

# User Guide – HT600 Series

v03/09

Professional submersible marine handheld transceivers

Common Information  
(all models)



HT642  
**Entry**



HT644  
**LCD**



HT648  
**Entry GMDSS**



HT649  
**LCD GMDSS**

# 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.

Common

## Table of Contents

<b>Common Information (all models)</b>	<b>Page</b>
Certification	2
Radio / Battery Care	3
Battery Care / Communications	4
Packing List	5
Optional Accessories	5 & 6
Preparing Your Radio For Use	6 & 7
Using Your Radio HT642/HT648	8
Using Your Radio HT644/HT649	9

<b>HT642</b>	
Feature List	10
Controls & Indicators	11

<b>HT644</b>	
Feature List	12
Controls & Indicators	13
LCD Icons	14

<b>HT648 (GMDSS)</b>	
Feature List	16
Controls & Indicators	17

<b>HT649 (GMDSS)</b>	
Feature List	18
Controls & Indicators	19
LCD Icons	20

# Certification

## CE Compliance Statement

The HT600 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:-  
HT600 series VHF 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



# Radio care

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## 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 a 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 regard 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 in water unless attached securely to the radio or get it wet by other means
- 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

# Battery care / information

- 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 and 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.

## GMDSS Battery (CLB750)

Your CLB750 GMDSS battery is a non rechargeable lithium ion battery. The battery is supplied with a security seal that must be removed before fitting to the radio. An expiry date is printed on the battery. Do not use this battery if past the expiry date. Replacement batteries are available from your local authorised dealer. If you require assistance where to purchase please contact Entel for details.

**Under no circumstances must you attempt to recharge this battery**

The warranty on all batteries is 12 months from new.

Note: only genuine Entel batteries should be used. 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

- HT64X Transceiver
- CNB750E Rechargeable 1800mAh Li-Ion battery (May not be included with GMDSS)
- CLB750E Non rechargeable Li-Ion battery (GMDSS only)
- CBH750 Spring loaded belt clip
- CATXX Antenna CCA trickle charger included with certain models

## Optional Accessories

### Battery & Charger Options

CNB750E	Spare 1800mAh Lithium-Ion battery pack with rear clip
CLB750E	Spare 2000mAh Lithium-Ion non-rechargeable battery pack with rear clip (for GMDSS models only)
CSAHT	1-way intelligent rapid charger, 110-230v
CSBHT	6-way intelligent, rapid charger, 110-230v
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

### Carry Options

CFC750	HT64X soft leatherette case finished in black with carry strap
CLC752	HT642, HT648 heavy duty black leather case with strap & belt loop
CLC753	HT644 & HT649 heavy duty black leather case with strap & belt loop
CBH750	Spare spring loaded belt clip

### Audio Accessory Options

CMPI/750	Compact medium duty speaker microphone with earpiece jack
CMP750	Heavy duty submersible speaker microphone
EHP9	D-shaped earpiece (plugs into CMPI/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...

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
CBH750	Spare spring loaded belt clip

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

Bluetooth option board in radio is required to use Bluetooth audio accessories. (Not available for HT644I/HT648I/HT649)

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

## Preparing Your Radio For Use

### Simplex/ Duplex Channel Use

Your transceiver has been factory programmed in accordance with International regulations.

The mode of operation cannot be altered from simplex to duplex or vice versa. Simplex or duplex mode is automatically activated, depending on the channel selected. If you have a licence to use a specific simplex or semi-duplex channel, contact your dealer who may be able to programme your channel using the transceiver's private channel memory.

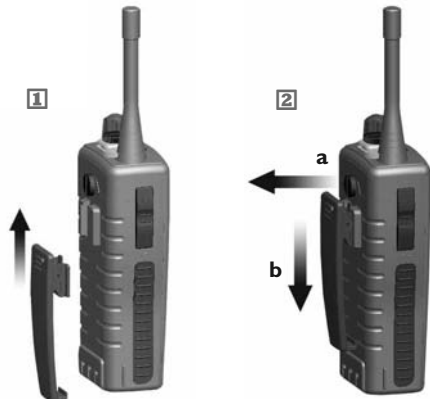
### Attaching / Removing the Battery Pack

- 1** To attach, locate the pegs on the bottom of the battery into the slots on the radio and 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, locate 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.





# Using Your HT642/HT648

## On / Off button

Press the on / off button to turn your radio on. A short turn on beep will be heard. To turn off, press and hold the on / off button until the display extinguishes.

## Using your radio

Before using your radio you may need to adjust the volume on the radio to take in to account background noise. Adjust the volume using the rotary control on the top of the radio.

## Transmitting on your radio

Before transmitting, ensure that the channel is not in use. To transmit press and hold the PTT button and speak approximately 35 - 50mm from the microphone on the radio. To receive, release the PTT button.

## Channel Scan (dealer programmable feature)

Press the dealer assigned button on the radio to start scan. Press again to return to stop.

## Monitor Button

Press the orange monitor button on the top of the radio to defeat the squelch mute. Press again to return to squelch mute.

## Securing Your Radio

You may secure your radio to you using either the supplied CBH750 belt clip or using an optional leather case.

# Using Your HT644/HT649

Common

## On / Off button

Press the on / off button to turn your radio on. A short turn on beep will be heard. To turn off, press and hold the on / off button until the display extinguishes.



## Using your radio

Before using your radio you may need to adjust the volume on the radio to take in to account background noise. Adjust the volume using the rotary control on the top of the radio.

## Transmitting on your radio

Before transmitting, ensure that the channel is not in use. To transmit press and hold the PTT button and speak approximately 35 - 50mm from the microphone on the radio. To receive, release the PTT button.

## Scan (HT644/HT649)

1. Select the desired channel to be scanned using the  &  buttons.
2. Press the [MEM] button to store the channel into the transceiver's memory. [MEM] is displayed on the LCD. This channel is now memorised to be scanned.
3. To add further channels, repeat steps 1 & 2.
4. To delete a channel from the transceiver's scan memory, simply press [MEM] button again whilst the memorised channel is displayed. [MEM] disappears.
5. All channels programmed remain in the transceivers scan memory even if the power is switched off.
6. To start scanning, press the [SCAN] key. The scan proceeds from the lowest to the highest programmed channel number and stops on channels when a transmission is received.
7. To stop the scan at any time, press the [SCAN] key.



## Emergency Channel

Channel 16 is used for emergency contact with other vessels. Hold down the [16] key for 1 second to select channel 16.

## Monitor Button

Press the blue monitor button on the top of the radio to defeat the squelch mute and release button to mute radio. A long press (radio will beep) will hold the squelch mute open until pressed again to cancel again to return to squelch mute.

## Adjusting squelch threshold

Press the blue monitor button on the top of the radio and switch radio on. Use  and  buttons to adjust threshold (between 01 - 16). Press MEM to store the setting.

## Securing Your Radio

You may secure your radio to you using either the supplied CBH750 belt clip or using an optional leather case.

# HT642

## Standard Features:

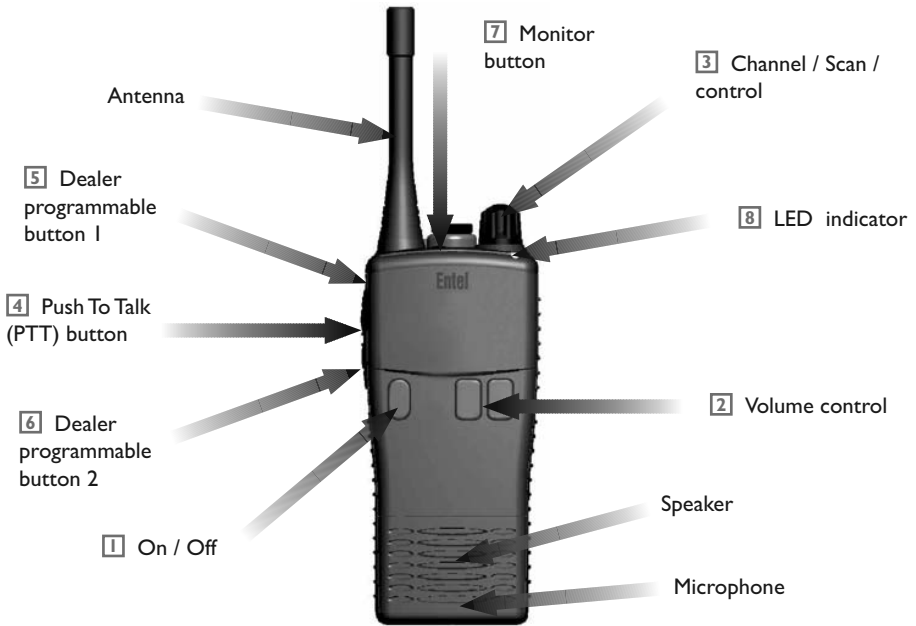
- Environmentally protected to IP68 i.e. submersible to 5 metres for up to 60 minutes
- Robust design, exceeds MIL-STD-810C/D/E/F
- 1800mAH Lithium-Ion battery for superior operational time
- 16 programmable channels
- Full transmit power output 5 Watts
- Exceptionally loud and clear audio
- Top mounted monitor button
- Automatic power save to further increase operational time
- Low battery alert indicates when the battery needs replacing

## Dealer programmable features:

- Channel Scan
- Key lock button
- Prefixed minimum volume level and fixed bleep level



# 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 Monitor button. Press button to turn on / off.
- 8 LED indicator:
  - RED Steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN Steady = Receiving

# HT644

## Standard Features:

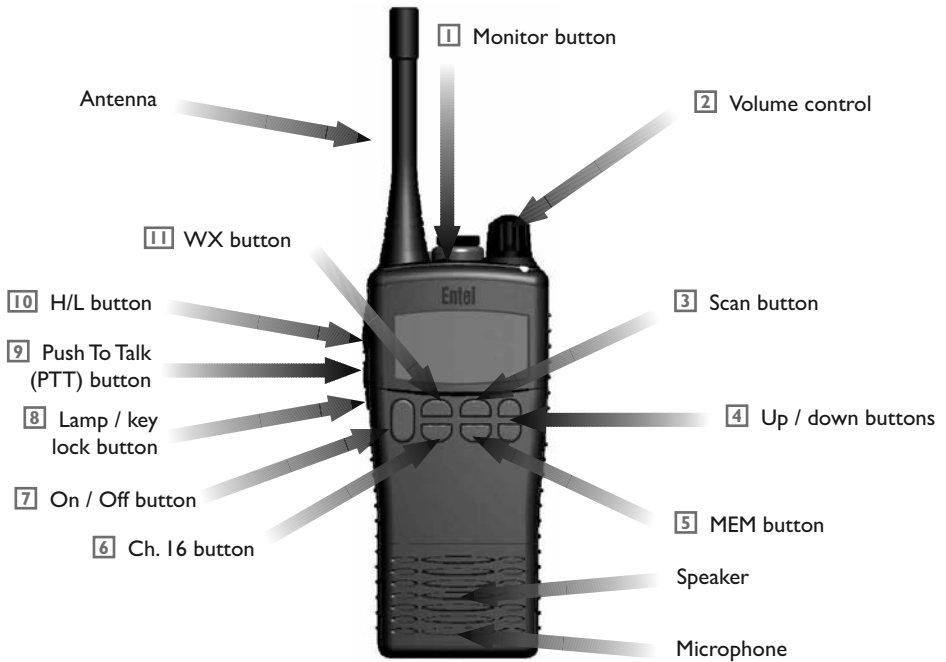
- Environmentally protected to IP68 i.e. submersible to 5 metres for up to 60 minutes
- Robust design, exceeds MIL-STD-810C/D/E/F
- LCD screen to display channel number
- 1800mAH Lithium-Ion battery for superior operational time
- INT, USA, CAN channels
- Full transmit power output 5 Watts
- Exceptionally loud and clear audio
- Ch 16 shortcut button
- Scan button
- Monitor button
- MEM button
- Automatic power save to further increase operational time
- Low battery alert indicates when the battery needs replacing

## Dealer programmable features:

- Key lock button
- Prefixed minimum volume level and fixed bleep level





# Controls & Indicators



- 1 Monitor button. Press to monitor channel.
- 2 Volume control
- 3 Channel scan button. Press to start / stop channel scanning.
- 4 Up / down buttons. Press up / down buttons to change channel.
- 5 MEM button. Memorise a desired channel for scanning.
- 6 Ch. 16 button. Shortcut button to access channel 16.
- 7 On / Off button. Press to turn radio on, press and hold to turn off.
- 8 Lamp/key lock button. Momentarily pressing this button illuminates the LCD display. Holding this button for over 1 second activates the key lock. To deactivate press button again.
- 9 PTT button. Press & hold to speak. Release to listen.
- 10 H/L button. Press and hold this button for one second to toggle between high and low power (1 & 5 Watts).
- 11 WX button. Immediately recalls the weather channels.

# LCD Indicators

• High power selected (5 Watts)	<i>H</i>
• Low power (1 Watt)	<i>L</i>
• Transmit in progress	<b>TX</b>
• Receive in progress	<b>RX</b>
• Indicated channel is memorised for scanning	<i>MEM</i>
• Scrambler mode enabled (version A & B only)	<i>SCM</i>
• Voice operated mode enabled	<i>VOX</i>
• Indicates the channel set for USA	<i>USA</i>
• Indicates the channel set for Canadian	<i>CAN</i>
• Indicates the channel set for International	<i>INTL</i>
• NOAA weather channels (USA and Canadian waters only)	<i>WX</i>
• A ship-to-ship channel (in USA or Canadian mode)	<i>A</i>
• Battery life indicator	
• Indicates keypad is locked, excluding the PTT, H/L and LAMP buttons	
• Private channel number selected	<i>P</i>
• Duplex channel selected (not simplex)	<i>DUP</i>

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# HT648

## Standard Features:

- Environmentally protected to IP68 i.e. submersible to 5 metres for up to 60 minutes
- Robust design, exceeds MIL-STD-810C/D/E/F
- GMDSS (Conforms to Pan European Specification ETS300-225 for the use of radios for Safety at sea)
- Non rechargeable Lithium-Ion battery for superior operational time
- 16 programmable channels
- Transmit power output 1 Watt
- Exceptionally loud and clear audio
- Top mounted monitor button
- Automatic power save to further increase operational time
- Low battery alert indicates when the battery needs replacing

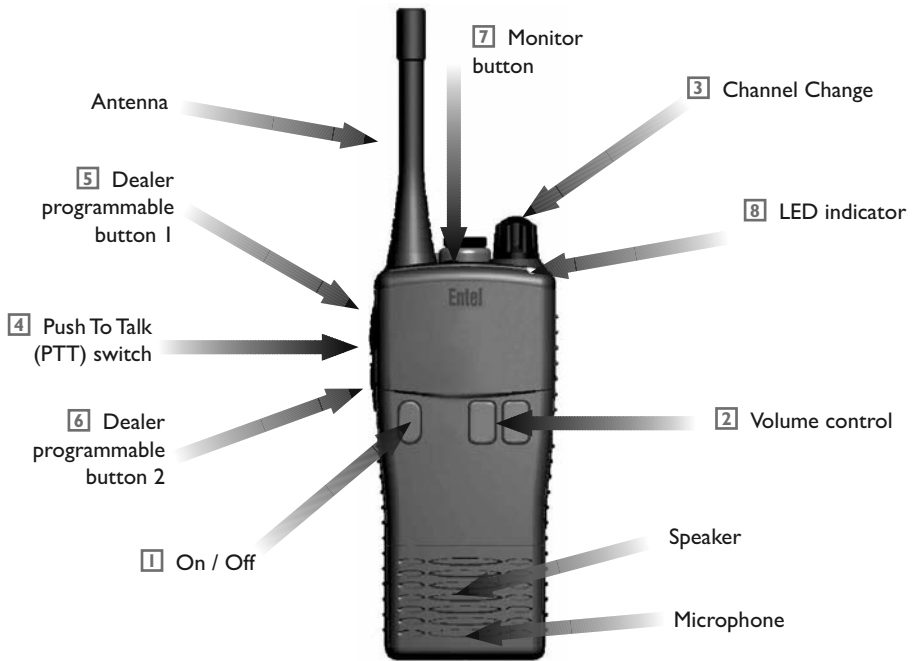


## Dealer programmable features:

- Channel Scan



# 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 change control, rotate to select the desired channel or scan setting.
- 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 Monitor button. Press to turn monitor on / off.
- 8 LED indicator.
  - RED Steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN Steady = Receiving

# HT649

## Standard Features:

- Environmentally protected to IP68 i.e. submersible to 5 metres for up to 60 minutes
- Robust design, exceeds MIL-STD-810C/D/E/F
- GMDSS (Conforms to Pan European Specification ETS300-225 for the use of radios for Safety at sea
- LCD screen to display channel number
- Non rechargeable Lithium-Ion battery for superior operational time
- 22 International Simplex channels
- Transmit power output 1 Watt
- Exceptionally loud and clear audio
- Ch 16 shortcut button
- Scan button
- Monitor button
- MEM button
- Automatic power save to further increase operational time
- Low battery alert indicates when the battery needs replacing



# Controls & Indicators



- 1 On / Off button. Press to turn radio on, press and hold to turn off.
- 2 Monitor button. Press to monitor channel
- 3 Channel scan button. Press to start/stop channel scanning.
- 4 Channel change buttons. Press up/down buttons to change channel.
- 5 Mem button. Press to memorise channel to scan.
- 6 Ch 16 button. Shortcut button to access channel 16.
- 7 Function button:
  - Short press will illuminate display backlight for 3 short period.
  - Long press will activate/deactivate keylock
- 8 PTT button. Press & hold to speak. Release to listen.
- 9 LED indicator:
  - RED Steady = Transmitting
  - RED flashing slowly = Battery needs re-charging
  - GREEN Steady = Receiving

# LCD Indicators

- 
- Keypad lock



- 
- Battery State



- 
- Channel Monitor



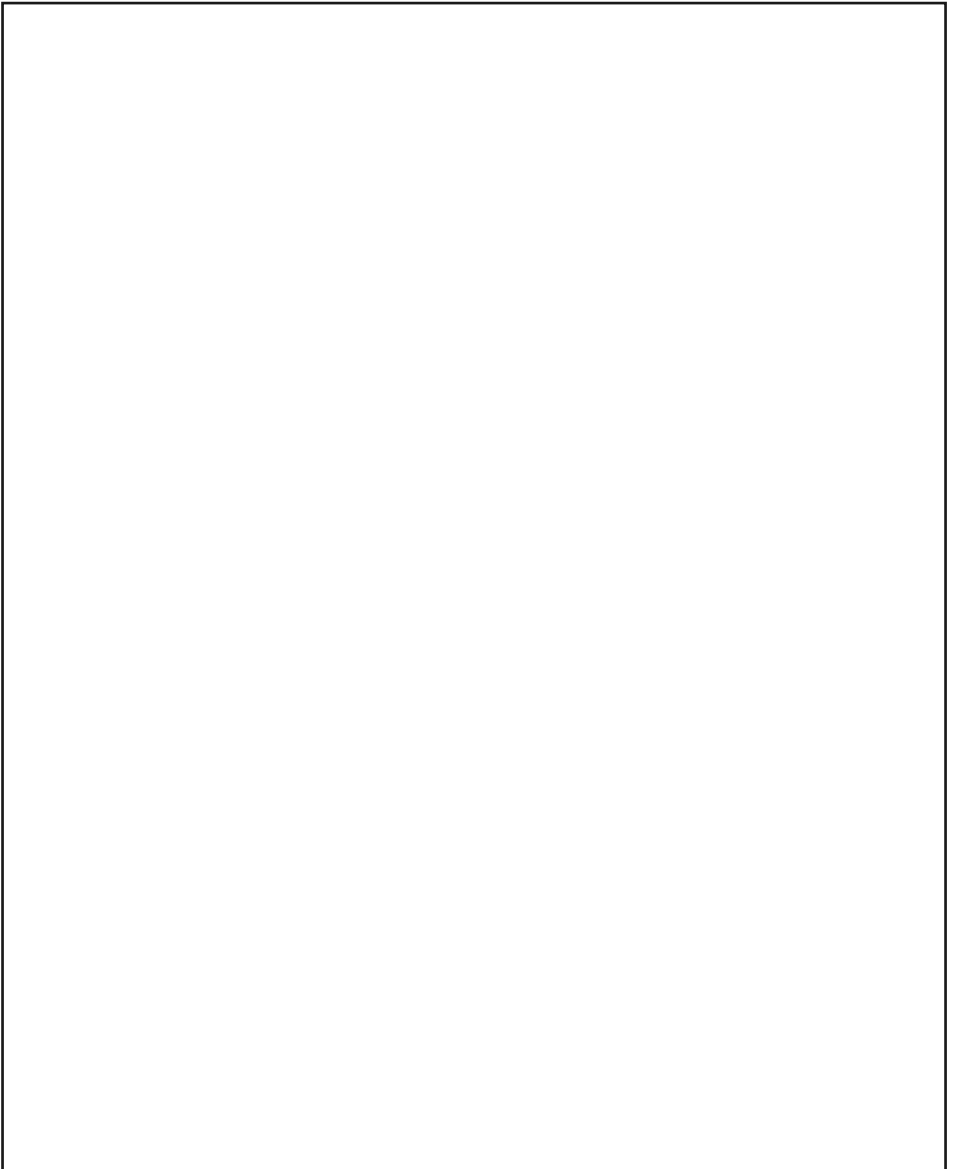
- 
- Memorise channel for scanning



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CE 0891 !

Registered Community Design Application 000810890

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

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