



INSTRUCTION MANUAL

MF/HF MARINE TRANSCEIVER **IC-M801GMDSS**



FOREWORD

Thank you for purchasing this Icom product. The IC-M801GMDSS MF/HF MARINE TRANSCEIVER is designed and built with Icom's superior technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

We want to take a couple of moments of your time to thank you for making the IC-M801GMDSS your radio of choice, and hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your IC-M801GMDSS.

◇ FEATURES

- *Standard 4×8" remote controller*
- *Built-in DSC meets ITU Class A requirement*
- *PC connection capability for remote control*

PRECAUTIONS

⚠ **WARNING HIGH VOLTAGE! NEVER** attach an antenna or internal antenna connector during transmission. This may result in an electrical shock or burn.

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

⚠ **WARNING! NEVER** mount the transceiver main unit overhead. The weight of the unit is approximately 8.5 kg, but its apparent weight will increase several fold due to wave shocks or vibration. The unit must be mounted on a flat hard surface only.

⚠ **NEVER** connect a power source of more than 31.2 V DC. This connection could cause a fire or ruin the transceiver.

⚠ **NEVER** place the transceiver where normal operation of the ship or vehicle may be hindered or where it could cause bodily injury.

⚠ **NEVER** let metal, wire or other objects touch any internal part or connectors on the rear panel of the transceiver. This may result in an electric shock.

DO NOT use chemical agents such as benzine or alcohol when cleaning, as they can damage the transceiver surface.

IMPORTANT

READ THIS INSTRUCTION MANUAL CAREFULLY before attempting to operate the transceiver.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the IC-M801GMDSS.

EXPLICIT DEFINITIONS

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

During maritime mobile operation, **KEEP** the transceiver and handset or microphone **as far away** as possible (at least 1 m) from the magnetic navigation **compass** to prevent erroneous indications.

Use Icom handset or microphones only (supplied or optional). Other manufacturer's handset or microphones have different pin assignments, and connection to the IC-M801GMDSS may damage the transceiver.


AVOID using or placing the transceiver in areas with temperatures below -15°C or above +55°C.

AVOID placing the transceiver in excessively dusty environments or in direct sunlight.

AVOID placing the transceiver against walls or putting anything on top of the transceiver. This will obstruct heat dissipation.

Place the unit in a secure place to avoid inadvertent use by children.

BE CAREFUL! The transceiver main unit will become hot when operating the transceiver continuously for long periods.

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IN CASE OF EMERGENCY

When your ship requires assistance, contact other ships and the Coast Guard by sending a distress call using digital selective calling on an emergency frequency.

<i>When immediate help is needed</i>	<i>When potential problems exist</i>
<div><div>① Push and hold [DISTRESS] for 5 sec. until the short beeps become one long beep, to send the distress call.</div><div>② After the appropriate traffic frequency is automatically selected (after an acknowledgement call is received), push and hold the PTT switch on the handset or microphone and send the following information.<div><div>1. "MAY DAY, MAY DAY, MAY DAY."</div><div>2. "THIS IS " (name of ship)</div><div>3. "LOCATED AT " (ship's position)</div><div>4. Give the reason for the distress call.</div><div>5. Explain what assistance you need.</div><div>6. Give additional information:<div><div>• Ship type</div><div>• Ship length</div><div>• Ship color</div><div>• Number of people on-board</div></div></div></div></div></div>	<div><div>① Push [DSC] to select DSC watch mode, if necessary.</div><div>② Push [MODE SET] to select DSC menu, rotate [CH] to select "Geographical" then push [ENT].</div><div>③ Follow the guidance displayed on the LCD (bottom line), to set up the category, area, traffic and calling frequencies with [CH], [ENT] and keypad.</div><div>④ Push and hold [CALL] for 1 sec. until the short beeps become one long beep.</div><div>⑤ Transmit the appropriate information using voice.<div><div>• DSC equipped ships may monitor your transmission.</div></div></div></div>

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

•CALL PROCEDURE

Calls must be properly identified and the time limit must be respected.

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

•PRIORITIES

- ① 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.
- ② False or fraudulent distress signals are prohibited and punishable by law.

•PRIVACY

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

•LOGS

- ① All distress, emergency and safety calls must be recorded in complete details. Log data activity is usually recorded in 24 hour time. Universal Time Coordinated (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; entries must be signed by the authorized licensed technician performing or supervising the work.

•RADIO LICENSES

(1) SHIP STATION LICENSE

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 application. This government-issued license states the call sign which is your craft's identification for radio purposes.

(2) OPERATOR'S LICENSE

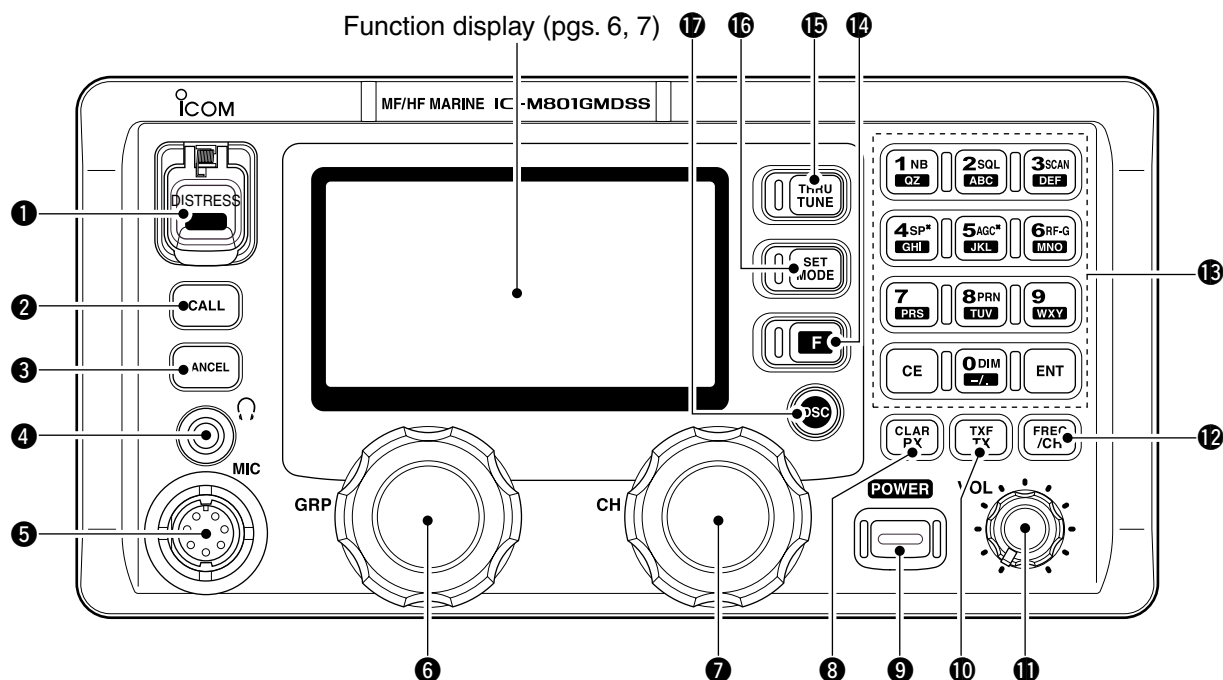
A Restricted Radiotelephone Operator Permit is the license most often held by small ship radio operators when a radio is not required for safety purposes.

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

Keep a copy of the current government rules and regulation handy.

■ Controller (RC-25GMDSS)



1 DISTRESS SWITCH [DISTRESS] (p. 18)

Push and hold for 5 sec. (approx.) to make a distress call.

2 CALL SWITCH [CALL]

Push and hold for 1 sec. to start calling after DSC contents are setup.

3 CANCEL SWITCH [CANCEL]

Cancels a distress or DSC repeat call.

4 HEADPHONE JACK []

Accepts headphones.

- Output power: 2.5 mW with a 16 Ω load (stereo/monaural)

5 MICROPHONE CONNECTOR [MIC]

Accepts the supplied or optional microphone.

- See p. 68 for appropriate microphones.
- See p. 65 for microphone connector information.

6 GROUP SELECTOR [GRP]

- ➔ Selects groups in 20 channel steps and ITU marine channel groups. (p. 8)
- ➔ Selects items during quick/initial set mode, etc.

7 CHANNEL SELECTOR [CH]

- ➔ Selects an operating channel within the selected channel group such as ITU channels. (p. 8)
 - User channels can be selected from 1 to 160 (max.) in sequence regardless of the channel group.
- ➔ Changes setting or value of the selected item during quick/initial set mode, etc.

8 RX/CLARITY SWITCH [RX CLAR]

- ➔ After pushing [F], turns the clarity function ON and OFF. (p. 12)
 - [CH] is used for clarity control.
- ➔ During DSC watch mode, enters RX memory select screen. (p. 31)
 - [CH] is used for distress and other call selection.

9 POWER SWITCH [POWER]

- ➔ Push to turn the power ON.
- ➔ Push and hold for 1 sec. to turn the power OFF.

10 TX/TRANSMIT FREQUENCY SWITCH [TX TXF]

- ➔ After pushing [F], displays the transmit frequency, and opens the squelch. Checks and monitors the transmit frequency while holding. (p. 10)
- ➔ During DSC watch mode, enters TX memory select screen. (p. 42)
 - [CH] is used for memory selection.

11 VOLUME CONTROL [VOL]

Adjusts the audio output level.

- Audio does not come from the speaker when:
 - The speaker OFF switch is turned ON.
 - The squelch function is turned ON and no signal is being received.
 - Pick the handset up with speaker switch “ ” position. (p. 5)
 - During DSC watch mode.

12 FREQUENCY/CHANNEL SWITCH [FREQ/CH]

- ➔ Selects indication type: (p. 8)
When channel comment indication is ON;
switches channel comment indication ON and OFF.
When channel comment indication is OFF;
switches transmit frequency indication ON and OFF.
- ➔ After pushing [F], enters channel name programming mode, when channel comment indication is ON. (p. 13)

13 KEYPAD

- 1 NB QZ** ➔ Inputs numeral "1" for channel number input, etc.
➔ Inputs "1," "Q," "Z," "q," "z" or space for channel comment input.
➔ After pushing [F], turns the noise blanker function ON and OFF. (p. 11)
- 2 SQL ABC** ➔ Inputs numeral "2" for channel number input, etc.
➔ Inputs "2," "A," "B," "C," "a," "b" or "c" for channel comment input.
➔ After pushing [F], turns the squelch function ON and OFF. (p. 11)
- 3 SCAN DEF** ➔ Inputs numeral "3" for channel number input, etc.
➔ Inputs "3," "D," "E," "F," "d," "e" or "f" for channel comment input.
➔ After pushing [F], starts and stops the scan function. (p. 9)
- 4 SP* GHI** ➔ Inputs numeral "4" for channel number input, etc.
➔ Inputs "4," "G," "H," "I," "g," "h" or "i" for channel comment input.
➔ After pushing [F], turns the external speaker output ON and OFF. (p. 10)
- 5 AGC* JKL** ➔ Inputs numeral "5" for channel number input, etc.
➔ Inputs "5," "J," "K," "L," "j," "k" or "l" for channel comment input.
➔ After pushing [F], turns the AGC OFF function ON and OFF. (p. 11)
- 6 RF-G MNO** ➔ Inputs numeral "6" for channel number input, etc.
➔ Inputs "6," "M," "N," "O," "m," "n" or "o" for channel comment input.
➔ After pushing [F], enters the RF gain adjustment mode. (p. 11)
- 7 PRS** ➔ Inputs numeral "7" for channel number input, etc.
➔ Inputs "7," "P," "R," "S," "p," "r" or "s" for channel comment input.

- 8 PRN TUV** ➔ Inputs numeral "8" for channel number input, etc.
➔ Inputs "8," "T," "U," "V," "t," "u" or "v" for channel comment input.
➔ After pushing [F], push for 1 sec. to print out the DSC contents, etc. (p. 46)
- 9 WXY** ➔ Inputs numeral "9" for channel number input, etc.
➔ Inputs "9," "W," "X," "Y," "w," "x" or "y" for channel comment input.
- 0 DIM -/** ➔ Inputs numeral "0" for channel number input, etc.
➔ Inputs "0" and symbols (., ", <, >, *, +, -, /, <=, >=, <=, >=) for channel comment input.
➔ After pushing [F], selects LCD backlight brightness.
- ENT** ➔ Fixes input of channel number and channel comment, etc.
➔ When pushed for 1 sec., stores programmed frequency, operating mode and memory comment into a channel.
- CE** ➔ Clears entered digits and retrieves the previous frequency, channel or channel names during setting.

14 FUNCTION SWITCH [F]

After pushing, activates the secondary functions.

- "[F]" appears when a secondary function can be accessed.

15 TUNE/THROUGH SWITCH [TUNE THRU]

- ➔ Starts tuning the connected AT-141 HF AUTOMATIC ANTENNA TUNER.
 - "TUNE" appears when tuned.
 - When the tuner cannot tune the antenna, the tuning circuit is bypassed automatically after 15 sec.
- ➔ After pushing [F], bypasses the connected antenna tuner. (p. 12)
 - "THRU" appears instead of "TUNE" indication.

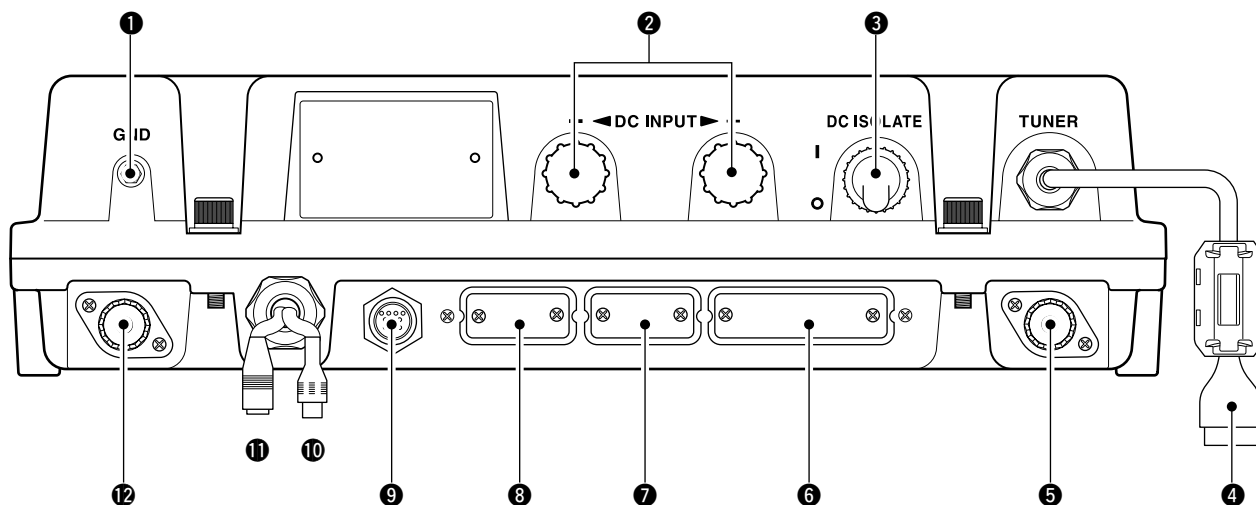
16 MODE/SET SWITCH [MODE SET]

- ➔ Push to select an operating mode.
 - J3E (USB), H3E (AM), LSB, J2B (AFSK), F1B (FSK), and A1A (CW) modes are available, depending on version or countries.
- ➔ After pushing [F], enters quick set mode. (p. 47)
- ➔ During DSC watch mode, enters DSC menu.

17 DSC SWITCH [DSC]

Switches DSC watch mode and voice communication mode when pushed.

■ Main unit



1 GROUND TERMINAL

IMPORTANT! Connects a ship's ground. See page 56 for details.

2 DC POWER TERMINALS (pgs. 54, 57)

Accepts 24 V DC through the supplied DC power cables.

Red terminal is for positive and black terminal is for negative connection.

3 DC ISOLATE SWITCH [DC ISOLATE] (p. 54)

Turns the transceiver's main power ON and OFF.

4 TUNER CONTROL SOCKET (pgs. 54, 58)

Connects a control cable to the antenna tuner, AT-141.

A female connector kit is supplied for antenna tuner connection.

5 ANTENNA CONNECTOR 1 (pgs. 54, 58)

Connects a 50 Ω HF band antenna via a 50 Ω matched coaxial cable with a PL-259 plug for both transmit and receive operation.

6 PRINTER CONNECTOR (pgs. 55, 66)

Connects an IBM® centronics or compatible printer to print out received DSC information automatically or manually.

7 REMOTE CONNECTOR [REMOTE] (pgs. 55, 65)

Connects to a PC via an RS-232C cable (D-sub 9-pin) for remote control in the NMEA or RS-232C format.

8 MODEM CONNECTOR [AF/MOD] (pgs. 55, 65)

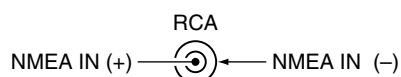
Connects to an NBDP (Narrow Band Direct Printing) or FAX system via a D-sub 9-pin cable.

9 CONTROLLER CONNECTOR [CONTROLLER] (p. 54)

Connects the supplied remote controller, RC-25GMDSS.

10 GPS CONNECTOR [GPS] (p. 55)

Input position and UTC data (NMEA0183 ver. 3.01 format), such as from a GPS receiver, etc., for setting your positioning and time data automatically without manual input for DSC operation.



11 SPEAKER JACK [SP] (p. 54)

Connects the supplied external speaker, SP-24E.

12 ANTENNA CONNECTOR 2 (p. 54)

Connects a 50 Ω HF band antenna via a 50 Ω matched coaxial cable with a PL-259 plug for DSC receiver.

IMPORTANT!: An HF antenna should be connected to this antenna connector, otherwise no DSC call can be received.

✓ For detailed "ANTENNA AND GROUNDING CONSIDERATIONS," see pages 73 to 75.

Count on us!