

# FURUNO

## DEEPSEA WORLD

GENERAL CATALOG



Marine Electronics &  
Satellite Communications

[www.mackaymarine.com](http://www.mackaymarine.com)

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# Our mission

Bringing together the most advanced navigational sensors and communications technology, Furuno provides the ability to create and implement optimal shipping routes that consider safety, environmental and economic factors for long voyages.

## A wide range of products for safer navigation

For safe and efficient navigation, Furuno provides a wide range of innovative radio-communications and radio-navigation equipment complying with IMO, ITU, IEC, ISO and other relevant standards.

## Innovative solutions, ahead of their time

The integration of the navigational equipment with new technologies, such as ship IoT, creates a brand-new experience in ship maneuvering. Furuno sees the potential needs of our product users and reflects them in our products and services as solutions. This is the basis of our motto, "Challenge the Invisible."

## Worldwide service network

You will never be without spare parts and technical backup thanks to our worldwide service network supported by Furuno's Continental Service Centers. Our experienced engineers perform the necessary technical service and support to remedy any situation.

# VOYAGER

FURUNO BRIDGE SYSTEM



## The next-generation bridge system

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FURUNO VOYAGER, the next-generation bridge system, has been designed using our decades of expertise in sensor technology, network integration and software development. FURUNO VOYAGER bridge system offers multifunction workstations with seamless display of Radar/Chart Radar, ECDIS, Conning and Alert Management System data. FURUNO VOYAGER bridge system has been developed with an intuitive user interface and in strict accordance with the most up-to-date safety and navigation standards in mind.

Total network sensor integration delivers situational awareness to the mariner. An uncomplicated display presentation simplifies and streamlines navigational tasks. Common responsibilities such as route planning, navigation status monitoring, log-keeping, alert awareness and day-to-day chart management are made easy through common workstation layout and redundancy of display and controls. Watchstanders will enjoy reduced workload and significant freedom to move about the bridge, with all necessary information available in a variety of displays and locations.

What's more, AMS/Conning display is designed beautifully to show all the necessary navigational data to the mariners on a single display. We put importance on offering required data in an organized way.

# RADAR

Model: **FAR-22x8** (19" LCD)/**FAR-23x8** (23.1" LCD or 27" wide LCD)

Model: **FAR-15x8** (15" LCD)

The latest digital signal processing technology and highly receptive antenna enables the Radar series to detect targets and show echoes with crisp images on your monitor, whether the ships are moving fast around your vessel or located miles away.



Model: FAR-23x8

# ECDIS

Model: **FMD-3200** (19" LCD)/**FMD-3300** (23.1" LCD or 27" wide LCD)

Model: **FMD-3100** (24" wide LCD)

Displays official Electronic Navigational Charts (ENC) S-57 Edition, Raster Navigational Chart (RNC).

A radar image, tracked targets and AIS data with the chart can be overlaid on the charts on ECDIS when conducting route planning and route monitoring. TCS certified.



Model: FMD-3300

# CHART RADAR

Model: **FAR-32x0** (19" LCD)/**FAR-33x0** (23.1" LCD or 27" wide LCD)

Featuring total integration of Radar and ENC Display System, FURUNO Chart Radar series display the radar images together with ENC at the same time.



Model: FAR-33x0

## Unique Ice Navigation Mode (option)

The Ice Detection mode is capable of finding the best route through icy waters. It removes image noise and the fine structures of the ice will become more visible.

# Navigation equipment

## NAVIGATIONAL ECHO SOUNDER

Model: **FE-800**

The FE-800 displays the clearance below the ship in the dual frequency operation (50/200 kHz), when interfaced with two transducers. The depth at the fore and aft positions can be displayed simultaneously.



(option)

## GNSS

Model: **GP-170**

The GNSS navigator GP-170 is an ideal position sensor for radar, AIS, ECDIS, autopilot, echo sounder and other navigation and communications equipment. Newly designed GPS chip and antenna unit deliver enhanced stability and precision in position fixing.



## AIS

Model: **FA-170**

The FA-170 enhances the safety and efficiency in navigation by automatically exchanging navigational status and other safety-related information within the VHF coverage.





## DOPPLER SONAR

Model: **DS-60**

The DS-60 is the SDME which outputs the information especially required for berthing and docking operation of vessels. It offers 3 display modes: 3-axis speed, berthing and NAV data. Independent STW and SOG sensors are required for 50,000 GT vessels. It offers 3 display modes: 3-axis speed, berthing and NAV data. Vessels over 50,000 GT are required to install Doppler sonar on board.



## DOPPLER SPEED LOG

Model: **DS-80**

The DS-80 indicates speed and distance on a large illuminated LCD. The paired beam transmission of the DS-80 eliminates the effect of pitching, and velocity correction for change of water temperature. Recommended for vessels over 500 GT. The paired beam transmission of the DS-80 eliminates effect of pitching, and velocity correction for change of water temperature.



## SATELLITE SPEED LOG

Model: **GS-100**

The measurement capability at dead slow speed is vital for precise docking of large ships. The GS-100 is the SDME and offers speed accuracy of  $\pm 0.02$  kn, which is of great help during berthing operations.



# VDR S-VDR

Model: **VR-7000/VR-7000S**

The VR-7000/7000S record the navigation data and assist investigators in identifying the causes of maritime casualty as well as to use the data for future reference to further incident prevention.



# BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM

Model: **BR-500**

The BNWAS BR-500 monitors the watch officers' awareness for early detection of emergency.



# SATELLITE COMPASS

Model: **SC-70/SC-130**

The SC-70/130 are the latest satellite compasses and increase the accuracy of other instruments, such as Radar, ECDIS, AIS, Doppler Sonar and Autopilots. The SC-70/130 surpass IMO standards regarding THD and GPS.



# REMOTE DISPLAY

Model: **RD-20/RD-50**

The RD-20/RD-50 display the data from onboard sensors. The displays are switched by the remote controller. The display brilliance of all units connected can be centrally controlled from 1 dimmer controller.



Model: RD-20 (144mm x 144mm)



Model: RD-50 (240mm x 240mm)

# Communication equipment

## GMDSS

Model: **RC-1800F2**

The RC-1800F2 is a quality radio communications console. The RC-1800F2 contains all the necessary radio equipment for ships operating in the GMDSS sea areas A2-3.



## VHF

Model: **FM-8900S**

The FM-8900S is designed to comply with the GMDSS carriage requirements. All the necessary facilities such as a Class A DSC modem and a CH 70 watch receiver are included in the transceiver unit.



## MF/HF

Model: **FS-1575/FS-2575/FS-5075**

In addition to MF/HF marine telephony communication facility, the FS-1575/2575/5075 is equipped with DSC plus DSC Watch Receiver capability on all distress and safety frequencies in MF and HF bands. NBDP facility is optionally available.



FS-1575 (150 W pep), FS-2575 (250 W pep), FS-5075 (HF: 500 W pep, MF: 400 W pep)

## NAVTEX

Model: **NX-700A/NX-700B**

The NX-700 can receive the NAVTEX messages on 518 kHz and 490 kHz or 4209.5 kHz at the same time.



Model: NX-700A (display with a printer)



Model: NX-700B (display only)



Model: **FELCOM18**

The FELCOM18 delivers full coverage of Inmarsat-C services: EGC reception, Inmarsat E-mail, distress message handling, polling, and data reporting.



Model: **FELCOM18/FELCOM19**

The FELCOM18/19 with SSAS kit are the ship security alert systems using the Inmarsat-C system to transmit an alert to a competent authority on shore when the ship is attacked by pirates, terrorists, etc. The FELCOM18/19 are both compatible with LRIT application.



Model: **IC-350**

The IC-350 is the centralized control of distress alerting of connected GMDSS equipment. It is required for all passenger ships engaged in international voyage to equip collective alerting controller system. All audio alarms can be halted with a single press of the "Mute Alarm" button.



Model: **FAX-30/FAX-410**

The FAX-30 automatically receives high quality weather maps and satellite images and displays them on an interfaced PC screen. The FAX-410 prints the images on a sheet of 10" paper by a thermal printing mechanism.



Model: FAX-30



# SafeComNet™

FURUNO Mobile Satellite Services

SafeComNet™- FURUNO Mobile Satellite Services covers scalable packages of satellite communication, onboard network infrastructure for safe and efficient fleet operation.

## Antenna Lineup



### *FleetBroadband*

Model: **FELCOM250/FELCOM500**

The FELCOM250 and FELCOM500 are FURUNO's Inmarsat FleetBroadband terminals, which delivers ship-to-shore/ ship-to-ship broadband communication of up to 432 kbps (FELCOM500) together with voice communication all at the same time by utilizing the latest generation Inmarsat I-4 satellites.



### *Global Xpress*

Model: **FV-110GX**

The FV-110GX is an advanced Ka-band antenna terminal designed for Inmarsat Global Express. The FV-110GX is easy to install with just one cable between Above Deck Equipment (ADE) and Below Deck Equipment (BDE).



### *VSAT*

Model: **FV-110**

The FV-110 is an advanced technology and reliable Ku-band antenna which is compatible with various VSAT platforms. It is a installation hassle free VSAT antenna with comes with high RF performance in 1m size.





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Satellite Communications**

[www.mackaymarine.com](http://www.mackaymarine.com)

**Mackay Marine**

+1 281 479 1515 [marinesales@mackaymarine.com](mailto:marinesales@mackaymarine.com)

**Mackay Communications, Satellite Solutions**

+1 919 850 3100 [satserv@mackaycomm.com](mailto:satserv@mackaycomm.com)

**Mackay Marine Canada**

+1 902 469 8480 [sales.canada@mackaymarine.com](mailto:sales.canada@mackaymarine.com)

**Mackay Govt. Group**

+1 904 880 4633 [government@mackaycomm.com](mailto:government@mackaycomm.com)

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**FURUNO U.S.A., INC.**

U.S.A. | [www.furunousa.com](http://www.furunousa.com)

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