

VHF MARINE TRANSCEIVER

## Command & Control Using Your Smart Device



# Class-D DSC VHF Marine Radio with WLAN Function

## Radio Control & Intercom via Your Smart Device

Use the RS-M500 app (for iOS™/Android™) to remotely control the IC-M510E through WLAN. Up to three smart devices can be used as a wireless microphone or remote controller in substitute for a simple microphone. Intercom function between your smart device and the radio is also available.



Smart device (RS-M500)

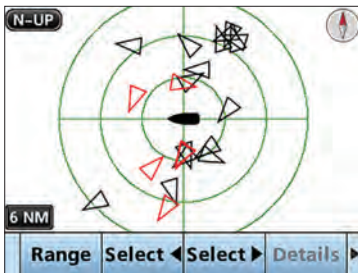


IC-M510E



Smart device

## Integrated AIS Receiver\*

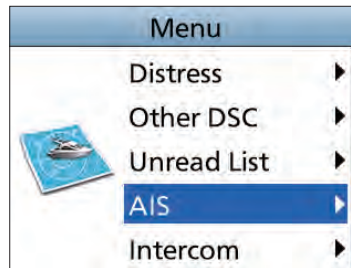


AIS plotter screen

With its integrated AIS receiver\* or external NMEA sentence (third party AIS receiver, transponder), the IC-M510E 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 receiver is not included depending on the transceiver version.

## Wide Viewing Angle Colour TFT LCD



Menu screen

The colour TFT LCD provides nearly a 180-degree viewing angle. The wide display has high-resolution characters and function icons. The night mode screen ensures good readability in low light conditions.

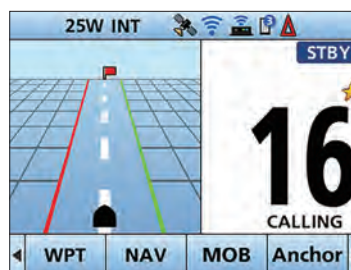
## New Sleek Design



Panel mount example

The IC-M510E is slim (depth: 53.6 mm) and easy to install in your boat. It's all-new sleek design is suitable for either panel or trunnion mounting.

## Simplified Navigation Function



Navigation screen

The Navigation function guides you to a specified waypoint or AIS target. You can assign up to 100 destinations as waypoints.



VHF MARINE TRANSCEIVER **IC-M510E**

Night Mode

Optional **COMMANDMIC™**  
**HM-195GB**  
**HM-229B**

**Provides Clear, Loud Audio**

The IC-M510E's internal speaker enhances the received audio. The waterproof speaker provides superior sound quality with a wide frequency range for powerful, clear audio.

**Interface BOX for NMEA 2000™ and Hailer**



CT-M500

The optional CT-M500 wireless interface box provides NMEA 2000™ connectivity and Two-way Hailer/PA function. The CT-M500 and the radio can be connected through WLAN. This separate interface box option allows for flexibility in positioning the unit closer to the NMEA network connection point.

**And More**

- Active Noise Canceling
- NMEA 0183/HS connectivity, NMEA 2000™ (CT-M500 required)
- Integrated GNSS receiver (Selectable from either internal receiver or use optional UX-241 GNSS antenna)
- IP68 advanced waterproofing (1 m depth of water for 60 minutes)
- Automatic Foghorn function (CT-M500 required)
- Voice Scrambler with optional UT-112A
- AquaQuake™ prevents audio degradation from a water-logged speaker
- Supplied speaker-microphone, HM-205RB can be connected to the rear panel
- External speaker connection
- Controlled with COMMANDMIC™ HM-195 or HM-229 series
- Supports 4-digit channels

## SPECIFICATIONS

GENERAL		
Frequency range	TX RX DSC AIS1, 2**	156.025–161.425 MHz <sup>†3</sup> 156.300–161.925 MHz <sup>†3</sup> 156.525 MHz 161.975, 162.025 MHz
Usable channels		INT, USA, ATIS <sup>†2</sup> channels
Type of emission		16K0G3E (FM), 16K0G2B (DSC) 16K0G2B (AIS) <sup>†2</sup>
Power supply requirement		13.8 V DC (10.8–15.6 V DC)
Current drain	TX 25 W output RX Max. audio	5.0 A 4.0 A (with HM-195)
Operating temperature range		–20°C to +60°C; –4°F to +140°F
Antenna impedance		50 Ω
Weight (approximate)		750 g; 1.7 lb (Not including microphone)
TRANSMITTER		
Output power (at 13.8 V DC)		25 W, 1 W
Max. frequency deviation		±5 kHz
Frequency error		±0.5 kHz
Spurious emissions		Less than 0.25 μW (at 25 W)
Residual modulation		More than 40 dB
Adjacent channel power		More than 70 dB
RECEIVER		
Sensitivity (at 20 dB SINAD)		–5 dBμ
DSC (1% BER)		–1 dBμ emf
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)		15 W typ. with a 4 Ω external speaker
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 to 13 (2.4 GHz band) <sup>†4</sup>
Output power		Less than 10 mW/MHz

<sup>†1</sup> Only for the Integrated AIS version. <sup>†2</sup> Available depending on the transceiver version. <sup>†3</sup> May differ depending on version. <sup>†4</sup> 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

### Supplied accessories:

- Speaker-microphone, HM-205RB
- Microphone hanger
- DC power cable
- Mounting bracket kit

## OPTIONAL ACCESSORIES

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

### COMMANDMIC™

**HM-195GB** (Black)  
**HM-195GW** (White)  
or **HM-229B** or **HM-229W**

\*"Distress" button\* with HM-195 series.  
\* HM-229 has no "Distress" button.

**Supplied accessories**

- OPC-1540, 6.1 m (20 ft) cable
- Microphone hanger
- Mounting base for connector

### SPEAKER-MICROPHONE

**HM-205RB**  
Same as supplied.

### EXTENSION CABLES

**OPC-1541** (6.1 m, 20 ft)  
For COMMANDMIC™

**OPC-1000** (6.1 m, 20 ft)  
For HM-205RB

### WIRELESS INTERFACE BOX

**CT-M500**  
For NMEA 2000™ interface and Hailer/PA function. To connect to the IC-M510E via WLAN.

### HORN SPEAKER

**SP-37**  
Power rating: 30 W, Impedance: 4 Ω

### VOICE SCRAMBLER UNIT

**UT-112A**  
Total of 32 voice scramble codes available.

### FLUSH MOUNT KIT

**MBF-7**

### 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

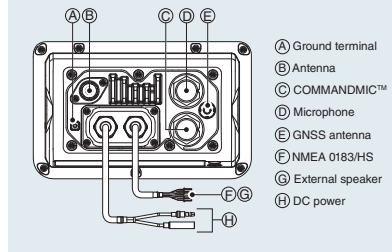
**RS-M500\***  
iOS™/Android™ application for remote operation of the IC-M510E without DSC operation.

### GNSS ANTENNA

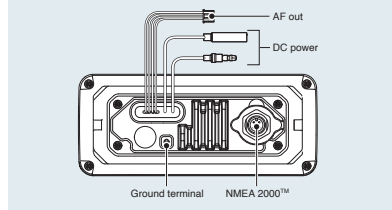
**UX-241**

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

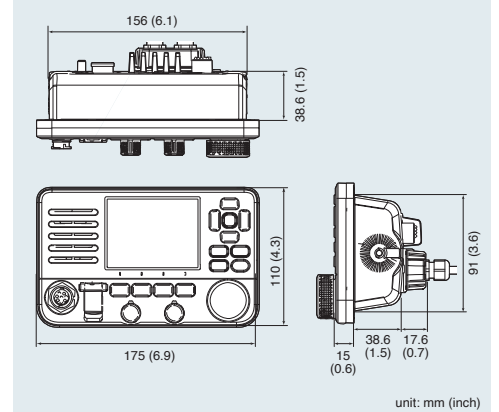
### REAR PANEL VIEW



### CT-M500 REAR PANEL VIEW



### DIMENSIONS



### IC-M510E Configuration Variations

	AIS Receiver
IC-M510E AIS (#25)	Integrated
IC-M510E (#15)	Not included

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