



INTRINSICALLY SAFE (IS) VHF TRANSCEIVER

# IC-M88 IS

FCC APPROVED FOR MARINE AND LAND MOBILE USE



## FCC Approved "Dual Purpose" Radio

### Tough construction, superior waterproofing

The IC-M88 IS is built tough to withstand hazardous and inhospitable environments at sea and on land. Even if the IC-M88 IS is dropped into water, complete waterproofing\* will protect it from harm. The compact and durable body meets military specifications (MIL-STD). \*Equivalent to JIS waterproof grade 7. (1m depth for 30 minutes)



### Waterproof speaker-mic, HM-138 IS

An optional waterproof speaker-microphone, the HM-138 IS, provides reliable operation, even with the IC-M88 IS securely on your belt.

### 22 programmable channels for land use

The IC-M88 IS has 22 programmable channels reserved for Land use (146–174MHz). Wide/narrow channel spacing is programmable for each channel, and CTCSS and DTCS signaling is built-in.

\*Appropriate license will be required.

### Li-Ion battery for extra long battery life

With the FM approved, 1700mAh Li-Ion battery pack, get up to 20 hours of talk time\* without "memory effect". A 6 unit rapid charger is optional. \*Typical operation; Tx:Rx: Stand-by duty ratio = 5:5:90

### Simple operation

6 clearly labelled buttons on the front panel and the volume/power knob maximize simplicity of operation. Even when wearing gloves, the large buttons are easy to operate. A large, clear LCD with backlighting and backlit buttons make night time operation simple.

### Additional features

- Auto WX scan and WX Alert function (U.S.A. version only)
- 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
- Powerful 5W output
- 2 Step power saver
- 4 Level battery indicator
- The self check function checks internal temperature, connected battery voltage (over voltage detection), and water intrusion



Icom Inc.

## Intrinsically safe version approved by Factory Mutual Research Corporation



This IS version of the M88 conforms to intrinsically safe rating of the FMRC (Factory Mutual Research Corporation). It can be used in many hazardous marine environments such as petroleum tankers and bulk cargo carrier. Ask your dealer for details.

Intrinsically safe Class I, II and III, Division 1, Groups C, D, E, F, and G ; Nonincendive Class I, Division 2, Groups A, B, C and D hazardous locations when used with Icom BP-227FM battery pack. "Max. Temp. T3C at 40°C"USE

## SPECIFICATIONS

| GENERAL                                          |                                                                                                    |  |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------|--|
| Frequency range                                  |                                                                                                    |  |
| Marine TX                                        | 156.025-157.425MHz                                                                                 |  |
| RX                                               | 156.050-163.275MHz                                                                                 |  |
| LMR Tx/Rx                                        | 146.000-174.000MHz                                                                                 |  |
| Usable channels* (*Varies according to version): |                                                                                                    |  |
| All U.S.A., International and Canadian channels; |                                                                                                    |  |
| 22 LMR channels plus 10 weather channels         |                                                                                                    |  |
| Channel spacing                                  |                                                                                                    |  |
| Marine                                           | 25kHz                                                                                              |  |
| LMR                                              | 25/12.5kHz                                                                                         |  |
| PLL channel step (LMR)                           | 5/6.25/7.5kHz                                                                                      |  |
| Current drain (at 7.2V DC)                       |                                                                                                    |  |
| Tx (at 5W output)                                | 1.6A                                                                                               |  |
| Rx (at AF max.)                                  | 200mA                                                                                              |  |
| Operating temp. range (except BP-227):           |                                                                                                    |  |
| Marine -20°C to +60°C; -4°F to +140°F            |                                                                                                    |  |
| LMR -30°C to +60°C; -22°F to +140°F              |                                                                                                    |  |
| Antenna impedance                                | 50Ω (SMA)                                                                                          |  |
| Dimensions (W×H×D)                               | 62×97×39 mm;                                                                                       |  |
| (proj. not included)                             | 2 <sup>7</sup> / <sub>16</sub> ×3 <sup>13</sup> / <sub>16</sub> ×1 <sup>1</sup> / <sub>32</sub> in |  |
| Weight (approx.; with BP-227)                    | 280g; 9.9oz                                                                                        |  |

| TRANSMITTER                 |                |
|-----------------------------|----------------|
| Output power (Hi/Mid/Low)   | 5/3/1W         |
| Max. frequency deviation    |                |
| Marine                      | ±5.0kHz        |
| LMR (wide/narrow)           | ±5.0/2.5kHz    |
| Audio harmonic distortion   |                |
| Less than 10% (at 60% mod.) |                |
| Spurious emissions          | -70dBc typical |
| Adjacent channel power      |                |
| Marine                      | 70dB           |
| LMR                         | 70/60dB        |
| Hum and noise ratio         |                |
| Marine                      | 40dB           |
| LMR (wide/narrow)           | 40/34dB        |

| RECEIVER                      |                 |
|-------------------------------|-----------------|
| Sensitivity (at 12dB SINAD)   | 0.25μV typical  |
| Squelch sensitivity           |                 |
| 0.35μV typical (at threshold) |                 |
| Adjacent Ch. selectivity      |                 |
| Marine                        | 70dB typical    |
| LMR (wide/narrow)             | 70/60dB typical |

|                                                   |              |
|---------------------------------------------------|--------------|
| Spurious response                                 | 70dB typical |
| Intermodulation rejection                         | 70dB typical |
| Hum and noise ratio                               |              |
| Marine                                            | 40dB         |
| LMR (wide/narrow)                                 | 40/34dB      |
| Audio output power                                |              |
| 0.35W typical (at 10% distortion with an 8Ω load) |              |

| 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     | 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, II |
| 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       | 509.3     | -     |
| Dust            | 510.1     | I        | 510.2     | I       | 510.3     | I       | 510.4     | I     |
| Vibration       | 514.2     | VIII, X  | 514.2     | I       | 514.3     | I       | 514.5     | I     |
| Shock           | 516.2     | I, II, V | 516.2     | I, IV   | 516.4     | I, IV   | 516.5     | I, IV |

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

## OPTIONS

## BP-227FM BATTERY PACK

7.2V/1700mAh Li-Ion battery pack. Provides 15 hours operating time\* (approx. at 5 Watts). Same as supplied. Operating temp. range: -20°C to +60°C; -4°F to +140°F \* Tx (Hi); Rx: standby=5:5:90

BC-152 DESKTOP CHARGER  
+ BC-147A/E AC ADAPTER

Regularly charges the BP-227FM in 9-10 hours. Same as supplied.

BC-119N DESKTOP CHARGER  
+ AD-100 CHARGER ADAPTER  
+ BC-145A/E/V AC ADAPTER

For rapid charging of battery pack. An AC adapter is supplied depending on version. Charging time: 2.5-3 hours.

BC-121 MULTI-CHARGER  
+ AD-100 CHARGER ADAPTER  
+ BC-124 AC ADAPTER

For rapid charging of up to 6 battery packs (Six AD-100s required). Charging time: 2.5-3 hrs.

CP-17L CIGARETTE LIGHTER CABLE  
WITH NOISE FILTER

## OPC-515L DC POWER CABLE

For use with the battery charger, BC-152 or BC-119N, instead of the AC adapter. (12-16 V DC required)

## OPC-656 DC POWER CABLE

For use the BC-121N with a DC power supply. (12-16V DC required)

## HM-138 IS SPEAKER-MICROPHONE

Full sized, waterproof construction corresponds to JIS grade 7 (1 m/30 min.).

## MB-86 SWIVEL BELT CLIP

Swivel belt clip. Same as supplied.

## MB-98 BELT CLIP

Alligator type belt clip.

## MB-96 LEATHER BELT HANGER

Swivel type belt hanger for use with MB-86.

## MB-96F LEATHER BELT HANGER

Fixed type belt hanger for use with MB-86.

OPTIONAL HEADSETS AVAILABLE, but are not IS rated.



BP-227FM



BC-147A/E + BC-152

BC-121  
+ AD-100 (6 pcs.)BC-145  
BC-124  
BC-119N  
+ AD-100

HM-138 IS



MB-86

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

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

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