



VHF MARINE TRANSCEIVER

IC-M505

**DSC Built-in
Class D**

Waterproof
1.5m depth for 30 minutes

Rugged
MIL-STD 810



Icom Inc.

Stylish and Sophisticated Class D Marine VHF

MARINE VHF TRANSCEIVER

IC-M505



Black version



Gray version

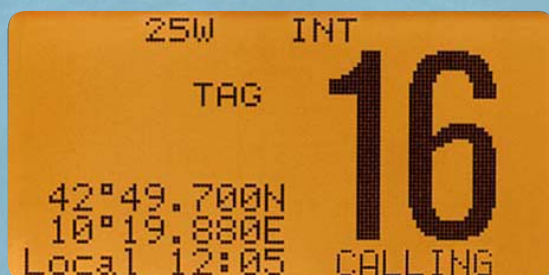
IPX8 grade waterproofing
(1.5m depth for 30 minutes)

Waterproof
1.5m depth for 30 minutes

The IC-M505 withstands submersion in up to 1.5m depth of water for 30 minutes. It is equivalent to the IPX8 standard. All products are rigorously checked to pass the quality test at the factory. You can install the unit into the most convenient place, without worrying about water splash.

Large LCD with dot-matrix characters

The large full dot-matrix display is designed for optimum readability in any lighting condition. With the extra large font, the channel number is maximized on the display, and GPS data, DSC emergency data, and other information can be easily read. The large buttons and knobs provide user friendly operation.



▲ 37×73mm size full dot-matrix display



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DSC Built-in Class D

ITU Class D DSC

The IC-M505 has built-in Class D DSC, which enables you to constantly monitor channel 70. This functionality provides users at sea with the peace of mind that they can call for help by pressing the "Distress" button if the need arises.

Position Request and Position Report

Over and above the DSC, your own and other ships' position data can be exchanged with the position request or position report functions. The received position information can be transferred to external navigation equipment*. In addition, the polling (request/reply) function checks whether a specific ship is within the communications range.

* External GPS receiver and navigation equipment which accepts NMEA 0183 format is required.

Superior receiver performance

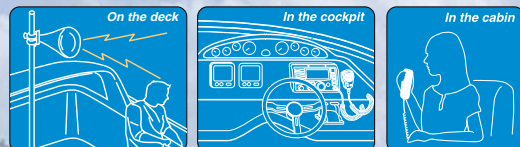
The IC-M505 has excellent receive specifications of 73dB for intermodulation rejection and adjacent channel selectivity, and -5dBµV (typical) high sensitivity. The IC-M505's superior receiver provides excellent resistance to intermodulation and allows you to catch a weak signal between strong stations.

Powerful audio output

The extra large speaker is mounted into a well-spaced housing, producing greater sound than the specified 2W output power. You can get clear and loud reception without requiring repetition of the message, even over the engine or other background noise.

25W hailer/RX speaker and auto foghorn

When connected to a hailer horn or external speaker on the deck or tower, you can make an announcement on-board from the microphone. The RX speaker function, "receiver-repeater", allows you to monitor the received audio from the hailer horn or speaker. Four foghorn patterns are also available for the automatic foghorn.



You can hear the received audio on the deck or tower, even when you are away from the transceiver.

GPS information indication

When connecting to an external GPS receiver, the GPS information indication function shows course and speed data as well as position, date and time on the display.

Other features

- Dual/tri-watch function for monitoring Ch.16 and/or call channel
- Instant access to Ch. 16 and call channel
- 7 levels adjustable backlit display and keypad
- Convenient "TAG" scanning function
- Optional Voice Scrambler, UT-112 for private communication
- 70 programmable channels
- Low voltage indicator
- Time-out-timer function
- Gray colour version (UK and Europe versions only)



Optional fully integrated COMMANDMICIII™

Full control 2nd station capability

The COMMANDMICIII™ is a remote control for the IC-M505 that may be positioned up to 18.3m (60ft) away from the IC-M505. All functions, including distress call, DSC, and foghorn, are available. The COMMANDMICIII™ may also be used as an intercom with the IC-M505.

Multi-function rotary dial

A newly designed multi-function rotary dial gives you quick and easy access to many M505 settings, including operating channel, volume, squelch, menu settings and more.

Other features

- Full dot-matrix LCD with 7-step dimmer setting
- Advanced waterproofing (1.5m/30 minutes)
- Extra large 45mm (d) speaker for superior audio
- 2.0W (typical) external speaker terminal



Backlit keypad and rotary dial

"Distress" button on the back of the unit

Optional COMMANDMICIII™, HM-162E ▶



SPECIFICATIONS

GENERAL

- Frequency range :
 - Tx 156.000–161.450MHz
 - Rx 156.000–163.425MHz
 - Ch 70 Rx 156.525MHz
- Mode : FM (16K0G3E), DSC (16K0G2B)
- Usable channels : INT and USA* channels (* UK version only.)
- Power supply requirement: 13.8V DC (10.8–15.6V)
- Current drain (at 13.8V DC):
 - Transmit 5.5A (25W output)
 - Receive 1.5A (Max. audio)
- Operating temperature range : -20°C to +60°C
- Antenna impedance : 50Ω (SO-239)
- Dimensions : 165×110×123.2 mm (W×H×D; projections are not included)
- Weight (approx.) : 1.45kg
- NMEA formats :
 - Input RMC, GGA, GNS, GLL, VTG
 - Output DSC, DSE

TRANSMITTER

- Output power : 25W/1W (at 13.8V DC)
- Max. Freq. deviation : ±5.0kHz
- Frequency error : ±1.5kHz
- Spurious emissions : Less than 0.25μW
- Adjacent Ch. power : More than 70dB
- Residual modulation : More than 40dB
- Audio harmonic distortion :
 - (at 60% deviation) Less than 10%
- Audio frequency response : +1dB to -3dB of 6dB oct. from 300Hz to 3000Hz

RECEIVER

- Intermediate frequency (1st/2nd) :
 - Normal 21.7MHz/450kHz
 - Ch. 70 31.05MHz/450kHz
- Sensitivity : -5dBμ typ. (emf: at 20dB SINAD)
- Squelch sensitivity : Less than 0dBμ (emf)
- Adjacent channel selectivity : More than 73dB (DSC More than 70dB)
- Spurious response : More than 73dB (DSC More than 70dB)

- Intermodulation : More than 73dB (DSC More than 68dB)
- Hum and noise : More than 40dB
- Audio frequency response : +1dB to -3dB of 6dB oct. from 300Hz to 3000Hz
- Audio output power : More than 2W (at 10% distortion with a 4Ω load)

Supplied accessories:

- Hand microphone
- DC power cable
- Mounting bracket kit

Applicable U.S. Military Specifications

The IC-M505 and HM-162E have been tested to and passed the following MIL-STD requirements and strict environmental standards.

Standard	MIL 810 C		MIL 810 D		MIL 810 E		MIL 810 F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
Low Pressure	500.1	I	500.2	I, II	500.3	I, II	500.4	I, II
High Temp.	501.1	I	501.2	I, II	501.3	I, II	501.4	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II	502.4-3	I, II
Temp. Shock	503.1	I	503.2	I	503.3	I	503.4	I
Solar Radiation	505.1	I	505.2	I	505.3	I	505.4	I
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III
Humidity	507.1	I, II	507.2	II, III	507.3	II, III	507.4	-
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	-
Dust Blowing	510.1	I	510.2	I	510.3	I	510.4	I
Immersion	512.1	I	512.2	I	512.3	I	512.4	I
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.5	I
Shock	516.2	I, II, V	516.3	I, IV	516.4	I, IV	516.5	I, IV

Measurements made in accordance with EN 301 025. All stated specifications are subject to change without notice or obligation.

OPTIONS

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

- **HM-162E REMOTE-CONTROL MICROPHONE**
Size (W×H×D): 65.5×150×38 mm
Weight (approx.; except cables): 385g
Supplied accessories :
 - 6.1m of cable, OPC-1540, with external speaker terminal
 - Microphone hanger
 - Mounting base for cable connector

DO NOT connect the HM-134B to the IC-M505 as this may damage the transceiver. HM-134B COMMANDMIC™ is NOT compatible with the IC-M505.



COMMANDMIC is a registered trademark of Icom Inc. (Japan) in the USA.

- **MB-75 FLUSH MOUNT KIT**
For flush-mounting the IC-M505 to a flat surface, such as a control panel.



- **OPC-1541 EXTENSION CABLE FOR HM-162E**
6.1m of extension cable for additional separation length when using the COMMANDMIC™. Up to 2 OPC-1541 can be connected.

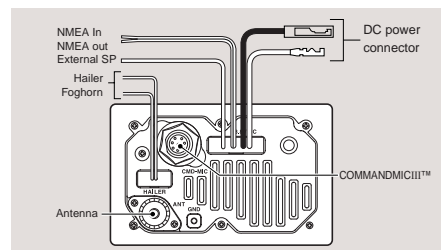


- **UT-112 VOICE SCRAMBLER UNIT**
Enables private communication by scrambling your voice signal. Up to 32 scrambling codes are available.

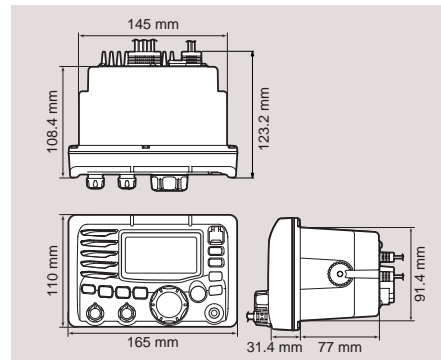


- **OPC-1542** : Connection cable for rear panel microphone connection.
- **HM-126RB/RG** : Speaker-microphone for rear panel connection.

REAR PANEL VIEW



DIMENSIONS



To install the OPC-1542 cable, modifications are required. Please ask your dealer for details (Not available in some countries).

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