



VHF MARINE TRANSCEIVER

# IC-M88 UL Version

## Marine Radio for Hazardous Locations

### 5 W Output Power for Hazardous Locations

The IC-M88 UL version provides 5 W output power and can be used in hazardous locations, stipulated under Class I, Division 2 conditions of use approved by UL. Nonincendive: Class I, Division 2, Groups A, B, C, D T6 ( $\leq 85^{\circ}\text{C}$ ) when used with Icom BP-227UL battery pack. Approved accessories: Speaker-microphone, HM-168IS. Ambient temperature:  $-20^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ . ANSI/ISA 12.12.01

### IPX7, Waterproof Construction

The IC-M88 UL version is built tough to withstand hazardous and inhospitable environments at sea and on land. Even if the IC-M88 UL version is dropped into water, the IPX7 waterproof construction will protect it from harm (1 m depth for 30 minutes). The compact and durable body also has been tested to U.S. military specifications (MIL-STD 810).

### Rechargeable Li-ion Battery for Extra Long Battery Life

With the standard 1950 mAh (typ.) Li-Ion battery pack, BP-227UL, the IC-M88 UL version allows you up to 19 hours of operating time.\*

\* Typical operation; Tx:Rx:Stand-by duty ratio = 5:5:90

### 22 Programmable Channels for LMR Use

The IC-M88 UL version has 22 programmable channels for LMR use\* (146–174 MHz). CTCSS and DTCS signaling is built-in.

\*Appropriate license will be required.

### Optional Waterproof Speaker-Microphone, HM-168IS

An optional waterproof speaker-microphone, HM-168IS, provides reliable operation, allowing you to wear the IC-M88 on your belt for added portable convenience.

### Built-in Voice Scrambler

The IC-M88 UL version has a built-in 32 code voice scrambler, depending on version. The voice scramble is compatible with the UT-112 which is adopted to some Icom marine radios.



Photo includes optional speaker-microphone, HM-168IS.

**Additional features**

- Selectable 5/3/1 W output power
- Auto WX scan and WX alert function
- Simple Up/Down switches for operating channel selection
- Instant access to Ch. 16 and Ch. 9 (or call channel)
- Simple add/delete TAG scanning operation
- Battery indicator shows remaining battery power in 4 levels
- Beep sound is programmable for each button
- The self check function checks internal temperature, connected battery voltage (over voltage detection), and water intrusion
- Monitor button opens squelch
- Key lock function
- Automatic scan function
- 2 step power saver

**OPTIONS**

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

<p><b>BATTERY PACK</b></p>  <p><b>BP-227UL</b> Rechargeable Li-Ion 1850 mAh (min.), 1950 mAh (typ.)</p>	<p><b>DESKTOP CHARGER</b></p>  <p><b>BC-147SA</b>    <b>BC-152N</b> Charges the BP-227UL in 9-10 hours. (approx.)</p>	<p><b>RAPID CHARGER</b></p>  <p><b>BC-123SA</b>    <b>BC-190</b> Rapidly charges the BP-227UL in 2.5-3 hours. (approx.)</p>
<p><b>MULTI-CHARGER</b></p>  <p><b>BC-197</b> Rapidly charges up to 6 battery packs in 2.5-3 hours. AD-128 is supplied with the BC-197, depending on version.</p>	<p><b>CIGARETTE LIGHTER CABLE</b></p>  <p><b>CP-23L</b> For use with BC-152N</p>	<p><b>DC POWER CABLES</b></p>  <p><b>OPC-515L</b>    <b>OPC-656</b> For use with BC-152N    For use with BC-197</p>
<p><b>SPEAKER-MICROPHONE</b></p> <p><b>IPX7</b></p>  <p><b>HM-1681S</b></p>	<p><b>LEATHER BELT HANGERS</b></p>  <p><b>MB-96N</b>    <b>MB-96F</b>    <b>MB-96FL</b> Swivel type    Fixed type    Long type</p>	<p><b>BELT CLIPS</b></p>  <p><b>MB-98</b>    <b>MB-86</b> Alligator type    Swivel type</p>

DO NOT use the transceiver with any other equipment other than the above options. The following battery chargers, BC-152N, BC-190 or BC-197 MUST NOT be used in an explosive atmosphere. Please ensure the IC-M88 UL version ratings are acceptable for the intended place of use, at Icom website "http://www.icom.co.jp/products/marine/handheld/IC-M88\_UL/". Please note there are classification differences between the IC-M88 UL and IC-M88 FM version.

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

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**SPECIFICATIONS**

IC-M88 UL Version		
<b>GENERAL</b>	<b>Marine channels</b>	<b>LMR channels</b>
Frequency coverage Tx Rx	156.025-157.425 MHz 156.050-163.275 MHz	146.000-174.000 MHz
Usable channel groups, Number of channels	INT, USA, CAN, WX channels	22 LMR channels
Type of emission	16K0G3E	8K50F3E
Channel spacing	25 kHz	12.5 kHz
Power supply requirement	7.4 V DC nominal	
Current drain (approx.) Tx (at 5 W) Rx Max. audio	1.6 A typ. 200 mA typ.	
Antenna impedance	50 Ω (SMA type)	
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)	62 × 97 × 39 mm; 2.44 × 3.82 × 1.54 in (With BP-227UL)	
Weight (approx.)	280 g; 9.9 oz (With BP-227UL)	
<b>TRANSMITTER</b>		
Output power (Hi/Mid/Low)	5/3/1 W	
Max. frequency deviation	±5.0 kHz	±2.5 kHz
Audio harmonic distortion	Less than 10% (at 60% deviation)	
Spurious emissions	-70 dBc typ.	
Adjacent channel power Hum and noise ratio	70 dB 40 dB	60 dB 34 dB
<b>RECEIVER</b>		
Sensitivity (at 12 dB SINAD)	0.25 μV typ.	
Squelch sensitivity	0.35 μV typical (at threshold)	
Adjacent channel selectivity	70 dB typ.	60 dB typ.
Intermodulation rejection	70 dB typ.	
Spurious response	70 dB typ.	
Hum and noise	40 dB	34 dB
Audio output power	350 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	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	
Water	IPX7 (Waterproof protection)

**Supplied accessories:** (\*Varies according to version.)

- Battery pack
- Battery charger
- AC adapter\*
- Swivel belt clip
- Antenna, FA-S59V
- Hand strap

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