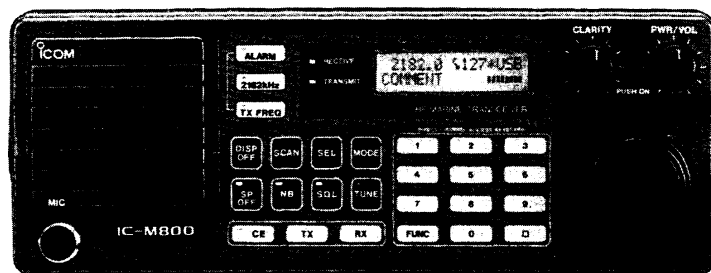


ICOM

INSTRUCTION MANUAL

HF MARINE TRANSCEIVER  
**IC-M800**



Icom Inc.

## FOREWORD

Thank you for choosing the **IC-M800 HF MARINE TRANSCEIVER**. Icom uses the most advanced, state-of-the-art engineering concepts and the latest technology.

To fully appreciate the capabilities of your new **IC-M800**, please read this instruction manual thoroughly. For further information, please feel free to contact your nearest Icom Dealer or Service Center.

## EXPLICIT DEFINITIONS

The following explicit definitions apply to this instruction manual.

WORD	DEFINITION
<b>WARNING</b>	Personal injury, fire hazard or electric shock may occur.
<b>CAUTION</b>	Equipment damage may occur.
<b>NOTE</b>	If disregarded, inconvenience only. No personal injury, risk of fire or electric shock.

## IMPORTANT SAFETY PRECAUTIONS

**READ THIS INSTRUCTION MANUAL** carefully and completely before attempting operation.

**SAVE THIS INSTRUCTION MANUAL** - This instruction manual contains important safety and operating instructions for the IC-M800.

**WARNING** - Mount the transceiver securely with bolts and nuts. If the transceiver is mounted without bolts and nuts, personal injury or transceiver damage could occur due to wave shock, vibrations, etc.

**NEVER** connect the transceiver to an AC outlet or more than a 16 V DC power source.

**AVOID** using the transceiver in temperatures below  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) or over  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ). The transceiver may not function properly in extreme temperatures.

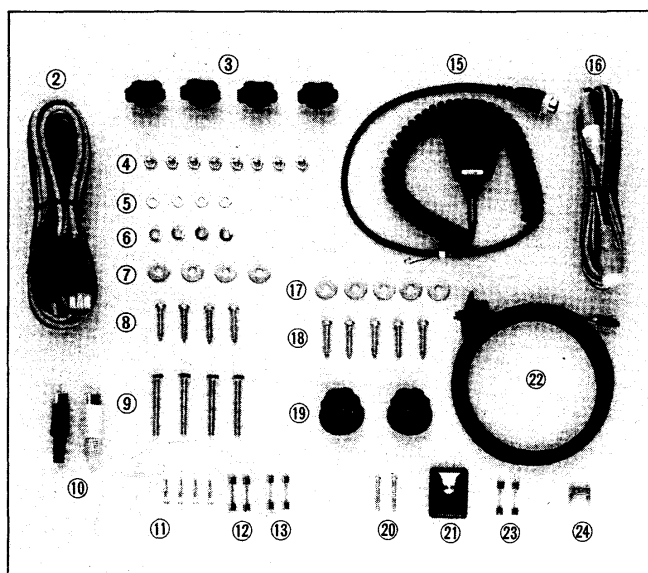
**AVOID** using the transceiver in excessively dusty environments.

**AVOID** placing the transceiver in direct sunlight.

**BE CAREFUL!** The heatsink may become hot when operating the transceiver continuously for long periods.

During maritime mobile operations, **DO NOT** operate the transceiver without running the boat's engine.

## UNPACKING



\* Mounting brackets for the transceiver and remote controller and the cable clamp are not shown in the picture above.

Accessories for the transceiver	Qty.
① Mounting bracket *	1
② DC power cable (OPC-077)	1
③ Mounting knobs	4
④ Nuts	8
⑤ Flat washers (for mounting knobs)	4
⑥ Spring washers (use together with nuts)	4
⑦ Flat washers	4
⑧ Self tapping screws	4
⑨ Bolts	4
⑩ DIN plugs	2
⑪ 4-pin connector (use when connecting a tuner)	1 set
⑫ Spare fuses (30 A for DC power cable)	2
⑬ Spare fuses (5 A for the internal circuitry)	2

Accessories for the remote controller	Qty.
⑭ Mounting bracket *	1
⑮ Microphone (EM-48)	1
⑯ DC power cable (OPC-089A)	1
⑰ Flat washers	4
⑱ Self-tapping screws	4
⑲ Mounting knobs (assembled rubber washer)	2
⑳ Self tapping screws (for microphone hanger)	2
㉑ Microphone hanger	1
㉒ Interface cable (OPC-172A)	1
㉓ Spare fuses (3 A for DC power cable)	2
㉔ Cable stopper (for interface cable)	1
㉕ Cable clamp* (for DC power cable)	1

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## INDIVIDUAL, SPLASH-RESISTANT REMOTE CONTROLLER

The separate controller is completely splash resistant and is only 286(W) × 111(H) × 62(D) mm\*, meaning it can be mounted practically anywhere. Up to 4 controllers (optional) can be connected to the IC-M800, controlling the transceiver anywhere. In addition, 4 controllers can also act as an intercom system.

\* 11.3(W) × 4.4(H) × 2.4(D) in

## STATE-OF-THE-ART OPTICAL FIBER CABLE

Optical fiber technology is another feature that makes the IC-M800 special. The optical fiber cable is approx. only 5 mm in diameter and can be easily installed beneath carpets or out of sight beneath window ledges. Tough, flexible and reliable, the cable will not corrode or pick up noise from other electrical systems on your vessel.

## 160 CONVENIENT MEMORY CHANNELS

Up to 160 user-programmable memory channels are available for your operating convenience. Each memory channel can store transmit and receive frequencies, operating mode and 7-digit alphabetical descriptions for your note.

## 848 ITU CHANNELS

The IC-M800 is designed with 704 pre-programmed ITU duplex channels (242 channels for SSB and 462 channels for FSK). The ITU duplex channels can be used as reverse frequencies between transmit and receive for coastal station operation. In addition, 144 ITU simplex channels (72 channels for SSB and 72 channels for FSK) are equipped with the transceiver.

## CONTINUOUS COVERAGE RECEIVER

The IC-M800 continuously covers all short wave frequencies from 0.5 to 30 MHz in 100 Hz steps including all marine frequencies. You can listen to international shortwave broadcasts, weather channels and news broadcasts.

## CHANNEL ACCESS VERSATILITY

Memory channel selection is quick and convenient via the main dial or 10-keyboard. The main dial and 10-keyboard can also be used for frequency changing.

## MEMORY SCAN

Memory scan is available for signal searching. Scan a specified channel with a variable scanning time of 1~10 sec. per channel.

## FSK CAPABILITY

The IC-M800 is designed for FSK operation such as RTTY or SITOR with the following features:

- Rapid Transmit/Receive switching time with Icom's DDS (Direct Digital Synthesizer) System.
- Optional 500 Hz/−6 dB filter installation capability for better selectivity in CW and FSK modes.
- An ACC socket for connecting an external terminal unit.

## ACC SOCKETS

The IC-M800 has 2 ACC sockets on the rear panel. They are input/output terminals and are used for connecting external equipment such as a linear amplifier, SITOR terminal unit, etc. The socket also has a scan control terminal for externally controlling IC-M800 scanning.

## S/R F INDICATOR

The indicator shows relative signal strength while receiving and relative output power while transmitting. This is useful for checking transmit modulation.

## 5 W AUDIO OUTPUT POWER

The IC-M800 emits 5 W powerful audio output power. You'll have no problem being heard when one remote controller (optional) is installed on the deck as a function of the intercom.

## EXCELLENT FREQUENCY STABILITY

All oscillator circuits in the IC-M800 are controlled with only one high-stability crystal unit. A total frequency stability of ±15 Hz is therefore obtained.

## OPTIONAL AUTOMATIC ANTENNA TUNER

The optional AT-120 HF AUTOMATIC ANTENNA TUNER can be used with a variety of vessels, even smaller boats that cannot use a long wire antenna element.

No adjustment is necessary. Just push the [TUNE] switch on the controller; the AT-120 adjusts the SWR to a matched condition in any frequency on an HF marine band.

## ■ Operating rules and guidelines

Before transmitting, monitor the channel you wish to use to avoid interrupting transmissions already in progress.

### (1) Call procedure

Calls must be properly identified and time limits must be respected.

- 1) Give your call sign each time you call another vessel or a coastal station. If you have no call sign, identify the station by giving the vessel name and the name of the licensee.
- 2) Give your call sign at the end of each transmission that lasts more than 3 minutes.
- 3) You must break and give your call sign at least once every 15 minutes during long ship-to-shore calls.
- 4) Keep your unanswered calls short (less than 30 seconds) and do not repeat a call for 2 minutes.
- 5) Unnecessary transmissions are not allowed.

### (2) Priorities

- 1) Read all the rules and regulations pertaining to priorities and keep an up-to-date copy handy. Safety and distress calls take priority over all others.
- 2) False or fraudulent distress signals are prohibited and punishable by law.

### (3) Privacy

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

### (4) Logs

- 1) All distress, emergency and safety calls must be recorded in complete detail. Log data activity is usually recorded in 24 hour time. Universal Time (formerly UTC) is frequently used.
- 2) Adjustments, repairs, channel frequency changes and authorized modifications affecting electrical operation of the equipment must be kept in the maintenance log and entries signed by the authorized licensed technician performing or supervising the work.

### (5) Radio licenses

#### 1) Ship Station License

When your craft is equipped with an HF marine transceiver such as the IC-M800 you must have a current radio station license before using the equipment. 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 application. Your government-issued license states the call sign which is your craft's identification for radio purposes.

#### 2) Operator's License

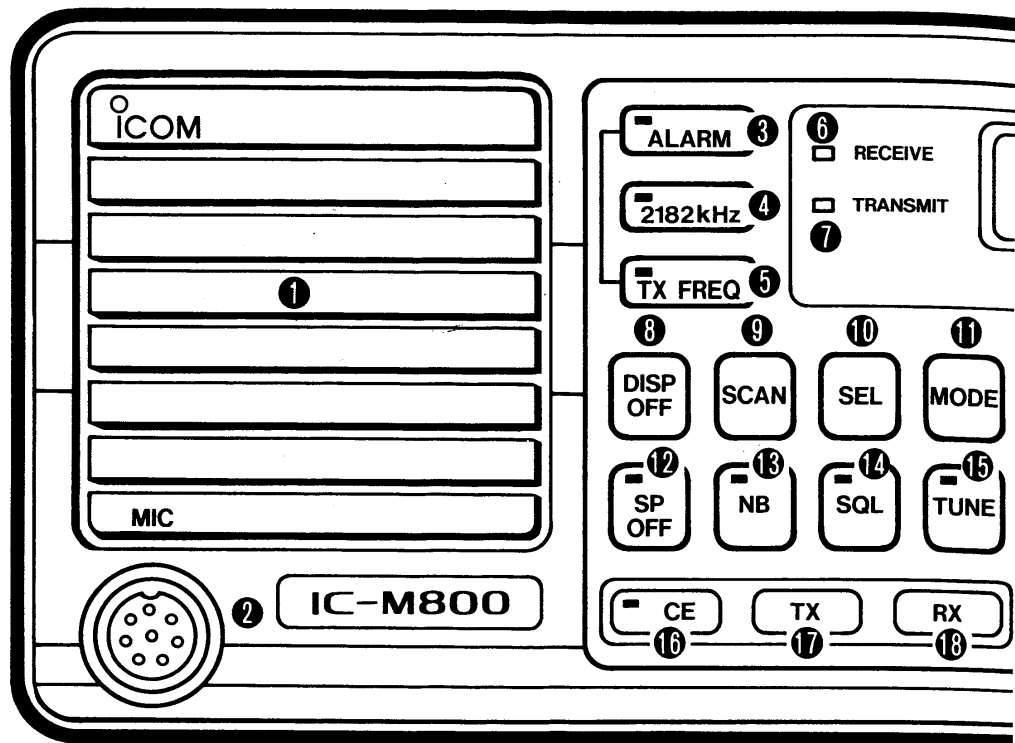
A Restricted Radiotelephone Operator Permit is the license most often held by small vessel radio operators when a radio is not required for safety purposes. You can usually obtain this permit by mail.

The Restricted Radiotelephone Operator Permit must be posted or 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, and ends the call, and makes the necessary log entries.

A current copy of the applicable government rules and regulations is usually required to be kept.

## Remote controller front panel



### ① INTERNAL SPEAKER

Operates when the transceiver is receiving or the intercom is operating.

### ② MIC CONNECTOR

Connects the supplied microphone or an optional HS-50 HANDSET here.

### ③ ALARM SWITCH [ALARM] (p. 19)

- Turns ON and OFF the alarm function.
- Transmits alarm signals when pushing this switch together with [TX FREQ].

### ④ 2182 kHz SWITCH [2182kHz] (p. 19)

Selects the 2182 kHz emergency and distress call frequency.

### ⑤ TRANSMIT FREQUENCY CHECK SWITCH [TX FREQ] (p. 16)

Switches the displayed receive frequency to the transmit frequency to check whether the frequency is busy or not.

### ⑥ RECEIVE INDICATOR [RECEIVE] (p. 15)

Lights when the transceiver is receiving and the squelch opens.

### ⑦ TRANSMIT INDICATOR [TRANSMIT] (p. 17)

Lights when the transceiver is transmitting.

### ⑧ DISPLAY LIGHT SWITCH [DISP OFF] (p. 20)

Turns OFF and ON the function display and switch indicator lights.

### ⑨ SCAN SWITCH [SCAN] (p. 18)

Starts and stops the scan.

### ⑩ SELECT CHANNEL SWITCH [SEL] (p. 18)

Selects the channels you want to scan.

### ⑪ MODE SWITCH [MODE] (pgs. 15, 16)

Selects the desired operating mode.

### ⑫ SPEAKER SWITCH [SP OFF] (p. 15)

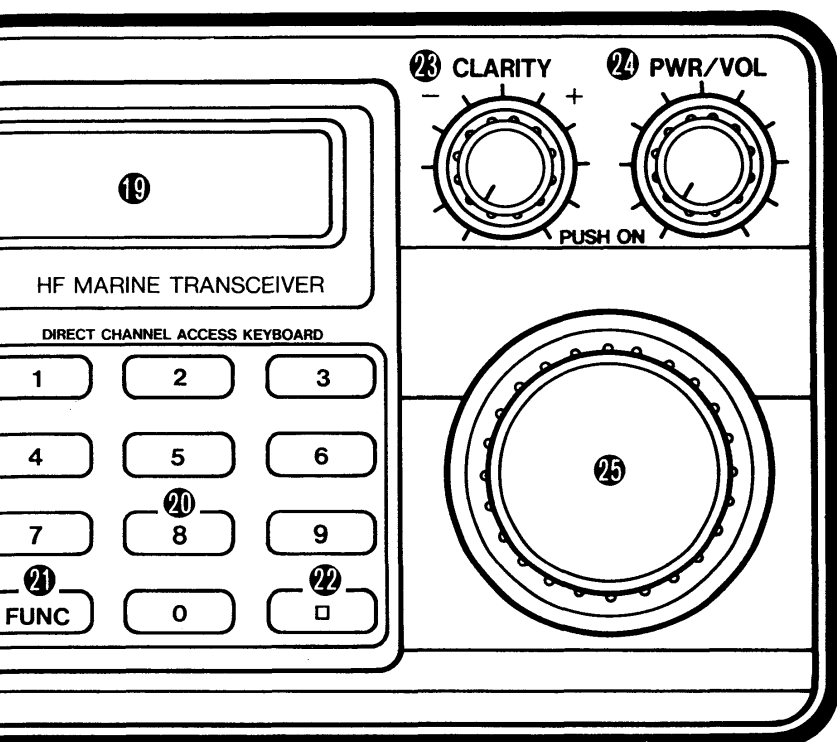
Turns OFF and ON receive sounds from the internal speaker

### ⑬ NOISE BLANKER SWITCH [NB] (p. 15)

Turns ON and OFF the noise blanker function.

### ⑭ SQUELCH SWITCH [SQL] (p. 15)

Closes and opens the squelch function.



**15 ANTENNA TUNER SWITCH [TUNE] (p. 16)**

Starts the tuning of the AT-120 HF AUTOMATIC ANTENNA TUNER (optional).

**16 CLEAR ENTRY SWITCH [CE] (p. 14)**

- Clears an entry and retrieves the previous key input.
- Sets the transceiver to change the display frequency at 100 Hz steps with the main dial when the switch lights.

**17 TRANSMIT FREQUENCY ENTER SWITCH [TX] (pgs. 13, 14)**

- Recalls a memory channel with the keyboard.
- Used when the desired transmit frequency is stored into a memory channel.

**18 RECEIVE FREQUENCY SWITCH [RX] (p. 13)**

- Recalls a memory channel with the keyboard.
- Used when the desired receive frequency is stored into a memory channel.

**19 FUNCTION DISPLAY (p. 6)**

Indicates current operating frequency, channel, mode and additional information.

**20 10-KEYBOARD (pgs. 13, 14)**

Used to input a frequency or memory channel number.

**21 FUNCTION SWITCH [FUNC]**

Activates secondary functions.

**22 CLARITY PRIORITY SWITCH [□] (p. 21)**

Sets the controller priority for controlling [CLARITY].

**23 CLARITY CONTROL [CLARITY] (p. 15)**

Shifts only the receive frequency by  $\pm 150$  Hz.

**24 POWER SWITCH AND VOLUME CONTROL [PWR/VOL]**

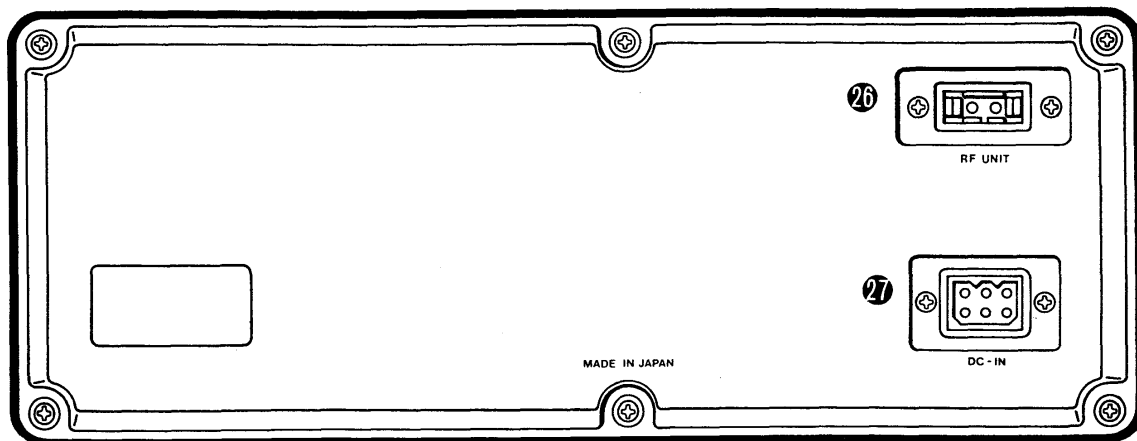
- Turns ON and OFF the transceiver power.
- Varies the audio output level from the internal speaker.

**25 MAIN DIAL (p. 13)**

- Changes the display frequency in 100 Hz steps when the CE indicator lights.
- Changes the memory channel when the CE indicator does not light.

### 3 PANEL DESCRIPTION

#### ■ Remote controller rear panel



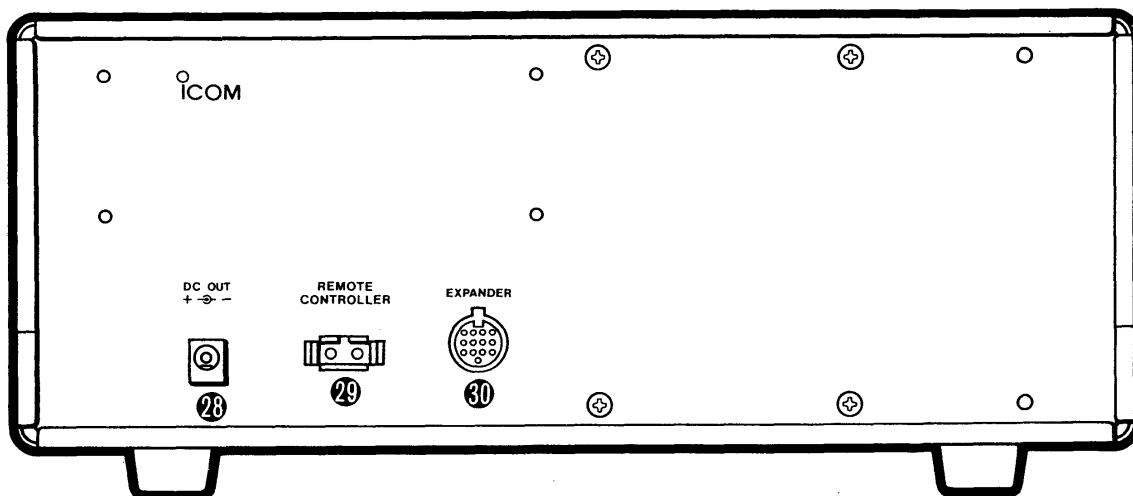
**26 CONTROL CABLE CONNECTOR [RF UNIT] (p. 8)**

Connect the control cable between the transceiver and controller here.

**27 DC POWER CONNECTOR [DC-IN] (p. 8)**

Connect the supplied DC power cable from this connector to an external 12 V DC power source.

#### ■ Transceiver front panel



**28 DC OUTPUT JACK [DC OUT] (p. 8)**

Outputs 12 V DC (max. 1 A). The jack can be used when connecting external equipment to the transceiver.

**29 CONTROL CABLE CONNECTOR [REMOTE CONTROLLER] (p. 8)**

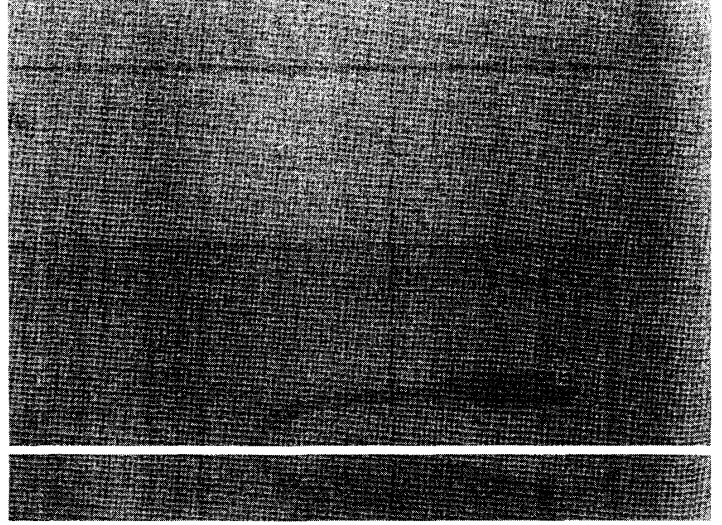
Connect the control cable between the transceiver and controller here.

**30 EXPANDER UNIT SOCKET [EXPANDER] (p. 21)**

Connect the plug from the EX-804 EXPANDER UNIT (optional) here.



**Count on us!**



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