

# IC-M87

**Waterproof**

1m depth for 30 minutes

**Intrinsically safe  
versions available**



**Rugged  
MIL-STD 810**



## Not Just Another Marine Radio!

### Tough, waterproof construction

The IC-M87 is built tough to withstand hazardous and inhospitable environments at sea and on land. Even if the IC-M87 is dropped into water, complete waterproof will protect it from harm. The compact and durable body also has been tested to military specifications (MIL-STD).

\* Equivalent to JIS Grade 7 or IPX7 of the corresponding International Standard IEC 529 (1989). (1m depth for 30 minutes)

### 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.

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

With the standard 1700mAh Li-Ion battery pack, BP-227, you can get up to 15 hours of operating time\* without worrying about 'memory effect' of the battery. An optional AA alkaline battery case, BP-226, provides a convenient back up and great reassurance in an emergency.

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

### Waterproof speaker-microphone, HM-138

An optional waterproof speaker-microphone, HM-138, provides reliable operation, allowing you to wear the IC-M87 on your belt for added portable convenience.

### 22 programmable channels for PMR use

The IC-M87 has 22 free channels reserved for PMR 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.

### Additional features

- 5W output power
- Simple Up/Down buttons for operating channel selection
- Instant access to Ch. 16 and call channel
- Simple add/delete TAG scanning operation
- Automatic scan function
- 2 step power saver
- 4 level battery indicator
- Desktop charger, BC-152 supplied
- Key lock and monitor function
- Beep sound is programmable for each button
- The self check function checks internal temperature, over voltage detection, and water intrusion



**ATEX Intrinsically safe versions**



An intrinsically safe version conforming to the 94/9/EC ATEX Directive, is suitable for use in hazardous areas where flammable gasses or liquids are used such as petroleum tankers and bulk cargo carrier.

The approved rating is II2G EEx ib IIA T3.  
Special conditions for use: Must be used with BP-227AX  
Approved accessories: Speaker-microphone HM-138  
Ambient operating temperature: -20°C to +55°C  
Ask your dealer for details.

**SPECIFICATIONS**

**GENERAL**

- Frequency range :
  - Marine Tx 156.000-161.450MHz
  - Rx 156.000-163.425MHz
  - PMR Tx/Rx 146.000-174.000MHz
- Usable channels\* : INT, U.S.A. channels  
(\* Varies according to version.) 22 PMR channels
- Channel spacing :
  - Marine 25kHz
  - PMR 25/12.5kHz, 20/12.5kHz
- PLL channel step (PMR) : 5/6.25/7.5kHz
- Current drain (at 7.2V DC) :
  - Tx (at 5W output) 1.6A
  - (at 1W output) 0.7A
  - Rx (at AF max.) 200mA
- Operating temp. range (except BP-227) :
  - Marine -15°C to +55°C
  - PMR -25°C to +55°C
  - PMR ATEX version -20°C to +55°C
- Antenna impedance : 50Ω (SMA)
- Dimensions (W×H×D) : 62×97×39 mm  
(projections not included)
- Weight (approx.) : 280g (with BP-227)  
290g (with BP-227AX)

**TRANSMITTER**

- Output power (Hi/Mid/Low) : 5/3/1W
- FRG version Marine 1/0.5W
- PMR 5/3/1W
- ATEX version Marine 1/0.5W
- PMR 1W
- Max. frequency deviation :
  - Marine ± 5.0kHz
  - PMR (25/20/12.5kHz) ± 5.0/4.0/2.5kHz
- Audio harmonic distortion : Less than 10% (at 60% mod.)
- Spurious emissions : 0.25μW (below 2GHz)
- Adjacent channel power :
  - Marine 70dB
  - PMR (wide/narrow) 70/60dB
- Residual modulation :
  - Marine 40dB
  - PMR (wide/narrow) 40/34dB

**RECEIVER**

- Sensitivity (at 20dB SINAD; emf) :
  - Marine -2dBμ typical
  - PMR -4dBμ typical
- Squelch sensitivity (emf) : ±0dBμ typical (at threshold)
- Adjacent Ch. selectivity :
  - Marine 70dB
  - PMR (wide/narrow) 70/60dB

- Spurious response : 70dB
- Intermodulation rejection :
  - Marine 68dB
  - PMR 65dB
- Hum and noise ratio :
  - Marine 40dB
  - PMR (wide/narrow) 40/34dB
- Audio output power (at 10% dist. with an 8Ω load) :
  - Marine 0.2W
  - PMR 0.35W

**Applicable U.S. Military Specifications**

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, 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	509.4	-
Dust	510.1	I	510.2	I	510.3	I	510.4	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 EN301 178 2 or EN300 086.  
All stated specifications are subject to change without notice or obligation.

**Supplied accessories:**

- Battery pack • Battery charger • AC adapter\*
- Swivel belt clip • Antenna, FA-S59V • Hand strap  
(\* Varies according to version.)

**OPTIONS**

**BP-226 BATTERY CASE**

Battery case for AA (LR6)×5 alkaline cells.  
Water resistant, equivalent to IPX4.

BP-226 is not approved as intrinsically safe.

**BP-227/AX Li-Ion BATTERY PACK**

7.2V/1700mAh Li-Ion battery pack. Provides 15 hours operating time\* (approx. at 5 Watts).  
BP-227AX is for ATEX version. Operating temp. range: BP-227; -20°C to +60°C, BP-227AX; -20°C to +55°C

\* Tx (Hi): Rx: standby=5:5:90

**BC-152 DESKTOP CHARGER**

+ **BC-147A/E AC ADAPTER**  
Regularly charges the BP-227 in 9-10 hours.  
The same as that supplied.

**BC-119N DESKTOP CHARGER**

+ **AD-100 CHARGER ADAPTER**  
+ **BC-145A/E/V/UK AC ADAPTER**  
For rapid charging of battery pack. An AC adapter is supplied depending on version.  
Charging time: 2.5-3 hours.

**BC-121N MULTI-CHARGER**

+ **AD-100 CHARGER ADAPTER**  
+ **BC-157 AC ADAPTER**  
For rapid charging of up to 6 battery packs (Six AD-100s are required). Charging time: 2.5-3 hours.

BC-152, BC-119N and BC-121N are not approved as intrinsically safe. Do not charge the BP-227AX in an explosive atmosphere.

**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)

These cables are not approved as intrinsically safe.

**HM-138 SPEAKER-MICROPHONE**

Full sized, waterproof construction equivalent to IPX7 (1 m/30 min.). Approved as intrinsically safe.

**MB-86 SWIVEL BELT CLIP**

Swivel belt clip. Prevents accidental dropping from your belt. The same as that supplied.

**MB-98 BELT CLIP**

Alligator type belt clip.

**MB-96N LEATHER BELT HANGER**

Swivel type belt hanger.

**MB-96F LEATHER BELT HANGER**

Fixed type belt hanger for use with MB-98.



**Icom Inc.** 1-1-32, Kamiminami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 URL: <http://www.icom.co.jp/world/index.html> **Count on us!**

**Icom America Inc.**  
2380 116th Avenue NE,  
Bellevue, WA 98004, U.S.A.  
Phone: +1 (425) 454-8155  
Fax: +1 (425) 454-1509  
E-mail: [sales@icomamerica.com](mailto:sales@icomamerica.com)  
URL: <http://www.icomamerica.com>

**Icom New Zealand**  
146A Harris Road, East Tamaki,  
Auckland, New Zealand  
Phone: +64 (09) 274 4062  
Fax: +64 (09) 274 4708  
E-mail: [inquiries@icom.co.nz](mailto:inquiries@icom.co.nz)  
URL: <http://www.icom.co.nz>

**Icom (UK) Ltd.**  
Unit 9, Sea St., Herne Bay,  
Kent, CT6 8LD, U.K.  
Phone: +44 (0)1227 741741  
Fax: +44 (0)1227 741742  
E-mail: [info@icomuk.co.uk](mailto:info@icomuk.co.uk)  
URL: <http://www.icomuk.co.uk>

**Asia Icom Inc.**  
6F No. 68, Sec. 1 Cheng-Teh Road,  
Taipei, Taiwan, R.O.C.  
Phone: +886 (02) 2559 1899  
Fax: +886 (02) 2559 1874  
E-mail: [sales@asia-icom.com](mailto:sales@asia-icom.com)  
URL: <http://www.asia-icom.com>

**Icom Canada**  
Glenwood Centre #150-6165 Highway 17,  
Delta, B.C., V4K 5B8, Canada  
Phone: +1 (604) 952-4266  
Fax: +1 (604) 952-0090  
E-mail: [info@icomcanada.com](mailto:info@icomcanada.com)  
URL: <http://www.icomcanada.com>

**Icom (Europe) GmbH**  
Communication Equipment  
Himmelgeister Str. 100,  
D-40225 Düsseldorf, Germany  
Phone: +49 (0)211 346047  
Fax: +49 (0)211 333639  
E-mail: [info@icom-europe.com](mailto:info@icom-europe.com)  
URL: <http://www.icomeurope.com>

**Icom France S.a**  
Zac de la Plaine, 1,  
Rue Brindejonc des Moulinais BP 5804,  
31505 Toulouse Cedex, France  
Phone: +33 (5) 61 36 03 03  
Fax: +33 (5) 61 36 03 00  
E-mail: [icom@icom-france.com](mailto:icom@icom-france.com)  
URL: <http://www.icom-france.com>

**Beijing Icom Ltd.**  
10C07, Long Silver Mansion, No.88, Yong Ding  
Road, Haidian District, Beijing, 100039, China  
Phone: +86 (010) 5889 5391/5392/5393  
Fax: +86 (010) 5889 5395  
E-mail: [bjicom@bjicom.com](mailto:bjicom@bjicom.com)  
URL: <http://www.bjicom.com>

**Icom (Australia) Pty. Ltd.**  
A.B.N. 88 006 092 575  
Unit 1 / 103 Garden Road,  
Clayton VIC 3168 Australia  
Phone: +61 (03) 9549 7500  
Fax: +61 (03) 9549 7505  
E-mail: [sales@icom.net.au](mailto:sales@icom.net.au)  
URL: <http://www.icom.net.au>

**Icom Spain S.L.**  
Ctra. de Gracia a Manresa Km. 14,750  
08190 Sant Cugat del Valles Barcelona, Spain  
Phone: +34 (93) 590 26 70  
Fax: +34 (93) 589 04 46  
E-mail: [icom@icomspain.com](mailto:icom@icomspain.com)  
URL: <http://www.icomspain.com>

**Icom Polska**  
Sopot, 3 maja 54, Poland  
Phone: +48 (58) 550 7135  
Fax: +48 (58) 551 0484  
E-mail: [icomspolska@icomspolska.com.pl](mailto:icomspolska@icomspolska.com.pl)  
URL: <http://www.icomspolska.com.pl>



Your local distributor/dealer:

**Point electronics**

A- 1060 Wien, Stumpergasse 41 - 43  
Tel.: +43/ 1/ 597 08 80/0 FAX: DW 40  
[www.point.at](http://www.point.at) [mail@point.at](mailto:mail@point.at)