COLOR SECTOR SCANNING SONAR
Model CH-37

Full-circle and vertical-fan scanning with 3D bottom imaging on 15" daylight-viewing high-definition CRT

Available in 60, 113 or 162 kHz
High-speed multi-sector scanning and variety of presentation mode

TRANSDUCER (RAISE/LOWER)
POWER (ON/OFF)
RANGE
MODE: Selects display mode; Normal(+E/S)/Expand/Vertical Fan(+E/S)
3D (Fore- aft perspective)/3D (Oblique perspective)
GAIN
TRAIN
TILT
SECTOR/FULL CIRCLE/HALF CIRCLE
RANGE/BEARING MARKER
EVENT MARK
TRACKBALL

CUSTOM MODE: Provides optimized user-defined sonar settings by a simple key operation

Dual mode useful for trawlers

Semi-circle scanning window
Vertical-fan scanning window

TNM (Trawl Net Mark)
The Model CH-37 is a new 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-37 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—on a new 15-inch color screen.

**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. The **Zoom mode** shows close-up target echoes.

**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.

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 real-time fish and bottom echoes. This mode is particularly useful for bottom trawlers.
1. Display Presentation
   15” color CRT,
   640(V) x 480(H) pixels (VGA)

2. Display Colors
   8 or 16 colors

3. Display Modes
   Full-circle, Vertical-fan, 1.5x Zoom,
   3D graphics, Dual

4. 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)

5. Frequency
   60, 113 or 162 kHz
   ( Specify when ordering. )

6. Output Power (Nominal)
   60 kHz: 0.8 kW
   113 kHz: 1.3 kW
   162 kHz: 1.5 kW

7. Pulse length
   0.2 to 10.6 ms interlocked with range in use

8. 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

9. Ship Speed for Hull Unit
   15 knots max.

10. Ambient Temperature (IEC60945 test method)
    -15°C to +55°C (Display unit)
    -5°C to +30°C (Electronics unit)

11. Input/Output Data
    Input: NMEA0183 $--GLL, $--DBT, $--RMB, $--RMC
    Output: RGB video in VGA format (optional interface required)

12. Power Supply
    24 VDC: 13.0 A
    32 VDC: 10.5 A
    (340 W when lowering or raising transducer)
    115/230 VAC, 50-60 Hz with 2 x Rectifier RU-1746B-2

EQUIPMENT LIST

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<tr>
<td>Transceiver unit CH-341</td>
<td>1 unit</td>
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<tr>
<td>Hull unit CH-342</td>
<td>1 unit</td>
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<tr>
<td>Interconnection cable (display-hull unit)</td>
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<td>Remote controller CH-343</td>
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<td>Rectifier RU-1746B-2 for 115/230 VAC mains</td>
<td>2 units</td>
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<td>E/S interface VI-1100A</td>
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<td>E/S buffer board (built-in type) OP06-13</td>
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<td>Handgrips for display unit OP03-70</td>
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<td>Loudspeaker SC-05WR</td>
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<td>Interface kit for connection of VGA monitor</td>
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SPECIFICATIONS OF CH-37

- **Loudspeaker**
  - SC-05WR

- **Transceiver Unit**
  - CH-341

- **Display Unit**
  - CH-370
  - 5m: 06S4037
  - 10m: 06S4076

- **Hull Unit**
  - CH-342

- **Motion Sensor**
  - MS-100

- **E/S Interface**
  - VI-1100A

- **Remote Controller**
  - CH-343

- **Rectifier**
  - RU-1746B-2

- **Transducer Unit**
  - DPYCYS-1.25 (For DC main)
  - DPYCYS-2.0

- **Options**
  - 24/32 VDC
  - 115/230 VAC
  - E/S Interface VI-1100A
  - Handgrips for display unit OP03-70
  - Loudspeaker SC-05WR

- **Steel or FRP transducer tank**
  - Specify 1, 1.8 or 3.5 m

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

**Display Unit**
- 30 kg 66.1 lb

**Transceiver Unit**
- 8.5 kg 18.7 lb

**Hull Unit**
- 55 kg 121.2 lb

**Display Specifications**
- 30 kg 66.1 lb

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- 8.5 kg 18.7 lb

**Hull Specifications**
- 55 kg 121.2 lb

**Power Supply**
- 24 VDC: 13.0 A
- 32 VDC: 10.5 A
- (340 W when lowering or raising transducer)
- 115/230 VAC, 50-60 Hz with 2 x Rectifier RU-1746B-2

**Equipment List**

- Display unit CH-370
- Transceiver unit CH-341
- Hull unit CH-342
- Interconnection cable (display-hull unit)
- Installation materials and standard spare parts
- E/S interface VI-1100A
- E/S buffer board (built-in type) OP06-13
- Remote display interface OP06-14
- Handgrips for display unit OP03-70
- Loudspeaker SC-05WR
- Steel or FRP transducer tank
- Interface kit for connection of VGA monitor