Class-H DSC GPS 6W Transceiver
HX890 Floating

New Ergonomic Design with the Most Advanced Features
Leading with Class-H DSC & GPS Marine Communications

Radio Specification
- Floating
- Submersible
- 6W Transmit Power
- Loud Audio

Usability
- Easy to Operate
- Large Display
- AC and DC Charger Included
- Li-Ion Battery Included

Features
- CLASS H
- DSC Distress and POS Poming
- GPS/Buo
- GPS Compass
- IPX8 (1.5m for 30 min Submersible)
- 3 Year Warranty
- MIL-STD-810F

Connectability

The photo shows the NAVY BLUE
**Ergonomic Design & Durable Construction**

**Marine Class-H DSC & GPS Floating 6W VHF Transceiver**

**Class-H DSC GPS 6W Transceiver**

**HX890**

- **HX890**: for USA
- **HX890E**: for Europe, Asia and Australia

**Supplied Accessories**
- CAT460 Antenna, SBR-13LI 7.4V 1800mAh Li-ion Battery Pack, SBR-32 Charger Cradle, SAD-2S AC Adapter,
- E-DC-19A DC Cable with Cigarette Lighter Plug for SBR-32,
- SBT-13 Alkaline Battery Case (AAA x 9), CLIP-22 Belt Clip,
- Hand Strap and T5101648 USB Cable

**Rounded Case Design and Durable Construction**

The HX890 has an innovative rounded case design that provides excellent handheld comfort and easy front panel operation. Professional grade construction meets MIL-STD-810F for operation in the harsh environment.

**Floating IPX8 Submersible Construction**

(4.92 ft / 1.5 m for 30 minutes)

Engineered to be rugged and reliable, the HX890 is designed to float and also constructed to survive submersion with the IPX8 water resistant rating (4.92 ft / 1.5 m of water for 30 minutes).

**ITU-R M.493-14 Class-H DSC (Digital Selective Calling) & CH70 DSC call Receiver**

The HX890 is capable of DSC (Digital Selective Calling) ITU-R M.493-14 Class-H operation. Class-H operation permits continuous reception of Digital Selective Calling functions on channel 70, concurrent with reception of radio calls on the audio channels.

**DSC DISTRESS ALERT**

Transmit and reception of DSC distress messages is incorporated. Distress alert transmissions include the latitude and longitude of the vessel when the Distress alert is activated.

**Built-in Integrated 66 Channel WAAS GPS Receiver**

With the internal high-performance 66 Channel GPS receiver, SBAS (WAAS / MSAS / EGNOS) satellites can be received. The HX890 includes a position logger that permits recording/logging the GPS location information at periodic intervals.
Extended Range 6W Transmit Power on Marine VHF
The HX890 provides a full 6 Watts of transmit power and also is selectable to 2W and 1W settings to assist the user in obtaining maximum battery life.

*5W TX required in some countries

700mW Loud Audio and Noise Canceling Function
The HX890 is designed to be heard even in noisy environments with 700mW of audio power supplied to the internal speaker. In addition, the HX890 has the Noise canceling function for both receive and transmit audio.

*11 hours Operating time with supplied Li-ion Battery
The Supplied 1800mAh high capacity Li-ion battery provides up to *11 hours operating time.
Also, the HX890 may be operated with the included *AAA* SBT-13 Alkaline Battery Case (AAA x 5).

*Based on Duty Cycle = (TX)sec: (RX)sec: (Standby)sec: with 6W TX power, GPS: ON, DSC: ON

Oversized Full-dot Matrix Display & E20 (Easy to Operate) Icon /Menu System
Designed with a large (1.7” x 1.7”, 43.2 x 43.2mm) Full-dot matrix display with wide digits and bold information flags that makes great visibility in any conditions. Also the HX890 advanced features “MENU” screen is displayed by pressing the MENU key on the front panel.

Selectable Display Mode (Night Mode Display)
The display is selectable between DAY mode and NIGHT mode.
The NIGHT mode display improves visibility at night by inverting the black and white dots of the display from the DAY mode.

Waypoint Navigation
: Navigate to stored memory locations using the compass screen
The HX890 is capable of storing up to 250 waypoints for navigation using the compass page. The compass page includes the distance and direction to the destination and the waypoint is indicated by a dot. The large compass screen makes it easy to discern the overall positional relationship at a glance.
Also, the HX890 allows setting 1 to 30 waypoints to create a route.

GM (Group Monitor) using DSC Group position Call
The GM (Group Monitor) feature of the HX890 utilizes the DSC (Digital Selective Calling), the Group call and Auto Position Polling, to display the group member locations.
By selecting the specific group member, you may begin navigation using the GM function. The HX890 is capable of storing up to 10 groups with 1 to 9 members each.

MOB (Man over Board) Location and navigation System
In an emergency, the MOB (Man Over Board) feature permits instantly recording the location where a person falls overboard.
This position may be reported for navigation to the exact location.

Water Activated Emergency Strobe Light
When the HX890 comes in contact with water, the water activated strobe light will turn on “WHITE” to assist finding the radio in low light conditions.
This feature operates when the radio is ON or OFF.

Integrated Voice Scrambler Systems
Two types of voice scrambler functions are available: the 4-Code type (CVS2500A compatible) or the 32-code type (FVP-42 compatible)
*The scrambler is not available for CH16 and CH70

Versatile Scanning modes and Multi-watch
The HX890 will automatically scan channels programmed into the preset channel memory and also the scan channel memory; and the last selected weather channel. Multi watch is used to scan two or three channels for communications.
- In Dual Watch, a normal VHF channel and the priority channel are scanned alternately.
- In Triple Watch, a normal VHF channel, the priority channel, and the sub channel are scanned repeatedly.

NOAA Weather Alert (USA version only)
In the event of extreme weather disturbances, such as storms and hurricanes, the NOAA (National Oceanic and Atmospheric Administration) sends a weather alert including a 1050Hz tone and subsequent weather report on one of the NOAA weather channels. The HX890 can receive weather alerts when monitoring a weather channel, on the last selected weather channel during scanning modes, or while listening on another working channel.

Built in FM Broadcast Radio Receiver
FM broadcast receiver function is included in the HX890, with FM broadcast frequency sweep and Memory frequency Store/Recall operations.
FEATURES
- Automatically poll the GPS positions of ships using DSC
- Individual Calling, Group Calling and Test Calling
- DSC Beep and Selectable Call Ringer time
- Preset key used to recall up to 10 favorite channels
- CH16/S Quick Access (S: Sub-channel)
- Checking GPS Signal (GPS Status Display)
- TOT (Transmit Time-Out-Timer)
- micro USB Data jack for PC interface
- VOX Operation with optional VOX Headset (SSM-64A)
- Battery Saver
- Dimmer Adjustment
- Keypad Illumination
- Key Beep
- Key Lock

SPECIFICATIONS

**General**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>156.025MHz - 161.600MHz (TX), 156.050MHz - 156.255MHz (RX) (USA/International, Including WX channels)</td>
</tr>
<tr>
<td>Channel Spacing</td>
<td>25kHz</td>
</tr>
<tr>
<td>Frequency Stability</td>
<td>±±2ppm (-4°F to +140°F [-20°C to +60°C])</td>
</tr>
<tr>
<td>Emission Type</td>
<td>16K0G3E (Voice), 16K0G2B (DSC)</td>
</tr>
<tr>
<td>Antenna Impedance</td>
<td>50Ω</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>7.4VDC, Negative Ground (Battery Terminal)</td>
</tr>
<tr>
<td>Current Consumption (Receive)</td>
<td>380mA</td>
</tr>
<tr>
<td>Operating Temperature (TX)</td>
<td>-4°F to +140°F [-20°C to +60°C]</td>
</tr>
<tr>
<td>Waterproof Rating</td>
<td>IPX8 (4.92/1.5m for 30 minutes)</td>
</tr>
<tr>
<td>DSC Individual Directory</td>
<td>Store up to 100 Entries</td>
</tr>
<tr>
<td>DSC Group Directory</td>
<td>Store up to 30 Groups</td>
</tr>
<tr>
<td>DSC Format</td>
<td>ITU-R M.493-14</td>
</tr>
<tr>
<td>NMEA Output</td>
<td>DSC, DSE, GLL, GGA, GSA, GSV, and RMC</td>
</tr>
<tr>
<td>Case Size (W x H x D)</td>
<td>2.50&quot; x 5.43&quot; x 1.50&quot; (66 x 138 x 38mm)</td>
</tr>
<tr>
<td>Weight (Approx.)</td>
<td>10.34 oz (310g) with SBR-13LI Belt Clip, hand strap &amp; Antenna</td>
</tr>
</tbody>
</table>

**Receiver**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit Type</td>
<td>Double-Conversion Superheterodyne</td>
</tr>
<tr>
<td>Intermediate Frequencies</td>
<td>(Voice) 1st: 38.85MHz, 2nd: 450kHz (DSC) 1st: 30kHz, 2nd: 45kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>(Voice) 0.25μV for 12dB SINAD, &lt;5μV for 20dB SINAD (DSC) 0.5μV for 12dB SINAD, &lt;5μV for 20dB SINAD</td>
</tr>
<tr>
<td>Adjacent Channel Selectivity</td>
<td>70dB typical</td>
</tr>
<tr>
<td>Intermodulation</td>
<td>70dB typical</td>
</tr>
<tr>
<td>Selectivity</td>
<td>12kHz/25kHz (-60dB / -60dB)</td>
</tr>
<tr>
<td>AF Output</td>
<td>700mW @ 16 Ohm for 10% THD (87.4V)</td>
</tr>
</tbody>
</table>

**GPS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver Channels</td>
<td>66 Channels</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Less than -147dBm</td>
</tr>
<tr>
<td>Time to First Fix</td>
<td>1 min typical (Cold Start) 5 sec typical (Hot Start)</td>
</tr>
<tr>
<td>Geodetic Datum</td>
<td>WGS84</td>
</tr>
</tbody>
</table>

**FM BROADCAST RECEIVER**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>65MHz - 108MHz</td>
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<tr>
<td>Frequency Step</td>
<td>100kHz</td>
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<tr>
<td>Sensitivity</td>
<td>1.5μV for 12dB SINAD</td>
</tr>
</tbody>
</table>

**Applicable MIL-STD**

<table>
<thead>
<tr>
<th>MIL Standard</th>
<th>Method / Procedures</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Low Pressure</td>
<td>500.4 - I, II</td>
<td>Humidity</td>
<td>507.4</td>
</tr>
<tr>
<td>High Temperature</td>
<td>501.4 - I, II</td>
<td>Soft Fog</td>
<td>509.4</td>
</tr>
<tr>
<td>Low Temperature</td>
<td>502.4 - I, II</td>
<td>Settling Dust</td>
<td>510.4 - III</td>
</tr>
<tr>
<td>Temperature Shock</td>
<td>503.4 - I</td>
<td>Vibration</td>
<td>514.5 - I</td>
</tr>
<tr>
<td>Solar Radiation</td>
<td>504.4 - I</td>
<td>Shock</td>
<td>516.5 - I, IV</td>
</tr>
<tr>
<td>Rain Blowing/Drip</td>
<td>506.4 - I, III</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**SUPPLIED ACCESSORIES**

- CAT460 Antenna
- SBR-13LI 7.4V 1800mAh Li-ion Battery Pack
- SBH-32 Charger Cradle
- SAD-25 AC Adapter for SBH-32
- SEP-10A Earphone for SSM-16A
- SSM-64A VOX Headset
- SSM-55A Earphone microphone
- CN-3 SNC-SSMA Adapter
- CAT460** Antenna
- MH-3A4B Submersible Speaker Microphone
- MH-7A4B Submersible Speaker Microphone
- SEP-16A Earphone for SSM-16A
- E-DC-19A DC Cable with 12V Cigarette Lighter Plug for SBH-32
- SBT-13 Alkaline Battery Case (AAA x 5)
- CLIP-22 Belt Clip
- T910648 USB Cable
- Hand Strap
- SBR-13LI** 7.4V 1800mAh Li-ion Battery Pack
- SBH-32** Charger Cradle
- SAD-25** AC Adapter for SBH-32
- E-DC-19A** DC Cable with 12V Cigarette Lighter Plug for SBH-32
- E-DC-6 DC Cable (plug and wire only)
- SBT-13** Alkaline Battery Case (AAA x 5)
- CLIP-22** Belt Clip
- SCG-11 Belt Clip Hanger

*1 The Same as the supplied accessory

**STANDARD HORIZON**

Nothing takes to water like Standard Horizon

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