



IC-M510E EVO

VHF MARINE TRANSCEIVER

IC-M510E EVO: Redefining Marine Communication!



The above photo shows IC-M510E EVO AIS Version.

Class-D DSC VHF Marine Radio with Smart Device Remote Control

Radio Control & Intercom Through Your Smart Devices

Use the RS-M500 app (for iOS™/Android™) to remotely control the IC-M510E EVO through WLAN. Up to three smart devices can be used as a wireless microphone or simple remote control of certain functions. You can make calls while working inside the vessel or checking the surroundings on deck.

An intercom function between your smart devices/CommandMic™ and the radio is also built in.



Smart device (RS-M500)

IC-M510E EVO



Award Winning Sleek Design iF DESIGN AWARD 2022

The IC-M510E series is a winner in the world-renowned iF DESIGN AWARD 2022. The radio can be installed in either panel or trunion mounting and has a sleek design that looks great on a boat's black glass cockpit dashboard.



Panel mount example

Built-in NMEA 2000™

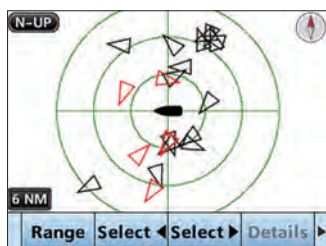
The NMEA 2000™ network provides plug-and-play data communication to inter-connect with other marine equipment such as an MFD (Multi-Function Display.) The radio can send GNSS (GPS) position, AIS*, DSC call, and radio channel data to other equipment.



NMEA 2000™ in/out

Integrated AIS Receiver*1

With its integrated AIS receiver*1 or external NMEA sentence*2, the IC-M510E EVO can show real-time AIS vessel traffic information on the display. You can directly make an individual DSC call to selected AIS targets from the AIS screen.



AIS plotter screen

Loud 25 W Two-Way Hailer/20 W RX Hailer

When connected to the optional SP-37 speaker horn, you can talk with the crew on the deck or shore via the radio's microphone and hear any reply via the horn speaker. The RX hailer function enables you to keep watch of the radio traffic on the deck or tower through the hailer speaker. You can also sound foghorn patterns from the hailer speaker. In addition, the built-in waterproof speaker enhances the received audio and provides powerful, clear audio.

*1 AIS receiver may not be included depending on the transceiver version.

*2 Optional MA-510TR or third-party AIS receiver/transponder.



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SPECIFICATIONS

GENERAL		
Frequency range ^{1,2}	TX	156.025 ~ 161.425 MHz
	RX	156.500 ~ 162.000 MHz*
		* 156.500 ~ 162.025 MHz for China
	DSC	156.525 MHz
	AIS1, 2 ¹	161.975, 162.025 MHz
Usable channels		INT, USA, ATIS ² channels
Type of emission		16K0G3E (FM), 16K0G2B (DSC) 16K0G2B (AIS) ¹
Power supply requirement		12.0 V DC (10.8 V ~ 15.6 V DC)
Current drain	TX 25 W output (at 13.8 V DC)	5.0 A
	RX Max. audio	1.6 A (IC-M510E EVO only)
		1.6 A (with ext SP, RX hailer, and HM-195)
Operating temperature range		-20°C ~ +60°C
Antenna impedance		50 Ω
Dimensions (W × H × D)		175 × 110 × 53 mm
Weight (approximately)		750 g (not including microphone)
TRANSMITTER		
Output power (at 12.0 V DC)		25 W, 1 W
Max. frequency deviation		±5 kHz
Frequency error		Less than ±0.5 kHz
Spurious emissions		Less than 0.25 μW
Residual modulation		More than 40 dB
Adjacent channel power		More than 70 dB
RECEIVER		
Sensitivity (at 20 dB SINAD)		-5 dBμ emf typical
	DSC (1% BER)	-1 dBμ emf typical
Adjacent channel selectivity		More than 75 dB
	DSC (1% BER)	More than 73 dBμ emf
Spurious response		More than 75 dB
	DSC (1% BER)	More than 73 dBμ emf
Intermodulation		More than 75 dB
	DSC (1% BER)	More than 68 dBμ emf
Hum and noise		More than 40 dB
Audio output power (at 10% distortion with 4 Ω)		More than 15 W (external speaker) 20 W typical (RX Hailer) 25 W typical (Hailer)
Wireless LAN		
Wireless LAN standard		IEEE802.11 b/g/n
Authentication and Encryption		WEP (64/128 bit), WPA-PSK (TKIP), WPA2-PSK (AES)
Channels		1 ~ 13 (2.4 GHz band) ^{1,4}
Output power		Less than 10 mW/MHz

¹ Only for the Integrated AIS version. ² Available depending on the transceiver version. ³ May differ depending on version. ⁴ May differ depending on the country of use.

Measurements made in accordance with EN301 025-2, -3. All stated specifications are subject to change without notice or obligation.

Applicable U.S. Military Specifications

Standard	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Rain	506.5	I
Humidity	507.5	II
Salt Fog	509.5	-
Dust Blowing	510.5	I
Immersion	512.5	I
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D, -E and -F.

Applicable IP Rating

Ingress Protection Standard	
Dust & Water	IP68 Dust-tight and waterproof protection

IC-M510E EVO Configuration Variations

	AIS Receiver
IC-M510E EVO AIS	Integrated
IC-M510E EVO	Not included

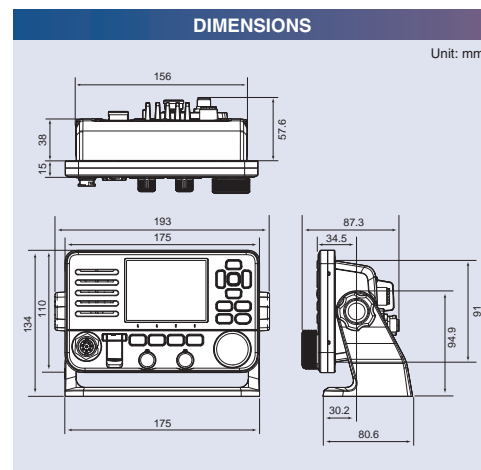
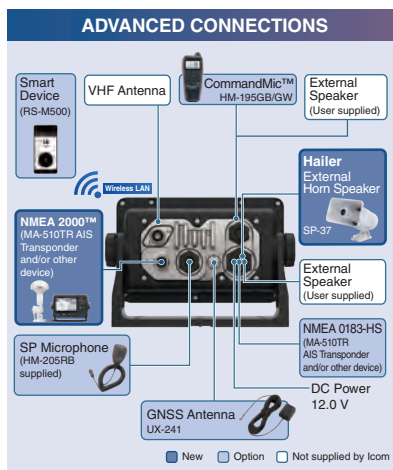
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OPTIONAL ACCESSORIES

Some options may not be available in some countries. Please ask your dealer for details.

COMMANDMIC™  HM-195GB (Black) HM-195GW (White) "Distress" button with HM-195 series. Supplied accessories • OPC-1540. 6.1 m cable • Microphone hanger • Mounting base for connector	SPEAKER-MICROPHONE  HM-205RB Same as supplied.	EXTENSION CABLES  OPC-1541 (6.1 m) For CommandMic™ OPC-1000 (6.1 m) For HM-205RB	
CONVERSION CABLES OPC-2522L L-type conversion adapter cable for HM-205RB.  OPC-2523L L-type conversion adapter cable for HM-195 series. 	HORN SPEAKER  SP-37 Power rating: 30 W, Impedance: 4 Ω	VOICE SCRAMBLER UNIT  UT-112A Total of 32 voice scrambler codes available.	FLUSH MOUNT KITS  MBF-7 Less than 25 mm thickness. MBF-9 Less than 38 mm thickness.
FRONT PANEL COVER MBZ-1 Attach to protect from sunlight. 	CLASS B AIS TRANSPONDER  MA-510TR For transmitting own vessel AIS information.		REMOTE CONTROL SOFTWARE  RS-M500* iOS™/Android™ application for remote operation of the IC-M510E EVO without DSC operation.
GNSS ANTENNA  UX-241	Supplied accessories: • Speaker microphone, HM-205RB • Microphone hanger • Mounting bracket kit • DC power cable • Flash mount gasket		

* Free download Android™/iOS™ app. Download on Google Play™/the App Store.



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