



# IC-M85E

VHF MARINE TRANSCEIVER

## *Marine and PMR Hybrid for Professional Use*





# Ultra Compact and Powerful with PMR Features



[ Actual Size ]



VHF MARINE TRANSCEIVER  
**IC-M85E**



## Compact and Lightweight

The IC-M85E is the most compact (W×H×D: 56 × 92 × 36.2 mm) and lightweight (weight: 281 g (with BP-294, FA-SC58V and MBB-3)) commercial grade marine and land mobile hybrid radio in the world\*.

\* As of December 2021, researched by Icom.



## Covering 136–174 MHz PMR Frequency

In addition to VHF marine channels, the IC-M85E covers 136–174 MHz PMR channels. Up to 100 programmable channels are available for PMR use. Each channel is programmable with CTCSS and DTCS tone.



## 700 mW Powerful Audio

Despite its compact body, the IC-M85E delivers 700 mW of loud audio. Clear communications is vital in noisy environments.



## Private Conversation

The radio has a built-in Voice Scrambler and provides private communication between stations (32-code, compatible with UT-112 voice scrambler unit).

### Supplied accessories;



BP-294 battery pack    BC-227 rapid charger    BC-123S\* AC adapter    FA-SC58V antenna  
\* SE for Europe plug. SUK for UK plug. SV for Australia plug.

# Marine Handheld



## Automated Emergency Alarm

The IC-M85E has three emergency related functions: the MOB Alarm, Man Down and Lone Worker functions. If one of these functions are activated, the radio automatically makes an emergency alarm.



## Instant Operation with Multi-Function Button

Channel group changing (Marine  $\leftrightarrow$  PMR) or the scrambler function ON/OFF can be assigned in the multi-function button on the top panel\*. The Key lock function can be activated by holding the button.



Multi-function button

\* Ask your dealer for details.



## IP67 and MIL-STD Rugged Construction

The IC-M85E is built durable to endure 1 m submersion for 30 minutes and dust-tight protection. The radio also passes MIL-STD-810 specifications.



### And More

- AquaQuake™ prevents audio degradation from a water-logged speaker
- Internal VOX capability for hands-free operation
- 21 hours of long battery life with BP-294 (TX: RX: Standby=5:5:90.)
- 5 W output power
- The self check function checks internal temperature, and connected battery voltage (over voltage detection)
- Monitor function • Priority scan function
- Dual/Tri-watch function for monitoring CH16 and/or call channel
- Favorite channel function for quick access to often used channels
- Supports 4-digit channels



MBB-3 belt clip



Hand strap

## Variety of Audio Accessories

### Waterproof Speaker-Microphones

HM-236



HM-222

With 3.5 mm earphone jack.



### Hands-Free Operation with Headsets

HS-94

Earphone-headset



or

HS-95

Behind-the-head headset



or

HS-97

Throat microphone



VS-5MC

PTT switch cable



### Earphones and Speaker Microphones for Noisy Environments

SP-27

Tube earphone\*



or

SP-29

Earhook type earphone\*



or

SP-40

Earphone\*



AD-135

3.5 mm earphone jack adapter.



HM-222

Waterproof speaker microphone with 3.5 mm earphone jack.



\* With 3.5 mm plug.

### Stylish Operation with Tie-Clip Microphone and Earphones

SP-26

Tube earphone\*



or

SP-28

Earhook type earphone\*



or

EH-15B

Earphone\*



HM-163MC

Tie-clip microphone



\* With 2.5 mm plug.

### Covert Earphone


SP-32

Tube earphone adapter for use with EH-15B and HM-163MC.



## OPTIONS


**BATTERY PACK AND CASE**



**BP-294**  
Li-ion battery with intelligent reporting.  
3050 mAh (min.)  
3150 mAh (typ.).  
IP67 Waterproof

**BP-291**  
Battery case LR6 (AA) × 5.  
Water resistance

**MULTI-CHARGER**




**AD-132N**

**BC-214N** **BC-157S**

Charges up to six BP-294 batteries in 5.3 hours (approx.).  
AD-132N is supplied with BC-214N, depending on version.


**CONNECTABLE TYPE CHARGER**



**BC-226** **BC-228**  
Charges the BP-294 in 4.9 hours. (approx.)


**CONNECTS UP TO SIX BC-226 UNITS.**

**INTELLIGENT CHARGER**



**BC-225** **BC-123S\***  
Shows the charging information with LED lighting. Charges the BP-294 in 4 hours. (approx.)


**DESKTOP CHARGERS**



**BC-227** **BC-123S\*** **BC-219N** **BC-123S\***  
Charges the BP-294 in 4.9 hours. (approx.)  
Charges the BP-294 in 4.7 hours. (approx.)


\* SE for Europe plug. SUK for UK plug. SV for Australia plug.

**BELT CLIPS**




**MBB-3** **MB-136**  
Alligator type. Swivel type.

**BELT HANGERS**



**MB-96N** **MB-96F** **MB-96FL**  
Swivel type. Fixed type. Long type.

**ACC ADAPTOR**



**AD-118**  
14-pin multi-connector to 6-pin Hirose connector

**CARRYING CASES**



**LC-187** **LC-188**  
Hard type. Hard type.  
Charging is possible while the case is attached.

**CIGARETTE LIGHTER CABLE & POWER SUPPLY CABLES**



**CP-23L** **OPC-515L** **OPC-656**  
For use with the BC-219N or BC-227. For use with the BC-219N, BC-225 or BC-227. For use with the BC-214N.

**ANTENNA**



**FA-SC58V**

## SOFTWARE

• **RS-BC225** : Intelligent charger software for Windows® PC. For use with BC-225.

## SPECIFICATIONS

		IC-M85E	
GENERAL		Marine channels	PMR channels
Frequency coverage	EUR, UK	Tx:156.000–161.450 MHz	Tx/Rx:136.000–174.000 MHz
	FRG, HOL	Rx:156.000–163.425 MHz	
	AUS	Tx:156.025–157.425 MHz Rx:156.300–162.025 MHz	Tx/Rx:136.000–174.000 MHz
Usable channel groups, Number of channels		INT, USA* channels (* Varies according to version)	100 PMR channels
Type of emissions	EUR, UK, AUS FRG, HOL	16K0G3E	16K0F3E/8K50F3E 14K0F3E/8K50F3E
Channel spacing		25 kHz	25/12.5 kHz 20/12.5 kHz
Power supply requirement		7.2 V DC nominal	
Current drain (approximate)		Tx:1.5 A (at 5 W)/Rx:0.45 A (Max.audio)	
Antenna impedance		50 Ω	
Operating temperature range	EUR, UK	–15 °C to +55 °C	–25 °C to +55 °C
	FRG, HOL AUS	–10 °C to +55 °C	–10 °C to +50 °C
Dimensions (W×H×D)		56 × 92 × 36.2 mm (With BP-294) (Projections not included)	
Weight (approximate)		281 g (with BP-294, FA-SC58V and MBB-3)	
TRANSMITTER			
Output power (at 7.2 V DC)		5/3/1 W	5/3/1 W
Max. frequency deviation	EUR, UK, AUS FRG, HOL	±5.0 kHz	±5.0 kHz (Wide), ±2.5 kHz (Narrow)
	AUS		±4.0 kHz (Wide), ±2.5 kHz (Narrow)
Frequency stability	EUR, UK	±1.5 kHz	
	FRG, HOL AUS	±1.5 kHz	±1.5 kHz
Spurious emissions	EUR, UK	0.25 μW (≤2 GHz), 1.0 μW (>2 GHz)	
	FRG, HOL AUS	–70 dBc typ.	
Residual modulation		40 dB	40 dB (Wide), 34 dB (Narrow)
Audio harmonic distortion		10% (at 60% deviation)	
Modulation limiting		60–100% of maximum deviation	
RECEIVER			
Sensitivity (at 20 dB SINAD)		–4 dBμ emf typical	–4 dBμ emf typ. (Wide) –2 dBμ emf typ. (Narrow)
Adjacent channel selectivity		70 dB	70 dB (Wide) 60 dB (Narrow)
Spurious response		70 dB	
Intermodulation		68 dB	65 dB
Hum and noise		40 dB	40 dB (Wide), 34 dB (Narrow)
Audio output power	Internal SP	700 mW typical (at 10% distortion with 12 Ω load at 1 kHz)	
	External SP	700 mW typical (at 10% distortion with 8 Ω load at 1 kHz)	

Measurements made in accordance with EN 301-178 or EN 300 086.

All stated specifications are subject to change without notice or obligation.

## Applicable U.S. Military Specifications &amp; IP Rating

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 Blowing/Drip	506.5	I, III
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.

Ingress Protection Standard	
Dust & Water	IP67 (Dust-tight and waterproof protection)

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