

Fax modem

Before your PC can recognise the communicator as a fax modem, the PC needs to be properly configured. Consult the user's guide of your PC on how to install new modems. PCs with Microsoft Windows 95 or NT 3.51 or higher operating systems can use the modem information file found on the diskette supplied in the communicator sales package. See also the Documentation section on the CD-ROM.

Using the communicator as a fax modem requires that data calls are supported by the network you are using and that this service is activated for your SIM card. Contact your home service provider for details.

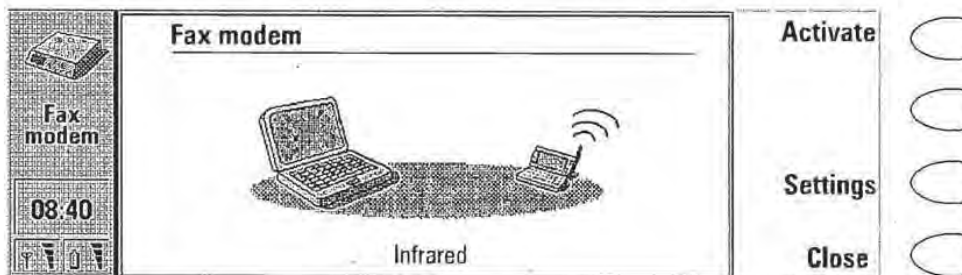


Figure 3

- 1 Press **Settings** and select the connection type. The functioning of a cable connection when the communicator is used as a fax modem is not guaranteed.
- 2 Connect the communicator to the PC via an infrared link as described in "To use the PC Suite" on page 39.
- 3 Wait until the connection is established.
- 4 Press **Activate** in the Fax modem main view. This will change the communicator to a fax modem. When the communicator is used as a fax modem, the call status indicator shows the text MODEM.
- 5 To stop using the communicator as a fax modem, press **Disable**.

The operations of a modem can be controlled by AT commands and S-registers. These commands give the advanced user an opportunity to control all the features of the modem. Should you need to enter the commands manually, consult the documentation of the PC application that you are using. A list of common AT commands based on the ETSI 07.07 standard and supported by the Nokia 9110 Communicator are available in the *atcomm.txt* file on the diskette included in the sales package of your communicator.

When the communicator is used as a fax modem, its normal communication features are disabled. Otherwise, the applications remain functional.

If an active PC connection is idle for longer than 20 minutes, the fax modem is automatically disabled to conserve power. However, when the communicator is connected to an electrical outlet, for example, while charging a battery, the time-out is not active.

Data removal

The Data removal application comes in handy if you want to remove personal information from the communicator, for example, before lending it to someone else. In this way you need not remove data one by one.

- 1 Select what kind of data you want to remove. The removable data is arranged in four groups: *All device data*, *Calendar data*, *Documents*, *Contacts and speed dials*.
- 2 Press **Delete**.
- 3 Before any data is removed, you must enter your lock code. See "Security" on page 127. When removing calendar data, you can choose to remove all calendar data or only events that occur before a given date.

Note: Even if you choose the *All device data* option, your Internet settings will not be removed. If you want to restore your communicator to the same state it was in at the time of purchase, see chapter 15 "Troubleshooting" on page 165.

Install/Remove software

The Install/Remove software application enables you to install new software from a PC to the communicator and later remove the software.

Caution: Beware of viruses! Only install on the Nokia 9110 Communicator software you have obtained from sources that offer adequate protection against viruses.

To use this application, you need to start the Nokia Communicator Server on your PC and connect your communicator to the PC. See "To use the Nokia Communicator Server" on page 46.

Press **Install** and select the software you want to install, or press **Remove** and select the software you want to remove.

The set of applications that were on the communicator at the time of purchase cannot be removed. This is to ensure that the basic functions of the communicator are always available.

Tip: To save the memory space of the communicator, you can install software to a memory card.

Backup/Restore

The Backup/Restore application enables you to make backups of various data on your communicator, and to restore it later. Data is backed up in sets which are stored in separate directories on the PC.

To use this application, you need to start the Nokia Communicator Server on your PC and connect your communicator to the PC. See "To use the Nokia Communicator Server" on page 46.

Select whether to backup *All data*, *Documents*, *Contacts*, or *Calendar* and press **Backup**. A backup directory will be created if necessary.

The restoration procedure is carried out in the same way as the backup operation, except that instead of **Backup** you must press **Restore**. When data is restored, files with similar names in the destination folder will be overwritten.

Note: While the Backup/Restore is in progress, the other applications of the communicator cannot be used. To interrupt the operation, for example, to make an emergency call, press **Cancel** and confirm by pressing **Interrupt**.

To make backups or restore data between a Nokia 9000 Communicator or a Nokia 9000i Communicator and a Nokia 9110 Communicator, see "To transfer data from older communicator models" on page 37.

Tip: While travelling, you can make backups of important documents to a memory card.

Memory card tool


The Memory card tool application can only be started if there is a memory card inserted in the communicator.

With this application, you can format and rename the memory card, and check the condition of the files.

About this product

This application displays information about the Nokia 9110 Communicator.


13. Extras

Press the  button on the keyboard to open the Extras application group, which contains Calculator, Clock, Composer and Voice recorder. With Extras you can also launch applications located on your memory card.

Note: More applications can be installed to your communicator from the CD-ROM included in the sales package.

To start one of the applications, select it and press **Select**.

To close an active application, press **Close**.

Tip: With one Extras application active, you can quickly switch to another by pressing the  button.

Calculator

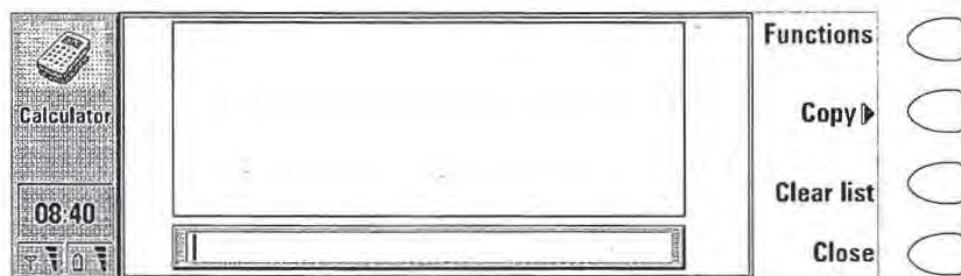


Figure 1

The Calculator contains an input field at the bottom of the screen, and above it a list where previous calculations, if any, can be seen. The most recent calculations are shown at the bottom of the list.

The list can be scrolled with the arrow keys, and it can be emptied by pressing **Clear list**.

The results of the calculations appear in **bold**. As long as you have not pressed Enter or "=", you can move in the calculation string with the arrow keys and edit the string.

The following characters can be used for the corresponding operations:

Character	Function
Numbers 0 to 9	
. (full stop)	decimal point
+	addition
-	subtraction
*	multiplication
/	division
()	brackets
= or Enter	sum
Esc	clears the entry field

To add functions in the input field

- 1 Press **Functions**.
- 2 Select one of the available categories and press **Select**. You will see a list of functions and you can select the one you want. You can select several functions before returning to the Calculator main view.

To copy calculations in the input field

- 1 Press **Copy** to select and copy a calculation or a result back to the input field for modification or recalculation.
- 2 To copy a calculation, press **Copy calculation**, and to copy a result, press **Copy result**.
- 3 Press **Back**. The selected item will be copied to the input field.

To change the mode of the calculator

When you press the Menu button in the Calculator main view and select *Settings*, you can change the mode of the calculator. Select either *Radians*, *Degrees*, or *Gradients*, and press **OK**.

Clock

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



Figure 2

To set an alarm

An alarm can be set to occur within the next 24 hours. Alarms that occur later than this are set in the Calendar application.

- 1 Press **Alarm clock** in the Clock main view.
- 2 Press **+** or **-** to adjust the time shown in the alarm clock display. Each press changes the time by one minute, but if you hold the button down a while longer, the time will start to change in 15-minute steps.
- 3 Press **OK** to accept the set alarm. When an alarm is set, the bell icon and the time of the alarm are shown in the Clock main view.

There can only be one active alarm. If an alarm is already active, the command names are different. A counter on the lower right side of the screen shows how much time remains to the time of the alarm.

Press **Change alarm time** if you want to readjust the time of the alarm.

Press **Delete alarm** to cancel the alarm.

Note: Alarms will occur according to the home city time. When in a different time zone, remember to change the home city.

To turn off the alarm sound

- 1 When the alarm sounds, press any phone or communicator keyboard key to silence it.
- 2 Press the **OK** command button. If you do not press **OK**, the alarm will sound four more times or until you press the **OK** button. However, if the alarm interval is set to zero, the alarm will sound only once. Set the alarm interval in the clock settings.

World time

World time (figure 3) is accessed with the **World time** command in the Clock main view.

The *Home* box shows the name of the currently selected home city, country, time, date and whether daylight saving time is in use.

The *Destination* box shows the same information for the currently selected destination city, as well as the international call prefixes needed to make a call from the home city to the destination city.

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



Figure 3

To select the destination city

- 1 Press **Set destination**.
- 2 Select a city from the list by scrolling the list with the arrow keys.
- 3 Press **OK**.

Tip: A quick way to select a city from the list of cities is to type the first letter of the city with the keyboard. The selection frame jumps to the first city starting with that letter.

To edit and add cities

- 1 Press **Cities** in the world time view to open a list of cities.
- 2 To make changes to existing cities, press **Edit city**. The city information is presented in the form of a card with the following fields:

City – The name shown in the list of cities. Can be entered manually.

Country – The name of the country associated with the city. The country name is selected from the list of countries.

Area code – The area code required when calling the city. The area code can be entered with or without a national prefix. Only numbers can be entered.

GMT offset – Indicates by how much the local time differs from the Greenwich Mean Time. Select a value for the offset from a list. The offset can range from -12 to +12 hours.

Set position – Opens a world map view where you can determine the position of the city by moving the cross hairs with the arrow keys. When the city is where you want it to appear, press **OK**.

To create a new city card, press **Add city**.

To remove a city from the list, press **Delete city**. The current home city cannot be removed; you will have to change the home city first.

To change the Clock settings

- 1 Press **Settings** in the Clock main view.
- 2 Select the setting you want to change and press **Change**, or type the new time or date from the keyboard.

Home city – Select the home city by scrolling the list of cities with the arrow keys. When your home city has been selected, press **OK**. If you select a city that is in a different time zone than your current home city, the system time will change.

Time – Enter the new time. The time format is selected in the System settings.

Date – Enter the new date. The date format is selected in the System settings.

Alarm interval: 0/1/2/3/4/5 minutes – Choose the interval between alarms. If you select 0, the alarm will go off only once.

Daylight saving – You can set the daylight saving time of the home city and destination city *On* or *Off*. This setting remains the same even if the home/destination city is changed.

Note: Changing the time or daylight saving time of the home city will also adjust the time of the whole time zone, as well as the system time. If a set alarm is skipped because of a changed time, the alarm will go off immediately.

Composer

The Composer application enables you to create your own, customised ringing tones.

To start the composer for the selected tune, press **Open**.

To compose a new tune press **Compose**.

To play the selected tune, press **Play**. While the tune is being played, the command changes into **Stop playing**.

Note: You can change the phone ringing tone in the Profile settings of the Telephone application or in the System sounds setting of the System application. See "Telephone settings" on page 65 and "System settings" on page 125.

To edit a tune

- 1 Open a tune or press **Compose**. A cursor appears at the bottom of the screen, indicating the currently selected note or rest.
- 2 To create a note or to alter the pitch of the note, press the up or down arrow keys. Each press changes the pitch of the note. A rest will appear after all possible note levels have been scrolled through.
- 3 To move the cursor, press the left or right arrow keys.

Note: To edit the preset tunes that were in the communicator at the time of purchase, press the Menu button and select **Copy**.

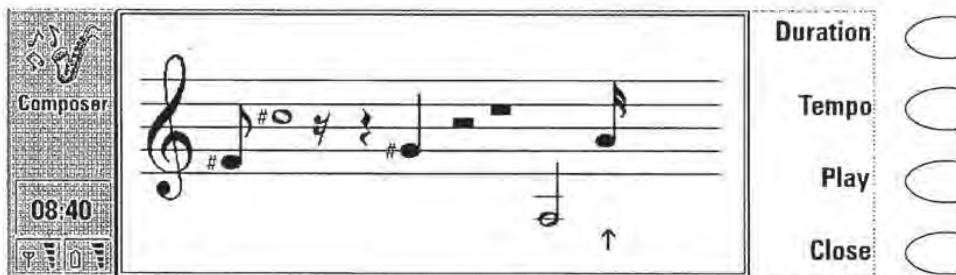


Figure 4

When a composition is being made, the following commands are available:

Duration changes the length of the selected note. Choose a quarter note, half note, whole note, sixteenth note, or eighth note. Press the command button until the value you want is shown.

Tempo opens a pop-up box with a new set of commands. Tempo is measured in beats per minute. To alter the tempo, remove the old value with the backspace key and enter the new value in the input field.

To accept the tempo, press **OK**.

To test the tempo, press **Test**. The tune will be played with the tempo

shown in the entry field.

To use the default tempo 160 beats/min., press **Default**.

Play plays the composition shown on the staff.

To remove a composition, press the Menu button, and select *Delete*.

To restore the tune to what it was before editing, press the Menu button and select *Undo changes*.

Close returns to the Composer main view.

To use shortcuts

While editing, you can use the following shortcuts:

Character	Function
Enter	Plays the tune
: (colon)	Staccato
- (hyphen)	Inserts a rest
Space bar	Inserts an empty column to the left of the cursor.
Backspace	Deletes the selected column containing a note or a rest.
. (full stop)	Lengthens the duration of the note or rest by half

Tip: For quick composing, press the corresponding letter key on the keyboard to generate a note. For example, pressing D generates the note D. When you press Shift and a letter key, a sharp note is generated, e.g. Shift-D generates D sharp.

To use the Menu button

When you press the Menu button in the Composer main view, the following options become available:

Copy – Copies the selected tune.

Delete – Removes the selected tune(s).

Rename – You can write the new name into the input field.

Send as SMS – Opens up the SMS directory where you can select a recipient for the composition(s). To send the composition(s), press **Send**.

When you receive a composition via SMS, a note showing the name or number of the sender and the name of the sent composition will appear on the display.

To add the composition to the list of tunes, press **Accept**. To discard the composition, press **Cancel**.

Transfer via IR – Enables you to send tunes from one communicator to another via the infrared link. The IR port of the receiving device must be activated before the operation. See "Infrared activation" on page 131.

Copy to memory card – Copies the selected tune(s) to the memory card.

Copy from memory card – Copies the selected tune(s) from the memory card to your communicator.

Voice recorder

The Voice 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 is 30 seconds.

Tip: With the Voice recorder you can record sounds and speech and set them as ringing tones. See "Telephone settings" on page 65.

The main view of the Voice recorder shows a list of all the sound files currently stored in your communicator. To open the selected file, press **Open**. **New file** creates a new file into which sound can be recorded. **Delete** allows you to remove the selected file.

When you open a sound file, you will see the length, which is measured in seconds, and the size, which is measured in kilobytes, of the file.

Note: Local laws may apply to recording conversations. Do not use this feature illegally.

To play a recording

- 1 Open the file and press **Play**.
- 2 The **Pause** command temporarily stops the playing of the sound file. To start playing again, press **Continue**.
- 3 To stop playing, press **Stop**.

To record

- 1 Open the file into which you want the sound to be recorded, and press **Record**. If you are recording a telephone conversation, you will hear a tone when the recording starts.

- 2 You can stop the recording for a while by pressing **Pause** and then start again by pressing **Continue**.
- 3 To stop the recording, press **Stop**.

Note: To record sound and speech you need to have the phone turned on and within range of network coverage.

To use the Menu button

When you press the Menu button in the Voice recorder main view, the following commands become available:

Rename – Renames the selected recording.

Copy to memory card – Copies the selected recording to the memory card.

Copy from memory card – Copies the selected recording from the memory card to your communicator.

Note: Sound files that the voice recorder can play have a .WAV extension and support the following audio format: 8, 11, 22 or 44khz, PCM/A-law, Stereo/Mono, 8bit.

14. Phone

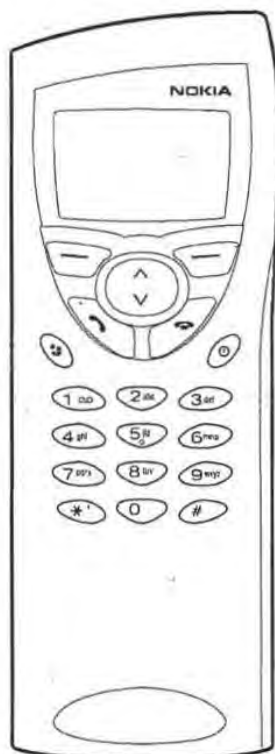


Figure 1

When operating the phone, keys are pressed one at a time. Two keys are never to be pressed simultaneously. The phone keypad is not functional when the device cover is open.

- ① – Switches the phone on and off.
- ☰ – Switches between different profiles. See "Profiles (Menu 3)" on page 158.
- ∨ ^ – Scroll through menus, submenus or settings. If there are no active calls, the scroll keys can be used to browse through the memory contents. When a call is active, pressing the scroll keys adjusts the volume level.
- ☎ – Dials a phone number and answers a call.
- ⏏ – Ends any active call, cancels a dialled call, or clears the display.

- 0 ... 9 – The number and alphabet keys. To call your voice mailbox, press and hold 1.
- * # – Used for special purposes in certain functions. If you have subscribed to two phone lines, you can switch between them by pressing and holding #.
- – The function of these two selection keys depends on the text shown on the bottom line of the display. See figure 2.

Note: Hold the phone as you would any other telephone with the antenna pointed up and over your shoulder.

As with any other radio transmitting device, do not touch the antenna unnecessarily when the phone is switched on. Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

To use the selection keys

When this manual instructs you to press a command key, press the selection key under the command name. For example, pressing **Menu**, i.e. the selection key under the text *Menu*, gains access to the menu functions, and **Names**, i.e. the selection key under the text *Names*, to the search functions. The commands vary according to the situation and previous selection.

The selection must often be confirmed by pressing **OK**. Whenever the **Back** command is shown, it can be used to return to the previous menu level without making any changes.

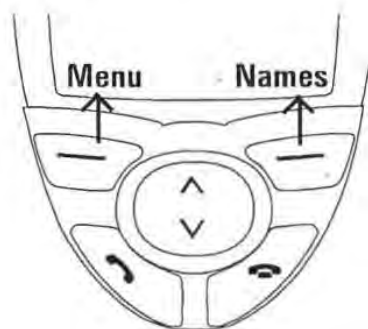


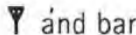
Figure 2

Display indicators

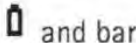
The display indicators inform you about the current operation of the phone. The indicators described below are shown when the phone is ready for use, with no characters entered by the user on the display.

OPERATOR

Indicates in which cellular network the phone is currently used.

 and bar

Indicates the current signal strength at your location. The more bars are visible, the stronger is the signal.


 and bar

Indicates how much charge there is left in the battery. The more bars are visible, the more charge is in the battery.


To make a call

You can make and receive calls only when the phone is switched on, the communicator has a valid SIM card fitted, and it is located in the service area of the cellular network.




Note: In some networks emergency calls to the international emergency number 112 may be made without a SIM card. Check with your network operator. For more information about making emergency calls, see "Emergency calls" on page 175.

- 1 Key in the area code and the phone number of the person you wish to call. If you make a mistake, you can remove the digits one at a time by pressing **Clear** repeatedly, or clear the whole display by pressing and holding **Clear**.
For international calls, start by pressing * twice quickly. The international call character + appears on the display, which informs the network centre to select the country-specific international prefix. Enter the country code, area code and the phone number.
- 2 Press  to dial the phone number.
- 3 When the phone number disappears and the text *Call 1* is shown, the call is connected.
When a call is active, you can use the ∇ and \wedge keys to lower or raise the volume level of the earpiece.

Note: The microphone and earpiece are on the rear of the device.

- 4 After the conversation, end the call by pressing .

To answer a call

- 1 When you receive a call, the phone gives a ringing tone and the text *Call* flashes on the display. If you have selected a silent profile in Menu 3, only the keypad and display lights will flash.
If the caller can be identified, the caller's name or phone number, and the text *Calling* will be displayed.
- 2 To answer the call, press . You can answer the call even while using the search or menu functions.
If you do not want to answer the call, simply press . The caller will hear the alerting tone change to a busy tone.
- 3 After the conversation, end the call by pressing .

To manage calls


There are a number of functions you can use during a call. To access the functions, simply press **Options**, scroll to the function and press **Select**.

Menu – You can access *Menu*.

Answer – You can answer an incoming call.

Reject – You can reject an incoming call.

Record – You can record your conversation with this option. See "Recorder (Menu 6)" on page 164.

Hold / Unhold – *Hold* allows you to put the current call on hold, so that another call can be made. The original call can be activated again by selecting *Unhold*. If the held call is the only call, you can unhold it by pressing  or the **Unhold** command.

Swap – This function makes a held call active and put a currently active call on hold. You can thus alternate between two calls.

New call – Puts the active call on hold and dials a new phone number.

Send DTMF – Transmits DTMF tones. See "To send DTMF tones" on page 152.

End this call – Ends the active call.

End all calls – Ends both the active and the held call.

Mute / Unmute – Switches the microphone of the communicator off or on. If the communicator is connected to a handsfree car kit, *Mute* also turns off the microphone of the car kit.

Conference – If you have one call active and another call on hold, this option merges them into a conference call.

Conference / One to one – *Conference* includes a new participant in a conference call. During a conference call, *One to one* allows you to converse privately with a selected participant.


Transfer – The voice call transfer enables you to connect two voice calls

together and disconnect yourself from both calls. See "Multiple calls" on page 62. Note that not all network operators support this function.

Data – When you have an alternating call active, this option changes the mode of the call from voice to fax. See "Multiple calls" on page 62.





Voice – When you have an alternating call active, this option changes the mode of the call from fax to voice.

Play last – Plays the last recording made with the recorder. The other party will also hear the recording.




Tip: If you have one active and one held call, press **Swap** to make the held call active and to put the currently active call on hold. In this way, you may converse with one party without ending the other call. You can also press  to swap between the calls if no numbers have been keyed in.

To search for phone numbers

You may fetch phone numbers from memory by the name with which the required phone number was stored. Note that the phone uses memory (SIM or Telephone) which is chosen in the Telephone application by pressing **Menu** and **Select**.

- 1 Press **Names**.
- 2 Key in the name of the person whom you want to call, or the first letter(s) of the name.
- 3 Press **OK**. The name closest to the keyed in characters will appear.
- 4 If the name found was not the one you searched for, scroll through the names with  or  until you reach the correct one.
- 5 To call the person, press . If the person has several phone numbers, scroll the selection frame onto the one you want and press .

To view the phone number stored with the name


- 1 When the desired name is on the display, press **Detail**. The phone number is displayed. If the person has several phone numbers, scroll through the numbers with  or  until you reach the correct one.
- 2 To call the number, press .


To use speed dialling

Speed dialling is a handy way to call frequently-used phone numbers. You can define up to eight speed dial numbers in the communicator memory. For information on how to set speed dials, see "To make contact cards" on page 51.

- 1 Key in the number of the speed dial location where you have stored the




phone number.

- 2 Press . The phone will display the phone number briefly, and then dial it. Speed dialling is not possible during a call.

Note: Number 1 is the speed dial location of your voice mailbox. To call your voice mailbox, press 1 and then , or just press and hold 1.

Last number redial

The communicator stores the last phone numbers you have dialled.

- 1 If there are any characters on the display, clear the display by pressing .
- 2 Press . The last dialled number will appear on the display.
- 3 You can scroll the numbers with ∇ or \wedge until the desired number is displayed.
- 4 Press  to dial the number.

You can also recall recent received calls and recent missed calls, see "Call register (Menu 2)" on page 156.

To send DTMF tones


If you need to send long DTMF strings, it is more convenient to send them via the communicator interface, see "Multiple calls" on page 62.

To send DTMF tones manually

- 1 Make a call to the desired phone number.
- 2 Key in the digits you want to send as DTMF tones. The digits are sent one by one to the network. DTMF tones can be transmitted even when the phone key click is set off.

Keypad lock


The keypad lock prevents the keypad keys being accidentally pressed when the communicator is, for example, in your pocket.

When the keypad is locked, you can answer calls normally by pressing . During a call, the keypad is unlocked and the communicator can be operated in the usual way. After the call, the keypad is automatically locked again.

The keypad will be automatically unlocked when the communicator is connected to a car kit. When the communicator is removed from the car kit, without having been switched off, the keypad will be locked automatically again.

To lock the keypad

- 1 Press **Menu** and then the * key within 3 seconds.

While the keypad is locked, the  icon and the **Unlock** command are displayed.

To unlock the keypad

- 1 Press **Unlock** and then the * key within 3 seconds.

Note: When the keypad is locked, calls may be possible to the emergency number programmed into your communicator (e.g. 112 or other official emergency number).

Help

Most menu functions are provided with a help text, which gives a brief description of the displayed function.

To view the help text

- 1 Scroll to the menu function about which you want help.
- 2 Wait for 10 seconds. The first page of the help text will appear. The text scrolls automatically. However, if you want to scroll it manually, press the scroll keys or **More**.
- 3 To exit from the help function, press **Back**.

To use the menus

The phone offers a set of menu functions that allow you to tailor the phone to your particular use. In each menu and submenu, you can check and alter the settings of functions. The menus and submenus can be entered by scrolling the menu or using the appropriate shortcuts.

You can access the menu functions even during a call.

To scroll the menus

- 1 Press **Menu**.
- 2 Press either ∇ or \wedge to scroll the list of menus until you reach the desired menu.
- 3 Press **Select** to enter the menu. If the menu contains any submenus, reach the one you want with either ∇ or \wedge .
- 4 Press **Select**. The selection frame is on the current setting.

- 5 Scroll the list of setting options until the selection frame is on the desired option.
- 6 Press **OK** to select the option. If you do not want to change the setting, you can return to the previous menu level by pressing **Back**.


To use menu shortcuts

All the menus, submenus and settings are numbered. This number is shown in the upper right corner of the display.

- 1 Press **Menu**.
- 2 Key in the number of the main menu under which the desired submenu is located.
- 3 Key in the number of the submenu where the function can be found.
- 4 Key in the number of the desired setting option.

For instance, to change the incoming call alert in the general profile to ring only once (Menu 3-1-2-1-3): press **Menu** to enter the menu facility, **3** to enter the Profiles menu, **1** to select the General profile, **2** to personalise the profile, **1** to modify the alert tones, and **3** to select *Ring once*.

To exit from the menu

- 1 Press  or press and hold **Back**.

Menu structure

The following menu table lists the names of the main menus and their submenus. Third-level menus are not shown here.


Menu	Function	Submenus
MENU 1	MESSAGES Y	1 Received short messages, 2 Info service, 3 Service command editor, 4 Voice messages
MENU 2	CALL REGISTER	1 Missed calls Y, 2 Received calls Y, 3 Dialed calls, 4 Erase recent call lists, 5 Show call duration Y, 6 Show call costs Y, 7 Call cost settings
MENU 3	PROFILES	1 General, 2 Silent, 3 Meeting, 4 Outdoor, 5 Pager, 6 Flight, 7 Headset, 8 Car
MENU 4	SETTINGS	1 Call settings, 2 Phone settings, 3 Security settings, 4 Restore factory settings
MENU 5	CALL DIVERT Y	1 Divert all voice calls, 2 Divert when busy, 3 Divert when not answered, 4 Divert if not reachable, 5 Divert all fax calls, 6 Divert all data calls, 7 Cancel all diverts
MENU 6	RECORDER	

Some menu functions are network services, indicated by the **Y** symbol in the menu table. To use such a function, your network must support it and you must subscribe to it. Note that network services are specific to each SIM card. If you change the SIM card, and you have not obtained the service for the new card, you will not be able to use the service.

Messages (Menu 1)

The Short Message Service (SMS) is a network service. Contact your service provider for details. The phone can be used for listening to voice messages in voice mailboxes and for reading received short messages. However, reading short messages is more convenient via the larger display of the communicator interface. To send short messages, use the SMS application of the communicator.

Received short messages (Menu 1-1)


When you receive a short message, the text *Message received* and the  indicator will be displayed and a tone will sound, unless the communicator is set to a silent profile.

A note is also shown when you receive faxes or mail. To read received faxes or mail, you must use the respective applications of the communicator interface.


- 1 To read the message immediately, press **Read**. To read the message later, press **Exit**.
- 2 Press **Read** again to view the received message.
The messages are listed in the order they were received. To read the second message on the list, press **√** to select it and then press **Read**.

Once you have read the message, you can press **Back** or **Option**. The options available in the phone are:

Erase – Erases the selected message from the memory.

Use number – Copies the phone number from the message and moves it onto the phone display. You can now call the number with .

Details – Shows the sender's name or number, the date and time the message was sent, and the number of the message centre.

Tip: You can dial the phone number in the message by pressing  while viewing the message.

Info service (Menu 1-2)

This network service allows you to receive short messages on various topics. You may read messages on topics that you have pre-defined on the communicator interface, see "SMS settings" on page 82.

- 1 Press **Select** to view the list of available choices.

- 2 Use ∇ or \wedge to scroll through the choice list. To get a list of messages, press **Read**.

Pressing **Select** gives you the following options:

On – Sets info message reception on.

Off – Turns info message reception off.

Topic index – Fetches a list of available topics from the network.

Read – Shows a list of received info messages. Scroll to the one you want to read and press **OK**.

Language – Sets the language for the messages. Scroll to the desired language and press **Mark**.

Service command editor (Menu 1-3)

In this menu, you can send service requests, such as activation commands for network services, to your service provider. Key in the sequence you want, and press **Send**.

Voice messages (Menu 1-4)

Listen to voice messages (Menu 1-4-1)

When you enter this menu, the communicator dials the phone number stored in menu 1-4-2. If required, key in the access code for your mailbox or answering machine when the connection has been made.

Voice mailbox number (Menu 1-4-2)

The phone number that you enter here will be dialled when you select the Listen to voice messages function in Menu 1-4-1. A voice mailbox can be a network service or your personal answering machine. You may enter a new or edit an existing phone number. The number will be used until you change the number again.

Call register (Menu 2)

In this menu, you can check and erase phone numbers of calls that you have missed (Menu 2-1), received (Menu 2-2) or dialled (Menu 2-3). Note that the Received calls and Missed calls functions are network services which work only in networks that allow you to view the caller's phone number.

Note: The communicator only registers missed calls when the phone is switched on and within network coverage.

Erase recent call lists (Menu 2-4)

Caution: The phone numbers are erased without warning. You cannot undo the operation.

Show call duration (Menu 2-5)

In this menu, you can view the duration of your outgoing and incoming calls and reset the timers.

Last call duration (Menu 2-5-1)

Shows the duration of the last outgoing or incoming call in hours, minutes and seconds, e.g. 00:02:15.

All calls' duration (Menu 2-5-2)

Shows the total duration of all calls made or received with any SIM card that you have used with the communicator.

Received calls' duration (Menu 2-5-3)

Shows the total duration of calls received with any SIM card that you have used with the communicator.

Dialled calls' duration (Menu 2-5-4)

Shows the total duration of calls made with any SIM card that you have used with the communicator.

Clear timers (Menu 2-5-5)

Resets all timers. There is no way to undo the reset operation.

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

Show call costs (Menu 2-6)

This network service allows you to check various call costs. The costs are shown in charging units or units of currency that you have set in Menu 2-7-2. The call cost is shown for each SIM card separately. For these settings you need the PIN2 code. Contact your service provider for more information.

Last call cost (Menu 2-6-1)

Shows the cost of the last, or current, call.

All calls' cost (Menu 2-6-2)

Shows the total cost of all calls made with the current SIM card.

Clear counters (Menu 2-6-3)

Resets all cost counters. Resetting requires the PIN2 code. This service is not available with SIM cards that do not support the PIN2 code. There is no way to undo the reset operation.

Call cost settings (Menu 2-7)

Call costs' limit (Menu 2-7-1)

This function allows you to limit the total costs of outgoing calls to a specified number of charging units or units of the currency that you have set in Menu 2-7-2. For this service you need the PIN2 code.

Changing the call cost limit also requires the PIN2 code. To turn the limit on, select *On*. Key in the cost limit in charging units or currency units. If you define the limit in currency units, you can press * or # to insert a decimal point.

After the limit has been turned on, the number of the remaining units is shown on the display when in idle mode. When all units have been used, no calls can be made.

To turn the limit off, select *Off*.

Note: In some networks calls to the emergency number programmed into your communicator (e.g. 112 or other official emergency number) may be made even if there are no charging units left.

Show costs in (Menu 2-7-2)

You may select whether the call costs and call cost limits will be displayed in currency or charging units. Contact your network operator for the prices of charging units. Changing the call cost unit requires the PIN2 code.

To show the limits in currency units, select *Currency*, or *Units* to show the limits in charging units. If you selected *Currency*, key in the charging unit price. Use * or # to insert a decimal point. Next, enter the currency name.



Profiles (Menu 3)

The profile settings are used for selecting the operating environment for the communicator, and for modifying the profile features. One profile is always in use.

To set on a profile

- 1 Press **Menu**.
- 2 Scroll with ∇ and \blacktriangle to Profiles and press **Select**.

- 3 Scroll to the desired profile, for example *Meeting*.
- 4 Press **Options**.
- 5 Scroll to *Activate* and press **OK**. The name of the selected profile is shown on the display, except when the general profile is selected.

Tip: A quick way to set on a profile is to press the  key on the phone keypad. Press the key again until the selection frame is on the desired profile. To select the profile, press and hold .

For more information about the different profiles, see "Telephone settings" on page 65.



To change the profile settings

- 1 Go to the Profiles menu and press **Select**.
- 2 Scroll to the desired profile and press **Options**.
- 3 Scroll to *Personalise* and press **OK**. For more information about the various profile settings, see "Telephone settings" on page 65.

Settings (Menu 4)


Call settings (Menu 4-1)

Anykey answer (Menu 4-1-1)

When set on, you can answer an incoming call by pressing any key on the phone keypad, except  or .

Automatic redialling (Menu 4-1-2)

When this function is set on and you call a number that is busy or does not answer, the communicator will attempt to call the number until the call is connected.

Press  to end the call attempts.

Speed dialling (Menu 4-1-3)

When set on, you can dial phone numbers stored in the speed dial locations by simply pressing and holding the assigned speed dial key.

Call waiting (Menu 4-1-4)

Call waiting is a network service. Contact your operator for subscription. See "Telephone settings" on page 65.

Choose *Activate* to enable call waiting, *Cancel* to disable call waiting, or *Status* to show call types with which call waiting may be used.

Own number sending (Menu 4-1-5)

You can set your phone number to be displayed or hidden from the recipient of your call. This function works only in networks that allow you to view callers' phone numbers, provided that this service has been activated for your SIM card. Do not use this function unless it has been activated for your SIM card.

Choose *Preset*, *On*, *Off*, *Next on*, or *Next off*. *Preset* selects the setting, *On* or *Off*, that you have agreed upon with your network operator. When you change the SIM card, the *Preset* setting is automatically selected.

Phone line in use (Menu 4-1-6)

If your network supports this service, you can have two phone lines in your communicator. You can select which line you want to use for making calls. For more information, see "Telephone settings" on page 65.

Phone settings (Menu 4-2)

Clock (Menu 4-2-1)

You can select whether the time is shown on the display.

Cell info display (Menu 4-2-2)

When this function is set on, the phone will indicate when it is using a network cell based on Micro-Cellular Network technology. The setting will remain in effect even if the SIM card is changed or the phone is switched off.

Note: The communicator consumes more power when the Cell info display is on.

Name list (Menu 4-2-3)

When searching for names and numbers, you can select whether to show three names, or one name at a time on the display.

List of own numbers (Menu 4-2-4)

You can store and manage phone numbers assigned to your SIM card. This function is a memory aid, from which you can check your own phone numbers.

Welcome note (Menu 4-2-5)

You can write a message of up to 36 characters which appears on the display when you switch on the phone.

- 1 Scroll to the *Welcome note* setting and press **Select**.
- 2 Key in the message.
- 3 Press **Options** and scroll to *Save* and press **OK**.

Network selection (Menu 4-2-6)

The communicator can be set to select automatically one of the cellular networks available in your area. You may also select the desired network manually in this menu.

When the *Automatic* option is selected, the communicator tries to utilise the network on which it was last registered. Outside of the home network service area, the communicator will select one of the networks that have a roaming agreement with the home network.

In the *Manual* mode, when you pick up a network manually from the network list, the communicator will always attempt to register on that network. If the communicator cannot reach, or loses contact with, the selected network, you are prompted to select another network.

Tip: Network selection comes in handy when you want to select a particular network, e.g. due to lower call charges.

Security settings (Menu 4-3)

The purpose of the security system is to prevent unauthorised use or altering of important settings. In most cases, activating or changing the security options requires the appropriate access code. See "Security" on page 127.

Note: When security features which restrict calls are in use (call diverting, call barring, fixed dialling, closed user group, or system lock), calls may be possible to certain emergency numbers in some networks (e.g. 112 or other official emergency number).

PIN code request (Menu 4-3-1)

On or Off. See "Security" on page 127.

Voice call barring (Menu 4-3-2)

Call barring is a network service; contact your operator for subscription. See "Telephone settings" on page 65.

- 1 Scroll to one of the following barring modes and press **Select**.
All outgoing calls

All international calls
International except to home country
All incoming calls
Incoming calls when abroad
Cancel all barrings

- 2 If you want to take the selected barring mode into use, scroll to *Activate*; if you want to disable the selected barring mode, select *Cancel*, or if you want to check the status of the barring mode, select *Status*, and press **OK**.

Fixed dialling (Menu 4-3-3)

You may restrict your outgoing calls to a pre-determined set of phone numbers, if supported by your SIM card. When the function is set on, you can only call a phone number which is included in the fixed dialling list or which begins with the same digits as a phone number on the list.

You are prompted for the PIN2 code when you try to put Fixed dialling on or off, or if you wish to delete, add or edit any phone number on the fixed dialling list.

If you select *Numbers*, the following options become available: *Search*, *Add entry* or *Erase all*. If you select *Add entry*, you are required to enter your PIN2 code and key in both the name and number you wish to add to the fixed dialling list.

To edit or erase a phone number on the fixed dialling list, select *Search* and key in the name of the person, or the first letter(s) of the name. Press **OK** and **Detail** to view the number. Select **Options**, enter your PIN2 code and you are given the choice of either *Edit* and *Erase*.

Note: The SIM card contents cannot be accessed if the Fixed dialling is on.

Closed user group (Menu 4-3-4)

This network service allows you to set the communicator to accept calls to and from a selected group of people. For details on creating a user group and activating this service, contact your network operator. You may be a member of up to 10 user groups.

Select one of the following options:

Preset – Uses a user group that the SIM card owner has agreed upon with the network operator.

On – Uses a particular user group. Calls can be made to or received from the members of the selected group only.

Off – Calls can be made and received in the normal way. You can use this option only if you are entitled to do so.

SIM change security (Menu 4-3-5)

The same settings can be found in the Security settings. See "Security" on page 127.

Change access codes (Menu 4-3-6)

In this submenu, you can change the lock code, the PIN code, the PIN2 code and the barring password. See "Security" on page 127.

The access codes may only include the digits 0 to 9.

System lock (Menu 4-3-7)

To lock the communicator, press **Select** and enter your lock code. The communicator locks immediately. Even if you remove and replace the battery and switch on the phone, the communicator will remain locked.

To unlock the communicator, press **Unlock** and enter the lock code.

Restore factory settings (Menu 4-4)

You can reset the settings of the menu functions to their original values. When you activate this setting, you will be prompted for your five-digit lock code. This function will not affect stored phone numbers and names, access codes, earpiece volume setting, call timers, cost counters, selected application tones or short messages.

Call divert (Menu 5)

The call divert network service allows you to direct your incoming voice calls to another phone number when you do not want to be disturbed, or when the phone is switched off or outside the network coverage area. The call diverting functions are described in more detail in "Telephone settings" on page 65.

- 1 Scroll to one of the following divert options and press **Select**:
 - Divert all voice calls*
 - Divert when busy*
 - Divert when not answered*
 - Divert if not reachable*
 - Divert all fax calls*
 - Divert all data calls*
 - Cancel all diverts*
- 2 Scroll to **Activate**. You will be asked for the phone number to which you wish to divert the incoming calls.
The *Cancel* option sets the divert mode off. *Status* shows what kind of calls are being diverted.

Recorder (Menu 6)

With the Recorder you can record your telephone conversations and voice memos, and listen to them. The maximum length of a recording is 30 seconds. See also "Voice recorder" on page 144.

Note: Local laws may apply to recording conversations. Do not use this feature illegally.

To record your own speech

- 1 In the Recorder menu, press **Select**.
- 2 Scroll to *Record* and press **Select**.
- 3 To stop the recording, press **Stop**.

To record your Telephone conversation

- 1 When you have an active call, press **Record**. When the recording starts, you will hear a tone.
- 2 To stop the recording, press **Stop**.

To record your telephone conversation when you have more than one call

- 1 If you have for example one call active and another on hold, press **Options**.
- 2 Scroll to *Record* and press **Select**. When the recording starts, you will hear a tone.
- 3 To stop the recording, press **Stop**.

To play a recording

- 1 In the Recorder menu, press **Select**.
- 2 Scroll to *List* and press **Select**.
- 3 Scroll to the recording you want to listen to, press **Options** and then **Play**.

To play a recording when you have an active call

- 1 Press **Option**.
- 2 Scroll to *Play last* and press **Select**. Or, if you want to play an older recording, follow the steps above. The other party will also hear the recording.

15. Troubleshooting

Tip: Club Nokia Careline answers questions and offers instructions over the phone. You can visit <http://club.nokia.com> to find the Club Nokia Careline phone numbers. See also the Accessories guide for further information on Club Nokia Careline.

You can also visit Nokia Wireless Data Forum at <http://www.forum.nokia.com> for information and support material related to the 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 charging 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 in "Battery" on page 27. If the NOT CHARGING message is displayed, the charging is suspended. In that case, check that the temperature of the battery is not above +45°C (+113°F). Wait for a while, disconnect the charger, connect it again and retry. If charging still fails, contact your local Nokia dealer.

2. Power comes on, but the phone does not work

Reboot the communicator by removing the battery and replacing it again.

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

Check the field strength indicator: you might be outside the network service area. See the answer to problem number 6.

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 "First start-up" on page 17.

3. Communicator interface does not activate 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.

See also problem 4.

4. Internal memory or system errors

Sometimes, for example, removing the battery in mid-operation may cause errors in the file system of the communicator. If you receive internal memory or system error messages and/or reboot prompts, or if the device does not respond to commands normally, resetting the communicator helps you recover from most of these problems. Try the reset operations in the order they have been listed: if checking the file system does not help, try removing temporary files, or format the file system.

To reset the communicator

- 1 Close the cover.
 - 2 Remove the battery.
 - 3 Remove the memory card if inserted.
 - 4 Place the connector end of the battery in the battery cavity, but do not press the other end in place yet. Do not let the battery slip from its place. The connector end is the one with the four metal strips.
 - 5 Open the cover.
 - 6 Press and hold down the required key combination (see below in this topic 4) and simultaneously push the battery end of the communicator down, so that the battery clicks into place. Hold down the keys until you see progress messages or a confirmation prompt on the display.
 - 7 In some cases you must confirm the action by pressing a command button.
- After the reset, the communicator will reboot and start normally.

To check the file system

Symptoms: The Memory application in the System application group shows too much (over 2 megabytes) or too little memory, even if you have just removed some documents, or the communicator applications crash when opening a document.

Key combination: Shift-Tab-left arrow

Caution: If there are problems in the file system, the corrupted files will be removed. If there are no problems, this operation does not affect any documents or settings.

To remove temporary files

Symptoms: The communicator is in a reboot cycle or a note saying that an .ini file is corrupted is displayed.

Key combination: Shift-Tab-right arrow

Caution: All temporary files will be removed. The Document outbox will be cleared, the default application settings restored, but for example, the SMS message centre number, Internet access point and Remote mailbox settings will be lost.

Stored documents will not be affected.

To format the file system

Symptoms: The communicator is in a reboot cycle or does not boot up.

First, check that your battery is not empty.

Key combination: Shift-Tab-F

Caution: Formats the file system. All data you have entered will be lost. This operation will restore your communicator to the state it was in at the time of purchase.

Remember that backed up data can be restored in all cases.


If these measures do not help, contact your local dealer.

5. 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 cannot be used in the communicator. Contact you dealer or network operator.

Check the status of your call barrings and diverts, see "Telephone settings" on page 65.

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 "Facts about cellular data transmission" on page 14.

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 "Handsfree mode" on page 61. Remember to turn the antenna to an upright position.

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

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

Fax diverts and barrings are set in the settings of the Fax application. Data barring is set in the Internet settings. Data calls cannot be diverted.

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 network services.

The phone may be off, or the communicator is low on memory. See problem 16.

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 barrings or fax diverts may be active. Fax barrings/diverts are set in the settings of the Fax application, data barrings are set in the Internet settings.

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

Mail reception: Your SIM card may not have a phone number for data connections. Contact your 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. Contact your e-mail service provider. If you are using the *Upon request* sending option, mail must be sent in the Document outbox, see "To send mail" on page 92.

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 centre number is missing or incorrect. Contact your service provider.

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

10. Cannot establish a Terminal or Internet connection

The Internet, Mail, WWW, or Terminal settings and configurations may be missing or incorrect. Check your Internet access point configurations in the Internet main settings. Contact your Internet service provider for the correct settings. See "Internet settings" on page 86.

If you receive internal error messages, remove and replace the battery and try again. If the problem persists, see problem 4.

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.

11. Infrared problems

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

If you are using the PC Suite for Nokia 9110 Communicator program on your PC, or if you want to receive data from another communicator or a digital camera, you will have to start the Infrared activation application on your communicator before the connection is made. See "Infrared activation" on page 131.

If you are using the Nokia Communicator Server program on the PC, the infrared connection is established automatically when you use one of the PC connectivity applications of the communicator.

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. For more information on IrDA drivers and their use in Windows 95, contact Microsoft.

For further information, see the Documentation section on the CD-ROM in the sales package of the communicator.

12. Printing problems

If you are using the infrared connection, the infrared port of the printer must be compatible to the IrDA standard. See "Document features" on page 34.

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 "To send faxes" on page 71.

Check that your printing settings are correct, see "System settings" on page 125.

You may be using an incorrect printer driver, see "Document features" on page 34.

13. PC connectivity problems

Make sure that the correct PC connectivity program is installed and running on your PC. See chapter 4 "Computer connectivity" on page 39.

Check the cable or infrared connection used. If you use an infrared connection, the IR ports must be facing each other.

Check that you are using the correct COM port.

14. 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 ETSI 07.07 standard and supported by the Nokia 9110 Communicator are listed in the *atcomm.txt* file on the diskette supplied with the communicator. For information on how to use the AT commands, consult the documentation of the telecommunication or fax application that you use on your PC.

15. Access code problems

The lock code is included in the sales package of the communicator. 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 network operator.

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

16. Low on memory

If you notice that the memory of your communicator is getting low, or you receive a warning note about insufficient memory, check the Memory application.

- 1 Press **Details** to see what kind of data takes up most memory. See "Memory" on page 130.
- 2 Make a backup of all important data.
- 3 Remove items which use a lot of memory, such as documents, received faxes, or old calendar data, either manually or with the Data removal application. See "Memory" on page 130. Or you can transfer the items to your memory card.

Note: Downloaded images, received faxes, and recordings may take up significant amounts of memory space.

17. Distorted characters in Terminal

If the data bits/stop bits/parity settings are different from those defined to the data service by the operator, characters may look distorted on the display.

18. ISDN connection

If you use an ISDN connection, go to the Internet settings and select *Internet access*. Select the access point you use or define a new one. In the *Advanced settings*, go to *Modem initialisation*. Enter the AT command `AT+CBST=71` on the dotted line.

16. Care and maintenance

Your Nokia 9110 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.

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. Unauthorised 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.

17. 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's 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.

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 minimise the potential for in-

terference.

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 (e.g. 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 facilities: 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 refuelling 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 network 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 9110 Communicator, like any wireless phone, operates using radio signals, wireless and landline networks as well as user-programmed functions which cannot guarantee connection in all conditions. Therefore you should never rely solely upon any wireless phone for essential communications (e.g. 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 networks or when certain network 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 the cover.
- 2 If the phone is not on, switch it on by pressing the  key. Some networks 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 emergency number for your present location (e.g. 112 or other official emergency number). Emergency numbers vary by location.
- 5 Press the  key.

If certain features are in use (call barring, fixed dialling, closed user group, 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.

To use this manual

The wireless phone described in this manual is approved for use in the GSM networks.

A number of features included in this manual are called network services. They are special services provided by wireless service providers. Before you can take advantage of any of these network services, you must subscribe to the service(s) you require from your home service provider and obtain instructions for their use. You can then activate these functions as described in this manual. The manual activation commands for various services are not presented in this manual (e.g., using the * and # characters for activating or deactivating services). The Nokia 9110 Communicator, nevertheless, is capable of handling commands given in that form. For these commands, please consult with your service providers.

WARNING! This apparatus is intended for use when supplied with power from a Lithium-ion battery and chargers ACP-9E, ACP-9X and ACP-9A. 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.

Glossary

A 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 9110 Communicator are available in the *atcomm.txt* file on the diskette included in the sales package of your communicator.

B Barring password

The barring password is a 4-digit code needed to change fax and voice call barrings, see "Telephone settings" on page 65. The password is not located in your communicator or SIM card, but in the network. You obtain the password from your network operator when you subscribe to the call barring service.

C 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, etc.

D Domain name and Host name

The terms "domain name" and "host name" are sometimes, slightly inaccurately, used as synonyms. In a fully qualified 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.

DTMF (Dual Tone Multi-Frequency) tones

DTMF tones are the tones you hear when you press the number keys on the phone keypad. DTMF tones allow you to communicate with voice mailboxes, computerised telephony systems, etc.

H Hotspot

A WWW page may contain hotspots, such as selection lists, text entry fields, and reset/submit buttons, which enable you to input information into the World Wide Web.

HTML (Hypertext Markup 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.

Hyperlink

Hyperlinks are used to move from one WWW page to another.

I 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 or by your own company.

Images, inline, external

Images within a fetched 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.

IP (Internet Protocol) address

All computers and other devices connected to the Internet using the Internet Protocol have their own individual addresses. The address consists of four numbers separated by points: for example, 131.227.21.167.

L Lock code

The lock code is a five-digit code needed to lock and unlock the communicator. The lock code is also required when you change certain settings. You will find the lock code on a sticker in the sales package of your communicator. Keep it secret and in a safe place, separate from the communicator.

M 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.

P **PIN (Personal Identity Number) code**

The PIN code protects your phone from unauthorised use. The PIN code is supplied with the SIM card. If the PIN code request is set on, 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.

PPP (Point to Point Protocol)

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 unauthorised 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 fetching 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 network operator.

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 network operator.

You cannot change the PUK2 code.

S 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.

SMTP (Simple Mail Transport Protocol)

An Internet protocol governing the transfer of electronic mail.

SSL (Secure Socket Layer)

A security protocol that prevents eavesdropping, tampering, or message forgery over the Internet. Documents using SSL are identified with the prefix HTTPS.

T 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.

U URL (Uniform Resource Locator)

Link information required by the WWW to connect to a given WWW host computer. The URL usually starts with *http://* followed by *www*. 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..."

V Voice mailbox

A voice mailbox is a network service or a personal answering machine where people can leave you voice messages.

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PC Suite for
Nokia 9110
and 9110i
Communicator
User's Guide

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<p>Notice: The contents of this manual reflect the PC Suite for Nokia 9110 Communicator program at press-time. For information about changes to the software (or system support) that may have occurred since the manual was printed, refer to the Readme file or on-line Help.</p>
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Chapter 1 : Before You Begin

This chapter introduces PC Suite for Nokia 9110 Communicator and instructs you on how to get started using the software.

Topics include:

- ◆ Introduction to PC Suite for Nokia 9110 Communicator
- ◆ System Requirements
- ◆ Installing the Software
- ◆ Program Icons
- ◆ The Opening Screen
- ◆ PC Suite Menu Commands
- ◆ Shortcut Commands
- ◆ Component Icons
- ◆ The Preferences Dialogue
- ◆ Communicator Recognition
- ◆ Preparing Your Communicator for a Data Transfer
- ◆ Desk Stand Button Settings

Introduction to PC Suite for Nokia 9110 Communicator

PC Suite for Nokia 9110 Communicator is a *suite* of functions that allow for the easy transfer of data between your Nokia 9110 Communicator and the PC applications you rely on most.

- ◆ PC Suite's Intellisync® component lets you synchronise your Nokia 9110 Communicator's Contacts, Calendar, and To-do list applications with a host of popular Windows applications.
- ◆ The Contacts application provides a PC Contacts file that is compatible, field-for-field, with your communicator's Contacts application.
- ◆ The Backup/Restore component lets you back up the data on your Nokia 9110 Communicator for safe keeping, and restore it if need be.
- ◆ Import/Export functions import and export Calendar and Contacts files between your communicator and PC.
- ◆ The Install/Remove component installs software to and removes software from your communicator.
- ◆ File Transfer functions let you select, move, copy, paste, rename, and delete communicator or PC files in a Windows Explorer-type environment.

System Requirements

In order to use PC Suite for Nokia 9110 Communicator, your PC must meet the following minimum system requirements:

- ◆ Windows 95/98/2000, Windows NT 4.0
- ◆ IBM-compatible 486 PC or higher
- ◆ 15 MB available hard disk space
- ◆ VGA monitor or better
- ◆ CD ROM drive
- ◆ One available serial or infrared port

Installing the Software

Follow these steps to install the PC Suite software on your PC:

1. Insert your CD into your CD ROM drive. The program should launch itself automatically. If it does not, continue following these instructions.
2. Click the Windows **Start** button; then click **Run**.
3. Type **d:\9110.exe** in the command line (substitute the letter "d" with the letter of your CD drive).
4. Press **Enter**.
5. A series of screens is presented. Follow on-screen instructions, and note:
 - ◆ You are asked to specify the PC COM port you will use to connect your communicator to your PC. If you will be connecting via infrared, check the box labelled **Infrared Port**.

- ◆ You are given the option of performing a **Complete** or **Custom** installation. If you choose **Custom**, you are presented with a screen labelled **Select Components**. This screen lists the PC applications supported by the PC suite Intellisync function. Un-checking an application in this screen removes support for that system. (Thus, cutting down on the disk space used by PC Suite.)

Note: If you un-check a PC application in this screen, but later want to restore support for that system, re-install PC Suite and check the application in the Select Components screen. (Don't un-install Intellisync before re-installing.) To avoid losing custom settings (including field mapping) un-check **PC Suite Program Files** in the Select Components screen. A re-installation of the software is the only case in which you should un-check PC Suite Program Files.

When installation is complete, a program group containing a set of PC Suite icons will have been created.

- ▶ To access the program group, click **Programs** on the Windows **Start** menu. Then click on **PC Suite for Nokia 9110 Communicator**.

Program Icons

When you install the PC Suite for Nokia 9110 Communicator software, a set of icons is created.



The **PC Suite for Nokia 9110 Communicator** icon accesses the PC Suite opening screen.



The **Help** icon accesses the on-line Help system.




The **Readme** icon displays a text file containing last-minute information not included in the manual or Help topics.

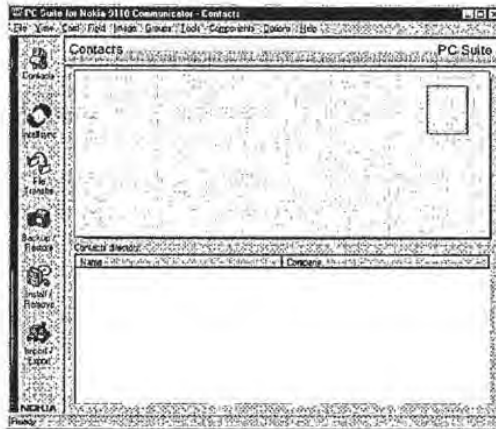


The **Uninstall** icon can be used to remove the PC Suite software from your PC.

The Opening Screen

Click the  **PC Suite for Nokia 9110 Communicator** icon in the PC Suite program group to start the PC Suite software. From the opening screen, all PC Suite components can be accessed via icons or menu commands.

The first time you open the PC Suite application, the Contacts component is open. Thereafter, the last-visited PC Suite component is open when you start the software.



PC Suite Menu Commands

Each PC Suite component displays its own set of command menus at the top of the screen. Refer to the component-specific sections of this manual for information on the menus that apply to each component.

Shortcut Commands

Most PC Suite commands that are executed by mouse-clicking on a button or menu item can also be initiated from your keyboard. Simply hold down the Alt key and press the letter that is underlined in the button or menu item.

Component Icons

Component icons are located on the left side of the PC Suite opening screen. These work as follows:

Note that you can "drag and drop" component icons to re-order them on the PC Suite screen.



The **Contacts** icon starts the Contacts application, which installs with PC Suite to provide field-for-field compatibility with your Nokia 9110 Communicator's Contacts application.



The **Synchronise** icon accesses the Intellisync component, which synchronises, imports, or exports data between records in your communicator and PC application.



The **Import/Export** icon accesses the PC Suite Import/Export function, which transfers Calendar and Contacts files between your communicator and your PC.



The **Backup/Restore** icon accesses PC Suite's Backup and Restore functions, which can be used to backup and, if need be, restore, the data on your Nokia 9110 Communicator.



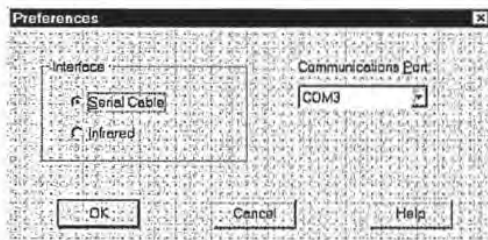
The **Install/Remove** icon accesses PC Suite's Install/Remove component, which can install software to, and remove software from, your Nokia 9110 Communicator's main memory or memory card.



The **File Transfer** icon displays a Windows Explorer-type dialogue that lets you cut, copy, paste, and move files between your communicator and your PC.

The Preferences Dialogue

Selecting the **Preferences** command from the PC Suite Options menu displays the **Preferences** dialogue. Before using PC Suite, make sure the settings in this dialogue are configured correctly.



- ◆ Select the radio button labelled **Serial Cable** if you are using a serial cable to connect your communicator to your PC.
- ◆ Select **Infrared** if you are using infrared communication.
- ◆ The **Communications Port** setting specifies the COM port you are using to connect your communicator to your PC. If you are using infrared, make sure you specify the port that is assigned for infrared connection.

Communicator Recognition

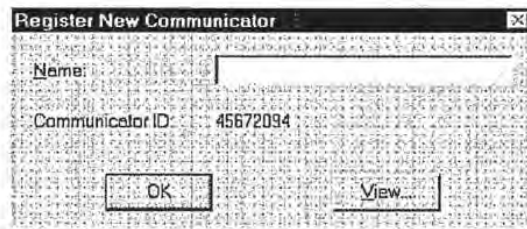
PC Suite functions allow you to configure operations—for example, Backup and Intellisync Synchronisations—for multiple communicators.

Because each Nokia 9110 Communicator has a *unique ID* number, PC Suite for Nokia 9110 Communicator has the ability to recognise individual communicators when they are connected to your PC.

To configure an operation for a *particular* communicator, you simply connect the communicator to your PC (or establish an infrared connection) and configure an operation. Thereafter, any time you connect *that* communicator and give a PC Suite command to run a configured operation, PC Suite recognises the communicator and runs the operation defined for that communicator.

Naming your Communicator

The very first time you connect a particular communicator to your PC—whether by serial cable or via infrared—PC Suite asks you for a *Name* to associate with the communicator.

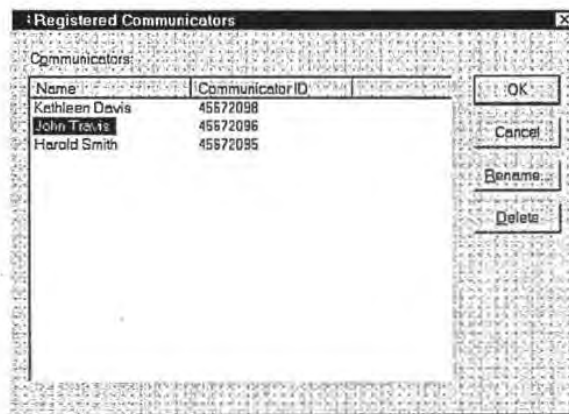


Assigning a name to each communicator allows PC Suite to associate each communicator (and the operations that are configured for that communicator) with a value that is more easily recognised than the communicator's ID number.

Pressing the **View** button in this prompt displays the "Registered Communicators" dialogue, which lists the communicators, if any, that have been connected and named.

This dialogue can be used to rename a communicator, or delete a communicator from the list of recognised communicators.

Deleting a communicator name in this dialogue deletes all files and settings associated with that communicator.



Note: The Registered Communicators dialogue can also be accessed from the Options menu.

Preparing Your Communicator for a Data Transfer


Refer to "The Preferences Dialogue" in this chapter for information on the PC Suite COM port setting.

PC Suite data transfer operations can occur via serial cable or infrared connection.

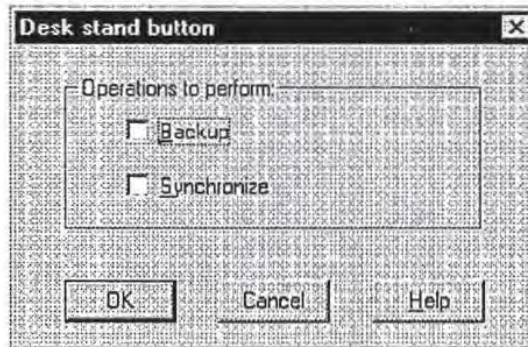
To prepare your communicator for a data transfer via serial cable: Connect your serial cable to your communicator and to the appropriate PC COM port. If you are using a desk stand, place your communicator in its desk stand with the desk stand serial cable connected to your PC COM port.

To prepare your communicator for a data transfer via infrared: Press the **System** button on your communicator. Select **IR activation** on the System menu. Then point your communicator at your PC infrared port or adapter.

Desk Stand Button Settings

If you use a desk stand, you can program the desk stand  synchronisation button to run the currently configured **Backup** and/or **Synchronise** operation whenever the program is active.

Click **Desk Stand Button Settings** in the Options menu to display the following dialogue:



This dialogue contains check boxes labelled **Backup** and **Synchronise**. Neither is checked by default.

- ◆ Check **Backup** if you want the desk stand synchronisation button to run the currently configured Backup operation.
- ◆ Check **Synchronise** if you want the desk stand synchronisation button to run the currently configured Intellisync operation.

If you check both **Backup** and **Synchronise**, both operations are performed when you click the desk stand synchronisation button, with the Backup operation occurring first.

Click **OK** to save your selection(s) and exit the dialogue. Clicking **Cancel** exits the dialogue without saving.

Chapter 2 : The Contacts Application

PC Suite for Nokia 9110 Communicator's Contacts component lets you create, edit, and update contact cards like those on your Nokia 9110 Communicator, and transfer them between your PC and your communicator.

Topics in this chapter include:

- ◆ Using the Contacts Application
- ◆ The Contacts Main Screen
- ◆ Opening and Saving a Database
- ◆ Creating a Contact Card Template
- ◆ Adding Contact Cards
- ◆ Card Menu Commands
- ◆ Editing Contact Cards
- ◆ Editing Contact Card Fields
- ◆ Adding Pictures to Contact Cards
- ◆ Creating and Editing Contact Groups
- ◆ Finding and Filtering Contact Information
- ◆ Importing Records from Another Database
- ◆ Updating *to* your Communicator
- ◆ Updating *from* your Communicator
- ◆ Synchronising your Contacts
- ◆ Contacts Menu Commands

Using the Contacts Application

PC Suite for Nokia 9110 Communicator's Contacts application lets you create, edit, and update contact cards like those on your Nokia 9110 Communicator, and transfer them between your PC and your communicator.

The Contacts Main Screen

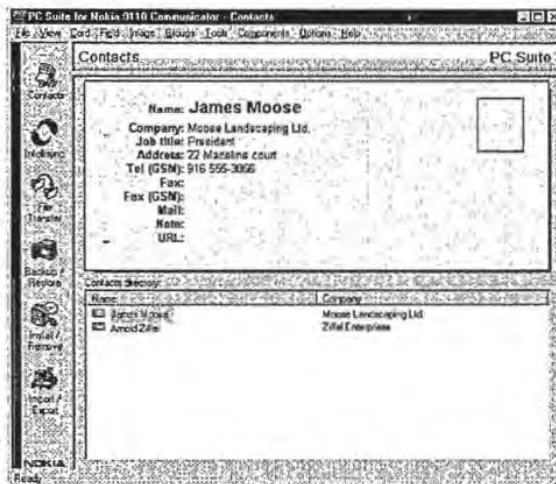


To access the Contacts application, click on the Contacts icon in the PC Suite opening screen.

To sort cards alphabetically by name, click on the **Name** heading in the lower part of the screen.

Clicking the **Name** heading toggles between alphabetical and reverse-alphabetical order.

To sort records similarly by **Company**, click the **Company** heading.



The Contacts main screen contains two windows. The lower window contains all the contact cards in the selected database. The top window shows the open contact card.

To open a contact card, click on a Contact name in the lower window.

Opening and Saving a Database

When you save a database, attached .JPG and .BMP image files are saved in a sub-directory. (Both .JPG and .BMP images saved in this sub-directory are converted to 16 bit grey scale JPEG format files.)

To create a new Contacts database, or open an existing database, click **Open** on the File menu and specify a database name and location. Use **File/Save** or **File/Save As** to save the current database.

Creating a Contact Card Template

Before you start creating Contact cards, you may want to alter the default Contact card template.

Follow these steps to create a template for the Contact cards you will create in Contacts:

Changing the Contact card template does not affect the form of existing cards.

1. Open the **Card** menu at the top of the Contacts main screen, and select **Template** to display the default Contact card template.

Note that menu options are sometimes disabled in the Field menu. For example, when the **Name** field is selected, *Change Label* and *Delete* are not available because you are not allowed to delete or rename the Name field.

2. In this template, you can *add* fields, *rename* fields, or *delete* fields from the default template. Simply select a field in the template and open the **Field** menu.

Field menu options include **Change Label**, **Add**, and **Delete**.

When the template is as you want it, you are ready to add new Contact cards to Contacts.

Adding Contact Cards

Follow these steps to create a new Contact card:

1. Click **Card** to open the Card menu.
2. Click **New**. This displays an empty Contact card (based on the current template) in the top window.
3. Fill out the card. Use the Enter key or up and down arrow keys to move between fields in the card template. (Note that as soon as you enter a Name value and move to another field, the new Contact card appears in the lower window.)
4. Repeat these steps for each card you want to create.
5. To save the new cards you've created, use the **File/Save** command.

Card Menu Commands

As described, the Template and New commands on the Contacts Card menu let you create a Contact card template and create new cards using the current template.

The complete set of Card menu commands is as follows:

- ◆ **New:** Lets you create a new Contact card.
- ◆ **Delete:** Deletes the open Contact card, or the Contact card selected in the Contacts directory portion of the screen.
- ◆ **Duplicate:** Copies the currently selected Contact card.
- ◆ **Copy Contents:** Copies the contents of the currently selected card to the Windows clipboard.
- ◆ **Template:** Displays the current Contact card template.

Editing Contact Cards

Editing Contacts cards in the Contacts application is easy. Simply select the card you want to edit, select the field whose value you want to change, and re-type the value.

Editing Contact Card Fields

You can also use the Field menu to edit the **fields** list for a particular card. Field menu commands include **Change Label**, **Add**, and **Delete**.

Changing a Field Label

The **Change Label** command on the Field menu lets you change the current field label to a label selected in a displayed list.



Note the text entry field at the lower right corner of list box. Typing a value here adds a parenthetical to the value selected in the list.

When you've specified the field label you want to use, click **OK** to redisplay the Contact card.

Note that you cannot change some field labels (e.g., Name, Company). When such fields are selected, the Change Label menu option is disabled.

Adding a Field

The Add command on the Field menu lets you add fields to the open Contact card. When you give the Add command, a list of fields displays.

See "The Add Field Labels List," next, for more information on the list of fields that you can select.



Note the text entry box at the lower right corner of the Add field dialogue. Typing a value here adds a parenthetical value to the field selected in the list—for example, Address (Business).

Once you've selected a field in this list, click **OK** to add the field to the open Contact card. Clicking **Cancel** exits without adding a field.

The Add Field List

The Add Field List contains the following fields:

C npany	The name of the company where the contact works.
J o b title	The job title of the contact.
A ddress	The address of the contact.
T e	The telephone number of the contact.
F a x	The fax number of the contact.
T e / F a x	If the contact has one phone number for both the telephone and the fax machine, write the number here.
M a il	The e-mail address of the contact.
D T M F	The DTMF (dial tone message format) string needed for communicating with the contact.
N ote	You can add important information such as birthday or office hours in this field.
U r l	The WWW address of the contact.
P a ssword	The calendar booking password of the contact.
R inging tone	The individual ringing tone set for the contact in the Nokia 9110 Communicator. Note that if you set an individual ringing tone to one that does not exist on the communicator, the default tone is played.
M e mber	The group(s) in which the contact is a member.

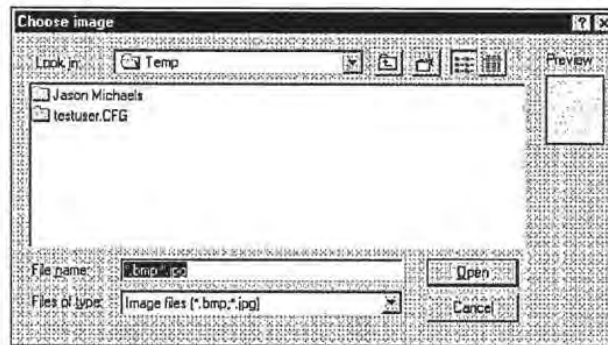
Deleting a Field

To delete a field from the open Contact card, highlight the field and give the File/Delete command.

Adding Pictures to Contact Cards

The Contacts application lets you add pictures to your Contact cards. A picture must first be stored on the PC in the .JPG or .BMP format.

To add a picture to the open Contact card, click on the picture frame at the upper right corner of the Contact card, or click **Image** and select **Add**. This displays a Choose Image dialogue.



In this dialogue, use standard Windows file location methods to find the file containing the picture you want to use. To select the picture file, highlight the filename and click **Open**. Then click **OK** to add the picture to the card.

If you want to add just a section of a picture to the card, use your mouse to select a rectangular portion of the picture before clicking the **OK** button.

Removing Pictures from Contacts Cards

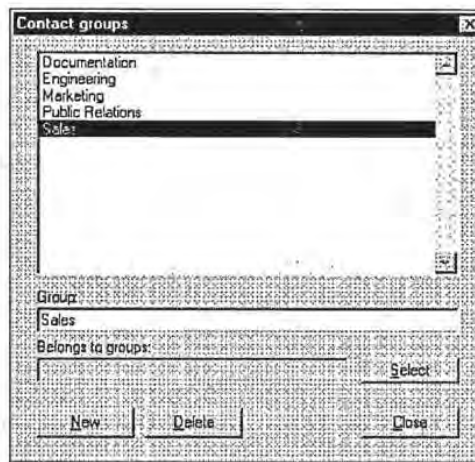
To remove a picture from the opened contact card, click **Image** and select **Delete**.

Creating and Editing Contact Groups

By default, Contact cards have a **Member** field. This field allows you to specify a group that the contact belongs to.

When you place the cursor in the Member field, a Select Group dialogue is displayed, listing the groups that are currently defined. To select from this list, highlight a group name and click **OK**.

To add to or change the Contact Group list, open the **Groups** menu and select **Edit**. This displays the Contact Group dialogue.



- ◆ **To add a new group to this list:** Click the **New** button and type a new Group name when prompted. Then click **OK**.
- ◆ **To assign a group in this list to the open Contact card:** Highlight the group name and click **Select**.

- ◆ **To remove a group from the Contact Group list:**
Highlight the Group name and click **Delete**.

Finding and Filtering Contact Information

The Contacts application's Tools menu contains commands that let you find and filter Contacts information.

Finding a Contact

To quickly find a Contact card, you can search for any text string using the Find command on the Tools menu.

Open the Tools menu and click **Find**. Then enter a string to be searched for.

When the string is located, the cards are resorted, and the Contact card containing the string is moved to the top of the list and displayed. If the string occurs in more than one card, additional cards containing the specified string are listed immediately below the displayed card.

Getting Contact Information

Giving the **Contact info** command on the Tools menu displays a dialogue containing general information about the currently open database—e.g., the number of records, the number of defined groups, etc.

Filtering Contacts into a New Database

The **Filter** command on the Tools menu is an efficient and versatile tool for filtering contacts from a large database into another database.

You can create search criteria row by row, and you can control the relationships between the criteria with the logical operators AND, OR, and NOT, and with parentheses. You can add as many search criteria as you want.

Search Criteria

At its simplest, a search criterion can be as follows:

Field = text

To create a search criterion, you select the name of a Contact card field from the Field list, and type in some text. For example:

Company = Bankers Ltd.

With this search criterion, all Contact cards that have **Bankers Ltd.** in the Company field would be fetched from the database.

You can also add wildcards (?) and (*) into the text criterion.

? corresponds to any single character. For example:

Name = ?im

finds all Contact cards in which the Name field begins with any character and ends with *im* (i.e. Kim, Tim, etc.).

* corresponds to any string of characters. For example:

Company = Bank*

searches for Contact cards in which the Company field begins with *Bank* (i.e. Bankers Ltd., Banking, BankSaving).

You can also select an asterisk (*) as the Contact field. For example:

The text field is case insensitive; that is, capital and lower-case letters are treated equally.

*** = Bank***

finds Contact cards in which any field begins with *Bank*.

Using the Logical Operators

The logical operators NOT, AND, and OR allow you to create more complex filters.

- ◆ **NOT** negates the search criterion. For example:

NOT Company = Bankers Ltd.

searches for all Contact cards in which the Company is **not** *Bankers Ltd.*

- ◆ **AND** joins two search criteria together, so that both of them apply to the search. For example:

Name = James

AND Company = Bankers Ltd.

finds all Contact cards in which the Name is *James* and the Company is *Bankers Ltd.*

- ◆ **OR** joins two search criteria together, but only one of them needs to be true for a Contact card to be selected. For example:

Name = James

OR Company = Bankers Ltd.

searches for Contact cards in which the Name is *James* or the Company is *Bankers Ltd.*

Using Parentheses

Using parentheses, you can combine search criteria. For example:

**Name = James
AND (Company = Bankers Ltd. OR Company = Global Air)**

finds all the contacts named *James* who work either for *Bankers* or *Global Air*.

Note: The closing parenthesis is selected in the input field located on the far right of the Filter contacts dialogue. Note, however, that it only becomes available when a starting parenthesis is selected.

To Use Filtering

When you open the Filter contacts dialogue, the first row gives an example of a search criterion:

Name = *

This matches all Name fields in the database. Edit this sample criterion using the following steps. Then add additional criteria as needed.

To edit or create a criterion:

1. If necessary, select a logical operator on the far left. In the first row, you can only select NOT.
2. In the Field column, select a field or a wildcard character.
3. Enter text (and/or wildcards) in the text input field.

To create new search criteria, use the **Insert** key. Remove existing ones with the **Delete** key.

Parentheses can be added to filters using the second and last input fields.

Executing the Filter

The open database is the source file from which records will be filtered. To open a different database, click the **Browse** button and select a new file.

Click the **Filter** button to perform the filtering operation. When the filtering is complete, the results, displayed in a separate window, can be saved.

Note that if you save the filtered records to an existing file, the contents of the file are overwritten (you are prompted to confirm the overwrite).

Note: Pictures (.JPG or .BMP files) are saved in a Contact images subfolder of the database you save.

Importing Records from Another Database

The Contacts application lets you add records from one Contacts database into another. Simply give the **Import from file** command on the File menu and specify a file. The records (including images) in the file you choose will be added to the open database.

Refer to "Synchronising Your Contacts" later in this chapter for more information on how the "Update" commands work.

Updating *to* your Communicator

The Contacts application's *File/Update to Communicator* command updates your communicator with records from the open database. That is, records in the open database that are not already contained in your communicator are added to the communicator.

Follow these steps:

1. Start Contacts and open the Contacts database that contains the records you want transferred to your communicator.
2. Connect your communicator to your PC COM port or establish an infrared connection.

If you're prompted to do so, enter a name for your communicator.

3. Open the File menu and click **Update to Communicator**.

Updating *from* your Communicator

The Contacts application's *File/Update from Communicator* command updates the open Contacts database with records from your communicator. That is, records in your communicator that are not already contained in the open database are added to the database.

Follow these steps:

1. Start Contacts and open the database that you want updated.
2. Connect your communicator to your PC COM port or establish an infrared connection. If you're prompted to do so, enter a name for your communicator.
3. Open the File menu and click **Update from Communicator**.

Synchronising your Contacts

If you were to give the **Update to Communicator** and **Update From Communicator** commands one after the other, each of your systems would contain the same set of Contact records. However, synchronising records in this fashion can result in the creation of "duplicate" records.

Why? During the updating process, records in your two systems are compared. If a record in the system you are updating from is not *identical*, field for field, to a record in the other system, it is transferred. This means, for example, that if each of your systems has a Contact card for John Johansen, but the phone numbers in the two cards are different, a *duplicate* card (containing a different phone number) is created in the target system when you give the "Update" command.

If you want to synchronise your Contact records and avoid the possibility of creating duplicate records, use the Intellisync synchronisation function described in Chapter 3.

Contacts Menu Commands

FILE	
Open	<i>Opens a Contacts database.</i>
Save	<i>Saves the open database.</i>
Save As	<i>Saves the open database to a given location.</i>
Import from file	<i>Imports records from another file into the open database.</i>
Update to communicator	<i>Updates communicator with records in the open database.</i>
Update from communicator	<i>Updates the open database with Contact records from your communicator.</i>
Exit	<i>Exits PC Suite.</i>

VIEW	
Status Bar	<i>Toggles status bar on and off.</i>

CARD	
New	<i>Creates a new Contact card.</i>
Delete	<i>Deletes the open Contact card.</i>
Duplicate	<i>Copies the open Contact card.</i>
Copy Contacts	<i>Copies the contents of the open card to the Windows Clipboard.</i>
Template	<i>Lets you change the default Contact card template.</i>

FIELD	
Change label	<i>Lets you change the selected field label.</i>
Add	<i>Lets you add a field to the open Contact card.</i>
Delete	<i>Deletes the field selected in the open Contact card.</i>

IMAGE	
Add	<i>Lets you add a picture to the open Contact card.</i>
Delete	<i>Deletes the picture from the open card.</i>

GROUPS	
Edit	<i>Lets you edit the Groups list.</i>

TOOLS	
Find	<i>Lets you find a Contact card containing a given string.</i>
Contact Info	<i>Shows you how much data is in the open database.</i>
Filter Contacts	<i>Lets you conduct an advanced search of the open database, and save "matching" records to another database.</i>

COMPONENTS	
Contacts	<i>Starts Contacts application component.</i>
Intellisync	<i>Accesses Intellisync component.</i>
File Transfer	<i>Accesses File Transfer component.</i>
Backup/Restore	<i>Accesses Backup/Restore component.</i>
Install/Remove	<i>Accesses Install/Remove component.</i>
Import/Export	<i>Accesses Import/Export component.</i>

OPTIONS	
Desk Stand Button Settings	<i>Displays desk stand button options.</i>
Registered Communicators	<i>Lists the communicators that have been connected and named.</i>
Preferences	<i>Displays the Preferences Dialogue.</i>

HELP	
Contents	<i>Displays on-line Help Contents.</i>
Commands	<i>Displays command information.</i>
Using Help	<i>Accesses Help for on-line Help.</i>
About PC Suite	<i>Displays "About PC Suite" dialogue.</i>

Chapter 3 : Intellisync

Intellisync's Synchronisation function compares records in your Nokia 9110 Communicator to records in your PC application. It then makes whatever changes are necessary in each system to ensure that each contains the same up-to-date information.

This chapter explains how Intellisync works, and guides you, step-by-step, through the process of running your first synchronisation.

Sections include:

- ◆ Quick Start Tutorial
- ◆ Intellisync Advanced Settings Dialogues
- ◆ Intellisync Special Topics
- ◆ Intellisync Glossary
- ◆ Intellisync Menu Commands

Quick Start Tutorial

Refer to "Synchronisation and History Files" under "Intellisync Special Topics" for information on how synchronisation is achieved.

See "Importing and Exporting Data" in "Intellisync Special Topics" for information specific to Intellisync Import and Export operations.

Refer to "Communicator Recognition" in Chapter 1 for information on how you can use PC Suite for Nokia 9110 Communicator with multiple communicators.

This "Quick Start" tutorial describes the most basic Intellisync dialogues, and guides you through the process of setting up and running your first Intellisync synchronisation. For information about Intellisync "Advanced Settings," refer to "Intellisync Advanced Settings Dialogues" later in this chapter.

Note: For simplicity, this tutorial emphasises **synchronisation**. However, the steps shown here can also be used to configure Intellisync **imports** and **exports** of data. The only difference is in the choice of a button in the Intellisync Choose Translator dialogue.

Synchronising Data

Intellisync is designed to simplify the synchronisation of data between your communicator and your PC. Synchronisation can be accomplished with little more than the press of a button. Before you can execute an operation for the first time, however, you must configure the operation you want to perform.

Once you have set up your configuration parameters for a particular communicator, you never need to configure again unless you want to change the nature of the operation.

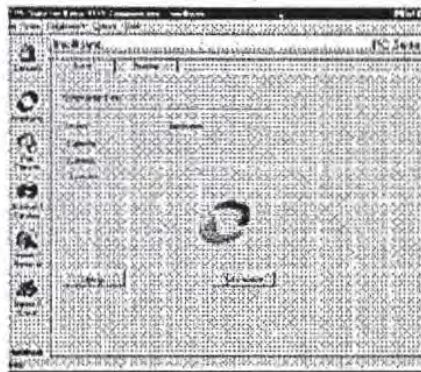
Before starting this tutorial, read "Intellisync Address Formats" under "Intellisync Special Topics" in this chapter.



Refer to "Remote Synchronisation" under "Intellisync Special Topics" for information about performing remote synchronisations.

Follow these steps to set up and perform your first synchronisation:

1. Click the PC Suite for Nokia 9110 Communicator icon in the PC Suite program folder to display the PC Suite opening screen.
2. Click the Intellisync icon on the opening screen to access Intellisync. The Local tab is selected by default.



3. Connect your communicator's serial cable to the appropriate PC COM port. (If you're using a desk stand, place your communicator into its desk stand.) If you're using infrared, establish an infrared connection between your communicator and PC.

If you're prompted to do so, enter a name for your communicator.

4. Click the **Settings** button.

Refer to "Address Formats" under "Intellisync Special Topics" for complete information on selecting an Address Format—including what you should do if none of the formats correspond to the formatting of your data.

5. You may be presented with a dialogue containing the tabs **Format** and **File**. This dialogue only displays the first time you configure an operation for a particular communicator. (Thereafter you can change settings in this dialogue using the **Contacts** command on the **Options** menu.)

- ◆ In the **Format** tab, select the address format that you are using for addresses in your communicator (see margin note).
- ◆ In the **File** tab, indicate if you want to synchronise **Contacts** on the communicator's main memory, or on the **Memory** card. If you choose the latter, specify the file you want synchronised.

When you've made your selections, click **OK** to display the Configuration dialogue.

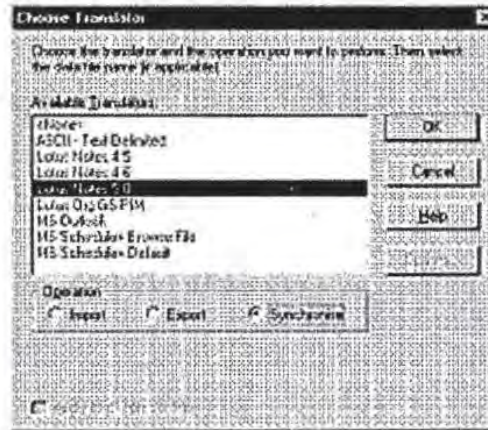


The Configuration dialogue contains an "Applications" list containing your communicator's **Calendar**, **Contacts**, and **To-do list** applications.

6. Click on the **Nokia 9110 Communicator** application you want to configure.
7. Click **Choose** to enter the **Choose Translator** dialogue.

This dialogue lists all the PC applications that are compatible with the Nokia 9110 Communicator application you selected.

When it's present, checking the **Apply to all applications** check box at the bottom of the Choose Translator dialogue configures all compatible Nokia 9110 Communicator "applications" with the PC application and file you selected. If all of the data you want synchronised is in a single file or folder, check this option to configure all of your communicator's applications at once.



8. Specify the application and (if necessary) the file you want to synchronise. (Use the **Browse** button for file selection to avoid making typos when typing in complicated paths.)

Notes:

- If you are synchronising with Outlook, you will specify a folder instead of a file. Use the **Browse** button for folder selection.
- If you are synchronising with Schedule+ 7.0, you must select **Schedule+ Default** (you do not need to specify a file; the open or last used file is used by default). If you are using Schedule+ 7.0a or 7.5, you can select either **Schedule+ Default** or **Schedule+ Browse File**. However, if you want to select a file, you must select **Schedule+ Browse File**. Otherwise the open or last used file is selected automatically.

For information about Options dialogue settings, click the **Help** button and refer to the **Supported Systems** on-line Help topic for the PC application you are using.

9. If necessary, select the operation you want to perform. **Synchronise** is normally selected by default. (Synchronise is not supported for ASCII - Text Delimited.)
10. If the **Options** button is enabled, click it. This accesses special application-specific settings that apply to the selected PC application. If necessary, adjust settings in the Options dialogue. Then click **OK**.
11. Click the **OK** button in the Choose Translator dialogue to return to the Configuration dialogue.

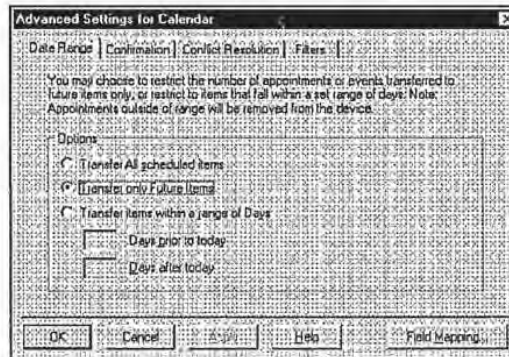


Now the PC application you selected appears next to the communicator's application name, and a two-way arrow appears between the application names. (A one-way arrow appears if you selected Import or Export.)

Note the check box adjacent to the highlighted applications. By default, this box is checked, indicating that the data is activated for synchronisation. (If you un-check this box, the data will not be synchronised.)

Refer to "Intellisync Advanced Settings Dialogues" later in this chapter for information on "Advanced" settings.

12. To review or alter settings or field mapping for a particular application, select the **Advanced** button to access the Intellisync Advanced Settings dialogue. (Intellisync provides default values for all "Advanced" settings.)



13. When you're ready to exit the Advanced Settings dialogue, click **OK** or **Cancel**.
14. Repeat steps 6 through 13 for each Nokia 9110 Communicator application you want to synchronise (not necessary if you checked **Apply to all applications** in the Choose Translator dialogue).
15. When you're ready to perform the operation, click the **OK** button at the bottom of the Configuration dialogue.
16. Click the **Synchronise** button on the Intellisync opening screen.
17. If prompted, resolve data conflicts.
18. A confirmation prompt appears, showing you how many adds, changes, and deletes will be applied to each of your systems if you proceed with the operation. Click **Accept** to proceed, or **Cancel**.

Refer to "The Conflict Resolution Tab" under "Intellisync Advanced Settings Dialogues" for information on how to resolve data conflicts during synchronisations. See "The Confirmation Tab" in the same section for information on the confirmation prompt.

Intellisync History Files

For each set of data you synchronise, a **history file** is used to determine the changes that must be made in each of your systems in order to achieve synchronisation. This file is **created** by the first synchronisation of the data. Therefore, a "first-run" synchronisation is different from (and may take longer than) subsequent synchronisations. A first-run synchronisation simply merges the contents of your two systems. The Conflict Resolution setting in the Advanced Settings dialogue is used to resolve conflicts between the systems.

See "The Conflict Resolution Tab" under "Intellisync Advanced Settings Dialogues" for information on the Conflict Resolution setting.

For information on how history files are used in the process of synchronisation, see "Synchronisation and History Files" under "Intellisync Special Topics."

If you use a desk stand with your communicator, refer to "Desk Stand Button Settings" in Chapter 1 for information on how you can program your desk stand synchronisation button to execute the currently configured Intellisync operation.

Re-Running the Operation

Now that you have configured a synchronisation, re-executing the operation is basically a one-step operation. To re-run the operation, simply prepare your communicator for synchronisation and click the **Synchronise** button on the Intellisync opening screen.

Taskbar Synchronisation

To run a synchronisation from the taskbar, simply click on the program icon on the taskbar, press the right mouse button, and select **Synchronise** from the pop-up menu.

Synchronisation Notes:

- Refer to "The Filters Tab" under "Intellisync Advanced Settings Dialogues" for information about filtering records for synchronisation.
- During Intellisync transfers of data between your communicator and the Contacts application, pictures attached to Contacts cards are ignored. Use PC Suite File Transfer commands to transfer .JPG and .BMP files between your communicator and PC.
- Some PC applications have to be running during synchronisations. If you are synchronising with one of these applications, you may see Intellisync open the application during the operation. (Refer to the Supported Systems section of on-line Help for information about whether or not the system you're using needs to be open or closed during data transfers.)
- Data can be transferred between records in your communicator and your PC applications because fields in the two systems are "mapped" (linked). Intellisync provides default "field mapping," but you may want to alter mapping to re-direct (or prevent) the flow of data. Refer to "The Field Mapping Dialogue" under "Intellisync Advanced Settings Dialogues" for complete information.
- Once you have synchronised a particular set of data, changing field mapping causes the next synchronisation of that data to be, in effect, a first-run synchronisation. Refer to "Intellisync History Files" and "Synchronisation and History Files" in this chapter for an explanation of *first-run* synchronisations.
- When you synchronise a Nokia 9110 Communicator application, it is automatically synchronised with all sections in the selected PC application that are compatible with that application.
- For information about how to perform synchronisations remotely, see "Remote Synchronisation" under "Intellisync Special Topics."

Intellisync Advanced Settings Dialogues

When you run a synchronisation, the operation is affected by settings contained in a set of Intellisync "Advanced Settings" dialogues. This section describes these dialogues.

Topics include:

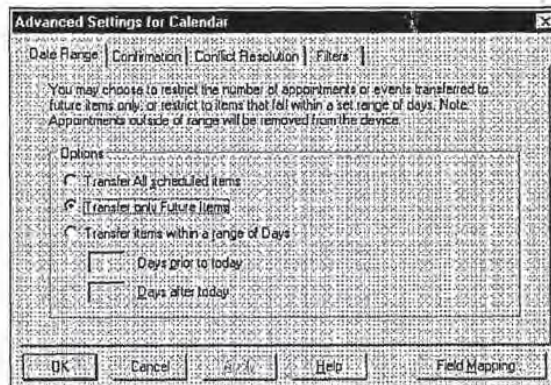
- ◆ Advanced Settings Tabs
- ◆ The Field Mapping Dialogue

Advanced Settings Tabs

Refer to the Quick Start Tutorial for information on the Intellisync Configuration and Choose Translator dialogues.

When you click the **Advanced** button in the Intellisync Configuration dialogue, the tabbed **Advanced Settings** dialogue for the selected Nokia 9110 Communicator application appears.

Clicking the **OK** button in this dialogue saves the current setting and exits the dialogue. Clicking **Apply** saves without exiting.



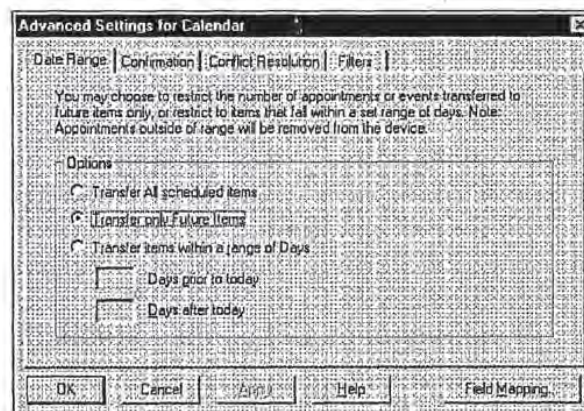
If a setting doesn't apply to the Nokia 9110 Communicator application currently selected in the Configuration dialogue, it is not presented. For example, when the Contacts application is selected, neither the Date Range nor the To-do List tabs are displayed.

The tabs in this dialogue contains the following settings and features:

- ◆ **Date Range:** Determines the range of Date Book items to be included in the operation.
- ◆ **To-do List:** Determines if *all* To-do items, or only *pending* To-do items will be included in the operation.
- ◆ **Confirmation:** Determines when and if a confirmation prompt will appear before a synchronisation takes place.
- ◆ **Conflict Resolution:** Determines how data conflicts will be resolved if they are detected during a synchronisation.
- ◆ **Filters:** Lets you create filters that exclude some records from synchronisation (or import/export).

The Date Range Tab

The Date Range setting in this tab determines the range of **Calendar** items that will be included in a data transfer.



You are presented with three options in this dialogue:

- ◆ **Transfer All Scheduled Items:** Transfers all dated items.
 - ◆ **Transfer Only Future Items:** Transfers only future items.
 - ◆ **Transfer Items Within a Range of Days:** Transfers items within a specified number of days before and after “today.”
- ▶ To select an option, click on the radio button next to the one you want.
- ▶ If you select the **Transfer items with a Range of Days** option, enter numbers in the boxes labelled **Days prior to today** and **Days after today**.

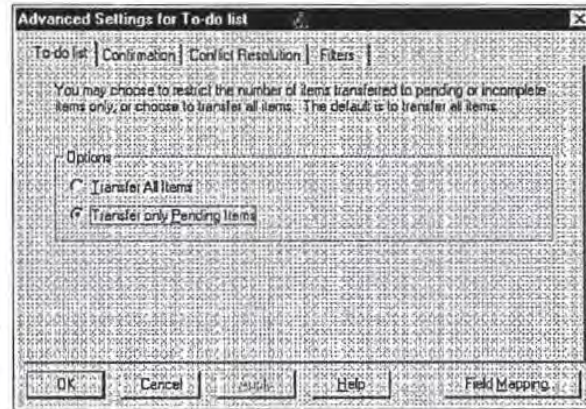
Notes:

- The “**Range of Days**” option allows you to create a relative date range that automatically moves with time. For example, if you have selected the range **30 days prior to today**, and **30 days after today**, the two month range adjusts itself automatically. That is, as today moves forward in time, so does the relative date range.
- When you run a synchronisation, records that were included in the previous synchronisation will be synchronised *whether or not they fall within the currently specified date range*. (Intellisync identifies these items by looking at the history file for the previous synchronisation). Note, however, that only those items that fall within the *currently specified* date range will be included in the update of the history file (and therefore synchronised during the next synchronisation of the data).

The To-do List Tab

The To-do setting in this tab determines whether all To-do list items or only pending To-do list items will be included in an operation.

Transfer All Items is the default setting at installation.



- ▶ If you select **Transfer All Items**, all To-do list items, including those marked “completed,” will be included in the operation.
- ▶ If you select **Transfer only Pending Items**, To-do list items that are marked “completed” will not be included in the operation.

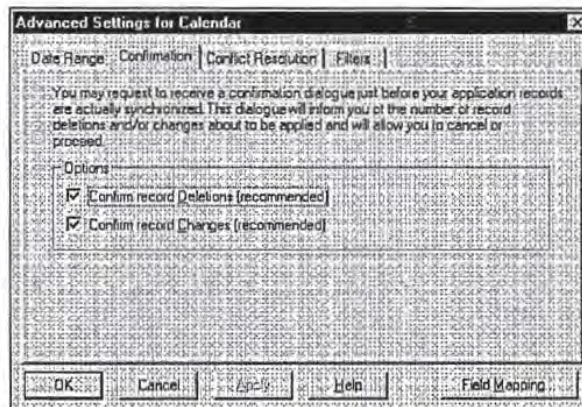
The Confirmation Tab

Confirmation prompts are only displayed during synchronisations. They do not appear during Intellisync imports or exports of data.

Before the results of a synchronisation are applied, you may be prompted to confirm the operation. The confirmation prompt—which lets you proceed with or cancel the operation, display details about what will occur, or execute a “full re-synchronisation”—is a safeguard against accidentally modifying or deleting the wrong data.

The setting in the Confirmation tab determines the conditions under which a confirmation dialogue appears.

At installation, both options are selected. Un-checking Confirm Record Deletions is not recommended.



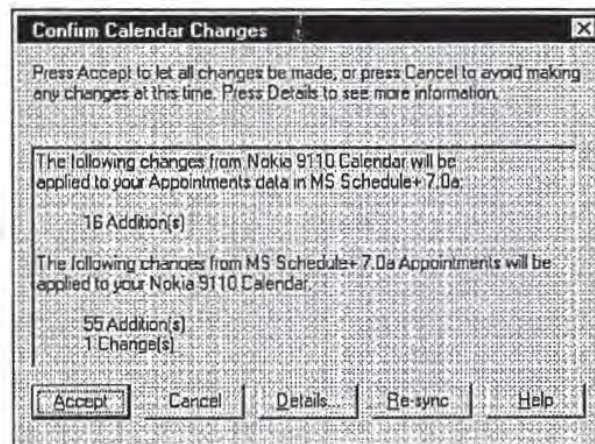
Two options are presented: **Confirm Record Deletions** and **Confirm Record Changes**.

Either, both, or neither can be selected.

- ▶ When **Confirm Record Deletions** is checked, the prompt appears if a synchronisation will result in the deletion of records.
- ▶ When **Confirm Record Changes** is checked, the prompt appears any time a synchronisation will add or change records.
- ▶ If **neither** of these options is checked, a confirmation prompt will only appear if the operation will result in the deletion of **all** records from a system.

This is a typical confirmation prompt:

A separate confirmation prompt is displayed for each Nokia 9110 Communicator application you are synchronising.



Note the five buttons at the bottom of the Confirmation prompt:

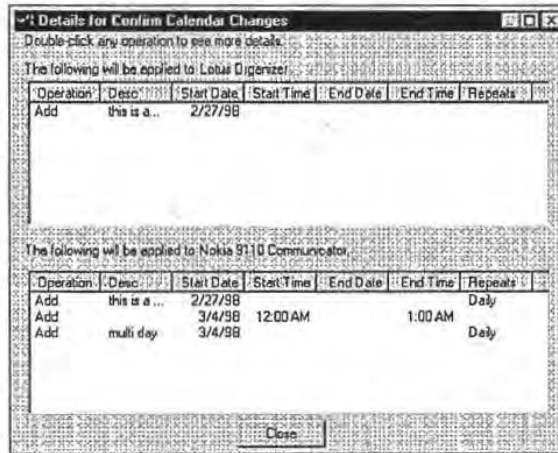
- **Accept:** Accepts the set of changes shown and continues the synchronisation.
- **Cancel:** Cancels the synchronisation.

Refer to "Full Re-Synchronisation" in "Intellisync Special Topics" for information on full re-synchronisation.

- **Details:** Displays a "Details" dialogue box showing a detailed description of what will occur if the synchronisation proceeds.
- **Re-sync:** Performs a *full re-synchronisation*—in effect, a "first -run" synchronisation.
- **Help:** Opens the Intellisync on-line Help system.

The Details Dialogue

The confirmation prompt that may appear before a synchronisation takes place contains a **Details** button. Use this button when you want to review the exact actions that will occur if the synchronisation proceeds.



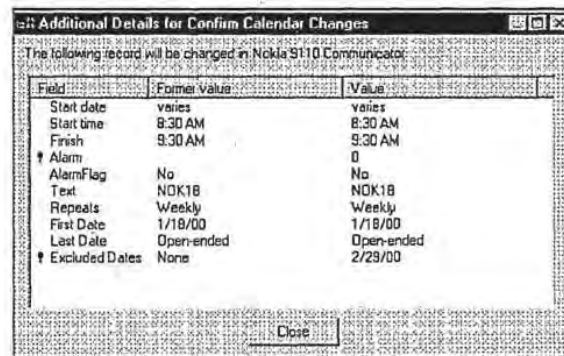
The Details dialogue contains a field-by-field representation of each of the records that will be affected by the synchronisation and, for each, notes the operation that will take place (Add, Change, Delete).

If changes will occur in both of your applications, a separate area of the dialogue will be shown for each.

The operation that will take place for each record is indicated in the first column of the Details dialogue.

To see *more* details about any single record, double click on the operation for that record. This displays an "Additional Details" dialogue.

Note that both the original and the new values are represented in this dialogue.



Notes:

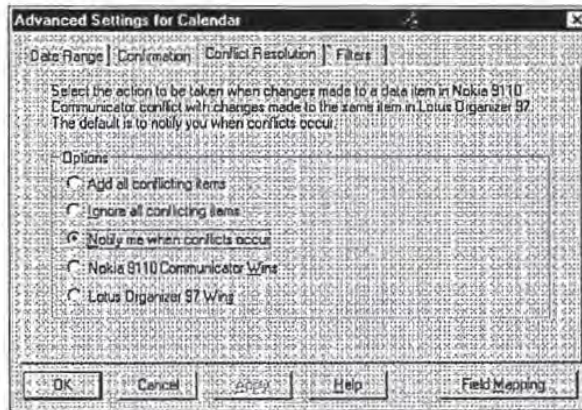
- Details dialogues can be resized. When you resize a dialogue, the position and size is remembered the next time you display a Details dialogue.
- Data in "Additional Details" dialogues can be sorted, in either ascending or descending order, by double clicking on the column heading (clicking the same column heading again sorts the column in the opposite order).
- To see the full contents of a field whose value is truncated in the Additional Details dialogue, double click on the field name. For a changed item, both the former and new values are displayed.

The Conflict Resolution Tab

When a **data conflict** occurs during a data transfer, and Intellisync can't resolve it using the normal synchronisation process, the **Conflict Resolution** setting selected in this tab is used to resolve it.

To specify a Conflict Resolution setting, select the radio button next to the option you want.

Notify me when conflicts occur is the default setting.



What is a Data Conflict?

A data conflict exists when records in your two systems that should be equivalent contain conflicting data in one or more mapped fields.

More specifically, a data conflict exists when two records contain the same **key field** values, but different values in other mapped fields.

Refer to "Field Mapping and Freeform Fields" under "The Field Mapping Dialogue" for information on how Intellisync interprets your communicator's Name field.

Refer to "Synchronisation and History Files" under "Intellisync Special Topics" for information on first-run synchronisations. See "Full Re-Synchronisation" in Intellisync Special Topics for details on full re-synchronisation.

Key Fields

Fields designated as "key" are those that are the most fundamental to a particular record. For example, First Name and Last Name fields are key fields in Contacts records.

The use of key fields in detecting data conflicts is premised on the following: When key fields in a Nokia record match the key fields in a PC application record, other mapped fields in the two records should also match. In other words, if both of your systems have an address record for Ron Ogg, the values in Title, Company, etc. should match. If they do not, a data conflict exists.

Note: Letter case counts in key fields. If you have a record for *Diana VanWinkle* in your PC application, and one for *Diana Vanwinkle* in your communicator, Intellisync does not recognise the names (or, therefore, the records) as equivalent. Synchronisation causes both records to occur in each system.

See **Key Fields** in on-line Help for information about which fields are key fields for each data type.

The occasions when the Conflict Resolution setting is needed to resolve data conflicts are as follows:

- ◆ First-run and full-re-synchronisations.
- ◆ Imports and Exports of data.
- ◆ When new records have been added to each system since the last synchronisation, and those records conflict. (For example, if you have added an address record for Brian Sawyer to each of your systems, but the Company fields don't match.)
- ◆ When mapped fields have been edited in both systems since the last synchronisation, but edited differently. (For example, if you have updated Brian's home phone number in both records, but made a typographical error in one of them.)

Conflict Resolution options work as follows:

- ◆ **Add all conflicting items:** Adds a new record to each system (or, for one-way transfers, to the target system). The original conflicting records remain intact.
- ◆ **Ignore all conflicting items:** Makes no change to either system.
- ◆ **Notify me when conflicts occur:** Displays a dialogue box each time a data conflict occurs, letting you decide which data to use on a case-by-case basis.
- ◆ **Nokia 9110 Communicator Wins:** Uses data from your communicator when conflicts occur. Use this option when your communicator contains the most current information.
- ◆ **Other Application Wins:** Uses PC data when conflicts occur. Use this option when your PC application contains the most current information.

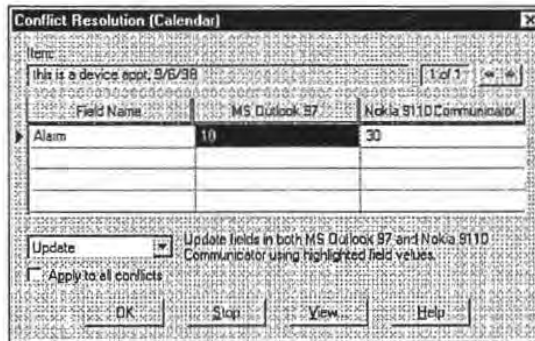
Notify me when conflicts occur is the default setting.

See "The Conflict Resolution Dialogue Box," below, for more information about the Notify setting.

The Conflict Resolution Dialogue Box

When **Notify** is the Conflict Resolution setting, a dialogue is presented each time Intellisync needs help resolving a conflict.

Note the check box labelled "Apply to all conflicts." If you check this box, the action you choose in this dialogue will be automatically applied to any other conflicts detected for the current Nokia 9110 Communicator application.



The Conflict Resolution dialogue shows the conflicting fields from both systems. The field name is displayed in the left column. The PC application's field value is in the centre, and the Nokia 9110 Communicator application's field value is on the right.

A box at the top labelled "**Item**" contains a **key field value**. This helps to identify the conflicting record.

If a record in one system conflicts with more than one record in the other system, the box to the right of the Item box will say **1 of 2**, or **1 of 3**, (etc.), and left and right arrow controls will let you switch between conflicts.

To resolve a conflict in the Conflict Resolution dialogue box, you can select one of the following options from the list box below the grid: Add, Ignore, Update, or Replace (Import/Export only).

- ◆ **Add:** Adds a new record to each system (or, for one-way data transfers, to the target system). The original conflicting records remain intact.
- ◆ **Ignore:** Makes no change to either record.
- ◆ **Replace:** (Import/Export only) Replaces the target record with a record containing mapped values from the source record. Unmapped fields in the original record will be lost.
- ◆ **Update:** Updates one or both records (as necessary) with the value or values you have highlighted in the grid. Use Update instead of Replace to avoid losing un-mapped fields in the target record.

Conflict Resolution Dialogue Buttons

The Conflict Resolution dialogue box also contains the following four buttons:

- **OK:** Initiates the specified action and continues the operation.
- **Stop:** Takes no action and terminates the operation.

- **View:** Displays a dialogue showing the full contents of the selected field. Use this to display complete values when lengthy values are truncated in the Conflict Resolution dialogue box.
- **Help:** Displays on-line Help text.

Conflict Resolution Notes:

- Refer to “The Same Record Changed and Deleted Dialogue” under “Intellisync Special Topics” for information about a special Conflict Resolution dialogue that appears when a record has been deleted in one system and changed in the other system since the last synchronisation.
- Remember: Except for “first-run” synchronisations, the Conflict Resolution setting is not normally needed to resolve conflicts when you’re synchronising your two systems. In most cases, Intellisync knows how to edit records to achieve synchronisation.
- Conflict Resolution is applied individually to each pair of configured applications. This means that any time you change the Conflict Resolution setting, the change will apply only to the currently selected applications.
- Since “Notify” (the default) is the only setting that lets you see each data conflict and decide for yourself how the conflict should be resolved, it is the recommended setting.

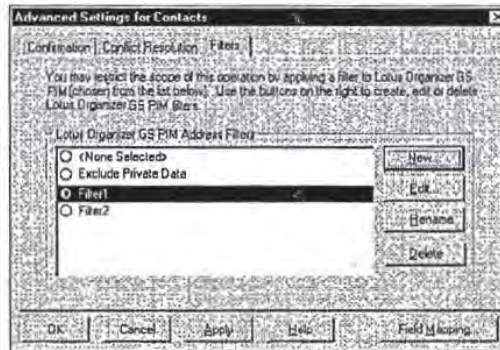
The Filters Tab

The Filters tab of the Advanced Settings dialogue lets you “filter” records for synchronisation, import, or export.

The names of the filters you create are shown in the Filters tab.

A pre-existing filter, Exclude Private Data, lets you exclude records marked Confidential, or Private, etc.

To activate a filter for use, click on it (you can only use one at a time.) Click <None Selected> if you do not want to apply a filter to the next synchronisation.



By default all records in the applications you configure for synchronisation are included when you run an Intellisync operation (unless they are excluded by the Date Range or To-do list setting).

If you want to synchronise (or import/export) only a subset of items, you can filter records using Intellisync’s filtering function.

For example, the following filter instructs Intellisync to include only address records that have a Last Name value starting with *A* through *M*, and have the Company value of *Bankers Ltd.*

Last Name is between A and M AND

Company equals Bankers Ltd.

When you click **New**, you are prompted to name the filter before creating it.

Filters Tab Commands

The Filters tab contains the following command buttons:

- The **New** button is used to create a new filter for the currently selected communicator and PC applications.
- The **Edit** button lets you edit an existing filter.
- The **Rename** button lets you rename an existing filter.
- The **Delete** button deletes the highlighted filter.

Conditions and Rules Tabs

Clicking the **New** or **Edit** button in the Filters tab displays two additional tabs: **Conditions** and **Rules**.

The Conditions Tab

The Conditions tab is where you specify the condition(s) that a record must meet in order to be included in a data transfer. Each condition consists of a **Field**, an **Operator**, and a **Value**.

For example, here are some conditions that could be applied to various applications:

Field	Operator	Value(s)
Last Name	<i>is between</i>	A and G
Company	<i>equals</i>	Global Air
Title	<i>equals</i>	President
Date	<i>is between</i>	01/01/1998 and 07/01/1998
Start Date	<i>on or after</i>	01/07/98

The Rules Tab

The Rules tab contains options corresponding to the logical operators AND and OR.

All Conditions must be met = AND

One or more conditions must be met = OR

Select an option in the Rules tab when you want to include more than one condition in a filter.

Note: Only one logical operator can be applied to any given filter. You cannot create filters that contain both AND and OR.

By combining **conditions** with a **logical operator** selected from the Rules tab, you can create filters like the following:

Date *after* 11/06/97 AND

Time *after* 14:00

Company *equals* Bankers Ltd. OR

Company *equals* Global Air OR

Company *equals* Software House Ltd.

The first filter would include only records with date values after 11/15/97 and time values after 14:00. (Note that times are shown in 24-hour format—e.g., 14:00 for 2 p.m.)

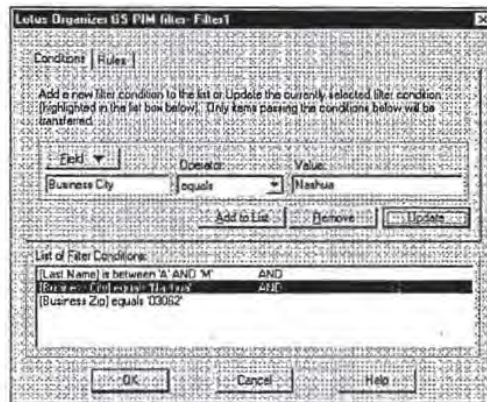
The second filter would include only records with a Company value of *Bankers Ltd.*, *Global Air*, or *Software House Ltd.*

Creating a Filter

Follow these steps to create a filter:

1. Click the **New** button in the Filters tab. When prompted for a filter name, type a name and then click **OK**. This displays the Conditions dialogue.

If you want to change the Operator or Value entry for a condition in this dialogue, change the entry and click **Update**. Clicking **Remove** deletes the highlighted condition.



2. Click the **Field** button to display the field list for the selected PC application. Highlight the field you want to filter on. This places it in the Field text box.
3. Select an **operator** for the condition by highlighting an option in the Operator list box. (See below for the list of operators you can choose from.)
4. Enter a value or values in the Value text box to complete the condition. Then click the **Add to List** button to place the condition in the Conditions List in the lower part of the dialogue.

Note that a logical operator will not appear in the Conditions tab until a second condition is added.

5. To add other conditions to the filter, click the **Rules** tab and select **All Conditions must be met** (AND) or **One or more conditions must be met** (OR). Then click the Conditions tab and specify additional conditions.
6. When the filter is complete, click **OK** to save it.

Conditions Tab Operators

There are four operator types that may be offered in the Conditions tab: **String**, **Date**, **Time**, and **Boolean**. Choices available for each type are as follows:

The Boolean operators *is true* and *is false* are used for fields like **Completed?** and **Confidential?** that are either checked or unchecked.

is true = checked
is false = unchecked

String	Date	Time	Boolean
starts with	equals	equals	is true
contains	does not equal	does not equal	is false
does not contain	after	after	
equals	before	before	
does not equal	on or after	on or after	
is empty	on or before	on or before	
is not empty	is between	is between	
is between	today minus ? days	now minus ? minutes	
	today plus ? days	now plus ? minutes	

Filtering Notes:

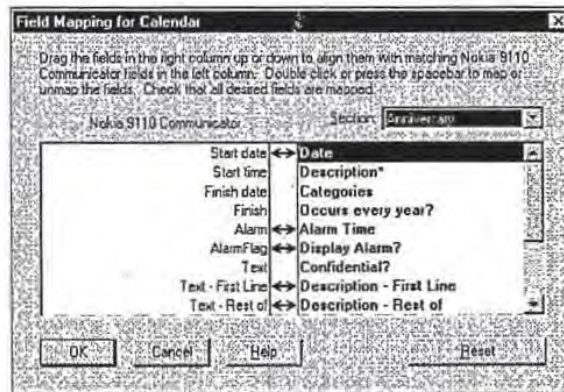
- Filtering can be applied to Intellisync imports and exports as well as synchronisations.
- If you filter on a field that is not mapped, Intellisync can filter on the PC side, but not on the communicator side. In other words, records will be excluded from your PC application, but not from your communicator.
- If you filter on a field that is contained in only one of your systems, the filter will only exclude records in that system.
- You cannot use both AND and OR in a single filter. However, you can use the operator **is between** to create conditions like **Last Name is between A and C**. This, in effect, says "If Last Name starts with A, **or** Last Name starts with B, **or** Last Name starts with C." You can then use the AND operator to create a filter like the following which, in effect, does utilise both logical operators.
Last Name *is between* A and C AND
Company *equals* Kennel Ltd.
- If you change or select a different filter after you've run a synchronisation with Outlook, the next synchronisation will be, in effect, a first-run synchronisation.
- A filter only applies to the Nokia 9110 Communicator and PC applications that were selected in the Configuration dialogue when the filter was created—e.g., Address Book, To Do List, etc. Filters must be created separately for each set of applications you want to synchronise.
- Clicking on a filter name in the Filters tab activates that filter for the next synchronisation. (Only one can be selected at a time.) When a filter is active, its name appears in the bottom right corner of the Configuration dialogue when the application to which it applies is highlighted.
- Click <None Selected> in the Filters tab if you do not want to apply a filter you've created to the next synchronisation.

The Field Mapping Dialogue

In order for data to be transferred between your communicator and your PC application file, corresponding fields in each application must be linked to one another, or “mapped.” Intellisync provides default “field mapping,” which links equivalent fields in your two systems. But you can edit mapping to re-direct (or prevent) the flow of data as needed.

- ▶ To access field mapping for selected applications, click the **Field Mapping** button at the bottom of the Advanced Settings dialogue. This displays the Intellisync Field Mapping dialogue.

Use the Section drop-down list box to specify the section for which you want to display field mapping.



The Field Mapping dialogue lists communicator fields on the left, and PC application fields on the right. Bi-directional arrows appear between fields that are “mapped,” or linked, for synchronisation.

- ▶ **To un-map mapped fields:** Click on the arrow (or highlight the PC field name and double click or press the Spacebar).
- ▶ **To map adjacent fields:** Click between the fields (or highlight the PC application field name and double click or press the Spacebar). An arrow appears to indicate that the fields are mapped.
- ▶ **To map non-adjacent fields:** Drag the field in the right-hand column and drop it next to the field in the left-hand column.
- ▶ **To reinstate default field mapping:** Click the Reset button.

Field Mapping Dialogue Buttons

The buttons at the bottom of the Field Mapping dialogue work as follows:

- **OK:** Saves changes made to field mapping and re-displays the previous Advanced Settings dialogue.
- **Cancel:** Cancels changes made to field mapping.
- **Help:** Opens the Intellisync on-line Help system.
- **Reset:** Resets field mapping to the installation default configuration.

Field Mapping Notes:

- Intellisync enforces certain field mapping rules. For example, you cannot map *date* fields to *time* fields. If you attempt to map incompatible field types, an error message is displayed.
- If you change field mapping after data has been synchronised, the subsequent synchronisation will be, in effect, a first-run synchronisation.
- Fields marked with asterisks in the Field Mapping dialogue are fields that must be mapped (or their sub-fields must be mapped) in order for a data transfer to succeed. If marked fields are not mapped, an error message is displayed when you attempt to exit the Field Mapping dialogue.
- Check the Supported Systems on-line Help topic for the PC application(s) you're using to see if any special field mapping rules apply. (For example, if your application allows for the creation of custom fields, the Help topic for that system should tell you how to map custom fields.)
- When a data string is transferred between fields in your communicator and your PC application, it may be truncated in the target field if it is too lengthy to be accommodated. It is not wise to edit truncated data. If you do, the data in the other system will be truncated after the next synchronisation. Refer to "Synchronisation and Data Truncation" under "Intellisync Special Topics" for a workaround that allows you to edit truncated text.

Field Mapping and Freeform Fields

If your freeform fields are formatted inconsistently, synchronisations and exports will result in the incorrect placement of values in your PC application.

Select the address format that most closely resembles the one you're using.

When Intellisync transfers Name and Address fields between your two systems, it assumes a particular format for your communicator's Name and Address fields.

The default Name format is as follows:

LAST, FIRST MIDDLE

The Address format is determined by the Address Format you select when you first configure an operation. (Refer to "Intellisync Address Formats" under "Intellisync Special Topics" for a description of each of the four available formats.)

If names are **not** entered into your communicator in the above format, and/or if the addresses in your communicator's Contacts application do not match any of the available formats, you may want to adjust the field mapping in the Field Mapping dialogue to direct values between the correct fields.

For example, if the third line in your addresses is formatted in this way: *City, State, Postal Code*, but the selected Address format is *Postal Code, City, State*, the following field mapping scheme would transfer values correctly between your communicator and PC:

<u>Communicator</u>		<u>PC Application</u>
City	↔	Postal code
State	↔	City
Postal Code	↔	State

Intellisync Special Topics

This section is devoted to explaining in detail some aspects of Intellisync that have only been touched upon in previous sections of this chapter.

Topics include:

- ◆ Synchronisation and History Files
- ◆ Intellisync Terms
- ◆ Intellisync Address Formats
- ◆ Importing and Exporting Data
- ◆ Synchronisation and Truncated Data
- ◆ Full Re-Synchronisation
- ◆ The Same Record Changed and Deleted Dialogue
- ◆ Sync Log Files
- ◆ Remote Synchronisation

Synchronisation and History Files

An understanding of history files and how synchronisation works is not mandatory. However, you may find this information helpful.

See "The Conflict Resolution Tab" under "Intellisync Advanced Settings Dialogues" for details on Conflict Resolution.

For additional information about history files, refer to the Intellisync on-line Help system.

During a synchronisation, Intellisync compares records in your communicator application to records in your PC application, and makes whatever changes are necessary in each system to ensure that both contain the same information.

If a record has been added to one system and not the other, that record is added to the incomplete system. If a record has been deleted from one system and not the other, Intellisync deletes the record from the other system. If there are discrepancies between records in the two systems, Intellisync uses the most current data. It knows which is the most current because it uses a "**history file**" when comparing the records.

The first time a particular set of data is synchronised, there is no history file. Data from the two applications are simply merged, and conflicts between the two systems are resolved using a "**Conflict Resolution**" setting.

However, this initial operation *creates* the history file that will be used for subsequent synchronisations.

How does the history file work? At the end of each synchronisation, a history file matching the two synchronised systems is created. When the systems are next synchronised, Intellisync compares the two synchronised systems to each other, and to the history file. If a record in the history file matches one system, but not the other, Intellisync knows that the "conflicting" record has been changed since the last synchronisation. It therefore applies the change to the other system and to the history file.

In cases where changes have been applied to both systems, and those changes conflict (for example, if you have added address records for the same name to each system, but the phone numbers don't match), the **Conflict Resolution** setting is used to resolve the matter.

Intellisync Address Formats

If address data in your communicator is not consistently formatted, and you have the same basic data in your PC application, you can achieve consistency by deleting the addresses from your communicator and synchronising with your PC application. This will transfer the contents of your PC application back into your communicator in the selected Address Format. Before doing this, however, it would be wise to backup your communicator data as a precaution.

In order for Intellisync to transfer data correctly between your communicator and your PC application, it must assume a particular format for freeform Name and Address fields in your communicator's Contacts application.

Intellisync assumes that Name fields are entered into your communicator as follows:

Last, First Middle

When you first configure an Intellisync operation for a particular communicator, you are prompted to select an **Address** format. Address formats can also be accessed by selecting **Contacts** on the Intellisync Options menu.

Intellisync offers five formats to choose from—Address Format 1, Address Format 2, and so on. If none of the formats match the format you are using, you can either select the closest format and adjust field mapping to account for the differences, or choose Format 5, which transfers the communicator's complete Address field to a single field in your PC application.

Refer to "Field Mapping and Freeform Fields" under "Intellisync Advanced Settings Dialogues" for additional information on freeform Name and Address fields.

Note: In order for Intellisync to successfully transfer data between your two systems, data in freeform fields must be entered in a **consistent** format. If your freeform fields have been entered inconsistently, the results of a synchronisation, import, or export will reflect that inconsistency.

Available Address Formats

Address Format 1

Address Item 1, City, State, Postal Code, Country

For example: 13 Lewis St., Moose Junction, MO, 45678, USA

Address Format 2

Address Item 1 <newline>

City, State, Postal Code, Country

For example: 1312 Lewis St.
Moose Junction, MO, 45678, USA

Address Format 3

Address Line 1 <newline>

Address Line 2 <newline>

City, State Postal Code <newline>

Country

For example: 1312 Lewis St.
Suite 34
Moose Junction, MO 45678
USA

Address Format 4

Address Line 1 <newline>
Address Line 2 <newline>
Postal Code, City, State <newline>
Country

For example: 1312 Lewis St.
Suite 34
45678, Moose Junction, MO
USA

Address Format 5

Selecting Address Format 5 is, in effect, selecting no format. This option can be used if you have not used consistent formatting in your communicator, or if none of the other formats resemble the format you're using.

When you select Address Format 5, your communicator's multi-line Address field is transferred to a *single* field in your PC application, and vice versa. Check the Field Mapping dialogue to see the default mapping.

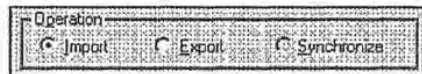
Note: Using this format during synchronisations may result in the transfer of incomplete addresses from your PC application to your communicator.

For example, when Address Format 5 is selected, Intellisync maps the communicator's *Address* field to the *Address* portion of a Schedule+ address. (A complete Schedule+ address includes *Address, City, State, Postal Code, and Country.*) Thus, only the *Address* portion of a Schedule+ address transfers to your Nokia 9110 Communicator. *City, State, etc.* are ignored. In order to transfer the entire Schedule+ address to your communicator, you would need to enter the entire address into the *Address* field.

Importing and Exporting Data

In addition to synchronising your communicator with PC applications, Intellisync can also perform *imports* and *exports* of data from one system to the other.

The same procedures that are involved in configuring and performing a synchronisation are used for importing and exporting. That is, you have to set up the Configuration and Choose Translator dialogues, and, if necessary, adjust settings in the Advanced Settings, Options, and Field Mapping dialogues. Once things are set up, the **Synchronise** button on the Intellisync opening screen initiates the operation. The only difference is in the choice of the operation in the Choose Translator dialogue.



- ◆ To import data from your PC to your communicator, select **Import**.
- ◆ To export data to your PC from your communicator, select **Export**.

Notes:

- When you perform an import or export, Intellisync doesn't duplicate records that already exist in both systems. For example, if you export the contents your communicator's Contacts application to your PC, records that are already contained in both systems are not transferred to the PC file.
- In a single operation, you can perform different *types* of data transfers. For example, in one operation, you can *import* into your communicator's Contacts application, *export* Calendar information, and *synchronise* your To Do's. It's simply a matter of which operation you choose for each set of data.

Synchronisation and Data Truncation

When data is transferred between fields in your communicator and your PC application, data is truncated in the target field if the source data is too lengthy to be accommodated.

If you later **edit** the truncated data, the corresponding data in your other system is truncated after the next synchronisation. (Because Intellisync applies the detected **edit** to the data.)

If you want to edit truncated data, there is a workaround—as follows:

Any time you edit truncated data, go in and edit the corresponding record in the other system. (It can be the same change you made in the shortened record, or a trivial edit of no consequence. The important thing is that a **change** is registered in that record). Make sure the “**Notify**” Conflict Resolution setting is selected. Then, during the next synchronisation, when the Conflict Resolution dialogue box is displayed for that record, select **Ignore**. This prevents the truncated data from overwriting the data in your other system.

Note: If you select **Ignore**, as recommended, you will be prompted to resolve the conflict again the next time you run a synchronisation. If this is not acceptable, you can highlight the original (non-truncated) text in the Conflict Resolution dialogue and choose **Update**. Note, however, that this will overwrite the edit that caused the conflict in the first place.

Full Re-Synchronisation

If, for some reason, the data in either your communicator or your PC application is lost or unintentionally altered, do not synchronise the data. Doing so will transfer the problem to your other system.

For example, if all address records were accidentally deleted from your PC application, Intellisync would see that all the records were deleted since the last synchronisation and remove the address records from your communicator.

Fortunately, the confirmation prompt would warn you before such a synchronisation actually took place. In addition to warning you, it would allow you to use the **Re-Sync** button to execute a Full Re-Synchronisation.

Unlike a normal synchronisation, a **full re-synchronisation** would not delete the records in your communicator. This is because a full re-synchronisation is, in effect, a "first-run" synchronisation. That is, the history file is thrown out, and the synchronisation simply merges the contents of the two systems.

Refer to "The Confirmation Tab" under "Intellisync Advanced Settings Dialogues" for information on the confirmation prompt.

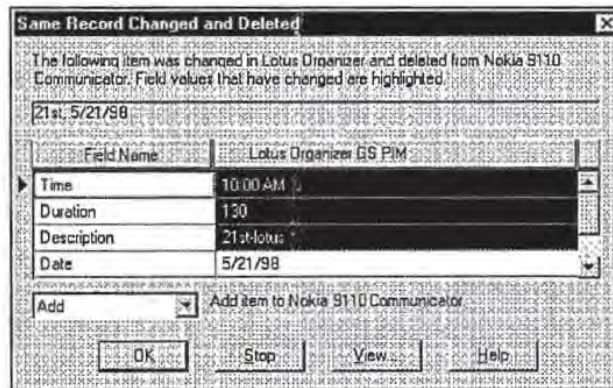
Notes:

- If the data in your communicator or PC application is not lost, but has in some other way been corrupted, you can delete the contents of the file and execute a full re-synchronisation to transfer the contents of the other system into the empty file or application. Note, however, that only mapped values can be transferred to the empty system. Unmapped values will be lost from any records you delete.
- The confirmation prompt is the **only** way to access the **Re-Sync** button. It is therefore advisable to keep active the **Confirm Record Deletions** setting in the Advanced Settings dialogue.

The Same Record Changed and Deleted Dialogue

If, during a synchronisation, Intellisync discovers that a previously synchronised record has been **changed** in one system and **deleted** in the other since the last synchronisation, a special dialogue is displayed.

This dialogue appears only when **Notify me when conflicts occur** is the selected Conflict Resolution setting. If any other setting is selected, a **change** will always override a **delete**—that is, the changed record will be added to the system from which the record was deleted.



The **Same Record Changed and Deleted** dialogue alerts you to the deletion of the record in one system, and shows you the record as it has been changed in the other. A list of options allows you to decide between the following actions:

- ◆ **Add:** Adds the item back into the system from which it was deleted.
- ◆ **Delete:** Deletes the record from the other system.
- ◆ **Ignore:** Lets each system remain as it is.

A set of buttons also appear at the bottom of the dialogue.

- **OK:** Exits the dialogue and applies the selected action.
- **Stop:** Stops the synchronisation.
- **View:** Lets you see the complete value of the highlighted field when it is too long to be displayed in the grid.
- **Help:** Calls on-line Help.

The Sync Log file can be a good source of information if you call for technical assistance.

The Sync Log file is a simple text file that can be viewed using any editor.

Each time you run a synchronisation, the file is overwritten. If you want to save a particular Sync Log file, rename the file before running another synchronisation. The file is located in a sub-directory (of the installation directory) named after the communicator serial number.

The Sync Log File

Intellisync maintains a Sync Log file that is updated after each data transfer. The Sync Log file contains a detailed accounting of what occurred during the synchronisation, import, or export.

Normally, it's not necessary to read the Sync Log file after an operation. However, if errors were reported, it may be a useful source of information.

To view the Sync Log file for the last data transfer, select the **Sync Log** command on the Intellisync View menu.

The file identifies the records that were transferred from one system to the other, and indicates the exact action that was taken for each record. Field Mapping is also shown in the Sync Log file.

Reading a Sync Log File

Before any actions are taken during a data transfer, records from each system are read (looked at). You will see the term **READ** used in the log file to indicate this process.

After reading records in each of the systems, Intellisync compares the records in both systems, as indicated in a section labelled **Summary of Data Analysis**. Here you will see phrases such as: *Unchanged on Both Systems, Changed on First System, and Deleted from Second System.*

The next section of the Sync Log file lists the actions that were taken in your "First System" (Nokia 9110 Communicator) and "Second System" (PC application) during the data transfer.

Actions that may be noted in the Sync Log file are as follows:

ADD: The record was added.

DELETE: The record was deleted.

FAIL RANGE: The item was excluded from the operation. It either failed the Date Range check for Appointments or it was a "completed" **To-do list** item, and the Transfer Only Pending Items option was checked in the **To-do list** tab of the Advanced Settings dialogue.

IGNORE: The record was ignored.

SKIP: The record was skipped because the data transferred was of a different type.

UPDATE: The record was updated with a value or values from the other system.

Intellisync lets you configure and save both a local and a remote synchronisation for each Nokia 9110 Communicator you connect and "register."

Remote Synchronisation

Intellisync allows you to configure and run "Remote" as well as "Local" synchronisations of Calendar data. A remote synchronisation is a synchronisation that you can run remotely, over a data call.

To configure a remote synchronisation, follow the "Quick Start" instructions provided at the beginning of this chapter—only click the **Remote** tab to configure the operation.

Remote vs. Local Synchronisation

When you run a synchronisation locally, you are sometimes prompted for information. For example, if the "Notify" Conflict Resolution setting is selected, you may be prompted to resolve data conflicts. If your PC application requires a password, you will be prompted to enter a password—and so forth.

Since interaction with your computer is not possible when you run a remote synchronisation, remote synchronisations are a little different from local ones.

Please note:

- ◆ When you configure a remote synchronisation, you will notice that the Conflict Resolution tab of the Advanced Settings dialogue does not contain the *Ignore* and *Notify* options. (**Add** is the default Conflict Resolution setting.)
- ◆ During a synchronisation, if Intellisync discovers that the same record has been deleted in one system and changed in the other since the last synchronisation, the change is applied instead of the delete.
- ◆ There is no Confirmation tab in the Advanced Settings dialogue because a confirmation prompt does not display during remote synchronisations.
- ◆ You cannot synchronise PC applications that require you to type a password for access during a synchronisation.

Running a Remote Synchronisation

Refer to Chapter 9, "Internet," in your Nokia 9110 Communicator manual for information on connecting your communicator to your PC via the Internet.

In order to run a remote synchronisation, you must have an Internet access point to facilitate the remote connection to your PC. In addition, PC Suite for Nokia 9110 Communicator must be up and running on your PC.

Once you have configured a remote synchronisation, follow these steps to run it from your communicator:

1. Press the **System** application button on your communicator.
2. Choose **Remote Synchronisation** and press **Select**.
3. Press **Settings** and define the destination host (the IP address of the server PC) and select your Internet access point.
4. Press **Start** to start a data call and begin synchronising.

When the synchronisation is complete, the data call ends.

Intellisync Glossary

Boldfaced text identifies additional terms defined in this section.

See "The Conflict Resolution Tab" under "Intellisync Advanced Settings Dialogues" for more information about Conflict Resolution and data conflicts.

Read this section to gain an understanding of some of the terms that are used to describe PC Suite's Intellisync function.

Conflict Resolution

A process (controlled by a setting in the Conflict Resolution tab of the Advanced Settings dialogue) that is sometimes used by Intellisync to determine how to resolve **data conflicts** during synchronisations. See *Data Conflict*, below.

Data Conflict

A data conflict occurs when records in both systems have matching **key field** values but conflicting data in other **mapped fields**. (For example, if both systems have address records in which the First and Last Name values are identical, but the address values differ.)

The very first time a set of data is synchronised (and any time you import or export data) the Conflict Resolution setting in the Advanced Settings dialogue is used to resolve all such conflicts. Upon subsequent synchronisations of the same data (after the **history file** has been created), the Conflict Resolution setting is needed only under either of the following two conditions:

- 1) When records with the same key fields have been added to both systems since the last synchronisation, but they have conflicts in other mapped fields.
- 2) When mapped fields in previously synchronised records (with matching key fields) have been edited since the last synchronisation, but edited differently.

Fanning

The conversion of a repeating item into many individual items ("fanned" items) having unique dates. Fanning occurs when one of your systems does not support an incoming repeating item.

Field Mapping

The linkage that directs the comparison and transfer of data during an Intellisync data transfer. Field mapping is contained (and can be edited) in the Intellisync Field Mapping dialogue.

To access the Field Mapping dialogue, select the Field Mapping button in the Advanced Settings dialogue.

Filter

A statement that can be applied to a synchronisation to restrict the records that are included in an operation. See "The Filters Tab" under "Advanced Settings Dialogue" for information about using Intellisync filters.

First-Run Synchronisation

The first synchronisation of a particular set of data.

A first-run synchronisation is different from subsequent synchronisations of the same set of data because no **history file** exists. The history file is *created* during the first run (and the **Conflict Resolution** setting is used to settle **data conflicts** between the two systems.)

Full Re-Synchronisation

A special mode of synchronisation that merges rather than synchronises data in your two systems. (In effect, a “first-run” synchronisation.) This is used for restoring lost data and for maintaining data integrity when records have been altered. A full re-synchronisation can be performed using the Re-Sync button in the confirmation prompt that may appear before the results of a synchronisation are applied. Refer to “The Confirmation Tab” under “Intellisync Advanced Settings Dialogues” for more information.

History File

A file that is created by a “first-run” synchronisation and updated after every subsequent synchronisation. This file aids Intellisync in determining which data to use when there are discrepancies between your communicator and PC application. See “Synchronisation and History Files” under “Intellisync Special Topics” for more complete information.

Key Field

A field specially defined to detect **data conflicts** during a data transfer. During a synchronisation, Intellisync compares the values of **mapped fields** in your two systems. When “key” values match, but other mapped values differ, a data conflict exists. For example, in Contacts records, if Name (key) values match, but Phone values differ, this is a data conflict.

Mapped Fields

Fields that are linked for data transfer in the Intellisync **Field Mapping** dialogue.

Section

A type, or category, of data contained in a PC application. For example, *Addresses*, *Notepad*, and *Schedule* are sections contained in some of the PC applications supported by Intellisync.

Synchronisation

The Intellisync operation that compares the records in your communicator to the records in a PC application file, and makes whatever changes are necessary in either system to make sure that they both contain the same data.

Translator

A component of the Intellisync software that enables Intellisync to transfer data between your Nokia 9110 Communicator and a particular PC application.

Intellisync Menu Commands

FILE	
Exit	<i>Exits PC Suite.</i>

VIEW	
Status Bar	<i>Toggles status bar on and off.</i>
Sync Log	<i>Displays the Sync Log for the last Intellisync operation.</i>

COMPONENTS	
Contacts	<i>Starts Contacts application component.</i>
Intellisync	<i>Accesses Intellisync component.</i>
File Transfer	<i>Accesses File Transfer component.</i>
Backup/Restore	<i>Accesses Backup/Restore component.</i>
Install/Remove	<i>Accesses Install/Remove component.</i>
Import/Export	<i>Accesses Import/Export component.</i>

OPTIONS	
Contacts	<i>Displays Contacts Address Format and File options.</i>
Desk Stand Button Settings	<i>Displays desk stand button options.</i>
Registered Communicators	<i>Lists the communicators that have been connected and named.</i>
Preferences	<i>Displays the Preferences dialogue.</i>

HELP	
Contents	<i>Displays on-line Help Contents.</i>
Commands	<i>Displays command information.</i>
Using Help	<i>Accesses Help for on-line Help.</i>
Premier Upgrade	<i>Displays Intellisync registration and Premier Upgrade subscription information.</i>
About PC Suite	<i>Displays "About PC Suite" dialogue.</i>

Chapter 4 : File Transfer Functions

The PC Suite File Transfer functions let you move, copy, paste, rename, and delete Nokia 9110 Communicator and PC files and folders in a familiar Windows Explorer-type environment.

Topics in this chapter include:

- ◆ Using the File Transfer Functions
- ◆ File Transfer Window Panes
- ◆ Selecting Files
- ◆ Copying Files and Folders
- ◆ Moving Files and Folders
- ◆ Deleting Files and Folders
- ◆ Renaming Files and Folders
- ◆ File Properties
- ◆ File Transfer Menu Commands

Using the File Transfer Functions

The PC Suite File Transfer functions let you move, copy, paste, rename, and delete Nokia 9110 Communicator and PC files and folders in a familiar Windows Explorer-type environment.

Note: Built-in conversion utilities for some types of files allow you to transfer “incompatible” files between your communicator and your PC in a readable form. Files that are converted include: Nokia 9110 Communicator Notes files, communicator Fax files, and PC TIFF files (compressed in Group 3 (1d) Fax format).



Follow these steps to access the PC Suite File Transfer functions.

1. Start PC Suite and click the **File Transfer** icon in the opening screen.
2. Connect your communicator to your PC COM port or establish an infrared connection. If you are prompted to do so, enter a name for your communicator.

Unlike Windows Explorer, you cannot launch a program or open a file from the File Transfer screen.



File Transfer Window Panes

The File Transfer screen looks very similar to Windows Explorer. It is divided into two panes that can be re-sized by dragging the splitter bar that separates them.

Drives and folders for both the Nokia 9110 Communicator and your PC are listed on the left, and can be expanded by clicking the + icon. The contents of the drive or folder highlighted on the left are shown on the right side of the window.

Selecting Files

Standard Windows file selection methods are used to select files or folders in the File Transfer screen. You can select an item by clicking on it with your mouse, or using the up and down arrow keys on your keyboard.

Use the Shift key in combination with the up and down arrow keys to select multiple adjacent items.

Shift-click or Ctrl-click also selects multiple files or folders.

Copying Files and Folders

Files and folders can be copied in the File Transfer window using "drag and drop" or by copying and pasting.

To Drag and Drop:

1. In the left pane, highlight the drive or folder containing the item you want to copy.
2. In either pane, select the item(s) you want to copy.
3. Hold the left mouse button down, and drag the item(s) to the new location. A + next to the cursor shows that you're copying (and not cutting) the item.
4. Release the mouse button.

If press the Ctrl key while you drag the item, the item is **removed** from its original location.

Keyboard Shortcuts:

Ctrl-C = Copy

Ctrl-V = Paste

To Copy and Paste:

1. In the left pane, highlight the drive or folder containing the item you want to copy.
2. In either pane, select the item(s) you want to copy.
3. Select **Copy** from the Edit menu, or click the right-mouse button choose **Copy** from the pop-up menu.
4. Highlight the left-pane drive or folder to which you want to copy the file.
5. Select **Paste** from the Edit menu, or click the right-mouse button and choose **Paste** from the pop-up menu.

Moving Files and Folders

Files and folders can be moved in the File Transfer window using "drag and drop" or by cutting and pasting.

Note that the use of the **Ctrl** key in drag and drop operations is **not** identical to its use in Microsoft Explorer.

You cannot cut read-only files or root folders from the communicator. Cut/Paste operations for these files/folders are, in effect, Copy/Paste operations.

Keyboard Shortcuts:

Ctrl-X = Cut

Ctrl-V = Paste

To Drag and Drop:

Use same drag and drop technique described previously for copying. However, you must press the **Ctrl** key while dragging. If you do not, the file or folder will not be removed from its original location.

To Cut and Paste:

1. In the left pane, highlight the drive or folder containing the item you want to cut.
2. In either pane, select the item (or items) you want to cut
3. Select **Cut** from the Edit menu, or click the right-mouse button choose **Cut** from the pop-up menu.
4. Highlight the left-pane drive or folder to which you want to move the file or folder.
5. Select **Paste** from the Edit menu, or click the right-mouse button and choose **Paste** from the pop-up menu.

Multiple items can be deleted at once in the right pane. Only one item at a time can be deleted from the left pane.

Deleting Files and Folders

There are three ways to delete an item from the left or right pane of the File Transfer window:

Select the item you want to delete. Then:

- ◆ Press the **Del** key
- ◆ Select **Delete** from the File menu, or
- ◆ Press the right mouse button and choose **Delete** from the pop-up menu.

Note: You cannot delete root folders or read-only files from the communicator.

Items deleted from your PC are sent to the Windows Recycle bin.

Renaming Files and Folders

Just like in Windows Explorer, you can rename files and folders using the Rename command.

To rename a file or folder:

1. Select the file or folder you want to rename in either pane.
2. Select **Rename** from the File menu, or click the right-mouse button and choose **Rename** from the pop-up menu.
3. Type a new name and then press **Enter**.

Note: You cannot rename non-empty folders, root folders, or read-only files in the communicator.

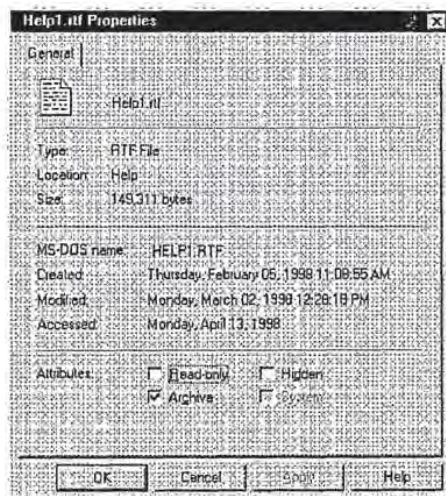
File Properties

Like Windows Explorer, the PC Suite File Transfer function lets you display and edit a file or folder's "properties."

Follow these steps:

1. Select a file or folder in either pane.
2. Select **Properties** from the File menu, or click the right-mouse button and choose **Properties** from the pop-up menu. This displays the Properties dialogue.

When a Properties dialogue is displayed for a communicator file or folder, check boxes are disabled (greyed). You cannot change the attributes of a file or folder in the communicator.



Check or un-check the check boxes in this dialogue to change a PC file or folder's attributes.

- ◆ Click **OK** to save changes and exit the dialogue.
- ◆ Click **Cancel** to exit without saving changes.
- ◆ Click **Apply** to save changes without exiting.

File Transfer Menu Commands

FILE	
Exit	<i>Exits PC Suite.</i>

VIEW	
Status Bar	<i>Toggles status bar on and off.</i>
Large Icons	<i>Switches view to Large Icons mode.</i>
Small Icons	<i>Switches view to Small Icon mode.</i>
List	<i>Switches view to List mode.</i>
Details	<i>Switches view to Details mode.</i>
Arrange Icons	<i>Lets you arrange icons by Name, Type, Size, or Date.</i>
Refresh	<i>Refreshes (updates) display.</i>

EDIT	
Cut	<i>Cuts the selected file or folder.</i>
Copy	<i>Copies the selected file or folder.</i>
Paste	<i>Pastes the item that was cut or copied to the selected location.</i>
Select All	<i>Selects all the items in the open folder.</i>
Invert Selection	<i>Inverts the selection status of each file in the open folder.</i>

COMPONENTS	
Contacts	<i>Starts Contacts application component.</i>
Intellisync	<i>Accesses Intellisync component.</i>
File Transfer	<i>Accesses File Transfer component.</i>
Backup/Restore	<i>Accesses Backup/Restore component.</i>
Install/Remove	<i>Accesses Install/Remove component.</i>
Import/Export	<i>Accesses Import/Export component.</i>

HELP	
Contents	<i>Displays on-line Help Contents.</i>
Commands	<i>Displays command information.</i>
Using Help	<i>Accesses Help for on-line Help.</i>
About PC Suite	<i>Displays "About PC Suite" dialogue.</i>

Chapter 5 : Backup and Restore

This chapter discusses the PC Suite Backup and Restore commands, which safeguard the data in your communicator.

Topics include:

- ◆ Backing Up Your Data
- ◆ Restoring a Backup
- ◆ Backup/Restore Menu Commands

Backing Up Your Data



Follow these steps to backup some or all of the data on your Nokia 9110 Communicator:

1. Click the **Backup/Restore** icon in the PC Suite opening screen.
2. Connect your communicator to your PC COM port or establish an infrared connection.

If prompted to do so, enter a name for your communicator.

To-do list records are included when you backup the Calendar application.

When you configure a Backup operation, your configuration is saved when you run the Backup or exit the Backup tab.

