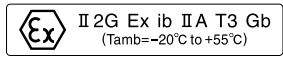




INSTRUCTION MANUAL

VHF MARINE TRANSCEIVER **IC-M87**



Icom Inc.



PREFACE



Thank you for choosing this Icom product. This product is designed and built with Icom's state of the art technology and craftsmanship. With proper care this product should provide you with years of trouble-free operation.

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL—This instruction manual contains important operating instructions for the IC-M87.

EXPLICIT DEFINITIONS

WORD	DEFINITION
 DANGER!	Personal death, serious injury or an explosion may occur.
 WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

FEATURES

22 free 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 included.

*Appropriate license will be required.

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, its waterproofing* will protect it from harm. The compact and durable body meets the military specifications (MIL-STD).

* Equivalent to JIS waterproof 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.

IN CASE OF EMERGENCY

If your vessel requires assistance, contact other vessels and the Coast Guard by sending a distress call on Channel 16.


○ **USING CHANNEL 16**

DISTRESS CALL PROCEDURE

1. "MAYDAY MAYDAY MAYDAY."
2. "THIS IS" (name of vessel)
3. Your call sign or other indication of the vessel.
4. "LOCATED AT" (your position)
5. The nature of the distress and assistance required.
6. Any other information which might facilitate the rescue.

RECOMMENDATION

CLEAN THE TRANSCEIVER THOROUGHLY WITH FRESH WATER after exposure to saltwater, and dry it before operating. Otherwise, the transceiver's keys, switches and controllers may become unusable, due to salt crystallization, and/or the charging terminals of the battery pack may corrode.

 **NOTE:** If the transceiver's waterproof protection appears defective, carefully clean it with a soft, damp (fresh water) cloth, then dry it before operating.
The transceiver may lose its waterproof protection if the case, jack cover, or the battery pack is cracked or broken, or the transceiver has been dropped.
Contact your Icom distributor or your dealer for advice.

PRECAUTIONS

⚠ **DANGER! NEVER** short terminals of the battery pack. Shorting may occur if the terminals touch metal objects such as a key, so be careful when placing the battery packs (or the transceiver) in bags, and so on. Carry them so that shorting cannot occur with metal objects. Shorting may damage not only the battery pack, but also the transceiver.

⚠ **DANGER! NEVER** use and charge Icom battery packs with non-Icom transceivers or non-Icom chargers. Only Icom battery packs are tested and approved for use with Icom transceivers or charged with Icom chargers. Using third-party or counterfeit battery packs or chargers may cause smoke, fire, or cause the battery to burst.

⚠ **WARNING! NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠ **WARNING! NEVER** hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 5 to 10 cm away from the lips and the transceiver is vertical.

CAUTION: DO NOT connect the transceiver to a power source other than the BP-227AX. Such a connection will ruin the transceiver.

CAUTION: DO NOT operate the transceiver unless the flexible antenna, battery pack and jack cover are securely attached. Confirm that the antenna and battery pack are dry before attaching. Exposing the inside of the transceiver to water will result in serious damage to the transceiver.

CAUTION: DO NOT place or leave the transceiver in direct sunlight or in places with temperatures below -15°C or above $+55^{\circ}\text{C}$: Marine, below -25°C or above $+55^{\circ}\text{C}$: PMR.

CAUTION: DO NOT modify the transceiver. The specifications may change and then the transceiver may not comply with the requirements of required regulation. The transceiver warranty does not cover any problems caused by unauthorized modification.

CAUTION: DO NOT use harsh solvents such as Benzine or alcohol when cleaning, because they will damage the transceiver surfaces.

CAUTION: DO NOT leave the transceiver in an insecure place to avoid use by unauthorized persons.

DO NOT push [PTT] when you do not actually intend to transmit.

KEEP the transceiver at least 0.9 meter away from your vessel's magnetic navigation compass.

BE CAREFUL! The transceiver meets IPX7* requirements for waterproof protection. However, once the transceiver has been dropped, waterproof protection cannot be guaranteed because of possible damage to the transceiver's case or the waterproof seal.

* Only when the BP-227AX, flexible antenna, [SP MIC] jack cover is attached.

BE CAREFUL! The transceiver will become hot when operating it continuously for long periods of time.

MAKE SURE to turn OFF the transceiver power before connecting or disconnecting the supplied or optional accessory.

Icom is not responsible for the destruction, damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:

- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightnings, or other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom transceiver with any equipment that is not manufactured or approved by Icom.

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INTRINSIC SAFETY



Versions of the IC-M87 which display the “EX” marking on the serial number seal.

The approval rating for these models is II 2G Ex ib II A T3 Gb.

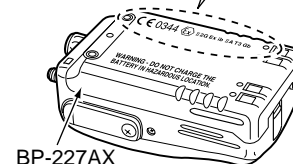
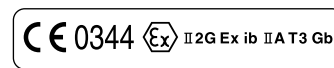
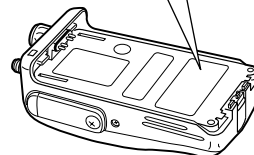
WARNING! NEVER charge the BP-227AX (with/without the transceiver) in an explosive atmosphere. The optional battery chargers are not approved as Intrinsically Safe.

When the transceiver is used in a hazardous area, the BP-227AX **MUST** be attached, either the jack cover or HM-138 **MUST** be attached to the speaker-microphone connector.

KEEP the transceiver and the BP-227AX clean to avoid any risk of ignition due to the build-up of electrostatic charges.

Repair of Icom transceivers should only be carried out by authorized Icom distributors. In particular, repair of ATEX approved transceivers can **ONLY** be done by Icom to maintain the intrinsically safe rating. **NEVER** attempt to repair an ATEX approved transceivers. Only Icom has the repair expertise and procedures to maintain the ATEX approval. Contact your Icom distributor or authorised dealer for details.

The ATEX standard is described on the sticker (Ex Marking) and BP-227AX as below.



BP-227AX

- **DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.**
- **DO NOT CHARGE THE BATTERY IN HAZARDOUS LOCATION.**

The equipment can be used without the microphone but with the jack cover.

ABOUT CE AND DOC



Hereby, Icom Inc. declares that the versions of IC-M87 which have the “CE” symbol on the product, comply with the essential requirements of the Radio Equipment Directive, 2014/53/EU, and the restriction of the use of certain hazardous substances in electrical and electronic equipment Directive, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address:
<http://www.icom.co.jp/world/support>

The EU declaration of conformity of the ATEX Directive, 2014/34/ EU is included in the box.

DISPOSAL



The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.

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◇ **Priorities**

- Read all rules and regulations pertaining to priorities and keep an up-to-date copy handy. Safety and distress calls take priority over all others.
- You must monitor Channel 16 when you are not operating on another channel.
- False or fraudulent distress calls are prohibited under law.

◇ **Privacy**

- Information overheard but not intended for you cannot lawfully be used in any way.
- Indecent or profane language is prohibited.

◇ **Radio licenses**

(1) SHIP STATION LICENSE

When your craft is equipped with a VHF FM transceiver, you must have a current radio station license before using the transceiver. It is unlawful to operate a ship station which is not licensed.

Inquire through your dealer or the appropriate government agency for a Ship-Radiotelephone license. This license includes the call sign which is your craft's identification for radio purposes.

(2) OPERATOR'S LICENSE

A restricted Radiotelephone Operator Permit is the license most often held by small vessel radio operators when a radio is not required for safety purposes.

The Restricted Radiotelephone Operator Permit must be posted near the transceiver or be kept with the operator. Only a licensed radio operator may operate a transceiver.

However, non-licensed individuals may talk over a transceiver if a licensed operator starts, supervises, ends the call and makes the necessary log entries.

A current copy of the applicable government rules and regulations is only required to be on hand for vessels in which a radio telephone is compulsory. However, even if you are not required to have these on hand it is your responsibility to be thoroughly acquainted with all pertinent rules and regulations.

◇ Supplied accessories

The following accessories are supplied:

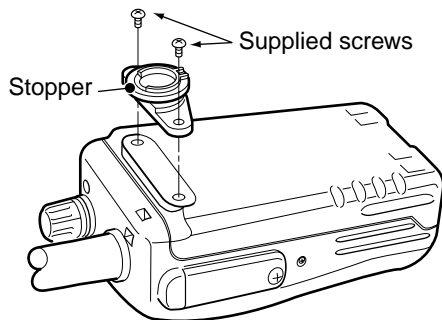
	Qty.
• Swivel belt clip	1
• Stopper for the swivel belt clip	1
• Screws for the swivel belt clip	2
• Flexible antenna	1
• Handstrap	1
• Battery pack	1
• Power adapter*	1
• Battery charger	1

*Not supplied with some version

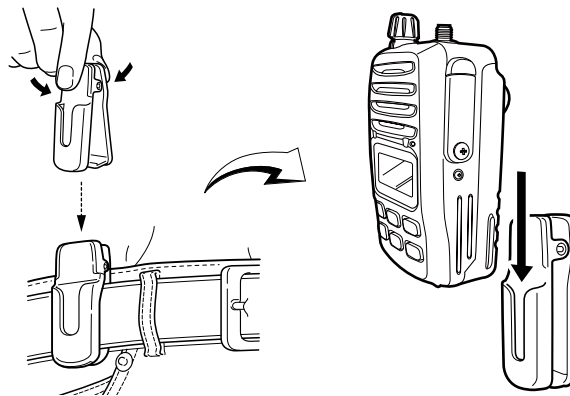
◇ Swivel belt clip

To attach:

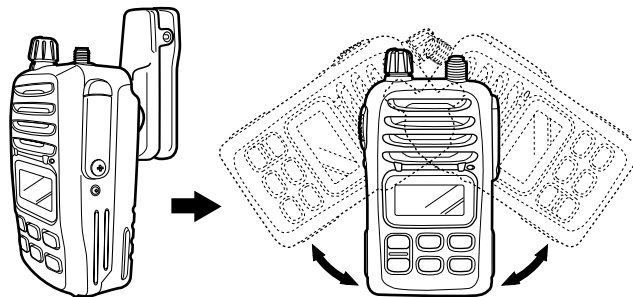
- ① Attach the stopper to the back of the transceiver.



- ② Clip the belt clip to a part of your belt and insert the stopper to the belt clip.

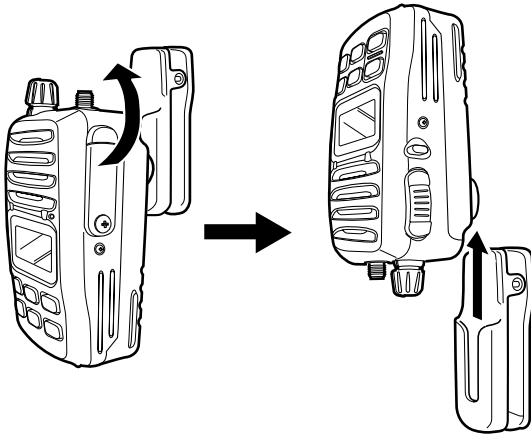


- ③ Once the transceiver is locked in place, it will swivel 360 degrees.



To remove:

Turn the transceiver upside down, and then lift up to release the transceiver from the belt clip.



CAUTION:

HOLD THE TRANSCEIVER TIGHTLY, WHEN ATTACHING OR REMOVING THE TRANSCEIVER FROM THE BELT CLIP.

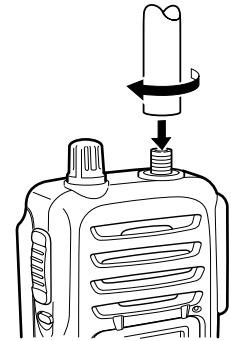
If the transceiver is accidentally dropped and the swivel belt clip's stopper is scratched or damaged, the swivel belt clip may not work properly.

◇ **Flexible antenna**

Connect the supplied flexible antenna to the antenna connector.

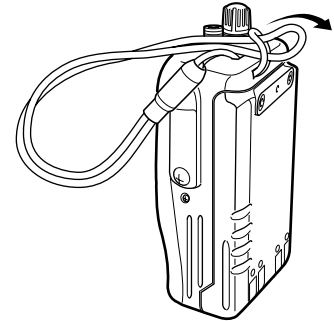
CAUTION:

- **NEVER** carry the transceiver by holding the antenna.
- **DO NOT** connect the antenna other than listed on page 32.
- Transmitting without an antenna may damage the transceiver.

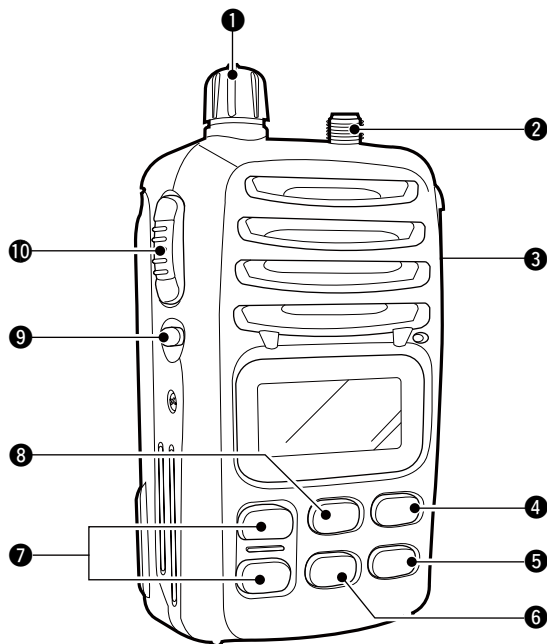


◇ **Handstrap**

Pass the handstrap through the loop on the back side of the transceiver as illustrated at right. This facilitates carrying.



■ Front, top and side panels



❶ VOLUME CONTROL [VOL]

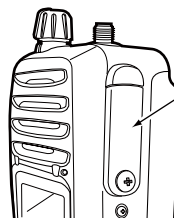
Turns power ON and adjusts the audio level.

❷ ANTENNA CONNECTOR (p. 3)

Connects the supplied antenna.

❸ SPEAKER-MICROPHONE CONNECTOR [SP MIC] (p. 28)

Connects the optional speaker-microphone.



[SP MIC] jack cover

NOTE: KEEP the [SP MIC] jack cover attached to the transceiver when the speaker-microphone is not in use.

❹ SCAN [SCN•DUAL]

- Starts or cancels the Normal or Priority scan. (p. 14)
- Enters watch mode when held down for 1 second. (p. 15)

❺ TRANSMIT POWER/LOCK SWITCH [H/L•LOCK]

- Selects high, middle (except for the German version) or low power when pushed. (p. 10)
- Toggles the Lock function ON/OFF when held down for 1 second. (p. 11)

❻ CHANNEL 16 SWITCH [16•C]

- Selects Channel 16 when pushed. (p. 8)
- Selects the Call channel when held down for 1 second. (p. 8)
- Enters the Call channel programming mode when the Call channel is selected and this switch is held down for 3 seconds. (p. 12)

Count on us!

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