

# FURUNO

10.4" LCD, Compact and High accuracy

# DOPPLER SONAR CURRENT INDICATOR

Model **CI-88**



- Compact design and single-mold transducer for ease of installation and maintenance
- High definition 10.4" color LCD for displaying tide current detections
- Blackbox system configuration allows use of commercial VGA monitors
- Continuous display of tide speed and direction at the three selected depth layers
- Tide speed/direction and ship's track can be plotted on screen for larger area tide observation
- Triple-beam system for less error in tide current detection
- True tide current presentation with external GPS navigator and Gyrocompass inputs at deep water locations
- Water temperature graph helps locate current rip (Temperature sensor required)



The FURUNO CI-88 is a Doppler Sonar Current Indicator designed for every type of fishing vessels and hydrographic survey vessels. The high-definition 10.4" color LCD continuously presents tide speed and direction at three depth layers simultaneously in addition to ship's speed and drift. This variety of current information allows you to predict net shape and plan when to throw your net.

There are six presentation modes: tide vector, ship's speed, echo level, text, track and tide log. Mode selection is simple by pressing the dedicated button. Other menu settings are also easily made by using the cursor pad or rotary knob. The CI-88 features the unique, user customizable "function button" to shortcut menu operation. Once you have registered the often-used function, then just press the dedicated button and then the function window pops up.

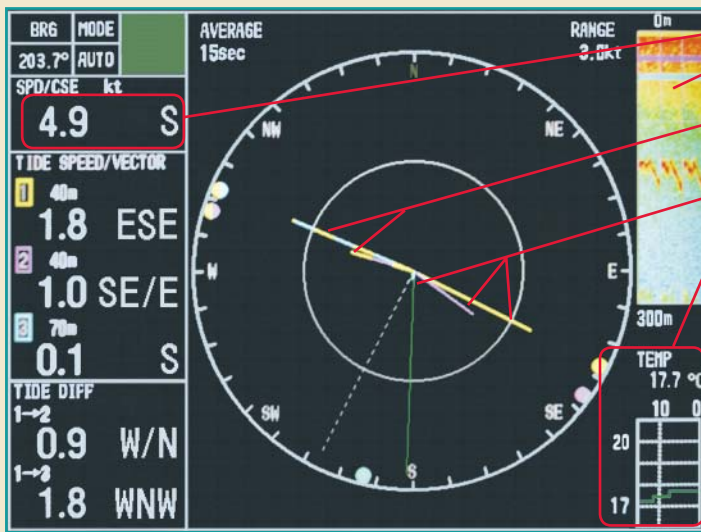
The CI-88 has a triple-beam emission system for providing highly accurate current measurement. This system greatly reduces the effects of rolling, pitching and heaving motions, providing a continuous display of tide information.

There are four modes for measurement: ground tracking, water tracking, NAV and Automatic. In the NAV mode, when ground (bottom) reference is not available acoustically in deep water, the CI-88 can provide true tide current information by receiving position data from a GPS navigator and heading data from a gyrocompass or a GPS compass.

The CI-88 consists of a display unit, a processor unit and a transducer. The control unit and display unit can be installed separately for flexible installation. A BlackBox configuration (without monitor) is also available.



# Increase your fishing efficiency by using highly accurate current information



- Ship's speed and course
- Echograms
- Tide vectors for tide differences Layer 1 and 2
- Layer 1 and 3
- Tide vectors for speed and direction Layer 1, 2 and 3
- Water temperature (external temp. sensor required)

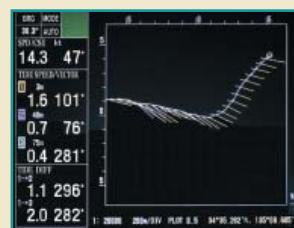
## TIDE VECTOR

Tide speed and direction for the three depth layers are displayed with vectors. The depth of each layer can be set manually in 1 m intervals. Other information such as tide differential between the reference and one of the two other layers, heading and course can also be displayed in large text.



## SHIP'S SPEED

Displays the speed components for fore-aft and port-stbd. The synthesized vector (green line) intuitively shows drift direction. The speed source is selectable on the menu from ground tracking or water tracking.



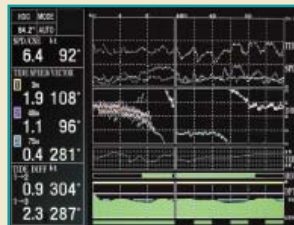
## TRACK

Tide vectors can be shown on the ship's track in user-specified intervals.



## ECHO LEVEL

Displays echogram obtained from each beam. It helps evaluate the concentration or distribution of fish school or seabed at three directions simultaneously.



## TIDE LOG

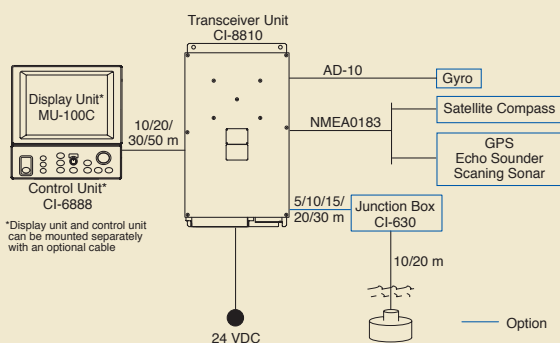
Displays the tide information over the past twelve hours.



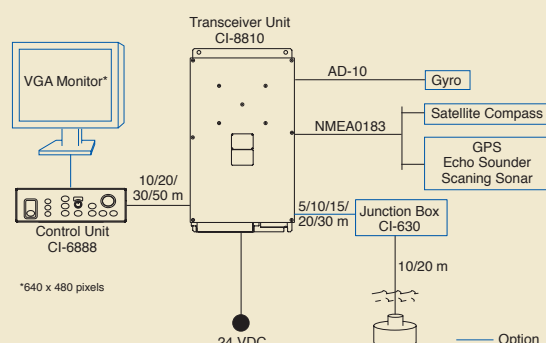
## TEXT

## INTERCONNECTION DIAGRAM

Standard configuration (with standard LCD monitor)



BlackBox configuration (with custom monitor)



\*Display unit and control unit can be mounted separately with an optional cable

\*640 x 480 pixels

# SPECIFICATIONS OF CI-88

## Display

10.4" TFT color LCD, 640 x 480 pixels

## Measurements

### Current

Speed: 0 to 9.9 kt  
 Direction: 0 to 360°  
 Number of layers: 3 layers

### Ship

Speed: -10 to 30 kt (fore-aft)  
 -9.9 to +9.9 kt (port-starboard)  
 Direction: 0 to 360°

### Depth Range

For current measurement

2 to 75% of water depth up to 100 m  
 (Over 10 m of water depth is required in Ground tracking mode. Over 40 m water depth is required in Water Tracking mode.)

For ground tracking

3 to 200 m

### Accuracy

Current: ± 2% of ship's speed + 0.2 kt  
 Ship's speed: ± 1% + 0.1 kt

**Number of Beams** Three beams

**Tilt** 60° each

**System Frequency** 288 kHz

**Data Interface** (NMEA 0183 Ver.1.5/2.0/3.0, IEC 61162)

### Inputs:

DBT, DPT (Depth), GGA, GLL, RMA, RMC (L/L),  
 HDG, HDM, HDT (Compass), MTW (Water temperature),  
 VTG (SOG, COG), ZDA (UTC)

### Outputs:

CUR (Water current layer), VBW (Dual Ground/Water Speed),  
 VDR (Set and Drift), VHW (Water speed and heading), VLW  
 (Distance travelled through the water), VTG (SOG, COG)

## ENVIRONMENTAL (IEC 60945 test method)

Temperature Display Unit: -15° to +55°  
 Control Unit: -15° to +55°  
 Transceiver Unit: -15° to +55°

Waterproofing Display Unit: IPX0 (IEC 60529)  
 Control Unit: IPX2 (IEC 60529)  
 Transceiver Unit: IPX0 (IEC 60529)

## POWER SUPPLY

24 VDC, 110 W (TX)

## EQUIPMENT LIST

### Standard

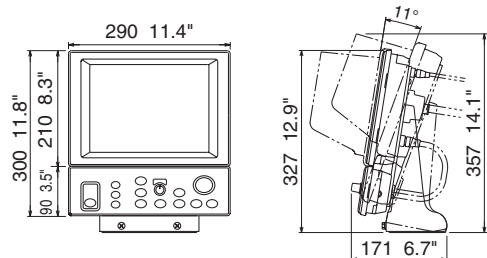
- |   |        |
|---|--------|
| 1. Display Unit MU-100C                     |        |
| 2. Control Unit CI-6888                     | 1 unit |
| 3. Transceiver Unit CI-8810                 | 1 unit |
| 4. Transducer CI-8840-1 with 10 m cable     | 1 unit |
| 5. Thru-hull Pipe for steel hull TFB-5000CI | 1 pc   |
| 6. Installation materials and spare parts   | 1 set  |

### Optional

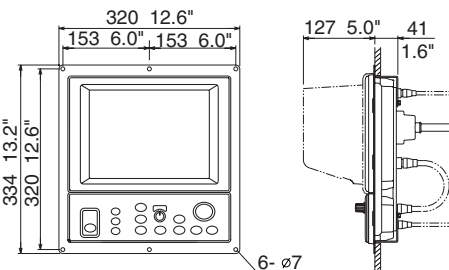
- Junction Box CI-630
- Transducer CI-8840-2 with 20 m cable
- Transducer Tank CI-820/821/822/823
- Cable for Transceiver - Junction box Z-6FVNV-SX-C, 5/10/15/20/30 m
- Cable for Display - Control Unit 66S1239-0, 5/10 m

## Display Unit and Control Unit

MU-100C and CI-6888 6.0 kg, 13.2 lb

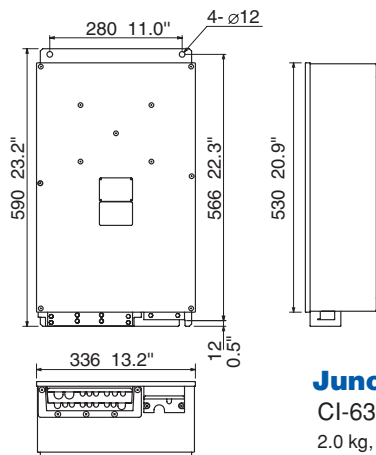


Flush Mount Type 6.0 kg, 13.2 lb



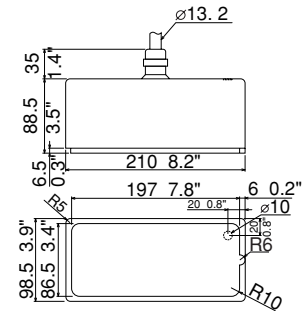
## Transceiver Unit

CI-8810 12.0 kg, 26.5 lb



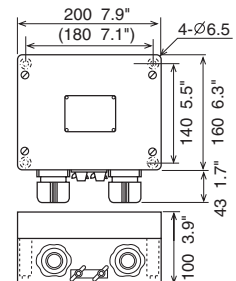
## Transducer

CI-8840-1 with 10 m cable 6.1 kg, 13.4 lb  
 CI-8840-2 with 20 m cable 8.9 kg, 19.6 lb



## Junction Box

CI-630  
 2.0 kg, 4.4 lb



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 SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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