

## Ultra Compact Intrinsically Safe Radio with 5 Watt Power Output



IC-M85UL

**5 W output power for hazardous locations approved by UL**

\* Land mobile channels for the USA version: 2 W

**Intrinsically safe: Class I, Division 1, Groups C, D;  
Class II, Division 1, Groups E, F, G;  
Class III. T3C.**

**Non-incendive: Class I, Division 2, Groups A, B, C, D**

**ANSI/TIA-4950-A, ANSI/UL 121201**

\* When used with Icom BP-292UL battery pack

\* Ambient temperature: -20°C to +60°C

**Compact and lightweight commercial grade marine and land mobile hybrid radio**

**Covering 136–174 MHz land mobile frequency, in addition to VHF marine channels**

**700 mW powerful audio provides clear communications**

**Abundant Emergency Functions; Man Over Board, Man Down, and Lone Worker Alarms**

**Easy switch between channel groups (Marine ↔ LMR) with a programmable multi-function button on the top panel**





**IP67 and MIL-STD-810G rugged construction**

**AquaQuake™ prevents audio degradation from a water-logged speaker**

**11 hours of long-lasting operating time (with BP-292UL, TX: RX: Standby = 5 : 5 : 90)**




**Optional speaker-microphone, HM-184UL**

OPTIONS

<p><b>BATTERY PACK</b></p>  <p><b>BP-292UL</b> Rechargeable Li-ion battery 7.2 V/ 1910 mAh (min.) 2010 mAh (typ.).</p>	<p><b>DESKTOP CHARGER</b></p>  <p><b>BC-227*1</b>   <b>BC-123S*2</b> Charges the BP-292UL in 2.7 hours. (approx.)</p>	<p><b>CONNECTABLE TYPE CHARGER</b></p>  <p><b>BC-226*1</b>   <b>BC-228</b> Charges the BP-292UL in 2.7 hours. (approx.)</p>  <p>Connects up to six BC-226 units.</p>
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\*1 The battery charger must not be used in an explosive atmosphere.  
\*2 SE for Europe plug, SA for USA plug.

<p><b>SPEAKER-MICROPHONE</b></p>  <p><b>HM-184UL</b> Waterproof.</p>	<p><b>BELT CLIPS</b></p>  <p><b>MBB-3</b>   <b>MB-136</b> Alligator type.   Swivel type.</p>	<p><b>BELT HANGERS</b></p>  <p><b>MB-96N</b>   <b>MB-96F</b>   <b>MB-96FL</b> Swivel type.   Fixed type.   Long type.</p>
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<p><b>CARRYING CASE</b></p>  <p><b>LC-191</b> Hard type. Charging is possible while the case is attached.</p>	<p><b>CIGARETTE LIGHTER CABLES &amp; POWER SUPPLY CABLE</b></p>  <p><b>CP-23L</b>   <b>CP-25H</b>   <b>OPC-515L</b> For use with the BC-227.   For use with the BC-227.   For use with the BC-227.</p>	<p><b>ANTENNA</b></p>  <p><b>FA-SC58V</b> Same as supplied.</p>
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The IC-M85UL should only be used with the specified Intrinsically Safe approved options. DO NOT use the transceiver with any other equipment other than the above options.

**Supplied accessories:**

- BP-292UL, battery pack
- BC-227, desktop charger
- BC-123SA/SE\*, AC adapter
- FA-SC58V, antenna
- MBB-3, Belt clip
- Hand strap

\* May differ, depending on transceiver version.

SPECIFICATIONS

		IC-M85UL	
GENERAL		Marine channels	LMR channels
Frequency coverage	TX RX	156.025–157.425 MHz 156.050–163.275 MHz	136.000–174.000 MHz
Usable channel groups, Number of channels		INT, USA*, CAN, WX* channels (*Varies according to version)	100 LMR channels
Type of emissions (Channel spacing)	USA EXP	16K0G3E (25 kHz) 16K0G3E (25 kHz)	11K0F3E (12.5 kHz) 16K0F3E (25 kHz) 11K0F3E (12.5 kHz)
Power supply requirement		7.2 V DC nominal	
Current drain (approximate)	TX RX Max. audio	1.5 A (at 5 W)	0.9 A (at 2 W) 1.5 A (at 5 W)
Antenna impedance		50 Ω	
Operating temperature range		-20 °C to +60 °C, -4 °F to +140 °F	-30 °C to +60 °C, -22 °F to +140 °F
Dimensions (W×H×D) (Projections not included)		56 × 92 × 34.1 mm, 2.2 × 3.6 × 1.3 in (With BP-292UL)	
Weight (approximate)		285 g, 10.1 oz (with BP-292UL, FA-SC58V and MBB-3)	
TRANSMITTER			
Output power (at 7.2 V DC)	USA EXP	5/3/1 W	2/1 W 5/3/1 W
Max. frequency deviation		±5.0 kHz	±5.0 kHz (Wide) ±2.5 kHz (Narrow)
Frequency stability		±5.0 ppm	
Spurious emissions		-70 dBc typical	
Hum and noise		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 12 dB SINAD)		0.25 μV typical	
Adjacent channel selectivity		70 dB typical	70 dB typical (Wide) 55 dB typical (Narrow)
Spurious response		70 dB typical	
Intermodulation		70 dB typical	
Hum and noise		40 dB	40 dB (Wide), 34 dB (Narrow)
Audio output power	Internal SP External SP	700 mW typical (at 10% distortion with 12 Ω load)	700 mW (at 10% distortion with 8 Ω load)

Measurements made in accordance with TIA/EIA-603. All stated specifications are subject to change without notice or obligation.

Applicable U.S. Military Specifications & 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)

Read all instructions enclosed with the transceiver carefully and completely before using the transceiver.

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