

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

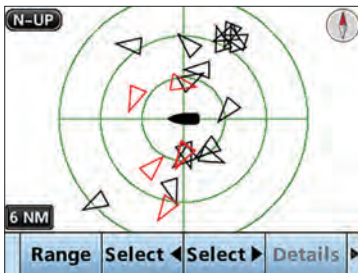


Smart device

WLAN

Front Deck

Integrated AIS Receiver*

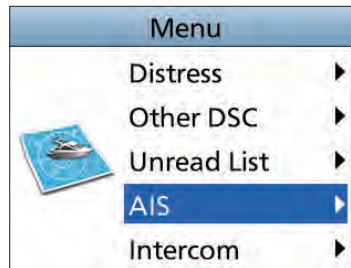


AIS plotter screen

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 trunion 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.



COMMANDMIC™ HM-195/HM-229 Series

Fly Deck

WLAN

Rear Deck

Cockpit

IC-M510E

Smart device

Bed Room

WLAN

Smart device



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** 156.300–161.925 MHz** 156.525 MHz 161.975, 162.025 MHz |
| Usable channels | | INT, USA, ATIS** channels |
| Type of emission | | 16K0G3E (FM), 16K0G2B (DSC) 16K0G2B (AIS)** |
| 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) DSC (1% BER) | | –5 dBμ –1 dBμ emf |
| Adjacent channel selectivity DSC (1% BER) | | More than 75 dB More than 73 dBμ emf |
| Spurious response DSC (1% BER) | | More than 75 dB More than 73 dBμ emf |
| Intermodulation DSC (1% BER) | | More than 75 dB 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)** |
| Output power | | Less than 10 mW/MHz |

** Only for the Integrated AIS version. ** Available depending on the transceiver version. ** May differ depending on version. ** 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™



Supplied accessories

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

HM-195GB (Black) HM-195GW (White) *Distress* button* with HM-195 series. * HM-229 has no "Distress" button.

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.

GNSS ANTENNA



UX-241

CLASS B AIS TRANSPONDER



MA-510TR
For transmitting own vessel AIS information.

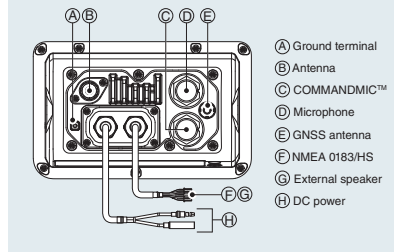
REMOTE CONTROL SOFTWARE



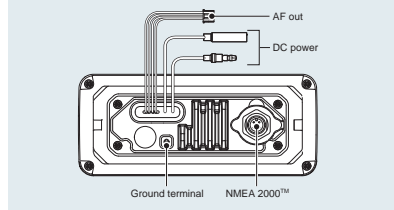
RS-M500*
iOS™/Android™ application for remote operation of the IC-M510E without DSC operation.

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

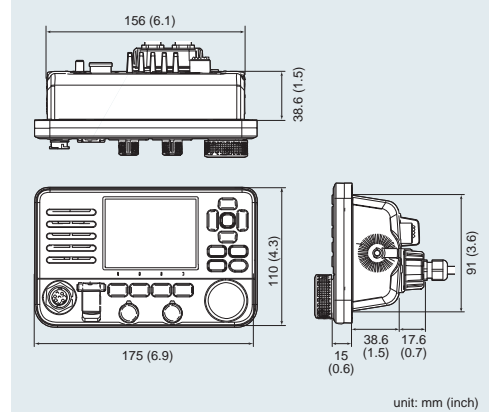
REAR PANEL VIEW



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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