## Welcome

Welcome to the world of Motorola digital wireless communications! We are pleased that you have chosen this Motorola GSM wireless phone.


Your phone may not appear exactly as the phone image above.

www.hellomoto.com
MOTOROLA and the Stylised M Logo are registered in the US Patent \& Trademark Office.
Java and all other Java-based marks are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.
All other product or service names are the property of their respective owners.

## © Motorola, Inc., 2003.

## Software Copyright Notice

The Motorola products described in this manual may include copyrighted Motorola and third-party software stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola and third-party software providers certain exclusive rights for copyrighted software, such as the exclusive rights to distribute or reproduce the copyrighted software. Accordingly, any copyrighted software contained in the Motorola products may not be modified, reverse-engineered, distributed, or reproduced in any manner to the extent allowed by law. Furthermore, the purchase of the Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any licence under the copyrights, patents, or patent applications of Motorola or any third-party software provider, except for the normal, non-exclusive, royalty-free licence to use that arises by operation of law in the sale of a product.
While Products specifications and features may be subject to change without notice, we are making every possible effort to ensure that user manuals are updated on a regular basis to reflect product functionality revisions. However, in the unlikely event that your manual version does not fully reflect the core functionality of your product, please let us know. You may also be able to access up-to-date versions of our manuals in the consumer section of our Motorola web site, at http://www.motorola.com.

## Contents


Safety and General Information ..... 6
Getting Started. ..... 13
About This Guide ..... 13
Installing the SIM Card ..... 13
Battery Use .....  14
Installing the Battery ..... 15
Installing a Lanyard ..... 16
Charging the Battery ..... 17
Turning Your Phone On .....  18
Adjusting Volume ..... 18
Making a Call ..... 19
Answering a Call ..... 19
Viewing Your Phone Number .....  19
Highlight Features .....  20
Taking and Sending a Photo ..... 20
Sending a Multimedia Message. ..... 22
Receiving a Multimedia Message .....  24
Playing Video Clips ..... 24
Using Event Lights ..... 25
Using Ring Lights. ..... 26
Learning to Use Your Phone ..... 27
Using the Display. .....  27
Using the 5-Way Navigation Key ..... 31
Using Menus ..... 32
Entering Text .....  34
Changing a Code, PIN, or Password ..... 43




## Safety and General Information

IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION. READ THIS INFORMATION BEFORE USING YOUR PHONE.

The information provided in this document supersedes the general safety information in user guides published prior to December 1, 2002.

## Exposure To Radio Frequency (RF) Energy

Your phone contains a transmitter and a receiver. When it is ON, it receives and transmits RF energy. When you communicate with your phone, the system handling your call controls the power level at which your phone transmits.

Your Motorola phone is designed to comply with local regulatory requirements in your country concerning exposure of human beings to RF energy.

## Operational Precautions

To assure optimal phone performance and make sure human exposure to RF energy is within the guidelines set forth in the relevant standards, always adhere to the following procedures.

## External Antenna Care

Use only the supplied or Motorola-approved replacement antenna. Unauthorised antennas, modifications, or attachments could damage the phone.

Do NOT hold the external antenna when the phone is IN USE. Holding the external antenna affects call quality and may cause the phone to operate at a higher power level than needed. In addition, use of unauthorised antennas may result in non-compliance with the local regulatory requirements in your country.

6 - Safety and General Information

## Phone Operation

When placing or receiving a phone call, hold your phone as you would a wireline telephone.

## Body-Worn Operation

To maintain compliance with RF energy exposure guidelines, if you wear a phone on your body when transmitting, always place the phone in a Motorola-supplied or approved clip, holder, holster, case, or body harness for this phone, if available. Use of accessories not approved by Motorola may exceed RF energy exposure guidelines. If you do not use one of the body-worn accessories approved or supplied by Motorola, and are not using the phone held in the normal use position, ensure the phone and its antenna are at least 1 inch ( 2.5 centimetres) from your body when transmitting.

## Data Operation

When using any data feature of the phone, with or without an accessory cable, position the phone and its antenna at least 1 inch ( 2.5 centimetres) from your body.

## Approved Accessories

Use of accessories not approved by Motorola, including but not limited to batteries and antenna, may cause your phone to exceed RF energy exposure guidelines. For a list of approved Motorola accessories, visit our website at www. Motorola.com.

## RF Energy Interference/Compatibility

Note: Nearly every electronic device is susceptible to RF energy interference from external sources if inadequately shielded, designed, or otherwise configured for RF energy compatibility. In some circumstances your phone may cause interference.

## Facilities

Turn off your phone in any facility where posted notices instruct you to do so. These facilities may include hospitals or health care facilities that may be using equipment that is sensitive to external RF energy.

## Aircraft

When instructed to do so, turn off your phone when on board an aircraft. Any use of a phone must be in accordance with applicable regulations per airline crew instructions.

## Medical Devices

## Pacemakers

Pacemaker manufacturers recommend that a minimum separation of 6 inches ( 15 centimetres) be maintained between a handheld wireless phone and a pacemaker.
Persons with pacemakers should:

- ALWAYS keep the phone more than 6 inches ( 15 centimetres) from your pacemaker when the phone is turned ON.
- NOT carry the phone in the breast pocket.

to These facilities may include hospitals or health care

Use the ear opposite the pacemaker to minimise the potential for interference.

- Turn OFF the phone immediately if you have any reason to suspect that interference is taking place.


## Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

## Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your GP may be able to assist you in obtaining this information.

[^0]
## Use While Driving

Check the laws and regulations on the use of phones in the area where you drive. Always obey them.
When using your phone while driving, please:

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call if driving conditions so require.


## Operational Warnings

## For Vehicles With an Air Bag

Do not place a phone in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a phone is placed in the air bag deployment area and the air bag inflates, the phone may be propelled with great force and cause serious injury to occupants of the vehicle.

## Potentially Explosive Atmospheres

Turn off your phone prior to entering any area with a potentially explosive atmosphere, unless it is a phone type especially qualified for use in such areas and certified as "Intrinsically Safe." Do not remove, install, or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.
Note: The areas with potentially explosive atmospheres referred to above include fuelling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust, or metal powders. Areas with potentially explosive atmospheres are often but not always posted.

## Blasting Caps and Areas

To avoid possible interference with blasting operations, turn OFF your phone when you are near electrical blasting caps, in a blasting area, or in areas posted "Turn off electronic devices." Obey all signs and instructions.

## Batteries

Batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewellery, keys, or beaded chains touch exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, bag, or other container with metal objects. Use only Motorola original batteries and chargers.
Your battery or phone may contain symbols, defined as follows:


| Symbol | Definition |
| :---: | :--- |
| In | Important safety information will follow. |
|  | Your battery or phone should not be disposed of in <br> a fire. |
| Your battery or phone may require recycling in <br> accordance with local laws. Contact your local <br> regulatory authorities for more information. |  |
|  | Your battery or phone should not be thrown in the <br> trash. |
|  | Your phone contains an internal lithium ion <br> battery. |

## Seizures/Blackouts

Some people may be susceptible to epileptic seizures or blackouts when exposed to blinking lights, such as when watching television

10 - Safety and General Information

or playing video games. These seizures or blackouts may occur even if a person never had a previous seizure or blackout.

If you have experienced seizures or blackouts, or if you have a family history of such occurrences, please consult with your doctor before playing video games on your phone or enabling a blinkinglights feature on your phone. (The blinking-light feature is not available on all products.)
Parents should monitor their children's use of video game or other features that incorporate blinking lights on the phones. All persons should discontinue use and consult a doctor if any of the following symptoms occur: convulsion, eye or muscle twitching, loss of awareness, involuntary movements, or disorientation.
To limit the likelihood of such symptoms, please take the following safety precautions:

- Do not play or use a blinking-lights feature if you are tired or need sleep.
- Take a minimum of a 15 -minute break hourly.
- Play in a room in which all lights are on.
- Play at the farthest distance possible from the screen.


## Repetitive Motion Injuries

When you play games on your phone, you may experience occasional discomfort in your hands, arms, shoulders, neck, or other parts of your body. Follow these instructions to avoid problems such as tendonitis, carpal tunnel syndrome, or other musculoskeletal disorders:

- Take a minimum 15-minute break every hour of game playing.
- If your hands, wrists, or arms become tired or sore while playing, stop and rest for several hours before playing again.
- If you continue to have sore hands, wrists, or arms during or after play, stop playing and see a doctor.


## European Union Directives Conformance Statement

Hereby, Motorola declares that this product is in compliance with


C

- The essential requirements and other relevant provisions of Directive 1999/5/EC
- All other relevant EU Directives


The above gives an example of a typical Product Approval Number. You can view your product's Declaration of Conformity (DoC) to Directive 1999/5/EC (the R\&TTE Directive) at www.motorola.com/ rtte - to find your DoC, enter the product Approval Number from your product's label in the "Search" bar on the Web site


## Getting Started

## About This Guide

This guide describes the basic features of your Motorola wireless phone.

## Optional Features

This label identifies an optional network, SIM card, or subscription-dependent feature that may not be offered by all service providers in all geographical areas. Contact your service provider for more information.

## Optional Accessories



This label identifies a feature that requires an optional Motorola Original ${ }^{T M}$ accessory.

## Installing the SIM Card

Your SIM (Subscriber Identity Module) card contains your phone number, service details, and phonebook/message memory.
Caution: Do not bend or scratch your SIM card. Avoid exposing your SIM card to static electricity, water, or dirt.


- New batteries or batteries that have been stored for a long time may require a longer charge time.
- Maintain the battery at or near room temperature when charging.
- Do not expose batteries to temperatures below $-10^{\circ} \mathrm{C}\left(14^{\circ} \mathrm{F}\right)$ or above $45^{\circ} \mathrm{C}\left(113^{\circ} \mathrm{F}\right)$. Always take your phone with you when you leave your vehicle.
- When you do not intend to use a battery for a while, store it uncharged in a cool, dark, dry place, such as a refrigerator.
- Batteries gradually wear down and require longer charging times. This is normal. If you charge your battery regularly and notice a decrease in tallk time or an increase in charging time, then it is probably time to purchase a new battery.

The rechargeable batteries that power this phone must be disposed of properly and may need to be recycled. Refer to your battery's label for battery type. Contact your local recycling centre for proper disposal methods.
Warning: Never dispose of batteries in a fire because they may explode.

## Installing the Battery

Your phone is designed to use only Motorola Original batteries and accessories. We recommend that you store batteries in their protective cases when not in use.



New batteries are shipped partially charged. Before you can use your phone, you need to install and charge the battery as described below. Some batteries perform best after several full charge/ discharge cycles.

## Action

1 Plug the travel charger into the bottom of your phone.


2 Plug the other end of the travel charger into the appropriate electrical outlet.
3 When your phone indicates Charge Complete, remove the travel charger.

Tip: You can safely leave the travel charger connected to your phone after charging is complete. This will not damage the battery.


## Turning Your Phone On



## Action

1 Press and hold © for 2 seconds to turn on the phone.


2 If necessary, enter your SIM card PIN code and press ok $(F)$ to unlock the SIM card.
Caution: If you enter an incorrect PIN code 3 times in a row, your SIM card is disabled and your phone displays SIM Blocked.
3 If necessary, enter your 4-digit unlock code and press OK ( $\cdot \cdot \overline{\text { P }}$ ) to unlock the phone.

## Adjusting Volume

Press left or right on the 5-Way Navigation key (\%) to increase or decrease volume.

- increase or decrease
 earpiece volume during a call
- increase or decrease the ringer volume setting when the home screen is visible
Tip: At the lowest volume setting, press the key left once to switch to vibrate alert. Press it again to switch to silent alert. Press the key right to cycle back to vibrate alert, then ring alert.
- turn off an incoming call alert

Alternatively the volume can also be accessed by pressing menu © $>$ Settings $>$ Ring Styles.

18 - Getting Started

## Making a Call

| Press |  | To |
| :--- | :--- | :--- |
| 1 | keypad keys | dial the phone number |
| 2 | 1 | make the call |
| 3 | 0 | end the call and "hang up" the phone <br> when you are finished |

Alternatively access the Phonebook by pressing menu $\Longleftrightarrow>$ Phone Book > scroll through to required entry > Send (i.).

## Answering a Call

When you receive a call, your phone rings and/or vibrates and displays an incoming call message.

| Press |  | To |
| :--- | :--- | :--- |
| 1 | answer the call |  |
| 2 | end the call and "hang up" the phone <br> when you are finished |  |



## Viewing Your Phone Number

To view your phone number from the home screen, press (
While you are on a call, press $\measuredangle>$ My Tel. Numbers.
Note: Your phone number must be stored on your SIM card to use this feature. To store your phone number on the SIM card, see page 48. If you do not know your phone number, contact your service provider.

## Highlight Features

You can do much more with your phone than make and receive calls! This section describes some of your phone's highlight features.

## Taking and Sending a Photo

To activate your phone's camera:

## Find the Feature $\quad>$ Multimedia $>$ Camera

Note: Camera can also be accessed quickly by pressing the right Soft Key from idle display, depending on local settings.
The active viewfinder image appears on your display.


Point the camera lens at the photo subject, then:

20 - Highlight Features
Press To

| 1 | CAPture ( $\%$ \%) | take a photo |
| :---: | :---: | :---: |
| 2 | STORE ( $\cdot \cdot \bar{\square}$ ) | view storage options |
|  |  | If you choose to store the photo, continue to step 3. |
|  | or |  |
|  | DISCARD ( -5$)$ | delete the photo and return to the active viewfinder |
| 3 | ( $0^{\text {P }}$ | scroll to Send in Message, Store Only, Apply as Wallpaper, or Apply as Screen Saver, or Send to Blog * |
| 4 | SELECT ( $\sqrt{2} \cdot$ ) | perform the storage option of your choice |

* Optional network/subscription dependent feature. Not all features may be available on your phone.
Press $\propto$ in the viewfinder to open the Pietures Menu. The Pictures Menu can include the following options:

| Option | Description |
| :--- | :--- |
| Go To Pietures | View pictures and photos stored on your <br> phone. |
| Auto-Timed Capture | Set a timer for the camera to take a photo. |
| Delete All | Delete all pictures. |
| Pictures Setup | Open the setup menu to adjust picture <br> settings. |
| View Free Space | See how much memory remains for <br> storing pictures. |

Tip: To assign a stored picture to a phonebook entry, open the entry and press $\leftrightarrows>$ Edilit > Picture. You cannot assign pictures to entries stored on your SIM card.

## Sending a Multimedia Message



$8:$
A Multimedia Messaging Service (MMS) message contains one or more slides with text and embedded media objects (including photos, pictures, animations sounds, voice records, and/or video clips). You can send the multimedia message to other wireless phone users, and to email addresses.

Find the Feature $\quad<\quad$| $>$ | Messages $>$ New Message |
| ---: | :--- |
|  | $>$ New Multimedia Msj |

## Press

1 keypad keys

|  | Press $\because$ to open the MMS Menu and insert a Picture, Voice Record, Sound, Video, New Page, Quick Note, or Contact Info. |
| :---: | :---: |
|  | store the message |
| 3 (\%) | oll to a Send To option |

## 4 SELECT ( $\%$ )

- Highlight [One Time Entry] to enter one or more phone numbers and/or email addresses.
- Highlight INew Ph.book Entryl to enter a number/address and add it to the phonebook.
- Or highlight an existing phonebook entry.
To
enter slide text
Press $\equiv$ to open the MMS Menu and insert a Pieture, Voice Record, Sound, Video, New Page, Quick Note, or Contact Info.

隹e the message
croil to a send Io option: t [One Time Entry] or [New Ph.book Entry] and enter a number/ address. Press OK ( $\wp$ ) or DONE ( $\mathcal{F}$ ) when you are finished.
Press To
or
$\operatorname{ADD}(\square) \quad$ add a phonebook entry to the list of recipients. Press DONE ( $F$ ) when you are finished.


| 6 CHANGE ( $-{ }^{\text {c }}$ ) | select Subject |
| :---: | :---: |
| 7 keypad keys | enter the subject |
| 8 OK ( $\cdot \cdot \underline{\text { ) }}$ | store the subject |
| 9 CHANGE (-i) | select Attachments |
| 10 (-). | scroll to Picture, Sounds, or Video |
| 11 SELECT ( $\%$ ) | select the file type |
| 12 (\%) | highlight the file you want |
| 13 SELEET ( $2 \cdot \%$ ) | attach the file |
| 14 BACK ( - ) | return to the message editor |
| 15 (-9) | scroll to Receipt |
| 16 CHANGE ( $-\mathcal{C}$ ) | select Receipt |
|  | activate/deactivate the delivery report |
| 18 DONE ( -i ) | return to the message editor |
| $\begin{aligned} & 19 \operatorname{SEND}(\cdot \cdot \gamma) \\ & \text { or } \end{aligned}$ | send the message |



$\therefore \quad$| send the message, view message |
| :--- |
| details, save the message in the |
| drafts folder, or cancel the message |

Highlight Features - 23

## Receiving a Multimedia Message



When you receive a multimedia message, your phone displays the : (message waiting) indicator and a New Message notification, and sounds an alert.

| Press | To |
| :--- | :--- |
| READ $(\square)$ | open the message |

Multimedia messages that you receive can contain different media objects:

- Photos, pictures, and animations are displayed as you read the message.
- A sound file or video clip begins playing when its slide is displayed.
- Attached files are added to the end of the message. To open the attachment, highlight the file indicator/filename and press VIEW ( $\Omega \cdot$ ) (image file type), PLAY ( $\Sigma \cdot$ ) (sound file or video clip), or OPEN $()$ ) object such as phonebook or datebook entry, or unknown file type).


## Playing Video Clips

You can download video clips with the micro-browser, and send and receive video clips in multimedia messages.
To play a video clip stored on your phone:

## Find the Feature $\quad>$ Multimedia $>$ Videos

| Press |  | To |
| :--- | :--- | :--- |
| $\mathbf{1}$ | O. | scroll to the video clip |
| $\mathbf{2}$ | PLAY $\left(\sum \cdot\right)$ | start video clip playback |

24 - Highlight Features

The video clip displays in the video clip playback screen.


Press $\leftrightarrows$ to open sub-menu

## Using Event Lights

When event lights are activated, your phone displays a light pattern to notify you of the following events: incoming calls, incoming calls from specific phonebook categories, incoming text and voicemail messages, alarms, power up, power down, or battery charging.
To turn event lights on or off:

| Find the Feature | $\begin{aligned} \approx & >\text { Settings }>\text { Ring Styles } \\ & >\text { Event Lights } \end{aligned}$ |
| :---: | :---: |
| Press | To |
| 1 (\%) | scroll to On or Off |
| 2 SEIECT ( $\cdot \square$ ) | select the option |

## Using Ring Lights



Select a light pattern to display when you receive an incoming call (in addition to or instead of a ring/vibrate alert). To select a light pattern:

| Find the Feature $\quad \Leftrightarrow$ | $>$ Settings $>$ Ring Styles |
| ---: | :--- |
|  | $>$ Ring Lights |

Press To

| 1 | scroll to the light pattern |  |
| :--- | :--- | :--- |
| $\mathbf{2}$ | SELECT $(2 \cdot)$ | select the light pattern |

Note: Ring lights only appear if Event lights are On.
The same light pattern displays for all incoming calls. You can use the light ID feature to display a distinctive light pattern when you receive calls from phonebook entries in a specific category. To set a light ID for a phonebook category, see page 69. The light ID is not displayed when ring lights are turned off.


## 26 - Highlight Features

## Learning to Use Your Phone

See page 1 for a basic phone diagram.

## Using the Display

The home screen is displayed when you are not on a call or using the menu. You must be in the home screen to dial a phone number.


Menu Indicator
The $\equiv$ (menu) indicator indicates that you can press the menu key $(\leftrightarrows$ ) to enter the main menu.
Labels at the bottom corners of the display show the current soft key functions. Press the left soft key ( $\mathcal{\sim}$ ) or right soft key ( $\widetilde{\Gamma}$ ) to perform the function indicated by the left or right soft key label. Your phone can display an analogue or digital clock in the home screen (see page 71).

The following status indicators can display:


## 1. Signal Strength Indicator

Vertical bars show the strength of the network connection. You cannot make or receive calls when the $i^{*}$ (no signal) indicator or ${ }^{2} \times$ (no transmit) indicator displays.

## 2. GPRS Indicator

Dhows that your phone is using a high-speed General
Packet Radio Service (GPRS) network connection.
GPRS allows faster data transfer speeds. Indicators can include:
$\begin{array}{ll}\text { 回 }=\text { GPRS PDP context } & \text { 모 }=\text { GPRS packet data } \\ \text { active } & \text { available }\end{array}$

28 - Learning to Use Your Phone


Shows connection and data transmission status. Indicators can include:

| 睹 = secure packet data transfer | $\vec{E}=$ insecure packet data transfer |
| :---: | :---: |
| ac secure application connection | ㄸㅏㅏ = insecure application connection |
| $==$ secure Circuit Switch Data (CSD) call | $\pm=$ insecure CSD call |

## 4. Roam Indicator



Shows when your phone is seeking or using another network outside your home network. Indicators can include:

$$
\begin{aligned}
& { }_{c}^{{ }_{c}^{s}}=2.5 \mathrm{G} \text { home } \quad{ }_{s}^{2 s}=2.5 \mathrm{G} \text { roam } \\
& { }_{c}^{z}=2 G \text { home } \quad{ }_{c}^{c}=2 G \text { roam }
\end{aligned}
$$



## 5. Active Line Indicator

Shows $8_{1}$ or $8_{2}$ to indicate the current active phone line.
Other indicators can include:

B = alarm activated
 can include:

$$
\begin{array}{ll}
8=\text { IM active } & =\text { available for IM } \\
x_{0}=\text { busy } & =\text { invisible to IM } \\
=\text { available for phone calls } & =\text { offline }
\end{array}
$$

When a Java application is active, a (Java midlet) indicator can display in this location.

## 7. Message Indicator



Displays when you receive a new message. Indicators can include:

| $E=$ text message | $=$ voicemail message |
| :--- | :--- |
| message | $=I M$ message |
| min |  |

ค = active chat session
When you enter a message, a number in this location shows the number of characters left on the current page (text message), or the message size (multimedia message).

30 - Learning to Use Your Phone

## 8．Location Indicator

啴回
Your phone may be able to send location information to the network during an emergency call．Indicators show when your phone is sending location information：
a location on = location off

## 9．Ring Style Indicator

Shows the ring style setting．
© an $^{2}$ loud ring
$\Delta_{0}=$ soft ring
縣＝vibrate
$s=$ vibrate and ring
$\Delta_{3}^{3}=$ silent

## 10．Battery Level Indicator

Vertical bars show the battery charge level．Recharge the battery when Low Battery displays and the battery alert sounds．

## Using the 5－Way Navigation Key



Use the 5－way navigation key （©．）to scroll up，down，left，or right through the menu system， highlight menu items，change feature settings，and play games．Press the centre select button to select a highlighted menu item．

## Using Menus



From the home screen, press $\curvearrowright$ to enter the main menu.


Press (-6.) to scroll to and highlight a menu feature icon in the main menu. The following icons represent features that may appear in the main menu, depending on your service provider and service subscription options.

| Icon | Feature | Icon | Feature |
| :---: | :---: | :---: | :---: |
| \& | Games \& Apps | 䈍 | Multimedia |
| 8 | Office Tools | 8is | Settings |
| (1) | IM | 6 | Web Aceess |
| ¢] | Phonebook | 㖪 | Recent Calls |
| $\square$ | Messages |  |  |

32 - Learning to Use Your Phone


## Selecting a Menu Feature



To select a menu feature, starting from the home screen:

## Find the Feature $\quad>$ Recent Calls $>$ Dialled Calls

This example shows that from the home screen, you must press $\Leftrightarrow$, scroll to and select 黽 Recent Calls from the main menu, then scroll to and select Dialled Calls. Press (o) to scroll, and the left/right soft keys to select the functions listed in the bottom left and right corners of the display.

## Selecting a Feature Option

Some features require you to select an option from a list:


Press $\leftrightarrows$ to open
sub-menu
Press (o) to scroll up or down to highlight the option you want.

- In a numbered list, press a number key to highlight the option.
- In an alphabetised list, press a key repeatedly to cycle through the letters on the key and highlight the closest matching list option.
When an option displays a list of possible values, press (e) left or right to scroll through and select a value.

When an option displays a list of possible numeric values, press a number key to set the value.


## Entering Text

Some features require you to enter information.

| Press (©). to scroll down to other options | Entry Datails | Highlighted Option |
| :---: | :---: | :---: |
|  | Name: Johin Smith | Press CHANGE ( $\%$ \%) |
|  | Category: General No.: 2125551212 Type: Work | / to view details of highlighted option |

The message centre lets you compose and send text messages. A Character Counter indicates how many more characters will fit in a Short Msg.


34 - Learning to Use Your Phone

## Choosing a Text Entry Method



Multiple text entry methods make it easy for you to enter names, numbers, and messages. The method (for example, iTAP predictive text or TAP input mode) you select remains active until you select another method.
Press (\#0) in any text entry screen to select one of the following entry methods:

| Primary | The primary text entry method (see below to set). |
| :--- | :--- |
| Numeric | Enter numbers only (see page 41). |
| Symbol | Enter symbols only (see page 41). |
| Secondary | The secondary text entry method (see below to <br> set). |

Alternatively, you can select a text entry method in any text entry screen by pressing $\Leftrightarrow>$ Entry Mode.
Tip: You can switch between text Entry Methods by pressing $\ddagger$ whilst in edit mode.


## Setting Up a Text Entry Method

Press $\leftrightarrows$ > Entry Setup from any text entry screen. Select Primary Setup or Secondary Setup, and choose:

| iTAP | Let the phone predict each word as you <br> press keys (see page 39). |
| :--- | :--- |
| Tap | Enter letters and numbers by pressing a <br> key one or more times. |
| Tap Extended | Enter letters, numbers, and symbols by <br> pressing a key one or more times. |
| None | Hide the Secondary setting (only available <br> for Secondary Setup). |

Learning to Use Your Phone - 35

## Using Capitalisation

Press［om in any text entry screen to change text case．The following indicators show capitalisation status：
abc $=$ no capital letters $\quad$ abc $=$ capitalise next letter only
${ }_{\text {nв }}=$ all capital letters

## Text Entry Method Indicators

When you select the Primary or Secondary text entry method，the following indicators identify the text entry setting：

| Primary | Second． |  |
| :---: | :---: | :---: |
| 1 | 2 | Tap，no capital letters |
| 14 | ${ }^{24}$ | Tap，capitalise next letter only |
| $1+$ | ${ }^{14}$ | Tap，all capital letters |
| 回 | 凹 | iTAP，no capital letters |
| 䀦 | 目 | iTAP，capitalise next letter only |
| 時 | 日t | iTAP，all capital letters |

The following indicators identify Numeric or Symbol entry method：
${ }_{123}=$ numeric method $@=$ symbol method

## Using Tap Method

This is the standard method for entering text on your phone．
Tap method cycles through the letters and number of the key you press．Tap Extended method also cycles through additional symbols as shown in the chart on page 38.
Press To
1 A keypad key one or select a letter, number, or symbol more times
2 keypad keys enter remaining characters.
Tip: Press (\%) right to accept a word completion, or $*$ to insert a space.
3 OK ( $\cdot \cdot)$
store the text
In a text entry screen, you can press $\#=$ to switch entry methods. If Tap or Tap Extended is not available as the Primary or Secondary entry method, see page 35.
When you enter text with Tap or Tap Extanded method, the soft key functions change.


When you enter 3 or more characters in a row, your phone may guess the rest of the word. For example, if you enter prod you might see:


If you want a different word (such as progress), continue pressing keypad keys to enter the remaining characters.

## Character Chart

Use this chart as a guide for entering characters with Tap Extended method.

| 1 1-0 | $\begin{aligned} & . ?!, @ '-\quad: ;() \& " ~ 10 \text { i } ; \% £ \$ ¥ a €+x^{*} / \backslash[]= \\ & ><\# \S \end{aligned}$ |
| :---: | :---: |
| 2 mac | a b c 2 á à â ã ç æ |
| (300) | def 3 é è ê ë |
| 45 | ghi4íîil |
| 5 m | jkI5 |
| 6 6mo | mno6ñóòôõ œ |
| 7 mom | pqrs 7 |
| 8 mo | tuv 8 ú ù û ü |
| \%mid | wxyz9 |
| $0 \cdot 0$ | change text case, for capital letters |

38 - Learning to Use Your Phone

| $*$ | enter a space (hold to enter a return) |
| :--- | :--- |
| $*=0$ | change text entry method (hold for default) |

Note: This chart may not reflect the exact character set available on your phone. In an email address or URL editor, $1 \rightarrow$ first shows common characters for that editor.

## Tap Method Text Entry Rules

- Press a keypad key repeatedly to cycle through its characters.
- Press (-). left or right to move the flashing cursor to the left or right in a text message.
- The first character of every sentence is capitalised. If necessary, press (o) down to force the character to lowercase before the cursor moves to the next position.
- If you enter or edit information and do not want to save the changes, press to exit without saving.


## Using iTAP ${ }^{T M}$ Method

iTAP ${ }^{\text {TM }}$ software provides a predictive text entry method that lets you enter a word using one keypress per letter. This can be faster than Tap method, because your phone combines the keypresses into common words.
 that match your keypresses display:

|  |  | Press (\%) - to |
| :---: | :---: | :---: |
|  | finll | accept Program |
|  | Abie ${ }^{\text {a }}$ Msy 435 |  |
|  | ProgI $\mathrm{Pamm} \uparrow$ |  |
|  |  | Press (o) to |
|  |  | highlight another |
|  | Pron Spoi | combination. |
|  | DELEIE ミ SELECI | Press * to enter |
| Press DELEIE ( $\mathcal{F}$ ) to | Press SELECT (.) | Prog and a space |
|  | to lock highlighted |  |
|  | combination |  |

If you want a different word (such as Progress), continue pressing keypad keys to enter the remaining characters.

## Entering Words

In a text entry screen, you can press $\# *$ to switch entry methods. An indicator shows which method is active (see page 36). If iitap method is not available as the Primary or Secondary entry method, see page 35 .

## Press

1 keypad keys (one press per letter)
2 (ㅇ) left or right highlight the combination you want

## Press

3 SELECT ( $\upharpoonright \cdot \square$ )
or

* enter the highlighted combination when it spells a word
A space is automatically inserted after the word.

If you enter a word your phone does not recognise, the phone stores it to use as one of your word options. When you fill memory space for unrecognised words, your phone deletes the oldest words to add new words.

## Using Numeric Method

In a text entry screen, press :*) to switch entry methods until the 123 (numeric) indicator displays.
Press keypad keys to enter the numbers you want. When you finish entering numbers, press $\#$ to switch to another entry method.

## Using Symbol Method

In a text entry screen, press © to switch entry methods until the © (symbol) indicator displays.

Press To

| 1 | keypad keys (one <br> press per symbol) | show possible symbol combinations <br> at the bottom of the display |
| :--- | :--- | :--- |
| 2 | (O.) left or right | highlight the combination you want |

## Press

3 SELECT ( $\%$ )
or To
lock a highlighted combination
You can press keypad keys to add more symbols to the end of the combination.
enter the highlighted combination

## Symbol Chart

Use this chart as a guide for entering characters with symbol method.

| 1-0 | $\begin{aligned} & . ?!, @ '-\quad: ;() \& " \sim 10 \text { i } ; \% £ \$ \neq \mathrm{a} €+\mathrm{x}^{*} / \backslash[] \\ & =><\# \S \end{aligned}$ |
| :---: | :---: |
| 2 ncc | @ _ \ B |
| 300 | /:; |
| 4 tam | " \& ' |
| 5 mm | () [] $\}$ |
| 6mo | ¿ ${ }^{\sim}$ |
| 7000 | <> $=$ |
| 8 mm | \$£¥口 |
| 59m | \# \% * |
| $0 \cdot 0$ | +-x*/=><\#§ |
| $\cdots$ | enter a space (hold to enter a return) |
| (*) | change text entry method (hold for default) |

Note: This chart may not reflect the exact character set available on your phone. In an email address or URL editor, 10.0 first shows common characters for that editor.

## 42 - Learning to Use Your Phone



## Deleting Letters and Words



Place the cursor to the right of the text you want to delete, and then:

## Action

Press DELETE $(\digamma)$ to delete one letter at a time.
Hold delifie (i) to delete the entire message.

## Changing a Code, PIN, or Password

Your phone's 4 -digit unlock code is originally set to 1234, and the 6digit security code is originally set to 000000 . Your service provider may reset these codes before you receive your phone.
If your service provider has not reset these codes, we recommend that you change them to prevent others from accessing your personal information. The unlock code must contain 4 digits, and the security code must contain 6 digits.
You can also reset your SIM card PIN code, PIN2 code, and/or call barring password if necessary.
To change a code or password:

$$
\text { Find the Feature } \quad<>\text { Settings }>\text { Security }
$$

> New Passwords

## Locking and Unlocking Your Phone

You can lock your phone manually or set the phone to lock automatically whenever you turn it off.
To use a locked phone, you must enter the unlock code. A locked phone still rings or vibrates for incoming calls or messages, but you must unlock it to answer.
You can make emergency calls on your phone even when it is locked (see page 55).


## Locking Your Phone Manually


$\left.\begin{array}{ll}\text { Find the Feature } & < \\ \text { > Settings }>\text { Seeurity } \\ >\text { Phone Lock }>\text { Lock Now }\end{array}\right\}$

## Unlocking Your Phone

Your phone's unlock code is originally set to 1234. Your service provider may reset the unlock code to the last 4 digits of your phone number.
At the Enter Unlock Code prompt:


Press To

| 1 | keypad keys | enter your unlock code |
| :--- | :--- | :--- |
| $\mathbf{2}$ | $\mathbf{0 K}\left(\Omega \cdot{ }^{\boldsymbol{r}}\right)$ | unlock your phone |



## Setting Your Phone to Lock Automatically

You can set your phone to lock every time you turn it off:

| Find the Feature | $\begin{aligned} \Leftrightarrow & >\text { Settings }>\text { Security } \\ & >\text { Phone Lock }>\text { Automatic Lock } \\ & >\text { On } \end{aligned}$ |
| :---: | :---: |
| Press | To |
| 1 keypad keys | enter your unlock code |
| 2 OK ( $\cdot \cdot \cdot$ ) | activate automatic lock |

44 - Learning to Use Your Phone

## If You Forget a Code, PIN, or Password



Your phone's 4-digit unlock code is originally set to 1234, and the 6digit security code is originally set to 000000 . Your service provider may reset the unlock code to the last 4 digits of your phone number before you receive your phone.
If you forget your unlock code, try entering 1234 or the last 4 digits of your phone number. If that does not work, at the Enter Unlock Code prompt:

| Press | To <br> display the unlock code bypass <br> screen |
| :--- | :--- |
| $\mathbf{2}$ keypad keys | enter your security code |
| $\mathbf{3} 0 \mathrm{OK}(\Omega)$ | submit your security code |

If you forget your security code, SIM card PIN code, PIN2 code, or call barring password, contact your service provider.

## Locking and Unlocking the Keypad

You can lock the keypad to prevent accidental key presses (for example, when carrying your phone in a purse or pocket).

| Press | To |
| :--- | :--- |
| $\infty$ | lock or unlock the keypad |

Note: Incoming calls and messages unlock the keypad.

## Using the Phonebook

This section briefly describes basic phonebook operations. For more information about using the phonebook, see page 68.
Shortcut: To open your phonebook from the home screen, you can press (-). up or down.

## Storing a Phone Number

Enter a phone number in the home screen, then press STORE ( $F \cdot \bar{\tau}$ ) to create a phonebook entry with that number. Fill in the other fields to complete the entry.
Select MORE to store another number (for example, a work number) under the same Name.

## Recording a Voice Name

When creating a phonebook entry, scroll to Voice Name and press RECORD ( $\Sigma$ ) . When you are ready, press RECORD ( $\Sigma \cdot$ ) again and say the entry's name (within 2 seconds). When prompted, press RECORD ( $F$ ) and repeat the name. Press DONE ( $-\dot{)}$ ) to store the voice name.

Note: This option is not available for entries stored on the SIM card.

## Storing a Picture for Caller ID

You can store a picture for a phonebook entry. The picture appears when you receive calls from the entry.
Note: This option is not available for entries stored on the SIM card.

When creating a phonebook entry, scroll to Picture and press
 store it for the entry.

46 - Learning to Use Your Phone

## Dialling a Number

Press $<\gg$ Phonebook > entry to call (1.).
Note: You can also access the Phonebook from idle display by pressing (6.), depending on local settings.

Tip: To quickly highlight entries in your Phonebook list: If your entries are sorted by Speed No., press an entry's speed number to highlight it. For example, press $1 \ldots 5 \mathrm{~m}$ for entry number 15. If your entries are sorted by Name, Voice Name, or Email, enter the first letter of the entry's name to highlight it. For example, press 5 m 5 m for the first entry that starts with " K ".

## Voice Dialling a Number

Press $\rightarrow>$ Office Tools, press Dialling Services $>$ Voice Dial, and say the entry's name (within 2 seconds).
Tip: To create a shortcut to Voice Dial, press
© > Office Tools > Dialling Services, scroll to Voice Dial, and hold the $\rightarrow$. Your phone prompts you to save the shortcut. To use a shortcut, press $\leftrightarrows$ and the shortcut key number.

## Sorting Phonebook Entries

Press $<\gg$ Phonebook, press $<\gg$ Setup $>$ Sort hy, then select whether you want to sort the phonebook list by Name, Speed No., Voice Name, or Email.
When sorting by name, you can view All numbers or just the Primary number for each name. To set the primary number for a name, see page 70

## Viewing Entries By Category

Press $\subset>$ Phonabook, press $\leftrightarrows>$ Categories, then select whether you want to view All entries, entries in a predefined category (Business, Personal, General, VIIPs), or entries in a category you created. To set the category for a phonebook entry, see page 69.

## Setting Up Your Phone

## Storing Your Name and Phone Number

觜鼻
To store or edit your name and phone number information on your SIM card:

Find the Feature $\quad>\quad>$ Settings $>$ Phone Status $>$ My Tel. Numbers

Shortcut: Press $\because \infty$ from the home screen to edit your name and phone number.
If you do not know your phone number, contact your service provider.

## Setting the Time and Date

Your phone uses the time and date for the Datebook. Your phone can synchronise its time and date with the network:

Find the Feature | $\Theta$ | $>$ Settings $>$ Initial Setup |
| ---: | :--- |
|  | $>$ Iime and Date $>$ Autoupdate |
|  | $>0 \mathrm{n}$ |

To set the time and date manually, set Autoupdate to off and use the Time and Date options:

Find the Feature $\quad<\quad$|  | $>$ Settings $>$ Initial Setup |
| ---: | :--- |
|  | $>$ Time and Date $>$ Time or Date |

48 - Setting Up Your Phone

## Setting a Ring Style

Your phone rings or vibrates to notify you of an incoming call or other event. This ring or vibration is called an alert.
You can select one of five different ring styles. The ring style indicator in the display shows the current ring style (see page 31).
To set a ring style:
Find the Feature $\quad \gg$ Settings $>$ Ring Styles $>$ Style

| Press |  | To |
| :--- | :--- | :--- |
| 1 | (.). | scroll to the ring style |
| 2 | SELECT $(\sqrt[F]{ })$ | select the ring style |

Each ring style contains settings for specific event alerts, ringer ID, and ringer and keypad volume. To change these settings, press © > Settings > Ring Styles > style Detail.
Shortcut: To change your ring volume from the home screen, you can press ©.) left or right.

## Setting a Wallpaper Image

You can set a photo, picture, or animation as a wallpaper (background) image in your phone's home screen. The wallpaper image appears as a faint watermark in text and menu displays.

| Find the Feature | $\begin{aligned} \Leftrightarrow & >\text { Settings }>\text { Personalise } \\ & >\text { Wallpaper } \end{aligned}$ |
| :---: | :---: |
| Press | To |
| 1 (-) | scroll to Picture |
| 2 CHANGE ( $\mathrm{F} \cdot \mathrm{T}$ ) | open the picture viewer |


|  | Press |  | To |
| :---: | :---: | :---: | :---: |
|  | 3 - up or down |  | scroll to a picture/animation |
|  |  |  | Scroll to [None] to turn off the wallpaper image. |
|  | 4 | SELECT ( $\sqrt{\square}$ ) | select the image |
|  | 5 | ( O $^{\text {a }}$ | scroll to Layout |
|  | 6 | CHANGE ( $\cdot \cdot \cdot$ ) | adjust the image layout |
|  | 7 | (o) | scroll to Centre, Tile, or Fit-to-screen |
|  |  |  | Centre places the image in the centre of the display. |
|  |  |  | Tile fills the display with multiple copies of the image. |
|  |  |  | Fit-to-screen resizes the image, if necessary, to fit the display. |
| (-) | 8 | SELECT ( $\sqrt{2} \cdot$ ) | confirm the layout setting |
|  | 9 | ВАСК ( $\sim$ ( | save wallpaper settings |

## Setting a Screen Saver Image

Set a photo, picture, or animation as a screen saver image.
The screen saver image displays when the phone is on and no activity is detected for a specified time. The image shrinks to fill the display, if necessary. An animation repeats for one minute, then the first frame of the animation displays.
Turn off the screen saver to extend battery life.

| Find the Feature $\quad<\quad$ | $>$ Settings $>$ Personalise |
| ---: | :--- |
|  | $>$ Sereen Saver |

50 - Setting Up Your Phone

| Press |  | To |
| :--- | :--- | :--- |
| $\mathbf{1}$ | scroll to Picture |  |

## Setting Display Colour

Select the colour palette that your phone uses to display indicators, highlights, and soft key labels.

## Find the Feature $\quad<\quad \begin{aligned} &>\text { Settings }>\text { Personalise } \\ &>\text { Colour Style }\end{aligned}$

## Adjusting the Backlight

Set the amount of time that the display and keypad backlights remain on.

$$
\text { Find the Feature } \quad \Leftrightarrow \quad>\text { Settings }>\text { Initial Setup } \begin{aligned}
& >\text { Backlight }
\end{aligned}
$$

## Setting Display Timeout



Set the display to turn itself off when no activity is detected for a specified time.

Find the Feature $\quad \Leftrightarrow \quad \begin{aligned} & >\text { Settings }>\text { Initial Setup } \\ & >\text { Display Timeout }\end{aligned}$


## 52 - Setting Up Your Phone

## Calling Features

For basic instructions on how to make and answer calls, see page 19.

## Changing the Active Line

D- Change the active phone line to make and receive calls from your other phone number.
Note: This feature is available only for dual-line-enabled SIM cards.

Find the Feature $\quad \omega \quad>\begin{gathered}>\text { Settings }>\text { Phone Status } \\ >\text { Active Line }\end{gathered}$
The active line indicator in the display shows the currently active phone line (see page 29).

## Redialling a Number

| Press |  | To |
| :--- | :---: | :--- |
| 1 | a. | view the last 10 dialled calls list |
| $\mathbf{2}$ | -. | scroll to the entry you want to call |
| 3 | i. | redial the number |

## Using Automatic Redial



When you receive a busy signal, your phone displays Call Failed, Number Busy.
To redial the phone number:

Press
(1.) or RETRY (F)

To
activate automatic redial

Your phone automatically redials the number. When the call goes through, your phone rings or vibrates one time, displays Redial Suceessful, and then connects the call.

## Using Caller ID

## Incoming Calls



Calling line identification (Caller ID) displays the phone number for incoming calls in your phone's display.
The phone displays the caller's name (and picture, if available) when the name is stored in your phonebook, or Incoming Call when caller ID information is not available.
You can also set your phone to play a distinctive ringer ID and/or light ID for specific entries stored in your phonebook. For more information, see page 68.

## Outgoing Calls

D. You can show or hide your phone number as an ID for the calls that you make.

Find the Feature
$\equiv>$ Settings $>$ In-Gall Setup
$>$ My Caller ID
54 - Calling Features

You can override the default caller ID setting when you make a call. While dialling (with digits visible in the display):

Press To
© > Hide ID/Show ID hide or show your caller ID for the next call

## Cancelling an Incoming Call

While the phone is ringing or vibrating:

| Press | To |
| :--- | :--- |
| IGNORE $(\Omega)$ | cancel the incoming call |

Depending on your phone settings and/or service subscription, the call may be diverted to another number, or the caller may hear a busy signal.

## Calling an Emergency Number

Your service provider programs one or more emergency phone numbers, such as 999, that you can call under any circumstances, even when your phone is locked or the SIM card is not inserted.
Emergency numbers vary by country. Your phone's preprogrammed emergency number(s) may not work in all locations, and sometimes an emergency call cannot be placed due to network, environmental, or interference issues.

| Press |  | To |
| :--- | :--- | :--- |
| 1 | keypad keys | dial the emergency number |
| 2 | 1. | call the emergency number |

## Dialling International Numbers



Press and hold $+\infty$ to insert the local international access code (+) for the country from which you are calling.

## Viewing Recent Calls

Your phone keeps lists of the calls you recently received and dialled, even if the calls did not connect. The lists are sorted from newest to oldest entries. The oldest entries are deleted as new entries are added.

Shortcut: Press 1. from the home screen to view the dialled calls list.

Find the Feature $\quad>$ Recent Calls

| Press | To |
| :--- | :--- |
| scroll to Received Calls or Dialled Calls |  |


| Option | Description |
| :--- | :--- |
| Store | Create a phonebook entry with the number <br> in the No. field. |
| Delete | Delete the entry. |
| Delete All | Delete all entries in the list. |
| Hide II/Show ID | Hide or show your caller ID for the next <br> call. |
| Send Message | Open a new text message with the number <br> in the To field. |
| Add Digits | Add digits after the number. |
| Attach Number | Attach a number from the phonebook or <br> recent calls lists. |
| Send Tones | Send the number to the network as DTMF <br> tones. <br> This option displays only during a call. |
| Talk then Fax | Talk and then send a fax in the same call <br> (see page 75). |

## Returning an Unanswered Call

Your phone keeps a record of your unanswered calls, and displays:

- X Missell Calls, where $\mathbf{X}$ is the number of missed calls

| Press |  | To |
| :--- | :--- | :--- |
| $\mathbf{1}$ | VIEW $\left(\sum \cdot\right)$ | see the received calls list |
| $\mathbf{2}$ | O.) | select a call to return |
| 3 | 0 | make the call |

## Using the Notepad



The most recent set of digits entered on the keypad are stored in your phone's notepad memory. This can be a phone number that you called, or a number that you entered but did not call. To retrieve the number stored in the notepad:

| Find the Feature | To |
| :--- | :--- |
| Press | call the number |
| or |  |
| $\operatorname{sTORE}(F \cdot)$ | open the Dialling Menu to attach a Notepad <br> number or insert a special character <br> or |
|  | create a phonebook entry with the <br> number in the No. field |

## Attaching a Number

While dialling (with digits visible in the display):

| Press | To |
| :--- | :--- |
| $\infty>$ Attach Number | attach a number from the phonebook <br> or recent calls lists |

## Calling With Speed Dial

Each entry you store in your phonebook is assigned a unique speed dial number.
To see an entry's speed dial number, press $\Longleftrightarrow>$ Phonebook, scroll to the entry, press VIIEW ( $\cdot>)$.

To speed dial a phonebook entry:

| Press |  | To |
| :--- | :--- | :--- |
| $\mathbf{1}$ | keypad keys | enter the speed dial number for the <br> entry you want to call |
| $\mathbf{2}$ | $\cdots$ | submit the number |
| $\mathbf{3}$ | D. | call the entry |

## Calling With 1-Touch Dial

To call phonebook entries 1 to 9 , press and hold the single-digit speed dial number for one second.
Tip: You must specify which phone number list you want to use with this feature: phone memory phonebook or SIM card phonebook (see page 70).

## Using Voicemail

Voicemail messages that you receive are stored on the network. To listen to your messages, you must call your voicemail phone number.
Your service provider may include additional information about using this feature.

## Listening to Voicemail Messages

## Find the Feature $\quad>$ Messages $>$ Voicemail

The phone calls your voicemail phone number. If no voicemail number is stored, your phone prompts you to store a number.

## Receiving a Voicemail Message



When you receive a voicemail message, your phone displays the ©i (voicemail message) indicator and a New VoiceMail notification.

| Press | To |
| :--- | :--- |
| call $(\Omega \cdot)$ | listen to the message |

The phone calls your voicemail phone number. If no voicemail number is stored, your phone prompts you to store a number.

## Storing Your Voicemail Number

If necessary, use the following procedure to store your voicemail phone number on your phone. Usually, your service provider has already done this for you.

| Find the Feature $\quad \Leftrightarrow$ | $>$ Messages |
| ---: | :--- |
|  | $=>$ Voicemail Setup |

Press To

| $\mathbf{1}$ | keypad keys | enter your voicemail number |
| :--- | :--- | :--- |
| $\mathbf{2}$ | $\mathbf{O K}(\Omega)$ | store the number |

You cannot store ap (pause), w (wait), or n (number) character in this number. If you want to store a voicemail number with these characters, create a phonebook entry for it. Then, you can use the entry to call your voicemail.

60 - Calling Features

## Using Call Waiting



When you are on a call, an alert tone sounds to indicate that you have received a second call.

| Press | To |
| :---: | :---: |
| 1 (1.) | answer the new call |
| 2 SWITCH (\%) | switch between calls |
| or |  |
| LINX (F) | connect the 2 calls |
| or |  |
| > End Call On Hold | end the call on hold |

You must turn on call waiting to use the feature. To turn call waiting on or off:

Find the Feature $\quad \Leftrightarrow \quad \begin{aligned} & >\text { Settings }>\text { In-Call Setup } \\ & >\text { Call Waiting }\end{aligned}$


## Putting a Call On Hold

Press
HOLD ( $F \cdot)$ (if available) put the call on hold
( $\gg$ Hold

## Transferring a Call



You can announce that you are transferring an active call to another party, or you can directly transfer the call.

## Announce the Call Transfer

| Find the Feature | © $>$ Hold |
| :---: | :---: |
| Press | To |
| 1 keypad keys | dial the number where you are transferring the call |
| 2 (1) | call the number and speak to the person who answers |
| $3 \Leftrightarrow$ | open the menu |
| 4 (-) | scroll to Transfer |
| 5 SELECT ( $2 \cdot \mathrm{P}$ ) | select Transfer |
| 6 OK ( $\%$ ) | confirm the transfer |

Do Not Announce the Call Transfer

| Find the Feature | > Transfer |
| :--- | :--- |
| Press   <br> $\mathbf{1}$ keypad keys To <br> dial the number where you are   <br> transferring the call   |  |
| $\mathbf{2}$ | 1. |

## 62 - Calling Features

## Phone Features

## Menu Map



## Settings Menu

Personalise

- Home Screen
- Main Menu
- Colour Style
- Greeting
- Wallpaper
- Screen Save
- Quick Dial

Fron Ring Styles
Style

- style Detail
- Ring Detail
$B \quad$ Call Divert
- Voice Calls
- Fax Calls
- Data Calls
- Cancel All
- Divert Status

Bill In-Call Setup

- In-Call Timer
- Call Cost Setup
- My Caller ID
- Talk and Fax
- Answer Options
- Call Waiting
(3)ISInitial Setup
- Time and Date
- 1-Touch Dial
- Display Timeout
- Backlight
- Scroll
- Language
- Contras
- DTMF
- Master Reset
- Master Clear

Phone Status

- My Tel. Numbers
- Credit Info/Available *
- Active Line
- Battery Meter
- Other Information


## (1) Headse

- Auto Answer
- Voice Dial

Gilb Car Settings

- Auto Answer
- Auto Handsfree
- Power-Off Delay
- Charger Time

Network

- New Network
- Network Setup
- Available Networks
- My Network List
- Service Tone
- Call Drop Tone

1 Security

- Phone Lock
- Lock Keypad
- Lock Application
- Fixed Dial
- Call Barring
- SIM PIN
- New Passwords

Java Settings

- Java System
- Java System
- Delete All Apps
- App Vibration
- App Volume
- App Priority
- App Backlight
- DNS IP
* optional features



## Feature Quick Reference



This section helps you locate features on your phone that are not described in this guide.

## Calling Features

| Feature | Description |  |
| :---: | :---: | :---: |
| Conference Call | During a call: <br> © $>$ Holld, dial next number, press (1.), press LINX ( | ${\underset{\sim}{7 n}}^{\square}$ |
| Call Diverting | Set up or cancel call diverting: © > Settings > Call Divert | $\sum^{n}$ |
| Call Barring | Restrict outgoing or incoming calls: $\begin{aligned} & \subset>\text { Settings }>\text { Security } \\ & >\text { Call Barring } \end{aligned}$ | $\overbrace{i n}^{n}$ |


| Feature | Description |  |
| :--- | :--- | :--- |
| Send Text | Send a text message: <br> Message <br> $\ggg$ Messages $>$ New Message <br> $>$ New Short Msg | nen |


| Feature | Description |  |
| :---: | :---: | :---: |
| Use MMS Template | Open an MMS template with preloaded media: <br> © > Messages > New Message > MMS Templates | $\overbrace{}^{n}$ |
| Read Message | Read a new text or multimedia message that you have received: <br> Press read ( $\bar{P}$ ) . |  |
| Store Message Objects | Go to a multimedia message slide, then: <br> ( $\gg$ Store | nin |

## Instant Messaging

| Feature | Description |
| :--- | :--- |
| Log In | Log in to instant messaging: <br> Find Others <br> Online |
| After you log in: <br> Select Contact List to see a list of <br> other users. |  |
| Start <br> Conversation | Start a conversation: <br> From your Contact list, highlight a <br> name in Online Contacts, press <br> SEND IM $(\Sigma \cdot /)$. |


| Feature | Description |
| :---: | :---: |
| Open Active Conversation | Open a conversation in progress: <br> From your Contact List, highlight a name in Conversations, press VIEW ( $\because$ ). |
| End Conversation | From the conversation display: © > End Conversation |
| Log Out | Log out of instant messaging: Select Log Out from the IM Online menu. |

Chat


## Phonebook



| Feature | Description |
| :---: | :---: |
| Create Entry | Create a new phonebook entry: <br> Type in telephone number <br> > Store > enter other details |
| Create Group Mailing List | Create a group mailing list as a phonebook entry: <br> © > Phonebook <br> © > New > Mailing List |
| Dial Number | Call a number stored in the phonebook: $\Leftrightarrow>$ Phonebook, highlight the phonebook entry, press (1.) to call |
| Voice Dial Number | Voice dial a number stored in the phonebook: <br> > Office Tools > Dialling Services > Voice Dial When prompted, say the entry's name (within 2 seconds). |
| Set Ringer ID for Entry | Assign a distinctive ringer alert to a phonebook entry: $\begin{aligned} & \approx>\text { Phonebook > entry } \\ & \approx>\text { E Edit > Ringer ID > ringer name } \end{aligned}$ <br> Note: The Ringer ID option is not available for entries stored on the SIM card. |


| Feature | Description |
| :---: | :---: |
| Set Picture ID for Entry | Assign a picture to display when you receive calls from an entry: $\begin{aligned} & \Leftrightarrow \text { > Phonebook > entry } \\ & \Xi \text { > Edilit > Pieture > picture } \end{aligned}$ <br> Note: The Pieture option is not available for entries stored on the SIM card. |
| Set Category for Entry | Set the category for a phonebook entry: <br> $\Leftrightarrow>$ Phonebook > entry <br> $\Leftrightarrow>$ Edit $>$ Category $>$ category name <br> Note: The Category option is not available for entries stored on the SIM card. |
| Set Category View | Set a phonebook category view: <br> © > Phonebook <br> © > Categories > category view |
| Set Category Light ID | Set a distinctive light pattern to be displayed when you receive calls from phonebook entries in a specific category: <br> $\Leftrightarrow>$ Phonebook <br> $\Leftrightarrow>$ Categories, scroll to entry, press © > Edilit > Light ID <br> Note: The Light ID option is not available for entries stored on the SIM card. |
| Sort Phonebook List | Set the order in which phonebook entries are listed: <br> © > Phonebook <br> © > Setup > Sort by $>$ sort order |


| Feature | Description |
| :---: | :---: |
| Set Primary Number | Set the primary number for a phonebook entry with multiple numbers: <br> $\Leftrightarrow>$ Phonebook, scroll to entry, press $\Rightarrow>$ Set Primary $>$ phone number |
| 1-Touch Dial | Set 1-touch dial to call entries stored in your phone memory phonebook or the SIM card phonebook: <br> © > Settings > Initial Setup > 1-Touch Dial |

## Personalising Features

| Feature | Description |
| :---: | :---: |
| Ring Style | Change the ring alert for an event: $\Leftrightarrow$ > Settings > Ring Styles > style Detail > select chosen alerts |
| Ringer IDs | Activate distinctive ring alerts assigned to phonebook entries: <br> $\lesssim>$ Settings > Ring Styles > style Detail $>$ Ringer IDs |
| Ring Volume | Set ringer volume: <br> © > Settings > Ring Styles > style Detail $>$ Ring Volume <br> Shortcut: Press (o) right or left in the home screen. |
| Keypad Volume | Set keypad keypress volume: © > Settings > Ring Styles > style Detail $>$ Key Volume |



## Menu Features



| Feature | Description |
| :---: | :---: |
| Language | Set menu language: <br> C > Settings > Initial Setup > Language |
| Master Reset | Reset all options except unlock code, security code, and lifetime timer: <br> © > Settings > Initial Setup > Master Reset |
| Master Clear | Reset all options except unlock code, security code, and lifetime timer, and clear all user settings and entries except SIM card information: <br> © > Settings > Initial Setup > Master Clear |

## Dialling Features

| Feature | Description |
| :---: | :---: |
| Fixed Dial | When you turn on fixed dialling, you can only call numbers stored in the fixed dial list. <br> Turn fixed dialling on or off: $\Leftrightarrow>\text { Settings }>\text { Security }>\text { Fixed Dial }$ <br> Use the fixed dial list: <br> © > Office Tools > Dialling Services > Fixed Dial |
| Service Dial | Dial service phone numbers: © > Office Tools > Dialling Services $>$ Service Dial |


| Feature | Description |  |
| :---: | :---: | :---: |
| Quick Dial | Your service provider may program your phone with one or more quick dial numbers, such as the customer service number. <br> Dial preprogrammed phone numbers: <br> $\Leftrightarrow>$ Office Tools > Dialling Services $>$ Quick Dial |  |
| DTMF Tones | Activate DTMF tones: <br> $\Leftrightarrow>$ Settings > Initial Setup > DTMF <br> Send DTMF tones during a call: <br> Press number keys. <br> Send stored numbers as DTMF tones during a call: <br> Highlight a number in the phonebook or recent calls lists, then press $\propto$ <br> $>$ Send Tones. |  |

## Call Monitoring

Network connection time is the elapsed time from the moment you connect to your service provider's network to the moment you end the call by pressing ©. This time includes busy signals and ringing.
The amount of network connection time you track on your resettable timer may not equal the amount of time for which you are billed by your service provider. For billing information, contact your service provider.

| Feature | Description |
| :--- | :--- |
| Call Times | View call timers: <br> $B \gg$ Recent Calls $>$ Call Times |
| In-Call Timer | Display time or cost information <br> during a call: <br> $e \gg$ Settings $>$ In-Call Setup <br> $>$ In-Call Timer |
| Call Cost | View call cost information: <br> $\infty \gg$ Recent Calls $>$ Call Cost |

## Handsfree Features

Note: The use of wireless devices and their accessories may be prohibited or restricted in certain areas. Always obey the laws and regulations on the use of these products.


| Feature | Description |  |
| :---: | :---: | :---: |
| Auto Handsfree (car kit) | Automatically route calls to a car kit when connected: <br> $\bigcirc>$ Settings $>$ Car Settings $>$ Auto Handsfree |  |
| Power-Off Delay (car kit) | Set the phone to stay on for a specified time after the ignition is switched off: <br> © > Settings > Car Settings <br> $>$ Power-Off Delay |  |
| Charger Time (car kit) | Charge the phone for a specified time after the ignition is switched off: <br> © $>$ Settings $>$ Car Settings <br> $>$ Charger Time |  |

Data and Fax Calls

| Feature | Description |  |
| :---: | :---: | :---: |
| Send Data or Fax | Connect your phone to the device, then place the call through the device application. |  |
| Receive Data or Fax | Connect your phone to the device, then answer the call through the device application |  |
| Talk Then Fax | Connect your phone to the device, enter the number, then press $\leftrightarrows>$ Talk Then Fax, then press $\qquad$ to make the call. |  |

## Network Features



| Feature | Description |
| :--- | :--- |
| Network Settings | $\left.\begin{array}{l}\text { View network information and } \\ \text { adjust network settings: } \\ \\ \\ \hline\end{array}\right)$ > Settings > Network |

Personal Organiser Features

| Feature | Description |
| :---: | :---: |
| Create Datebook Event | Create a new datebook event: $\Leftrightarrow>$ Office Tools > Datebook, highlight the day, press the centre select button, press C $>$ New |
| View or Edit Datebook Event | View or edit event details: © > Office Tools > Datebook, highlight the day, press the centre select button, press VIEW ( $\cdot \cdot /$ ) |
| Event Reminder | View event reminder: VIEW ( $5 \cdot \overline{\text { P }}$ ) <br> Close event reminder: $\text { EXIT ( }(\underset{)}{ }$ |
| Set Alarm | Set an alarm: <br> © > Office Tools > Alarm Clock |
| Turn Off Alarm | Turn off alarm: <br> Press DISABLE ( $;$ ) or 0 . <br> Set 8-minute delay: <br> Press snooze ( $\cdot \cdot \cdot$ ). |



## 76 - Phone Features

| Feature | Description |
| :---: | :---: |
| Calculator | Calculate numbers: C > Office Tools > Calculator |
| Currency Converter | Convert currency: <br> $\Leftrightarrow>$ Office Tools $>$ Calculator <br> © $>$ Exchange Rate <br> Enter exchange rate, press ok ( $(\Omega)$ ), enter amount, and select $\$$ in the bottom of the display. |

## Security

| Feature | Description |
| :--- | :--- |
| SIM PIN | Lock or unlock the SIM card: <br>  <br>  <br>  <br>  <br> Caution: If you enter an incorrect PIN <br> code 3 times in a row, your SIM card is <br> disabled and your phone displays <br> SIM Blocked. |
| Lock Application | Lock phone applications: <br> - $>$ Settings > Security > Lock Application |

News and Entertainment


| Feature | Description |  |
| :---: | :---: | :---: |
| Launch MicroBrowser | Start a micro-browser session: © > Web Access > Browser |  |
| Download Objects from Web Page | Download a picture, sound, or phone theme from a Web page: <br> Highlight the file, press <br>  | ${\underset{\sim}{i n}}_{\square}^{\square}$ |
| Web Sessions | Select or create a Web session: $\Leftrightarrow>$ Web Aceess > Web Sessions | $\Sigma$ |
| Apply Phone Theme | Apply a grouped set of image and sound files to your phone: <br> $\Leftrightarrow>$ Multimedia $>$ Themes $>$ theme |  |
| Download Game or Application (micro-browser) | Download a Java game or application with the microbrowser: <br> © > Web Access > Browser, highlight the application, press SELEET ( $\sigma \cdot\rangle$ ), press DWNLOAD ( $\wp \cdot$ ) | $\underbrace{\underline{T}}$ |
| Download Game or Application (computer) | Download a Java game or application from a computer: <br> Connect your phone to the computer, press $\Leftrightarrow>$ Settings > Java Settings > Java App Loader. | $\stackrel{q}{\underline{\text { V }}}$ |

[^1]| Feature | Description |
| :---: | :---: |
| Launch Game or Application | Launch a Java game or application: <br> © > Games \& Apps, highlight the application, press SELECT ( $\wp \cdot \cdot$ ) |
| Manage Pictures | Manage pictures and animations: <br> © > Multimedia > Pietures |
| Manage Sounds | Manage ring tones, sounds that you have composed or downloaded: $\propto>\text { Multimedia }>\text { Sounds }$ |
| Manage Video Clips | Manage video clips: © > Multimedia > Videos |
| Edit Sounds With MotoMixer | Edit MIDI-based sound files that you can use with your phone: <br> © > Multimedia > MotoMixer > [New Mix] or mix file name |
| Create Ring Tones | Create ring tones that you can use with your phone: <br> $\therefore$ > Multimedia > Sounds > [New iMelody] |
| Camera | When in camera mode, scroll up and down to zoom in and out (\%) and from right to left to adjust the level of brightness.To change other settings press $\leftrightarrows$ $>$ Picture Setup. |

## Specific Absorption Rate Data

## This model phone meets international standards for exposure to radio waves

Your mobile phone is a radio transmitter and receiver. It is designed and manufactured not to exceed limits for exposure to radio frequency (RF) energy. 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 organisations through periodic and thorough evaluation of scientific studies. The guidelines include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.
The exposure standard for mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. Under the guidelines for your phone model, the SAR limit is 2.0 W/kg. ${ }^{1}$ Tests for SAR are conducted in accordance with CENELEC ${ }^{2}$ testing procedures using standard operating positions 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 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 base station, the lower the power output of the phone.
Before a phone model is available for sale to the public, it is tested to confirm compliance with the guidelines. The tests are performed in positions that conform to a uniform testing methodology determined by an expert standards body. The highest SAR value for this model phone when tested for use at the ear is: $0.87 \mathrm{~W} / \mathrm{kg} .^{3}$

While there may be differences between the SAR levels of various phones and at various positions, they all meet the governmental requirements for safe exposure. Please note that improvements to this product model could cause differences in the SAR value for later products; in all cases, products are designed to be within the guidelines.

[^2]
## Index

## A

accessories 13
accessory connector port 1
active line indicator 29 active line, changing 53 alarm clock 76 alert
creating 79
defined 49
setting $18,49,70$
turning off 18
animation
downloading 78
screen saver 50
viewing 79
wallpaper 49
answering a call 19 application, locking and unlocking 77 automatic redial 54

## B

backlight 51
barring calls 65
battery
charging 17
extending battery life 14,51
installing 15
level indicator 31
browser. See micro-browser

## C

calculator 77
call
alert, turning off 18
answering 19
barring 65
barring password, changing
43
call waiting 61
costs 74
dialled calls list 56
dialling 19
diverting 65
emergency number 55
ending 19
hold 61
international access code 56
making 19
received calls list 56
receiving 19
ring style $18,49,70$

82 - Index

speakerphone 74
timers 74
transferring 62
unanswered call 57
Call Failed, Number Busy message 54
call waiting 61
caller ID 21,54
calling line identification. See caller ID
camera
settings 79
taking a photo 20
category
light ID 69
phonebook entry 69
view 69
centre select button 31
character chart 38
chat 67
clock
selecting analogue or digital
71
setting 48
codes
changing 43
default 43,45
forgetting 45
colour, setting 51
conference call 65
customising the menu 71

## D

data call 75
date, setting 48
datebook 76
dialled calls list 56
dialling a number 19, 72, 73
display
backlight 51
colour 51
description 27
home screen 27
language 72
personalising 71
timeout 52
distinctive ringer alert 70
diverting calls 65
DTMF tones
activating 73
sending 73

## E

earpiece volume 18
emergency number 55
end key 1
ending a call 19
Enter Unlock Code message
44
event lights 25

## F

fax call 75
5-way navigation key 1,31 fixed dial 72

## G

games 78
GPRS indicator 28 groove tunes 79

H
headset jack 1
hold a call 61
home keys, personalising 71
home screen
defined 27
selecting clock view 71

I
IM 66
incoming call
answering 19
diverting 65
Incoming Call message 54
indicators
active line 29
battery level 31
GPRS 28
Java midlet 30

## 84 - Index

location 31
message 30
message waiting 24
messaging presence 30
ring style 31
roam 29
signal strength 28
text case 36
text entry method 30,36
transmission 29
voicemail message 30,60
instant messaging. See IM
international access code 56
iTAP software 39

## J

Java applications 78 Java midlet indicator 30
joystick 1

## K

key
centre select button 31 end 1
5-way navigation 1,31
left soft key 1, 27, 71
menu 1
power 1
right soft key 1, 27, 71
send 1 56

K

voice 1
volume control 1, 18
keypad
volume, setting 70

## L

language, setting 72
left soft key
functions 1, 27
personalising 71
line, changing 53
location indicator 31
lock
application 77
phone 43
SIM card 77
Low Battery message 31

## M

making a call 19
master clear 72
master reset 72
menu
entering text 34
icons, changing in home screen 71
icons, converting to text 71
language, setting 72
personalising 71
rearranging features 71
using 32
view, changing 71
menu key 1
message
chat 67
MMS template 66
MMS, defined 22
multimedia message 65
reading 66
text 65, 66
message indicator 30
message waiting indicator 24
messaging presence indicator 30
micro-browser
browser setup 78
Java applications 78
using 78
Web sessions 78
MMS template 66
MMS. See message
MotoMixer 79
multimedia message
receiving 24
sending 22, 65
multimedia messaging service.
See message
my telephone number 19, 48

## N

network settings 76
notepad 58
number
storing your number 48
viewing your number 19
numbers, entering 41

## 0

1-touch dial setting preference 70 using 59
optional accessory, defined 13 optional feature, defined 13

## P

passwords. See codes phone
active line indicator 29
active line, changing 53
alert, turning off 18
clear stored information 72
codes 43
date, setting 48
language, setting 72
locking 43
network settings 76
open to answer 19
reset all options 72
ring style $18,49,70$
security code 43
time, setting 48
turning on/off 18
unlock code 43
unlocking 18, 43
phone number
active line indicator 29
active line, changing 53
attaching 2 numbers 58
international access code 56
redialling 53
storing in phonebook 68
storing your number 48
viewing your number 19
phone theme 78
phonebook
attaching 2 numbers 58
category for entry 69
category light ID 69
category view 69
dialling a number 68
group mailing list 68
1-touch dial 59
picture ID 21, 46, 54, 69
primary number, setting 70
ringer ID 68, 70
sorting entries 47, 69
speed dial number 58
storing an entry 68

## 86 - Index


voice dialling 68
photo
downloading 78
picture ID 21, 54
sending 20
taking 20
picture
downloading 78
screen saver 50
viewing 79
wallpaper 49
picture ID 21, 54
setting 46, 69
PIN code
changing 43
entering 77
PIN2 code, changing 43
power key 1
predictive text entry 39
primary text entry method 35

## Q

quick dial 73

## R

received calls list 56
recent calls 56
redial
automatic redial 54 busy number 53
right soft key
functions 1,27
personalising 71
ring lights 26
ring style indicators 31
ring style, setting $18,49,70$
ring tone
creating 79
downloading 78
editing with MotoMixer 79
managing 79
ringer ID
setting 68
turning on/off 70
ringer volume, setting 18, 70 roam indicator 29

## S

screen saver 50
secondary text entry method
35
security code
changing 43
default 43
send key 1
service dial 72
shortcuts 71
signal strength indicator 28
silent alert, setting 18, 49, 70
SIM Blocked message 18, 77
SIM card T
defined 13
installing 13
locking 77
PIN code entry 18
PIN code, changing 43
PIN2 code, changing 43
precautions 13
SIM Blocked message 18, 77
SIM PIN code
changing 43
entering 77
SIM PIN2 code, changing 43
soft keys
functions 27
illustration 1
personalising 71
sound
creating 79
downloading 78
managing 79
speakerphone
activating 74
automatic answer 74
speed dial 58
standby time, increasing 51
symbol chart 42
symbols, entering 41

## T

tap method text entry 36
telephone number storing your number 48 viewing your number 19
text capitalisation, changing 36 character chart 38 entering 34 entry method, selecting 35 entry method, setup 35 iTAP software predictive text entry 39
numeric method 41 symbol chart 42 symbol method 41 tap method 36
text case indicator 36
text entry method
selecting 35
setup 35
text entry method indicator 30 , 36
theme 78
time, setting 48
timers 74
transfer a call 62
transmission indicator 29
travel charger 17

## 88 - Index





[^0]:    8 - Safety and General Information

[^1]:    78 - Phone Features

[^2]:    1 The SAR limit recommended by international guidelines (ICNIRP) for mobile phones used by the public is 2.0 watts/kilogram ( $\mathrm{W} / \mathrm{kg}$ ) averaged over ten grams of tissue. The limit incorporates a substantial margin for safety to give additional protection for the public and to account for any variations in measurements.

    ## 2 CENELEC is a European Union standards body.

    3 Additional related information includes the Motorola testing protocol, assessment procedure, and measurement uncertainty range for this product.

