

INTERQUARTZ®

LCD FEATURE PHONE
Model 98583

OPERATING INSTRUCTIONS

This Interquartz telephone has been manufactured to very high standards and is very easy to use. Please read this manual carefully to find out how to use the features.

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1. Important Notes

Intended use

This apparatus is intended for use on 2 wire analogue PSTN and PABX circuits within the United Kingdom.

Declaration of Conformity

Interquartz (UK) Limited declares under its sole responsibility that this product

Model: 98583

Is in conformity with the following relevant harmonised standards

Health & Safety	73/23/EEC
Electromagnetic Compatibility	89/336/EEC

Following the provisions of Council Directive 1999/5/EC on radio equipment and telecommunications terminal equipment.

A J Roberts
Director

April 2000

Telephone facilities

This telephone has been designed for the use of the following facilities :

- liquid crystal display
- on hook dialling
- handsfree speakerphone operation
- operation in the absence of proceed indication
- operation on PABX's which return secondary indication
- memories accessed by a button
- last number redial
- recall (earth or timed break selectable)
- selectable pulse or tone signalling
- access pause insertion (maximum of 3)
- mute function
- speaker volume control
- ringer volume control
- ringer pitch control
- ringing indicator
- voice messaging

REN number

The REN number of this telephone is 1.

If you wish to connect any other equipment to the line, simply add the REN numbers of each piece together and ensure that the total does not exceed 4. If too many phones are connected to the line, the circuit may be overloaded and your telephone may not ring.

Not all telephones have the same REN. If a British Telecom phone is supplied unmarked, you can assume that it has a REN of 1

Handsfree speaking / On hook dialling

This telephone is designed to work on most telephone lines by drawing power from the line. However, when using the on-hook dial facility or the loudspeaking facility, there are some instances where the power available may not be sufficient to provide an adequate performance.

This telephone requires the use of batteries for memory back up (see **Figure 2**) and, in the event of insufficient line power, the batteries also provide an additional power source for loudspeaking operation.

Emergency calls

"999" calls can be made on this telephone, for the purpose of making calls to the emergency service. An access code may also be required, if the phone is connected to a PABX.

Audible tones

This telephone is provided with a "valid" and an "invalid" audible tone. Whenever a button is pressed following a valid operation, e.g. dialling a number from memory, a short high pitched sound will be heard. If an incorrect operation is attempted, e.g. pressing a memory button when no memory is present, then a low pitched sound will be heard.

2. Installation

This telephone is designed to plug straight into a modular style socket. If you do not have one of these sockets, they can be obtained from your Network Supplier. A card is included for this purpose. Simply complete it and send it to your Network Supplier.

Batteries

This telephone requires 4 AA battery cells (provided separately) to retain the memories in the event that the telephone is disconnected from the line.

To insert the batteries, first ensure that the telephone is disconnected from the telephone line.

If replacing old batteries, make sure that the telephone handset remains on the cradle when the telephone is turned upside down and you should find that you will not lose any memories that have previously been programmed.

Locate the battery compartment on the base of the telephone, next to a label marked " WARNING: Unplug the connection to the network before opening this cover ". You will need to insert a small pointed tool in the hole next to the compartment. Press down and slide the battery compartment out. Insert the four AA batteries making sure that they are the correct way round, replace the compartment and connect the telephone to the network.

You should check the state of the batteries at least once a year making sure that you follow the above procedure. If there is any sign of corrosion, the batteries must be replaced.

NOTE : After replacing the batteries it may be necessary to reprogram your direct access memories (see **Section 4**).

*If your telephone is connected to a PABX or to a network system using recall facilities, read **Section 5** otherwise proceed to the following paragraphs.*

Connection

Insert the line cord into the socket. Set the tone/pulse switch (located in the base of the telephone, see **Figure 2**) to the appropriate position. If you are unsure as to whether your exchange is pulse or tone, call your Network Supplier and they will advise you.

Set the ringer volume and ringer pitch control, as desired.

Setting the clock

The LCD display shows the time of day, in its normal mode (see telephone features **Section 3** for other functions of the display).

The time can be set in either a 12 hour or a 24 hour clock. The format is HH - MM - SS (H hours, M minutes, S seconds)

To set the time of day :

Push gently on the switch cover plate, located just below the LCD display, **Figure 1**, and the cover will rotate to reveal a set of buttons.

Press the STORE button

Press the relevant hour time on the keypad (HH) - can be one or two digits

Press the minute time on the keypad (MM) - MUST be two digits

Decide on the format and press

0	for 12 hour mode	AM setting
1	for 12 hour mode	PM setting
2	for 24 hour mode	

Press the CLOCK / TIMER button

3. Telephone Features

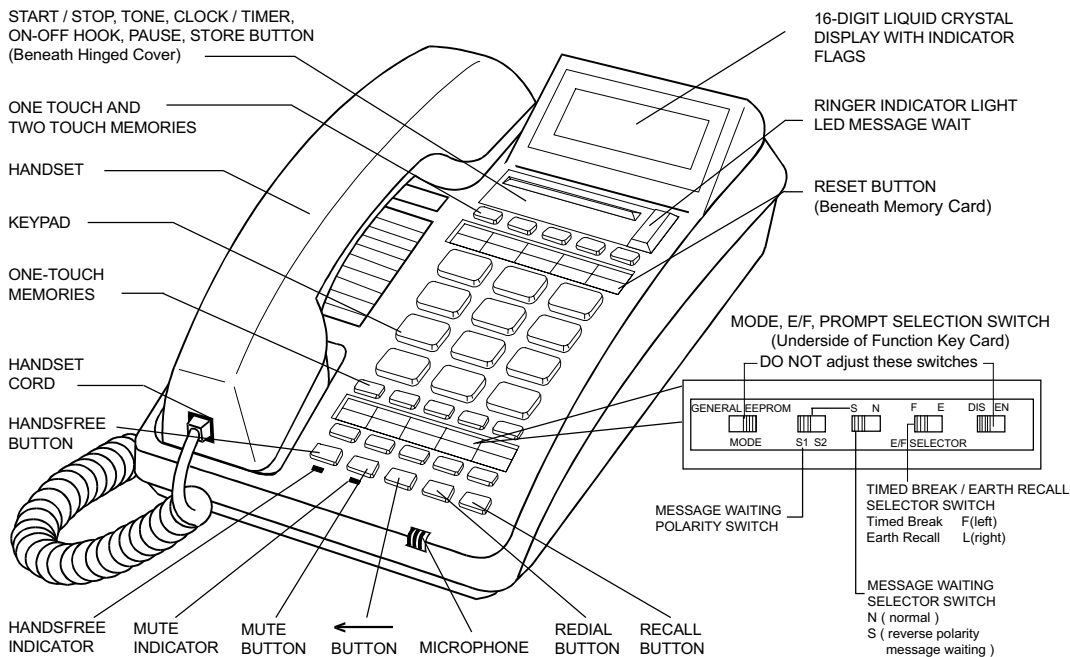


Figure 1 General Appearance

Liquid crystal display (LCD)

The LCD displays up to 16 numbers to show the time of day, the duration of call time or the number being called. In addition, there are ten prompts that appear at the top of the display to indicate different modes of operation of the telephone.

Handsfree button

Press to switch the speakerphone mode on or off. The red LED below the button glows when the speakerphone is on.

This feature is storable in memory.

Mute button

Press to activate the mute circuit, cutting off the speech transmission to the handset (or handsfree microphone). Press again to resume normal conversation. The red LED, below the mute button, glows when the call is muted and a MUTE prompt is also displayed on the LCD.

Note : The MUTE function will only operate in the on-line state and replacing the handset will automatically release the mute function.



This is an edit button for use when storing numbers into memory. If a mistake is made at the time of programming the memories, pressing the button removes the last digit displayed on the screen (pressing the button twice, removes the last two digits).

Redial

Single touch button for redialling the last number that was dialled, either from the keypad or from a direct access memory (maximum of 32 digits). It may include numbers 0-9, #, *, pause, timed break recall, off-hook, handsfree.

Memory buttons

Used for storing telephone numbers and certain access features.

There are fifteen dedicated memory buttons providing TWENTY direct access memories. The lower set of ten buttons, provides single touch memories, each of 24 digits capacity. The higher set of five buttons, provides five one-touch and five two-touch memories, each of 24 digits capacity.

The following buttons are located under a cover, immediately below the LCD.

Start / Stop

Push to start the timer, push again to stop it. Note, the timer will automatically start when the telephone handset is lifted (or the handsfree button is pressed) and will stop when the handset is replaced. The elapsed time will show on the LCD for a period of 8 seconds and then the display will revert to clock.

Tone button

This button is used to send signals in tone (DTMF) format regardless of the tone / pulse switch setting. Its main use is for accessing computers, home banking, answering machines etc. when the telephone is connected to a pulse exchange. An access pause will automatically be inserted whenever this button is pressed.

Clock / Timer

Selects different display modes. In the off-line state the display will toggle between the time (default) and the timer. If the telephone is connected to the line the display will rotate each time this button is pressed, in the sequence

Dialled number

Time

Timer

On / Off hook button

Used to monitor an outgoing call. In this mode the user may dial and listen to the call progress without lifting the handset. Once the call is answered then either the handset must be lifted or the speakerphone button must be pressed, to continue the conversation.

If the called party does not answer the telephone within 60 seconds, the line will be released. A warning tone, of two short beeps, will be heard 5 seconds before the line release.

This feature is storable in memory.

Pause button

Introduces a pause of 3.6 seconds during dialling. A maximum of 3 pauses may be inserted, otherwise the telephone may cease to function properly.

This feature is storable in memory.

Store button

Used for storing numbers in the direct access memories.

The numbers 0 to 9, *, #, handsfree, on/off hook, pause and TBR recall can be stored in memory.

Ringer indicator

Flashes when the telephone rings with an incoming call.

Ringer volume switch

Located on the base of the unit (see **Figure 2**). Move switch to select no sound (OFF), muted sound (LOW) or full sound (HIGH) for ringing on incoming call.

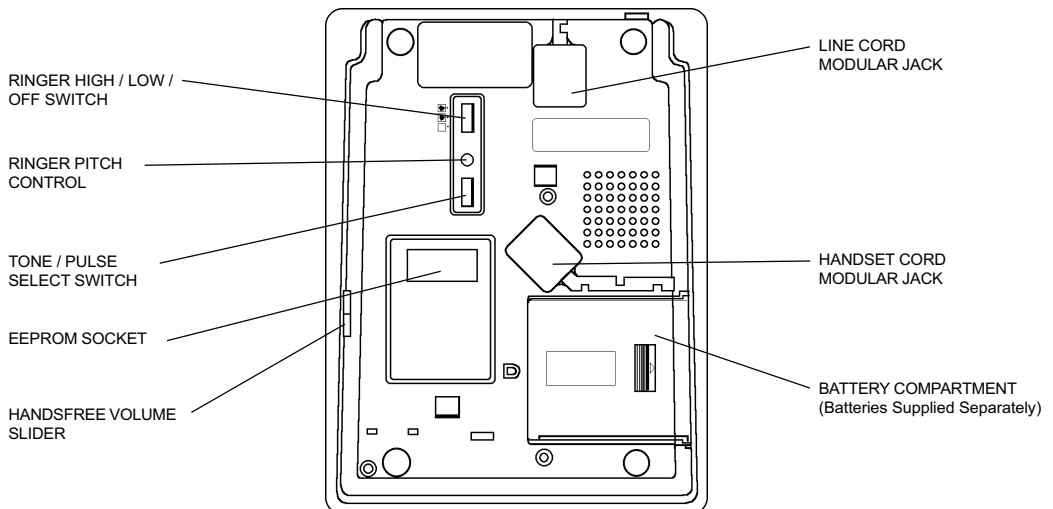


Figure 2 Bottom View

Ringer pitch control

Located on the base of the unit (see **Figure 2**). Rotating this knob alters the pitch of the ringing signal. Ideal where there is more than one phone in a room.

Volume slider

Adjusts the volume of the on-hook dial / handsfree speaker.

Tone / Pulse switch

Located on the base of the unit (see **Figure 2**). Used to select the correct dialling mode, either TONE or PULSE. If you have any doubt about the system supplied to your phone, contact your Network Supplier and they will advise you.

Reset button

It is unlikely that you will need to use this button.

The button is located under the memory number overlay for the five, top, memory buttons, **Figure 1**. If the telephone appears not to function, for any reason, pressing this button will reset the telephone to normal operation.

Note : any stored memories will be lost and must be re-entered.

4. Operating Instructions

Manual dialling

Lift the handset, listen for the dial tone and then dial the required number using the keypad. The number called will appear on the LCD.

On hook dialling

In this mode, telephone calls can be made without lifting the handset and the progress of calls can be monitored. Once the calling party answers the phone you **MUST** either lift the handset or press the speakerphone button to conduct the conversation.

- Press on hook dial button and the dial tone will be heard in the monitor speaker.
- Dial the required number on the keypad
- Monitor the call's progress, through the speaker
- Lift the handset or press the speakerphone button when the called party answers the phone
- The call is terminated by replacing the handset or by pressing the speakerphone button.

In on-hook dialling mode the telephone will monitor the call progress. If the called party does not answer, then the telephone will automatically release the line after approximately 60 seconds. A warning tone, of two short beeps, sounds 5 seconds before line release and the calling time can be extended by pressing the pause button.

If you wish to terminate a busy call or a non-answered call, before the telephone does so automatically, simply press the off-hook button.

Speakerphone dialling

The speakerphone can be used for manual dialling in much the same way as the off-hook dialling method :

- Press the speakerphone button and the dial tone will be heard in the speaker.
- Dial the required number on the keypad
- When the called party answers the phone, continue to speak using the microphone in the telephone or pick up the handset, if you so wish. With the handset in use it is possible to revert to speakerphone use by pressing the speakerphone button BEFORE replacing the handset.

NOTE : if using the handset and the speakerphone button is pressed to revert to speakerphone operation, both the handset and the speakerphone microphones are muted until the handset is replaced.

- The call is terminated by replacing the handset on the cradle or by pressing the Speakerphone button.

The telephone will continue to ring an unanswered number until the call is terminated by pressing the speakerphone button.

Memory dialling

The ten single touch memory buttons are simply pressed once to access the memory stored behind the button.

With the five one- and two-touch memories, the button is pressed once to access the " first page " and twice in quick succession, to access the " second page " .

It is possible to store just telephone numbers in the memories but you can make speed dialled calls directly from the memory, by storing facility codes (see below).

When using the memory facilities, this telephone has two audible beeps to advise you of a correct entry - "high tone" or an incorrect entry - "low tone". If you make an incorrect entry, check your error and re-input the information.

When entering numbers into these direct access memories you should ensure that you have programmed them correctly, by checking the LCD display.

After replacing the batteries, it may be necessary to reprogram these memories.

Storing an "ordinary" telephone number in memory

- press the store button
- enter the telephone number (if your telephone is behind a PABX, it may be necessary to insert a pause after the access code. This is storable in the memory.

Alternatively, you may have programmed your telephone for automatic pause insertion - see **Section 5** - in which case a pause is not necessary when storing a number in memory).

- press the required memory button, once to store in the "first page" / only page or twice to store in the "second page".

Dialling an "ordinary" telephone number from memory

- lift the handset or press the speakerphone key
- press the appropriate memory key either once or twice (depending on where you stored the number)
- proceed with the call as outlined in the previous sections

Speed dialling

To make the most use of the facilities available on this telephone, particularly when used behind a PABX, this is the recommended method of storing numbers and of using the memories.

The memories are capable of storing

the numbers 0-9, #, *, pause, tone, timed break recall, off-hook, handsfree.

If a number in memory begins with an off-hook or a speakerphone code, the associated button becomes a speed dialling button. Pressing the button will turn on the monitor in either handsfree or speakerphone mode. The dial tone will be heard and the number will be dialled. The call will proceed as outlined in the previous sections.

To store a Speed dial number

- press store button
- press EITHER off-hook button OR speakerphone button
- press pause button once (if necessary)
- enter the telephone number (if your telephone is behind a PABX, it may be necessary to insert a pause after the access code. This is storable in the memory. Alternatively, you may have programmed your telephone for automatic pause insertion - see **Section 5** - in which case a pause is not necessary when storing a number in memory).
- press the required memory button, once for storing in the "first page" or twice for storing in the "second page"

To dial a Speed dial number

With the handset resting on the cradle, press the required memory button once, or twice - depending on the location of the number.

If the speakerphone code was used in the memory, simply start the conversation when the call is answered. If the off-hook code was used in the memory, the handset will have to be lifted (or the speakerphone button pressed) for the conversation to begin.

To terminate the call either replace the handset or press the speaker phone button.

Cascade dialling

It is possible to dial a number that is contained in more than one memory location or for which you want to dial part of the number manually.

e.g. for a very long number split between memory locations 1 and 2

- obtain a dial tone
- press memory button 1
- press memory button 2

the telephone will now dial a number consisting of the contents of both memory 1 and memory 2

Mixed dialling

It is possible, if your telephone is connected to a pulse exchange, to carry out mixed mode dialling. If you have a tone exchange, mixed dialling is not necessary.

Access to home banking facilities, to computers and to some remote answering machines requires the use of tones rather than pulse dialled numbers.

To initiate a mixed mode dialled number :

- dial the first part of the number (in pulse, because this is how your telephone set will be switched - see **Section 3**)
- press the tone button (a pause of 3.6 seconds will be automatically inserted) and dial the remainder of the number. This will now be sent out in tone format.
- at the end of the call replace the handset or press the speakerphone button. The telephone will revert to normal pulse dialling format.

It is possible to store mixed dialling format numbers in the memory. Simply follow the above procedure, pressing the tone key at the appropriate place.

Redialling

The telephone number stored in the temporary re-dial buffer will NOT include the off-hook or the Speakerphone codes if these were input manually before a call was made.

Simple redial and mixed format redial

To redial the last number, obtain a dialling tone and press the redial key.

Redial of a Speed dialled number

If a speed dialled number is the last number dialled, the redial button becomes a speed dial button. Simply press the redial key. The telephone will proceed to dial, using either the off-hook code or the speakerphone code - whichever was stored with the original number.

5. PABX and System Usage

This telephone can be used behind a PABX or on a network system that utilises the recall function. There are many such systems and whilst it is likely that no problems will be encountered, it cannot be guaranteed that the telephone will operate correctly under all circumstances and any cases of difficulty should be referred to your supplier.

Recall

This telephone is supplied set to Timed Break Recall. If your system has an Earth Recall, the PBX recall switch will need to be reset.

Before you attempt to change the recall switch (see **Figure 1**), you should disconnect the phone from the network, if you have so connected it.

You will need a small screwdriver, or similar pointed tool, to remove the clear plastic cover plate and the single touch memory location card. With the tool you can then adjust the switch to the setting required.

If you are unsure as to which recall setting is applicable, please consult your PABX manager or supplier.

Note : there are some other switches beneath this cover. Do NOT adjust them as they will affect the memory operation of the telephone.

Replace the covers, plug the phone back into the socket and it is ready for use.

PABX access

Where a PABX access digit is required to obtain a direct outside line, it may be necessary to insert a pause after dialling the access digit, but (see also **Section 3**).

Automatic pause insertion

If your PABX requires a pause after dialling the outside line access code, this can be inserted automatically by programming the telephone.

e.g. If the access code is "9", the telephone can be programmed in the following way

- press store
- press "9"
- press store
- press " * "

Whenever a telephone number that begins with the access code is dialled - "9" in this example - a 3.6 second pause will automatically be inserted after the access code has been dialled.

To cancel this feature

- press store
- press store
- press " * "

Voice Messaging

When used behind a PABX, this telephone will respond to voice messaging systems on specific PABX types. Your telephone manager should be able to advise you.

As supplied, the telephone will respond to high voltage message signalling. If your system provides reverse polarity message signalling, then the following action will have to be taken before your telephone will operate correctly.

Refer to figure 1 on page (6). Remove the telephone from the line and then remove the lower memory overlay card.

The switch marked S/N should be moved from "N" to position "S". When the telephone is connected to line and voice message signals are received, the message light should flash or stay on(system dependent).

If for some reason the message light, a bright red LED, comes on with NO message signals received, remove the telephone from the line and adjust the switch marked S1/S2 from the S1 position to the S2 position. When re-connected, the telephone should now function correctly.

It must be pointed out that various PABX types have individual system requirements in order for visual message waiting signals to be detected. If there is a signal present, the telephone will detect it. If there is no signal, then it will not be detected! If in any doubt, please refer to your telephone manager or to your supplier.

6. Maintenance and Problem Solving

Your telephone is a precision electronic instrument. Avoid rough handling and extreme temperatures. Use a mild detergent and a damp cloth when cleaning. Never use a stronger cleaner.

If your telephone does not appear to be working correctly, please check the following :

No dial tone - is phone cord properly connected to the wall socket ?

Will not dial - tone / pulse switch may be set to wrong position

Will not ring - ringer switch is set to off

- REN number may exceed 4, for all telephones connected to the line. Disconnect a phone until the number is below 4

If there are still problems, and you have more than one telephone :

Remove the "problem" telephone. Insert another telephone and check that it works. If "yes" then the "problem" telephone is possibly faulty. If not, then you may have a faulty line. Try using the other socket and see which telephones work. If you do have a faulty line then you should contact your Network Supplier.

You should however be aware that if you request them to repair a fault that is found not to be their's, then they are entitled to charge you for a visit.

In the event that you still have problems then you should consult your supplier.

7. Warranty and Service

This product is guaranteed, by Interquartz (UK) Limited, for **six years** from the date of manufacture.

Every Interquartz telephone has a unique serial number and part of that number refers to the date of manufacture. A label, similar to that shown below is affixed to each telephone

9515	030852
(model no)	QC.P

The figure 9515 means that the telephone was made during week 15 (10 April) 1995. Under the six year warranty, cover will apply until 10 April 2001.

A warranty is designed to cover either manufacturing faults or component defects. It is not designed to cover fair wear and tear. The Interquartz warranty is no exception.

We look to you, our customer, to be reasonable and sensible over the warranty. We will endeavour to repair any telephone sent in to us within the warranty period but we reserve the right to charge for items that we consider replaceable under wear and tear. For example, if a handset cord splits within a few months, it will be replaced. If a phone is returned after, say, four years of heavy use with a similar problem, we might take a different view and wish to charge.

If you have a genuine warranty problem and provided that the warranty seal has not been broken, we will either repair your telephone, or, at our sole discretion, replace it with a similar telephone. In the event that a model may have been discontinued, any replacement would have similar or better features.

If you need to return a faulty unit to us, send it to :

**Interquartz (UK) Limited
Pennine House
Salford Street
Bury
BL9 6YA**

Make sure that you tell us what appears to be wrong with the phone.

DO NOT FORGET TO INCLUDE YOUR OWN NAME AND ADDRESS.

We ask that you bear the cost of returning the telephone to us. We will return it to you, at our expense.

This warranty is in addition to any statutory rights



This telephone is approved to
EEC directive 1999/5/EC

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Manufactured by
International Quartz Limited

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