iCOM

INSTRUCTION MANUAL

VHF MARINE TRANSCEIVER
IC-M411

Icom Inc.

FOREWORD

Thank you for purchasing this Icom product. The IC-M411 VHF MARINE TRANSCEIVER is designed and built with Icom's state of the art technology and craftsmanship. With proper care, this transceiver 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-M411 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-M411.

◇ *FEATURES*

❍ *Advanced receiver performance*

❍ *Easy to hear speaker*

❍ *Built-in DSC meets Class D requirement*

❍ *Rugged waterproof construction*

❍ *Favorite channel function*

❍ *AquaQuake water draining function*

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-M411.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

CLEAN THE TRANSCEIVER AND MICROPHONE THOROUGHLY WITH FRESH WATER after exposure to water including salt water, otherwise, the keys and switches 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. Your call sign or other indication of the vessel (AND 9-digit DSC ID if you have one).
> 4. "LOCATED AT ...." (your position)
> 5. The nature of the distress and assistance required.
> 6. 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, push and hold **[DISTRESS]** for 5 sec. until you hear 5 short beeps change to 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. Push and hold **[PTT]**, then transmit the appropriate information as listed above.

INSTALLATION NOTE

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).
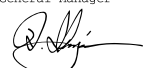
The maximum RF power available from this device is 25 watts. The antenna should be installed as high as possible for maximum efficiency and that this installation height should be at least 5 meters above ground (or accessible) level. In the case where an antenna cannot be installed at a reasonable height, then the transmitter should neither be continuously operated for long periods if any person is within 5 meters of the antenna, nor operated at all if any person is touching the antenna.

In all cases any possible risk depends on the transmitter being activated for long periods. (Actual recommendation limits are specified as an average of 6 minutes) Normally the transmitter is not active for long periods of time. Some radio licenses will require that a timer circuit automatically cuts the transmitter after 1–2 minutes etc.

Similarly some types of transmitter, SSB, CW, AM, etc. have a lower 'average' output power and the perceived risk is even lower.

DOC

CE versions of the IC-M411 which display the "CE" symbol on the serial number seal, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC. This warning symbol indicates that this equipment operates in non-harmonised frequency bands and/or may be subject to licensing conditions in the country of use. Be sure to check that you have the correct version of this radio or the correct programming of this radio, to comply with national licensing requirement.

DECLARATION OF CONFORMITY

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

Declare on our sole responsibility that this equipment complies with the essential requirements of the Radio and Telecommunications Terminal Equipment Directive, 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

Kind of equipment: VHF MARINE TRANSCEIVER

Type-designation: IC-M411

Version (where applicable):

This compliances is based on conformity with the following harmonised standards, specifications or documents:

i)	EN 301 025-2	V1.2.1 (2004-09)
ii)	EN 301 025-3	V1.2.1 (2004-09)
iii)	EN 60945	2002
iv)	EN 60950-1	2001
v)	EN 300 698-2	V1.1.1 (2000-08)
vi)	EN 300 698-3	V1.1.1 (2001-05)

CE 0560 ①

Düsseldorf 26th Sep. 2007
Place and date of issue

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Authorized representative name

H. Ikegami
General Manager

Signature

Icom Inc.

• List of Country codes (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			

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PRECAUTIONS

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

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

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.

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

KEEP the transceiver at least 1 m away from the ship's navigation compass.

DO NOT use or place the transceiver in areas with temperatures below –20°C or above +60°C or, in areas subject to direct sunlight, such as the dashboard.

AVOID the use of chemical agents such as benzine or alcohol when cleaning, as they may damage the transceiver surfaces. If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.

BE CAREFUL! The transceiver rear panel will become hot when operating continuously for long periods.
Place the transceiver in a secure place to avoid inadvertent use by children.

BE CAREFUL! The transceiver employs waterproof construction, which corresponds to IPX7 of the international standard IEC 60529 (2001). However, once the transceiver has been dropped, waterproofing cannot be guaranteed due to the fact that the case may be cracked, or the waterproof seal damaged, etc.

Icom optional equipment is designed for optimal performance when used with this transceiver. We are not responsible for the transceiver being damaged or any accident caused when using non-Icom optional equipment.

◇ PRIORITIES

• 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.

• You must monitor Channel 16 when you are not operating on another channel.

• False or fraudulent distress signals are prohibited and punishable by 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 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 vessel 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 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.

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

2 PANEL DESCRIPTION

■ Front panel

Speaker ❽ ❾ ❿ Function display (p. 4) ❶

❼ ❻ ❺ ❹ ❸ ❷
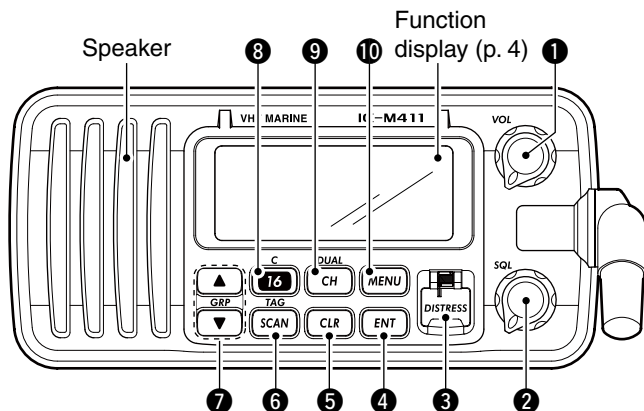
❶ POWER/VOLUME CONTROL [VOL]
➥ Rotate to turn the transceiver power ON or OFF.
➥ Rotate to adjust the audio level.

❷ SQUELCH CONTROL [SQL] (p. 7)
Rotate to set the squelch threshold level.

❸ DISTRESS KEY [DISTRESS] (p. 18)
Push and hold for 3 sec. to transmit a distress call.

❹ ENTER KEY [ENT]
Sets the DSC menu, a channel comment, etc. when pushed.

❺ CLEAR KEY [CLR]
Push to cancel the entered function and exits the condition when pushed.

❻ SCAN/TAG CHANNEL KEY [SCAN•TAG] (p. 11)
➥ Push to start and stop the normal or priority scan when tag channels are programmed.
➥ Push and hold for 1 sec. to set or clear the displayed channel as a tag (scanned) channel.
➥ While pushing **[HI/LO]** located on the microphone, push and hold for 3 sec. to set or clear all tag channels in the selected channel group.

❼ CHANNEL UP/DOWN KEYS [▲]/[▼]•[GRP]
➥ Push to select the operating channels, Set mode settings, DSC menu items, etc. (pgs. 5, 6, 13, 41)
➥ Push both keys to select a channel group in sequence. (p. 6)
  • EUR version has International channels only and this function is not available.
➥ Push to select the desired digit or character. (pgs. 8, 13, 14, 17)
➥ While pushing **[SCAN•TAG]**, push to adjust the brightness of the LCD and key backlight. (p. 9)
➥ While pushing and holding both keys, turn power ON to activates the AquaQuake function. (p. 9)

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⑧ CHANNEL 16/CALL CHANNEL KEY [16•C]
➥ Push to select Channel 16. (p. 5)
➥ Push and hold for 1 sec. to select call channel. (p. 5)
  • "**CALL**" appears when call channel is selected.
➥ Push and hold for 3 sec. to enter the call channel pro-
  gramming condition when the call channel is selected.
  (p. 8)
➥ While pushing **[CH•DUAL]**, push to enter the channel
  comment programming condition. (p. 8)
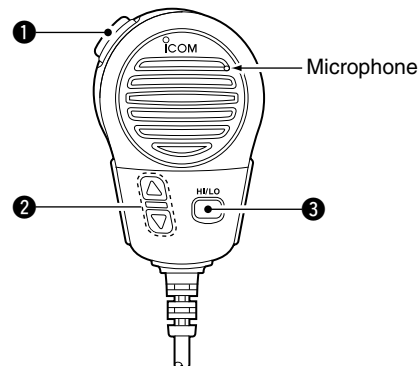➥ While turning power ON, push to enter set mode. (p. 41)

⑨ CHANNEL/DUALWATCH/TRI-WATCH KEY [CH•DUAL]
➥ Push to select the regular channel. (pgs. 5, 6)
➥ Push and hold for 1 sec. to start dualwatch or tri-watch.
  (p. 12)
➥ Push to stop dualwatch or tri-watch when either is acti-
  vated. (p. 12)

⑩ DSC MENU KEY [MENU] (p. 13)
Push to toggle the DSC menu ON or OFF.

■ Microphone

Microphone

❶ PTT SWITCH [PTT]
Push and hold to transmit; release to receive. (p. 7)

❷ CHANNEL UP/DOWN KEYS [▲]/[▼]
➥ Push to select the operating channels, Set mode set-
  tings, DSC menu items, etc. (pgs. 5, 6, 13, 41)
➥ Checks TAG channels, changes scanning direction or
  resumes the scan manually during scan. (p. 11)
➥ Push to select the desired digit or character.
  (pgs. 8, 13, 14, 17)

❸ TRANSMIT POWER KEY [HI/LO]
➥ Push to toggle the output power high and low. (p. 7)
  • Some channels are set to low power only.
➥ While pushing and holding **[HI/LO]**, turn power ON to
  toggle the Microphone Lock function ON and OFF. (p. 9)

■ Function display
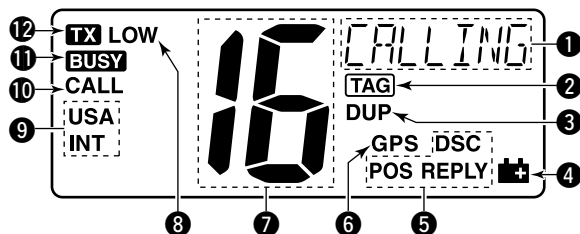
q CHANNEL COMMENT INDICATOR
➥ 'Latitude,' 'Longitude' and UTC time data scroll in sequence.
➥ Channel comment appears and scrolls (if programmed) for about 10 sec. after the channel selection. (p. 8)
➥ "DSC" appears when DSC channel group is in use; "ATIS" appears when ATIS channel group is in use. (p. 6)
➥ "SCAN 16" appears during Priority scan; "SCAN" appears during Normal scan. (p. 11)
➥ "DW 16" appears during Dualwatch; "TW 16" appears during Tri-watch. (p. 12)
➥ In Set mode, indicates and scrolls the selected item. (p. 41)

w TAG CHANNEL INDICATOR (p. 11)
Appears when a TAG channel is selected.

e DUPLEX INDICATOR (p. 6)
Appears when a duplex channel is selected.

r LOW BATTERY INDICATOR
Appears when the battery voltage drops to approx. 10 V DC or below.

t DSC INDICATOR
Indicates the DSC status.
• "**DSC**" appears when a DSC call is received. (pgs. 23, 34)
• "**POS REPLY**" appears when a Position Reply call is received. (p. 37)

y GPS INDICATOR
➥ Appears while valid position data is received.
➥ Blinks when invalid position data is received.
➥ Disappears when no GPS receiver is connected.

u CHANNEL NUMBER READOUT
➥ Indicates the selected operating channel number.
• "**A**" appears when a simplex channel is selected.
➥ In Set mode, indicates the selected condition. (p. 41)

i LOW POWER INDICATOR (p. 7)
Appears when low power is selected.

o CHANNEL GROUP INDICATOR (p. 6)
Indicates whether an International "**INT**" or U.S.A. "**USA**" channel is in use. (Depends on version)

10 CALL CHANNEL INDICATOR (p. 5)
Appears when the call channel is selected.

11 BUSY INDICATOR (p. 7)
Appears when receiving a signal or when the squelch opens.

12 TRANSMIT INDICATOR (p. 7)
Appears while transmitting.

Count on us!

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