ICOM

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 trunnion mounting and has a sleek design that looks great on a boat's black glass cockpit dashboard.

Panel mount example

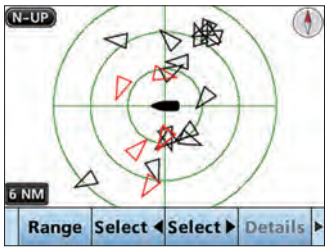
Built-in NMEA 2000™

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*1, 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.

Night Mode

VHF MARINE TRANSCEIVER

IC-M510E EVO

Optional CommandMic™

HM-195GB

Built-in Class D DSC and Distress Button

With just a press of the "DISTRESS" button, the built-in DSC (Digital Selective Calling) system can digitally transmit distress information to the Coast Guard and/or other vessels. The DSC watch function continuously monitors the DSC channel (Ch. 70) for added safety and security.

DISTRESS button

Wide Viewing Angle Colour TFT LCD

The colour TFT LCD provides nearly a 180-degree viewing angle. The wide display has high-resolution characters and function icons. Just hold down the DISP key to switch the Night mode screen which ensures good readability in low light conditions.

Other Features

- Simplified Navigation function
- Combined with MA-510TR supports safer navigation
- Active Noise Canceling technology
- Integrated GNSS receiver (selectable from either internal GPS antenna or use optional UX-241 GNSS antenna)
- IP68 advanced waterproofing (1m depth of water for 60 minutes)
- Voice Scrambler with optional UT-112A
- AquaQuake™ water draining function
- Supplied HM-205RB speaker-microphone can be connected to either the front or rear panel to meet to the user's requirement
- External speaker connection
- Optional HM-195 CommandMic™ are available
- Supports 4-digit channels
- Supplied waterproof flash mount gasket for panel mount

SPECIFICATIONS

GENERAL	
Frequency range*3 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) RX Max. audio	5.0 A 1.6 A (IC-M510E EVO only) 7.3 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)*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	MIL 810 G	
	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

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.

GNSS ANTENNA

UX-241

CLASS B AIS TRANSPONDER

MA-510TR
For transmitting own vessel AIS information.

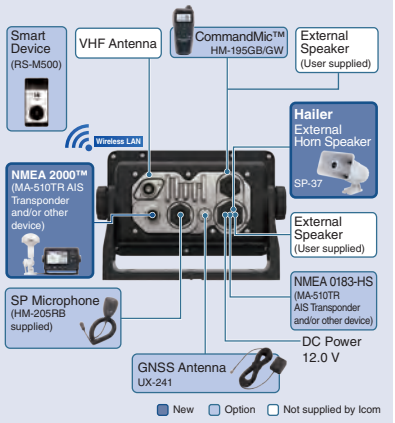
REMOTE CONTROL SOFTWARE

RS-M500*
iOS™/Android™ application for remote operation of the IC-M510E EVO without DSC operation.

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

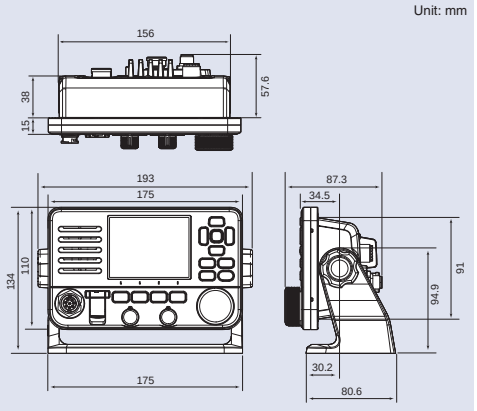
Supplied accessories:
- Speaker microphone, HM-205RB
- Mounting bracket kit
- Microphone hanger
- Flash mount gasket
- DC power cable

ADVANCED CONNECTIONS



DIMENSIONS

Unit: mm



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