Black Box Searchlight Sonar

Model CH-250BB

- Choice of frequency: 60, 88 or 150 kHz
- Select virtually any size non-interlaced, VGA or higher PC monitor CRTs, as well as flat panel color LCDs (VGA – 640 x 480)
- Target lock on a fish school or L/L position of a designated fishing area
- Pulse length automatically switched with range to optimize overall performance
- A specific color can be shown in white to enhance the echo level display
- Instant selection of eight different operational modes
- Displays echoes in 8 or 16 colors

- Audible target detection freeing the operator from a continuous display watch
- Shared monitor utilization of Radar and PC systems with standard PC monitor switching system
- “All Glass”, balanced and symmetrical bridge layout when multiple equivalent PC monitors are employed
- Sonar video distribution to a vessel’s television system, or multiple external monitors is possible with standard PC monitor converters and distributors

The CH250BB gives you the flexibility to select the type of display you want, and the capability to switch between other Furuno “Black Box” products.
# SPECIFICATIONS OF CH-250BB

## 1. Range Scales and Pulse Length

<table>
<thead>
<tr>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meters</td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>120</td>
<td>160</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Feet</td>
<td>40</td>
<td>80</td>
<td>120</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
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<td>700</td>
<td>800</td>
<td>1000</td>
<td>1500</td>
<td>2000</td>
<td>2500</td>
<td>3500</td>
</tr>
<tr>
<td>Fathoms</td>
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<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>160</td>
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<td>250</td>
<td>300</td>
<td>400</td>
<td>500</td>
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<tr>
<td>P/B</td>
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<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>160</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>700</td>
</tr>
</tbody>
</table>

Max scale depends on the system frequency. 1600 m (60 kHz), 1200 m (88 kHz), 1000 m (150 kHz). Training speed is subject to the system frequency and range scales. Two speeds on long range scales.

## 2. Display Modes

1. Full circle searchlight
2. Zoom (x 1.5)
3. Vertical-fan scanning
4. Vertical sounding
5. Full circle search and Vertical scan
6. Full circle search with Historical display
7. Semi circle search and Strata display
8. Full circle search and Video Plotter

## 3. Color

8 or 16 colors, plus white

## 4. Audio Monitor

1000 Hz

## 5. TX Output Power

0.8-1.2 kW

## 6. Beamwidth (at -3 dB)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>H</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 kHz</td>
<td>15˚ (H) x 12˚ (V)</td>
<td></td>
</tr>
<tr>
<td>88 kHz</td>
<td>11.5˚ (H) x 9.5˚ (V)</td>
<td></td>
</tr>
<tr>
<td>150 kHz</td>
<td>6.5˚ (H) x 6.5˚ (V)</td>
<td></td>
</tr>
</tbody>
</table>

## 7. Transducer Control

**Tilt**

0˚ to -180˚ at 3˚ or 6˚ steps (in vertical scan)
+5˚ to -90˚ at 1˚ steps (in full circle scan)

**Training sector**

Manual or automatic training at 6˚ or 12˚ steps in search sector of 6˚-360˚

**Target Lock**

By L/Lor Echo position

## 8. Interface

NMEA0183 Ver. 1.5, 2.0 (IEC 61162-1)

**Input:**

- DBS, DBT, DPT, GGA, GLL, HDG, HDM, MDA, MTW, RMA, RMC, VDR, VHW, VTG

**Output:**

- TLL

## EMC AND ENVIRONMENT

Complies with IEC 60945

Display Unit:

- -15˚C to +55˚C

Water Resistance: IEC IPX5

## EQUIPMENT LIST

### Standard

1. Control Head
   - CH-252
   - 1 Unit
2. Hull Unit CH-254 (travel 400 mm) or CH-255 (travel 250 mm)
   - 1 Unit
3. Transceiver unit CH-253
   - 1 Unit
4. Installation materials and spare parts
   - 1 Set
5. Interface box IF-8000
   - 1 Unit
6. Motion sensor MS-100 or Clinometer BS-7004

### Optional

1. Non-Interlaced, Multi-sync PC Monitor (VGA 640 x 480)
2. Remote controller CH-256
3. Rectifier RU-1746B-2
4. External Speaker
5. 1 m tall steel tank, 1.8 m tall steel tank, 3.5 m tall steel tank, 1 m tall FRP tank, 1.8 m tall FRP tank, 1 m tall aluminum tank
6. NMEAcable

## POWER SUPPLY

**Display/Control unit**

- 12-32 VDC, 55 W

**Hull unit**

- 12 or 24/32 VDC, 55 W
- (200 W while raising/lowering transducer)

## REMOTE CONTROLLER (OPTIONAL)

**CSH-256**

- Weight 0.3 kg, 0.7 lb

## HULL UNIT

**CSH-254** (Travel 400 m)

- 43 kg, 94.8 lb

**CSH-255** (Travel 250 m)

- 42 kg, 92.6 lb

## TRANSCEIVER UNIT

**CSH-253**

- Weight 3.2 kg, 7.1 lb

## INTERCONNECTION DIAGRAM

- IF-8000 Interface Unit
- CH-250 Hull Unit
- CH-253 Transceiver Unit
- CSH-254 Hull Unit
- CSH-255 Hull Unit

## SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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