

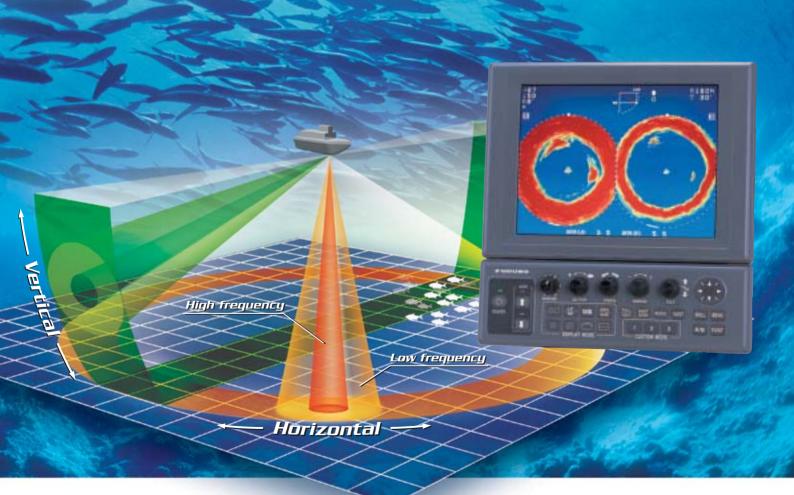
FURUNO®

10.4" Color TFT LCD and Black Box Configurations

DUAL FREQUENCY SEARCHLIGHT SONAR Model CH-300

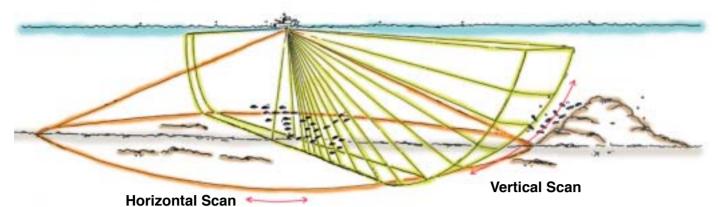
- Incorporates both a low and a high frequency (60/153 or 85/215 kHz) transducer in one soundome
- BlackBox system configuration allows use of FURUNO or commercial monitors
- CUSTOM MODE keys provide onetouch setup or short-cut key function
- Variety of display modes: Horizontal and Vertical scan, Mix, Echo sounder

- Compact hull unit for space saving installation (select from 250 or 400 mm travel)
- Pulse length automatically switched according to range selected, to optimize performance
- Target lock tracks selected fish schools or L/L position
- Multi language menu: English, Spanish, Danish, Portuguese, French, Norwegian, Italian, Swedish and Thai









The world's first dual-frequency searchlight sonar CH-300 is designed for a wide range of commercial or sport fishing vessels. Its operating frequency can be selected from either 60/153 or 85/215 kHz, and the transducers are incorporated in one soundome. The high frequency of, 153 and 215 kHz, gives a highly detailed search near and all around the vessel. The lower frequency, 60 and 85 kHz, enables longrange searches of over 500 m. With advantages of both high and low frequency, the CH-300 helps to search on a rough seabed and to greatly enhance fish school detection.

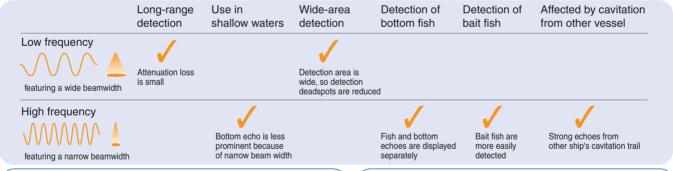
A variety of presentation modes are available: horizontal and vertical scan, echo sounder and the combination mode displaying horizontal and vertical scan/historical/plotter presentations. The combination of horizontal and vertical scan helps evaluate the distribution of fish schools in both the horizontal and vertical planes simultaneously.

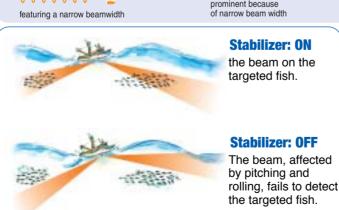
The CH-300's unique mix mode uses the frequency characteristic that "high frequency beams receive stronger echoes from tiny fish, compared with low

frequency". By comparing the returned echo intensity of both frequencies, this mode picks out the echoes of tiny fish and displays them in discriminative colors. Other echoes are displayed in the weakest color. This helps to discriminate tiny fish such as small bait fish from other fish.

The CH-300 provides two target lock modes to track a fish echo and stationary position such as a fish shelter or reef. Target Lock automatically tracks the chosen fish school. In Position Track, the beam is locked onto the L/L position specified by the target marker.

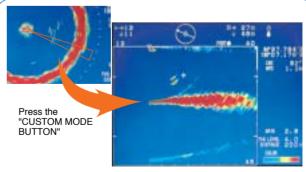
Standard package consists of a 10.4" LCD, control, transceiver and compact hull units. This separated system configuration provides a flexible and space-saving installation. A BlackBox configuration (without monitor) is also available. The hull unit, whose travel or stroke can be selected at either 250 mm or 400 mm, will fit any boat where a 190 mm (7.5") internal diameter hull tube is available. Also, a previously installed CH-250 can be changed to the CH-300 without dry-docking since both models use the same size hull unit.





Beam stabilization

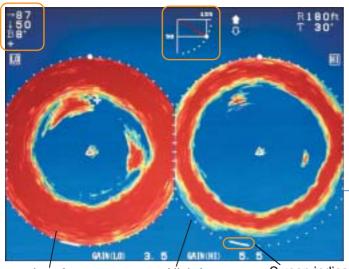
Even in rough seas, the sonar beam is kept at the required tilt angle by using ship's pitch and roll information. The CH-300 can obtain this information from a satellite compass (SC-50/110). The motion sensor MS-100 or clinometer BS-704 can also be interfaced.



Cross section scan

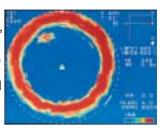
The CH-300 has a "Cross Section Scan" function. It allows you to instantly view the vertical plane in a specific direction by pressing the "CUSTOM MODE BUTTON". It is useful for evaluating the concentration and location of the targeted fish school as well as for navigation purposes.

Compact soundome contains a dual-frequency transducer. See fish targets you have never seen before!



Horizontal scan

The horizontal scan helps detect fish schools at any tilt, all around the vessel. In the dual-frequency presentation. any two presentations from high/low frequency scan and the mix mode can be displayed. Gain of each mode can be adjusted separately.





Cursor position data : Horizontal range

. Depth B: Bearing



Tilt angle indicator

- 1: Horizontal max. range
- 2: Vertical max. depth 3. Tilt angle

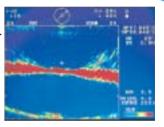
- Low frequency
- High frequency

Sweep indicator (Shows train position)

2 5 4 5 4 0 660n AUNCHD VG LEVEL

Vertical scan

The vertical scan paints the bottom profile within a userspecified vertical plane in any direction. In the the dual-frequency presentation, the vertical scan mode shows any two of high/low frequency scan



and the mix mode. The slant range and sonar dome tilt are graphically shown by a cursor indicator.



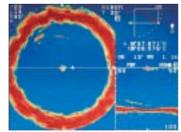
Nav data (Requires appropriate sensor)

- ·Position in latitude, longitude
- Course Sneed

- Echo settings
- ·Gain setting
- Distance settings

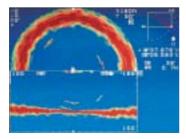
Horizontal with vertical scan

Low frequency



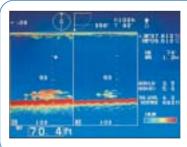
High frequency

Half-circle horizontal with vertical scan



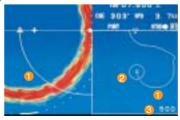
Combination of horizontal with vertical scan

A unique feature of this sonar is a mode integrating the two images above. This sonar image can be switched between full and half circle with vertical scan.



Echo sounder

The transducer tilted down at 90 degrees can sound fish schools and seabed straight down like a fish finder. This mode is available when the soundome is retracted into the tank.



Horizontal scan with VideoPlotter

Own ship track is displayed on the sonar image, which is ideal for purse seining or bottom trawling.

VideoPlotter display(sub window)

- 1 Track
- 2: Sonar range marker
- (Radius changes with video plotter range)
- 3: Scale

SPECIFICATIONS OF CH-300

Display Unit

10.4" TFT color LCD Standard:

FURUNO 15" LCD MU-151C/155C and BlackBox 12.1" LCD MU-120C, recommended

or commercial monitor (640 x 480 pixels)

Color

Echo: 16 or 8 colors (echo)

3 colors selected (user setting available) Background:

Display Mode

Horizontal scan (Normal/Expanded), Vertical scan, Mix, Echo sounder

Combination Display Plotter, Vertical scan, History

External Data Indication

L/L, Depth, Course, Ship's speed, Water current vector, Track, Water temperature (External IEC 61162 data required)

Audio Monitor 1000 Hz 7. **TX Output Power** 1 kW

60/153 or 85/215 kHz Frequencies

Beamwidth (at -3 dB)

16°/7° (Hor), 14°/5° (Ver) 11°/5° (Hor), 10°/4° (Ver) 60/153 kHz: 85/215 kHz:

10. Transducer Control

0° to -180° at 3° or 6° steps (Ver) +5° to -90° at 1° steps (Hor)

Training Sector: Manual or automatic training at 6° or 12° steps in search sector 6° to 360°

Target Lock: By L/L, Echo position

11. Range scales (Feet, Fathom, Passi/Braza can be selected) 15 ranges customized between 10 to 1600 m Horizontal: Vertical: 15 ranges customized between 10 to 600 m

12. Interface (NMEA 0183 Ver 1.5, 2.0, IEC 61162-1) Input: DBS, DBT, DPT, GGA, GLL, HDG, HDM, HDT, MDA, MTW, RMA, RMC, VDR, VHW,

VTG. att Output:

13. Language

English, Spanish, Danish, Portuguese, French, Norwegian, Italian, Swedish, Thai

POWER SUPPLY

Transceiver Unit: 12-24 VDC; 7.0-3.5 A

Hull Unit: 12/24 VDC; 4.7/2.3 A, 16.7/8.2 A* *While raising/lowering transducer

ENVIRONMENT

Temperature

Display, Transceiver Unit: -15°C to +55°C Hull Unit: 0°C to +35°C

Waterproofing

Display Unit: Hull Unit: **IEC IPX5** IEC IPX2

EQUIPMENT LIST

Standard

1. Display Unit MU-100C (Not included in BlackBox) 1 unit Control Unit CH-302 1 unit 3. Transceiver Unit CH-303 1 unit 4. Hull Unit 1 unit

CH-304 (travel 400 mm) or CH-305 (travel 250 mm) 5. Interface Unit IF-8000 (BlackBox only)

1 unit 6. Installation Materials and Spare Parts 1 set

Option

- Remote Controller CH-256-E
- Rectifier RU-1746B-2
- Loudspeaker SC-05WR, Horn

Transducer Tank

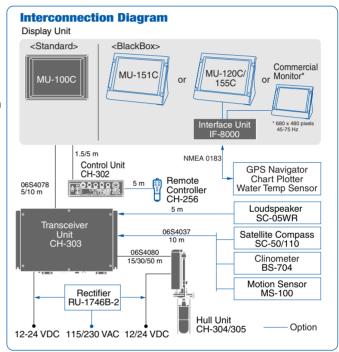
Steel: 1, 1.8, 3.5 m; FRP: 1, 1.8 m; Aluminum: 1 m

NMEA Cable

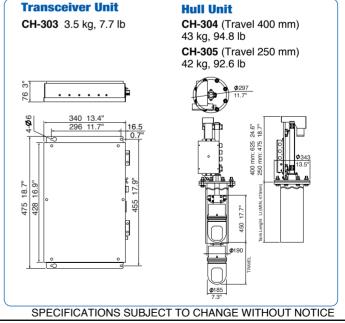
6P-6P: 5 m (MJ-A6SPF0012-050), 10 m (MJ-A6SPF0012-100) 6P-4P: 5 m (MJ-A6SPF0011-050), 10 m (MJ-A6SPF0011-100)

Motion Sensor MS-100

- Clinometer BS-704
- Interface Unit IF-8000



Display and Control Unit MU-100C and CH-302 5.7 kg, 12.6 lb 8.3" 11.8 210 300 357 327 169 6.7 206 8.1" 320 12.6" Flush mount type 153 6.0" _l_ 153 6.0" 4.2 kg, 9.3 lb 13.2" 12.6" 334 320 6-¢7 **FURUNO ESPAÑA S.A.**



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