# ICOM
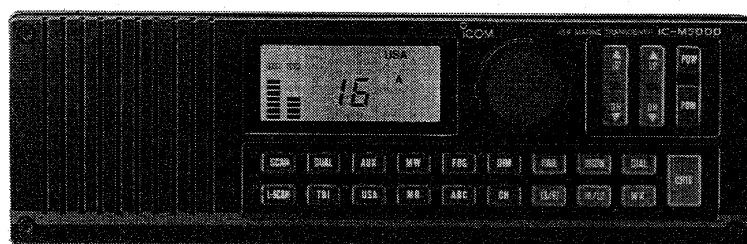
VHF MARINE TRANSCEIVER
(FULL DUPLEX CAPABILITY)

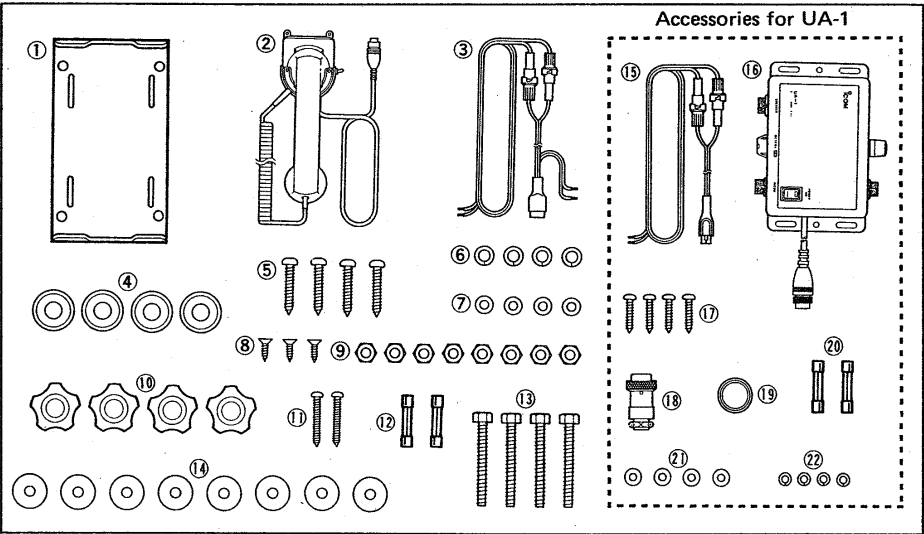# IC-M500D

Icom Inc.

# FOREWORD

Thank you for choosing the **IC-M500D VHF MARINE TRANSCEIVER.** Icom uses the most advanced, state-of-the-art engineering concepts and the latest technology when designing its communication products.

This attractively styled new **IC-M500D** has the following advanced features:

- ●Floating ground design
- ●Full duplex capability
- ●Strong splash-resistant, dust-gight case with molded frame design
- ●25W of high transmission output power
- ●Icom's new TRI WATCH function
- ●All marine channels pre-programmed
- ●48 user-programmable memory channels
- ●HAILER and INTERCOM operations available
- ●25W of hailer output power
- ●Variety of scan functions

To fully appreciate the capabilities of your new **IC-M500D,** please read this instruction manual thoroughly. Also, visit your nearest authorized Icom Dealer or Service Center if you have questions relating to the operation of the transceiver.

# UNPACKING



**Accessories included with the IC-M500D:**                                                              Qty.
① Mounting bracket . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
② Handset kit (HS-50) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
③ DC power cable (OPC-191) for IC-M500D . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
④ Rubber feet (C-30-CS-1) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑤ Self-tapping screws (Pan head A0 6 x 30 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑥ Spring washers (M6 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑦ Flat washers (M5 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑧ Self-tapping screws (For handset cradle installation) . . . . . . . . . . . . . . . . . . . . . . . . . . . 3
⑨ Nuts (M6 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8
⑩ Knob bolts (G-type D-35 M5 x 10 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑪ Self-tapping screws (Pan head A0 3.5 x 30 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2
⑫ Spare fuses (10A) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2
⑬ Hex head bolts (M6 x 50 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑭ Flat washers (M6 t=1.6 D=20 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8
⑮ DC power cable (OPC-044A) for UA-1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
⑯ Audio amplifier (UA-1) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
⑰ Self-tapping screws (Pan head A0 4 x 20 SUS) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
⑱ Speaker plug (NS-1004-4P) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
⑲ Connector cover . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1
⑳ Spare fuses (10A) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2
㉑ Flat washers (M4 Ni) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4
㉒ Spring washers (M4 Ni) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4

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# IMPORTANT

1. Transmitting or testing while installing, servicing or maintaining a 2-way radio unit that may affect the proper operation of a 2-way radio station must be performed by or under the immediate supervision and responsibility of a person with a general radiotelephone operator's license or other such authorized license.

2. **DO NOT** operate both the IC-M500D and UA-1 without running the vessel's engine. The vessel's battery will be exhausted if the IC-M500D and UA-1 power are ON while your vessel's engine is OFF.

3. **Be careful!** If the IC-M500D or UA-1 are not securely mounted with bolts and nuts, personal injury or transceiver damage could occur due to wave shock, vibrations, etc.

4. Transmitting without an antenna will damage the transceiver.

5. Keep interconnection cables as far away as possible from electrical pumps, generators and other electronic instruments to prevent instrument malfunctions.

## 1-1 FRONT PANEL
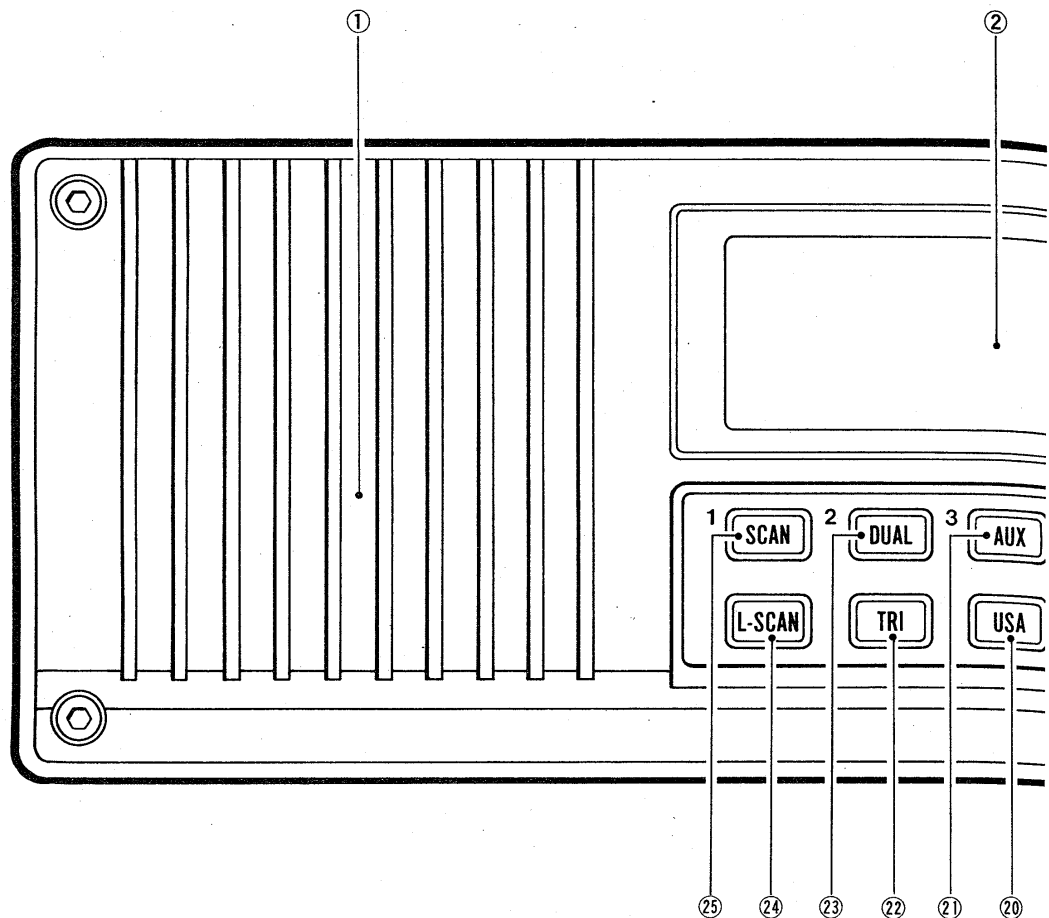


① **INTERNAL SPEAKER**
Operates when the transceiver is receiving or the INTERCOM is operating.

② **FUNCTION DISPLAY**
Indicates current operating channel and additional information. Refer to Section 1 - 2 FUNCTION DISPLAY.

③ **CHANNEL SELECTOR**
Selects an operating channel.

④ **SQUELCH SET SWITCH**
Varies the squelch threshold point.

The squelch threshold point is indicated by the SQUELCH LEVEL indicator on the FUNCTION DISPLAY.

⑤ **VOLUME SET SWITCH**
Varies the audio output level from the speaker.

The volume level is indicated by the VOLUME LEVEL indicator on the FUNCTION DISPLAY.

⑥ **POWER SWITCHES**
Turns ON the power when either switch is pushed, and turns OFF the power when both switches are pushed simultaneously.

⑦ **CHANNEL 16 SWITCH**
Selects Channel 16. This channel can be used as a call channel or as a marine distress and safety call channel.

⑧ **DIAL SWITCH**
Selects the DIAL mode.

⑨ **WEATHER CHANNEL SWITCH**
Selects the weather channels.

⑩ **INTERCOM SWITCH**
Selects the INTERCOM mode.

⑪ **RF POWER SWITCH**
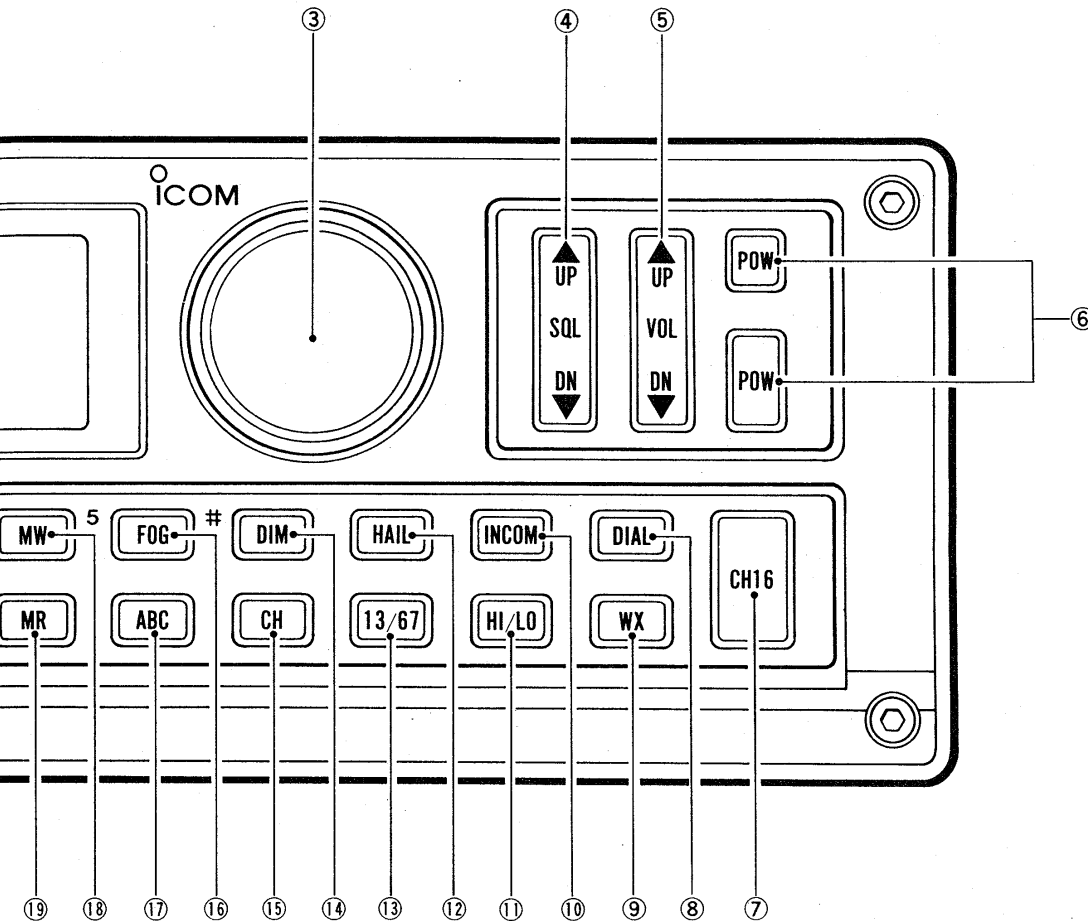Alternately selects HIGH and LOW transmit output power.
● HIGH : 25 W
● LOW : 1 W

⑫ **HAILER SWITCH**
Selects the HAILER mode. (Supplied UA-1 AUDIO AMPLIFIER must be connected.)

⑬ **HIGH POWER SWITCH**
Selects HIGH output transmit power while pushing and holding this switch when operating on Channels 13 and 67 on a U.S.A. channel.

#### ⑭ DIMMER SWITCH
Turns ON and OFF the FUNCTION DISPLAY backlight.

Varies backlight intensity at 8 levels when the CHAN-NEL SELECTOR is rotated while pushing and holding the [DIM] switch.

#### ⑮ DIRECT CALL SWITCH
Turns ON the DIRECT CALL function.

To select the desired channel quickly, push the [CH] switch then push number keys on the keyboard.

#### ⑯ FOGHORN SWITCH
Activates the foghorn when the supplied UA-1 AUDIO AMPLIFIER is connected.

#### ⑰ MEMORY CHANNEL GROUP SWITCH
Selects memory channel group A, B or C.

Each group has 16 channels, and each channel can be selected with the CHANNEL SELECTOR.

#### ⑱ MEMORY WRITE SWITCH
Stores the desired channel into memory channels.

#### ⑲ MEMORY READ SWITCH
Selects the MEMORY mode.

#### ⑳ U.S.A. CHANNEL SWITCH
Selects U.S.A. or International marine channels.

#### ㉑ AUXILIARY SWITCH
No connection. This is an extra switch.

#### ㉒ TRI WATCH SWITCH
Starts and stops the TRI WATCH function.

The transceiver monitors Channel 16 and Memory Channel 00 while listening to the current operating channel.

#### ㉓ DUAL WATCH SWITCH
Starts and stops the DUAL WATCH function.

The transceiver monitors Channel 16 while listening to the current operating channel.
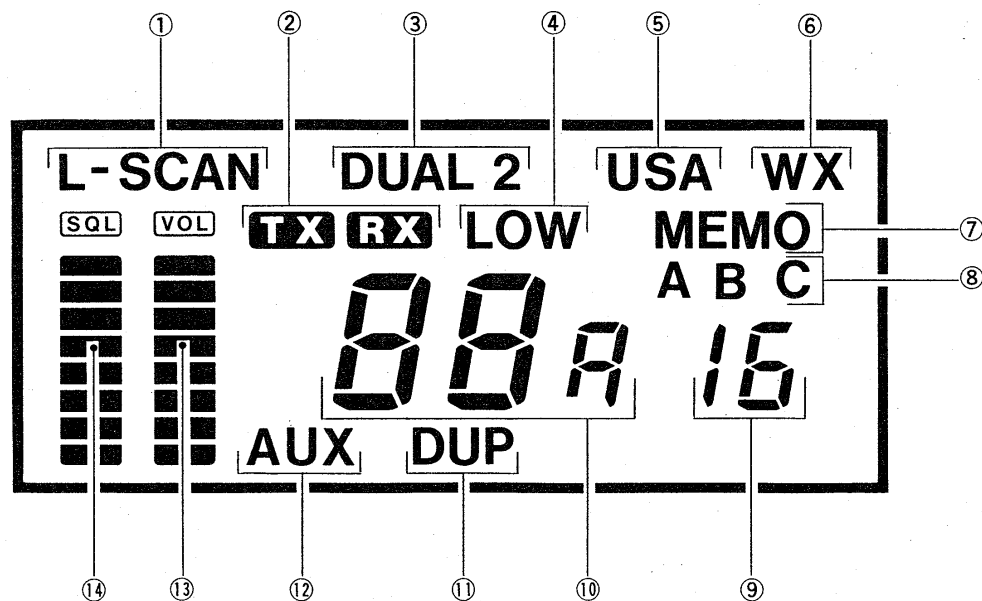
#### ㉔ LOCKOUT SCAN SWITCH
Starts and stops the LOCKOUT scan.

#### ㉕ SCAN SWITCH
Starts and stops the DIAL, MEMORY and WEATHER CHANNEL scan.

## 1-2 FUNCTION DISPLAY



① **SCAN INDICATORS**
Appear while scanning.
- "SCAN"    : Scan is operating.
- "L-SCAN" : LOCKOUT scan is operating.
- "L"          : The displayed channel is programmed as a lockout channel.

② **TRANSMIT/RECEIVE INDICATORS**
When the transceiver is transmitting "TX" appears.

When the transceiver is receiving and the channel is busy "RX" appears.

③ **DUAL AND TRI WATCH INDICATORS**
Indicates that the DUAL or TRI WATCH function is operating.
- "DUAL"    : DUAL WATCH is operating.
- "DUAL 2" : TRI WATCH is operating.

④ **TRANSMIT POWER INDICATOR**
Displays the operating output power.
- LOW power   : "LOW" appears.
- HIGH power  : No indication.

⑤ **CHANNEL MODE INDICATOR**
Displays channel modes such as U.S.A. or International marine channels.
- U.S.A. channel           : "USA" appears.
- International channel  : No display.

⑥ **WEATHER CHANNEL INDICATOR**
Lights while operating a weather channel.

⑦ **MEMORY MODE INDICATOR**
Appears when the transceiver selects the MEMORY mode.

⑧ **MEMORY CHANNEL GROUP INDICATOR**
Displays which memory channel group (A, B or C) has been selected.

⑨ **MEMORY CHANNEL INDICATOR**
Displays the memory channel number.

⑩ **CHANNEL INDICATOR**
Displays channel numbers.

⑪ **DUP INDICATOR**
Indicates the channel is for duplex operation.

⑫ **AUXILIARY INDICATOR**
Appears when the [AUX] switch is pushed.

⑬ **VOLUME LEVEL INDICATOR**
Displays the relative audio output level when receiving.

Displays the relative modulation level when transmitting.

⑭ **SQUELCH LEVEL INDICATOR**
Displays the relative squelch threshold level when receiving.

Displays the relative transmit output power selection when transmitting.
- LOW power   : 2 bars appear.
- HIGH power  : All bars appear.

**Count on us!**

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