

# FURUNO

## 10.4" COLOR LCD DISPLAY SEARCHLIGHT SONAR Model CH-270

- High definition 10.4" color LCD display
- Instant selection of eight modes for efficient fishing and navigation
- User-friendly customizable menu
- Motion Sensor ensures clear images in rough seas (optional)
- Black Box configuration available
- Multi language menu; English, Spanish, Danish, Portuguese, French, Norwegian, Italian, Swedish, Thai, Chinese, Japanese and Vietnamese.
- Low-profile hull unit for space saving installation (select from 250 or 350 mm travel)
- Small 147 mm ID hull tube used
- Cross Section Scan for instant vertical observation
- Target Lock function automatically tracks targeted fish school
- Audible target detection frees operator from continuous watch (optional loudspeaker required)
- Intuitive depth and range readouts with two-axis index line



 **Mackay**

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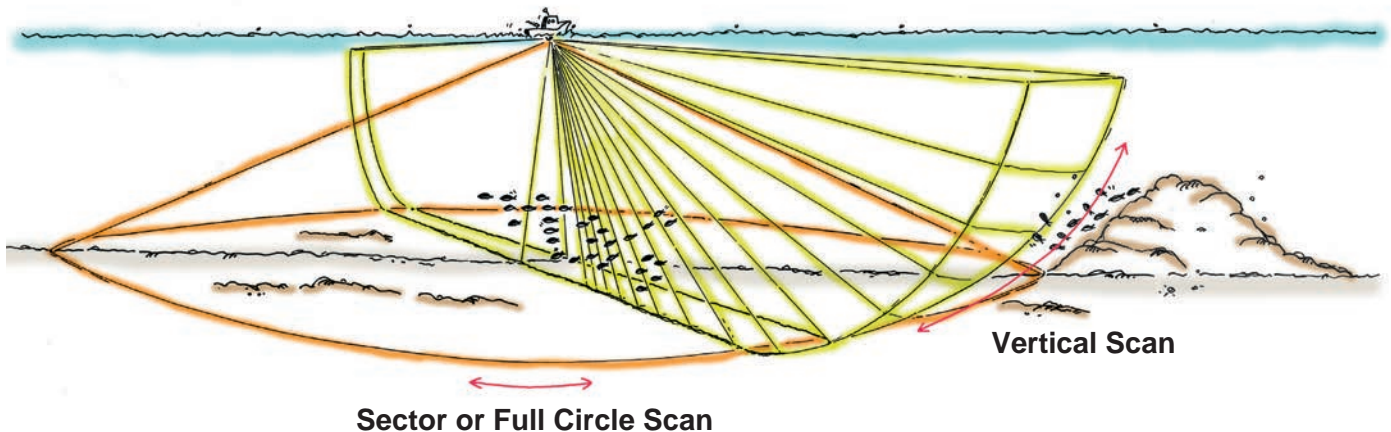
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# A remarkably compact hull unit that can scan all around the vessel in specified sectors, bearings and tilt angles



The CH-270 is a sophisticated new searchlight sonar designed for small fishing vessels and pleasure craft. Individual fish, fish schools and underwater objects are displayed on a 10.4" color LCD. The echoes are displayed in 8 or 16 colors according to received echo strength; the strongest echoes are red and the weakest are blue. One echo can be displayed in white so that a specific echo level is highlighted. The background color is also selectable for optimal day and night viewability.

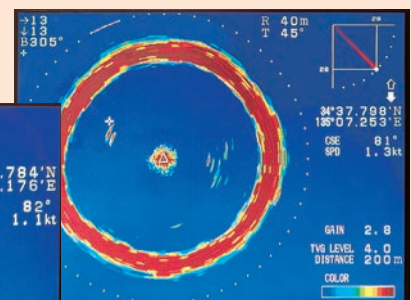
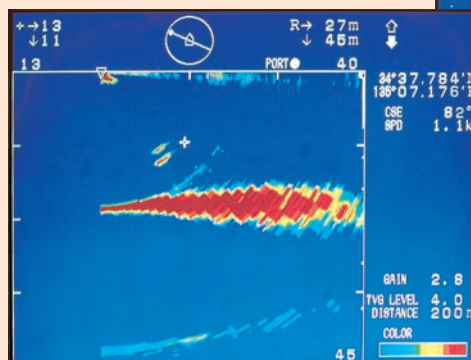
There are eight display modes: full circle scan, zoom, vertical scan, vertical sounder, combination of full or half circle with vertical scan, full circle with history, full circle with strata and full circle with VideoPlotter. In the vertical scan mode, you can view the vertical plane in any direction around the vessel. The CH-270 features a unique "Cross Section Scan" to view the vertical plane. When you find a specific echo in the full circle scan mode, just push the appropriate "CUSTOM MODE BUTTON" and the cross section scan window appears.

The CH-270 provides two modes for tracking a target echo: target lock mode and L/L mode. . The target lock mode permits automatic tracking of targeted fish schools within a predetermined search zone after it has been manually acquired. In the L/L mode, the beam is locked to a position chosen with the target marker (such as a fish shelter or reef). This mode can be enhanced with more accurate position input such as DGPS or WAAS.

The CH-270 consists of a 10.4" LCD display unit, transceiver unit and low-profile hull unit. This 3-unit configuration provides a space-saving installation. A Black Box configuration (without monitor) is also available. The hull unit will fit any boat where a 147 mm (6") hull tube is available. Previously installed CH-18 or 28's can be upgraded to a CH-270 without drydocking since the hull unit is the same.

## CROSS SECTION SCAN

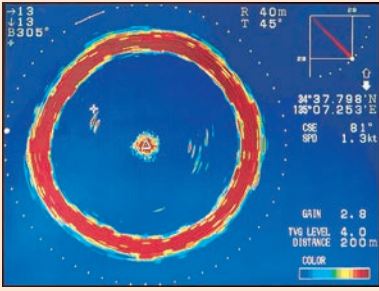
The CH-270 has a new unique "Cross Section Scan" mode. You can instantly view the vertical plane in a specified direction by pressing the "CUSTOM MODE BUTTON". This mode is useful for evaluating the concentration and location of target fish schools or for navigational purposes.



Press the "CUSTOM MODE BUTTON"

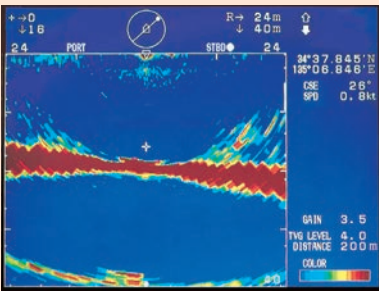


## FULL CIRCLE SCAN



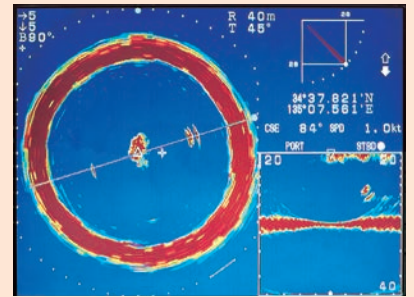
The full circle scan helps to detect fish schools at any bearing around the vessel.

## VERTICAL SCAN

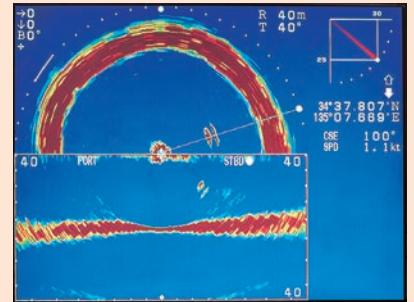


The vertical scan displays the bottom profile within a user-specified vertical plane. The cursor indicator shows range and transducer tilt.

## Combination of FULL/HALF CIRCLE with VERTICAL SCAN



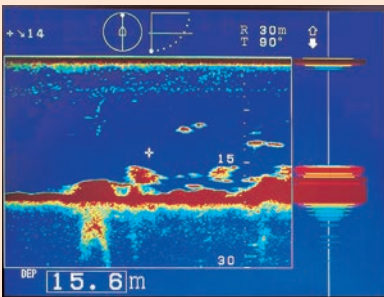
Combination of FULL CIRCLE with VERTICAL SCAN



Combination of HALF CIRCLE with VERTICAL SCAN

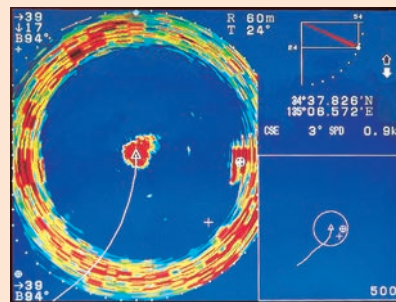
One unique feature of this sonar is the mode combining full and half circle scan with vertical scan.

## VERTICAL SOUNDER



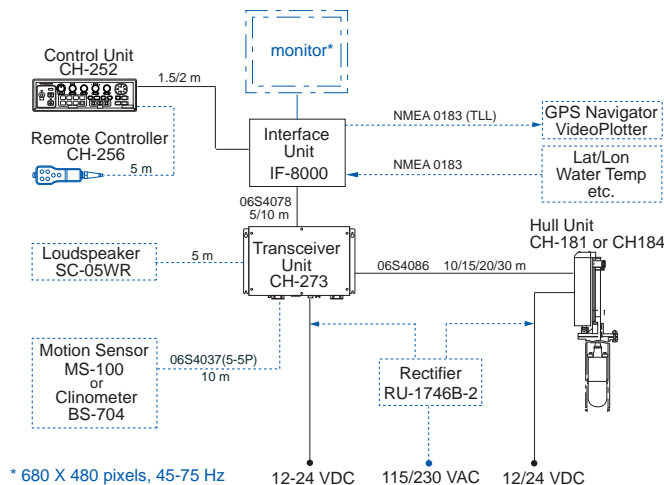
When fully retracted, the transducer tilted to 90 degrees can display fish schools and seabed straight down at high speeds.

## FULL CIRCLE with VideoPlotter

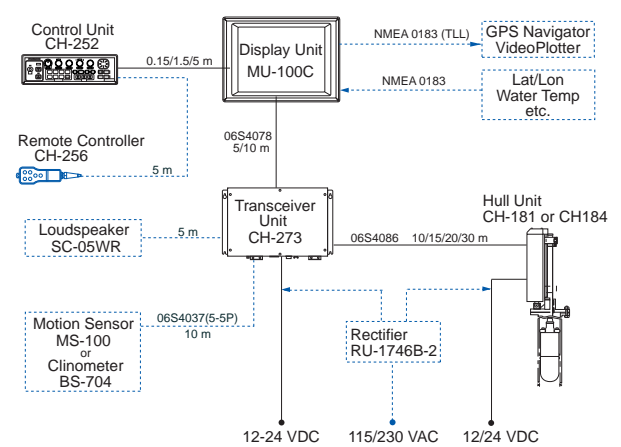


The own ship track can be displayed when a GPS unit is attached. An unrivaled feature for purse seining and bottom trawling.

## Interconnection Diagram



**Black Box configuration (with custom monitor)**



**Standard configuration (with MU-100C LCD monitor)**

-- Option  
 — Procured locally

# SPECIFICATIONS OF CH-270

## 1. Range scales and Time to train (the default setting at full circle scan mode)

Range	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Meters	10	20	40	60	80	100	120	160	200	250	300	400	500	600	800
Feet	40	80	120	200	300	400	500	600	700	800	1000	1200	1500	2000	2500
Fathoms	10	20	30	40	60	80	100	120	140	160	200	250	300	400	500
P/B	10	20	30	40	60	80	100	120	140	160	200	250	300	400	600
Time to train full circle (s) (Fast scan/Normal scan)	11	11	11	11	11	11	11	13/14	14/17	16/21	18/25	22/33	26/41	30/49	38/65

Maximum scale depends on the display modes. 1600 m (full circle scan), 600 m (vertical scan).

- 2. **Display Unit** 10.4" TFT color LCD (VGA: 640 x 480 pixels)
- 3. **Color** 8 or 16 colors
- 4. **Display Mode**
  - (1) Full Circle scan (2) Zoom(x 1.5) (3) Vertical scan
  - (4) Vertical Sounder (5) Full/Half Circle and Vertical scan
  - (6) Full Circle and History (7) Full Circle and Strata
  - (8) Full Circle and Video Plotter
- 5. **Audio monitor** 1000 Hz
- 6. **TX Output Power** 0.8 kW
- 7. **Frequency** 180 kHz
- 8. **Beamwidth** 8° conical (at -3 dB)
- 9. **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 6° to 360°
  - Target Lock: By L/L, Echo position or manual
- 10. **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 TLL
  - Output:
- 11. **Power Supply**
  - Transceiver Unit: 12-32 VDC: 4.7-1.8 A
  - Hull Unit: 12/24 VDC: 4.0/2.5 A (Max. 10/6 A)
- 12. **Language** English, Spanish, Danish, Portuguese, French Norwegian, Italian, Swedish, Thai, Japanese, Chinese and Vietnamese.

## EQUIPMENT LIST

### Standard

- 1. Display Unit MU-100C 1 unit
- 2. Control Unit CH-252 1 unit
- 3. Hull Unit CH-181 (travel 350 mm) or CH-184 (travel 250 mm) 1 unit
- 4. Transceiver Unit CH-273 1 unit
- 5. Installation Materials and Spare Parts 1 set
- 6. Interface Unit IF-8000 (BlackBox type only) 1 unit

### Option

- 1. Remote Controller CH-256
- 2. Rectifier RU-1746B-2
- 3. Loudspeaker SC-05WR, Horn
- 4. Transducer Tank
  - Steel, 6" schedule 80 pipe: 1, 1.8, 3.5 m
  - FRP, 147 mm ID: 1, 1.8 m
- 5. 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)
- 6. Motion Sensor MS-100 or Clinometer BS-704
- 7. Interface Unit IF-8000

## EMC AND ENVIRONMENT

### Temperature

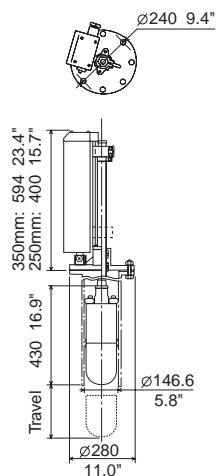
- Display Unit, Transceiver Unit: -15°C to +55°C
- Hull Unit: 0°C to +45°C

### Water resistance

- Display Unit: IEC IPX5

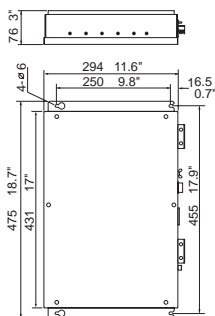
## HULL UNIT

- CH-181 (Travel 350 mm)**  
37 kg, 81.6 lb
- CH-184 (Travel 250 mm)**  
35 kg, 77.2 lb



## TRANSCIEVER UNIT

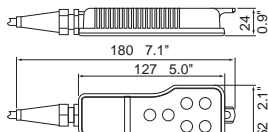
- CH-273** 3.5 kg, 7.8 lb



## REMOTE CONTROLLER

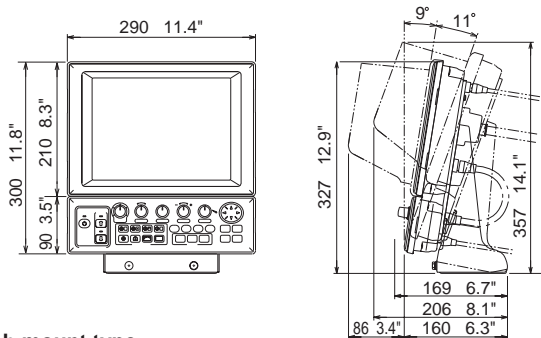
- CH-256**

- 0.3 kg
- 0.7 lb



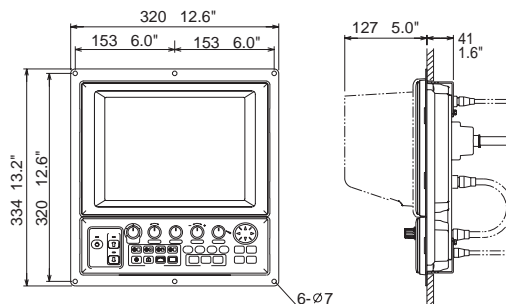
## DISPLAY UNIT and CONTROL UNIT MU-100C and CH-252

5.7 kg, 12.6 lb



### Flush mount type

4.2 kg, 9.3 lb



Beware of similar products

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE  
PLEASE READ MANUAL BEFORE USING THE UNIT

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