Contact: +971507924960
Email: sales@industrytechstore.com
Website: www.Industrytechstore.com

Business
Critical
Communications

# HT Series

## Commercial Grade Marine Portables

- Commercial grade construction
- GMDSS Model
- EN60945 Approved
- Submersible IP68


## Tough | IP68 RATING
## Submersible
## Dependable

www.entel.co.uk/ht-marine

# HT Series

## Commercial Grade Marine Portables

Rugged, designed for gloved hand use and with exceptionally loud audio, Entel's HT Commercial Marine portable radios are specifically designed to withstand the everyday rigours of the Maritime workplace.

With over 30-Years' experience exceeding the demands of the Maritime Workplace, Entel offers the most complete and established range of Commercial Marine portable radios available. Versions include: VHF, UHF and GMDSS.

# Why Entel HT Commercial Marine portables?

- Superior voice quality and volume
- IP68 (2 metres depth for 4 hours) submersible
- MIL-STD C/D/E/F/G standard robust construction
- High capacity (2200 mAh) Li-ion batteries as standard
- Established & proven portables based on over 30-Years' experience

### Superior Audio

Using the latest compander noise reduction technology, Entel's Commercial Marine portables deliver loud & crisp audio no matter what environment you are in.

### Commercial Grade Construction

Exceeding MIL-STD 810/C/D/E/F/G rating, the HT Series 2.0 is designed to withstand shock, vibration, dust and moisture, ensuring a tough enduring performance and many years of trouble free use, even in the most hostile environments.

### Intelligent Li-ion Battery

Entel's Lithium-ion Batteries provide the following key advantages:

**Extended Talk Time** – The 2200mAh Li-ion capacity of Entel's Lithium-ion batteries is up-to double that of other makes, therefore ensuring maximum talk-time.

**Li-ion Chemistry** – Entel's Li-ion batteries are not prone to the dreaded memory effect that Ni-Cad and Ni-MH battery packs suffer from. This ensures that you always have a good charge every time you take the battery from its charger.

### 2 Metres, 4 Hours Submersible

Conforming to IP68 standard, the HT Series 2.0 offers the highest submersibility rating of any manufacturer. This unique Series protects against corrosion, withstanding total immersion in water to a depth of 2 metres for 4 hours to protect against the likely hazards encountered in any field of operation.

### GMDSS MED

The HT649 GMDSS is a MED certified survival craft radio that carries the essential Wheel Mark logo. It's designed to function in the most extreme and harshest of environments and meets the strict environmental requirements for GMDSS radios.

**The HT649 is available in two packages:**

**PACK 1**
includes HT649 radio & Primary (emergency) battery.

**PACK 2 AS PACK 1 PLUS**
Secondary (rechargeable) battery and charger.

# Model Selection

| | | Region | Entry | LCD UHF | LCD VHF | LCD GMDSS |
|---|---|---|---|---|---|---|
| Not Intrinsically Safe | VHF Marine INT/USA/CAN | EU | – | – | HT644 | – |
| | Marine UHF | EU | HT782M | HT783M | – | – |
| | Marine UHF | Non EU | HT782 | HT783 | – | – |
| MED, GMDSS Approved | VHF Marine | EU | – | – | – | HT649 |
| IP68 2 METRES for 4 Hours Submersible | | | ✓ | ✓ | ✓ | ✓ |
| MIL-STD 810 C/D/E/F/G | | | ✓ | ✓ | ✓ | ✓ |
| High-Capacity Li-ion Battery | | | ✓ | ✓ | ✓ | ✓ |
| Flash Upgradable (to add new features) | | | ✓ | ✓ | – | ✓ |
| Channel Capacity | | | 16 | 255 | INT/USA/ CAN | INT/USA/ CAN |
| Private Channels | | | ✓ | ✓ | ✓ | ✓ |
| Low Battery Warning | | | ✓ | ✓ | ✓ | ✓ |
| Channel Naming | | | – | ✓ | – | – |
| VOX (hands free operation) | | | ✓ | ✓ | ✓ | ✓ |

# Technical Specification

| General | | |
|---|---|---|
| Frequency Range | VHF<br>UHF | 156-163.27Mhz (INT,USA,CAN)<br>450-470Mhz |
| Channel Spacing | 12.5KHz & 25Khz | |
| Operating Voltage | 7.6v | |
| Battery | CNB750E 2200mAh Lithium-ion | |
| Weight | Display model 277g<br>Non display model 267g | |
| Overall Dimensions (HxWxD) | 130mm x 59.5mm x 37mm | |
| Channels | VHF INT/USA/CAN mode plus private<br>UHF | 255 |
| Channels non display version | UHF | 16 |

| Transmitter | |
|---|---|
| Power Output VHF (HI/LOW) | 5W/1W |
| Power Output UHF (HI/LOW) | 2W/1W |
| HT649 GMDSS | 1W |
| Audio Distortion | <5% |
| Unwanted Emission | >0.25uW |
| Adjacent Channel Power | 70dBc / 60dBc |

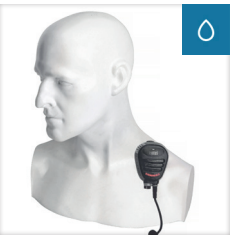
| Receiver | |
|---|---|
| Analogue Sensitivity | -116dBm (0.2uV) for 12dB Sinad |
| Rated Audio Output | 0.5 watts |
| Intermodulation Response | >68dB |
| Adjancent Channel Sensitivity | >70dB / >60dB |
| Surprious Rejection | >70dB / >60dB |
| Audtio Response | 300Hz to 3KHz -6dB/Octave |
| Audio Distortion | <5% |
| Conducted Spurious Emissions | <2nW from 30Mhz to 2GHz |

| Environmental | |
|---|---|
| Operating Temperature | -20°C to +55°C |
| Storage Temperature | -40°C to +85°C |
| Thermal Shock | Compliant MIL-STD810 C/D/E/F/G |
| Humidity | |
| Shock & Vibration | |
| Packing Test | |
| Drop Test | |
| Water Ingress | IP68 2 metres, 4 hours submersible |

# Accessories

Supplied package includes:
2200mAh Li-ion battery pack, drop in charger, spring loaded belt clip, high efficiency antenna & quick start user guide

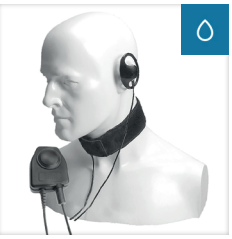
**CSBHT**
Six-way charger



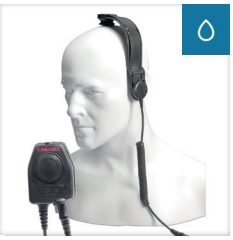
**CMP750**
Heavy duty speaker mic submersible

**EA12/750**
Earpiece microphone

**EA15/750**
Covert earpiece / microphone



**CXR16/750***
Throat mic. Bone conductive



**CXR5/750***
Skull mic. Bone conductive

**CHP750HS***
Hard hat eardefender, submersible PTT

Submersible products are represented with a water droplet.

For the complete range of accessories please visit our website. All specifications are subject to change without notice.

* Submersible - PTT only

Full list of accessories available online.



# Contact

**Designed in the United Kingdom**

For more information about our products, please contact us:
Entel UK, 320 Centennial Avenue Centennial Park, Elstree, Borehamwood, Hertfordshire WD6 3TJ, United Kingdom

**+44 (0)20 8236 0032** **info@entel.co.uk** **entel.co.uk**

# HT649 GMDSS Survival Craft

## Quick Start User Guide


0063

0558

Designed in the United Kingdom

Entel

## INTRODUCTION

The HT649 GMDSS is a MED certified survival craft radio that carries the essential Wheel Mark logo. It's designed to function in the most extreme and harshest of environments and meets the strict environmental requirements for GMDSS radios.

To meet your exact requirements the radio may have been customised by your Entel dealer. These features will be explained in a separate guide issued by the dealer.

## PACKING LIST

| PACKAGE 1 |
|---|
| HT649 VHF radio |
| Primary battery for Emergency use only |
| Spring loaded belt clip |
| High efficiency antenna |
| Lanyard |
| Quick start user guide |
| **PACKAGE 2 AS PACKAGE 1 PLUS** |
| Li-ion rechargeable battery pack |
| Drop in charger |
| Bulkhead screw spacer kit |

### Attaching and removing accessories

1. To attach an accessory, remove the accessory cover by unscrewing the locking screw anti-clockwise (leave the cover attached or store in a safe place).
2. Plug the accessory into the socket, then carefully tighten the locking screw clockwise until finger tight (do not overtighten or use any implement)
3. To remove an accessory, unscrew the locking screw of the accessory by hand in an anti-clockwise direction. Ensure you re-fit the accessory socket cover (the radio is not submersible without the socket covered).


## BATTERY INFORMATION

Battery care

**Primary battery pack - CLB750G (Yellow)**

1. This is a non-rechargeable, single use Lithium battery
2. The battery is supplied with a security seal that must only be removed before use
3. An expiry date is printed on the battery. Regularly check the date of your batteries and replace as required. Immediately, and safely, dispose of any out-of-date batteries.

**Charging the CNB750E secondary battery pack (Black)**

1. Connect the AC adaptor to the charger pod and plug in
2. Turn the radio off and insert the battery pack into the charger pod, either with or without the radio attached. The charger LED status light changes to red and charging begins
3. When charging is complete, the charger status LED changes from red to green (a fully discharged battery pack will take approximately 6 hours to recharge)

**CAUTION**

## BATTERY PACK PRECAUTIONS

- Do not recharge the battery pack if it is already fully charged. Doing so may reduce the life of the battery pack
- After charging is complete, remove the battery from the charger
- Please ensure that the radio is turned off before placing it in the charger and never switch a radio on whilst in the charger
- Only use Entel branded battery packs and chargers
- Do not short the battery terminals or dispose of the battery in a fire
- Do not charge the radio and/or battery pack if they are wet

**DANGER**

**DO NOT DISASSEMBLE OR MODIFY THE BATTERY IN ANY WAY!**

Your Entel battery pack incorporates a safety circuit to avoid danger, if the safety circuit is damaged or bypassed, or the battery cells are damaged directly, they may generate extreme heat, smoke, rupture and emit flames.

## REPAIR & MAINTENANCE

Repair and maintenance of this product can only be carried out by Entel. Any damage to the anti-tamper seal will invalidate the product approval. Should you have any difficulties in operating this product please contact your Entel Dealer for support.

## CONTROLS & INDICATORS


1. On/Off button. Press and hold to turn the radio on or off
2. **MEM Button:** Adds / removes the currently selected channel to / from the scan list.

   **SCAN Button:** Starts/Stops scanning the channels added to the scan list.

   **16 Button:** Toggles between the currently selected channel and channel 16.

   **MON Button:** Latches squelch open
3. Channel up / down buttons
4. Push To Talk (PTT) button. Press to speak and release to listen.
5. Non-programmable button
6. Short press toggles LCD and keypad backlight on/off. Long press toggles keypad lock on/off
7. Non-programmable button
8. LED Indicator

   Red steady - Transmitting

   Red flashing slowly - Battery needs recharging

   Green steady - Receiving

   Amber pulsing – In standby mode
9. Volume Control
10. Microphone

The product shall only be put into service after it has been professionally configured by a specialist radio communications dealer for the EU member state or geographical area it is intended to be operated within.

**Intended country of use**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | AT | BE | BG | CH | CY | CZ | DE | DK | EE |
| | ES | FI | FR | EL | HR | HU | IE | IS | IT |
| | LI | LT | LU | LV | MT | NL | NO | PL | PT |
| | RO | SE | SI | SK | TR | UK(NI) | | | |

## PREPARING YOUR RADIO FOR USE

### Attaching / removing the antenna


1. To attach, carefully align the antenna with the socket. Screw in the antenna and clockwise (taking care not to cross the thread) until it is seated firmly with the accessory cover's rubber ring between the antenna and the top of the radio. (A)
2. To remove, unscrew the antenna anti-clockwise. (B)

### 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 use any implement or overtighten). (C)
2. To remove, unscrew the locking screw anti-clockwise and pull the battery away from the top of the radio. (D)

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CE

## SWITCHING ON, RECEPTION AND SWITCHING OFF

1. To switch on, press and hold the on/off control (1) on the front of the radio.
2. When the radio has passed its diagnostic tests, it will emit a fanfare tone.
3. The radio will enter standby mode. This is indicated by the LED Amber flashing once every 5 seconds, signalling that the radio is ready for use.
4. Adjust the volume control to select the desired volume level.
5. Using the channel buttons, ensure you have the correct channel selected.
6. When receiving a valid signal, the LED will illuminate steady green and audio will be emitted from the radio's speaker or audio accessory (if attached)
7. When finished using the radio, switch off by pressing and holding the on/off button (1) until the radio beeps and the LED/LCD is extinguished.

## TRANSMITTING

1. Perform steps 1 through to 5 of Switching On, Reception and Switching Off.
2. Before transmitting, monitor the channel and make sure it is clear.
3. When receiving a signal, wait until the signal stops before transmitting. The radio cannot transmit and receive simultaneously.
4. Press the PTT (Push To Talk) button (4) to begin your transmission. To confirm transmission the LED illuminates red.
5. For best transmitted speech quality you must talk directly into the radio's microphone (10) at around 4cm between your mouth and the radio.
6. Please note: if you talk into the top of the radio or with your mouth further away, you will transmit poor quality speech
7. When the transmission is finished release the PTT button.

## DECLARATION OF CONFORMITY

**We Entel UK Limited of:**
320 Centennial Ave, Centennial Park, Elstree. WD6 3TJ United Kingdom Tel +44 208 236 0032 info@entel.co.uk
This declaration of conformity is issued under the sole responsibility of the manufacturer and is issued according to the provisions of European Council Directive 96/98/EC on marine equipment amended by the Commission Directive 2014/90/EU and the Merchant Shipping (Marine Equipment) Regulation 2016.
EN 300 225: December, 2015 v1.5.1
EN 301 843-2: November, 2017 v2.2.1
EN 60945: October, 2002, Edition 4
IEC 60945/Corrigendum 1: April, 2008, Edition 4
IMO Resolution A.694(17): 1991
IMO Resolution A.809(19): 1995
ITU-R M.489-2: October, 1995
MSC Resolution 149(77): June, 2003
MSC Resolution 36(63): May, 1994
MSC Resolution 515(105): April, 2022
MSC Resolution 97(73): December, 2000

**Marine Electronics Directive (MED)**
Compliance is being ascertained by the following certificates;
EC type-examination certificate (Module-B)
No. 232120001/AA/01 has been issued
Product category: MED/5.17
Product quality system certificate (Module-D)
Certificate No. P133
Kiwa Nederland B.V.
Notified Body No. 0063

**The Merchant Shipping (Marine Equipment) Regulation 2016 (MER)**
Compliance is being ascertained by the following certificates:
UK type-examination certificate (Module-B)
No. 232380005/AA/01 has been issued
Item number and designation: UK/5.17 Portable survival craft two-way VHF radiotelephone apparatus
Product quality system certificate (Module-D)
Certificate No. P133 MER
UK Approved Body Kiwa Ltd.
Approved Body No. 0558
Frequency Range TX 155MHz-161.450MHz
RX 155MHz-163.425MHz
Power Output 1W
Name: Mike Jamieson
Position: Quality Manager
Date: 25th September 2023
Signed:

APPROACHABLE ac REGISTERED
UKAS MANAGEMENT SYSTEMS
8320