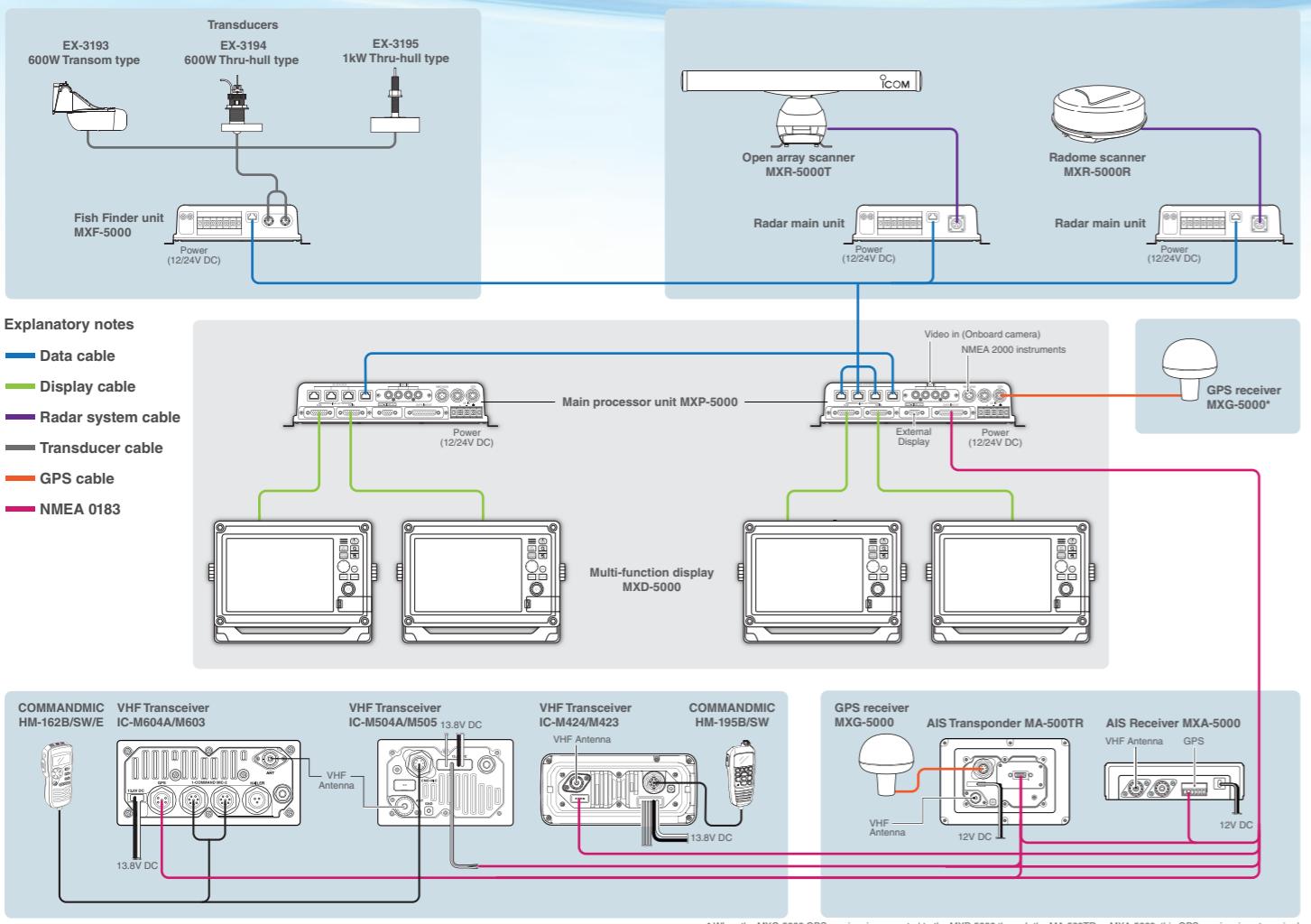


Wiring Diagram



Option Cables



EX-3187
Display extension cable
(5m; 16.4ft)
Up to three EX-3187
cables are connectable.

OPC-1895
Data cable (20m; 65.6ft)
For connection from MPU to
radar or fish finder and
between MPU and MPU.

OPC-1929
Transducer extension cable
(6m; 19.7ft)

OPC-1077A (20m; 65.6ft)
OPC-1078A (30m; 98.4ft)
Radar system cables for connection
between radar main unit and scanner unit.
OPC-1077A is for MXR-5000R only.

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This product includes software (part of tcp_wrappers) developed by the University of California, Berkeley. This product includes software developed by the University of California, Berkeley and its contributors.

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Command – Your Way, Communications and Navigation Setup

System overview

The MarineCommander™ is Icom's marine navigation system, which integrates various marine modules such as a fish finder, marine radar, AIS and VHF transceiver into the multi-function displays (MFD).

Up to two MFDs can be connected to a main processor unit (MPU) and support separate dual display operation.

If connecting two MarineCommander MPUs via a data cable, up to four MFDs can be used and the connected modules (E.g. fish finder, radar) can be shared with the other MFDs.

Affordable Dual Display Connection Up to Four Displays in a System

The MarineCommander allows you to connect two MFDs simultaneously. All connected modules including chart data, fish finder and marine radar can be shared with two MFDs, which can provide separate operation. The MFD can be installed up to 20m (65.6ft)* away from the MPU. When connecting two MarineCommanders via a data cable, up to 4 displays can be used and C-MAP™ chart data can be shared in the system.

* Three optional EX-3187 extension cables are required.



Slim Dimensions and Easy Installation

The MFD has 69.2mm (2.7 inch) slim dimensions and is light weight for easy flush mount installation. The MFD has IPX7 submersible construction protecting it from water intrusion. The MFD can be connected with a main processor unit (MPU) using a single cable connection and power supplied via the MPU.



Daylight Viewable Display

The 12.1 inch size MFD provides 800x600 pixels resolution. The 900cd/m² high brightness, color LCD with anti-reflecting surface coating glass offers bright, vivid indication in detail even under direct sunlight. The color palette is selectable for day and night mode.



Simple Operation

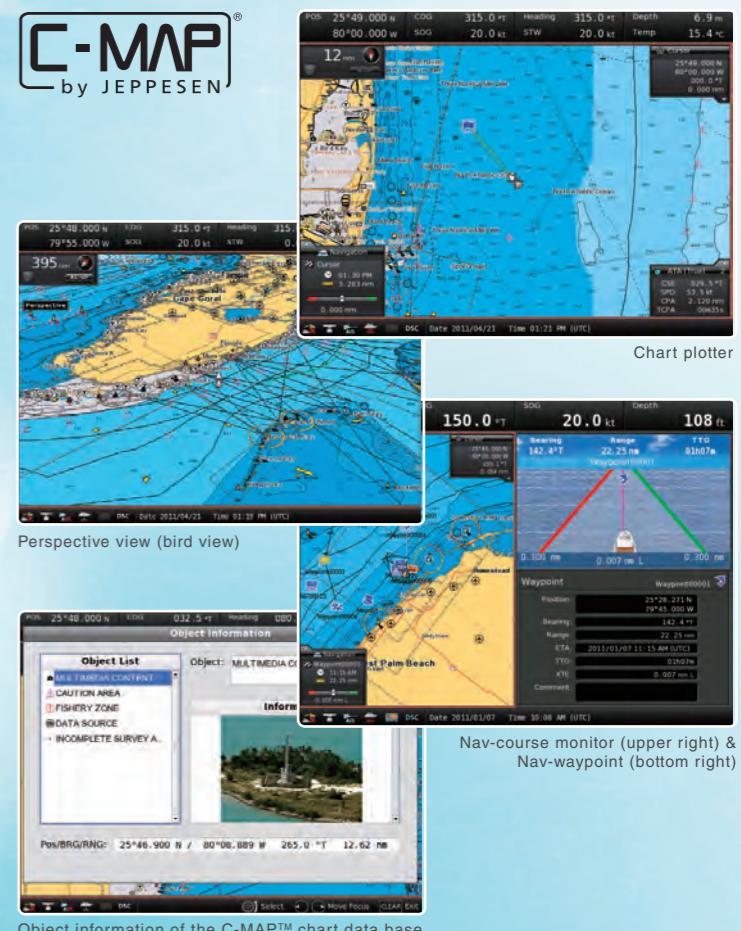
The MarineCommander offers a simple graphical user interface and intuitive operation with minimum buttons and rotary knob. The display layout can be split into up to 4 panes, providing an easily customized layout with simple operation.



C-MAP™ MAX Compatible

The MarineCommander is compatible with the C-MAP™ MAX chart by JEPPESEN in an SD card format*. The MarineCommander provides quick and fast responding rendering performance. The C-MAP™ MAX chart provides guardian alarm, route-check, perspective view and Port database for safe and easy navigation.

* Chart data is not supplied from Icom.



MXG-5000 GPS Receiver

The MXG-5000 is a 12 channel GPS receiver with WAAS, EGNOS and MSAS differential corrections. It offers accurate position information and features IPX6 high-pressure water jet resistance.



USB Flash Drive Connection

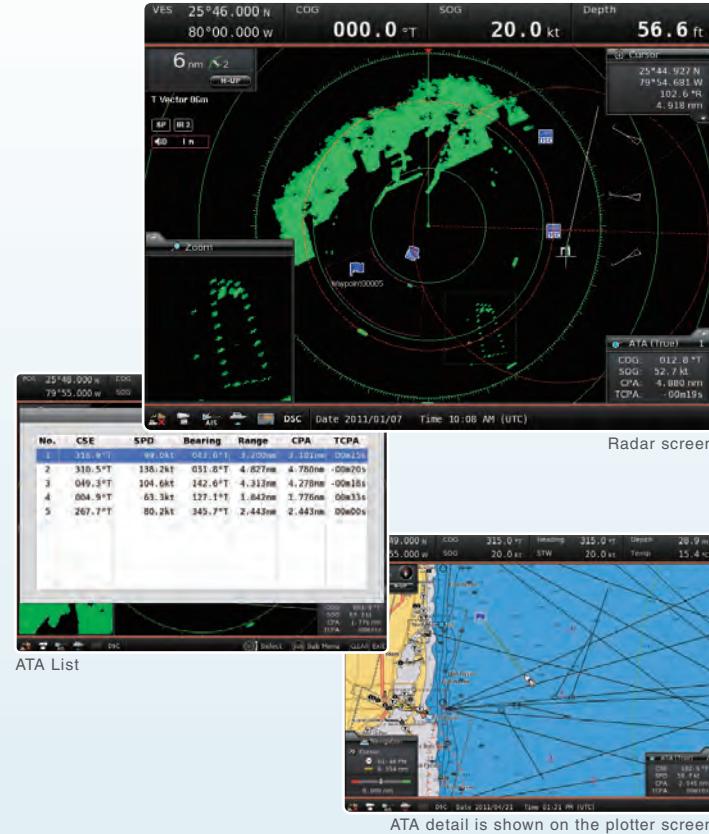
The MFD has a USB slot to connect with a USB flash drive. Waypoint, track and route information and memo data can be backed up to a USB flash and imported to other MarineCommanders or a PC.



• Marine Radar



The MXR-5000R/T marine radar provides clear target discrimination. Waypoint and AIS target can be overlaid on the radar screen. The marine radar helps collision avoidance and increases your safety at sea. The radar images can be overlaid on the plotter screen in the same scale and helps you to detect dangerous objects.



Simplified ATA (Automatic Tracking Aid)

The simplified ATA function allows you to plot up to 10 targets and the radar continues to track the targets automatically. The ATA targets can be overlaid on the plotter screen.

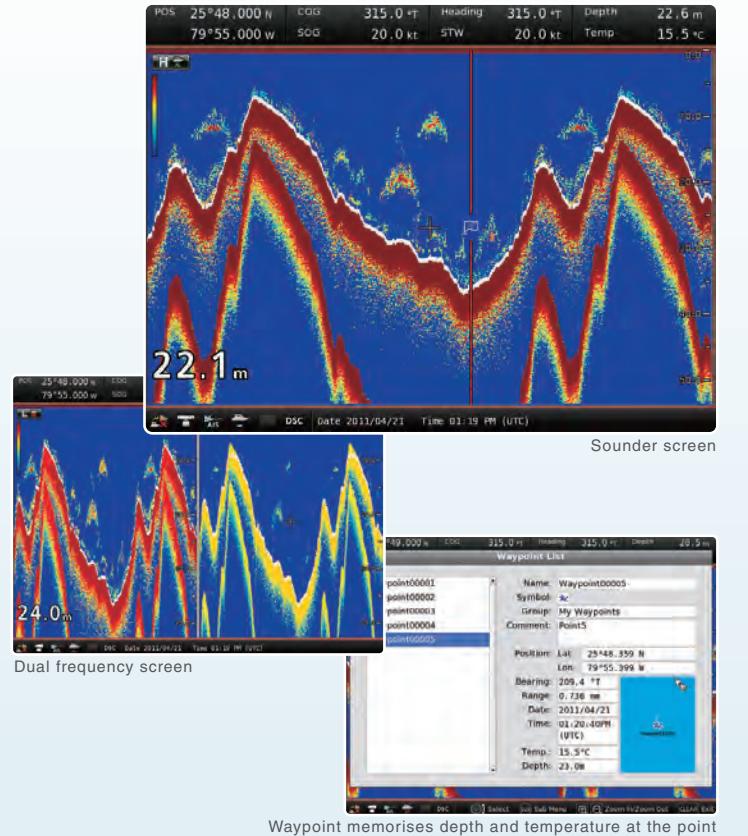
Marine Radar



• Fish Finder



When a fish finder module is connected, the MarineCommander system can have a dual frequency sounder function. Using the 50kHz/200kHz dual frequency mode, the MarineCommander enhances the separation and helps in fish detection.



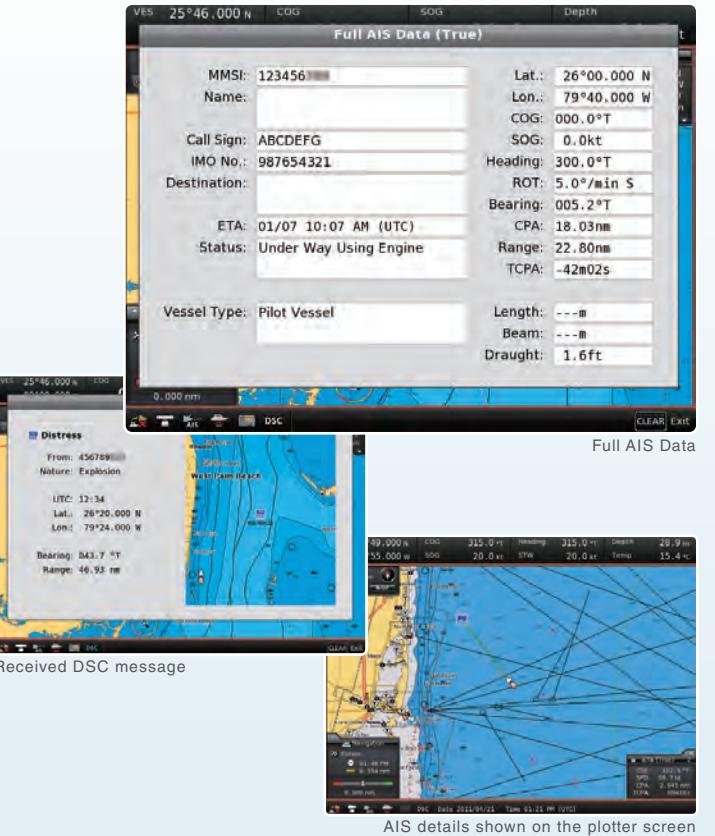
Waypoint on the fish finder

When used with the fish finder module, the MarineCommander memorises the waypoint information with depth and temperature data.

• AIS and VHF Transceiver



AIS (Automatic Identification System) receives real-time vessel traffic information broadcasted by other AIS equipped vessels. Using the optional MA-500TR or MXA-5000, the AIS data can be overlaid on the plotter and radar screen.



DSC call (VHF transceiver required)

The MarineCommander has the capability to be connected to compatible Icom VHF transceivers.* Various types of DSC calls, including individual, group, all ship, position and polling request*, can be initiated from the MarineCommander. Received DSC messages and position information can be shown on the plotter display.

*IC-M603 firmware upgrade version or IC-M505 compatible version is required.
DSC call types available are dependant on VHF transceiver capability.

• Engine Monitoring



When connected to engine/environment/positioning sensors with an NMEA 2000 interface, the MarineCommander shows current data on a virtual engine meter. This data can also be shown on the status-bar or data-bar according to your setting.



Graphic screens

• Video Camera Monitoring



The MarineCommander has four video input ports with RCA connectors for connecting up to 4 surveillance video cameras (NTSC or PAL format) and allows you to monitor surroundings and crew members on the MarineCommander display.



• Other Features

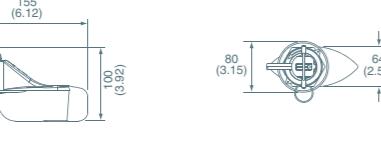
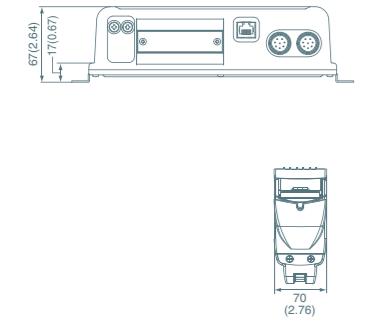
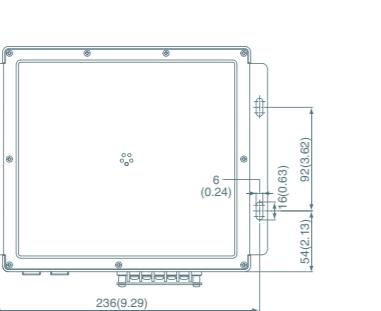
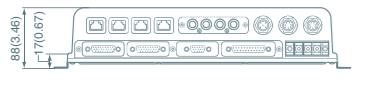
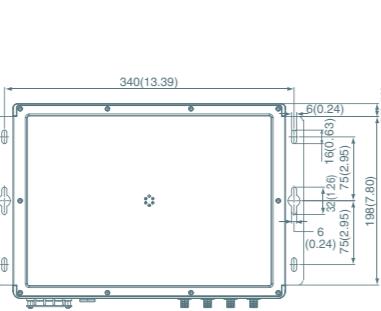
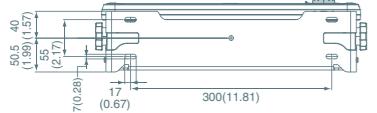
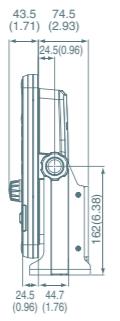
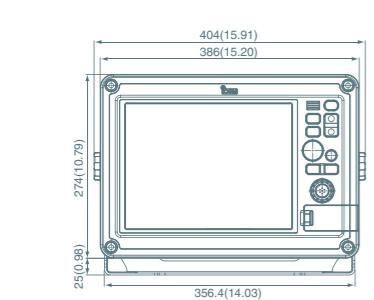
- The external display connector (analog RGB) allows you to output to an external display
- Multiple language display (English/French/Spanish)
- External NMEA2000 Connection (Engine, Fuel, Engine Temperature, Wind, GPS, Compass, STW)
- Memo function allows you to store a comment with picture data* and position information.

* To show picture data, the picture data must be stored in the connected USB flash drive.



Specifications

Unit:mm (inch)



Transducer

	EX-3193	EX-3194	EX-3195
Type	600W transom type, built-in boat speed and temperature sensors	600W thru-hull type, built-in boat speed and temperature sensors	1kW thru-hull type, built-in temperature sensors
Output power	600W	600W	1kW
Operating frequency	50kHz, 200kHz	50kHz, 200kHz	50kHz, 200kHz
Beamwidth	50kHz: 45°, 200kHz: 11°	50kHz: 45°, 200kHz: 11°	50kHz: 15°×21°, 200kHz: 3°×5°
Vessel speed sensor	18,000 p/nm	19,000 p/nm (with fairing)	-
Speed range	1kt~44kt	21,500 p/nm (without fairing)	-
Weight (approx.)	0.5kg; 1.1lb	2.5kg; 5.5lb	3.6kg; 7.9lb
Optional transducer ext. cable	OPC-1929 (6m; 19.7ft)	OPC-1929 (6m; 19.7ft)	OPC-1929 (6m; 19.7ft)

Multi-function display

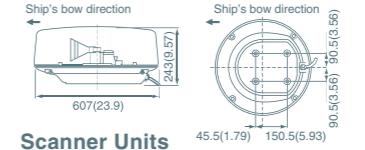
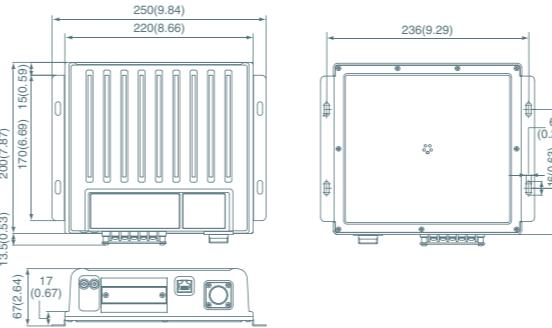
MXD-5000	
Multi-function display	12.1 inch TFT
Screen size	246×184.5 mm
Screen resolution	SVGA 800×600 dots
Screen brightness	900 cd/m ² (Max.)
Contrast ratio	500
Viewing angle	Vertical Top 50° to Bottom 70° (Contrast ratio ≥10) Horizontal Left 70° to Right 70°
Power supply	30V DC (Supplied from MXP-5000)
Dimensions (W×H×D)	386×274×69.2 mm; 15.2×10.79×2.72 in (without bracket) (Projections not included) 404×299×102 mm; 15.91×11.77×4.02 in (with bracket)
Weight (approx.)	3.6kg; 7.9lb (without bracket) 4.1kg; 9.0lb (with bracket)
Usable temperature range	-20°C to +60°C; -4°F to +140°F
Waterproofing	IPX7
Cable length	5m; 16.4ft
Optional extension cable	EX-3187 (5m; 16.4ft)

Main processor unit

MXP-5000	
Power supply	12/24V DC (10.8 to 31.2V DC)
Current drain(at 12V DC) (at Maximum brightness)	Less than 4.7A (One MXD-5000) Less than 7.7A (Two MXD-5000s)
Dimensions (W×H×D)	360×88×228.8mm; 14.17×3.46×9.01 in (Projections not included)
Weight (approx.)	4.25kg; 9.37lb
Usable temperature range	-20°C to +60°C; -4°F to +140°F
Waterproofing	IPX4

Fish Finder

MFN-5000	
Power supply	12/24V DC (10.8 to 31.2V DC)
Current drain (at 12V DC)	Less than 0.6A (Water depth range: 40m, output power 600W) Less than 1.0A (Water depth range: 40m, output power 1kW)
Output power	600W/1kW
Transmission frequency	50kHz ±1kHz 200kHz ±1kHz
Dimensions (W×H×D)	250×67×200 mm; 9.84×2.64×7.87 in (Projections not included)
Weight (approx.)	2.18kg; 4.8lb
Usable temperature range	-20°C to +60°C; -4°F to +140°F
Waterproofing	IPX4
Optional data cable	OPC-1895 (20m; 65.6ft)



Scanner Units	
MXR-5000R Radome scanner	MXR-5000T Open array scanner
Type	2ft (60cm) radome
Peak output power	4kW
Maximum range	36NM
Rotation speed	24 rpm, 36 rpm, 48 rpm
Beam width	Horizontal 4°typ. Vertical 22°typ.
Side lobe	-18dB
Polarization	Horizontal
Transmission frequency	9410MHz±30MHz PON
Pulse width	80ns/2800Hz, 80ns/2160Hz, 250ns/2160Hz, 350ns/2160Hz, 900ns/720Hz
Dimensions	607 (Diameter)×243 (H) mm; 23.9×9.57 in
Weight (approx.)	8kg; 17.6lb (without cable)
Usable temperature range	-25°C to +70°C; -13°F to +158°F
Relative humidity	Less than 95% at 40°C
Waterproofing	IPX6
Supplied system cable	OPC-1188A (15m; 49.2ft)
Optional radar system cables	OPC-1077A (20m; 65.6ft) OPC-1078A (30m; 98.4ft)



Radar Units

MXR-5000R		MXR-5000T	
Power supply	12/24V DC (10.8 to 31.2V DC)	12/24V DC (10.8 to 31.2V DC)	12/24V DC (10.8 to 31.2V DC)
Current drain (at 12V DC)	Less than 5.0A	Less than 5.5A	Less than 5.5A
Dimensions (W×H×D)	250×67×200 mm;	250×67×200 mm;	250×67×200 mm;
Weight (approx.)	2.1kg; 4.6lb	2.1kg; 4.6lb	2.1kg; 4.6lb
Usable temperature range	-20°C to +60°C; -4°F to +140°F	-20°C to +60°C; -4°F to +140°F	-20°C to +60°C; -4°F to +140°F
Waterproofing	IPX4	IPX4	IPX4
Optional data cable	OPC-1895 (20m; 65.6ft)	OPC-1895 (20m; 65.6ft)	OPC-1895 (20m; 65.6ft)

Complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

AIS Transponder and Receiver

MA-500TR		MZA-5000	
Frequency range (Unit:MHz)	161.975, 162.025 (default) 156.025-162.025	Rx: 161.975, 162.025 Simultaneous reception	
Type of emission	16K0GXW (GMSK)	16K0F1D (GMSK)	
Power supply requirement	12.0V DC (9.6-15.6V)	12.0V DC (10.8-15.6V)	
Dimensions (Projections not included; WxHxD)	165×110×123 mm; 6.5×4.33×4.84 in	132×34×155 mm; 5.2×3.43×6.1 in	
Weight (approx.)	1000g; 2.2lb	460g; 1.0lb	
Current drain	Transmit 1.5A Receive 0.7A	460g; 1.0lb	
Sensitivity	-110dBm	-116dBm typ.	
Intermodulation rejection	65dB	65dB	
RF output power	2W	-	
Waterproofing	IPX7 (1m depth/30 min)*1	-	
Data interface	IEC 61162-1:2000 or IEC 61162-2 selectable	Input: IEC 61162-1:2000 Output: IEC 61162-2	