

**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)

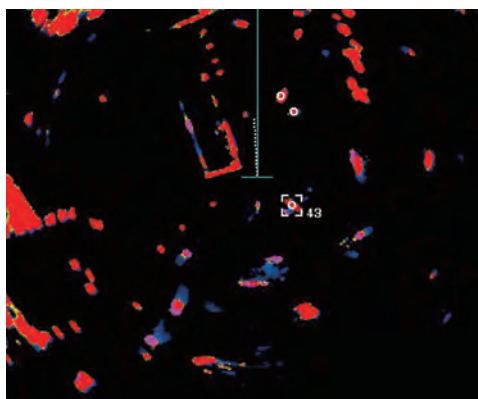


Photo: 15" Marine Display MU-150HD (Optional supply)

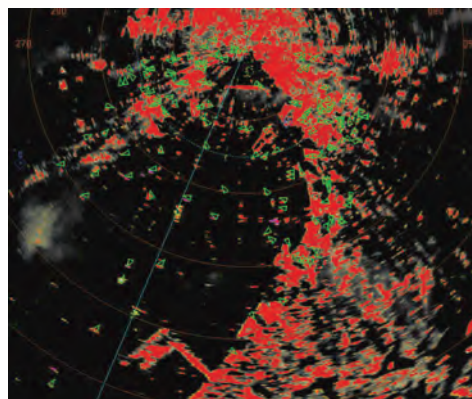
- ▶ FAR-1513-BB/1523-BB Marine Radar features advanced functionality in a small and easy to use package
- ▶ Accurately track other vessels with Fast Target Tracking™ (TT) functionality
- ▶ Improved sea and rain clutter suppression
- ▶ Improved user interface for simple and efficient operation
- ▶ Target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

## 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.



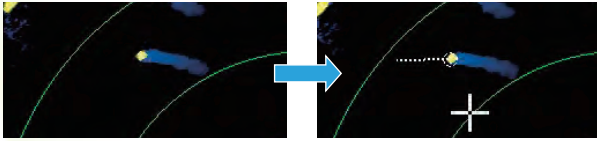
Moving targets are displayed in pink



Rain echoes are displayed in gray

## 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.

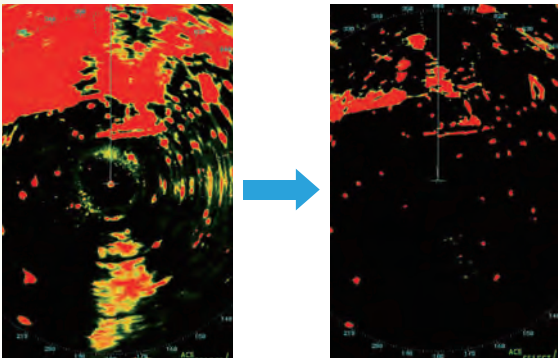


Before following target

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

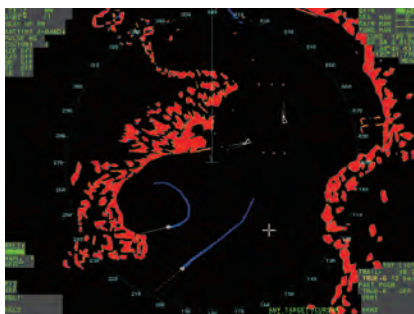
A supported GPS Chart Plotter is required, see [www.furuno.com](http://www.furuno.com) for further details.

## AIS connectivity built-in

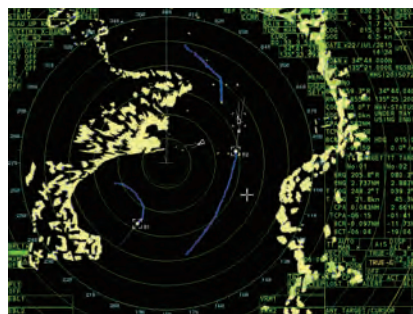
Connect a required AIS transponder to overlay AIS targets on the radar display. Up to 40 different targets can be activated simultaneously.

## Customize the display according to your needs

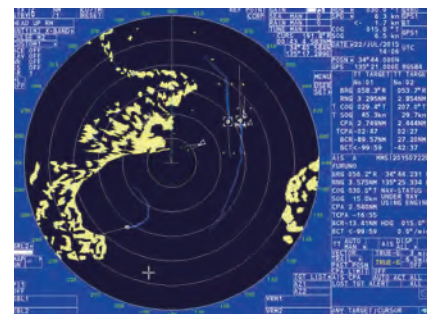
FAR-1513-BB/1523-BB offers impressive customizability and freedom when it comes to display. Choose how you want echoes to be displayed so that you can maximize visibility and efficiency.



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.



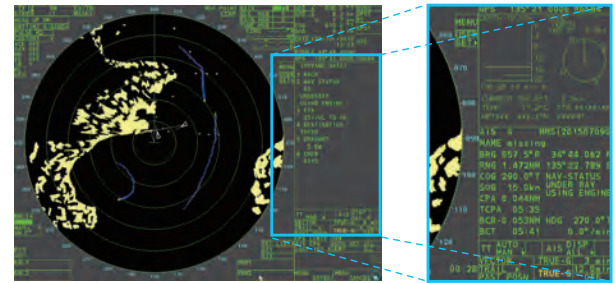
Control Unit



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-Display series

19" LCD MU-190, 15" LCD MU-150HD and MU-152 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	22°
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)*
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\*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)
Contact closure	4 ports: GPS/LOG/AMS/ECDIS (IEC61162-1)
Remote display	6 output ports: 4ch, System Fail, Power fail
LAN	1 input port: Remote ACK
DVI	2 ports: Signal: HD, BP, Trigger and Video
RGB	1 port: Ethernet 100Base-TX
5.2 Data sentences	1 port: VDR or RGB monitor
Input	ABK, ACK, ACN, ALR, BWC, BWR, CUR, DBK, DBS, DBT, DPT, DTM, GBS, GGA, GLL, GNS, HBT, HDG, HDM, HDT, MTW, MWV, RMB, RMC, RTE, THS, VBV, 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

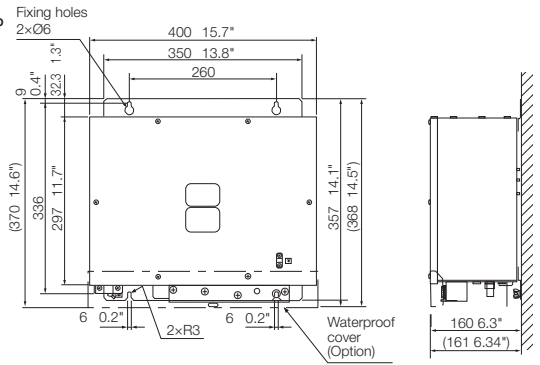
1. Processor Unit RPU-024
2. Control Unit RCU-028
3. Antenna Unit with cable, 10/15/20/30 m (Specify when ordering)
4. Standard Spare Parts and Installation Materials

### Option

1. Display Unit MU-150HD, MU-152 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

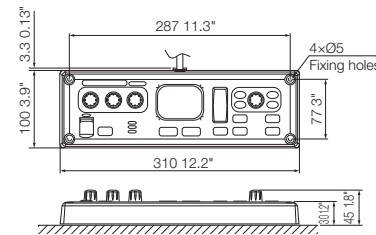
### Processor Unit

**RCU-024**  
DC 6.2 kg 13.7 lb  
AC 6.8 kg 15 lb



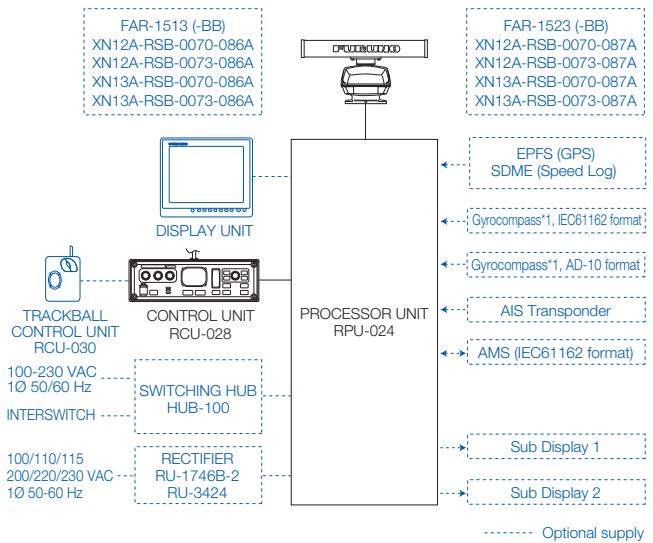
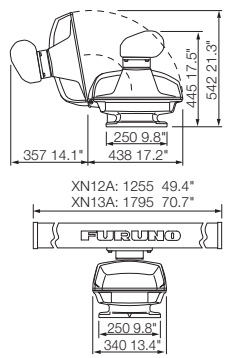
### Radar Control Unit

**RCU-028**  
1.2 kg 2.6 lb



### Antenna Unit

**XN12A XN13A**  
25 kg 55.1 lb 27 kg 59.5 lb



Beware of similar products

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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