

# User Guide – HT700 Series

v03/09

Professional submersible handheld transceivers

Common Information  
(all models)



HT702/712/722/782(U)  
**Entry**



HT702S/712S/722S/782S(U)  
**Entry Selcall**



HT703/713/723/783(U)  
**Entry LCD**



HT705/715/725/785(U)  
**Advanced Selcall, 8-key**



HT706/716/726/786(U)  
**Advanced Selcall, Full Keypad**

# Introduction

This guide covers the 'basics' of your radio's operation. To meet your exact requirements the radio may have been customised by your Entel authorised dealer. These features will be explained in a separate guide issued by the dealer.

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# Certification

## CE Compliance Statement

The HT700 series transceiver displays "CE" on the serial number label, indicating its compliance with the essential requirements of the EEC directive for Electromagnetic Compatibility.

## Declaration of Conformity

We Entel UK Limited

OF:

4 Elstree Gate,  
Elstree Way  
Borehamwood  
Hertfordshire  
WD6 1JD  
United Kingdom

Declare under our sole responsibility that the product:-  
HT700 series VHF/UHF handheld transceiver

Serial Number \_\_\_\_\_

To which this declaration relates, is in accordance with directive 99/5/EC and conforms to the following standard or other nominative documents:-  
EN 300 086-2 V1.1.1, EN 301 489-1 V1.5.1:2003, EN 60065:2002

Following provisions of the R&TTE directive.

M Austin



Quality Manager



# Radio care

## Advice

- Do not use options or accessories not specified by Entel
- Ensure that the radio is used within the parameters for which it was designed
- Please switch the transceiver off before connecting optional accessories

## Warning

Turn the transceiver off in the following locations:

- In explosive atmospheres (flammable gas, dust including metallic & grain powders etc)
- Whilst taking on fuel or while parked near fuel station
- Near explosives or blasting sites

- In aircraft, medical institutions or near persons known to be wearing a pacemaker

## Caution

- Do not disassemble or modify the transceiver for any reason
- Do not transmit while touching the antenna terminal or any exposed metallic parts of the aerial as this may result in a burn
- Please check and observe regulations in your country with regards to use whilst driving

## End of Life Disposal

- When your Entel transceiver reaches the end of its useful life, please ensure that the unit is disposed of in an environmentally friendly way. For country specific information please see [www.entel.co.uk/recycling](http://www.entel.co.uk/recycling).

# Battery care

## Introduction

Your Entel radio is supplied with a high performance Lithium Ion (Li-Ion) battery.

These batteries:

- Extend talk time
- Reduce the battery's size and weight
- Do not suffer from 'memory effect' that reduces the life of Ni-Cad and NiMH batteries
- Have a low toxicity, therefore reducing the impact on the environment

## Battery Pack Precautions

- Switch the transceiver OFF before charging
- Charge the battery pack before use
- Do not recharge the battery pack if it is

already fully charged. This could lead to a premature battery replacement warning message. (See Battery Communications on page 4)

- Charge the battery in accordance with the instructions enclosed with your charger
- Do not charge the transceiver and/or battery pack if they are wet

The battery pack includes potentially hazardous components. Please:

- Do not disassemble or reconstruct battery
- Do not short-circuit the battery
- Do not incinerate or apply heat to the battery
- Do not immerse the battery unless attached securely to the radio in water or get it wet by other means

# Battery care / information

- Do not charge the battery near fires or under direct sunlight
- Use only the specified charger and observe charging requirements
- Do not pierce the battery with any object or strike it with an instrument
- Do not use the battery pack if it is damaged in any way
- Do not reverse-charge or reverse-connect the battery
- Do not touch a ruptured or leaking battery

If liquids from the battery get into your eyes, immediately:

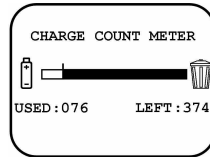
Wash your eyes out with fresh water avoiding rubbing them. Seek medical treatment

## Battery Pack

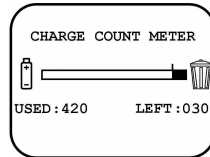
- If a battery is not to be used for an extended period of time (e.g. several months) remove the battery pack from the equipment and store in a cool and dry location (around 0°C) part charged. Do not fully discharge the battery before storage.
- Each charge cycle reduces the battery's life. Minimise the number of times you charge your battery especially in hotter environments which further shortens a battery's life.

## Battery Communications

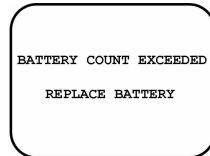
Each battery used with your radio has a microprocessor fitted, which logs the number of times your battery has been charged. On a radio with an LCD display, the number of times the battery has been charged, together with the remaining charge cycles available, will be shown during switch on. On the advanced 8-key and 20-key models, battery charge cycle information may also be accessed via the menu. (If not de-activated by your dealer)



The warranty on all batteries is 12 months from new, or 450 charge cycles, whichever is the sooner. After 420 cycles, at switch on the radio will emit a series of short tones, and on LCD models a waste bin icon will flash to alert you to the need to buy a new battery.



After 450 cycles, at switch on the radio will emit a series of long beeps, and LCD models the message will change to BATTERY COUNT EXCEEDED REPLACE BATTERY. The radio will continue to operate but its operational time may be reduced, eventually failing all together.



Note: only genuine Entel batteries should be used. Only genuine batteries offer the battery charge count feature informing you when the battery is reaching the end of its useful life. Customer satisfaction is assured as you can not be supplied with sub standard, potentially dangerous battery packs from 3rd party manufacturers, ensuring it delivers the expected capacity and endurance.

On HT series batteries a breathable membrane is used. This is clearly marked on the battery label. Piercing the membrane will allow water ingress to the battery, and will invalidate the warranty.

# Packing List

- HT7XX Radio
- CNB750E Rechargeable 1800mAh Li-Ion battery
- CBH750 Spring loaded belt clip
- CATXX Antenna
- User guide CD
- Single way charger (only supplied with HT7X2, HT7X2S and HT7X3 models)

## Optional Accessories

### Battery & Charger Options

CNB750E	Spare 1800mAh Lithium-Ion battery pack with rear clip
CSAHT	1-way intelligent rapid charger, 100-240v
CSBHT	6-way intelligent, rapid charger, 100-240v
CCAHT-230	1-way trickle charger with 230V mains adapter
CCAHT-110	1-way trickle charger with 110V mains adapter
CCAHT-12	1-way trickle charger with cigar lighter lead, 12V DC operation
CBE750	Dummy battery and regulator with cigar lighter plug

### Carry Options

CFC750	HT 2.0 series soft leatherette case finished in black with carry strap
CLC752	HT7X2 heavy duty black leather case with strap & belt loop
CLC753	HT7X3 & HT7X5 heavy duty black leather case with strap & belt loop
CLC756	HT7X6 heavy duty black leather case with strap & belt loop
CBH750	Spare spring loaded belt clip

### Audio Accessory Options

CMP1/750	Compact medium duty speaker microphone with earpiece jack
CMP750	Heavy duty submersible speaker microphone
EHP9	D-shaped earpiece (plugs into CMP1/750 or CMP750 above)
EA12/750	D-shaped earpiece with in-line PTT/microphone & VOX*
EA15/750	Earpiece microphone with transparent acoustic tube & VOX*
EA19/750	D-shaped earpiece with boom microphone and in-line PTT & VOX*
EHP750	D-Shaped earpiece (connects directly to radio)
EPT40/750	Bone conductive earpiece microphone with PTT
CXR5/750	Bone conductive skull microphone with in-line PTT
CXR16/750	D-shaped earpiece and throat microphone with in-line PTT

# Optional Accessories cont...

Common

CHP1/750	Light weight single earpiece headset with in-line PTT & VOX*
CHP750HS	Single earpiece ear defender headset with boom mic and in line PTT for hard hat & VOX*
CHP750HD	Double earpiece defender headset with boom mic and in line PTT for hard hat & VOX*
CHP750D	Double earpiece headband defender headset with boom mic and in line PTT & VOX*
CHP750BT	Bluetooth double earpiece headband defender headset with boom mic and ear cup PTT

\*VOX = Voice Operated Transmit (hands free operation)

Bluetooth option board in radio is required to use Bluetooth audio accessories.

## Antenna Options

CXW640	Antenna adapter for external aerial	CAT10S-78	78MHz compressed antenna
CAT20	Helical antenna VHF	CAT10S-85	85MHz compressed antenna
CAT80	Whip antenna UHF	CAT10S	66-88MHz uncut compressed antenna
CAT20S	Stubby antenna VHF	CAT700-40	30-50MHz antenna
CAT80S	Stubby antenna UHF		

For complete up to date list of optional accessories visit [www.entel.co.uk](http://www.entel.co.uk)

# Preparing Your Radio For Use

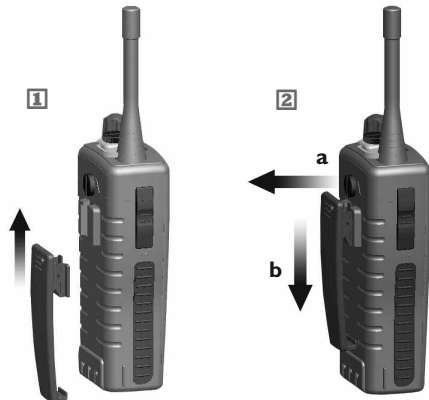
## Attaching / Removing the Battery Pack

- 1** To attach, locate the pegs on the bottom of the battery and place into the slots on the radio. Then press the top of the battery against the radio. Secure battery by tightening the screw clockwise by hand. (Do not over tighten)
- 2** To remove, unscrew the locking screw anticlockwise and pull the battery away from the top of the radio.



## Attaching / Removing the Belt Clip

- 1** To attach, press the clip into the slot on the back of the battery and slide up until you hear a “click”.
- 2** To remove, pull the tab (a) towards the belt clip. Then slide the belt clip downwards (b).



# Preparing Your Radio For Use cont...

Common

## Attaching / Removing the Aerial

- 1 To attach, carefully align the aerial with the socket. Screw in the aerial clockwise (taking care not to cross the thread) until it is seated firmly against the top of the radio.
- 2 To remove, unscrew the aerial anti-clockwise.



## Attaching / Removing Audio Accessories

- 1 To attach, remove the accessory cover by unscrewing the locking screw anti-clockwise (leave cover attached or store in a safe place). Attach accessory plug by locating over the socket. Carefully tighten the locking screw clockwise until finger tight (do not tighten with a screwdriver etc).
- 2 To remove, unscrew the locking screw by hand in an anti-clockwise direction (carefully use a coin or screwdriver if too tight). Ensure you re-fit the accessory cover so as to protect the socket.

## Charging Your Radio

Several charger options are available. Please refer to your charger user guide.



## Turning your radio on

Turn your radio on by pressing the on / off button on the front of the radio. The radio will bleep and the LED will illuminate constant yellow for approximately 4 seconds, followed by a second “warble” (if not disabled by the Dealer when programmed).



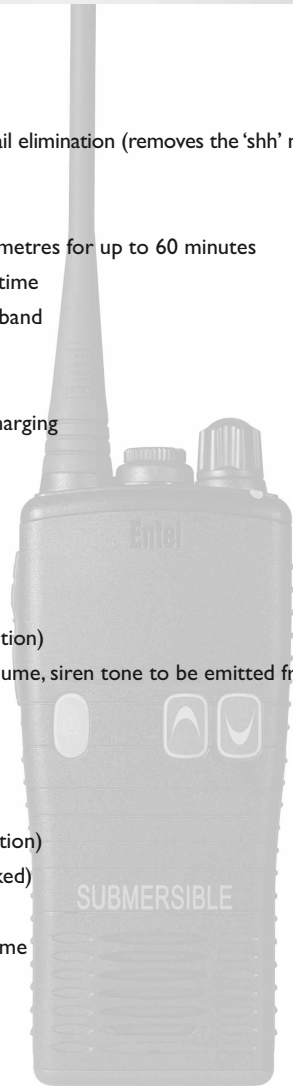
# HT702/712/722/782(U)

## Standard Features:

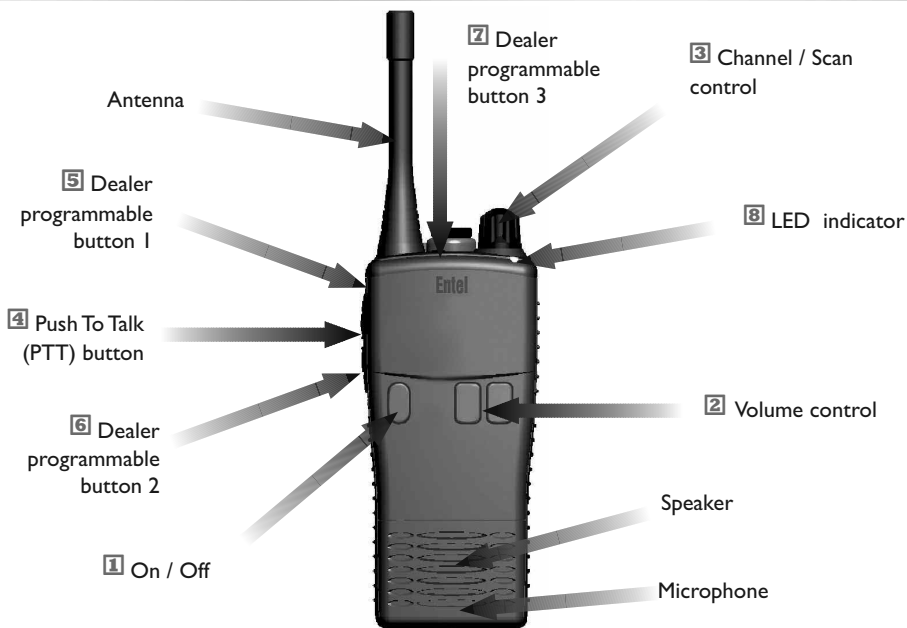
- 16 programmable channels
- Full transmit power output (5 Watts VHF, 4 Watts UHF)
- CTCSS & DCS (analogue & digital squelch) with squelch tail elimination (removes the 'shh' noise)
- Exceptionally loud and clear audio
- Robust design, exceeds MIL-STD-810C/D/E/F
- Environmentally protected to IP68 i.e. submersible to 5 metres for up to 60 minutes
- 1800mAh Lithium-Ion battery for superior operational time
- Full band switching allows access to all channels in each band
- Battery charge count
- Radio cloning mode
- Low battery alert indicates when the battery needs recharging

## Dealer programmable features:

- VOX for hands free operation
- High/Low transmit power
- Normal & priority scan (programmable per channel position)
- Panic (personal attack) button causes high pitch, high volume, siren tone to be emitted from the radio's speaker
- Key lock button
- Prefixed minimum volume level and fixed beep level
- Channel monitor (CTCSS/DCS Defeat)
- Talkaround (allows communication away from a base station)
- Transmit time out-timer (ensures channels are not blocked)
- Voice scrambler with 1 code per channel (option)
- Automatic power save to further increase operational time
- User adjustable squelch



# Controls & Indicators



- 1** On / Off button. Press to turn radio on, press and hold to turn off.
- 2** Press up / down buttons to increase / reduce volume.
- 3** Channel / Scan control. Rotate to select the desired channel or scan setting.
- 4** Push To Talk (PTT) button. Press to speak and release to listen.
- 5** Dealer programmable button 1 (ask your dealer for more information).
- 6** Dealer programmable button 2 (ask your dealer for more information).
- 7** Dealer programmable button 3 (ask your dealer for more information).
- 8** LED indicator:
  - RED steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN steady = Receiving
  - YELLOW steady = Non valid signal detected
  - YELLOW flashing rapidly = Scanning

# HT702S/712S/722S/782S(U)

All the features of the HT702/712/722/782 (see page 8) plus the following features:

## Standard Features:

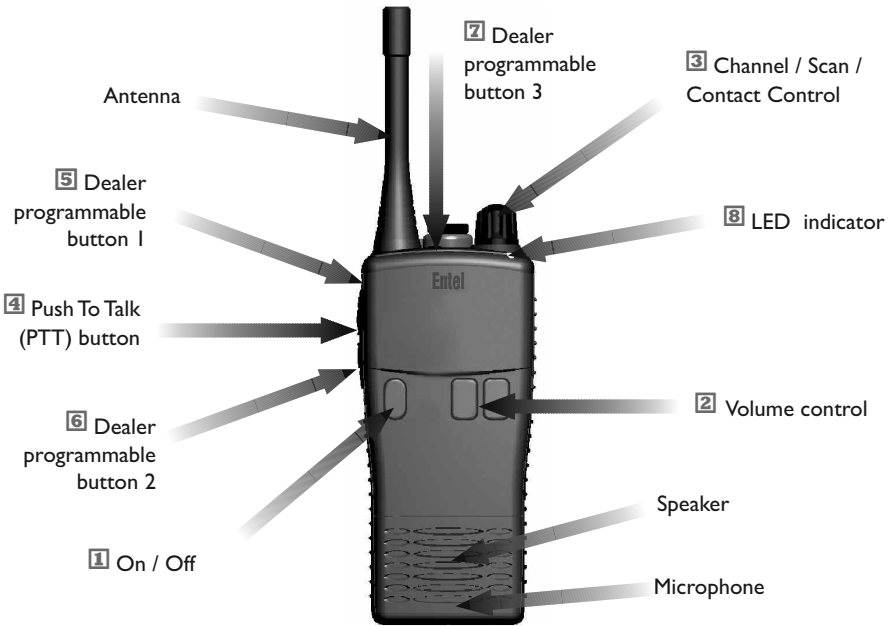
- Entry level selective calling
- Voice scrambler with 4 codes per channel included as standard

## Dealer programmable features:

- Open or closed channel modes (allows private conversations)
- Call a group, individual or all radios at once
- Up to 16 pre-programmed contacts
- Multiple ringtones
- Stun (disable) a lost or stolen radio
- Revive (enable) a recovered radio
- Panic button with remote alert
- Emergency microphone live
- Automatic Lone-Worker alarm mode
- Automatic Man-Down alarm mode (optional)
- Silent alarm call mode
- Continue emergency alarm even if radio switched off



# Controls & Indicators



- 1 On / Off button. Press to turn radio on, press and hold to turn off.
- 2 Press up / down buttons to increase / reduce volume.
- 3 Channel / Scan / Contact control. Rotate to select the desired channel or scan setting.
- 4 Push To Talk (PTT) button. Press to speak and release to listen.
- 5 Dealer programmable button 1 (ask your dealer for more information).
- 6 Dealer programmable button 2 (ask your dealer for more information).
- 7 Dealer programmable button 3 (ask your dealer for more information).
- 8 LED indicator.
  - RED steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN steady = Receiving
  - GREEN flashing slowly = Selcall received
  - YELLOW steady = Non valid signal detected
  - YELLOW flashing rapidly = Scanning

# HT703/713/723/783(U)

All the features of the HT702/712/722/782 (see page 8) plus the following additional features:

**Standard Features:**

- LCD screen to display channel number / battery charge count
- 255 channel capacity



# Controls & Indicators



- 1** On / Off button. Press to turn radio on, press and hold to turn off.
- 2** Channel / Scan control or volume control (dealer definable).
- 3** Channel / Scan control or volume control (dealer definable).
- 4** Push To Talk (PTT) button. Press to speak and release to listen.
- 5** Dealer programmable button 1 (ask your dealer for more information).
- 6** Dealer programmable button 2 (ask your dealer for more information).
- 7** Dealer programmable button 3 (ask your dealer for more information) and LED indicator.
- 8** LED indicator:
  - RED steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN steady = Receiving
  - GREEN flashing slowly = Selcall / message received
  - YELLOW steady = Non valid signal detected
  - YELLOW flashing rapidly = Scanning

# HT705/715/725/785(U)

All the features of the HT703/713/723/783 (see page 12) plus the following features:

## Standard Features:

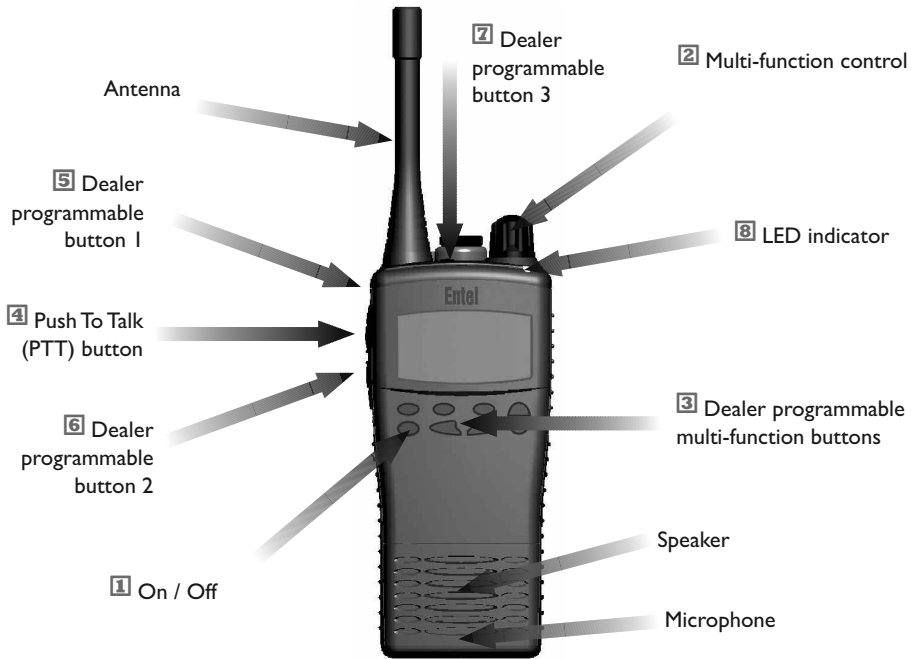
- Advanced selective calling
- Voice scrambler with up to 4 codes per channel
- Intuitive menus (like a mobile phone)
- Info button (user guide built-in to radio)

## Dealer programmable features:

- Speed dial
- Who's calling (caller ID)
- 255 user contact list (just like a mobile phone)
- Missed, received & dialled numbers lists
- Multiple ring / alert tones
- Power on password option
- Manual location information sent with emergency call
- Fully automatic indoor location (option)
- Send / Receive status messages



















# Controls & Indicators



- 1** On/Off button. Press to turn radio on, press and hold to turn off.
- 2** Multi-function dealer programmable control (ask your dealer for more information).
- 3** Dealer programmable multi function buttons.
- 4** Push To Talk button. Press to speak and release to listen.
- 5** Dealer programmable button 1 (ask your dealer for more information).
- 6** Dealer programmable button 2 (ask your dealer for more information).
- 7** Dealer programmable button 3 (ask your dealer for more information).
- 8** LED indicator:
  - RED steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN steady = Receiving
  - GREEN flashing slowly = Selcall / message received
  - YELLOW steady = Non valid signal detected
  - YELLOW flashing rapidly = Scanning



# LCD Indicators

• Message Received	
• Missed Call	
• Key Bleeps Off	
• Silent Profile	
• Keypad Locked	
• Man Down	
• Lone Worker	
• Bluetooth device connected	
• Accessory Connected	
• VOX Enabled	
• Scramble Enabled	
• Do Not Disturb	
• Whisper Mode	
• Battery State	
• Receive strength / TX Output Low / Mid / High	 RX / L / M / H
• Call Diverted	
• Speaker muted	
• Speaker unmuted	
• Talkaround enabled	
• Channel scanning	

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# HT706/716/726/786(U)

All the features of the HT705/715/725/785 (see page 14) plus the following features:

## Standard Features:

- Keypad

## Dealer programmable features:

- Edit contact list
- Free dial radio contacts
- Free dial telephone numbers
- Free dial DTMF numbers



















# Controls & Indicators



- 1 On / Off button. Press to turn radio on, press and hold to turn off.
- 2 Multi-function dealer programmable control (ask your dealer for more information).
- 3 Dealer programmable / function buttons.
- 4 Push To Talk (PTT) button. Press to speak and release to listen.
- 5 Dealer programmable button 1 (ask your dealer for more information).
- 6 Dealer programmable button 2 (ask your dealer for more information).
- 7 Dealer programmable button 3 (ask your dealer for more information).
- 8 LED indicator
  - RED steady = Transmitting
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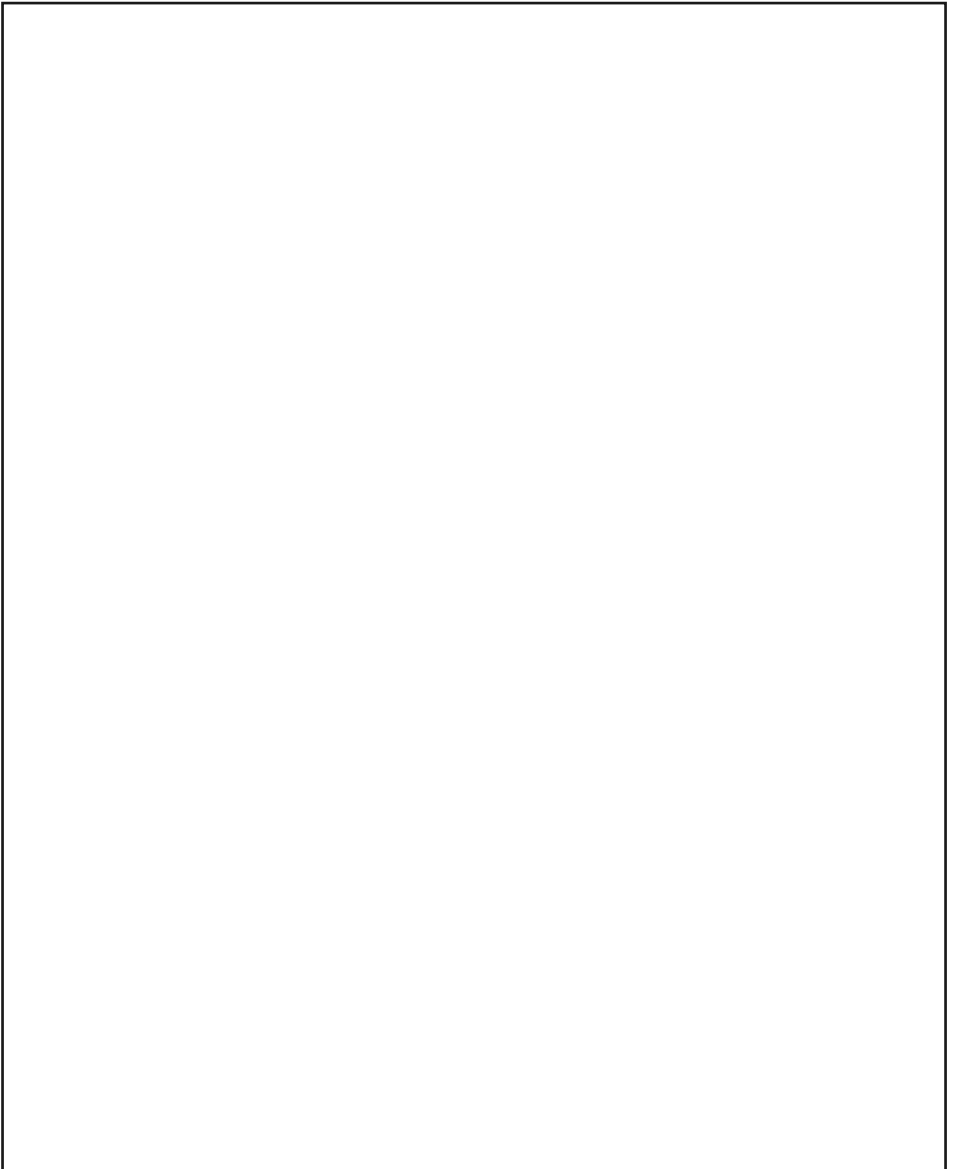
# LCD Indicators

• Message Received	
• Missed Call	
• Key Bleeps Off	
• Silent Profile	
• Keypad Locked	
• Man Down	
• Lone Worker	
• Bluetooth device connected	
• Accessory Connected	
• VOX Enabled	
• Scramble Enabled	
• Do Not Disturb	
• Whisper Mode	
• Battery State	
• Receive strength / TX Output Low / Mid / High	
• Call Diverted	
• Speaker muted	
• Speaker unmuted	
• Talkaround enabled	
• Channel scanning	

# NOTES

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professional's  
choice'

<Intended Country Of Use>

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CE 0891 !

Registered Community Design Application 000810890

U.S. Design Patent Pending No. 23/182,829

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