

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 EE x 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 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	508.1	I	508.2	I	508.3	I	508.4	-
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

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.

