

**FURUNO**

**MARINE RADAR**

Model

***FAR-1513-BB/1523-BB***

*(12 kW)*

*(25 kW)*



Photo: 15" Marine Display MU-150HD  
(Optional supply)



# Easy to use Marine Radar with advanced capabilities, at a great value

Model **FAR-1513-BB/1523-BB**  
(12 kW) (25 kW)

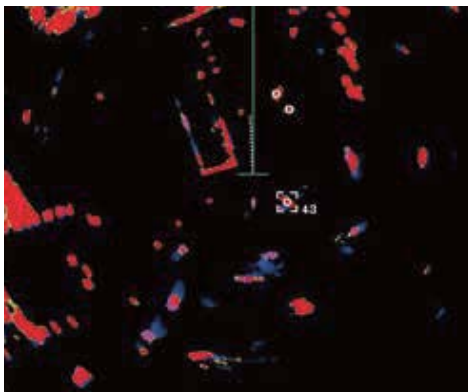


Photo: 15" Marine Display MU-150HD  
(Optional supply)

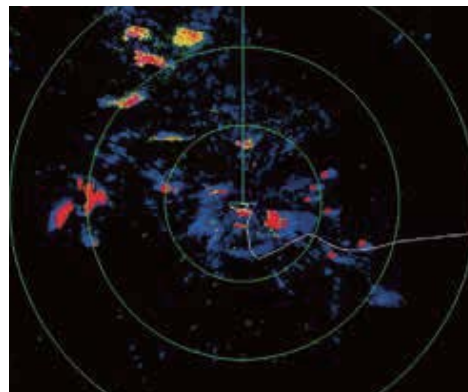
- ▶ FAR-1513-BB/1523-BB Marine Radar features advanced functionality in a small and easy to use package
- ▶ Accurately track other vessels with advanced Fast Target Tracking™ (TT) functionality
- ▶ Improved sea and rain clutter suppression function
- ▶ Improved user interface for simple and efficient operation
- ▶ Target Analyzer™ function for improved situational awareness

## **NEW** Target Analyzer™ function

The Target Analyzer™ function displays moving targets, stationary targets, rain, sea surface and targets closing in on your vessel in different colors. Spot hazardous targets directly, simply by their color. Target Analyzer™ can improve situational awareness, hence increasing safety at sea.



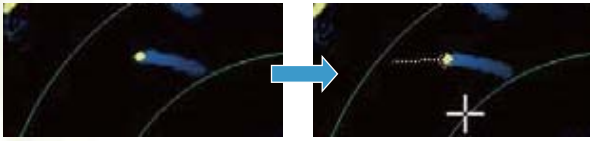
Moving targets are displayed in pink



Rain echoes are displayed in blue

## **NEW** Fast Target Tracking™ (TT)

It only takes a few seconds after a target has been selected, for a speed and course vector to be displayed. With accurate tracking information, estimating other vessels course and speed is made easier.

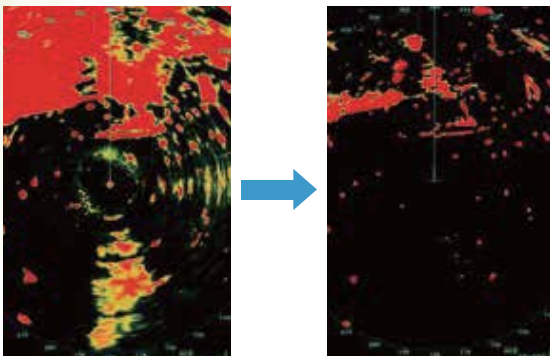


Before following target

After following target

## ACE function suppresses false echoes

Quickly adjust the radar image with a single action. When Automatic Clutter Elimination (ACE) function is activated, the system automatically adjusts the clutter reduction filter and gain control according to the sea and weather conditions selected (Calm/Rough Sea/Hard Rain).



Automatic Clutter Elimination (ACE) OFF

Automatic Clutter Elimination (ACE) ON

## Display Radar overlay on your connected GPS Chart Plotter

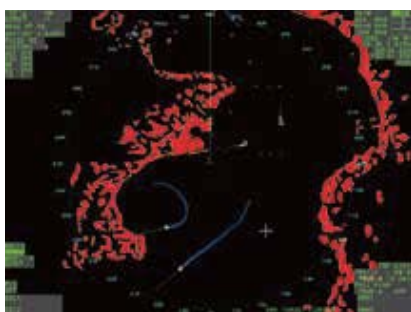
A supported GPS Chart Plotter is required, see [www.furuno.com](http://www.furuno.com) for further details.

## AIS connectivity built-in

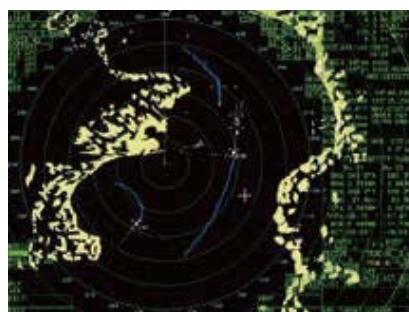
Connect a required AIS transponder to overlay AIS targets on the radar display. Up to 40 different targets can be tracked simultaneously.

## Customize the display according to your needs

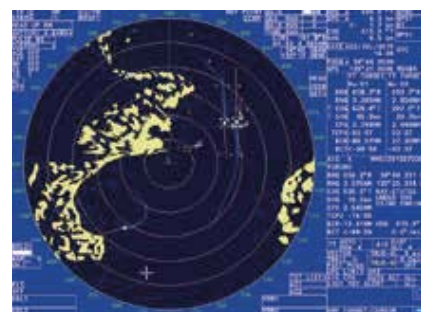
FAR-1513-BB/1523-BB offers impressive customizability and freedom when it comes to display. Choose how you want echoes to be displayed so that you can maximize visibility and efficiency.



Simple display, without range rings



All display, range rings and TT targets



Circle display

## Compact easy to use control unit

Individual knobs for gain/rain/sea clutter suppression as well as RotoKey and a touch panel allow efficient, simple operation. An optional trackball unit as well as a regular USB mouse can also be used.



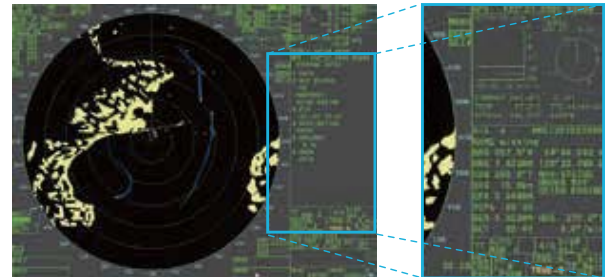
Control Unit



Optional Trackball Control Unit

## Customizable data display for efficient and simple operation

Whether it be a close up window of approaching targets or target information, you can customize the display freely to show the information you need at hand.



Close up with AIS-information

## High visibility MU-190 and MU-150HD Marine Display

19" LCD MU-190 and 15" LCD MU-150HD are available as optional supply to fit the needs of your unique vessel. A high brightness display ensures great visibility in the most difficult of conditions.

## Scalable Ethernet Network System

The 100 Base-TX Ethernet is utilized to network two radar systems together without the need for extra devices. For convenience, you can control both radars from any of the connected displays.

## SPECIFICATIONS

- 1. ANTENNA UNIT**
  - 1.1 Antenna type Slotted waveguide array
  - 1.2 Radiator length 4 ft (XN12A), 6 ft (XN13A)
  - 1.3 Horizontal beamwidth 1.9° (XN12A), 1.35° (XN13A)
  - 1.4 Vertical beamwidth 20°
  - 1.5 Sidelobe attenuation
    - XN12A -24 dB (within ±20° of main-lobe)
    - XN13A -28 dB (within ±20° of main-lobe)
  - 1.6 Polarization Horizontal
  - Rotation 24 rpm (RSB-0070), 48 rpm (RSB-0073)
- 2. RADAR DISPLAY\***
  - 2.1 Screen resolution 1024 x 768 (XGA)\*

\*Display unit is optional supply.
- 3. RF TRANSCEIVER**
  - 3.1 Frequency 9410 MHz ±30 MHz, PON
  - 3.2 Output power
    - FAR-1513 (-BB) 12 kW
    - FAR-1523 (-BB) 25 kW
  - 3.3 Minimum range 25 m
  - 3.4 Range discrimination 25 m
  - 3.5 Range accuracy 1 % of range in use or 10 m whichever is the greater
  - 3.6 Bearing accuracy ±1°
  - 3.7 IF frequency 60 MHz
- 4. PROCESSOR UNIT**
  - 4.1 Warm-up time 90 s approx. (FAR-1513) 3 minutes approx. (FAR-1523)
  - 4.2 Presentation mode Head-up, STAB Head-up, North-up (TM/RM), Course-up, Stern-up
  - 4.3 Marks Cursor, Radar ring, Heading mark, North mark, Bearing line, Vector, Map mark, Zoom, VRM, EBL, Acquisition zone
  - 4.4 Target tracking (TT) Auto or manual acquisition: 50 targets in 0.2-32 NM  
Tracking: 5/10 pts on all target  
Time of vector: 0 to 60 minutes
  - 4.5 AIS Display capacity: 300 targets,  
Tracking: 5/10 pts on activated target  
Time of vector: 0 to 60 minutes
  - 4.6 Echo trail True/Relative, Trail length: 0 to 30 minutes (30 s steps) or continue
  - 4.7 Radar map 5,000 pts
  - 4.8 Interswitch function selectable from menu
- 5. INTERFACE**
  - 5.1 Number of ports on processor unit
    - Heading 1 port: AD-10 format or IEC61162-2
    - Serial 2 ports: AIS/HDG (IEC61162-2)
    - 4 ports: GPS/LOG/AMS/ECDIS (IEC61162-1)
    - Contact closure 6 output ports: 4ch, System Fail, Power fail
    - 1 input port: Remote ACK
    - Remote display 2 ports: Signal: HD, BP, Trigger and Video
    - LAN 1 port: Ethernet 100Base-TX
    - DVI 1 port: DVI-D for main display
    - RGB 1 port: VDR or RGB monitor
  - 5.2 Data sentences Input
    - ABK, ACK, ACN, ALR, BWC, BWR, CUR, DBK, DBS, DBT, DPT, DTM, GBS, GGA, GLL, GNS, HBT, HDG, HDM, HDT, MTW, MWW, RMB, RMC, RTE, THS, VBVW, VDM, VDO, VDR, VHW, VTG, VWR, VWT, WPL, ZDA
  - Output
    - ABM, ACK, ALC, ALF, ALR, ARC, BBM, EVE, HBT, OSD, RSD, TLB, TLL, TTD, TTM, VSD
- 6. POWER SUPPLY**
  - 6.1 Processor unit
    - FAR-1513 (-BB) 24 VDC: 5.0 A max. (24 rpm), 5.6 A max. (48 rpm)
    - FAR-1523 (-BB) 24 VDC: 6.4 A max. (24 rpm), 7.0 A max. (48 rpm)
  - 6.2 Rectifier (RU-1746B-2, option) 100-115/200-230 VAC, 1 phase, 50/60Hz
- 7. ENVIRONMENTAL CONDITIONS**
  - 7.1 Ambient temperature
    - Antenna unit -25°C to +55°C (storage: +70°C or less)
    - Processor unit -15°C to +55°C
  - 7.2 Relative humidity 93% or less at +40°C
  - 7.3 Degree of protection
    - Antenna unit IP26
    - Processor unit IP20 (IP22: option)
    - Control unit IP22
  - 7.4 Vibration IEC 60945 Ed.4

## EQUIPMENT LIST

### Standard

1. Processor Unit RPU-024
2. Control Unit RCU-028
3. Antenna Unit with cable, 10/15/20/30 m (Specify when ordering)
4. Standard Spare Parts and Installation Materials

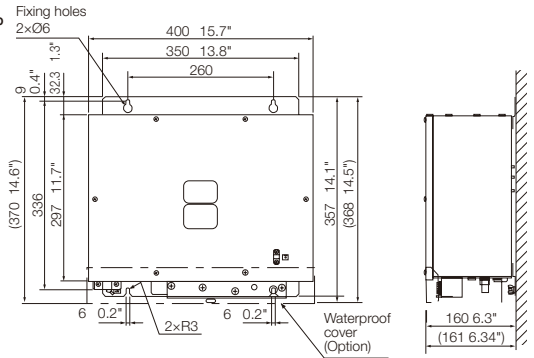
### Option

1. Display Unit MU-150HD or MU-190, customer supply.
2. Trackball Control Unit RCU-030
3. AD Converter AD-100
4. Stepdown Transformer Unit RU-1803
5. AC-DC Power PR-240, PR-850A
6. Rectifier RU-3423/RU-1746B-2/RU-3424
7. Radar signal cable (1 m/5 m/10 m/15 m)  
RW-4864 1M/RW-4864 5M/RW-4864 10M/RW-4864 15M
8. For Display Unit, DVI cable (10 m) DVI-D/D S-LINK 10M
9. Switching Hub HUB-100

### Processor Unit

#### RCU-024

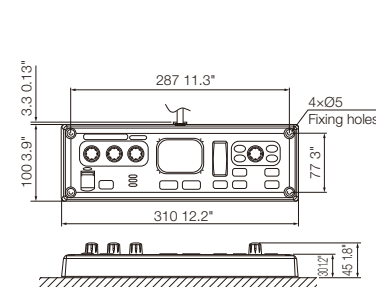
DC 6.2 kg 13.7 lb  
AC 6.8 kg 15 lb



### Radar Control Unit

#### RCU-028

1.2 kg 2.6 lb



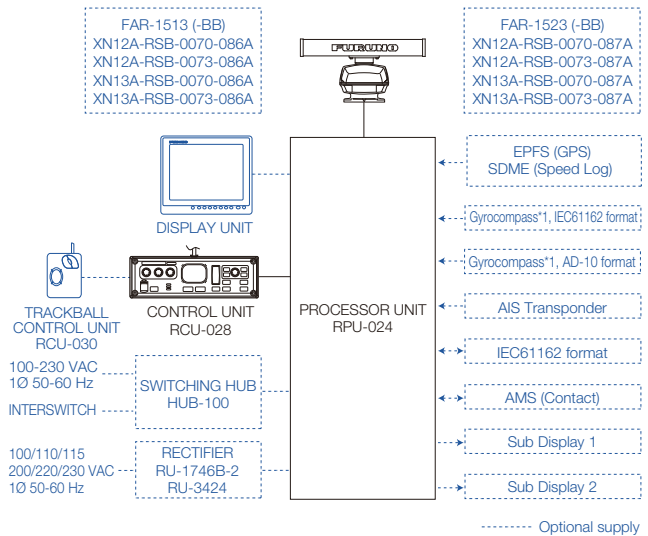
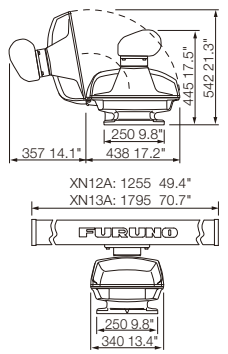
### Antenna Unit

#### XN12A

25 kg 55.1 lb

#### XN13A

27 kg 59.5 lb



Beware of similar products

All brand and product names are registered trademarks, trademarks or service marks of their respective holders.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

**FURUNO ELECTRIC CO., LTD.**  
Nishinomiya, Hyogo, Japan  
www.furuno.com

**FURUNO U.S.A., INC.**  
Camas, Washington, U.S.A.  
www.furunousa.com

**FURUNO (UK) LIMITED**  
Havant, Hampshire, U.K.  
www.furuno.co.uk

**FURUNO FRANCE S.A.S.**  
Bordeaux-Mérignac, France  
www.furuno.fr

**FURUNO ITALIA S.R.L.**  
Gatteo Mare, Italy  
www.furuno.it

**FURUNO ESPAÑA S.A.**  
Madrid, Spain  
www.furuno.es

**FURUNO DANMARK A/S**  
Hvidovre, Denmark  
www.furuno.dk

**FURUNO NORGE A/S**  
Ålesund, Norway  
www.furuno.no

**FURUNO SVERIGE AB**  
Västra Frölunda, Sweden  
www.furuno.se

**FURUNO FINLAND OY**  
Espoo, Finland  
www.furuno.fi

**FURUNO POLSKA Sp. Z o.o.**  
Gdynia, Poland  
www.furuno.pl

**FURUNO EURUS LLC**  
St. Petersburg, Russian Federation  
www.furuno.ru

**FURUNO SINGAPORE**  
Singapore  
www.furuno.sg

**FURUNO DEUTSCHLAND GmbH**  
Rellingen, Germany  
www.furuno.de

**FURUNO HELLAS S.A.**  
Piraeus, Greece  
www.furuno.gr

**FURUNO (CYPRUS) LTD**  
Limassol, Cyprus  
www.furuno.com.cy

**FURUNO SHANGHAI CO., LTD.**  
Shanghai, China  
www.furuno.com/cn