

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


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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 Ex 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)

Measurements made in accordance with EN301 178 2 or EN300 086.
All stated specifications are subject to change without notice or obligation.

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 F	Method	Procedure
Low Pressure	500.4		I, II
High Temperature	501.4		I, II
Low Temperature	502.4-3		I, II
Temperature Shock	503.4		I
Solar Radiation	505.4		I
Rain	506.4		I, II
Humidity	507.4		—
Salt Fog	509.4		—
Dust	510.4		I
Vibration	514.5		I
Shock	516.5		I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

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/1850mAh (min.), 1950mAh (typ.) 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-147SA/SE 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-145SA/SE/SV/SUK 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-157S 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-23 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 with 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.

HM-168 SPEAKER-MICROPHONE

Compact type speaker-microphone. Equivalent to IPX7.

HM-168 is **not approved** as intrinsically safe.

MB-86 SWIVEL BELT CLIP

Swivel belt clip. 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, Kami-minami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

www.icom.co.jp/world

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
URL: http://www.icomamerica.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
URL: http://www.icomcanada.com

Icom (Australia) Pty. Ltd.

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
URL: http://www.icom.net.au

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
URL: http://www.icom.co.nz

Icom (Europe) GmbH

Communication Equipment
Auf der Krautweide 24
65812 Bad Soden am Taunus, Germany
Phone: +49 (6196) 76685-0
Fax: +49 (6196) 76685-50
E-mail: info@icom-europe.com
URL: http://www.icom-europe.com

Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyer"
Bajos A 08174, Sant Cugat del Valles,
Barcelona, Spain
Phone: +34 (93) 590 26 70
Fax: +34 (93) 589 04 46
E-mail: icom@icomspain.com
URL: http://www.icomspain.com

Icom (UK) Ltd.

Blacksole House, Altira Park,
Herne Bay, Kent, CT6 6GZ, U.K.
Phone: +44 (01227) 741741
Fax: +44 (01227) 741742
E-mail: info@icomuk.co.uk
URL: http://www.icomuk.co.uk

Icom France s.a.s.

Zac de la Plaine,
1 Rue Brindejone des Moulins, BP 45804,
31505 Toulouse Cedex 5, France
Phone: +33 (5) 61 36 03 03
Fax: +33 (5) 61 36 03 00
E-mail: icom@icom-france.com
URL: http://www.icom-france.com

Icom Polska

81-850 Sopot, ul. 3 Maja 54, Poland
Phone: +48 (58) 550 7135
Fax: +48 (58) 551 0484
E-mail: icompolska@icompolska.com.pl
URL: http://www.icompolska.com.pl

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
URL: http://www.asia-icom.com

Your local distributor/dealer:

anfer
RADIOCOMUNICACIONES

info@anfer.com www.anfer.com

Tel. (+34) 963 311 410 Fax. (+34) 963 311 411