ICOM

INSTRUCTION MANUAL

MF/HF MARINE TRANSCEIVER

IC-M801E

Icom Inc.

FOREWORD

Thank you for purchasing this Icom product. The IC-M801E 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-M801E 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-M801E.

◇ *FEATURES*

❍ *Standard 4×8″ remote controller*

❍ *Built-in DSC meets ITU Class E requirement*

❍ *12 and 24 V DC versions are available*

❍ *PC connection capability for remote control*

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-M801E.

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.

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 15.6 V DC or 31.2 V DC (depending on the transceiver version). 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.

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-M801E 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.

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.

When immediate help is needed

① Push and hold [DISTRESS] for 5 sec. until the short beeps become one long beep, to send the distress call.

② After 8291 kHz 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.

1. "MAY DAY, MAY DAY, MAY DAY."
2. "THIS IS……" (name of ship)
3. "LOCATED AT ……" (ship's position)
4. Give the reason for the distress call.
5. Explain what assistance you need.
6. Give additional information:
   - Ship type
   - Ship length
   - Ship color
   - Number of people on-board

When potential problems exist

① Push [DSC] to select DSC watch mode, if necessary.

② Push [MODE SET] to select DSC menu, rotate [CH] to select "Geographical" then push [ENT].

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.

④ Push and hold [CALL] for 1 sec. until the short beeps become one long beep.

⑤ Transmit the appropriate information using voice.
- DSC equipped ships may monitor your transmission.

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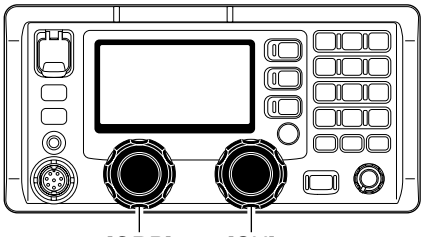
QUICK REFERENCE

■ How to set a Channel/Group

The IC-M801E has up to 160 user-programmable, 249 ITU SSB duplex, 124 ITU SSB simplex and 662 ITU FSK duplex channels.

◇Using the group and channel selectors

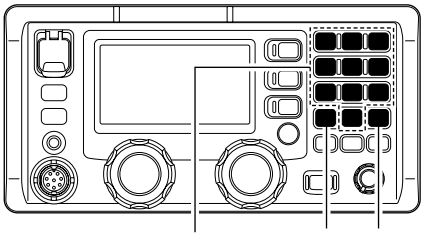


① Rotate [GRP] to select the desired group.
- Available groups are shown in the list below.
- During user-programmable channel group use, the channels change in 20-channel steps. See details on p. 8.

Example; When starting the user-programmable Ch. 1.
1⇔21⇔41…141⇔401⇔4-1⇔601……C2-1…1

② Rotate [CH] to select the desired channel.
- Available channels are shown in the list below.
- Pushing [▲]/[▼] on the optional hand microphone, HM-135, also selects a channel.

◇Using the keypad



•When selecting an user-programmable channel

➥ Push the appropriate numeral keys to set the 1, 2 or 3-digit channel number, then push [ENT].
- Pushing [CE] clears input digits and retrieves the channel.

Example; When selecting Ch. 1.
Push [1 NB] then push [ENT].
Example; When selecting Ch. 35.
Push [3 SCAN], [5 AGC] then push [ENT].
Example; When selecting Ch. 128.
Push [1 NB], [2 SQL], [8 PRN] then push [ENT].

•When selecting an ITU duplex channel

➥ Push the appropriate numeral keys to set the 3, 4 or 5-digit channel number, then push [ENT].
- Pushing [CE] clears input digits and retrieves the channel.

Example; When selecting Ch. 401.
Push [4 SP], [0 DIM], [1 NB] then push [ENT].
Example; When selecting Ch. 2505.
Push [2 SQL], [5 AGC], [0 DIM], [5 AGC] then push [ENT].

•When selecting an ITU simplex channel

➥ Push the appropriate numeral keys to set the 5 or 6-digit channel number, then push [ENT].
- Push [0 DIM] 3 times to enter "– (dash)."
- Pushing [CE] clears input digits and retrieves the channel.

Example; When selecting Ch. 4-1.
Push [4 SP], [0 DIM], [0 DIM], [0 DIM], [1 NB] then push [ENT].
- After pushing [0 DIM] 3 times, "–" appears.

Example; When selecting Ch. 25-2.
Push [2 SQL], [5 AGC], [0 DIM], [0 DIM], [0 DIM], [2 SQL] then push [ENT].
- After pushing [0 DIM] 3 times, "–" appears.

•Available channel groups and channels

Channel No.	Description	Channel No.	Description	Channel No.	Description
1 to 160	User Ch.*1	1201 to 1241	12 MHz ITU duplex Ch.	22-1 to 22-9	22 MHz ITU simplex Ch.
401 to 427	4 MHz ITU duplex Ch.	12-1 to 12-9	12 MHz ITU simplex Ch.	2501 to 2510	25 MHz ITU duplex Ch.
4-1 to 4-9	4 MHz ITU simplex Ch.	1601 to 1656	16 MHz ITU duplex Ch.	25-1 to 25-9	25 MHz ITU simplex Ch.
601 to 608	6 MHz ITU duplex Ch.	16-1 to 16-9	16 MHz ITU simplex Ch.	C1-1 to C1-21	C1 channels
6-1 to 6-9	6 MHz ITU simplex Ch.	1801 to 1815	18 MHz ITU duplex Ch.	C2-1 to C2-31	C2 channels
801 to 832	8 MHz ITU duplex Ch.	18-1 to 18-9	18 MHz ITU simplex Ch.	4001 to 25040	ITU FSK duplex Ch.*2
8-1 to 8-9	8 MHz ITU simplex Ch.	2201 to 2253	22 MHz ITU duplex Ch.		

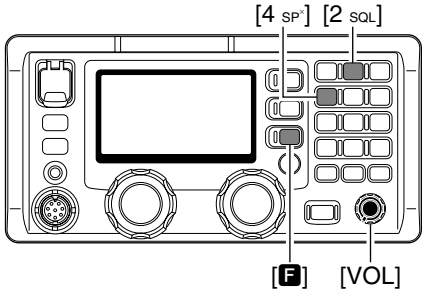
*1[GRP] changes in 20 channels steps. *2SITOR use— no group separation.

■ Audio output/squelch adjustment

◇Audio output level

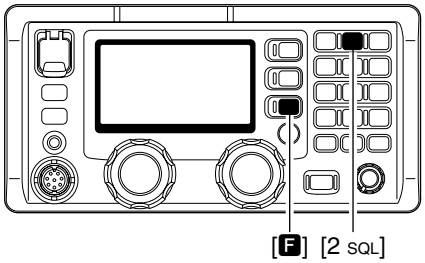
➥Rotate [VOL] to adjust audio output level.

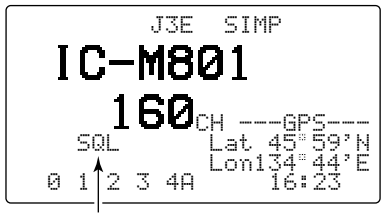
NOTE: Connect the handset/microphone and make sure that no "▒SP" and "SQL" indicators are displayed during audio level adjustment, otherwise, audio may not be output.
When either or both indicators are displayed, perform the following operations;
- When "▒SP" is displayed, push [F] then [4 SP×].
- When "SQL" is displayed, push [F] then [2 SQL].



◇Squelch function

➥Push [F] then [2 SQL] to turn the squelch function ON and OFF.



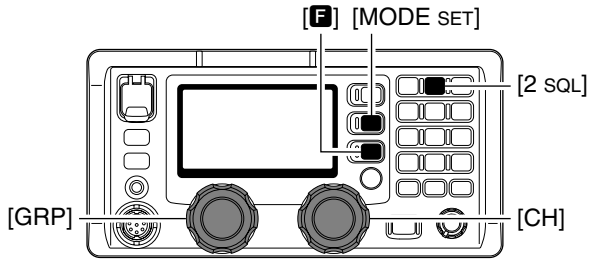


"SQL" appears when the squelch function is ON.

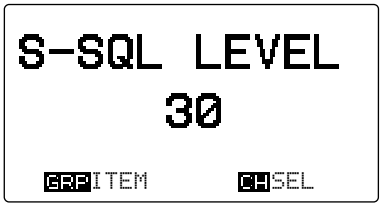
•*Squelch level adjustment*

① Push [F] then [2 SQL] to turn the squelch function ON.
- Select the desired frequency/channel in advance, if desired.

② Push [F] then [MODE SET] to enter quick set mode.



③ Rotate [GRP] to select the "S-SQL LEVEL" item.
④ Rotate [CH] to adjust the squelch level.
- Adjust the level within 1–100 range.

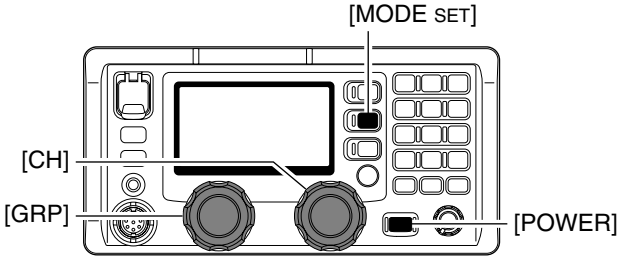


⑤ Push [MODE SET] to exit quick set mode.

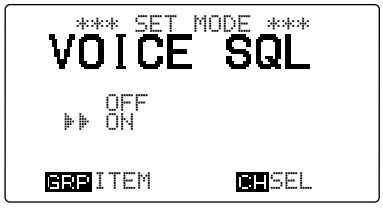
•*Voice squelch function*

The voice squelch function detects voice components in the received signal and opens the squelch only when voice components are included in the signal.

① While pushing [MODE SET] turn the power ON to enter initial set mode.



② Rotate [GRP] to select the "VOICE SQL" item.
③ Rotate [CH] to select the voice squelch function ON and OFF.



④ Turn the power OFF then ON again to exit initial set mode.

■ Basic voice transmission and reception

◇ Receiving a signal

① Select the desired channel via [GRP] and [CH], or keypad.
- Turn ON/OFF the squelch function or adjust the squelch level as desired.

② When a signal is received, "RX" indicator appears and audio is output from the connected speaker.
- Rotating [VOL] to adjust the audio output level at this moment is recommended.
- S-meter shows the received signal strength.

③ Use the following functions, if desired:

•Noise blanker

Push [F] then [1 NB] to turn the noise blanker ON and OFF.
- "NB" appears when the noise blanker is activated.
- See page 42 for the noise blanker level adjustment.

•AGC (Automatic Gain Control) OFF function

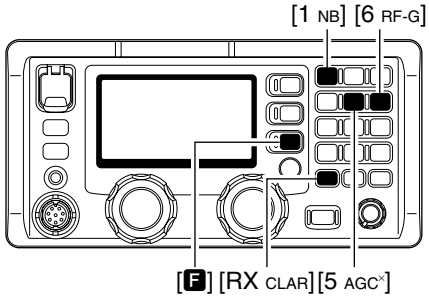
Push [F] then [5 AGC] to turn the AGC OFF function ON and OFF.
- "AGC" appears when the AGC-OFF function is activated (deactivating AGC).

•RF gain level

Push [F], [6 RF-G] to enter the RF gain adjustment mode, then rotate [CH] to adjust the gain.
- Adjust the gain within 0 (low sensitivity) to 9 (maximum sensitivity) range.
- Push [MODE SET] to exit the adjustment mode.

•Clarity

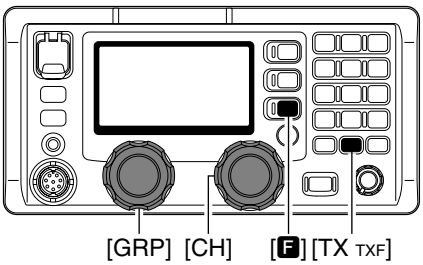
Push [F], [RX CLAR] to switch the clarity function ON and OFF, then rotate [CH] for critical tuning.



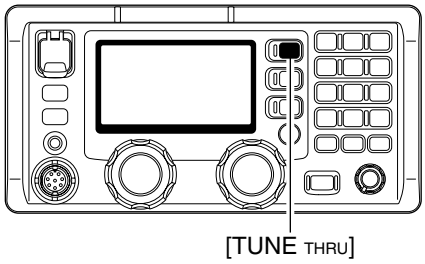
◇ Transmitting in voice

① Select the desired channel via [GRP] and [CH], or keypad.

② Push [F], then push and hold [TX TXF] for a while to monitor the transmit frequency of the selected channel.
- The transmit frequency is displayed and "TX" blinks.
- When the channel is busy, wait until it becomes clear, or change the channel.



③ When the optional AT-141 is connected, push [TUNE THRU] to start manual tuning.
- "TUNE" appears when the antenna is tuned.
- "TUNE" blinks when a tuning error has occurred.
- Automatic tuning function is also available.



④ Push and hold [PTT] on the handset or microphone to transmit.
- "TX" appears.
- If "SWR" appears during transmit, check your antenna system.

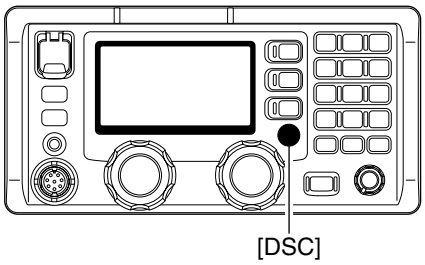
⑤ Speak into the handset or microphone at your normal voice level.

⑥ Release [PTT] to return to receive.
- "TX" disappears.

■ Receiving a DSC

➥For waiting for a DSC call, such as an individual or group call on the desired frequencies, push [DSC] to enter DSC watching mode.

- Monitoring the frequencies, 2187.5, 4207.5, 6312.0, 8414.5, 12577.0 and 16804.5 kHz, for distress, urgency, etc., no operation is necessary with the transceiver. These frequencies are monitored at all times.

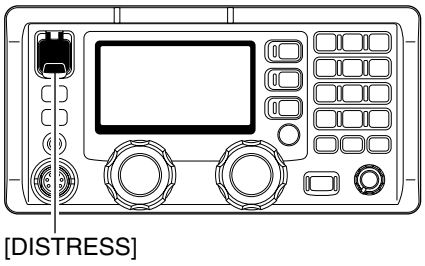


■ Transmitting a distress call

◇ Simple distress call

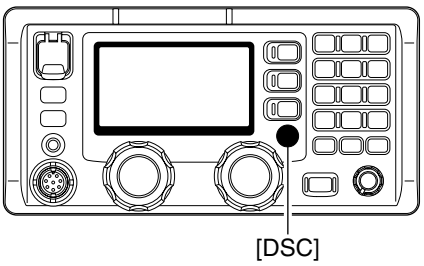
➥Lift up the distress switch cover, then push and hold [DISTRESS] for 5 sec.

- After 5 sec., a distress call is sent.

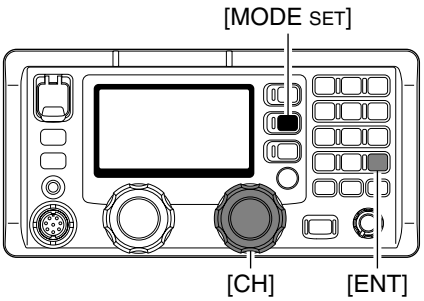


◇ Regular distress call

① Push [DSC] to enter DSC watch mode.



② Push [MODE SET] to enter DSC menu.



③ Rotate [CH] to select "Distress" then push [ENT].

```
******* DSC MENU *******
-------- Select --------
 Position
 Individual
 GrouP
 Geo9raPhical
▶Distress
 Distress RLY
 Semi/Auto
 Test
 RX memory
 TX memory
 Set uP
 Self test
 Exit
CHSEL  ENTOK
```

④ Rotate [CH] to select the desired nature then push [ENT].

```
******* Distress *******
-------- Nature --------
▶Undesi9nated
 Fire,ExPlosion
 Floodin9
 Collision
 Groundin9
 CaPsizin9
 Sinkin9
 Disable adrift
 Abandonin9 shiP
 Piracy attack
 Man overboard
CHSEL  ENTOK
```

⑤ Verify your position and the UTC time, then push [ENT].

- When no NMEA0183 ver. 3.01 data is applied to [GPS], your position and UTC time should be input in this step.
  - Use the keypad and [CH] when changing your position or the time.
  - Move the cursor with [CH] rotation.
  - [3 SCAN], [6 RF-G], [7] and [9] is used for the 'East,' 'North,' 'South' and 'West' selection.

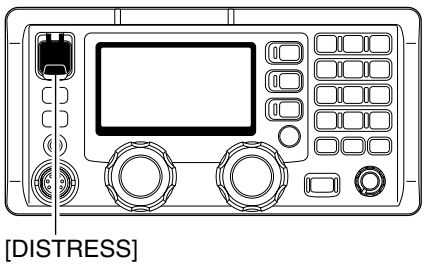
```
******* Distress *******
--- Position & time ----

    Latitude  34°34.343N
   Longitude 135°34.343E
         UTC  12:34


CENull CH↔ ENTOK
```

⑥ Rotate [CH] to select the DSC calling frequencies, then push [ENT].

- After pushing [ENT], return to DSC menu as shown in step ③.

```
******* Distress *******
--------- AttemPt --------
▶Sin9le:six freQuency
 Sin9le: 2187.5kHz
 Sin9le: 4207.5kHz
 Sin9le: 6312.0kHz
 Sin9le: 8414.5kHz
 Sin9le:12577.0kHz
 Sin9le:16804.5kHz
CHSEL  ENTOK
```

⑦ Lift up the distress switch cover, then push and hold [DISTRESS] for 5 sec.



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.

Count on us!

<Intended Country of Use>

☐GER ☐FRA ☐ESP ☐SWE
☐AUT ☐NED ☐POR ☐DEN
☐GBR ☐BEL ☐ITA ☐FIN
☐IRL ☐LUX ☐GRE ☐SUI
☐NOR

A-6471H-1EU-①a
Printed in Japan

Printed on recycled paper with soy ink.

Icom Inc.
1-1-32 Kamiminami, Hirano-ku, Osaka 547-0003, Japan