



Note: If you are using the POP3 protocol, e-mail messages are not updated automatically in online mode. To see the newest e-mail messages, you need to disconnect and then make a new connection to your mailbox.

View e-mail messages offline

When you view e-mail messages offline, your game deck is not connected to the remote mailbox.

To view e-mail messages offline, you must first retrieve e-mail messages from your mailbox. After you have retrieved the e-mail messages to your game deck, select **Options > Disconnect** to end the data connection.

You can continue reading the retrieved e-mail headings or the retrieved e-mail messages offline. You can write new e-mail messages, reply to the retrieved e-mail messages, and forward e-mail messages. You can set the e-mail messages to be sent the next time you connect to the mailbox. When you open **Mailbox** the next time and you want to view and read the e-mail messages offline, answer **No** to the **Connect to mailbox?** query.

Retrieve e-mail messages

If you are offline, select **Options > Connect** to start a connection to a remote mailbox.

The remote mailbox view is similar to the **Inbox** folder in **Messaging**. You can move up and down in the list by pressing  or . The following icons are used to show the status of the e-mail:

- New e-mail (the arrow in the icon is pointing outwards). The content has not been retrieved from the mailbox to your game deck (offline or online mode).
- New e-mail (arrow pointing inwards), the content has been retrieved from the mailbox.
- E-mail messages that have been read.
- E-mail headings that have been read and the message content has been deleted from the game deck.

- 1 When you have an open connection to a remote mailbox, select **Options > Retrieve** and one of the following:
 - New**—to retrieve all new e-mail messages to your game deck.
 - Selected**—to retrieve only the e-mail messages that have been marked. Use the **Mark/Unmark > Mark/Unmark** commands to select messages one by one. For information on marking items, see "Mark an item" on page 8.
 - All**—to retrieve all messages from the mailbox.
- 2 To cancel retrieving, press **Cancel**.

After you have retrieved the e-mail messages, you can continue viewing them online.

- 3 Select **Options > Disconnect** to close the connection and to view the e-mail messages offline.

Copy e-mail messages to another folder

If you want to copy an e-mail from the remote mailbox to a folder under **My folders**, select **Options > Copy**. Select a folder from the list and press **OK**.

Open e-mail messages

Options when viewing an e-mail message are **Reply, Forward, Delete, Attachments, Message details, Move to folder, Add to Contacts, Find, Help, and Exit**.

When you are viewing e-mail messages either in online or offline mode, scroll to the e-mail you want to view and press  to open it. If the e-mail message has not been retrieved (arrow in the icon is pointing outwards), you are offline, and you select **Open**, you will be asked if you want to retrieve this message from the mailbox.



Note: The data connection is left open after e-mail has been retrieved. To end the data connection, select **Options > Disconnect**.

Disconnect from mailbox

When you are online, select **Options > Disconnect** to end the data call or GPRS connection to the remote mailbox. See "Data connection indicators" on page 6.

View e-mail attachments

Options in the Attachments view are **Open, Retrieve, Save, Send, Delete, Help, and Exit**.

You can open a message that has the attachment indicator  and select **Options > Attachments**. In the Attachments view, you can retrieve, open, or save attachments. You can also send attachments using a Bluetooth wireless connection.



Important: E-mail attachments may contain viruses or otherwise be harmful to your game deck or PC. Do not open any attachment if you are not sure of the trustworthiness of the sender. For more information, see "Certificate management" on page 48.



Tip: To save memory, you can remove attachments from an e-mail while retaining them on the e-mail server. Select **Options > Delete** in the Attachments view.

RETRIEVE ATTACHMENTS

If an attachment has a dimmed indicator, it has not been retrieved to the game deck. To retrieve the attachment, scroll to it and select **Options > Retrieve**.



Note: If your mailbox uses the IMAP 4 protocol, you can decide whether to retrieve e-mail headings only, messages only, or messages and attachments. With the POP3 protocol, the options are e-mail headings only or messages and attachments. For further information, see page 82.

OPEN ATTACHMENTS

- 1 In the **Attachments** view, scroll to an attachment and press  to open it. If you are *online*, the attachment is retrieved directly from the server and opened in the corresponding application. If you are *offline*, the game deck asks if you want to retrieve the attachment to the game deck. If you answer **Yes**, a connection to the remote mailbox begins.
- 2 Press **Back** to return to the e-mail viewer.



Tip: Supported image formats are listed on page 63. To see a list of other file formats supported by the Nokia N-Gage game deck, go to the product information at www.n-gage.com.

SAVE ATTACHMENTS

To save an attachment, select **Options > Save** in the **Attachments** view. The attachment is saved in the corresponding application. For example, sounds can be saved in **Recorder** and text files (.TXT) in **Notes**.



Note: Attachments like images can be saved on the memory card, if the memory card is defined as the memory store.

Delete e-mail messages

From the game deck message retained in remote mailbox, select **Options > Delete > Device only**.

The game deck mirrors the e-mail headings in the remote mailbox. So, although you delete the message content, the e-mail heading stays in your game deck. If you want to remove the heading as well, you have to first delete the e-mail message from your remote mailbox and then make a connection from your game deck to the remote mailbox again to update the status.

From the game deck and remote mailbox, select **Options > Delete > Device and server**.

If you are offline, the e-mail will be deleted first from your game deck. During the next connection to the remote mailbox, it will be automatically deleted from the remote mailbox. If you are using the POP3 protocol, messages marked to be deleted are removed only after you have closed the connection to the remote mailbox.

Undelete e-mail messages

To cancel deleting an e-mail from both the game deck and server, scroll to an e-mail that has been marked to be deleted during the next connection () , and select **Options > Undelete**.

• OUTBOX



Outbox is a temporary storage place for messages that are waiting to be sent.

Messages are placed in **Outbox**, for example, when your game deck is outside the network coverage area. You can also schedule e-mail messages to be sent the next time you connect to your remote mailbox.

Status of the messages in **Outbox** are as follows:

Sending—A connection is being made and the message is being sent.

Waiting/Queued—For example, if there are two similar types of messages in **Outbox**, one of them is waiting until the first one is sent.

Resend at (time)—Sending has failed. The game deck will try to send the message again after a time-out period. Press **Send** if you want to restart the sending immediately.

Deferred—You can set documents to be on hold while they are in **Outbox**. Scroll to a message that is being sent and select **Options > Defer sending**.

Failed—The maximum number of sending attempts has been reached. Sending has failed. If you were trying to send a text message, open the message and check that the **Sending** settings are correct.

• VIEW MESSAGES ON A SIM CARD

Before you can view SIM messages, you need to copy them to a folder in your game deck.

- 1 In **Messaging**, select **Options > SIM messages**.
- 2 Select **Options > Mark/Unmark > Mark** or **Mark all** to mark messages.
- 3 Select **Options > Copy**.
- 4 Select a folder, press **OK** and go to the folder to view the messages.

• CELL BROADCAST



In **Messaging** main view, select **Options > Cell broadcast**.

Options in cell broadcast are **Open, Subscribe/Unsubscribe, Hotmark/Unhotmark, Topic, Settings, Help, and Exit**.

You can receive messages on various topics, such as weather or traffic conditions from your service provider. For available topics and relevant topic numbers, contact your service provider. In the main view you can see the following:

- The status of the topic:  for new, subscribed messages and  for new, unsubscribed messages.
- The topic number, topic name, and whether it has been flagged () for follow-up. You will be notified when messages belonging to a flagged topic have arrived.



Note: A packet data (GPRS) connection may prevent cell broadcast reception. Contact your network operator for the correct GPRS settings. For further information on the GPRS settings, see "Packet data (GPRS)" on page 41.

• SERVICE COMMAND EDITOR



In **Messaging**, select **Options > Service command**.

You can send service requests, such as activation commands for network services (also known as USSD commands **Applicable to US?**), to your service provider. For more information, contact your service provider. To send a request do the following:

- In the standby mode or when you have an active call, key in the command numbers and press **Send**.
- If you need to enter letters as well as numbers, select **Messaging > Options > Service command**.

• MESSAGE SETTINGS

The messaging settings have been divided into groups according to the different message types. Scroll to the settings you want to edit and press .

Text message settings

Options when editing text message center settings are **New msg. center, Edit, Delete, Help, and Exit**.

Go to **Messaging** and select **Options > Settings > Text message** to open the following list of settings:

Message centers—Lists all the text message service centers that have been defined. For a procedure to add a new text message center, see page 85.

Msg. center in use (message center in use)—Defines which message center is used for delivering text messages and smart messages such as picture messages.

Receive report (delivery report)—When this network service is set to **Yes**, the status of the sent message (**Pending, Failed, Delivered**) appears in the log. When set to **No**, only the status **Sent** appears in the log.

Message validity—If the recipient of a message cannot be reached within the validity period, the message is removed from the text message service center. Note that the network must support this feature. **Maximum time** is the maximum amount of time allowed by the network.

Message sent as—The options are **Text, Fax, Paging, and E-mail**. For further information, contact your network operator.



Note: Change this option only if you are sure that your service center is able to convert text messages into these other formats.

Preferred connection—You can send text messages using the normal GSM network or using GPRS, if supported by the network. See “Packet data (GPRS)” on page 41.

Reply via same ctr. (network service)—By setting this option to **Yes**, if the recipient replies to your message, the return message is sent using the same text message service center number.

Use the following procedure to add a new text message center

- 1 Open **Message centers** and select **Options > New msg. center**.
- 2 Press , write a name for the service center, and press **OK**.
- 3 Press  .
- 4 Press  and write the number of the text message service center (**Must be defined**). Press **OK**. You need the message center number to send text and picture messages. You receive the number from your service provider. To take the new settings into use, go back to the settings view. Scroll to **Msg. center in use**, press , and select the new service center.

Multimedia messages settings

Go to **Messaging** and select **Options > Settings > Multimedia message** to open the following list of settings:

Preferred connection (Must be defined)—Select which access point is used as the preferred connection for the multimedia message center. See “Settings” on page 73.



Note: If you receive multimedia message settings in a smart message and save them, the received settings are automatically used for the Preferred connection. See "Receive smart messages" on page 79.

Secondary conn.—Select which access point is used as the secondary connection for the multimedia message center.



Note: Both **Preferred connection** and **Secondary conn.** must have the same **Homepage** setting pointing to the same multimedia service center. Only the data connection is different.



Tip: If your preferred connection uses a packet data connection, you may want to use high-speed data or data call for the secondary connection. This way you are able to send and receive multimedia messages even when you are not in a network that supports packet data. For further information, please contact your network operator or service provider. See also "Data connections and access points" on page 40.

Multimedia reception—Select from the following options:



Note: If the settings **Only in home net.** or **Always on** have been selected, your game deck can make an active data call or GPRS connection without your knowledge.

- **Only in home net.**—to receive multimedia messages only when you are in your home network. When you are outside your home network, multimedia message reception is turned off.
- **Always on**—to receive multimedia messages always.
- **Off**—to decline receiving multimedia messages or advertisements at all.



Important: When you are outside your home network, sending and receiving multimedia messages may cost more.

On receiving msg.—Select from the following options:

- **Retr. immediately**—if you want the game deck to retrieve multimedia messages instantly. If there are messages with Deferred status, they will be retrieved as well.
- **Defer retrieval**—if you want the multimedia messaging center to save the message to be retrieved later. To retrieve the message later, set **On receiving msg.** to **Retr. immediately**.
- **Decline message**—if you want to decline multimedia messages. The multimedia messaging center will delete the messages.

Allow anon. messages—Select **No**, if you want to decline messages coming from an anonymous sender.

Receive adverts—Define whether you want to receive multimedia message advertisements or not.

Reports—Set to **Yes**, if you want the status of the sent message (**Pending**, **Failed**, **Delivered**) to be shown in the log.



Note: It might not be possible to receive a delivery report of a multimedia message that has been sent to an e-mail address.

Deny report sending—Choose **Yes**, if you do not want your game deck to send delivery reports of received multimedia messages.

Message validity—If the recipient of a message cannot be reached within the validity period, the message is removed from the multimedia messaging center. Note that the network must support this feature. **Maximum time** is the maximum amount of time allowed by the network.

Image size—Define the size of the image in a multimedia message. The options are: **Small** (max. of 160*120 pixels) and **Large** (max. 640X480 pixels).

Default speaker—Choose **Loudspeaker** or **Handset**, if you want the sounds in a multimedia message to be played through the loudspeaker or the earpiece. For more information, see “Loudspeaker” on page 10.

E-mail settings

Go to **Messaging** and select **Options > Settings > E-mail**.

Open **Mailbox in use** to select which mailbox you want to use.

Options when editing e-mail settings are **Editing options**, **New mailbox**, **Delete**, **Help**, and **Exit**.

Mailboxes settings

Select **Mailboxes** to open a list of mailboxes that have been defined. If no mailboxes have been defined, you will be prompted to do so. The following list of settings appears:

Mailbox name—Write a descriptive name for the mailbox.

Access point in use (Must be defined)—The Internet Access Point (IAP) used for the mailbox. Choose an IAP from the list. For more information on how to create an IAP, see also “Connection settings” on page 40.

My mail address (Must be defined)—Write the e-mail address given to you by your service provider. The address must contain the @ character. Replies to your messages are sent to this address.

Outgoing mail server: (Must be defined)—Write the IP address or host name of the computer that sends your e-mail.

Send message—Define how e-mail is sent from your game deck. **Immediately**—A connection to the mailbox is started after you have selected **Send**. **During next conn.**—E-mail is sent when you connect to your remote mailbox the next time.

Send copy to self—Select **Yes** to save a copy of the e-mail to your remote mailbox and to the address defined in **My mail address**.

Include signature—Select **Yes** if you want to attach a signature to your e-mail messages and to start to write or edit a signature text.

User name:—Write your user name, given to you by your service provider.

Password:—Write your password. If you leave this field blank, you will be prompted for the password when you try to connect to your remote mailbox.

Incoming mail server: (Must be defined)—The IP address or host name of the computer that receives your e-mail.

Mailbox type:—Defines the e-mail protocol your remote mailbox service provider recommends. The options are **POP3** and **IMAP4**.



Note: This setting can be selected only once and cannot be changed if you have saved or exited from the mailbox settings.

Security—Used with the POP3, IMAP4, and SMTP protocols to secure the connection to the remote mailbox.

APOP secure login—Used with the POP3 protocol to encrypt the sending of passwords to the remote e-mail server. Not shown if IMAP4 is selected for **Mailbox type**.

Retrieve attachment (not shown if the e-mail protocol is set to POP3)—To retrieve e-mail with or without attachments.

Retrieve headers—To limit the number of e-mail headers you want to retrieve to your game deck. The options are **All** and **User defined**, which can only be used with the IMAP4 protocol.

Service messages settings

When you go to **Messaging** and select **Options > Settings > Service message**, the following list of settings opens:

Service messages—Choose whether or not you want to receive service messages.

Authentic. needed—Choose if you want to receive service messages only from authorized sources.

Cell broadcast settings

Check with your service provider whether Cell broadcast is available and what the available topics and related topic numbers are. Go to **Messaging > Options > Settings > Cell broadcast** to change the settings:

Reception—On or Off

Language—All allows you to receive cell broadcast messages in all supported languages. Selected allows you to choose in which languages you wish to receive cell broadcast messages. If the language you want could not be found in the list, select **Other**.

Topic detection—If you receive a message that does not belong to any of the existing topics, **Topic detection > On** allows you to save the topic number automatically. The topic number is saved to the topic list and shown without a name. Choose **Off** if you do not want to save new topic numbers automatically.

Other folder settings

Go to **Messaging** and select **Options > Settings > Other** to open the following list of settings:

Save sent messages—Choose if you want to save a copy of every text message, multimedia message, or e-mail that you have sent to the Sent items folder.

No. of saved msgs.—Define how many sent messages will be saved to the Sent items folder at a time. The default limit is 20 messages. When the limit is reached, the oldest message is deleted.

Memory in use—Define memory used. Choices are game deck's memory or memory card.

11 Profiles



➔ Press  and go to Profiles.

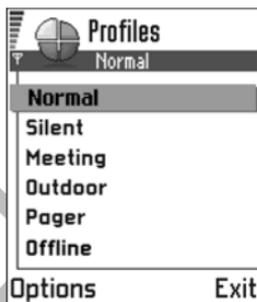
In Profiles, you can adjust and customize the tones for different events, environments, or caller groups. There are six preset profiles: **Normal**, **Silent**, **Meeting**, **Outdoor**, **Pager**, and **Offline**, which you can customize to meet your needs.

You can see the currently selected profile at the top of the display in the standby mode. If the General profile is in use, only the current date appears.

The tones can be default ringing tones, tones created in Composer, tones received in a message, or transferred to your game deck using a wireless technology, or a PC connection, and then saved to your game deck.

• CHANGE PROFILES

- 1 Press  and go to Profiles..
- 2 In the Profiles list, scroll to a profile and select **Options > Activate**.
To change the profile, press  in the standby mode. Scroll to the profile you want to activate and press **OK**



• CUSTOMIZE PROFILES



Note: For information on the offline profile see "Offline profile" on page 93.

- 1 To modify a profile, scroll to the profile in the Profiles list and select **Options > Personalize**. A list of profile settings opens.
- 2 Scroll to the setting you want to change and press  to open the following choices:

Ring tone—To set the ringing tone for voice calls, choose a ringing tone from the list. When you scroll through the list, you can stop on a tone to listen to it before you make your selection. Press any key to stop the sound. If a memory card is used, tones stored on it have the  icon next to the tone name.

Ring tones use shared memory. See “Shared memory” on page 12.

You can change ringing tones in two places: **Profiles** or **Contacts**. See “Add a ringing tone” on page 55.

Incoming call alert—When **Ascending** is selected, the ringing volume starts from level one and increases level by level to the set volume level.

Ring volume—To set the volume level for the ringing and message alert tones.

Message alert tone—To set the tone for messages.

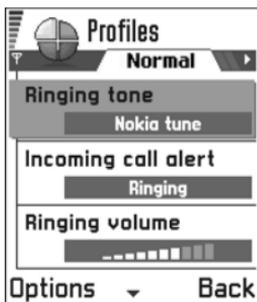
Vibrating alert—To set the game deck to vibrate at incoming calls and messages.

Keypad tones—To set the volume level for keypad tones.

Warning tones—The game deck sounds a warning tone, for example, when the battery is running out of power.

Alert for—To set the game deck to ring only upon calls from phone numbers that belong to a selected contact group. Phone calls coming from people outside the selected group will have a silent alert. The choices are **All calls** and a list of contact groups if you have created them. See “Create contact groups” on page 56.

Profile name—You can rename a profile and give it any name you want. The **General** and **Offline** profiles cannot be renamed.



• OFFLINE PROFILE



Note: Your game deck must be switched on to use this function. Do not switch the game deck on when wireless device, wireless technology, or radio use is prohibited or when it may cause interference or danger.

Offline profile lets you use the game deck without connecting to the GSM wireless network to play games, listen to music and the radio.



Important: In Offline profile you cannot make any calls, including emergency calls, or use other features that require network coverage.

- 1 Press  and go to **Profiles**.
- 2 In the Profiles list, scroll to **Offline** and select **Options > Activate**.

- 3 Press **Yes**.

The game deck restarts and the GSM is turned off, as indicated by the  in the signal strength indicator. All GSM wireless phone signals to and from the device are prevented.

To open the list of available profiles, do a short-press on the power. Then scroll to **Offline** and select **OK**.



Note: If a Bluetooth connection was turned off as a result of entering the offline profile you must re-enable the connection manually. See "Bluetooth connection settings" on page 120.



Note: In areas where mobile phone use is prohibited, wireless technology and radio use may also be prohibited. Therefore, consult the relevant authorities before using wireless technology or the radio.

Leave Offline profile

- 1 Press  and go to **Profiles**.
- 2 In the Profiles list, scroll to a profile other than **Offline**, and select **Options > Activate**.
- 3 Press **Yes**.

The game deck restarts and it re-enables GSM wireless transmissions (providing there is sufficient signal strength).

Customize Offline profile

- 1 Scroll to **Offline** in the Profiles list and select **Options > Personalize**.
- 2 Scroll to the setting you want to change and press  to open the choices:
Ring volume—To set the volume level for the message alert tones received using a Bluetooth connection.

Message alert tone—To set the tone for messages received using a Bluetooth connection.

Keypad tones—To set the volume level for keypad tones.

Warning tones—To set a warning tone sound, for example, when the battery is running out of power.

12 Favorites



Note: Your game deck must be switched on to use this function. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.



Press  and go to Extras > Favorites.

You can use **Favorites** to store shortcuts, links to your favorite images, video clips, notes, recorder sound files, browser bookmarks, and saved browser pages.

Options in **Favorites** are **Open**, **Edit shortcut name**, **Shortcut icon**, **Delete shortcut**, **Move**, **List view/Grid view**, **Help**, and **Exit**.

The default shortcuts are as follows:

- —opens the Notes editor
- —opens the Calendar with the current date selected
- —opens the Messaging Inbox

• ADD SHORTCUTS

Shortcuts can be added only from the individual applications. Not all applications have this functionality. Shortcuts are automatically updated if you move the item it is pointing to, for example moving an item from one folder to another

- 1 Open the application and scroll to the item that you want to add as a shortcut to **Favorites**.
- 2 Select **Options > Add to Favorites** and press **OK**.

Shortcut options are as follows:

- **To open a shortcut**, scroll to the icon and press . The file is opened in the corresponding application.
- **To delete a shortcut**, scroll to the shortcut you want to remove and select **Options > Delete shortcut**. Removing a shortcut does not affect the file it is referring to.
- **To change the shortcut heading**, select **Options > Edit shortcut name**. Write the new name. This change affects only the shortcut, not the file or item the shortcut refers to.



13 Calendar and To-do



Note: Your game deck must be switched on to use this function. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.



Press  and go to **Calendar**.

In **Calendar**, you can keep track of your appointments, meetings, birthdays, anniversaries, and other events. You can also set a calendar alarm to remind you of upcoming events.

Calendar uses shared memory. See "Shared memory" on page 12.

• CREATE CALENDAR ENTRIES

- 1 Select **Options** > **New entry** and select one of the following:
Meeting to remind you of an appointment that has a specific date and time.
Memo to write a general entry for a day.
Anniversary to remind you of birthdays or special dates. Anniversary entries are repeated every year.
- 2 Fill in the fields (see "Calendar entry fields" on page 97).
Use the controller key to move between fields.
Press  to change between upper and lower case.
- 3 To save the entry, press **Done**.



Meeting	
Subject	Dentist
location	
Start time	08:00
Options	Done

Edit calendar entries

Options when editing a calendar entry are **Delete**, **Send**, **Help**, and **Exit**.

- 1 In the **Day view**, scroll to the entry and press  to open it.
- 2 Edit the entry fields and press **Done**.
If you are editing a repeated entry, choose how you want the changes to take effect:

All occurrences—all repeated entries are changed

This entry only—only the current entry will be changed.

Delete calendar entries

In the **Day** view, scroll to the entry you want to delete and select **Options > Delete** or press . Press **OK** to confirm.

If you are deleting a repeated entry, choose how you want the change to take effect:

All occurrences—all repeated entries are deleted

This entry only—only the current entry will be deleted.

As an example, your weekly class has been canceled. You have set the calendar to remind you every week. Choose **This entry only** and the calendar will remind you again next week.

Calendar entry fields

Subject/Occasion—Write a description of the event.

Location—the place of a meeting, optional.

Start time, End time, Start date, and End date.

Alarm—Press  to activate the fields for **Alarm time** and **Alarm date**.

Repeat—Press  to change the entry to be repeating. Shown with  in the day view.



Tip: The repeat function is handy if you have a recurring event, a weekly class, a monthly meeting, or a daily routine you need to remember.

Repeat until—You can set an ending date for the repeated entry.

Synchronization—If you select **Private**, after synchronization the calendar entry can be seen only by you and it will not be shown to others with online access to view the calendar. This is useful when, for example, you synchronize your calendar with a calendar on a compatible computer at work. If you select **Public**, the calendar entry is shown to others who have access to view your calendar online. If you select **None**, the calendar entry will not be copied to your PC when you synchronize your calendar.



Tip: To write a calendar entry, press any key ( - ) in any calendar view. A Meeting entry is opened and the characters you keyed in are added to the **Subject** field.

Calendar views

Options in the different calendar views are **Open, New entry, Week view/ Month view, Delete, Go to date, Send, Settings, Help, and Exit**.

MONTH VIEW

Synchronization icons in the month view are as follows:

- Private
- Public
- None
- the day has multiple entries

In the Month view, one row equals one week. The current date is underlined. Dates that have calendar entries are marked with a small triangle in the right bottom corner. There is a frame around the currently selected date.

To open the Day view, scroll to the date you want to open and press .

To go to a certain date, select **Options > Go to date**. Write the date and press **OK**.

 **Tip:** If you press  in month, week, or day views, today's date is automatically highlighted.

Calendar entry icons in Day and Week views:

- Meeting
- Memo
- Anniversary

WEEK VIEW

In the Week view, the calendar entries for the selected week are shown in seven day boxes. The current day of the week is underlined. Memos and Anniversaries are placed before 8:00 a.m. Meeting entries are marked with colored bars according to starting and ending times.

To view or edit an entry, scroll to the cell that has an entry and press  to open the Day view, then scroll to the entry and press  to open it.



May							
05/21/2002							
	Mo	Tu	We	Th	Fr	Sa	Su
18	29	30	1	2	3	4	5
19	6	7	8	9	10	11	12
20	13	14	15	16	17	18	19
21	20	21	22	23	24	25	26
22	27	28	29	30	31	1	2
23	3	4	5	6	7	8	9

DAY VIEW

In the Day view, you can see the calendar entries for the selected day. The entries are grouped according to their starting time. Memos and anniversaries are placed before 8:00 a.m.

To open an entry for editing, scroll to it and press . Press  to go to the next day or press  to go to the previous day.

Calendar view settings

Select **Options > Settings** and select one of the following:

Default view—To select the view that appears first when you open Calendar.

Week starts on—To change the starting day of the week.

Week view title—To change the title of the Week view to be the week number or the week dates.

• SET CALENDAR ALARMS

- Create a new meeting or anniversary entry, or open a previously created entry.
- Scroll to **Alarm** and press  to open the **Alarm time** and **Alarm date** fields.
- Set the alarm time and date.
- Press **Done**. An alarm indicator  appears next to the entry in the Day view.

Stop a calendar alarm

The alarm duration is one minute. When the alarm time expires, press **Stop** to end the calendar alarm. If you press any other key, the alarm is set to snooze.

• SEND CALENDAR ENTRIES

In the Day view, scroll to the entry you want to send and select **Options > Send**. Then select the method, the choices are **Via text message**, **Via e-mail** (available only if the correct e-mail settings are in place), and **Via Bluetooth**. For further information, see "Messaging" on page 66, and "Send data" on page 121.

• TO-DO

 Press  and go to **Extras > To-do**.



In **To-do** you can keep a list of tasks that you need to do.

The To-do list uses shared memory. See "Shared memory" on page 12.

- 1 To start to write a to-do note, press any key ( - ).
The editor opens and the cursor blinks after the letters you have keyed in.
 - 2 Write the task in the **Subject** field.
Press  to add special characters.
 - 3 To set the due date for the task, scroll to the **Due date** field and key in a date.
 - 4 To set a priority for the to-do note, scroll to the **Priority** field and press .
 - 5 To save the to-do note, press **Done**.
 **Note:** If you remove all characters and press **Done**, the previously saved note will be deleted.
 - 6 To open a to-do note, scroll to it and press .
 - 7 To delete a to-do note, scroll to it and select **Options > Delete** or press .
 - 8 To mark a to-do note as completed, scroll to it and select **Options > Mark as done**.
 - 9 To restore a to-do note, select **Options > Mark as not done**.
- Priority icons: —High, —Low, and (no icon)—Normal.
- Status icons: —task completed and —not completed.



• DATA IMPORT

You can move calendar, contacts and to-do data from many different Nokia phones to your game deck using the PC Suite for Nokia N-Gage game deck Data Import application. Instructions for using the application can be found in the PC Suite online help.

14 Extras



Note: Your game deck must be switched on to use the functions in the Extras folder. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.

• CALCULATOR



➡ Press and go to Extras > Calculator.

Options in Calculator are Last result, Memory, Clear screen, Help, and Exit.

- 1 Enter the first number of your calculation.
Press to erase a mistake in the number.
- 2 Scroll to a function and press to select it.
Use to add, to subtract, to multiply, or to divide.
- 3 Enter the second number.
- 4 To execute the calculation, scroll to and press .



Note: The calculator has limited accuracy and rounding errors may occur, especially in long divisions.

- To add a decimal, press .
- Press and hold to clear the result of the previous calculation.
- Use and to view previous calculations and move in the sheet.
- Select to save a number to the memory, indicated by M.
- To retrieve the number from the memory, select .
- To clear a number in memory, select Options > Memory > Clear screen.
- To retrieve the result of the last calculation, select Options > Last result.



Tip: Press repeatedly to scroll the functions. You can see the selection change between the functions.

• COMPOSER



➡ Press and go to Media > Composer.

Composer allows you to create your own, customized ringing tones. Note that it is not possible to edit a default ringing tone.

Options in Composer are Open, New tone, Delete, Mark/Unmark, Rename, Duplicate Help, and Exit.

- 1 Select **Options > New tone** to open the editor and to start composing. Options when composing are **Play, Insert symbol, Style, Tempo, Volume, Help, and Exit.**
 - Select **Options > Insert symbol** to open a list of notes and rests, or use the keys to add notes and rests. See the table later in this section. The default duration a quarter note.
 - To listen to the tone, press  or select **Options > Play**. To stop playing, press **Stop**.
 - To adjust the volume select **Options > Volume** before you start to play the tone.
 - To adjust the tempo, select **Options > Tempo**. To increase or decrease the tempo gradually, press  or , respectively. You can set the tempo to any number between 50 and 250 beats per minute. The default tempo is 160 beats per minute.
 - To apply different playing styles, select **Options > Style > Legato** (notes played in a smooth and even manner) or **Staccato** (notes played separately to produce short, sharp sounds).
 - To select many notes or rests at the same time, press and hold  and press and hold  or  at the same time.
 - To move notes up or down on the staff by a half step, scroll to the note and press  or .
 - To produce C#, press and hold  together with .
- 2 Press **Back** to save.

Keys	Note	Key and function
	c	 Shortens the duration of the selected notes or rests in steps.
	d	 Lengthens the duration of the selected notes/rests in steps.
	e	 Inserts a rest.

Keys	Note	Key and function
	f	Press  to open a list of notes and rests.
	g	 Switches octaves, all selected notes or rests are moved to the next octave.
	a	 Deletes selected notes.
	b	A long press of keys  –  produces a dotted (lengthened) note or rest or shortens a lengthened note.

• CONVERTER



 Press  and go to Extras > Converter.

In **Converter**, you can convert measures (such as **Length**) from one unit to another.



Note: The Converter has limited accuracy, and rounding errors may occur.

Convert units

Options in **Converter** are Select unit / Change currency, Conversion type, Currency rates, Help, and Exit.

- 1 Scroll to the **Type** field and press  to open a list of measures.
- 2 Scroll to the measure you want to use and press **OK**.
- 3 Scroll to the first **Unit** field and press  to open a list of available units. Select the unit **from** which you want to convert and press **OK**. Scroll to the next **Unit** field and select the unit **to** which you want to convert.
- 4 Scroll to the first **Amount** field and key in the value you want to convert. The other **Amount** field changes automatically to show the converted value. Press  to add a decimal and press  for the +, - (for temperature), and E (exponent) symbols.



Note: The conversion order changes if you write a value in the second **Amount** field. The result appears in the first **Amount** field.

Choose currency and set exchange rate

Before you can make currency conversions, you need to choose a base currency and add exchange rates.



Note: The rate of the base currency is always 1. The base currency determines the conversion rates of the other currencies.

- 1 Select **Currency** as the measure type and select **Options > Currency rates**. A list of currencies opens and you can see the current base currency at the top.
- 2 To change the base currency, scroll to the currency, and select **Options > Set as base curr.**



Note: When you change the base currency, all previously set exchange rates are set to 0 and you need to key in new rates.

- 3 Add exchange rates, scroll to the currency, and key in a new rate. (The new rate indicates how many units of the currency equal one unit of the base currency you have selected.)
- 4 After you have inserted all the needed exchange rates, you can make currency conversions. See "Convert units" on page 103.



Tip: For example, if you set the euro (EUR) as the base currency, and a dollar (USD) is currently 1.146 euros, you would key in 1.146 as the exchange rate for the USD.



Tip: To rename a currency, go to **Currency rates**, scroll to the currency, and select **Options > Rename currency**.

• NOTES



➡ Press and go to **Extras > Notes**.

You can link notes to **Favorites** and send them to other compatible devices. Plain text files (TXT format) you receive can be saved to **Notes**.

To start to write, press (-). Press to clear letters. Press Done to save.

• CLOCK



➡ Press and go to **Extras > Clock**.

Options in Clock are **Set alarm**, **Reset alarm**, **Remove alarm**, **Settings**, **Help**, and **Exit**.

Settings

To change the time or date, select **Options > Settings** in Clock. To change the clock shown in the standby mode, scroll down in the **Date and time** settings and select **Clock type > Analog** or **Digital**.

Set alarm

- 1 To set a new alarm, select **Options > Set alarm**.
- 2 Enter the alarm time and press **OK**. When the alarm is active, the  indicator appears.



Note: The alarm clock works even if the game deck is switched off.

To cancel an alarm, go to clock and select **Options > Remove alarm**.

To turn off an alarm, press **Stop**.

When the alarm tone sounds, press any key or **Snooze** to stop the alarm for five minutes, after which it will resume. You can do this a maximum of five times.

If the alarm time is reached while the game deck is switched off, the game deck switches itself on and starts sounding the alarm tone. If you press **Stop**, the game deck asks whether you want to activate the game deck for calls. Press **No** to switch off the game deck or **Yes** to make and receive calls.



Note: Do not press **Yes** when wireless device use is prohibited or when it may cause interference or danger.

• RECORDER



Press  and go to **Media > Recorder**.

Options in Recorder are **Open**, **Record sound clip**, **Delete**, **Move to device mem**, **Move to mem. card**, **Mark/Unmark**, **Rename sound clip**, **Send**, **Add to Favorites**, **Settings**, **Help**, and **Exit**.

The voice recorder allows you to record telephone conversations and voice memos. If you are recording a telephone conversation, both parties will hear a tone every five seconds during recording.



Note: Obey all local laws governing recording of calls. Do not use this feature illegally.

Select **Options > Record sound clip** and scroll to a function and press  to select it. Use:  to record,  to pause,  to stop,  to fast forward,  to fast rewind, and  to play an opened sound file.



Note: Recorder cannot be used when a data call or a GPRS connection is active.

15 Services (XHTML)



Various service providers on the Internet maintain pages specifically designed for mobile devices, offering services such as news, weather reports, banking, travel information, entertainment, and games. With the XHTML browser you can view these services as WAP pages written in WML, XHTML pages written in XHTML, or a mixture of both.

XHTML browser supports pages written in the Extensible Hypertext Markup Language (XHTML) and the Wireless Markup Language (WML).



Note: Your game deck must be switched on to use this function. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.



Press  and go to **Media > Services** or press and hold  in the standby mode.



Note: Check the availability of services, pricing, and taxes with your service provider and/or service provider. Service providers will also give you instructions on how to use their services.

For making a connection, browsing, and ending the connection to the service, see "Keys and commands" on page 109.

• SET UP BROWSER SERVICE

Receive settings in a smart message

You may receive service settings in a special text message (also called a smart message) from the network operator or service provider that offers the service. See "Receive smart messages" on page 79. For more information, contact your network operator or service provider, or visit Club Nokia's Web site (www.club.NokiaUSA.com).



Tip: Settings may be available, for example, on the Web site of a network operator or service provider.

Key in settings

Follow the instructions given by your service provider.

- 1 Go to **Settings > Connection settings > Access points** and define the settings for an access point.
See "Connection settings" on page 40.
- 2 Go to **Services > Options > Add bookmark**.

- Write a name for the bookmark and the address of the browser page defined for the current access point.

• MAKE A CONNECTION

Once you have stored all the required connection settings, you can access browser pages.

There are three different ways to access browser pages:

- Select the homepage () of your service provider.
- Select a bookmark from **Bookmarks**.
- Press the keys  -  to begin writing the address of a browser service. The **Go** to field at the bottom of the display is activated and you can continue writing the address there



Tip: To access **Bookmarks** while browsing, press and hold . To return to the browser view again, select **Options** > **Back to page**.

After you have selected a page or written the address, press  to start to downloading the page. See also "Data connection indicators" on page 6.



Note: If the security indicator  appears during a connection, this indicates the data transmission between the device and the browser gateway (or browser server) is encrypted. It does not, however, indicate that the data transmission between the gateway and the content server (place where the requested resource is stored) is necessarily secure.

• VIEW BOOKMARKS



Glossary: A bookmark consists of an Internet address (mandatory), bookmark title, WAP access point, and if the service requires, a user name and password.



Note: Your game deck may have some pre-installed bookmarks for sites not affiliated with Nokia. Nokia does not warrant or endorse these sites. If you choose to access them, you should take the same precautions, for security or content, as you would with any site.

Options in **Bookmarks** (selection on a bookmark or folder) are **Open**, **Download**, **Back to page**, **Send**, **Go to URL address** and **Find bookmark**, **Add bookmark**, **Edit**,



Delete, Read service msgs., Disconnect, Move to folder, New folder, Mark/Unmark, Rename, Clear cache, Details, Add to Favorites, Settings, Help, and Exit.

In **Bookmarks**, you can see bookmarks pointing to different kinds of web pages. Bookmarks are indicated by the following icons:

- The homepage defined for the browser access point. If you use another web access point for browsing, the homepage is changed accordingly.
- The last visited page. When the game deck is disconnected from the service, the address of the last visited page is kept in memory until a new page is visited during the next connection.
- A bookmark showing the title.

When you scroll through bookmarks, you can see the address of the highlighted bookmark in the Go to field at the bottom of the display.

Add bookmarks manually

- 1 In **Bookmarks**, select **Options > Add bookmark**.
- 2 Fill in the fields.
Only the address must be defined. The default access point is assigned to the bookmark if no other one is selected. Press  to enter special characters such as /, ., :, and @. Press  to clear characters.
- 3 Select **Options > Save** to save the bookmark.

Send bookmarks

To send a bookmark, scroll to it and select **Options > Send > Via text message**.

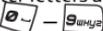


• BROWSE

On a browser page, new links appear underlined in blue and previously visited links in purple. Images that act as links have a blue border around them.

Options when browsing are **Open**, **Service options**, **Bookmarks**, **History**, **Go to URL address**, **View image**, **Read service msgs.**, **Save as bookmark**, **Send bookmark**, **Reload**, **Disconnect**, **Show images**, **Clear cache**, **Save page**, **Find**, **Details**, **Session**, **Security**, **Settings**, **Help**, and **Exit**.

Keys and commands

- To open a link, select the link and press .
- To scroll the view, use the controller key.
- To enter letters and numbers in a field, press the keys . Press  to enter special characters such as /, ., :, and @. Press  to clear characters.
- To go to the previous page while browsing, press **Back**. If **Back** is not available, select **Options > History** to view a chronological list of the pages you have visited during a browsing session. The history list is cleared each time a session is closed.
- To check boxes and make selections, press .
- To retrieve the latest content from the server, select **Options > Reload**.
- To open a sublist of commands or actions for the currently open web page, select **Options > Service options**.
- Press  to disconnect from a web service and to quit browsing.



VIEW SERVICE MESSAGES

To download and view new service messages while browsing:

- 1 Select **Options > Read service msgs.** (shown only if there are new messages).
- 2 Scroll to the message and press  to download and open it.

For more information about service messages, see "Service messages" on page 80.

SAVE BOOKMARKS

- To save a bookmark while browsing, select **Options > Save as bookmark**.
- To save a bookmark received in a smart message, open the message in the **Inbox in Messaging** and select **Options > Save to bookmarks**. See also "Receive smart messages" on page 79.

View saved pages

If you regularly browse pages containing information which does not change very often you can save and then browse them when offline. If you have a memory card, you can save web pages on it instead of the game deck's memory.

Options in the Saved pages view are **Open**, **Back to page**, **Reload**, **Remove**, **Read service msgs.**, **Disconnect**, **Move to folder**, **New folder**, **Mark/Unmark**, **Rename**, **Clear cache**, **Details**, **Add to Favorites**, **Settings**, **Help**, and **Exit**.

- To save a page while browsing, select **Options > Save page**.
Saved pages are indicated by the following icon:  (NEED ICONS/CL)

The saved web page.

In the saved pages view, you can create folders to store your saved web pages.

Folders are indicated by the following icon:

Folder containing saved web pages.

- To open the Saved pages view, press  in the Bookmarks view. In the Saved pages view, press  to open a saved page.

If you want to start a connection to the web service and to retrieve the page again, select **Options > Reload**. You can also arrange the pages into folders.



Note: The game deck stays online after you reload the page.



• DOWNLOAD

You can download items such as ringing tones, images, operator logos, and video clips through the mobile browser.

Once downloaded, items are handled by the respective applications on your game deck, for example, a downloaded image will be saved in the **Media > Images**.

Download directly from the web page

To download the item directly from a web page, scroll to the link and select **Options > Open**.

Purchase an item



Note: Copyright protections may prevent some images, ringtones and other content from being copied, modified, transferred or forwarded.

To download the item:

- Scroll to the link and select **Options > Open**.
- Select **Buy** if you want to buy the item.

Check an item before downloading



Note: Check with your service provide to see if they offer this service.

You can see details about an item before you download it. Details about an item may include the price, brief description, and size.

- Scroll to the link and select **Options > Open**.

Details about the item are displayed on your game deck.

If you want to continue with the downloading, press **Accept** or if you want to cancel the download, press **Cancel**.



• END A CONNECTION

- Select **Options > Disconnect**, or
- Press and hold  to quit browsing and to return to the standby mode.

Empty the cache

The information or services you have accessed are stored in the cache memory of the game deck.



Note: If you have tried to access or have accessed confidential information requiring passwords (for example, your bank account), empty the cache of your game deck after each use. To empty the cache, select **Options > Clear cache**.



Glossary: A cache is a buffer memory that is used to store data temporarily.

• BROWSER SETTINGS

Default access point—If you want to change the default access point, press  to open a list of available access points. The current default access point is highlighted. For more information, see “Connection settings” on page 40.

Show images—Choose if you want to view pictures when you are browsing. If you choose **No**, you can later load images during browsing by selecting **Options > Show images**.

Font size—You can choose three text sizes in the browser: **All small normal**, **large**, and **All large**.

Cookies—**Allow** or **Decline**. You can enable or disable the receiving and sending of cookies.

Conf. touch tone sending—Always or First time only. The browser supports functions you can access while browsing. You can make a voice call while you are on a web page, send touch tone tones while a voice call is in progress, and save a name and phone number from a Web page in **Contacts**. Choose whether you want to confirm before the game deck sends DTMF tones during a voice call. See also "Options during a call" on page 17.

Text wrapping—Choose **Off** if you do not want the text in a paragraph to automatically wrap, or **On** if you do.

FCC Draft

16 (Java™) Applications



Note: Your game deck must be switched on to use this function. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.



Press  and go to **Extras > Applications**.

In **Applications** you can open or remove installed Java applications. In **Install** you can install new Java applications (file extensions .JAD or .JAR).

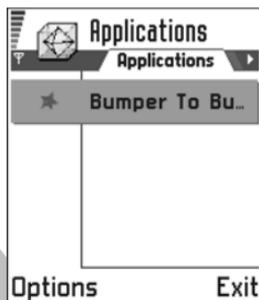


Note: Your game deck supports J2Micro Edition™ Java applications. Do not download PersonalJava™ applications to your game deck as they cannot be installed.

When you open **Applications**, you can see a list of Java applications that have been installed to your game deck.

Options in **Applications** are **Open**, **View details**, **Settings**, **Remove**, **Go to URL address**, **Update**, **Help**, and **Exit**.

- 1 Scroll to an application and select **Options > View details** to view the following:
 - Status**—Installed, Running, or Downloaded (shown only in Install view)
 - Version**—the application version number
 - Supplier**—the supplier or manufacturer of the application
 - Size**—the size of the application file in kilobytes
 - Type**—a brief description of the application
 - URL**—an address of an information page on the Internet
 - Data**—the size of application data, such as high scores, in kilobytes
 - 2 To start a data connection and to view extra information about the application, scroll to it and select **Options > Go to URL address**.
 - 3 To start a data connection and to check if there is an update available for the application, scroll to it and select **Options > Update**.
- Applications uses shared memory. See "Shared memory" on page 12.



• INSTALL A JAVA APPLICATION

Installation files may be transferred to your game deck from a compatible computer, downloaded during browsing, or sent to you in a multimedia message as an e-mail attachment or using a Bluetooth wireless connection. If you are using PC Suite for Nokia N-Gage game deck to transfer the file, place it in the `c:\nokia\installs` folder in your game deck.



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



Note: In **Install**, you can only install Java software installation files with the extension **.JAD** or **.JAR**.

Options in **Install** are **Install**, **View details**, **Delete**, **Help**, and **Exit**.

- 1 In **Applications**, to view the installation packages, press  to open the **Downloaded** view.
- 2 To install an application, scroll to an installation file and select **Options > Install**.
Alternatively, search the game deck memory for the installation file, select the file, and press  to start the installation.



Tip: If you have received the installation file as an e-mail attachment, go to your mailbox, open the e-mail, open **Attachments**, scroll to the installation file, and press  to start the installation.

- 3 Press **Yes** to confirm the installation.
The **.JAR** file is required for installation. If it is missing, the game deck may ask you to download it. If there is no access point defined for applications, you will be asked to select one. When you are downloading the **JAR** file, you may need to enter a user name and password to access the server. You obtain these from the supplier or manufacturer of the application.

During installation, the game deck checks the integrity of the package to be installed. The game deck shows information about the checks being carried out, and you are given options to continue or cancel the installation. Once the game deck has checked the integrity of the software package, the application is installed on your game deck.

- 4 The game deck informs you when installation is complete.
To open the Java application after installation, you must go to **Applications**.



Tip: When you are browsing, you can download an installation file and install it immediately. Note, however, that the connection is left running in the background during installation.

To open a Java application, scroll to the application in and press  .

To uninstall a java application, select the application and select **Options > Remove**.

● APPLICATION SETTINGS

To define a default access point for downloading missing application components, select **Options > Settings > Default access point**. For more information on creating access points, see the "Access points" on page 42.

Select an application and select **Options > Settings**, and then select:

- **Access point**—Select an access point to be used by the application for downloading extra data.
- **Network connection**—Some Java applications may require a data connection to be made to a defined access point. If no access point has been selected, you will be asked to select one. The options are:
 - Allowed**—The connection is created without a notification.
 - Ask first**—You will be asked before the application makes the connection.
 - Not allowed**—Connections are not allowed.

17 Manager—applications and software



Note: Your game deck must be switched on to use the functions in the Tools folder. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.



Press  and go to Tools > Manager.

In **Manager** you can install new applications and software packages, and remove applications from your game deck. You can also check the memory consumption.

Options in **Manager** are **View details**, **View certificate**, **Install**, **Remove**, **View log**, **Send log**, **Memory details**, **Help**, and **Exit**.

When you open **Manager**, you can see a list of the following:

- Installation packages that have been saved to Manager,
- Partially installed applications (indicated by ) , and
- Fully installed applications that you can remove (indicated by ).



Note: In **Manager**, you can only use device software installation files with an .SIS extension.

- Scroll to an installation file and select **Options > View details** to view the **Name**, **Version**, **Type**, **Size**, **Supplier**, and **Status** of the software package.
- Scroll to a software package and select **Options > View certificate** to display the security certificate details of a software package. See "Certificate management" on page 48.



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

Do not install the application if Manager gives a security warning during installation.



Tip: To install Java applications (file extension .JAD or .JAR), go to **Applications**. For further information, see "(Java™) Applications" on page 113.

• INSTALL SOFTWARE

You can install applications that are specifically intended for the Nokia N-Gage game deck or suitable for the Symbian operating system. A software package is usually one large compressed file containing many component files.

If you install a program that is not intended specifically for the Nokia N-Gage game deck, it may function and look very different from the usual Nokia N-Gage game deck applications.



Important: If you install a file that contains an update or repair to an existing application, you can only restore the original application if you have the original installation file or a full back-up copy of the removed software package. To restore the original application, first remove the application and then install the application again from the original installation file or the back-up copy.



Tip: Select **Options > View log** to see what software packages have been installed or removed and when.

- Installation packages may be transferred to your game deck from a compatible computer, downloaded during browsing, or sent to you in a multimedia message as an e-mail attachment, or using a Bluetooth connection. If you are using PC Suite for Nokia N-Gage game deck to transfer the file, place it in the **c:\nokia\installs** folder on your game deck.
- Installation packages may be transferred to your game deck from a compatible computer using the supplied DKE-2 mini-B USB cable. If you are using Microsoft Windows Explorer to transfer the file from the CD-ROM to the Nokia N-Gage game deck, place it on your memory card (**local disk**).
- Open **Manager**, scroll to the installation package, and select **Options > Install** to start the installation.
Alternatively, search the game deck memory or the memory card for the installation file, select the file, and press  to start the installation.



Tip: If you have received the installation file as an e-mail attachment, go to your mailbox, open the e-mail, open the **Attachments** view, scroll to the installation file, and press  to start the installation.

During installation, the game deck checks the integrity of the package to be installed. The game deck shows information about the checks being carried out and you are given options whether to continue or cancel the installation. Once the game deck has checked the integrity of the software package, the application is installed on your game deck.



Tip: To send your installation log to a help desk so that they can see what has been installed or removed, select **Options > Send log > Via text message** or **Via e-mail** (available only if the correct e-mail settings are in place).

• REMOVE SOFTWARE

- 1 To remove a software package, scroll to it and select **Options > Remove**.

2 Press **Yes** to confirm the removal.

If you remove software, you can only re-install it if you have the original software package or a full back-up of the removed software package. If you remove a software package, you may no longer be able to open documents created with that software. If another software package depends on the software package that you removed, the other software package may stop working. Refer to the documentation of the installed software package for details.

• VIEW MEMORY CONSUMPTION

To open the memory view select **Options > Memory details**.



Note: If you have a memory card installed on your game deck, you will have a choice of two memory views, one for the game deck or **Device memory** and one for the **Memory card**. If not, you will only have the **Device memory** view.

When you open either of the memory views, the game deck calculates the amount of free memory for storing data and installing new software. In the memory views, you can view the memory consumption of the different data groups: **Calendar**, **Contacts**, **Documents**, **Messages**, **Images**, **Sound files**, **Video clips**, **Applications**, **Mem. in use**, and **Free memory**.



Tip: If the game deck memory is getting low, remove some documents, or move them to the memory card. See also the "Troubleshooting" on page 127.

18 Connectivity



Note: Your game deck must be switched on to use the functions in the **Tools** folder. Do not switch the game deck on when wireless device use is prohibited or when it may cause interference or danger.



Press  and go to **Tools > Bluetooth**.

You can transfer data from your game deck to another compatible device, for example, a phone or a computer, using a Bluetooth wireless connection.

• BLUETOOTH WIRELESS CONNECTION



Note: The Nokia N-Gage game deck is compliant with and adopts Bluetooth Specification 1.1. However, interoperability between the game deck and other products with wireless technology is not guaranteed and depends on compatibility. For more information on the compatibility with Bluetooth wireless devices, please review the product user information or check with the manufacturer.

You can play two player or multiple player games using a Bluetooth wireless connection with friends who have the same game on a compatible device. See "Games" on page 26. You can use a Bluetooth connection in Offline profile; however, in this Offline profile the device does not make or receive wireless phone calls. See "Offline profile" on page 93.



Tip: You can also play game deck-to-game deck games using Bluetooth wireless technology.

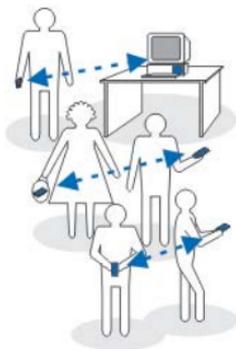
Bluetooth wireless technology enables cost-free connections between electronic devices within a maximum range of 30 feet (10 meters). A wireless connection can be used to play games, send images, videos, texts, business cards, calendar notes, or to connect wirelessly to compatible devices such as computers.

Since Bluetooth wireless devices communicate using radio waves, your game deck or other compatible devices do not need to be in direct line-of-sight.

The two devices only need to be within a maximum of 30 feet (10 meters) of each other, although the connection can be subject to interference from obstructions such as walls or from other electronic devices.

Using wireless connections consumes the battery and the game deck operating time will be reduced. Take this into account when performing other operations with your game deck.

There may be restrictions on using wireless technology devices. Check with your local authorities.



Initial Activation

When you activate the Bluetooth wireless application for the first time, you are asked to assign a Bluetooth name to your game deck.

Write a name (up to 30 letters) or use the default name, "Nokia N-Gage game deck". If you send data using a Bluetooth connection before you have assigned an individual Bluetooth name to your game deck, the default name will be used.

Bluetooth connection settings

To modify Bluetooth connection settings, scroll to the setting you want to change and press .

- **Bluetooth**—Select **On** if you want to use a Bluetooth wireless connection. If you select **Off**, all active connections are ended and cannot be used for sending or receiving data.
- **My device's visibility**—If you select **Shown to all**, your game deck can be found by other Bluetooth-compatible devices during a device search. If you select **Hidden**, your game deck cannot be found by other devices during a device search.



Note: After setting the connection to active and changed **My device's visibility** to **Shown to all**, your game deck and this name can be seen by other Bluetooth-compatible device users.



- **My Bluetooth name**—Define a a Bluetooth connection name for your game deck. After you have set the connection to be active and changed **My device's visibility** to **Shown to all** this name can be seen by other Bluetooth-compatible device users.



Tip: When searching for devices, some compatible devices may show only the unique Bluetooth addresses (device addresses). To find out what the unique Bluetooth address of your game deck is, enter the code ***#2820#** in the standby mode.

Send data



Note: There can be only one active Bluetooth connection at a time.

- 1 Open an application where the item you wish to send is stored. For example, to send an image to another compatible device, open the Images application, to send a video clip to another compatible device, open the Video Player application.
- 2 Scroll to the item you want to send, such as an image, and select **Options > Send > Via Bluetooth**.



Tip: To send text using a Bluetooth connection (instead of text messages), go to **Notes**, write the text, and select **Options > Send > via Bluetooth**.

The game deck starts to search for devices within range. Bluetooth-enabled devices that are within range start to appear on the display one by one. You can see a device icon, the device's Bluetooth name, the device type, or a short name. Paired devices are shown with  .



Note: If you have searched for Bluetooth-compatible devices earlier, a list of the devices that were found previously appears first. To start a new search, select **More devices**. If you switch off the game deck, the list of devices is cleared and the device search needs to be started again before sending data.

- 1 To interrupt the search, press **Stop**. The device list freezes and you can start to form a connection to one of the devices already found.
- 2 Scroll to the desired device and press **Select**. The item you are sending is copied to **Outbox** and **Connecting** appears. If the other device requires pairing before data can be transmitted, a tone

sounds and you are asked to enter a passcode. Complete the following

- Create your own passcode (1-16 characters long, numeric) and agree with the owner of the other Bluetooth-compatible device to use the same code. This passcode is used only once and you do not have to memorize it.
- After pairing, the device is saved in **Paired devices**.



Glossary: Pairing means authentication. The users of the Bluetooth-enabled devices should agree together what the passcode is and use the same passcode for both devices in order to pair them. Devices that do not have a user interface have a factory set passcode.

When the connection has been established, **Sending data** appears. If sending fails, the message or data will be deleted. The Drafts folder in Messaging does not store messages sent using a Bluetooth connection



Note: Data received using a Bluetooth connection can be found in the Inbox folder in Messaging. See "Inbox—receive messages" on page 77.

ICONS FOR BLUETOOTH-COMPATIBLE DEVICES

- Computer
- Phone
- Other
- Unknown

CHECK BLUETOOTH CONNECTION STATUS

- When appears in the standby mode, a Bluetooth connection is active.
- When is blinking, your game deck is trying to connect to the other device.
- When appears continuously, a Bluetooth connection is active.

Paired devices

Pairing with a device makes device searches easier and quicker. Paired devices are easier to recognize, they are indicated by in the search result list. In **Bluetooth**, press to open a list of paired devices ().

Options in **Paired devices** are **New paired device**, **Connect** or **Disconnect**, **Assign short name**, **Delete**, **Delete all**, **Set as authorized** or **Set as unauthorized**, **Help**, and **Exit**.

PAIR WITH A DEVICE

- 1 Select **Options > New paired device** in **Paired devices**.
The game deck searches for devices within range. If you have searched for Bluetooth-compatible devices earlier, a list of the devices that were already found appears.
- 2 To start a new search, select **More devices**.

- 3 Scroll to the device you want to pair with and press **Select**.
- 4 Enter your passcode, or create your own passcode (1–16 characters long, numeric) and agree with the owner of the other Bluetooth-compatible device to use the same code. This passcode is used only once and you do not have to memorize it.

After pairing, the device is saved in **Paired devices**.

CANCEL PAIRING

- 1 In **Paired devices**, scroll to the device whose pairing you want to cancel and press  or select **Options > Delete**.
The device is removed from the Paired devices list and the pairing is canceled.
- 2 If you want to cancel all pairings, select **Options > Delete all**.



Note: If you are currently connected to a device and delete the pairing with that device, pairing is removed immediately, but the connection will remain active.

ASSIGN NAMES

You can define a short name (nickname, alias), to help you recognize a certain device. This name is stored in the game deck memory and cannot be seen by other Bluetooth-compatible device users.

- 1 To assign a short name, scroll to the device and select **Options > Assign short name**.
- 2 Write the short name and press **OK**.



Tip: Give a short name to your friend's Bluetooth-enabled device or to your own computer to be able to recognize it more easily.



Note: Choose a name which is easy to remember and recognize. Later when you are searching for devices or a device is requesting a connection, the name you have chosen will be used to identify the device.

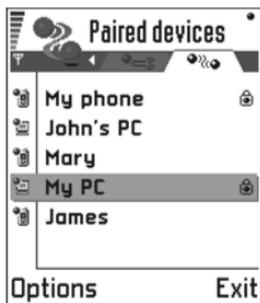
SET AUTHORIZATION

After you have paired with a device, you can set it to be authorized or unauthorized.

Unauthorized (default)—Connection requests from this device need to be accepted separately every time.

Authorized—Connections between your game deck and this device can be made without your knowledge. No separate acceptance or authorization is needed. Use this status for your own devices, for example, your PC, or devices that belong to someone you trust. The  icon is added next to authorized devices in the Paired devices view.

In **Paired devices**, scroll to the device and select **Options > Set as authorized** or **Set as unauthorized**.



Receive data

When you receive data using a Bluetooth connection, a tone sounds and you are asked if you want to accept the message. If you accept,  appears and the item is placed in the **Inbox** folder in **Messaging**. Messages are indicated by . See "Inbox—receive messages" on page 77 for further information.

End a connection

A Bluetooth connection is ended automatically after sending or receiving data.

• CONNECT TO A COMPUTER

For further information on how to make a connection to a compatible computer using a Bluetooth connection and how to install the PC Suite for Nokia N-Gage game deck, see the *Installation Guide for PC Suite* on the CD-ROM in the "Install" section. For further information on how to use the PC Suite for Nokia N-Gage game deck, see the PC suite **online help**.

Use the CD-ROM

The CD-ROM typically starts automatically when inserted into the CD-ROM drive of your compatible PC. If not, proceed as follows:

- 1 Click the Windows **Start** button and select **Programs > Windows Explorer**.
- 2 On the CD-ROM drive, locate a file called **Nokia game deck.exe** and double-click it.
The CD-ROM interface opens.
- 3 Locate PC Suite for Nokia N-Gage game deck in the "Install" section.
- 4 Double-click 'PC Suite for Nokia N-Gage game deck'. The installation wizard will guide you through the installation process.

Use the modem feature

Detailed installation instructions can be found in *Quick Guide for Nokia Modem Options* on the CD-ROM supplied with the game deck.



• SYNC APPLICATION



Note: You have to download the Sync application from the CD-ROM.

The Sync application enables you to synchronize your calendar or contacts in your game deck with various calendar and address book applications on a compatible computer or on the Internet. Synchronization takes place over a GSM data call or packet data connection.

The synchronization application uses SyncML technology for synchronization. For information on SyncML compatibility, please contact the supplier of the calendar or address book application you want to synchronize your game deck data with.

Options in **Remote sync** are **Synchronize**, **New sync profile**, **Edit sync profile**, **Delete**, **View log**, **Help**, and **Exit**.

Create a synch profile



Glossary: Synchronization profile is the settings for the remote server. You can create several profiles if you need to synchronize your data with multiple servers or applications.

If no profiles have been defined, the game deck asks you if you want to create a new profile.

- 1 When that game deck prompts you to create a new profile, select **Yes**. To create a new profile in addition to existing ones, select **Options > New sync profile**.
- 2 Choose whether you want to use the default setting values or copy the values from an existing profile to be used as the basis for the new profile.
- 3 Define the following:
Sync profile name—Write a descriptive name for the profile.

Bearer type, **Host address**, **Port**, or **HTTP authentication**—Contact your service provider or system administrator for the correct values.

Access point—Select an access point you want to use for the data connection. For more information, see "Connection settings" on page 40.

User name—Your user ID for the synchronization server. Contact your service provider or system administrator for your correct ID.

Password—Write your password. Contact your service provider or system administrator for the correct value.

Calendar—Select **Yes** if you want to synchronize your calendar.

Remote calendar—Enter a correct path to the remote calendar on the server. Must be defined if the previous setting **Calendar** has been set to **Yes**.

Contacts—Select **Yes** if you want to synchronize your contacts.

Remote contacts—Enter a correct path to the remote address book on the server. It must be defined if the previous setting **Contacts** has been set to **Yes**.

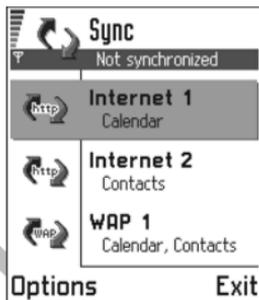
- 4 Press **Done** to save the settings.

Synchronize data

In **Sync**, you can see the different profiles. You can also see which protocol the profile uses, **http** or **WAP**, and what kind of data will be synchronized—calendar, contacts, or both.

- 1 In the main view, scroll to a profile and select **Options > Synchronize**.
The status of the synchronization appears at the bottom of the screen.
- 2 To cancel synchronization before it is finished, press **Cancel**.
- 3 You are notified when the synchronization has been completed.

After synchronization is complete, press **View log** or select **Options > View log** to open a log file showing the synchronization status (**Complete** or **Incomplete**) and how many calendar or contact entries have been added, updated, deleted, or discarded (not synchronized) in the game deck or on the server.



19 Troubleshooting

If you experience problems with your game deck, Club Nokia Careline (**Applicable to US?**) answers questions and offers instructions over the phone. For more information on the Club Nokia Careline see the Club Nokia invitation in this guide or go to www.club.NokiaUSA.com.

MEMORY LOW

When the following notes are shown, the game deck memory is low and you must start to delete some data: **Not enough memory to perform operation. Delete some data first.** or **Memory low. Delete some data.** To view what kind of data you have and how much memory the different data groups consume, go to **Tools > Manager** and select **Options > Memory details**.

Delete the following items regularly:

- Messages from the **Inbox**, **Drafts**, and **Sent** folders in **Messaging**
- Retrieved e-mail messages from the game deck memory
- Saved browser pages
- Images in **Images**

If you want to delete contact information, calendar notes, call timers, call cost timers, game scores, or any other data, go to the respective application to remove the data.



Note: If the game deck does not respond, try deleting items one by one.

Clearing calendar memory—To remove more than one event at a time, go to the **Month view** and select **Options > Delete entry** and one of the following:

- **Before date**—to delete all calendar notes which take place before a certain date. Enter the date before which all calendar notes will be deleted.
- **All entries**—to delete all calendar notes

Erasing log information—To erase all the log contents, Recent calls register, and Messaging delivery reports permanently, go to **Logs** and select **Options > Clear log** or go to **Settings > Log duration > No log**.

Different ways to store data are as follows:

- Use **PC Suite for Nokia N-Gage** game deck to copy some information to your computer.
- Send images to your e-mail address and then save the images to your computer
- Send data to another Bluetooth-compatible device

Q&A

Game deck display

Q: Why do missing, discolored, or bright dots appear on the screen every time I turn on my game deck?

A: This is an intrinsic characteristic of the active matrix display. Your game deck display contains multiple switching elements to control the pixels. A small number of missing, discolored, or bright dots on the screen might exist.

Bluetooth wireless connections

Q: Why can't I end a Bluetooth connection?

A: If another device is pairing with your game deck but not sending data, and leaves the connection open, then the only way to disconnect is to deactivate the Bluetooth connection link altogether. Go to **Bluetooth** and select the setting **Bluetooth > Off**.

Q: Why can I not find my friend's Bluetooth-enabled device?

A: Verify that both devices are activated.

Verify that the distance between the two devices is not over 30 feet (10 meters) or that there are no walls or other obstructions between the devices.

Verify that the other device is not in "hidden" mode.

Multimedia messaging

Q: What should I do when the game deck tells me that it cannot receive a multimedia message because memory is full?

A: The amount of memory needed is indicated in the error message: **Not enough memory to retrieve message. Delete some data first.** To view what kind of data you have and how much memory the different data groups consume, go to **Tools > Manager** and select **Options > Memory details**. After you have freed up memory, the multimedia message center tries to send the multimedia messages again automatically.

Q: What should I do when the game deck displays: **Unable to retrieve multimedia message. Network connection already in use. ?**

A: End all active data connections. Multimedia messages cannot be received if another data connection using a different gateway address is active for browser or e-mail.

Q: How can I end the data connection when the game deck starts a data connection again and again? **Retrieving message** or **Trying to retrieve message** again are shown briefly. What is happening?

A: The game deck is trying to retrieve a multimedia message from the multimedia messaging center.

Verify that the settings for multimedia messaging have been defined correctly and that there are no mistakes in phone numbers or addresses. Go to **Messaging** and select **Options > Settings > Multimedia message**.

To stop the game deck from making a data connection, you have the following options. Go to **Messaging** and select **Options > Settings > Multimedia message**.

- Select **On receiving msg. > Defer retrieval** if you want the multimedia messaging center to save the message to be retrieved later, for example, after you have checked the settings. After this change, the game deck still needs to send information notes to the network. To retrieve the message later, select **Retr. immediately**.
- Select **On receiving msg. > Decline message** if you want to decline all incoming multimedia messages. After this change, the game deck needs to send information notes to the network and the multimedia messaging center will delete all multimedia messages that are waiting to be sent to you.
- Select **Multimedia reception > Off** if you want to ignore all incoming multimedia messages. After this change the game deck will not make any network connections related to multimedia messaging.

Images

Q: Is the format of the image I'm trying to open supported?

A: See "Image details view" on page 60 for further information on the supported image formats.

Music

Q: Why can't I transfer music tracks to the game deck?

A: Make sure there is enough space on the memory card. If necessary deleted some music tracks from the memory card.

Games

Q: Why can I not play the selected game?

A: Check that the correct memory card for the selected game is installed.

Messaging

Q: Why can't I select a contact?

A: If you cannot select a contact in the Contacts directory, the contact card does not have a phone number or an e-mail address. Add the missing information to the contact card in the Contacts application.

Calendar

Q: Why are the week numbers missing?

A: If you have changed the Calendar settings so that the week will start on some other day than Monday, then the week numbers will not be shown.

Browser

Q: What should I do when I see the message **No valid access point defined**. Define one in **Services settings**. ?

A: Insert proper browser settings. Contact your browser service provider for instructions. See "Set up browser service" on page 106.

Log

Q: Why does the log appear empty?

A: You may have activated a filter and no communication events fitting that filter have been logged. To see all events, select **Options > Filter > All communication**.

PC connectivity

Q: Why do I have problems in connecting the game deck to my compatible PC?

A: Make sure that PC Suite for Nokia N-Gage game deck is installed and running on your PC. See the *Installation guide for PC Suite* on the CD-ROM in the 'Install' section. For further information on how to use the PC Suite for Nokia N-Gage game deck, see the PC suite online help.

Access codes

Q: What is my password for the lock, PIN, or PUK codes?

A: The default lock code is **12345**. If you forget or lose the lock code contact your game deck dealer. If you forget or lose a PIN or PUK code, or if you have not received such a code, contact your network service provider.

For information about passwords, contact your access point provider, for example, a commercial Internet service provider (ISP), browser service provider, or network operator.

Application not responding

Q: How do I close an application that is not responding?

A: Open the application switching window by pressing and holding . Scroll to the application, and press  to close the application.

Too many applications open

Q: Why is the game I am playing running so slowly?

A: You may have too many applications open. Close applications that you are not using by pressing and holding . Then scroll to the application, and press  to close the application.

FCC Draft

20 Reference information

• BATTERY STATEMENTS

Charging and Discharging

Your phone is powered by a rechargeable battery.

Note that a new battery's full performance may be achieved only after two or three complete charge and discharge cycles!

The battery can be charged and discharged hundreds of times but it will eventually wear out. When the operating time (talk time and standby time) is noticeably shorter than normal, it is time to buy a new battery.

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

Temperature extremes can affect the ability of your battery to charge; allow it to cool down or warm up first.

This paragraph should be used ONLY for phones using Ni-Cd AND/OR NiMH batteries: choose the appropriate battery type

For good operation times with Ni-Cd/NiMH batteries, discharge the battery from time to time by leaving your phone switched on until it turns itself off (or by using the battery discharge facility of any approved enhancement available for your phone). Do not attempt to discharge the battery by any other means.

Use the battery only for its intended purpose.

Never use any charger or battery which is damaged or worn out.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip, or pen) causes direct connection of the + and – terminals of the battery (metal strips on the battery), for example, when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 59°F and 77°F (15°C and 25°C). A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose of batteries in a fire!

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

• USE PROPER CARE AND MAINTENANCE

Your phone is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfill any warranty obligations and to enjoy this product for many years:

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside which may damage electronic circuit boards.

- Do not attempt to open the phone. Nonexpert handling may damage it.
- Do not drop, knock, or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to your phone, battery, charger or any enhancement. If any of them are not working properly, take them to your nearest qualified service facility. The personnel there will assist you, and if necessary, arrange for service.

• UNDERSTAND IMPORTANT SAFETY INFORMATION

Traffic Safety

Do not use a handheld telephone while driving a vehicle. Always secure the phone in its holder; do not place the phone on the passenger seat or where it can break loose in a collision or sudden stop.

Remember road safety always comes first!

Operating environment

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

Use the phone only in its normal operating positions.

Magnetic precautions—only in phones with magnetic interference issues

Parts of the phone are magnetic. Metallic materials may be attracted to the phone, and persons with a hearing aid should not hold the phone to the ear with the hearing aid. Always secure the phone in its holder, because metallic materials may be attracted by the earpiece. Do not place credit cards or other magnetic storage media near the phone, because information stored on them may be erased.

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 wireless phone.

PACEMAKERS

Pacemaker manufacturers recommend that a minimum separation of 6 inches (20 cm) be maintained between a handheld 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 phone more than 6 inches (20 cm) from their pacemaker when the phone is switched on
- Should not carry the phone in a breast pocket
- Should use the ear opposite the pacemaker to minimize the potential for interference.
- If you have any reason to suspect that interference is taking place, switch off your phone 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 cellular phones, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to

determine if they are adequately shielded from external RF energy or if you have any questions. Switch off your phone in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles (for example, electronic fuel injection systems, electronic antiskid/antilock 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 your phone off in any facility where posted notices so require.

Potentially explosive atmospheres

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

Users are advised to switch off the phone when at a refueling point (service station). Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants, or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats; chemical transfer or storage facilities; vehicles using liquefied 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 phone or install the phone 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 phone, 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.

Aircraft statement for non US handportables and transportables

Using your phone while in the air is prohibited. Switch off your phone 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.

Aircraft statement for US handportables and transportables

FCC regulations prohibit using your phone while in the air. Switch off your phone 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, legal action, or both.

• EMERGENCY CALLS

Important: This phone, like any wireless phone, operates using radio signals, wireless, and landline networks as well as user-programed functions. Because of this, connections in all conditions cannot be guaranteed. Therefore you should never rely solely upon any wireless phone for essential communications (for example, medical emergencies).

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 phone is not on, switch it on. Check for adequate signal strength.

PHONES WITH SIM CARDS



Some networks may require that a valid SIM card is properly inserted in the phone.

- 2 Press [handset down] as many times as needed (for example, to exit a call, to exit a menu, etc.) to clear the display and ready the phone for calls.
- 3 Key in the emergency number for your present location (for example, 911 or other official emergency number). Emergency numbers vary by location.
- 4 Press the [handset up] /[send] key.

If certain features are in use, you may first need to turn those features off before you can make an emergency call. Consult this user guide 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 wireless phone may be the only means of communication at the scene of an accident—do not end the call until given permission to do so.

PHONES WITH EOTD/E911

The following text will be required when the phone supports the emergency automatic location information.

This phone supports FCC mandated emergency location service. This feature may not be supported by emergency response numbers or wireless phone networks in all areas. 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.

FCC Draft

• CERTIFICATION INFORMATION (SAR)

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

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

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

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (for example, at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone as reported to the FCC when tested for use at the ear is .24 W/kg, and when worn on the body, as described in this user guide, is .47 W/kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements).

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

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of **<http://www.fcc.gov/oet/fccid>** after searching on FCC ID PDN-NEM-4.

For body-worn operation, this phone has been tested and meets the FCC RF exposure guidelines for use with an enhancement that contains no metal and that positions the handset a minimum of 5/8 inch (1.5 cm) from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

If you do not use a body-worn enhancement and are not holding the phone at the ear, position the handset a minimum of 5/8 inch (1.5 cm) from your body when the phone is switched on.

*In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kilogram (W/kg) averaged over one gram of tissue. The standard incorporates¹Use enhancements safely

A few practical rules for enhancement operation:

- Keep all accessories out of the reach of small children.
- When you disconnect the power cord of any enhancement, grasp and pull the plug, not the cord.
- Check regularly that any vehicle-installed accessories are mounted and are operating properly.
- Installation of any complex car accessories must be made by qualified personnel only.
- Use only batteries, chargers, and accessories that have been approved by the phone manufacturer. The use of any other types could invalidate any approval or warranty applying to the phone and could be dangerous.

1

- **ENHANCEMENTS**

Add enhancement information for your phone here.

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21 Troubleshooting

The following table lists some common problems and their solutions.

Problem	Possible cause	Possible solution
My phone isn't charging	The charger and phone aren't properly connected	Securely connect the charger to the phone
	The charger is not properly plugged into the wall	Ensure the charger is plugged in correctly
My phone isn't making/receiving calls	The battery isn't charged	Charge the battery
	The signal strength is poor	If you are indoors, move toward a window
I can't listen to my voice messages	You don't have voicemail service	Call your wireless provider
	You haven't setup your voicemail service with your wireless provider	Call your wireless provider
	You haven't saved your voicemail number to your phone.	See "Call your voice mailbox" on page 14.
	You've forgotten your password or are entering it incorrectly	Call your wireless provider
	The voicemail number you have saved to your phone is incorrect	Call your wireless provider
When I insert my SIM card into another phone, it's rejected	Fixed dialing is activated on your SIM card and the receiving phone doesn't support fixed dialing	Deactivate fixed dialing on the SIM
I can't hear the radio.	A proper enhancement (headset or music stand) is not connected to the phone. No radio frequencies are saved in memory. Volume needs adjustment.	Connect the proper enhancement. See "Radio" on page 30. See "Volume control" on page 9 to locate the volume key.

22 Frequently asked questions

This section lists answers to the most frequently asked questions.

Q. What is my security code?

- A. The default security code is 12345. However, Nokia recommends that you change this code immediately. Certain features can be used only after the correct security code has been successfully entered.

Q. How do I lock and unlock the keypad?

- A. Press   to lock the keypad. To unlock the keypad, press **Unlock** .

Q. How do I make the phone ring louder?

- A. See "Profiles" on page 92 for more details.

Q. How do I change the ringing tone?

- A. See "Profiles" on page 92 for more details.

Q. How do I store my voice mailbox number?

- A. See "Change the voice mailbox number" on page 15.

Q. How do I call my voice mailbox number (retrieve voice messages)?

- A. See "Call your voice mailbox" on page 14.

Q. How do I redial the last-dialed number?

- A. Press  twice.

Q. How do I assign a key to 1-touch dialing?

- A. Press , scroll to Tools, press , scroll to 1-touch dialing, and press . Scroll to the first (empty) slot, press  and press  twice. Enter or retrieve the name/number you want to assign to the key and press **Select**. Repeat these steps as many times as necessary.

Q. How do I check the memory status?

- A. Press  > Tools > Memory card

Q. How do I find my phone's Model number and IMEI number?

- A. The model number and IMEI numbers are located on a label under the phone's battery. Turn your phone off, remove the back cover and then remove the battery from the phone.

Q. How do I clear my call timers?

- Important:** Clearing call timers cannot be undone.



- A. Press  > Extras > Log > Call duration > All calls.
Press Options then select Clear timers.

When the Lock code prompt appears, enter your security code and press OK.

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23 Glossary (to be updated)

Business card	A business card is the same as an entry in the Contacts list. It may contain a name, phone number, and text entry. It can also be sent to other devices.
Call forwarding	A network services feature you use to forward incoming calls to another number.
Call lists	A list used to track numbers for incoming, outgoing, or missed calls.
Call log	A log that registers information about calls you make and receive.
Call timers	Timers used to track the amount of time you spend on calls.
Call waiting	A network services feature that enables your phone to beep while you are in the middle of a call. The beep lets you know that someone else is calling you.
Electronic serial number (ESN)	The identification number that is assigned to the phone. This number is located under the battery.
In-call options	Features available for use while you are in a call.
Keypad	Locks the keypad to prevent accidental key presses.
Keypad tones	The tone you hear when you press a key.
Menu	A list of choices you can make to change settings on your phone or use various phone features.
MMS	Acronym for "Multimedia messaging service."
Predictive text	A method of entering information in your phone that uses a dictionary to predict, or guess, what you are writing.
Profile	A group of settings you can use to customize the way your phone works.
Quick save	A fast method for saving a number.

Ringing tone	The sound your phone makes when you receive a call. Ringing tones can be ringing sounds or short tunes.
Scroll bar	A bar that appears on the right side of the screen when you scroll through the main menus.
SMS	Acronym for "short message service."
Start screen	Your phone's idle screen.
Voice mail	A network services feature that enables people who call and miss you to leave a voice message on your phone.
Warning tones	Sounds your phone makes during error conditions, during confirmations, when the battery is low, and when you need to recharge the battery.

24 Technical information (to be updated)

Feature	Specification
Weight	4.8 oz (137 g) with BL-5C 850 mAh Li-Ion Battery
Size	5.26 x 2.74 x .79 in (length, width, thickness)
Frequency range	Lowband 824–849 MHz (TX) 869–894 MHz (RX) Highband 1850–1910 MHz (TX) 1930–1990 MHz (RX)
Tx output power	Lowband: Up to 2 W Highband: Up to 1 W
Battery voltage	3.6 V nominal
Operating temperature	14°F to +131°F (-10°C to +55°C)
^aTalk time, standby time	Talk-time: up to 2 hours Talk-time with speaker: up to 4 hours Stand by time: up to 10 days Music player: up to 8 hours Radio on with headset: up to 20 hours Radio on with speaker(?): up to 16 hours Games: 3–6 hours

- a. Battery talk and standby times are estimates only and depend on signal strength, network conditions, features used, battery age and condition (including the effect of charging habits), temperatures to which battery is exposed, use in digital mode, and many other factors. Please note that the amount of time a phone is used for calls will affect its standby time. Likewise, the amount of time that the phone is turned on and in the standby mode will affect its talk-time.

• Nokia ONE-YEAR LIMITED WARRANTY

Nokia Inc. ("Nokia") warrants that this cellular phone ("Product") is free from defects in material and workmanship that result in Product failure during normal usage, according to the following terms and conditions:

- 1 The limited warranty for the Product extends for ONE (1) year beginning on the date of the purchase of the Product. This one year period is extended by each whole day that the Product is out of your possession for repair under this warranty.
- 2 The limited warranty extends only to the original purchaser ("Consumer") of the Product and is not assignable or transferable to any subsequent purchaser/end-user.
- 3 The limited warranty extends only to Consumers who purchase the Product in the United States of America.
- 4 During the limited warranty period, Nokia will repair, or replace, at Nokia's sole option, any defective parts, or any parts that will not properly operate for their intended use with new or refurbished replacement items if such repair or replacement is needed because of product malfunction or failure during normal usage. No charge will be made to the Consumer for any such parts. Nokia will also pay for the labor charges incurred by Nokia in repairing or replacing the defective parts. The limited warranty does not cover defects in appearance, cosmetic, decorative or structural items, including framing, and any non-operative parts. Nokia's limit of liability under the limited warranty shall be the actual cash value of the Product at the time the Consumer returns the Product for repair, determined by the price paid by the Consumer for the Product less a reasonable amount for usage. Nokia shall not be liable for any other losses or damages. These remedies are the Consumer's exclusive remedies for breach of warranty.

- 5 Upon request from Nokia, the Consumer must prove the date of the original purchase of the Product by a dated bill of sale or dated itemized receipt.
- 6 The Consumer shall bear the cost of shipping the Product to Nokia in Melbourne, Florida. Nokia shall bear the cost of shipping the Product back to the Consumer after the completion of service under this limited warranty.
- 7 The Consumer shall have no coverage or benefits under this limited warranty if any of the following conditions are applicable:
 - a) The Product has been subjected to abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized connections, unauthorized repair, misuse, neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of Nokia, including damage caused by shipping.
 - b) The Product has been damaged from external causes such as collision with an object, or from fire, flooding, sand, dirt, windstorm, lightning, earthquake or damage from exposure to weather conditions, an Act of God, or battery leakage, theft, blown fuse, or improper use of any electrical source, damage caused by computer or internet viruses, bugs, worms, Trojan Horses, cancelbots or damage caused by the connection to other products not recommended for interconnection by Nokia.
 - c) Nokia was not advised in writing by the Consumer of the alleged defect or malfunction of the Product within fourteen (14) days after the expiration of the applicable limited warranty period.
 - d) The Product serial number plate or the enhancement data code has been removed, defaced or altered.
 - e) The defect or damage was caused by the defective function of the cellular system or by inadequate signal reception by the external antenna, or viruses or other software problems introduced into the Product.

- 8 Nokia does not warrant uninterrupted or error-free operation of the Product. If a problem develops during the limited warranty period, the Consumer shall take the following step-by-step procedure:
- a) The Consumer shall return the Product to the place of purchase for repair or replacement processing.
 - b) If "a" is not convenient because of distance (more than 50 miles) or for other good cause, the Consumer shall ship the Product prepaid and insured to:
Nokia Inc., Attn: Repair Department
795 West Nasa Blvd.
Melbourne, FL 32901
 - c) The Consumer shall include a return address, daytime phone number and/or fax number, complete description of the problem, proof of purchase and service agreement (if applicable). Expenses related to removing the Product from an installation are not covered under this limited warranty.
 - d) The Consumer will be billed for any parts or labor charges not covered by this limited warranty. The Consumer will be responsible for any expenses related to reinstallation of the Product.
 - e) Nokia will repair the Product under the limited warranty within 30 days after receipt of the Product. If Nokia cannot perform repairs covered under this limited warranty within 30 days, or after a reasonable number of attempts to repair the same defect, Nokia at its option, will provide a replacement Product or refund the purchase price of the Product less a reasonable amount for usage. In some states the Consumer may have the right to a loaner if the repair of the Product takes more than ten (10) days. Please contact the Customer Service Center at Nokia at the telephone number listed at the end of this warranty if you need a loaner and the repair of the Product has taken or is estimated to take more than ten (10) days.

- f) If the Product is returned during the limited warranty period, but the problem with the Product is not covered under the terms and conditions of this limited warranty, the Consumer will be notified and given an estimate of the charges the Consumer must pay to have the Product repaired, with all shipping charges billed to the Consumer. If the estimate is refused, the Product will be returned freight collect. If the Product is returned after the expiration of the limited warranty period, Nokia's normal service policies shall apply and the Consumer will be responsible for all shipping charges.
- 9 You (the Consumer) understand that the product may consist of refurbished equipment that contains used components, some of which have been reprocessed. The used components comply with Product performance and reliability specifications.
- 10 ANY IMPLIED WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR USE, SHALL BE LIMITED TO THE DURATION OF THE FOREGOING LIMITED WRITTEN WARRANTY. OTHERWISE, THE FOREGOING LIMITED WARRANTY IS THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. NOKIA SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF ANTICIPATED BENEFITS OR PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF DATA, PUNITIVE DAMAGES, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT OR FACILITIES, DOWNTIME, THE CLAIMS OF ANY THIRD PARTIES, INCLUDING CUSTOMERS, AND INJURY TO PROPERTY, RESULTING FROM THE PURCHASE OR USE OF THE PRODUCT OR ARISING FROM BREACH OF THE WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL OR EQUITABLE THEORY, EVEN IF NOKIA KNEW OF THE LIKELIHOOD OF SUCH DAMAGES. NOKIA SHALL NOT BE LIABLE FOR DELAY IN RENDERING SERVICE UNDER THE LIMITED WARRANTY, OR LOSS OF USE DURING THE PERIOD THAT THE PRODUCT IS BEING REPAIRED.

- 11 Some states do not allow limitation of how long an implied warranty lasts, so the one year warranty limitation may not apply to you (the Consumer). Some states do not allow the exclusion or limitation of incidental and consequential damages, so certain of the above limitations or exclusions may not apply to you (the Consumer). This limited warranty gives the Consumer specific legal rights and the Consumer may also have other rights which vary from state to state.
- 12 Nokia neither assumes nor authorizes any authorized service center or any other person or entity to assume for it any other obligation or liability beyond that which is expressly provided for in this limited warranty including the provider or seller of any extended warranty or service agreement.
- 13 This is the entire warranty between Nokia and the Consumer, and supersedes all prior and contemporaneous agreements or understandings, oral or written, relating to the Product, and no representation, promise or condition not contained herein shall modify these terms.
- 14 This limited warranty allocates the risk of failure of the Product between the Consumer and Nokia. The allocation is recognized by the Consumer and is reflected in the purchase price.
- 15 Any action or lawsuit for breach of warranty must be commenced within eighteen (18) months following purchase of the Product.
- 16 Questions concerning this limited warranty may be directed to:
Nokia Inc.
Attn: Customer Service
7725 Woodland Center Blvd., Ste. 150
Tampa, FL 33614
Telephone: 1-888-NOKIA-2U (1-888-665-4228)
Facsimile: (813) 287-6612
TTY/TDD Users Only: 1-800-24-NOKIA (1-800-246-6542)
- 17 The limited warranty period for Nokia supplied attachments and accessories is specifically defined within their own warranty cards and packaging.

Patents (to be updated)

Manufactured or sold under one or more of the following US Patents.
Asterisk (*) indicates design patents pending.

4868846	4969192	5001372	5101175	5212834	5230091
5241583	5311179	5331638	5331638	5335362	5384782
5384782	5390223	5396657	5400949	5416435	5442521
5444816	5446364	5479476	5487084	5519885	5526366
5553125	5557639	5581244	5625274	5640395	5664053
5677620	5692032	5699406	5699482	5701392	5729534
5729541	5754976	5760568	5782646	5805301	5827082
5835889	5839101	5844884	5845219	5857151	5862178
5870683	5887266	5889770	5892475	5898925	5907823
5914796	5915440	5917868	5920826	5926138	5926769
5930233	5946651	5956625	5956633	5960389	5963901
5966374	5966378	5970059	5987137	5991716	5991857
6005857	6011853	6014573	6026161	6028567	6029128
6038238	6043760	6047196	6049796	6055439	6060193
6069923	6081534	6084962	6088746	6094587	6097964
6112099	6115617	6118775	6122498	6128322	6128509
6138091	6144243	6144676	6148209	6151507	6163609
6164547	6167248	6170073	6185295	6188909	6195338
6199035	6201876	6240076	6240079	6249584	6266330
6292668	6295286	6310609	6324412	29159800*	29159801*
29159803*	29159804*	29159805*	29159806*		

NOTES

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Appendix A

Message from the CTIA (Cellular Telecommunications & Internet Association) to all users of mobile phones.

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ATCC Draft

Safety is the most important call you will ever make.

A Guide to Safe and Responsible Wireless Phone Use

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

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

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

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

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

Wireless Phone "Safety Tips"

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

- 1 Get to know your wireless phone and its features such as 1-touch dial and redial. Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the 1-touch dial function without taking your attention off the road.
- 2 When available, use a hands free device. A number of hands free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices if available to you.
- 3 Position your wireless phone within easy reach. Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.

- 4 Suspend conversations during hazardous driving conditions or situations. Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, your first responsibility is to pay attention to the road.
- 5 Do not take notes or look up phone numbers while driving. If you are reading an address book or business card, or writing a "to do" list while driving a car, you are not watching where you are going. It's common sense. Don't get caught in a dangerous situation because you are reading or writing and not paying attention to the road or nearby vehicles.
- 6 Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic. Try to plan your calls before you begin your trip or attempt to coincide your calls with times you may be stopped at a stop sign, red light or otherwise stationary. But if you need to dial while driving, follow this simple tip--dial only a few numbers, check the road and your mirrors, then continue.
- 7 Do not engage in stressful or emotional conversations that may be distracting. Stressful or emotional conversations and driving do not mix--they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations which have the potential to divert your attention from the road.
- 8 Use your wireless phone to call for help. Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations--with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in the case of fire, traffic accident, road hazard or medical emergency. Remember, it is a free call on your wireless phone!
- 9 Use your wireless phone to help others in emergencies. Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
- 10 Call roadside assistance or a special wireless non-emergency assistance number when necessary. Certain situations you encounter while driving may require attention, but are not urgent enough to merit a call for emergency services. But you still can use your wireless phone to lend a hand. If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

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

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

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

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

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Phone: (202) 785-0081

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Appendix B

Message from the FDA (U.S. Food and Drug Administration) to all users of mobile phones.

July 18, 2001 For updates: <http://www.fda.gov/cdrh/phones>

FCC Draft

Consumer Update on Wireless Phones

U.S. Food and Drug Administration

1. Do wireless phones pose a health hazard?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

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

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting

effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop—if they do—may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

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

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

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

FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

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

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

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

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

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

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

If there is a risk from these products--and at this point we do not know that there is--it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure. If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna.

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

10. What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

11. What about wireless phone interference with medical equipment?

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI. FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a compatible phone and a accompanied hearing aid at the same time. This standard was approved by the IEEE in 2000.

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

12. Where can I find additional information?

For additional information, please refer to the following resources:

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

July 18, 2001 For updates: <http://www.fda.gov/cdrh/phones>

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