

COLOR SCANNING SONAR

Model CSH-53

- Instantaneous fish detection by using 360° omni-directed transmission
- Simplified detection and analysis of distribution patterns of targeted fish schools
- Easy to see 15-inch, 16-color, high-resolution CRT display
- Choice of either 28 or 50 kHz operating frequency
- Power Boost function for enhanced target detection
- Several unique features: Target Lock, Off-Center, Net Shooting Mark, Event Mark, and Estimate Marks

The FURUNO CSH-53 is a new Color Scanning Sonar primarily designed for purse seiners and trawlers. It instantly displays the underwater situation for 360 degrees all around your vessel. The high-resolution 15-inch, 16-color display clearly shows all fish and fish schools present in the vessels immediate area.

There are three basic display modes: Full-Circle Sonar, Sounder/Sonar combination and Sonar/Historical display. Other unique operating features include True Motion, Automatic Tilt Scanning, Audio Search, Off-center, Target Lock and Estimate Marks. Echoes within an Estimate Mark are presented in a zoomed window along with a histogram showing the strength of the echo components. This graphically helps to assess the density of the targeted fish school.



Two Estimate Marks can be entered, which allows the comparison of up to two fish schools. Use of this feature is very helpful in determining which fish school should be targeted and caught.

In addition, the CSH-53 has two unique transceiver functions: BOOST and NARROW. Power BOOST helps detect fish over longer ranges while the NARROW transducer beam angle reduces surface and bottom returns again to enhance fish detection. Each of the two functions has its own front panel switch for ease of operation.

External sensors providing vessel position, heading, speed depth and water temperature may be input. The CSH-53 will then display vessel position, speed, heading, course, depth, surface water temperature as well as operate in its innovative True Motion mode.





SPECIFICATIONS OF CSH-53

1. Display

High-resolution 15-inch CRT, 640 (H) x 480 (V) dots

2. Presentation Color

Echoes in 16 colors, Marks in 4 colors

3. Frequency

28 or 50 kHz (specify when ordering)

4. Presentation Modes

Full-circle, Full-circle+E/S combination, and Full-circle+ Historical Display in Head-up, North-up* and True Motion* *Appropriate sensors required

5. Range Scales

50 kHz model: 75 - 2,000 m (3,200 m in Off-center) 28 kHz model: 75 - 3,000 m (4,800 m in Off-center)

6. Pulselength

Pulselength: 0.5 to 20 ms (depending on range scales)

7. Beamwidth (at -6 dB)

50 KHz	28 kHz
TX: 360° (hor) x 13° - 16° (ver)	360° x 21° - 25°
RX: 16° - 22° (hor) x 13° - 18° (ver)	25° - 23°

8. Tilt

Manual control: -5° to 60° (downward) in 1° steps Automatic tilt scan: 2° steps

9. Hull Unit

Travel:	800 mm	1200 mm
Raising Time:	16 seconds	22 seconds
Lowering Time:	15 seconds	20 seconds
Ship Speed:	18 knots	18 knots
(Raise/Lower):	(15 knots)	(15 knots)

10. Audio Search

30°, 60°, 90°, 180°, 330°

Audio Output: 2 W, Frequency: 1.1 kHz

POWER SUPPLY

- 100 VAC, 50/60 Hz, 1ø, 500 VA (1 kVA max)
- 115/230 VAC with optional stepdown transformer PT-400
- 24/32 VDC with optional DC-AC inverters TR-2435 and TR-24100

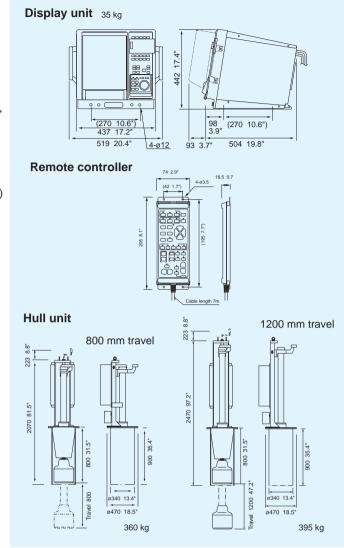
EQUIPMENT LIST (specify 28 or 50 kHz)

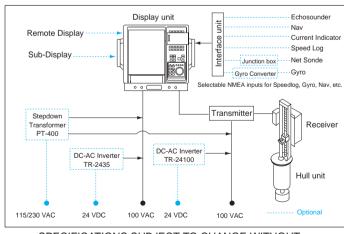
Standard

- 1. Display Unit CSH-530
- 2. Transmitter Unit CSH-551
- 3. Receiver Unit CSH-552
- Hull Unit (specify when ordering) CSH-5508F (800 mm travel) CSH-5512 (1200 mm travel)
- 5. Remote Controller CSH-135
- 6. Interface Unit CS-120A
- 7. Installation materials and spare parts

Optional

- 1. DC-AC Inverter TR-2435 and TR-24100 for 24 VDC
- 2. Stepdown Transformer PT-400
- 3. Net Sonde Interface CS-170
- 4. Echo Sounder Interface VI-1100A
- 5. Sub-Display Unit CSH-536
- 6. Remote Display Unit CSH-106
- 7. Gyro Converter AD-100
- 8. Hand Grip





SPECIFICATIONS SUBJECT TO CHANGE WITHOUT

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