Press **Font** in the document you are creating or editing. A dialog opens, see Figure 85.

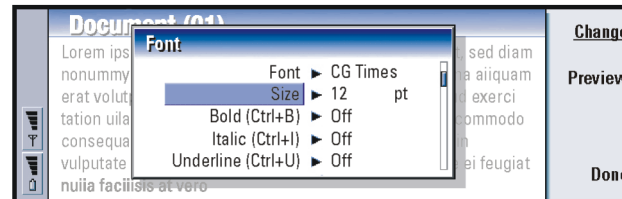


Figure 85

- 2 Press **Change** to change the value of a list item.
To see the effect of the changes you have made, press **Preview**.
- 3 Press **Done** to save the changes you have made.

Change text style

- 1 Select the text whose style you want to change.
- 2 Press **Style**. A list of choices in alphabetical order opens.

3 Select a style option from the list and press **Set**:

These are the default values of the style options in the list:

Style option	Font	Point size	Bold	Italics	Underlined	Justification
<i>Normal</i>	URW Sans	12 pt	Off	Off	Off	Left
<i>Header</i>	URW Sans	10 pt	Off	Off	Off	Left
<i>Footer</i>	URW Sans	10 pt	Off	Off	Off	Left
<i>Heading 1</i>	URW Sans	16 pt	On	Off	Off	Left
<i>Heading 2</i>	URW Sans	14 pt	On	Off	Off	Left
<i>Heading 3</i>	URW Sans	12 pt	On	Off	Off	Left
<i>Title</i>	URW Sans	18 pt	On	Off	Off	Centered

Create a new or modify an existing style option

- 1 Press **Style**.
- 2 To create a new style option, press **New**. Or, to modify a style option, select the style and press **Edit**. A dialog opens.
- 3 Give the style option a new name by typing over the old name. Note that you cannot edit the names of the default styles.
Press **Format** to view a list of style values you can change.
- 4 Press **Change** to change the values of the following: *Font*, *Alignment*, *Indents*, *Tabs*, *Line spacing*, *Borders*, *Bullets*, and *Outline level*.
- 5 Press **Done** to confirm the changes.

Example: You may have a company template which shows the company name and defines a particular layout.

Templates

You can use templates and save documents as templates when creating and editing documents.

To select a template, press the Menu key and select *File > Templates > Select template...* A list of available templates opens. Select a template and press **OK**.

To save a document as a template, press the Menu key and select *File > Templates > Save as template...*

To delete a template, go to File manager. See page 246.

Insert an object

Tip: To resize an image after insertion, press the Menu key and select *Edit > Object > Object details...*

- 1 Press **Insert object** in the document you are creating or editing. A dialog opens. See Figure 86.



Figure 86

- 2 Select from the list the type of object you want to insert.
- 3 Press **Insert new** to open the corresponding editor.
Press **Insert existing** to open a list of files. Only files which you can insert are listed.

- **Note:** Objects in a document are not links but embedded attachments, which may increase the file size of the document dramatically.

Hide or make visible text markers

To hide or make visible markers that are used in editing within the document, proceed as follows.

- 1 Press the Menu key and first select *Tools > Preferences...* A dialog with two pages opens.
- 2 Set the following options on or off:
Basic options page: *Show tabs*, *Show spaces*, and *Show paragraph marks*,
Advanced options page: *Show forced line breaks*, *Show non-breaking spaces*, and *Show hard hyphens*

View the outline of a document

- 1 Press the Menu key and select *View > Outline...* A tree structure of the document opens.
- 2 To show more details, press **Expand**.
To show less details, press **Collapse**.
To open a selected point in the document, press **Go to**.
- 3 Press **Close** to return to the document view.

■ **Tip:** To open a specific page in the document, press the Menu key and select *Tools > Go to...*

Paginate

After creating a new document, you can divide it into pages. Press the Menu key and select *Tools > More > Paginate*. This command will also update the page numbering.

Sheet

In Sheet you can work and store your data in a file that is called a workbook. Each workbook contains at least one worksheet. A workbook can also contain chartsheets; a chartsheet is a spreadsheet file containing a chart that is based on data from a worksheet.

Sheet can open files created with recent versions of Microsoft Excel for Windows. Note that not all features and formatting of the original files will be supported. Files made with other versions of Microsoft Excel may only be viewed. You can also save files made with the communicator in Microsoft Excel format. For information on other file format conversions, see the PC Suite guide on the CD-ROM.

Workbooks

■ **Tip:** To add a workbook to the Desk application, press the Menu key and select *File > Add to Desk*.

To create a new workbook, press the Menu key and select *File > New workbook*

To open an existing workbook, press the Menu key and select *File > Open*

To save a workbook, press the Menu key in the worksheet view and select *File > Save*

To send a workbook as mail or via infrared, press the Menu key in the worksheet view and select *File > Send*

Worksheets

To create a new worksheet in a workbook, press the Menu key and select *Insert > New worksheet*

Entering data

To enter data, select a cell with the Arrows key and start typing the data in the selected cell.

To confirm what you have entered into a cell, press Enter, **OK**, or go to another cell with the Arrows key. To dismiss the action, press Esc or **Cancel**.

You can also enter a formula to perform operations on worksheet data. Sheet application provides some predefined, or built-in, formulas, which are known as functions.

To insert a function, press **Insert function**. A dialog opens. See Figure 87. The function categories you can choose from are as follows: *All*, *Financial*, *Date and time*, *Mathematical*, *Statistical*, *Lookup*, *Text*, *Logical*, and *Information*. Each category has a set of functions, which you can see from the list next to *Function name*. Select the function you want and press **Close**.

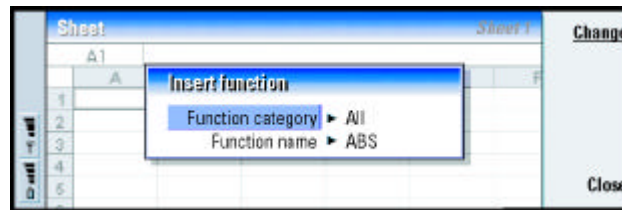


Figure 87

Example: You might want to sum up figures in cells C2 to C4 in cell C5; select cell C5, press **Point reference** and select the cell range from C2 to C4. Press Enter or **OK** to confirm the action. The SUM will now appear in C5.

In a formula, you can enter constant values or cell references. A cell reference tells Sheet where to look for the values or data you want to use in the formula. To enter a reference to a cell or cells in a formula:

- 1 Go to the cell you want to edit, and press **Edit**.
- 2 Move the cursor to the place where you want to insert a reference, and press **Point reference**.
- 3 Select the cells that contain the values you want to use. See 'To select cells' on page 135. The focus remains in the cell you are editing. Press Enter or **OK** to confirm the action.

Sheet		Sheet 1					
	C1	Feb					
1		January					
2			45				
3			23				
4			56				
5	Total						

Figure 88

Selecting cells

There are two ways to select a cell or a range of cells in a worksheet:

- Press the Menu key and select *Edit > Select*. Then enter the selection range or choose a range from the list.
- Press and hold the Shift key, and increase the selection frame with the Arrows key.

To select entire rows or columns, press and hold the Shift key, and select the desired row or column headings with the Arrows key.

To select the entire worksheet, use the shortcut Ctrl + A.

Example: To select column A, enter A:A. To select row 1, enter 1:1. To select columns B and C as well as rows 2 and 3, enter B2:C3

The selection is cleared when you press the Arrows key or Tab key.

Insert cells

- 1 Select a number of cell(s) that you want to insert into the worksheet.
- 2 Press the Menu key and select *Insert > Cells*. A dialog opens.
- 3 Define whether you want the inserted cell or cells to appear above (*Shift cells down*) or left (*Shift cells right*) of the selected range.
To insert an entire row(s) or column(s), select either *Entire row* or *Entire column*.
- 4 Press **OK** to accept the insertion and **Cancel** to dismiss it.

Sort cells

You can rearrange the order of cells from top to bottom and left to right.

- 1 Select the range.
- 2 Press the Menu key and select *Tools > Sort*.
- 3 Select either *Top to bottom* or *Left to right*. A dialog opens.
- 4 Define the sorting criteria.
- 5 Press **Close** to do the sorting.

Search for data

- 1 Press the Menu key and select *Edit > Find*. A dialog opens.
- 2 In the *Find:* field, enter the string you want to search for.
- 3 Press **Find** to search for the string.
Press **Options** to search the worksheet according to certain criteria.
Press **Replace** to replace the string with something else.

Clear cells

- 1 Choose the cell or cells you want to clear.

 **Tip:** Pressing **Options** opens up the following options: *Search in values*, *Search in formula*, *Match case*, *Find entire cells only*, *Direction*, and *Search by*.

- 2 Press **Clear**. A lists of choices appears.
- 3 To clear both the contents and formats of the cell or cells, select *All*.
To clear only the contents of the cell or cells, select *Contents*.
To clear only the formats of the cell or cells, select *Formats*.

Adjust column width or row height

- 1 Select the column(s), or row(s).
- 2 Press the Menu key and select *Format > Column width... or Row height...*
- 3 To increase column width, press > on the Arrows key as many times as necessary. To diminish column width, press <.
To increase row height, press v on the Arrows key as many times as is necessary.
To diminish row height, press ^.
To adjust the width or height by exact figures, press **Define width**.

	A	B	C	D	E	F
1	January	February	March	31	45	69
2	January	February	March	31	45	69
3	January	February	March	31	45	69
4	January	February	March	31	45	69
5	Total	124	111	141		

Figure 89

Align cell contents

- 1 Select the cell or cells.
- 2 Press the Menu key and select *Format > Alignment*. A dialog opens.
- 3 Define the following options: *Horizontal*, *Vertical*, and *Wrap text to cell*.

Change the appearance of cell borders

- 1 Select the cell or cells.
- 2 Press the Menu key and select *Format > Cell appearance > Borders*. A dialog opens.
- 3 Define the following options: *Outline*, *Top*, *Bottom*, *Left*, *Right*, and *Line color*.

Change number format

- 1 Select the cell or cells.
- 2 Press the Menu key and select *Format > Numbers*. A dialog opens.
- 3 Choose the required format from the list. Depending on the format you choose, you may define the place of the decimal.

Change fonts

- 1 Select the cell or cells.
- 2 Press the Menu key and select *Format > Font*. A dialog opens.
- 3 Press **Change** to change the value of a list item.
- 4 To see the effect of the changes you have made, press **Preview**.
- 5 Press **Done** to save the changes you have made.

Change background color

- 1 Select the cell or cells.
- 2 Press the Menu key and select *Format > Cell appearance > Background color*. A dialog opens.
- 3 Choose the color.

Insert page breaks

- 1 Press the Menu key and select *Insert > Page break*. A dialog opens.

Tip: To change viewer preferences, press the Menu key and select *Tools > Settings*. Set the following options on or off: *Show gridlines*, *Show row headers*, *Show column headers*, *Automatic recalculation*, *Show zero values*, and *Show pagination lines*.

Tip: To view sheets in the Chartsheet view, press **Sheets/ Charts**.

2 Define the following options: *Break at column* and *Break at row*.

● **Note:** Since the break is placed above and on the left side of the selected cell, you cannot insert a page break when the cell A1 is selected.

Name cells

- 1 Select the cell or cells.
- 2 Press the Menu key and select *Insert > Name > Add*. If the cell or cells already have a name, you can edit the name by selecting *Edit*. A dialog opens.
- 3 Enter the name.

Name worksheets

- 1 Press the Menu key and select *Edit > Rename worksheet*. A dialog opens.
- 2 Choose the worksheet from the list and name it.

Delete cells, columns, rows, page breaks, and worksheets

- 1 Select a cell within the area you want to delete.
- 2 Press the Menu key and select *Edit > Delete*. A dialog opens.
- 3 Choose from the list what you want to delete.

Go to any sheet or chart within the same workbook

- 1 Press the Menu key and select *View > Worksheets* or *Sheets/Charts*. A list opens.
- 2 Choose a sheet or chart and press **OK** to open the sheet and **Cancel** to dismiss it.

● **Note:** You cannot change the order of the sheets.

Chartsheets

Create chartsheets

There can be seven different kinds of charts: *Line*, *Column*, *Stacked column*, *Bar*, *Stacked bar*, *X/Y scatter*, and *Pie*.

- 1 Select a range of cells on a worksheet. These will provide the data for your new chartsheet.
- 2 Press the Menu key and select *Insert > New chart*. A dialog opens.
- 3 Define the following: *Chart name*, *Chart type*, *3-D*, *Background color*, and *Axis color*.
- 4 Press **Close** to create a new chartsheet and Esc to dismiss it.

Edit chartsheets

- 1 Press **Select object**. A dialog opens.
- 2 Choose an object from the following list for editing and press **OK**: *Chart*, *Chart title*, *X-axis*, *Y-axis*, *X-axis title*, *Y-axis title*, *Legend*, *Major X-axis gridlines*, *Minor X-axis gridlines*, *Major Y-axis gridlines*, *Minor Y-axis gridlines*, and *Series*. The setting dialog for the selected object opens. See Figure 90 for an example of X-axis settings being edited.
- 3 To edit the object, press **Change** or press Enter. A dialog opens.
To delete the object, press **Delete**.
- 4 Define the new values.

 **Tip:** You can also press the Tab key and Enter to select objects. Press Esc to cancel the selection.



Figure 90

5 Press **Close** to confirm the changes or Esc to dismiss them.

● **Note:** You can select only one object at a time.

Replace chartsheet data

■ **Tip:** To define the general appearance of a chart, press **Chart settings**. Define the page style and name in the two pages of the dialog which opens.

You can replace the data on which your chartsheet is based.

- 1 Press **Sheets/ Charts** and select the worksheet your chart is based on.
- 2 Select a new data area for the chart from the worksheet, press the Menu key, and select **View > Sheets/Charts** to return to the chartsheet.
- 3 Press the Menu key, select **Tools > Replace data**, and press **OK** to confirm the changes or **Cancel** to dismiss them.

Presentation viewer

You can use Presentation viewer to view presentations. You can also send and receive these presentations as mail or via infrared.

You can view documents created with recent versions of Microsoft PowerPoint for Windows. Note that not all features and formatting of the original documents will be supported.

View a presentation

Press **Open** in the Presentation main view to select and view a document. To close the application, press **Close**.

When a document is opened, the top of the first slide is shown. To view the next slide, press **Next** or Enter. To view the previous slide, press **Previous**. To scroll the current slide, use the Arrows key.

Tip: You can zoom in and out to get a better view of the presentation.

Outline view

To get an overview of the whole presentation, press **Outline view**. This opens up a view where the text content of the presentation is in a list format. See Figure 91.



Figure 91

To view only title texts, press **Titles only**. To return to the standard slide show, press **Slide view**.

Search for and view a slide

- 1 Press the Menu key and select *Tools > Go to slide....* A list of the slides in the presentation opens.
- 2 Go to the slide you want by using the Arrows key.
- 3 Press **Go** to open the slide.

Tip: Use File manager together with a memory card to remove files and folders from the communicator memory and thus free memory. See 'Back up and restore data to and from the memory card' on page 251.

View the presenter's notes

To view the presenter's notes along with the slides, press the Menu key and select *View > Notes view*.

File manager

You can use File manager to manage the contents and properties of various folders.

The main view has two frames: a folder tree on the left and a file list on the right.



Figure 92

You can toggle between the frames with the Tab key.

Folder view

The folder tree can contain folders from two roots, the communicator and a memory card.

Tip: Avoid saving files to the root of the communicator; use folders instead.

Under the communicator root there is *C:\Documents* folder that contains four default folders: *\Documents\Downloaded*, *\Documents\Photo gallery*, *\Documents\Templates* and *\Documents\Tones*.

To show or hide subfolders in the folder list frame, press < and > on the Arrows key. The - and + signs in front of the folder icons indicate whether the subfolders are shown or hidden. Folders without either sign have no subfolders, and you can use the Arrows key to switch between the folder view and files view.

● **Note:** Multi-selection is not possible in the folder list frame.

Files view

The file list on the right shows all the files in the source or folder currently selected in the left frame. The title of the file list frame shows the path of the currently selected file. The file list frame also shows the application-related icon, name, and the last modification date of the file.

The files are sorted in alphabetical order by default.

● **Note:** Hidden files are shown only if you press the Menu key and select *View > Show all files*

■ **Tip:** To change the sorting order or the value by which the files are sorted (name, date and time, type, and size), press the Menu key and select *View > Sort by* or *Sorting order*.

View the contents of a folder

- 1 Choose a folder in the left folder tree frame and press **Open**.
A view of all the subfolders and files of the parent folder opens. See Figure 93.



Figure 93

- 2 To view any possible subfolder, select it and press **Open**.
- 3 To view parent folders, press Esc.
- 4 Press **Close folder** to return to the main view.

The title of the folder content view shows the path name and the number of files and subfolders in the folder, together with the total size of all the files in the folder.

This view shows the name, last modification date and time, and the size of a particular file. The icon in front of the name indicates the type of file or subfolder.

Open a file

- 1 Select a file and press **Open**. The file will then be opened in the corresponding application.
- 2 To return to the main view, press **Close folder**.

● **Note:** You can open only one file at a time.

Moving files and folders

- 1 Select folders or files that you want to move and press **Move** in the main view of File manager. A list of folders opens, as shown in Figure 94.

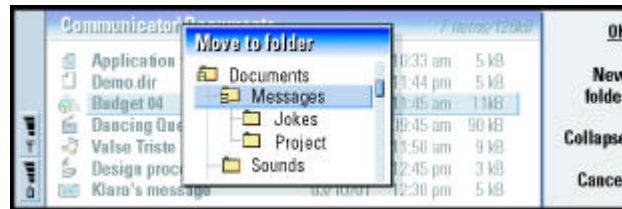


Figure 94

- 2 Search for a target folder with the Arrows key.
To hide or show the subfolders of a folder, press **Collapse** and **Expand** respectively. You can also navigate in the folder list with the Arrows key and +/– keys.
To create a new target folder, press **New folder**.
- 3 Press **OK** to confirm the move and **Cancel** to dismiss it.

Tip: For multi-selection, see 'Select several items at once' on page 72.

Create new folders

- 1 In the main view of File manager select the folder in which you want create a new folder
- 2 Select *File > New folder*.
- 3 Name the new folder.
- 4 To confirm the changes, press **OK**. To dismiss the changes, press **Cancel**.

Tip: In the Properties dialog, you can also change a file into hidden or read-only state or a folder into read-only state.

Rename files and folders

- 1 Select the file or folder in the main view of File manager.
- 2 Press the Menu key and select *File > Rename*. The cursor now appears at the beginning of the selected file or folder name.
- 3 Rename the file or folder.
- 4 To confirm the changes, press **OK**. To dismiss the changes, press **Cancel**.

View the properties of files, folders, and drives

- 1 Select the file, folder, or drive in the main view of File manager.
- 2 Press the Menu key and select *File > Properties...* A dialog opens, as shown in Figure 95.

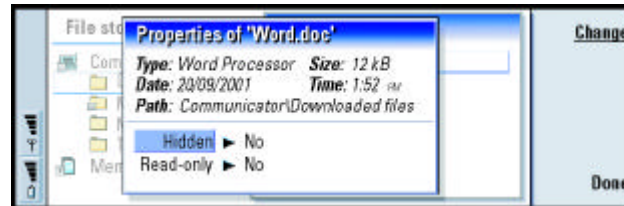


Figure 95

Search for files and folders

- 1 Choose the folder or memory storage where you want the search to take place.
- 2 Press the Menu key and select *Tools > Find...* A dialog opens.
- 3 Enter in the field the string for which you want to search.
- 4 Press **Options** to define the search in more detail. See Figure 96.

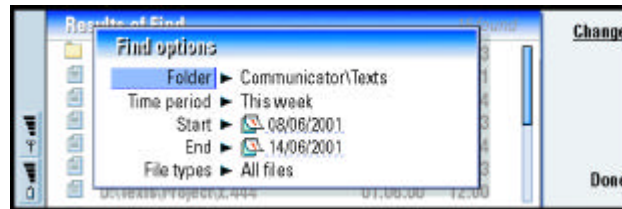


Figure 96

Press **Change** to change the value of a list item.

When ready, press **Close**.

5 Press **Find** to start the search.

To interrupt the search, press **Stop**.

6 When the search is over, press **Open** to open the folder or file found.

To start a new search, press **New find**.

7 To return to the main view, press **Close**.

Tip: You can search according to time period, start and end time, and the file type.

Back up and restore data to and from the memory card

It is advisable to make backups of your communicator data regularly.

Note: The Backup and Restore commands will copy all data. You cannot back up or restore an individual folder. The Backup and Restore commands are recursive; that is, they copy folders and all the contents within the folders. For information about selective backups, selective restoring, and using PC to back up and restore, see the PC Suite guide on the sales package CD-ROM.

To be able to back up to and restore from a memory card, the card should be inserted in the communicator. For details, see 'Inserting the memory card' on page 71.

- 1 Press the Menu key and select *Memory card > Backup to memory card...* or *Restore from memory card...*, depending on what you want to do. A dialog opens.
- 2 If you are making a backup, look for a backup folder on the memory card by pressing **Change** or type in the name of a new folder in the *Backup folder* field. If you are restoring data to your communicator, select the folder in the communicator into which you want to restore your data. Normally you should select the root folder.
- 3 Press **Backup** to back up all the communicator data to the memory card. Press **Restore** to restore all the backed-up memory card data to the communicator.

12. Extras

Extras contains the following applications: Calculator, Clock, Control panel, Recorder, Imaging, Cell broadcast, Video player, and Fax modem.

Most of the new applications that you install will be added to the Extras application group. For more information on applications available on the sales package CD-ROM, see Software on CD-ROM Guide in the Using Nokia 9290 Communicator section of the CD-ROM.

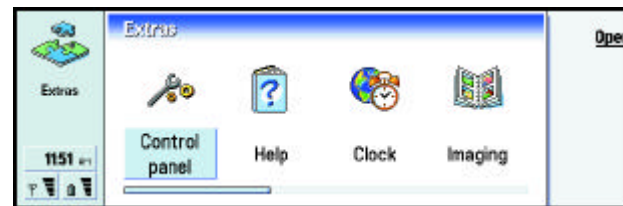


Figure 97

Clock

The Clock shows the time and date in your home city and country or region, as well as in several other cities and countries in the world. The Clock also includes an alarm clock.

To set the current date and time for your communicator, press the Menu key and select *Tools > Date and time...*

Tip: To install applications, see section 'Install/Remove software' on page 264.

Tip: To choose the clock type, press the Menu key and select *View > Clock type > Digital or Analog*.

Tip: To turn off a sounding alarm, press **Stop** or any key on the keypad of the phone cover. Press **Snooze** to silence the alarm for five minutes.

Tip: The world map shows the currently selected city in cross hairs.

Set an alarm

- 1 Press **Alarm clock** in the main view. An alarm clock view opens.
- 2 The currently active alarms are listed next to the clock.
- 3 To create a new alarm, press **New alarm** or to edit an alarm, press **Edit alarm**.
- 4 Define the *Time* of the alarm and the frequency in *Occurrence* and *Day* fields. Define also the *Description* displayed when the alarm goes off.
- 5 Press **Done** to accept the set alarm.

Change your home city

If your home city and time settings on your communicator are not set correctly, you must first set your home city and then set the time, since your home location defines the time zone used.

- 1 Go to the **World clock** main view.
- 2 Press **Change city**. A cities view opens. See figure 98.



Figure 98

- 3 Type the city in the search field or scroll the list and press **Select** when ready.
- 4 Press **OK** to accept the change of time zone or **Cancel** to dismiss it.

● **Note:** For more detailed information about Clock, see the Nokia 9290 Communicator help.

Calculator

There are two modes in Calculator: desk calculator for simple arithmetic operations and scientific calculator for more complicated mathematical calculations.

There are two ways to perform calculations, either by typing the characters in the input field or selecting symbols from the function map. A calculation is executed by pressing Enter or =.

The calculation and its result can be seen on the output sheet on the left. You cannot write in the output sheet, but selection is possible.

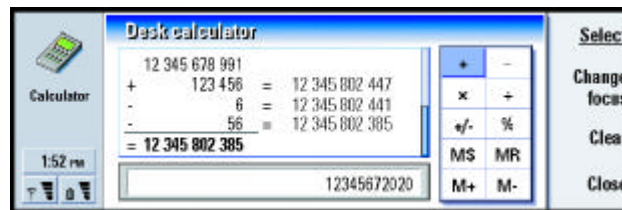


Figure 99

To move between the input field, output sheet, and function map, press the Tab key.

The input field is never empty in the desktop calculator: it contains either the result of the previous calculation or a zero (0) if you have pressed backspace.

● **Note:** For more detailed information about Calculator, see the Nokia 9290 Communicator help.

Control panel

In the Control panel you can view or modify the following: *Security, Data call restrictions, Data call restrictions, Profiles, Data call restrictions, Certificate manager, Date and time, Install/Remove software, Internet access, About product, Memory, Regional settings, and Default folder*

Modifying these features affects the operation of your communicator across all the applications.



Figure 100

To open a program for editing, select it with the Arrows key and press **Select**.

Security

Here you can define the phone security level of your communicator.

- **IMPORTANT:** The default lock code is **12345**. For security reasons, it is imperative that you change the lock code. Keep the code secret and in a safe place, separate from the communicator.

The codes are shown as asterisks. If you are changing a code, you will be prompted for the current code and then the new code twice.

PIN code request:

If you set the PIN code request *On*, the communicator requests that you enter the code every time you turn on the phone. If you enter the PIN code incorrectly three times in succession, you will need a PUK code to unblock the SIM card. When the SIM card is blocked, you cannot send or receive any documents or calls except calls to preprogrammed emergency numbers. Otherwise, the communicator can be used normally. You need the PIN code to change this setting.

- **Note:** This setting cannot be changed, if the phone is switched off or if there is no valid SIM card inserted.
- **Note:** Some SIM cards do not allow you to turn the PIN code request off.

Autolock period:

Determines the security time-out period, after which the communicator will lock. The options are *None/2 minutes/5 minutes/10 minutes*. The last option allows you to define the number of minutes yourself. When the communicator is locked, you can make emergency calls to predefined numbers using the cover phone. You can also answer incoming calls and make emergency calls using the Telephone application. All other actions are blocked. The timer is reset by any input, data transfer, printing, and so on. You need the lock code to change this setting.

 **Tip:** Changing the PIN code requires that *PIN code request* is selected, the phone is on, and that there is a valid SIM card inserted.

Lock if SIM card is changed:

If set *On*, every time the phone is switched on this security option checks whether the SIM card in the communicator has been changed. If the SIM card has been changed and the new SIM card has not been used with your communicator previously, the communicator locks itself until the lock code is correctly entered. The communicator recognizes five different SIM cards as the owner's cards. You need the lock code to change this setting.

PIN code:

This setting allows you to change the PIN code. The new PIN code must be from 4 to 8 digits long.

PIN2 code:

This setting allows you to change the PIN2 code. The PIN2 code is required to access some functions, such as the call cost settings, which must be supported by your SIM card. If you enter an incorrect PIN2 code three times in succession, you will need a PUK2 code to unblock the PIN2 code. The new PIN2 code must be from 4 to 8 digits long.

Lock code:

This setting allows you to change the lock code. The default lock code is **12345**. The new lock code must be from 5 to 10 digits long. If you enter an incorrect lock code five times in succession, the phone will be locked for five minutes after which you can try again. If you try again within less than five minutes, you have to wait five minutes more before a code can be accepted.

Restriction password

This setting allows you to change the restriction password. If you enter an incorrect password three times in succession, the password is blocked and you must ask the system service provider for a new password.

- **Note:** Avoid using codes that are similar to emergency numbers to prevent accidental dialing of the emergency number.
- **Note:** Even when the communicator is locked, it is possible to call to the emergency number preprogramed into the phone (for example, 911 or other official emergency number).

■ **Tip:** Changing the restriction password requires that the phone is on and the Call restriction service is activated for your SIM card.

Data call restrictions

Here you can prevent or allow the following data call types:

- **Note:** You need a restriction password to modify these settings.

Outgoing calls: When activated, prohibits making data calls.

Incoming calls: When activated, prohibits receiving data calls.

International calls: When activated, prohibits making international calls.

Incoming calls when roaming: When activated, prohibits receiving calls when roaming.

International except to home country: When activated, prohibits making international calls to all countries except to the country that has been defined as the home country.

- **Note:** Calls described here as international may in some cases be made between regions of the same nation.

■ **Tip:** Use data call restrictions to limit the use of the phone, if you borrow it to someone temporarily.

■ **Tip:** To check the current status of a restriction option, select the option and press **Check status**.

Accessories

Here you can define some of the settings when you use the Nokia 9290 Communicator with Advanced HF Car Kit CARK109 or Headset HDC-8L.

For other information on accessories for Nokia 9290 Communicator, see the accessories section of this guide.

Define the accessories options as follows:

- 1 Double-click the Accessories icon in the Control Panel. A dialog opens
- 2 Select the accessory options that you want to modify. The options are *Headset/Car kit*. Press **Edit**.
- 3 Define the following:

Headset settings

Automatic answer: Allows you to define whether the automatic answering is on or off when your communicator is attached to the car kit.

Default profile: Allows you to choose the profile that will be automatically selected, when you attach your communicator to the car kit.

Car kit settings

Cover display lights: Allows you to define whether the cover display lights are always on or not when the headset is attached to your communicator.

Automatic answer: Allows you to define whether the automatic answering is on or off when the headset is attached to your communicator.

Default profile: Allows you to choose the profile that will be automatically selected, when the headset is attached to your communicator.

Profiles

Here you can edit profiles. Profiles define the tones and sound level of your communicator in different operating environments.

For details on profiles, see 'Profile settings' on page 120.

Display

Here you define the appearance of the display.

Contrast page

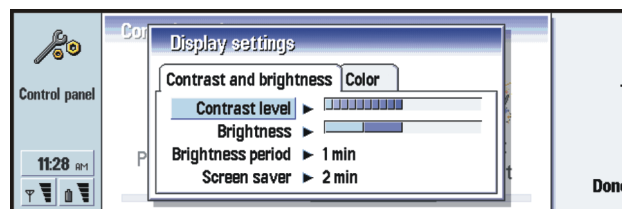


Figure 101

Press + and - to adjust the bar you are editing.

Contrast level: Pressing + increases and - decreases the contrast of the display.

Brightness: The brightness level of the display. There are five levels to choose from.

Screen saver: A time period after which, if there has not been any key presses within that time, the brightness will go down to its lowest level. The level will rise to the level defined in *Brightness* as soon as any key is pressed again. The options are 15 sec/30 sec/45 sec/1 min/2 min.

 **Tip:** Selecting a low brightness level and a short time period for the last two options saves the battery and increases the operation time of the communicator.

Brightness period: A time period after which the display will blank out if the device remains inactive. The options are *2 min/4 min/6 min/8 min/10 min*.

Colors page

Color palette: The display color scheme. The options are *Blue/Red/Green/Grey*.

Background pattern: The background image of the command button area. The options are *Plain/Wheels/Sand/Water/Leaves*

Certificate manager

With Certificate manager you can manage digital certificates which you use when connecting to WWW sites, WAP services, mail servers, and when installing software. You need these certificates when you:

- want to connect to an online bank or some other site or remote server for actions that involve transferring confidential information,
- want to minimize the risk of viruses or other malicious software and be sure of the authenticity of software when downloading and installing it.

Note however, 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; Certificate manager must contain correct, authentic, and trusted certificates for increased security to be available.

To open the main view of Certificate manager, press the **Extras** application button, select *Control panel*, and select *Certificate manager*.

The main view lists the currently available certificates and their validity information.

- **Note:** Certificates have a restricted lifetime. If a certificate is marked *Expired* even if it should be *Valid*, check that the date and time in your communicator are correct.

Define the usage of the certificate

- 1 Select the certificate and press **View details**. A dialog with certificate details opens.
 - 2 Press **Trust settings**. A dialog opens.
 - 3 If you want this certificate to be able to certify WWW sites and mail servers, select *Web browser and Mail*, press **Change**, and select *Yes*.
 - 4 If you want this certificate to be able to certify the origin of a new software, select *Software installation*, press **Change**, and select *Yes*.
- **Note:** Before changing these settings, you must make sure that you really trust the owner of the certificate and that the certificate really belongs to the listed owner.

Check that a certificate is authentic

Certificates are used to verify the origin of WWW pages and installed software. However, they can only be trusted if the origin of the certificate is known to be authentic. If you are adding a new certificate, or want to check the authenticity of an existing certificate, proceed as follows:

- 1 Select the certificate and press **View details**. A view of certificate details opens.
- 2 The *Subject* field identifies the owner of this certificate. Make sure that this is the name of the party to whom you think that this certificate belongs.
- 3 Scroll the dialog until you see the *Fingerprint* field.

- 4 The *Fingerprint*: field uniquely identifies the certificate. Contact the help desk or customer service of the owner of the certificate (see step 2 above) and ask for the MD5 fingerprint of the certificate. Compare the fingerprint with the one shown in the dialog. If they match, the certificate is authentic.

● **Note:** Use this authentication procedure each time you add a new certificate.

Add or delete certificates

To add a new certificate, press **Add**. A dialog opens in which you can search and select the new certificate.

To delete a certificate, select it and press **Delete**.

Date and time

Here you define the current time and date for your communicator.

Time: The current time.

Date: The current date.

Daylight-saving: Determines how the time of your communicator is affected by changes in daylight saving time. The options are *On/Off/Define summer*. If *Define summer* is selected, you have to enter the dates *Summer starts* and *Summer ends*.

Install/Remove software

With Install/Remove you can install new software or remove installed applications from your communicator.

When you open the Install/Remove application, the *Installed software* page lists all of the software packages that have been installed, with their name, version number, type, and size.

Press **Certificate Info** to display the certificate details of an installed software package that has a digital signature and a certificate.

Install software

The types of applications which you can install are those that are specifically intended for the Nokia 9290 Communicator or suitable for the Symbian operating system on Crystal style devices, and Java applications.

● **Note:** If you install software that is not intended specifically for the Nokia 9290 Communicator, its usage can differ significantly from the usual Nokia 9290 Communicator applications.

You can download or transfer a software package containing the files of the application into the communicator. Then you can install the application. Software can also be installed from a memory card. A software package is usually one large compressed file containing many component files.

● **IMPORTANT:** When downloading or transferring software packages into the communicator, use only packages whose file names end '.sis'. An example suitable file name is 'MediaPlayer.sis'.

To start the installation, press *Install new* on the *Installed software* page. Browse for the software package you want to install, and press **OK**. The installation process begins.

■ **Tip:** You can also start the installation by browsing for the installation package in communicator memory or memory card with File manager, selecting it, and pressing the Enter key.

Tip: If you have installed PC Suite for Nokia 9290 Communicator on your PC and the communicator is connected to your PC, you can also install software by double-clicking a file ending with .sis stored on your PC.

WARNING! Only install software from sources that offer adequate protection against viruses and other harmful software. To help you, the software installation system on the Nokia 9290 Communicator uses digital signatures and certificates on software packages. See page 264.

If you are installing software without a digital signature or a certificate, the communicator warns you of the risks of installing software, as shown in figure 102.

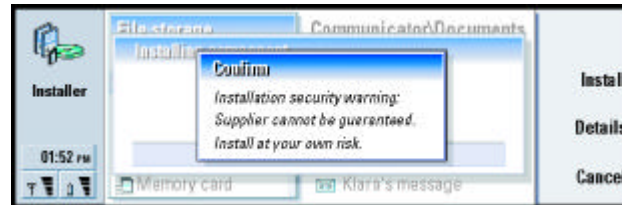


Figure 102

If you see this warning message, only continue installation if you are absolutely sure of the origin and contents of the software package.

The installation procedure also checks the integrity of the package to be installed. Once these checks are complete, the application is installed on your communicator. During the installation process, you are shown information about the checks being carried out on the package. You are also given options whether to continue with or cancel the installation.

Remove software

- 1 To remove an installed software package from your communicator, select the software package you want to remove from the *Installed software* page and press **Remove**.
- 2 A dialog appears asking for your confirmation. Press **OK** to remove the software.

● **Note:** Some software packages update existing software and cannot be removed.

● **IMPORTANT:** If you remove software, you can only re-install it by having the original software package file, or by restoring a full back-up that contains the removed software package. If you remove a software package, you may no longer be able to open documents 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.

Installation log

To view the list of software installations and removals that have taken place, press the Menu key and go to the *Install log* page. This list shows what software has been installed and removed, and when that happened. 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 on this list may also help to pinpoint problems that are caused by software packages that are incompatible with each other.

Installation settings

On the Preferences page, you can select options related to software installation. You can define the following:

Delete installation file after use – If set to *Yes*, the software package installation file (that ends in .sis) will be deleted from the device after installation. If you download software packages using the WWW browser, this may be helpful in reducing the amount of required storage space.

● **Note:** If you want to store the software package file for possible re-installation later on, either set this to *No* or make sure that you have a copy of the software package file stored on your PC or on a CD-ROM.

Default installation language – You can set the default installation language to the language that your Nokia 9290 Communicator has. If the software package contains several different language versions of the software, the language version specified here will be installed.

Sort installed software by – To sort the list of installed software packages, select one of the options *Name*, *Type*, or *Size*.

Internet access

Here you are able to edit, create new, and delete existing Internet access points.

For details on how this is done, see the Internet section of the Settings checklist delivered in your sales package. For details on IAPs, see 'Setting up your Internet access point' on page 173.

About this product

Here you can scroll to see copyright information on the Nokia 9290 Communicator.

Memory

Here you can view the amount of free memory for storing data and installing new software. You can scroll and view the memory consumption of the following details: *Documents, Spreadsheets, Sounds, Faxes, Mails, Short messages, Calendar data, Contacts, Images, Installed applications*, and *Other file types*.

If your memory card is inserted in the communicator, press **Memory card** to view the amount of available memory on the card. Press **Device** to return to view the communicator memory.

If the memory is getting low, you should remove some documents. Before removing, you can print, fax, or mail them, or transfer them to a PC or a memory card.

Regional settings

On these four pages you can define the local time, date, numbering, and currency expressions.

● **Note:** For more detailed information about Regional settings, see the Nokia 9290 Communicator help.

Tip: When you have recorded sounds and speech, you can set them as ringing tones. See page 140.

Default folder

With the *Default folder*, you can define the folder which acts as a default saving folder whenever you wish to save a document in your communicator memory. For details on how to manage your files and folders, see 'File manager' on page 246.

Recorder

The Recorder allows you to record telephone conversations and voice memos. You can also listen to your recordings and other sound files.

The maximum length of a recording depends on the available memory.

You can open files that have been stored in the following file formats: .WAV, .AU, and compressed GSM encoded file format. Compression is done implicitly during the recording process.

Recorder contains all the controls like **Play**, **Stop**, **Pause**, and **Record** that are typically found in recording equipment. Press **Resume** to continue after recording or playback has been paused.

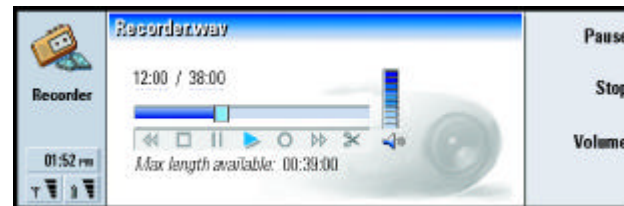


Figure 103

You can change the volume level of the Recorder application by pressing the $\wedge$ and $\vee$ keys on the Arrows key. You can also edit sound files by using the commands in the Edit menu.

 **WARNING!** Obey all local laws governing recording of calls. In some states it is unlawful to record a phone conversation without first advising all call participants.

 **Note:** For more detailed information about Voice recorder, see the Nokia 9290 Communicator help.

Imaging

The Imaging application acts as a file manager for images. Application folders created for storing images are called albums. Images appear as thumbnail images in albums. A thumbnail image is a small image representing the original full size image.

Imaging supports a wide range of image formats, among them JPEG, TIFF, GIF, BMP, MBM, and WBMP.

You can open all commonly used image files directly for viewing. Press **Zoom in** to enlarge the image, **Zoom out** to reduce the image on the display, and **Rotate** to rotate the image.

To view image properties, press the Menu key and select *File > Properties...*

You can use the Imaging application for viewing images and handling image albums.

You can delete, rename, copy, and move images from one album to another and create your own favorite albums.

 **Tip:** Press the Menu key and select *View > Zoom > Zoom ratio...* to zoom by exact figures.

Tip: If you have images or albums in the `\Documents\Photo gallery\` directory on an inserted memory card, they also will appear in this view.

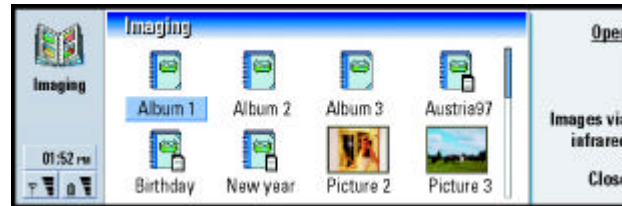


Figure 104

Note: Albums can contain only images, not subalbums.

You can also receive images via IR. For details, see 'Receive images via infrared' on page 274.

Create a new album

- 1 Press the Menu key and select *File > New album...* A dialog opens.
- 2 Define the following:
Name: Name of the album.
- 3 To save the album in the communicator, press **Create locally**.
To save the album in the memory card, press **Create in mem. card**.

View album contents

Tip: To open an image located outside the image albums, select *File > Open from....*

- 1 Select the album in the Imaging main view and press **Open**. A thumbnail view of the album contents opens.
- 2 You can scroll the contents of the album with the Arrows key.
To open an image for viewing, press **Open**.
- 3 To view the next frame in the image, if available, press the Menu key and select *View > Next frame*. To return to the previous image, select *Previous frame*.

- 4 Press **Close** to return to the thumbnail view.

Move images to and from albums

- 1 Select the image or images in the thumbnail view with the Arrows key.
- 2 Press the Menu key and first select *Edit > Copy* or *Cut*.
- 3 Press Close album.
- 4 Open the target album.
- 5 Press the Menu key and select *Edit > Paste*.
- 6 If the target album already has an image or images with the same name, a confirmation note appears asking you if you wish to replace the existing image. Choose from the following options:
 - Replace** - The existing image is replaced with the image you are pasting.
 - Replace all** - All existing images are replaced with the same name.
 - Skip** - Skips the image and continues the operation.
 - Cancel** - Cancels the whole paste operation.

Tip: You can select several images with the Space key. You can also use the *Edit* menu commands and the corresponding shortcuts (Ctrl+c, Ctrl+x, Ctrl+v) to move or copy images.

Create new images from originals

You can choose parts of an opened image, save them as separate images, and reuse them.

- 1 Open an image. Press the Menu key and select *Edit > Select image range*. The selection frame is now visible on the image.
- 2 To move the selection frame, use the Arrows key.
To change the size of the selection frame, press down the Ctrl key and use the Arrows key.

Tip: To rename albums or images, select *File > Rename....*, define a name, and press OK. The file extension cannot be changed.

Tip: Large images transferred from a digital camera may take too much internal memory to be viewed. To scale the size of the transferred images down to 640x480 pixels, press the Menu key and select *Tools> Use VGA*, if the option is not already selected. Note that all cameras may not support this function.

- 3 To save the frame as an image, press the Menu key and select *File > Save as...* Select *Selected range*.
- 4 Select the folder you wish to save in, give a name for the new image file, and press **OK**.

Resize images

- 1 Press the Menu key and select *Tools > Resize...* A dialog opens.
- 2 Scroll with the Arrows key to select the new size and press **Select** or press **Best fit** to fit the image horizontally to the screen.

Receive images via infrared

- 1 Open the album where you want to save the received file.
- 2 Press **Images via infrared**. A dialog opens.
- 3 Select one of the following:
 - Receive in album:* To receive the image and save it.
 - Receive and mail:* To receive the image and send it as an e-mail message.
 - Receive and fax:* To receive the image and send it as a fax.
- 4 Press **OK**.

Video player

Video player shows video clips of files in 'Nokia Interleaved Multimedia' (NIM) format. You can open these files from the File manager or other applications in the communicator, or download and play them from your Web browser.

You can find NIM format files on the CD-ROM in the sales package. Alternatively, to convert a common video file format such as AVI to NIM format, use the Multimedia converter application. You can find this application on the CD-ROM. For more information on installing files from the CD-ROM, see page 81.

● **IMPORTANT:** Video player is pre-installed on the memory card contained in the sales package. It will not work if you remove the memory card.

The main view of Video player is shown in figure 105.

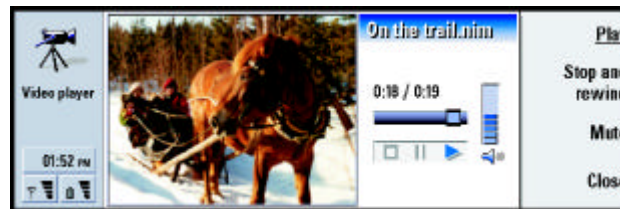


Figure 105

It shows indicators for play, pause, and stop. The elapsed time and total time are shown as digits.

Cell broadcast

Cell Broadcast is an application which you use with the Cell Broadcast Service (CBS) to view the messages and to subscribe to topics of interest. In areas where CBS is provided, you can receive short messages on various topics such as taxis, weather, service provider services, and directory enquiries.

■ **Tip:** Check with your system service provider to see whether CBS is available.

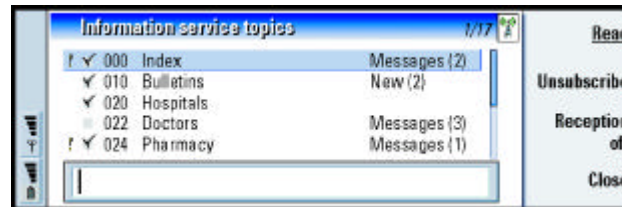


Figure 106

To start or stop receiving CBS messages, in the main view of Cell broadcast, press **Reception on** or **Reception off**.

Tip: You can search for different topics. Enter a name of a topic in the search field.

Press **Read** to read messages and press **Next** or use the commands in the View menu to browse for more messages.

To subscribe, scroll to a topic and press **Subscribe**. A check mark is displayed in the box on the left-hand end of the topic. To unsubscribe, press **Unsubscribe**.

To add, edit, or remove topics when the reception is off, press the Menu key and select **> Topic > Add topic / Edit topic / Delete topic(s)**.

Tip: You can quickly mark a topic as a hot topic by first selecting the topic and then pressing **Ctrl + M**.

If you want to be notified with a dialog displaying a message on a particular topic when a new topic message is received, press the Menu key and select **Topic > Mark as hot topic**. The hot topic is marked with an exclamation mark "!".

Create or rename topic lists

To create a new list, press the Menu key and select **List > New blank list...** or **New list with selected topics...**

To change the name of the list that is open, press the Menu key and select *List > Rename list...*

Note that the reception must be turned off.

Open topic lists

To open a different list, press the Menu key and select *List > Select topic list*

In different topic lists, you can still subscribe and unsubscribe topics and set them as hot topics.

Detect new topics

To add new topics automatically, press the Menu key and select *Tools > Settings...* Define the following:

Add new topics to list – The options are *Yes/No*. If you select *Yes*, all new topics are added automatically to your current list of topics. If you select *No*, you will receive only the messages concerning subscribed or hot topics that you already have in your topic list.

Language – Select the language of the topics you want to receive. Select *All* to receive topic messages in all languages.

● **Note:** You will receive only the messages that are in the language you have chosen. To make sure you receive all messages, select *All*.

■ **Tip:** You can sort the topics by pressing the Menu key and selecting a sorting command in the *View* menu.

■ **Tip:** Create a new empty topic list and select the *Yes* and *All* options in the settings to receive a complete list of topics available in that area.

Fax modem

You can use the communicator as a fax modem with a compatible PC. Your communicator can be connected to a PC via serial cable or by using an infrared connection.

Before your PC can recognize the communicator as a fax modem, you need to install a new modem configuration for your PC. Please refer to your operating system manual for more information. During the installation you may be asked to enter the path to the modem information file. The path on the sales package CD-ROM is: \ Software for PC \ Printer and Modem drivers. Advanced users can also find a list of supported AT commands from this path. Normally there is no need to use these commands.

● **Note:** Using the communicator as a fax modem requires that data calls are supported by the service provider and that this service is active in your SIM card.

Install fax modem driver using cable connection

- 1 Start Windows.
- 2 Insert the Nokia 9290 CD-ROM into the CD-ROM drive of the computer and locate the modem information file (mdmn9290.INF). Alternatively, you can find the file on the www.forum.nokia.com Web site.
- 3 Double-click the *Modems* icon in the Windows Control Panel. A dialog opens. If no modem drivers have been installed on the computer before, continue from step 6.
- 4 Click the **Add** button.
- 5 In the field *What type of modem do you want to install?* select *Other*. Click **Next**

- 6 Select the option *Don't detect my modem; I will select it from a list*
 - 7 Click **Have disk...**
 - 8 Click **Browse** and locate the CD-ROM drive with the Nokia 9290 CD-ROM.
 - 9 On the CD-ROM, locate a folder *Software for PC/Modem drivers*
 - 10 In the Modem drivers folder, select *Mdmn9290.inf* file and click **Open** or **OK**.
 - 11 In the Install from disk dialog, Click **OK**.
 - 12 In the Install New Modem dialog, select *Nokia 9290 Communicator (Cable)*. If you are using High Speed connection (HSCSD), select a speed higher than 9600 bps and cable connection. Click **Next**.
 - 13 Select the COM port where the serial cable is connected. Click **Next**.
 - 14 Click **Finish**.
 - 15 Remove the CD-ROM from the drive.
 - 16 In your communicator, press the Extras application button, select *Fax modem*, and press **Open**.
 - 17 In the Fax modem application, press **Settings**
 - 18 On the Connection page of the Fax modem settings, define the following:
Connection type: *Cable*
Transfer rate: 19200 or higher. Make sure that this setting is the same both in your communicator and your PC.
Data bits: 8
Stop bits: 1
Flow control: *Software*
 Press **Done**
- **Note:** Transfer rate is the speed with which the data is transferred between your communicator and PC. The best transfer rate for normal GSM calls is 19200 or higher. For high speed calls, you should select 115200. Select the same rate in your PC application as well.

■ **Tip:** To use High Speed connection, your GSM operator must activate High Speed Data Services on your SIM card.

19 Your communicator is now ready to be used as a fax modem. Press **Activate** to activate the Fax modem.

Fax modem settings

To open Fax modem, press the **Extras** application button, select *Fax modem*, and press **Open**

Note that an active PC connection using the fax modem is disconnected after 20 minutes if no data is sent or received. However, an active call is not automatically disconnected.

● **Note:** You cannot change fax modem settings if the fax modem is activated. To change these settings, make sure that fax modem is not active.

Open Fax modem and press **Settings**. A dialog with two pages opens.

Define the following:

Connection page

Connection type: Press **Change** to change this option. The options are *Infrared* and *Cable*. If you select *Infrared*, the rest of the options are automatically set. If you select *Cable*, define also the following:

Transfer rate: The speed with which the data is transferred between your communicator and PC. The best transfer rate for normal GSM calls is 19200. For high speed calls, you should select 115200. Select the same rate in your PC application as well.

Data bits: Defines how many bits are used to form a byte. The default option, 8, can typically be used.

Parity: A parity error-checking procedure. The default option, *None*, can typically be used.

Stop bits: Defines number of stop bits used. The default option, *1*, can typically be used.

Flow control: It is recommended to select *Software*. This setting needs to be the same in you PC as well.

Operating system page

Windows 2000: If you are not using Windows 2000, press **Done** and select *No*. The rest of the options on the page are dimmed. If you are using Windows 2000, select *Yes*. Define also the following information about the connection. The information needed is provided by the host that you are about to call. If you do not have this information try to use the default options.

Connection type: The options are *Normal/High speed*. *Normal* is the default.

Remote modem type: The options are *Analog/ISDN V.110/ISDN V.120*. *Analog* is the default.

Max. connection speed: The default in an analog connection is *Automatic*.

● **Note:** This configuration needs to be redefined if you use a different kind of modem. If the connection settings are incorrect, the call is not created.

Activate or disable the fax modem

In the Fax modem main view, press **Activate** or **Disable**.

13. Accessories guide

Original Nokia accessories ensure the best possible operation of your Nokia mobile phone in various conditions. The Nokia 9290 Communicator accessories have been designed for different users and communication needs.

● **Note:** Use only batteries, chargers, and accessories approved by the communicator manufacturer for use with this particular communicator model. The use of any other types will invalidate any approval or warranty applying to the communicator, and may be dangerous.

■ **Tip:** Original Nokia accessories cover a wide range of user environments: advanced data transmission equipment, practical headsets, chargers and holders for mobile as well as office use.

Power management

High power battery BLL-3

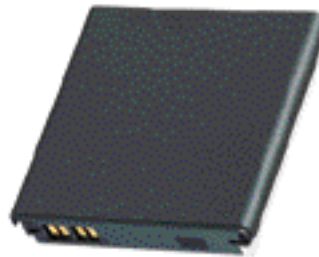


Figure 107

The High Power Battery BLL-3 is a slim, powerful and durable 1300 mAh Li-Ion battery. This battery provides you with a talk-time of 4-10 hours and stand-by time of 80-230 hours, depending on usage.

The combined weight of the Nokia 9290 Communicator with battery is 244 g, (approximately half a pound).

Performance travel charger ACP-12U



Figure 108

Tip: This charger is especially suitable for active travellers.

The Performance Travel Charger ACP-12U is a lightweight and durable charger which functions over most mains voltages. The communicator can be operated normally during charging. Using this charger, the charging time of the communicator is approximately 180 minutes (depending on the amount of charge already in the battery).

Advanced desktop stand DCH-10



Figure 109

The Advanced Desktop Stand DCH-10 provides a convenient way to

- charge the battery when it is attached to the communicator
- connect to a compatible PC for data transfer.

It has an infrared port on the left side of the stand; see Figure 109. The stand also has a slot for charging batteries separately from the communicator; this is especially convenient for charging spare batteries.

Charge the communicator battery with the desktop stand

- 1 Plug the Performance Travel Charger ACP-12U into the stand.
- 2 Place the communicator, with the battery attached, in the desktop stand connector end first.
- 3 Plug the charger into a mains outlet.

Tip: To charge batteries with this stand you need the Performance Travel Charger ACP-12U. To connect to a PC, you need the RS-232 Adapter Cable DLR-2L. You can also connect to a PC via infrared.

Charge a spare battery with the desktop stand

- 1 Plug the Performance Travel Charger into the stand.
 - 2 Insert the spare battery in the second slot, the golden contacts first. First press the battery downwards, then push it slightly backwards, until it clicks into place.
 - 3 Plug the charger into a mains outlet. Check that the light on the left of the stand is on. The red light indicates that charging is in progress. When the battery is charged you will see a steady green light.
 - 4 To remove the battery, slide it forwards then lift it up and out of the stand.
- **Note:** If the communicator is also charging in the desk stand, the charging of the spare battery will cease until the battery attached to the communicator is fully charged.

Connect to a PC

To connect to a compatible PC, either use the RS-232 Adapter Cable DLR-2L, as follows:

- 1 Plug the adapter cable into the connector at the back of the stand.
- 2 Connect the other end of the cable to the PC.
- 3 Place the communicator in the stand, connector end first.
- 4 On the PC, start either the PC Suite for Nokia 9290 Communicator program, or the Fax/Modem application.

Alternatively, use an infrared connection, as follows:

- 1 Check that infrared is activated in the communicator and on the PC
- 2 Place the communicator in the stand, connector end first.
- 3 Place the infrared port on the stand in line with the infrared port on the PC. The distance between the two ports should be a maximum of 30 cm (11.81 inches).

- 4 On the PC, start either the PC Suite for Nokia 9290 Communicator program, or the Fax/Modem application.

You can also synchronize data between your communicator and an organizer program on a compatible PC with a single press of the  button. For more information, see the PC Suite Guide in the Using Nokia 9290 Communicator section of the sales package CD-ROM.

Vehicle accessories

Advanced HF car kit CARK109



Figure 110

Tip: Battery charging times are the same as those for the Performance Travel Charger ACP-12U.

The Advanced HF Car Kit CARK109 offers a convenient handsfree option in a car. The car kit provides charging for your communicator. The car kit must be installed by qualified personnel.



Figure 111

The kit consists of the Advanced Active Car Holder CRM-1 (shown in Figure 111), Advanced HF Unit HFU-2, Microphone HFM-8 and External HF Speaker HFS-12. In addition you can use an optional Handset HSU-1 for privacy and the optional Antenna Set AMD-2 for improved reception and increased operation (both items supplied separately).

Place the communicator in the holder

- 1 Close the cover of the communicator and turn the antenna to a closed position.
- 2 Insert the communicator in the car kit holder connector end first.
- 3 To avoid damaging the connectors, press the communicator down gently until it is securely held by the locking mechanism.

Make a call with the car kit

- 1 Key in the desired number with the keypad or use the search function to look for a name and number.
- 2 Press . For a private call, lift the handset if installed.

Answer a call

- 1 Press , or, if the handset is installed, lift the handset.

- 2 If you set the Automatic answer feature on in the Car profile, the communicator will automatically answer incoming calls.

Switch from handset operation to handsfree operation

Press the Options selection key once and replace the handset in 5 seconds. If you do not press Options before replacing the handset, the call will end.

End a call

Press  , or, if the handset is installed, replace the handset.

Ignition sense

The ignition sense feature allows the communicator to be automatically switched on or off whenever the communicator is in the charging holder and the vehicle is started or switched off. This prevents the communicator from draining the car battery, if accidentally left on for a long period of time.

If installed, the ignition sense is always available. If you do not wish to enable the ignition sense, ask your dealer to leave it uninstalled.

When the ignition is turned off, the message 'Phone will power off, if not used' is displayed. The communicator will be switched off after 15 seconds unless you press any key or take the communicator from the holder during this time.

Car mute

This feature mutes the car radio during a phone call, if supported by the car radio. Ask your dealer to enable the car radio feature during installation.

Antenna motor control

If installed, this feature will activate the electrical motor of the mobile antenna.

Mobile charger LCH-9



Figure 112

The Mobile Charger LCH-9 provides an easy and convenient way to charge the communicator battery in a vehicle. It is suitable for most vehicles' cigarette lighter sockets. Plug the lead from the mobile charger into the bottom connector of the communicator.

Wearables

Headset HDC-8L



Figure 113

The Headset HDC-8 offers private headset audio operation. With the remote control button, which is located in the microphone part of the headset, you can answer and end a call. The headset connects directly to the connector at the bottom of the communicator.

Carrying cases

Carry case CSL-25



Figure 114

There are two different carrying cases designed especially for the Nokia 9290 Communicator. The case shown in Figure 115 (CSL-26) has a convenient shoulder strap. Both are available from Nokia dealers.

Carrying case CSL-26



Figure 115

Mobile office

Memory card

The 16 Mbyte postage stamp sized memory card provides removable storage for the communicator. The memory card increases the available memory for data and software applications. For example you could load new applications to the communicator and save files such as images, wav sounds, faxes and documents. You could also use a memory card for different applications or address books.

For additional memory, the 64 Mbyte MMC memory card (DTS-64) can be purchased on the www.nokiausa.com web page in accessories for the 9290 Communicator.

● **Note:** The memory cards used in Nokia 9290 Communicator are not compatible with older models of Nokia communicator, but you can use the cards used in Nokia 9110i Communicator in the model 9290 after formatting them.

RS-232 Adapter cable DLR-2L



Figure 116

This versatile adapter cable provides convenient computer connectivity for data transfer with your Nokia 9290 Communicator. It connects to the RS-232 serial port of a compatible computer. It can also be used with the Advanced Desktop Stand DCH-10.

14. Troubleshooting

You can visit Forum Nokia at www.forum.nokia.com for information and support material related to the communicator.

 **WARNING!** You must backup all your data on the communicator BEFORE sending it in for repairs. All hardware is sent back to you clean. Nokia is not responsible for any data that is on the machine when it is sent in. Please call Customer Care before sending in your communicator.

1. Phone or communicator interface does not start; both displays remain blank

Make sure that the battery is properly installed and charged.

Make sure that the contacts on the battery and the desktop stand are clean.

The battery charge may be too low for operation. Check the display and listen for the low battery warning tones. Charge the battery as described on page 67. If the NOT CHARGING message is displayed, the charging is suspended. Temperature extremes will affect the ability of your battery to charge: allow it to cool down or warm up first. Wait for a while, disconnect the charger, connect it again and retry. If charging still fails, contact your local Nokia dealer.

2. Communicator interface does not start; cover phone display is flashing

The communicator memory is corrupted. Contact your local Nokia dealer.

3. The battery is attached, but the phone does not work

Try to switch on the phone by pressing the  key for several seconds.

Check that the flight mode is not active. For more information see 'Flight profile' on page 133.

Restart the communicator by removing the battery, waiting thirty seconds, and replacing it again.

Try charging the communicator. If you see the battery level indicator on the phone but the phone does not work, contact your local Nokia dealer.

Check the signal strength indicator: you might be outside the system service area.

Make sure that the telephone service is activated for your SIM card.

Check if there is an error message on the display after switching on. If so, contact your local dealer.

Check that the SIM card is correctly installed, see the Getting Started Guide.

4. Communicator interface is not activated or applications stop responding

Close the cover and open it again. If this does not help, close the cover and remove the battery. Replace the battery and open the cover again. Wait while the communicator performs a self-test and starts.

Try charging the communicator.

If the device does not respond even after several restarts (disconnect the charger, take battery out, wait for 30 seconds, and replace the battery), remove all temporary files as follows:

- 1 Disconnect the charger and remove the battery to restart the communicator.
- 2 Insert the battery and open the cover.

Tip: If you have to give away your Communicator, it is a good idea to format the device and restore the factory-installed software from the CD-ROM. This way the next user will be able to start with a fresh device.

- 3 When you see the Nokia 9290 Communicator Welcome screen, immediately press and hold down the Ctrl+Shift+I keys. The I key should be pressed last.
- 4 Temporary files are deleted. This empties the cache, removes cookies, resets plugin registrations and resets the settings you have made in some of the applications including all Internet and profile settings, Desk shortcuts and display settings. All other applications and files stay intact.

If the procedures described above do not help, as a last resort before contacting your local dealer you can try formatting the internal memory of the communicator.

Note that formatting the memory removes all items except the standard applications that have been factory pre-installed in ROM memory! If you have made a full backup with PC Suite, you can use PC Suite to format the memory and restore the backed-up files. If you have made a backup to a memory card, see 'Back up and restore data to and from the memory card' on page 259. If you have not made a backup, but you still must format the internal memory, proceed as follows:

- 1 Disconnect the charger and remove the battery to restart the communicator.
- 2 Insert the battery and open the cover.
- 3 When you see the Nokia 9290 Communicator Welcome screen, immediately press and hold down the Ctrl+Shift+F keys. The F key should be pressed last.
- 4 Formatting starts. It takes at least two minutes to complete.
- 5 With Windows Explorer, locate the *All_Nokia_9290_data.sis* installation package in the *Preinstalled in device* folder of the sales package CD-ROM and install it.

5. Cannot make or receive calls

Check to see if you have 'Flight' profile turned on. When this profile is active you cannot make or receive calls.

Make sure that the phone is not off. Close the cover and switch on the phone.

If you get the message INVALID SIM CARD, your SIM card cannot be used in the communicator. Contact your dealer or system service provider.

Check the status of your call restrictions and forwards, see 'System services settings' on page 124.

The phone may be busy: data or fax is being sent or received, or the communicator is being used as a fax modem. Wait for the data/fax transmission to end, or drop the call by pressing the  key on the phone keypad.

6. Call quality is poor

Your location may not allow better call quality. This problem may occur especially in a moving car or train. Move to a location where the radio signal reception is better. See 'GSM data transmission' on page 53.

Reception is usually better above ground level, outdoors and while stationary. Sometimes even moving the communicator slightly will improve reception. You can also try using the communicator in the handsfree mode, see page 112. Remember to turn the antenna to an upright position.

7. Cannot forward or bar voice, fax or data calls

You may have not subscribed to the service in question, or it is not supported by the system, or the message center number and the number to which you want to forward your calls may be missing or incorrect.

Fax forwards and restrictions are defined in *Tools > Account settings...* in the **Messaging** application. Data restriction is set in the in the Data call restrictions in Control panel. Data calls cannot be forwarded.

8. Cannot select a contact

If you cannot select a contact in the Telephone, Fax, SMS or Mail directory, the contact card does not have a telephone number, fax number, wireless phone number or an e-mail address. Add the missing information to the contact card in the Contacts application.

9. Cannot send or receive faxes, short messages or mail

Make sure that you have subscribed to these system services.

The phone may be off, or the communicator is low on memory.

The number format you use may be invalid, or the called number has not answered within 10 tries, or you are calling to a wrong phone number.

The phone may be busy: data or fax is being sent or received, the communicator is being used as a fax modem. Wait for the data/fax transmission to end, or drop the call by pressing the  key on the phone keypad.

Fax/data restrictions or fax forwards may be active. You can define the Fax restrictions/forwards in *Tools > Account settings...* in **Messaging**.

Fax reception: Your SIM card may not have a fax number.

Mail reception: You have not subscribed to a remote mailbox service, or the mail service you are using uses another mail protocol than what you have selected. (Check with our Internet Service Provider whether you should be using POP3 or IMAP4.) If you are using secure connections, your remote mailbox service also has to support secure connections. There may also be a transient problem with the remote mailbox service, or the Internet servers between the communicator and the remote mailbox. Try again after a couple of minutes, and then contact your Internet Service Provider.

Mail sending: You have not subscribed to a remote mailbox service, or the mail server delivering your mail does not comply with the SMTP protocol. If you are using secure connections, your remote mailbox service also has to support secure connections. There may also be a transient problem with the remote mailbox service, or the Internet servers between the communicator and the remote mailbox. Try again after a couple of minutes, and then contact your Internet Service Provider. If you are using the Upon request sending option, mail must be sent in the Document outbox, see 'Outbox' on page 203.

If you receive service provider error messages when connecting to your remote mailbox, contact your remote mailbox service provider. Your remote mailbox may contain corrupted mail messages or the mail server settings may be incorrect.

If you have problems sending mail with attachments, select **Cancel sending** and try again. If this does not help, try the key combination Shift-Tab-right arrow. Some mail attachments can take up a significant amount of memory and therefore freeing some memory by deleting something from your communicator memory might also help.

Short message sending: You have not subscribed to the Short Message Service or the message center number is missing or incorrect. Contact your service provider.

The reason for failure may also depend on the system: the system does not support SMS, fax, or data/mail; the system is out of order or busy; the signal strength is not adequate for sending.

10. Phone display shows "Message too long" when I try to open a received short message.

The received message is over 1377 characters long. Use the Messaging application to read it.

11. Cannot establish an Internet connection

If you are trying to connect to the Internet (in order to use WWW or to receive or send mail), but the operation does not succeed, you can use the following checklist to find out where the problem might be located:

- 1 Is the data call active when you are trying to connect? Look at the data call indicator on the phone side. If the data call is dropped after a few seconds after starting to connect, check the phone number in the Internet Access settings. See page 173 for details.
If the phone number is correct, the reason may be in poor system conditions, or a congested GSM network. Also check the Data call settings in the Internet Access settings (connection type, data call type, and maximum connection speed). See page 173 for details.
Contact your system service provider if you have problems with data call establishment, and your Internet Service Provider to find out the correct remote modem type. If you are roaming outside your home system, you might want to try the basic GSM data call settings described in a tip on page 178.
- 2 If the data call is active, but you cannot receive or send mail, try to use the WWW browser to connect to your Internet Service Provider's WWW pages. If that works, the problem is most likely in the mail settings or the remote mailbox service. For more information, see Mail settings on page 214.
- 3 If the data call is active, but you cannot download WWW pages with the WWW browser, make note of the most recent status indication displayed to you in the title bar of the WWW browser.
 - If the status indication reads *Waiting for reply from host* or *Looking up host address*, it is likely that the WWW address (URL) has been mistyped, or there is a problem with proxy server settings in the Internet Access Point or the proxy server itself, or there is a transient problem with the WWW server or

Internet connections between the WWW server and your Internet Service Provider. Check the proxy server settings explained on page 177. Disconnect the call, wait for a couple of minutes, and retry the connection. If the connection still does not succeed, contact your Internet Service Provider.

- If the status indication reads *Logging into system* or *Connected*, the problem is most likely in your Internet Access Point settings (See page 173 for details) or your Internet Service Provider's dial-up system, or you might need a script in order to connect to your Internet Service Provider. Disconnect the data call, wait for a couple of minutes, and retry the connection. If the connection still does not succeed, contact your Internet Service Provider.
- 4 If your data call is unexpectedly dropped, this may be a case of poor system conditions, congestion in the phone system, or a too low inactivity period setting.

If you are unable to connect to the Internet after repeated attempts, and have successfully used your Internet connection previously, or get error messages when starting the WWW browser, remove and replace the battery and try again.

12. Infrared problems

The communicator may be connected to a PC, laptop, printer, digital camera, wireless phone or another communicator via the infrared connection.

If you are using the PC Suite for Nokia 9290 Communicator program on your PC, or if you want to receive data from another communicator or a digital camera, you must activate the Infrared connection on your communicator before the connection is made. See PC Suite Guide in the sales package CD-ROM and 'Activate the infrared connection' on page 82 of this guide.

The PC to which you want to establish the connection must have an IrDA compatible infrared port; installed and activated IrDA drivers; and Microsoft Windows 95/98/98SE/Me. For more information on IrDA drivers and their use in Windows, contact Microsoft.

If you have an IBM Thinkpad laptop with Windows 98 SE installed, you may encounter problems with infrared connections. If problems occur, proceed as follows:

- 1 Click the Windows **Start** button and select *Settings > Control Panel*.
- 2 In the Windows 98 Control Panel, open **System**.
- 3 In the *System properties* dialog, select the *Device Manager* tab.
- 4 Under *System Adapters*, select *IBM Thinkpad Fast Infrared Port* and click the **Properties** button. *IBM Thinkpad Fast Infrared Port Properties* dialog opens.
- 5 Click the *Driver* tab and then click the **Update Driver...** button. *Update Device Driver Wizard* starts.
- 6 Click **Next**.
- 7 Select the *Install one of the other drivers* option and click the **View List...** button.
- 8 Infrared PnP Serial Port has been found. Click **OK**.
- 9 Click **Next**.
- 10 Infrared PnP Serial Port is ready to be installed. Click **Next**.
- 11 The new driver has been installed. Click **Finish**.
- 12 The computer must be restarted before the new driver can be taken to use. Click **Yes** to restart the computer.

13. Printing problems

If you are using the infrared connection, the infrared port of the printer must be compatible to the IrDA standard. See 'Print' on page 78.

If you fail to establish an infrared connection, transfer the file to a PC and use the PC to print the document. Alternatively, you can fax the document to the nearest fax machine. See 'Write and send a new fax' on page 207.

14. PC connectivity problems

Make sure that PC Suite for Nokia 9290 Communicator is installed and running on your PC. See the PC Suite Guide for more information.

If you use a cable connection, check that the cable is properly attached at both ends.

If you use an infrared connection, check that the IR ports are facing each other and the route between the ports is unobstructed.

Check that you are using the correct serial port (COM) on your PC.

For all other PC Suite problems, see the PC Suite Guide and the PC Suite online help 'Troubleshooting' section.

15. Fax modem problems

When you use the communicator as a fax modem, make sure that the communicator and the PC use the same baud rate. If you use the infrared connection, the baud rate is set automatically. If you use the cable connection, set the baud rate in the Fax modem settings. For the PC, the baud rate is set in the connectivity software of the PC.

If you use the cable connection, fully compatible operation with all PC fax and terminal software cannot be guaranteed. Consult your dealer. If you have problems with your PC fax software, use the infrared connection.

If you have problems establishing a data connection with the remote modem, try fixing the data transmission rate by using an AT command. Common AT commands based on the GSM 07.07 standard and supported by the Nokia 9290 Communicator are listed in the atcomm.txt file on the CD-ROM supplied with the communicator. You can find this file by clicking 'AT commands' in 'PC software section' on the CD-ROM. For information on how to use the AT commands and fax modem drivers, consult the documentation of the telecommunication or fax application that you use on your PC.

16. Access code problems

The default lock code for Nokia 9290 Communicator is **12345**. If you forget or lose the lock code contact your communicator dealer.

If you forget or lose a PIN or PUK code, or if you have not received such a code, contact your system service provider.

For information about Internet passwords, contact your Internet service provider.

17. Low on memory

Your communicator can run out of memory just like a PC. There may be several reasons for that:

- You have too many applications running. Press the Menu key and check the leftmost menu for tasklist of open applications. Choose the application that does not have to be open and close it.
- You have received a lot of mail or you have saved large images or other items that use a lot of memory. To free up communicator memory, remove unnecessary data, move large items to a memory card or transfer them to your PC, if possible. See " on page 206 and PC Suite Guide for details.

- You have tried to download a large WWW page. See item 19 on this troubleshooting list.

You can check the memory usage in the Memory application of Control panel.

See 'Memory' on page 269.

18. Cannot connect to the Internet when roaming

You are able to connect to the Internet when in your home country or region. You are now roaming and your Internet connection does not work. Try using the settings of a basic GSM data connection. Also check that the phone number of your Internet Access Point is in international format. See 'Data call page' on page 178.

19. 'Memory' error note seen when downloading very large WWW pages

Some WWW pages are extremely large because they contain many large images or tables. These types of pages consume memory in the communicator very quickly. If, when downloading WWW pages, you see an error note about memory, the first action is to close any other applications that you may have opened after starting the WWW browser. To do that, press the Menu key and check the leftmost menu for tasklist of open applications. Select and close each item.

If you still experience problems, turn off the setting which allows loading images automatically. One last action is to exit the WWW browser application, start it again, and try to download the page once more without images.

● **Note:** Removing data files or installing applications does not have effect on the memory available to the WWW browser.

20. Some of the applications have disappeared or have been accidentally removed.

You may have removed or replaced the memory card that was originally inserted in your communicator.

If you have removed the card, re-insert it.

If you have replaced it, use PC Suite for Nokia 9290 Communicator to install memory card applications from the *Preinstalled in Memory Card* folder of the sales package CD-ROM to the new memory card.

You can also find the installation packages for the other preinstalled applications in the *Preinstalled in device* folder of the sales package CD-ROM.

Re-install all the applications that are missing.

15. Reference information

Important safety information

Traffic safety

Do not use a communicator while driving a vehicle. If using a communicator, park the vehicle first. Always secure the communicator in its holder; do not place the communicator on the passenger seat or where it can break loose in a collision or sudden stop.

The use of an alert device to operate a vehicle's lights or horn on public roads is not permitted.

Remember road safety always comes first!

Operating environment

Remember to follow any special regulations in force in any area and always switch off the phone of your communicator whenever it is forbidden to use it, or when it may cause interference or danger.

When connecting the communicator or any accessory to another device, read its user guide for detailed safety instructions. Do not connect incompatible products.

As with other mobile radio transmitting equipment, users are advised that for the satisfactory operation of the equipment and for the safety of personnel, it is recommended that the equipment should only be used in the normal operating position (held to your ear with the antenna pointing over your shoulder).

Do not point the infrared beam at anyone's eye or allow it to interfere with other infrared devices.

To maintain compliance with radio frequency exposure guidelines, always use Nokia approved accessories. Place the communicator in an approved carrying case or belt clip when carrying the communicator while the phone is on.

Electronic Devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your communicator.

Pacemakers: Pacemaker manufacturers recommend that a minimum separation of 20 cm (6 inches) be maintained between a hand-held 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 communicator more than 20 cm (6 inches) from their pacemaker when the phone is switched on;

Should not carry the communicator in a breast pocket;

Should use the ear opposite the pacemaker to minimize the potential for interference.

If you have any reason to suspect that interference is taking place, switch off the phone of your communicator immediately.

Hearing aids: Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider.

Other medical devices: Operation of any radio transmitting equipment, including communicators, 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 the phone of your communicator 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.

Vehicles: RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles (for example electronic fuel injection systems, electronic anti-skid (anti-lock) braking systems, electronic speed control systems, air bag systems). Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted notices: Switch off the phone of your communicator in any facility where posted notices so require.

Potentially Explosive Atmospheres

Switch off the phone of your communicator when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Users are advised to switch off the phone when at a refueling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel 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 liquified petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

Vehicles

Only qualified personnel should service the communicator, or install the communicator in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty which may apply to the unit.

Check regularly that all wireless phone 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 communicator, its parts or accessories.

For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both 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.

Switch off the phone of your communicator before boarding an aircraft. The use of wireless telephones in an aircraft may be dangerous to the operation of the aircraft, disrupt the wireless telephone system and may be illegal.

Failure to observe these instructions may lead to suspension or denial of telephone services to the offender, or legal action or both.

Emergency Calls

IMPORTANT!

The Nokia 9290 Communicator, like any wireless phone, operates using radio signals, wireless and landline systems as well as user-programed functions which cannot guarantee connection in all conditions. Therefore you should never rely solely upon any wireless phone for essential communications (for example, medical emergencies).

Remember, to make or receive any calls the phone must be switched on and in a service area with adequate signal strength. Emergency calls may not be possible on all wireless phone systems or when certain system services and/or phone features are in use. Check with local service providers.

To make an emergency call:

- 1 If the device cover is open, close it.

- 2 If the phone is not on, switch it on by pressing the  key. Some systems may require that a valid SIM card is properly inserted in the communicator.
- 3 Press and hold the  key for several seconds to ready the phone for calls, and to end possible active data or fax calls.
- 4 Key in the for your present location (for example, 911 or other official emergency number). Emergency numbers vary by location.
- 5 Press the  key.

If certain features are in use (call restrictions, fixed dialing, system lock, keypad lock, etc.), you may first need to turn those features off before you can make an emergency call. Consult this document and your local cellular service provider.

When making an emergency call, remember to give all the necessary information as accurately as possible. Remember that your communicator may be the only means of communication at the scene of an accident – do not cut off the call until given permission to do so.

Important power supply information

 **WARNING:** This apparatus is intended for use when supplied with power from a Lithium-ion battery and chargers ACP-12U and LCH-9. Other usage will invalidate any approval given to this apparatus and may be dangerous. Use only batteries, chargers and accessories approved by the communicator manufacturer for use with this particular communicator model. The use of any other types will invalidate any approval or warranty applying to the communicator, and may be dangerous. For

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

Certification Information (SAR)

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

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.* Tests for SAR are conducted using standard operating positions accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (for example, at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone as reported to the FCC when tested for use at the ear is 0.43W/kg and when worn on the body, as described in this user guide, is 0.33W/kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements).

While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of

<http://www.fcc.gov/oet/fccid> after searching on FCC ID: PDN RAB-3N.

For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with the Nokia accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

*In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kilogram (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements. SAR values may vary

depending on national reporting requirements and the network band. For SAR information in other regions please look under product information at www.nokia.com.

Safety is the most important call you will ever make.

A Guide to Safe and Responsible Wireless Phone Use

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

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

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

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

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

Wireless Phone "Safety Tips"

Below are safety tips to follow while driving and using a wireless phone which should be easy to remember.

- 1 Get to know your wireless phone and its features such as speed dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.

- 2 When available, use a hands free device. A number of hands free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.
- 3 Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.
- 4 Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.
- 5 Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to do" list while driving a car, you are not watching where you are going. It's common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
- 6 Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip--dial only a few numbers, check the road and your mirrors, then continue.
- 7 Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix--they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
- 8 Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations--with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!
- 9 Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.

- 10 Call roadside assistance or a special wireless non-emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

Careless, distracted individuals and people driving irresponsibly represent a hazard to everyone on the road. Since 1984, the Cellular Telecommunications Industry Association and the wireless industry have conducted educational outreach to inform wireless phone users of their responsibilities as safe drivers and good citizens. As we approach a new century, more and more of us will take advantage of the benefits of wireless telephones. And, as we take to the roads, we all have a responsibility to drive safely.

The wireless industry reminds you to use your phone safely when driving.

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

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

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Consumer Update on Wireless Phones

U.S. Food and Drug Administration

1. Do wireless phones pose a health hazard?

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

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

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

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

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;
- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health.

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

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Federal Communications Commission
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

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

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

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

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

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

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

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

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.

5. What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop – if they do – may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

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

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

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

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

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

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects.

Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

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

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques, sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue-simulating model of the human head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

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

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

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

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

10. What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones.

Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

11. What about wireless phone interference with medical equipment?

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

FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

12. Where can I find additional information?

For additional information, please refer to the following resources:

- FDA web page on wireless phones
<http://www.fda.gov/cdrh/phones/index.html>
- Federal Communications Commission (FCC) RF Safety Program
<http://www.fcc.gov/oet/rfsafety>
- International Commission on Non-Ionizing Radiation Protection
<http://www.icnirp.de>
- World Health Organization (WHO) International EMF Project
<http://www.who.int/emf>
- National Radiological Protection Board (UK)
<http://www.nrp.org.uk/>

July 18, 2001

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

Care and maintenance

Your Nokia 9290 Communicator is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years. When using your communicator, battery, charger OR any accessory:

Keep it and all its parts and accessories out of small children's reach.

Keep it dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.

Do not use or store it in dusty, dirty areas. Its moving parts can be damaged.

Do not store it in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.

Do not store it in cold areas. When the communicator warms up (to its normal temperature), moisture can form inside the communicator, which may damage electronic circuit boards.

Do not attempt to open it. Non-expert handling of the device may damage it.

Do not drop, knock or shake it. Rough handling can break internal circuit boards. Dropping the product may break the color display, which is fragile.

Do not use harsh chemicals, cleaning solvents, or strong detergents to clean it. Wipe it with a soft cloth slightly dampened in a mild soap-and-water solution.

Do not paint it. Paint can clog the device's moving parts and prevent proper operation.

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications or attachments could damage the communicator and may violate regulations governing radio devices.

If the communicator, battery, charger or any accessory is not working properly, take it to your nearest qualified service facility. The personnel there will assist you and, if necessary, arrange for service.

Accessory safety

A few practical rules for accessory operation:

- Keep all accessories out of the reach of small children.
- When you disconnect the power cord of any accessory, grasp and pull the plug, not the cord.
- Check regularly that any vehicle-installed accessories are mounted and

are operating properly.

- Installation of any complex car accessories must be made by qualified personnel only.
- Use only batteries, chargers, and accessories that have been approved by the phone manufacturer. The use of any other types could invalidate any approval or warranty applying to the phone and could be dangerous.

Battery safety

Charging and Discharging

Your phone is powered by a rechargeable battery.

Note that a new battery's full performance 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 operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery.

Use only batteries approved by the phone manufacturer and recharge your battery only with the chargers approved by the manufacturer. Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime. If left unused, a fully charged battery will discharge itself over time.

Temperature extremes can affect the ability of your battery to charge.

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 phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose of batteries in a fire!

Dispose of batteries according to local regulations (for example, recycling). Do not dispose as household waste.

Technical data

Weight	244 g (8.6 oz.)
Size	158 x 56 x 27 mm (6.22 x 2.20 x 1.06 inches)
Frequency Range	
Transmitter Output Power	
Battery Voltage	
Charging current	1300 mAh Lithium-ion battery
Operating Temperature	
Number of Channels	
Number of NAMs	
Memory Locations	

Memory Capacity	
Data/fax transmission rate	
Fax type	

NOKIA One Year Limited Warranty for US

● **Note:** This warranty is applicable to US residents ONLY.

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 accessory data code has been removed, defaced or altered.
 - e) The defect or damage was caused by the defective function of the cellular system or by inadequate signal reception by the external antenna, or viruses or other software problems introduced into the Product.
- 8 Nokia does not warrant uninterrupted or error-free operation of the Product. If a problem develops during the limited warranty period, the Consumer shall take the following step-by-step procedure:
- a) The Consumer shall return the Product to the place of purchase for repair or replacement processing.
 - b) If "a" is not convenient because of distance (more than 50 miles) or

for other good cause, the Consumer shall ship the Product prepaid and insured to:

Nokia Inc., Attn: Repair Department
795 West Nasa Blvd.
Melbourne, FL 32901

- c) The Consumer shall include a return address, daytime phone number and/or fax number, complete description of the problem, proof of purchase and service agreement (if applicable). Expenses related to removing the Product from an installation are not covered under this limited warranty.
- d) The Consumer will be billed for any parts or labor charges not covered by this limited warranty. The Consumer will be responsible for any expenses related to reinstallation of the Product.
- e) Nokia will repair the Product under the limited warranty within 30 days after receipt of the Product. If Nokia cannot perform repairs covered under this limited warranty within 30 days, or after a reasonable number of attempts to repair the same defect, Nokia at its option, will provide a 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 the 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 (1-800-246-6452)

- 17 The limited warranty period for Nokia supplied attachments and accessories is specifically defined within their own warranty cards and packaging.

*Nokia is a registered trademark of Nokia Corporation.

Nokia One Year Limited Warranty for Canada

● **Note:** This warranty is applicable to Canadian residents ONLY.

Nokia warrants that the Nokia wireless phone and accessories are free from defects in material and workmanship. The warranty period for the Phone (Radio) units and all accessories (excluding carry cases) is twelve (12) months from the date of purchase OR fourteen (14) months from date of wholesale shipment from Nokia, OR fifteen (15) months from the date of manufacture by Nokia. The warranty period for the Carry cases is three (3) months from the date of Purchase or five (5) months from the date of wholesale shipment from Nokia.

During the warranty period, Nokia will, at its option, repair or replace the defective product free of charge. Replacement Product may be either new or remanufactured or refurbished.

However, if Nokia determines that the warranty conditions cannot be applied, the purchaser will be billed for the repair and shipping.

EXCEPTIONS

This warranty is subject to the following exceptions:

1. Mobile or fixed installation, which is not in accordance with the installation instructions, published by Nokia, will void the warranty. Damage caused by a repair or an attempt to repair by other than a service centre authorized by Nokia will void the warranty;
2. This warranty covers normal consumer use and does not cover defects or damage to any product which, in the sole opinion of Nokia, has been subject to: improper storage, exposure to moisture or dampness, exposure to fire, sand, dirt, windstorm, lightning, or earthquake: to theft, battery leakage, unauthorized modification, misuse, neglect, abuse, misapplication, accident, alteration, improper installation, maladjustment of consumer controls, or abnormal operating conditions, or which has been attributable to acts of God:
3. Fuses are not covered by the warranty;
4. This warranty does not cover defects or damages caused by a product which is not approved by Nokia to be connected to its wireless phone;
5. This warranty does not cover defects or damages caused by improper or defective function of the carrier system or by inadequate signal reception by the antenna;

6. Removal and reinstallation costs are not covered by this warranty;

7. This warranty is applicable only to products bought through Nokia Products Ltd. in Ajax, Ontario, Canada, and sold either in Canada or Bermuda.

8. Removal, alteration, or defacing of the Serial Number Plate, or the accessory Date Code Labels will void the warranty.

In no event shall Nokia be liable for incidental, special, or consequential damages, direct or indirect, loss of unanticipated benefits or profits, loss of use of its wireless telephone, resulting from the use of its wireless phone, or its accessories, or arising from any breach of this warranty.

CLAIM PROCEDURE

In order to obtain warranty performance, return the defective unit to the Nokia Service Centre with transportation charges prepaid (Shipping of the repaired unit may be paid by Nokia, in which case Nokia shall have risk of loss or damage during this shipment).

The proof of date of purchase will be required before in-warranty service is rendered.

Maintenance and service may be obtained in any authorized service centre in Canada.

EXTENSION OF WARRANTY PERIOD

When a repair is made, an extra 90-day service warranty is given to the labour and parts of the repair concerned. If replacement of a faulty unit is applied, instead of repairing, this 90-day service warranty is applied to the replaced unit.

Besides this 90-day service warranty, the warranty repairs or replacements do not affect the original warranty conditions, which are determined by the date of purchase.

THE FOREGOING WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE.

Some provinces do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

FOR WARRANTY SERVICE LOCATION, CONTACT YOUR SERVICE PROVIDER/RETAILER/DEALER OR DIRECTLY TO:

NOKIA PRODUCTS LIMITED
601 Westney Road South
Ajax, Ontario L1S 4N7

Tel: 905-427-1373
1-888-226-6542

Website: www.nokia.ca

For products being returned to Nokia or its authorized service centres, the service provider/retailer/dealer shall prepay shipping charges, taxes, duties, insurance. Nokia shall have no risk for loss or damage during this shipment.

NOTE: As warranty is automatically registered, no further action is required by the consumer.

16. Glossary

AT Commands

Operations of a fax modem can be controlled by AT commands. These commands give the advanced user an opportunity to control all the features of the modem. A list of common AT commands based on the ETSI 07.07 standard and supported by the Nokia 9290 Communicator is available on the CD-ROM included in the sales package of your communicator.

Cookies

Cookies are little pieces of information, given by the server to you, to store information about your visits to a Web site. When you accept cookies, the server is able to evaluate your use of the Web site; what you are interested in, what you want to read, and so on.

DNS

Domain Name Service. An Internet service that translates domain names like `www.nokiausa.com` into IP addresses like `192.100.124.195`. Domain names are easier to remember but this translation is needed because the Internet is based on IP addresses.

Domain name and Host name

The terms "domain name" and "host name" are sometimes, slightly inaccurately, used as synonyms. In a full domain name, e.g. `www.forum.nokia.com`, the first part of the name is the name of the host,

and the following parts are names of domains to which the host belongs. Each host name corresponds to a certain IP address. Host names are used because they are easier to remember than IP addresses.

Gateway IP address

The address of a WAP gateway. (see: WAP gateway).

Hotspot

A World Wide Web (WWW) page may contain hotspots, such as selection lists, text entry fields, and reset/submit buttons, which enable you to input information into the WWW.

HSCSD

High-Speed Circuit-Switched Data is circuit-switched wireless data transmission for mobile users at data rates up to 43.2 Kbps which is four times faster than the standard data rates of the Global System for Mobile (GSM) communication standard in 1999. HSCSD is comparable to the speed of many computer modems that communicate with today's fixed telephone systems.

HTML (Hypertext Mark-up Language)

A language used to define the appearance and content of WWW documents.

HTTP (Hypertext Transfer Protocol)

A document transfer protocol used in the WWW.

HTTPS

HTTP over a secure connection. See Secure Socket Layer (SSL)

Hyperlink

A link on a WWW page that leads to another World Wide Web page or site, or another place on the same page. Hyperlinks are usually underlined or shown in a different color from the surrounding text. Hyperlinks can also be pictures.

IAP (Internet Access Point)

The point where your communicator connects to the Internet by way of a data call. An Internet access point can be provided, for example, by a commercial Internet service provider (ISP) or by your own company.

Images, inline, external

Images within a retrieved WWW page are inline images. Larger images are often placed as external images and have to be viewed separately.

IMAP4 (Internet Mail Access Protocol, version 4)

A protocol used for accessing your Remote mailbox.

IETF (Internet Engineering Task Force)

IETF are responsible for most of the Internet standardization. Nokia 9290 Communicator is using many IETF specifications. In the callback settings, one of the settings is specified by IETF whereas the other methods are specified by Microsoft.

ISDN connections

ISDN connections are a way to establish a data call between the Communicator and your Internet Access Point. ISDN connections are digital from end to end and as such offer quicker set-up times and faster data rates than Analog connections. In order to use ISDN, both your Internet service provider and network provider have to support them.

Java

An object-oriented, general purpose programming language developed by Sun Microsystems and originally designed for handheld devices.

Java is language similar to C++, but simplified to eliminate language features that cause common programming errors. Compiled Java code can run on most computers because Java interpreters and runtime environments exist for most operating systems

Lock code

The lock code is a five-digit code needed to lock and unlock the communicator. The default lock code for Nokia 9290 Communicator is **12345**. The lock code is also required when you change certain settings. Keep it secret and in a safe place, separate from the communicator.

MCN (Micro-Cellular Network) technology

Microcells are used for increasing the capacity of wireless networks in urban areas.

MIME (Multipurpose Internet Mail Extensions)

A standard Internet format which permits including multiple mail objects in a single message. The mail objects can be, for example, formatted multifont text messages and non-textual elements, such as images and audio fragments.

PIN (Personal Identity Number)

The PIN code protects your phone from unauthorized use. The PIN code is supplied with the SIM card. If the PIN code request is selected, the code is required each time the phone is switched on. The PIN code must be 4 to 8 digits long.

PIN2 Code

The PIN2 code is supplied with some SIM cards. The PIN2 code is required to access certain functions supported by the SIM card. The length of the PIN2 code is 4 to 8 digits.

Plug-in

A plug-in is add-on software that can be downloaded from the WWW. The communicator uses plug-ins to display a document that the WWW application itself cannot show

POP3 (Post Office Protocol, version 3)

A common mail protocol that can be used for accessing the Remote mailbox.

Point-to-point protocol (PPP)

A common networking software protocol which enables any computer with a modem and a phone line to connect directly to the Internet.

Protocol

A formal set of rules that govern how data is transferred between two devices.

Proxy

In some networks, the connection between the WWW and the site you want to connect to is blocked by a firewall. The firewall protects the network from unauthorized external access. A proxy is an intermediary program that enables access through the firewall. A proxy can also serve as a network cache to speed up the retrieving process.

PUK (PIN Unblocking Key) code

The PUK is an 8-digit code supplied with the SIM card. The code is required when you want to change a disabled PIN code. If you enter an incorrect PUK code ten times in succession, the SIM card is rejected and you cannot make or receive any calls, except emergency calls. When the SIM is rejected, you will need a new SIM card. You cannot change the PUK code. If you lose the code, contact your system service provider.

PUK2 Code

The PUK2 code is supplied with some SIM cards. The code is required when you want to change a disabled PIN2 code. If you enter an incorrect PUK2 code ten times in succession, you will not be able to access the functions which require the PIN2 code. To use these functions again, you will need to obtain a new SIM card from your system service provider. You cannot change the PUK2 code.

Restriction password

The restriction password is a 4-digit code needed to change fax and voice call restrictions, see 'Restrict voice calls' on page 126. The password is not located in your communicator or SIM card, but in the network. You obtain the password from your system service provider when you subscribe to the call restriction service.

Roaming agreement

An agreement between two or more system service providers to enable the users of one service provider to use the services of other service providers.

Secure Socket Layer (SSL)

A security protocol that prevents eavesdropping, tampering, or message forgery over the Internet. Documents using SSL are identified with the prefix HTTPS.

SIM (Subscriber Identity Module) card

The SIM card contains all the information the cellular network needs to identify the network user. The SIM card also contains security-related information.

Simple Mail Transport Protocol (SMTP)

An Internet protocol governing the transfer of electronic mail.

TCP port

Identifies the data port of the destination computer.

TCP/IP (Transmission Control Protocol/Internet Protocol)

A protocol that governs data communication in the Internet and in the TCP/IP networks.

Template

In word processing a template or a style sheet is a file or form that defines the layout of a document. A template may determine parameters like the page size, margins, and fonts. You can use the same style sheet for many documents. For example, you can define one style sheet for personal letters, another for official letters, and a third for reports.

Touch Tones

The system used by touch-tone telephones. Touch tones assign a specific frequency, or tone, to each key so that it can easily be identified by a microprocessor. Touch tones allow you to communicate with voice mailboxes, computerized telephony systems, etc.

Transport Layer Security

A security protocol similar to SSL offering end-to-end encrypted and authenticated connections. The server to which the connection is established is authenticated by the use of certificates. Data transfers are secured with encryption algorithms. The Nokia 9290 Communicator supports TLS version 1. See also Secure Socket Layer (SSL)

URL (Uniform Resource Locator)

Link information required by the WWW to connect to a given WWW host computer. The URL usually starts with `http://`. For example, the Nokia Wireless Data Forum home page can be found at `http://www.forum.nokia.com`. URLs are often referred to with phrases like "Home page location," "Site location," "can be found at..."

Voice Mailbox

A voice mailbox is a system service or a personal answering machine where people can leave you voice messages.

WAP

Wireless Application Protocol. The transport protocol for WAP services, used by the WAP browser.

WAP access point

An extension to an Internet access point (see: IAP), which provides additional information that the WAP browser needs in order to be able to connect to a WAP service.

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