

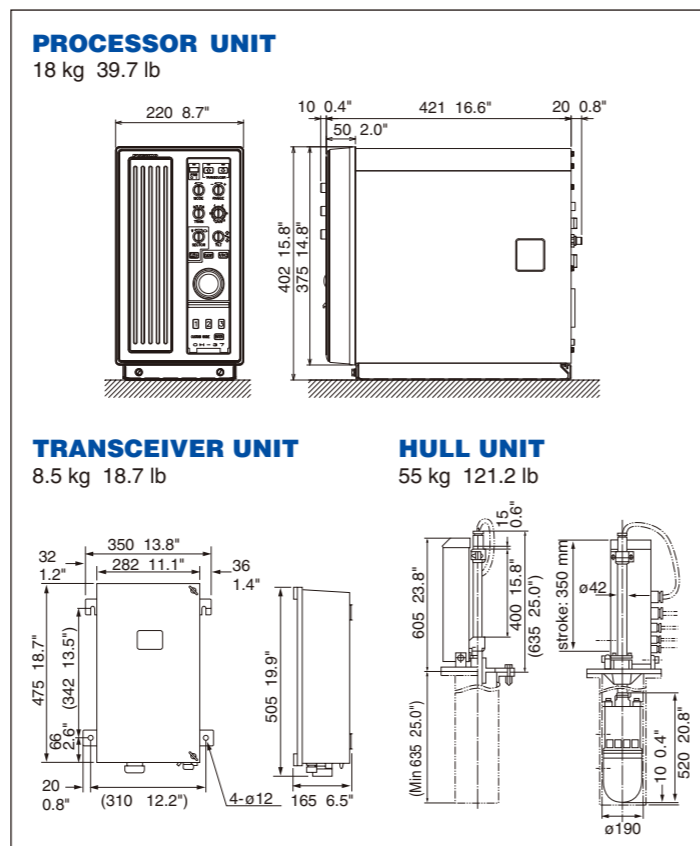
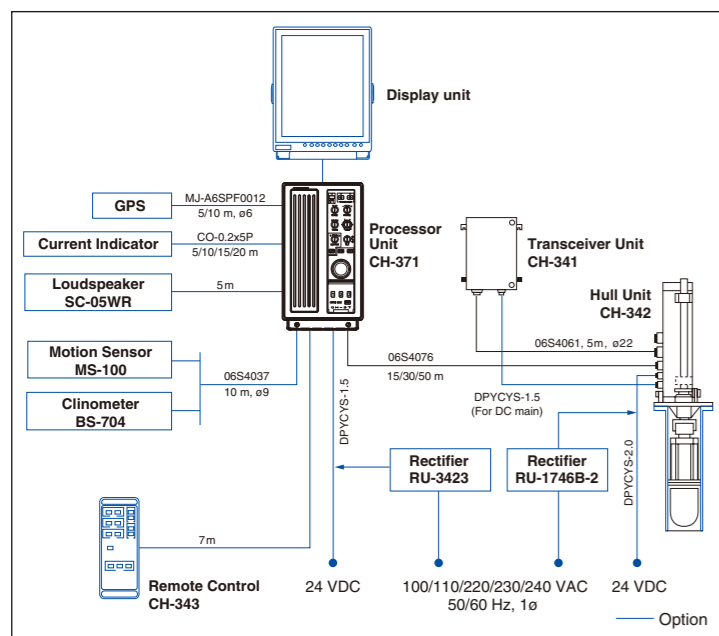
SPECIFICATIONS OF CH-37BB

- 1. **Display Colors** 8 or 16 colors
- 2. **Display Modes** Full-circle, Vertical-fan, 1.5x Zoom, 3D graphics, Dual
- 3. **Range Scales**
 Full-circle mode
 12 ranges from 30 to 1600 m (100 to 6000 ft, 20 to 1000 fa)
 Vertical-fan mode
 12 ranges from 10 to 1000 m (30 to 3000 ft, 10 to 500 fa)
- 4. **Frequency** 60, 113 or 162 kHz
 (Specify when ordering.)
- 5. **Output Power (Nominal)**
 60 kHz: 0.8 kW, 113 kHz: 1.3 kW, 162 kHz: 1.5 kW
- 6. **Pulse length**
 0.2 to 10.6 ms interlocked with range in use
- 7. **Transducer Control**
 Full-circle mode
 Training: 45° or 6° steps through 360°
 (Scanning sector 45°, 90°, 135°, 180° or 225°. Sector center can be set in any direction in 15° steps.)
 Tilt angle: +5° to -90° in 1° steps manually
 Vertical-fan mode
 Vertical scan: 6° or 3° steps (Scanning sector selectable from 36°, 60°, 96°, 120°, 156° and 180°. Sector center can be set between 0° and 180° in 6° steps.)
 Training: 6° steps manually or 15° steps automatically
- 8. **Ship Speed for Hull Unit**
 15 knots max.
- 9. **Ambient Temperature**
 0°C to 50°C

- 10. **Input/Output Data**
 Input: NMEA0183 \$--GLL, \$--DBT, \$--RMB, \$--RMC
 Output: RGB video in XGA/SXGA format
- 11. **Power Supply**
 24 VDC: 16.5 A
 (340 W when lowering or raising transducer)
 100/110/115/200/220/240 VAC, 50-60 Hz with 2 x Rectifier

EQUIPMENT LIST

- Standard**
- 1. Processor unit CH-371 1 unit
 - 2. Transceiver unit CH-341 (Specify 60, 113 or 162 kHz.) 1 unit
 - 3. Hull unit CH-342 (Specify shaft length: 1.17, 2.2 or 3.8 m.) 1 unit
 - 4. Installation materials and standard spare parts 1 set
- Option**
- 1. Marine display MU-190V
 - 2. Motion sensor MS-100
 - 3. Clinometer BS-704
 - 4. Remote control CH-343
 - 5. Rectifier RU-1746B-2 and RU-3423 for 110/220 VAC mains
 - 6. Loudspeaker SC-05WR
 - 7. Steel or FRP transducer tank (Specify 1, 1.8 or 3.5 m)



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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COLOR SECTOR SCANNING SONAR

Model

CH-37BB

Full-circle and vertical-fan scanning with 3D bottom imaging
 Available in 60, 113 or 162 kHz

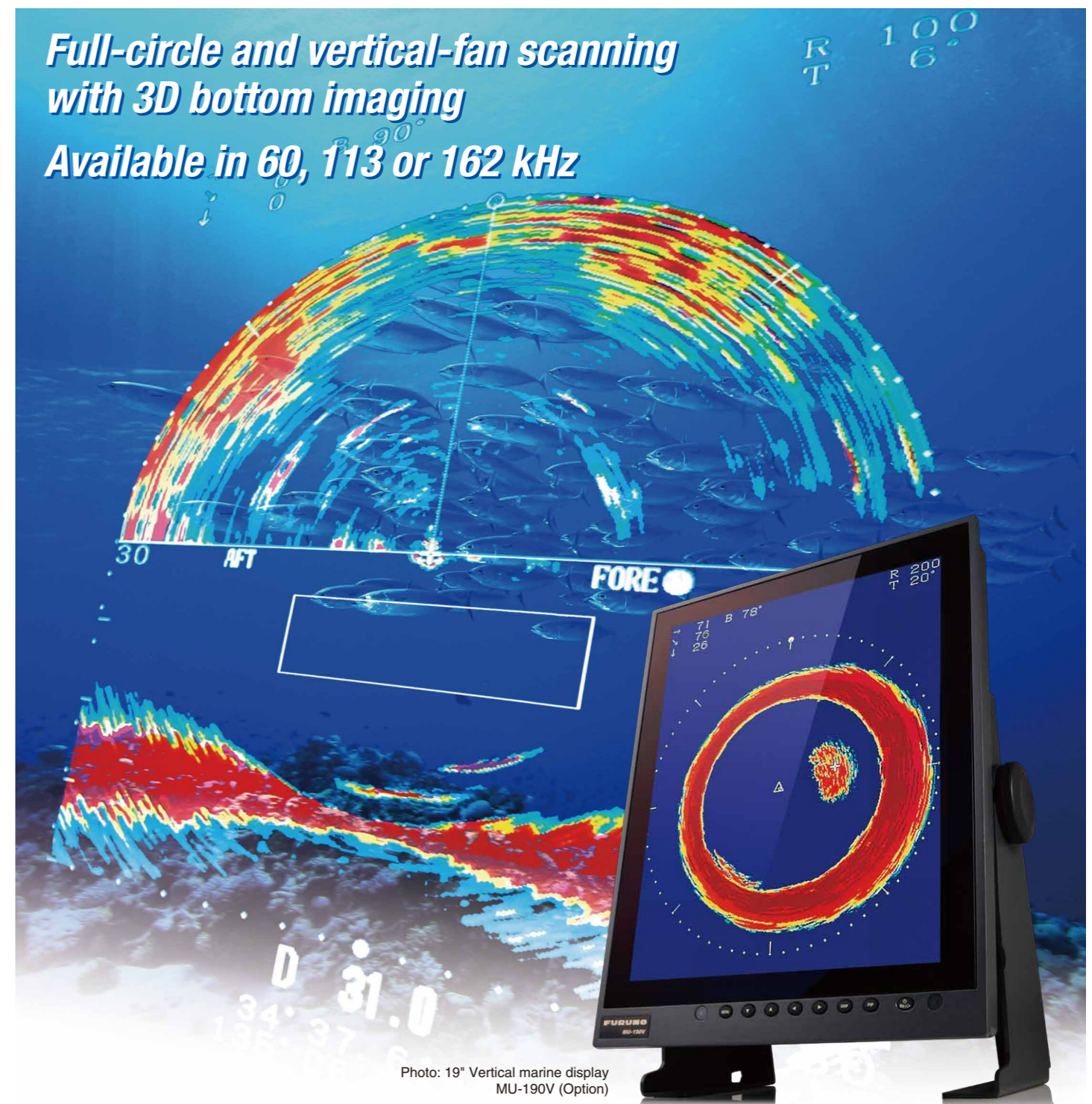


Photo: 19" Vertical marine display MU-190V (Option)

High-speed multi-sector scanning and variety of presentation mode

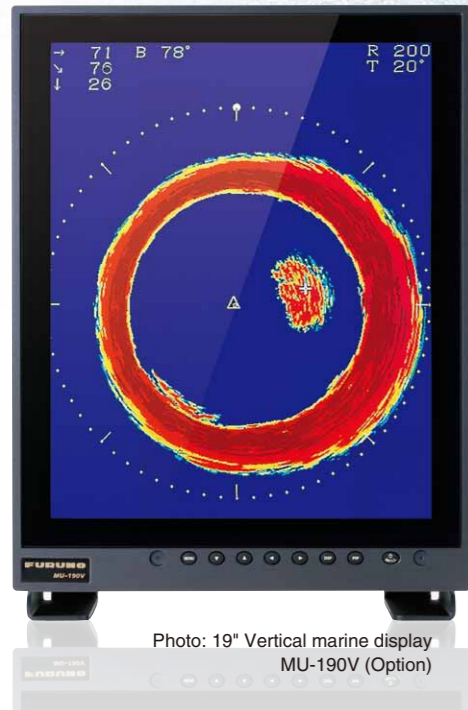


Photo: 19" Vertical marine display MU-190V (Option)



The Model CH-37BB is a high-performance color sonar suited for bottom trawlers, tuna seiners and other fishing vessels. Based on FURUNO's exclusive multi-sector beam-forming technology, it provides the combined advantages of searchlight and omni-directional sonars at a reduced cost.

The CH-37BB shows vivid and clear underwater images in five display modes—Full-circle, Vertical-fan, Semi-circle and Vertical-fan, 1.5x Zoom and 3D graphics.

- | | |
|--|---|
| 1 POWER (ON/OFF) | 6 GAIN |
| 2 TRANSDUCER (RAISE/LOWER) | 7 SECTOR/FULL CIRCLE/HALF CIRCLE |
| 3 MODE:
Selects display mode:
Normal (+E/S)/Expand/Vertical Fan (+E/S)
3D (Fore-aft perspective)/
3D (Oblique perspective) | 8 TILT |
| 4 RANGE | 9 EVENT MARK |
| 5 TRAIN | 10 RANGE/BEARING MARKER |
| | 11 TRACKBALL |
| | 12 CUSTOM MODE:
Provides optimized user-defined sonar settings by a simple key operation |

COLOR SECTOR SCANNING SONAR

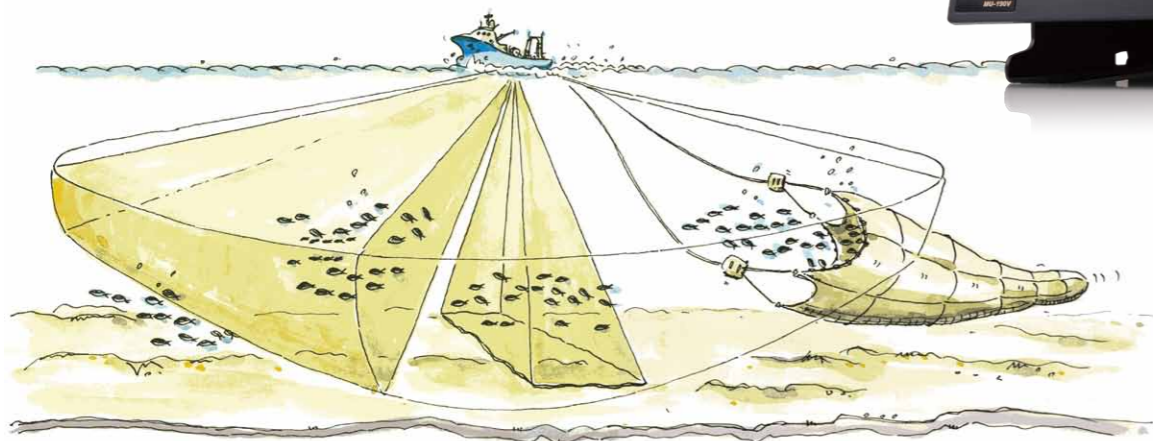
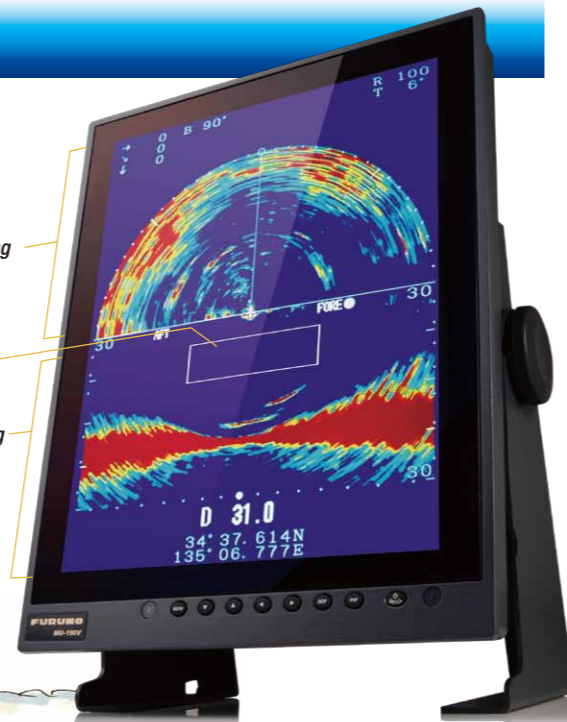
Model **CH-37BB**

- ▶ Full-circle, sector or vertical-fan scanning display modes
- ▶ Historical seabed image using unique 3D graphics processor
- ▶ Choice of 60, 113 or 162 kHz
- ▶ Normal or fast scanning
- ▶ 8- or 16-color presentation
- ▶ Displays ship's position, heading, intended course line, and water currents when interfaced with appropriate sensors
- ▶ One-touch selection of optimum sonar settings with user-programmable "custom" function keys
- ▶ The optional MS-100 motion sensor electronically stabilizes the sounding beam for up to 20° roll/pitch for a steady picture presentation.
- ▶ The dual mode for easy evaluation of distribution of fish school at vertical/horizontal planes

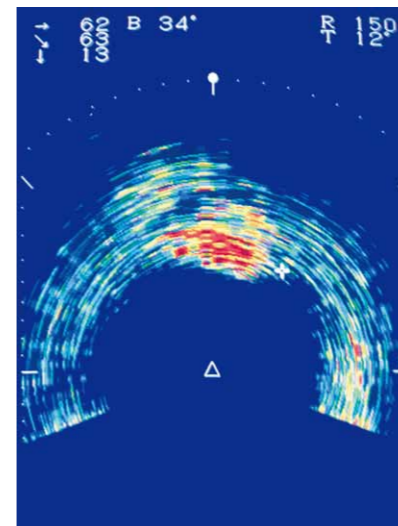
Dual mode useful for trawlers

Full-circle scanning (with the capability of scanning a user-specified sector area in a reduced time) presents a picture like a scanning sonar with adjustable tilt for rapid location and tracking of fish targets. Vertical-fan scanning uses a fan-shaped sounding beam directed downward with up to 180° vertical sector coverage presenting an echosounder-like cross section of the underwater situation. The Vertical-fan mode greatly supports your fish-finding operation. It is also useful for monitoring the net shape and for bottom fish detection. The Dual mode shows the vertical and horizontal presentation on the same screen. It is useful to evaluate the distribution of fish school in horizontal and vertical planes. A TNM (Trawl Net Mark) can be displayed at vertical plane on the vertical-fan scanning and dual modes. By inputting net height and width dimensions, the operator can overlay the net mouth opening.

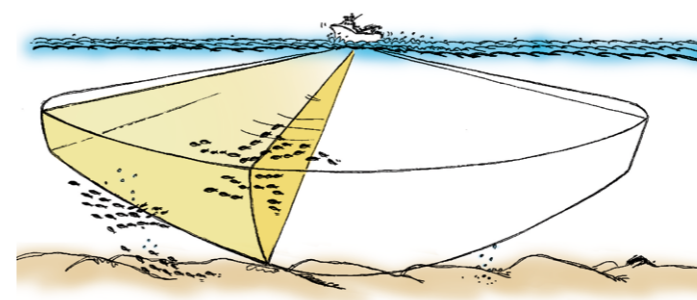
Semi-circle scanning window
TNM (Trawl Net Mark)
Vertical-fan scanning window



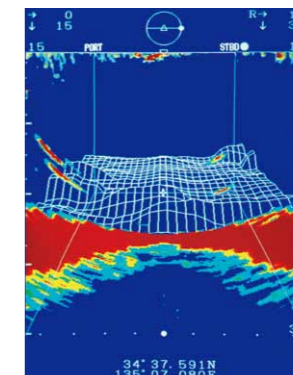
Horizontal scan (1.5x Zoom)



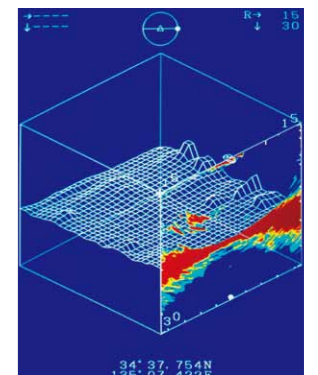
The Zoom mode shows close-up target echoes.



Vertical-fan scan with 3D graphics overlay useful for trawlers



Fore-aft perspective



Oblique perspective

(Sounding beam directed from starboard to port.)

The 3D graphics mode shows a frontal or oblique perspective of the seabed, viewed aft from the vessel. The vertical fan beam fixed in the athwartship direction is used to provide the 3D bottom image. The 3D image is overlaid with realtime fish and bottom echoes. This mode is particularly useful for bottom trawlers.

