



INSTRUCTION MANUAL

VHF MARINE TRANSCEIVER **IC-M423**



Icom Inc.

FOREWORD

Thank you for purchasing this Icom product. The IC-M423 VHF MARINE TRANSCEIVER 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.

We appreciate you making the IC-M423 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-M423.

◆ **FEATURES**


- *Simple operation with large keys*
- *Easy to hear speaker*
- *Built-in DSC meets ITU Class D requirement*
- *Rugged waterproof construction*
- *Optional COMMANDMICIV™ (HM-195)*
- *Easy to make an individual DSC calls using the optional MA-500TR Class B AIS Transponder*

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-M423.

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 of personal injury, fire or electric shock.

CLEAN THE TRANSCEIVER AND MICROPHONE THOROUGHLY WITH FRESH WATER after exposure to water including salt, otherwise, the keys and switch may become inoperable due to salt crystallization.

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. Say your call sign or other description of the vessel (AND 9 digit DSC ID if you have one).
4. "LOCATED AT" (your position).
5. State the nature of the distress and assistance required.
6. Give any other information which might facilitate the rescue.

Or, transmit your Distress call using digital selective calling on Channel 70.

USING DIGITAL SELECTIVE CALLING (Ch 70)

DISTRESS CALL PROCEDURE

1. While lifting up the key cover, hold down [DISTRESS] for 3 seconds until you hear 3 short beeps and then one long beep.
2. Wait for an acknowledgment on Channel 70 from a coast station.
 - After the acknowledgement is received, Channel 16 is automatically selected.
3. Hold down [PTT], then transmit the appropriate information as listed above.

INSTALLATION NOTE

Installation:

The installation of this equipment should be made in such a manner as to respect the EC recommended electromagnetic field exposure limits. (1999/519/EC)

The maximum RF power available from this device is 25 watts. The antenna should be installed as high as possible for maximum efficiency and the installation height should be at least 1.4 meters above any accessible position. In the case where an antenna cannot be installed at a reasonable height, then the transmitter should neither be continuously operated for long periods if any person is within a distance of 1.4 meters of the antenna, nor operated at all if any person is touching the antenna.

It is recommended that antenna of a maximum gain of 3 dB are used. If higher gain antenna are required then please contact your Icom distributor for revised installation recommendations.

Operation:

The exposure to RF electromagnetic field is only applicable when this device is transmitting. This exposure is naturally reduced due to the nature of alternating periods of receiving and transmitting. Keep your transmissions to the minimum necessary.

PRECAUTIONS

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

⚠ **WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC or use reverse polarity. This will ruin the transceiver.

⚠ **WARNING! NEVER** cut the DC power cable between the DC plug at the back of the transceiver and fuse holder. If an incorrect connection is made after cutting, the transceiver may be damaged.

CAUTION: NEVER place the transceiver where normal operation of the vessel may be hindered or where it could cause bodily injury.

KEEP the transceiver and microphone at least 1 m away from the vessel's magnetic navigation compass.

DO NOT use or place the transceiver in areas with temperatures below -20°C or above $+60^{\circ}\text{C}$ or, in areas subject to direct sunlight, such as the dashboard.

DO NOT use harsh solvents such as benzine or alcohol to clean the transceiver, as they will damage the transceiver's surfaces. If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.

DO NOT disassemble or modify the transceiver for any reason.

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

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

BE CAREFUL! The transceiver and the optional HM-195 COMMANDMICIV™ meet 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.

* Except for the DC power connector, NMEA In/Out leads and AF Out leads.

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COUNTRY CODE LIST

• ISO 3166-1

	Country	Codes		Country	Codes
1	Austria	AT	18	Liechtenstein	LI
2	Belgium	BE	19	Lithuania	LT
3	Bulgaria	BG	20	Luxembourg	LU
4	Croatia	HR	21	Malta	MT
5	Czech Republic	CZ	22	Netherlands	NL
6	Cyprus	CY	23	Norway	NO
7	Denmark	DK	24	Poland	PL
8	Estonia	EE	25	Portugal	PT
9	Finland	FI	26	Romania	RO
10	France	FR	27	Slovakia	SK
11	Germany	DE	28	Slovenia	SI
12	Greece	GR	29	Spain	ES
13	Hungary	HU	30	Sweden	SE
14	Iceland	IS	31	Switzerland	CH
15	Ireland	IE	32	Turkey	TR
16	Italy	IT	33	United Kingdom	GB
17	Latvia	LV			

TABLE OF CONTENTS

FOREWORD	i
IMPORTANT	i
EXPLICIT DEFINITIONS	i
IN CASE OF EMERGENCY	ii
INSTALLATION NOTE	ii
PRECAUTIONS	iii
COUNTRY CODE LIST	iv
TABLE OF CONTENTS	iv
1 OPERATING RULES	1
2 PANEL DESCRIPTION	2-6
■ Front panel	2
■ Function display	4
■ Speaker Microphone	6
■ Softkey function	6
3 PREPARATION	7-8
■ MMSI code programming	7
■ ATIS code programming (For Dutch and German version transceivers)	8
4 BASIC OPERATION	9-15
■ Channel selection	9
■ Receiving and transmitting	11
■ Call channel programming	12
■ Channel name programming	12
■ Microphone Lock function	13

1

2

3

4

5

6

7

8

9

10

11

12

13

14

TABLE OF CONTENTS (Continued)

■ Adjusting the volume level.....	14	■ PA (Public Address) function.....	67
■ Adjusting the squelch level.....	14	■ Horn function.....	68
■ Adjusting the display backlight level.....	15	9 MENU SCREEN OPERATION	69–75
■ AquaQuake water draining function	15	■ Menu screen operation	69
5 SCAN OPERATION.....	16–17	■ Menu screen items.....	70
■ Scan types	16	■ Radio Settings items.....	71
■ Setting Favorite channels.....	17	■ Configuration items	72
■ Starting a scan	17	10 CONNECTIONS AND MAINTENANCE	76–82
6 DUALWATCH/TRI-WATCH.....	18	■ Connections	76
■ Description	18	■ Antenna.....	78
■ Operation	18	■ Fuse replacement	78
7 DSC OPERATION	19–65	■ Cleaning.....	78
■ DSC address ID	19	■ Supplied accessories	78
■ Position and time programming.....	22	■ Mounting the transceiver.....	79
■ Distress call.....	23	■ MB-132 installation	80
■ Transmitting DSC calls	27	■ Microphone installation	81
■ Receiving DSC calls	45	11 SPECIFICATIONS AND OPTIONS	83–84
■ Received Call log	57	■ Specifications	83
■ Transmitted Call log.....	59	■ Options.....	84
■ DSC Settings	60	12 CHANNEL LIST.....	85–86
■ Making an Individual call using an AIS transponder ..	64	13 TEMPLATE	87–88
8 OTHER FUNCTIONS.....	66–68	14 TROUBLESHOOTING.....	89
■ Intercom operation	66		
■ RX Speaker function	67		

◇ Priorities

- Read all rules and regulations pertaining to call 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

You may require a current radio station license before using the transceiver. It is unlawful to operate a ship station which is not licensed, but required to be.

If required, contact 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

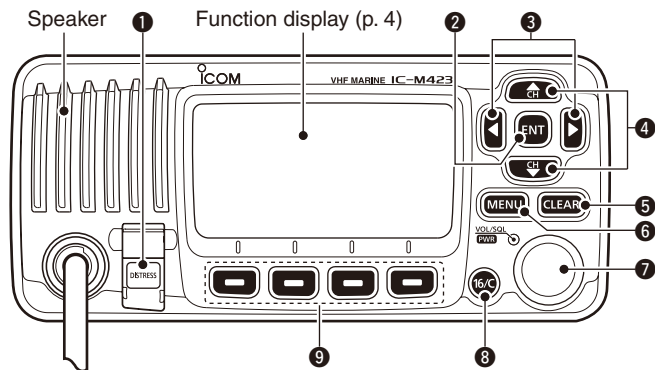
A Restricted Radiotelephone Operator Permit is the license most often held by small vessel radio operators when a radio is not required for safety purposes.

If required, the Restricted Radiotelephone Operator Permit must be posted or kept with the operator. If required, 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.

■ Front panel



1 DISTRESS KEY [DISTRESS] (pp. 23, 24)
Hold down for 3 seconds to transmit a Distress call.

2 ENTER KEY [ENT] (pp. 7, 10, 69)
Push to set the input data, selected item, and so on.

3 LEFT AND RIGHT KEYS [◀]/[▶]

- ➔ Push to switch to the previous or next key function that is assigned to the softkeys. (p. 6)
- ➔ Push to select the desired character or number in the table while in the channel name, position, MMSI code programming mode, and so on. (pp. 7, 12, 22)

4 UP AND DOWN/CHANNEL SELECT KEYS [▲•CH]/[▼•CH]

- ➔ Push to select the operating channels, Menu items, Menu settings, and so on. (pp. 11, 69)
- ➔ Push to check Favorite channels, change the scanning direction or manually resume a scan. (p. 17)

5 CLEAR KEY [CLEAR] (pp. 7, 12, 69)
Push to cancel the entered data, or to return to the previous screen.

6 DSC MENU KEY [MENU] (p. 69)
Push to enter or exit the Menu screen.

7 VOLUME AND SQUELCH SWITCH/POWER SWITCH [VOL/SQL•PWR]

- ➔ When the power is OFF, hold down for 1 second to turn ON power. (p. 11)
- ➔ Hold down for 1 second to turn OFF power.
- ➔ When the power is ON, push to enter the volume level adjustment mode.* (p. 14)
 - Each push of this switch toggles the mode between the volume level adjustment, squelch threshold level adjustment, operating channel selection and the LCD and key backlight brightness adjustment, if assigned.
- ➔ Rotate to adjust the volume level.* (p. 14)

*The desired function can be assigned in the Menu screen.

8 CHANNEL 16/CALL CHANNEL KEY [16/C]

- ➔ Push to select Channel 16. (p. 9)
- ➔ Hold down for 1 second to select the Call channel. (p. 9)
 - “CALL” appears when the Call channel is selected.
- ➔ Hold down for 3 seconds to enter Call channel programming mode when the Call channel is selected. (p. 12)

9 SOFTKEYS

The desired functions as described below can be assigned in the Menu screen.

Scan [SCAN] (p. 17)

Push to start or stop a Normal or Priority scan.

Dualwatch/Tri-watch [DW] (p. 18)

- ➔ Push to start a Dualwatch or Tri-watch.
- ➔ Push to stop a Dualwatch or Tri-watch when either is activated.

High/Low [HI/LO] (p. 11)

Push to set the power to high or low.

- Some channels are set to only low power.

Channel [CHAN] (p. 9)

Push to select a regular channel.

Public address [PA] (p. 67)

Push to enter the PA (Public Address) mode.

RX Speaker [RX-4] (p. 67)

Push to turn the RX Speaker mode ON or OFF.

Horn [HORN] (p. 68)

Push to enter the Horn mode.

Intercom [INCM] (p. 66)

Push to enter the Intercom mode.

AquaQuake [AQUA] (p. 15)

While holding down, the AquaQuake function is activated to clear water away from the speaker grill.

Favorite channel [★] (p. 17)

- ➔ Push to set or clear the displayed channel as a Favorite (Tag) channel.
- ➔ Hold down for 3 seconds to clear or set all Favorite channels in the selected channel group.

Name [NAME] (p. 12)

Push to enter the channel name programming mode.

Backlight [BKLT] (p. 15)

Push to enter the LCD and key backlight brightness adjustment mode.

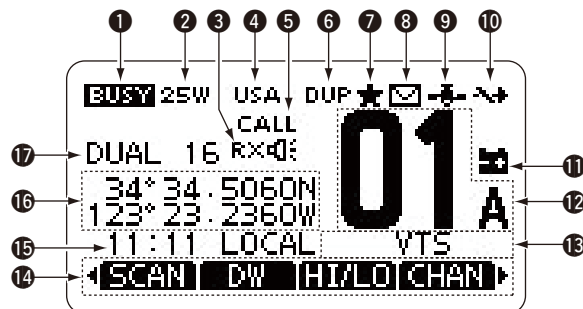
- While in the adjustment mode, push [▲]/[▼]/[◀]/[▶] or rotate Dial to adjust the brightness of the LCD and key backlight.

Log [LOG] (p. 57)

Push to enter “RCVD CALL LOG” in the DSC CALLS menu.

2 PANEL DESCRIPTION

■ Function display



- 1 BUSY/TRANSMIT ICON** (p. 11)
➔ “**BUSY**” appears when receiving a signal or when the squelch is open.
➔ “**TX**” appears while transmitting.
- 2 POWER ICON** (p. 11)
➔ “25W” appears when high power is selected.
➔ “1W” appears when low power is selected.
- 3 RX SPEAKER ICON** (p. 67)
Appears while in the RX Speaker mode.
- 4 CHANNEL GROUP ICON** (p. 10)
Shows which channel group is selected, a U.S.A. “USA,” International “INT,” ATIS “ATIS” or DSC “DSC”, depending on the version.
*German transceiver version only

- 5 CALL CHANNEL ICON** (p. 9)
Appears when the Call channel is selected.
- 6 DUPLEX ICON** (p. 10)
Appears when a duplex channel is selected.
- 7 FAVORITE CHANNEL ICON** (p. 17)
Appears when a Favorite (Tag) channel is selected.
- 8 MESSAGE ICON** (p. 57)
Blinks when there is an unread DSC message.
- 9 GPS ICON**
➔ Stays ON when the GPS receiver is activated and valid position data is received.
➔ Blinks when invalid position data is being received.
- 10 SWITCH ICON** (p. 61)
Appears when the “CH 16 SWITCH” in DSC Settings is set to ‘OFF’.
- 11 LOW BATTERY ICON**
Blinks when the battery voltage drops to approximately 10 V DC or less.
- 12 CHANNEL NUMBER READOUT**
Shows the selected operating channel number.
• When a simplex channel is selected, “A” appears.
- 13 CHANNEL NAME FIELD**
The channel name appears, if programmed. (p. 12)

Count on us!

< Intended Country of Use >

☐AT ☐BE ☐CY ☐CZ ☐DK ☐EE
☐FI ☐FR ☐DE ☐GR ☐HU ☐IE
☐IT ☐LV ☐LT ☐LU ☐MT ☐NL
☐PL ☐PT ☐SK ☐SI ☐ES ☐SE
☐GB ☐IS ☐LI ☐NO ☐CH ☐BG
☐RO ☐TR ☐HR

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