



## INSTRUCTION MANUAL

VHF MARINE TRANSCEIVERS

**IC-M330**  
**IC-M330E**  
**IC-M330G**  
**IC-M330GE**



Icom Inc.

Thank you for choosing this Icom product. This product 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.

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## IMPORTANT

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**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

**SAVE THIS INSTRUCTION MANUAL** — This instruction manual contains important operating instructions for the IC-M330, IC-M330E, IC-M330G, IC-M330GE.

This instruction manual includes some functions which are usable only when they are preset by your dealer. Ask your dealer for details.

Icom is not responsible for the destruction, damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:

- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightning, other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom transceivers with any equipment that is not manufactured or approved by Icom.

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## FEATURES

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- **Easy user interface**

The transceiver is equipped with a screen for easy readability and easy-to-use user interface.

- **Dualwatch and Tri-watch functions**

Convenient functions that enable you to monitor the Distress channel (Ch 16) while receiving on another channel of your choice (Dualwatch), or while receiving on another channel of your choice, and the Call channel (Tri-watch).

\* May not be usable, depending on the transceiver version.

- **DSC function**

The transceiver has the DSC functions for distress alert transmission and reception, as well as the general DSC calls such as Individual calls, All ships calls, Group calls, and so on.

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## EXPLICIT DEFINITIONS

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| WORD              | DEFINITION  |
|-------------------|---|
| <b>⚠ WARNING!</b> | Personal injury, fire hazard or electric shock may occur.                               |
| <b>CAUTION</b>    | Equipment damage may occur.   |
| <b>NOTE</b>       | If disregarded, inconvenience only. No risk of personal injury, fire or electric shock. |

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# IN CASE OF EMERGENCY

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If your vessel requires assistance, contact other vessels and the Coast Guard by sending a distress call on Channel 16.

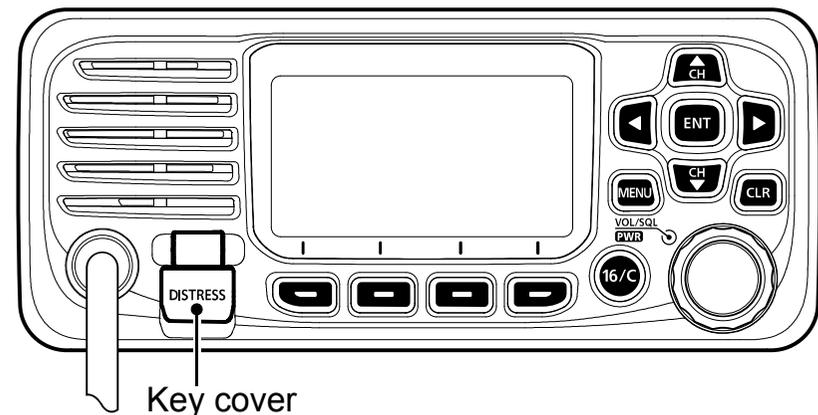
## **USING CHANNEL 16 DISTRESS CALL PROCEDURE**

1. "MAYDAY MAYDAY MAYDAY."
2. "THIS IS ....." (name of vessel).
3. Say your call sign or other indication of the vessel (AND your 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 (DSC) 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 to the left.



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# RADIO OPERATION WARNING

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WARNING

Icom requires the radio operator to meet the FCC Requirements for Radio Frequency Exposure. An omnidirectional antenna with gain not greater than 9 dBi must be mounted a minimum of 5 meters (measured from the lowest point of the antenna) vertically above the main deck and all possible personnel. This is the minimum safe separation distance estimated to meet all RF exposure compliance requirements. This 5 meter distance is based on the FCC Safe Maximum Permissible Exposure (MPE) distance of 3 meters added to the height of an adult (2 meters) and is appropriate for all vessels.

For watercraft without suitable structures, the antenna must be mounted so as to maintain a minimum of 1 meter vertically between the antenna, (measured from the lowest point of the antenna), to the heads of all persons AND all persons must stay outside of the 3 meter MPE radius.

Do not transmit with radio and antenna when persons are within the MPE radius of the antenna, unless such persons (such as driver or radio operator) are shielded from antenna field by a grounded metallic barrier. The MPE Radius is the minimum distance from the antenna axis that person should maintain in order to avoid RF exposure higher than the allowable MPE level set by FCC.

**FAILURE TO OBSERVE THESE LIMITS MAY ALLOW THOSE WITHIN THE MPE RADIUS TO EXPERIENCE RF RADIATION ABSORPTION WHICH EXCEEDS THE FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE) LIMIT. IT IS THE RESPONSIBILITY OF THE RADIO OPERATOR TO ENSURE THAT THE MAXIMUM PERMISSIBLE EXPOSURE LIMITS ARE OBSERVED AT ALL TIMES DURING RADIO TRANSMISSION. THE RADIO OPERATOR IS TO ENSURE THAT NO BYSTANDERS COME WITHIN THE RADIUS OF THE MAXIMUM PERMISSIBLE EXPOSURE LIMITS.**

## **Determining MPE Radius**

**THE MAXIMUM PERMISSIBLE EXPOSURE (MPE) RADIUS HAS BEEN ESTIMATED TO BE A RADIUS OF ABOUT 3M PER OET BULLETIN 65 OF THE FCC. THIS ESTIMATE IS MADE ASSUMING THE MAXIMUM POWER OF THE RADIO AND ANTENNAS WITH A MAXIMUM GAIN OF 9 dBi ARE USED FOR A SHIP MOUNTED SYSTEM.**

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# AVERTISSEMENT POUR LES OPÉRATEURS RADIO

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AVERTISSEMENT

Icom exige que l'opérateur radio se conforme aux exigences de la FCC en matière d'exposition aux radiofréquences. Une antenne omnidirectionnelle dont le gain ne dépasse pas 9dBi doit être fixée à une distance minimale de 5 mètres (mesurée depuis le point le plus bas de l'antenne)

verticalement au-dessus du pont principal et de tout le personnel qui peut s'y trouver. Il s'agit de la distance de sécurité minimale prévue pour satisfaire aux exigences de conformité en matière d'exposition aux RF. Cette distance de 5 mètres est établie en fonction de l'exposition maximale admissible sécuritaire de 3 mètres établie par la FCC, à laquelle on ajoute la hauteur d'un adulte (2 mètres); cette distance convient pour tous les navires.

Dans le cas des embarcations sans structure convenable, l'antenne doit être fixée de façon à maintenir une distance minimale de 1 mètre verticalement entre cette antenne (mesurée depuis son point le plus bas) et la tête de toute personne présente; toutes les personnes présentes doivent se tenir à l'extérieur d'un rayon d'exposition maximale admissible de 3 mètres.

Ne pas émettre à l'aide de la radio et de l'antenne lorsque des personnes se trouvent à l'intérieur du rayon d'exposition maximale admissible de cette antenne, à moins que ces personnes (comme le conducteur ou l'opérateur radio) ne soient protégées du champ de l'antenne par un écran métallique relié à la masse. Le rayon d'exposition maximale admissible équivaut à la distance minimale que cette personne doit maintenir entre elle et l'axe de l'antenne pour éviter une exposition aux RF supérieure au niveau d'exposition maximale admissible fixé par la FCC.

**LE NON-RESPECT DE CES LIMITES PEUT CAUSER, POUR LES PERSONNES SITUÉES DANS LE RAYON D'EXPOSITION MAXIMALE ADMISSIBLE, UNE ABSORPTION DE RAYONNEMENT DE RF SUPÉRIEURE À L'EXPOSITION MAXIMALE ADMISSIBLE FIXÉE PAR LA FCC. L'OPÉRATEUR RADIO EST RESPONSABLE D'ASSURER QUE LES LIMITES D'EXPOSITION MAXIMALE ADMISSIBLE SOIENT RESPECTÉES EN TOUT TEMPS PENDANT LA TRANSMISSION RADIO. L'OPÉRATEUR RADIO DOIT S'ASSURER QU'AUCUNE PERSONNE PRÉSENTE NE SE SITUE À L'INTÉRIEUR DU RAYON D'EXPOSITION MAXIMALE ADMISSIBLE.**

**Établir le rayon d'exposition maximale admissible ON ESTIME QUE LE RAYON D'EXPOSITION MAXIMALE ADMISSIBLE EST D'ENVIRON 3 M, TEL QUE STIPULÉ DANS LE BULLETIN OET 65 DE LA FCC. CETTE DISTANCE ESTIMÉE TIEN COMPTE D'UN SYSTÈME INSTALLÉ SUR UN NAVIRE UTILISANT LA PUISSANCE MAXIMALE DE LA RADIO ET DES ANTENNES DONT LE GAIN MAXIMAL EST DE 9 dBi.**

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## FCC INFORMATION

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**CAUTION:** Changes or modifications to this transceiver, not expressly approved by Icom Inc., could void your authority to operate this transceiver under FCC regulations.

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## INFORMATION FCC

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Cet équipement a été testé et reconnu conforme aux limites fixées pour un appareil numérique de classe A, conformément au point 15 de la réglementation FCC. Ces limites sont définies de façon à fournir une protection raisonnable contre le brouillage préjudiciable lorsque cet appareil est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut émettre un rayonnement de fréquence radio. S'il n'a pas été installé conformément aux instructions, il peut par ailleurs créer des interférences perturbant les communications radio.

L'utilisation de cet appareil dans une zone résidentielle peut provoquer un brouillage préjudiciable, auquel cas l'utilisateur sera tenu de corriger la situation à ses frais.

**MISE EN GARDE:**

Tout changement ou modification, non expressément approuvé par Icom Inc., peut annuler l'autorisation de l'utilisateur à utiliser cet appareil conformément à la réglementation FCC.

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## NOTE

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**A WARNING STICKER is supplied with the USA version transceiver.**

To comply with FCC regulations, this sticker must be affixed in such a location as to be readily seen from the operating controls of the radio as in the diagram below. Make sure the chosen location is clean and dry before applying the sticker.

EXAMPLE:



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# PRECAUTIONS

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

⚠ **WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC such as a 24 V battery. This connection could cause a fire or damage the transceiver.

⚠ **WARNING! NEVER** reverse the DC power cable polarity when connecting to a power source. This could damage the transceiver.

⚠ **WARNING! NEVER** cut the DC power cable between the DC connector on the transceiver's rear panel and the fuse holder. If an incorrect connection is made after cutting, the transceiver may be damaged.

⚠ **WARNING! NEVER** operate the transceiver during a lightning storm. It may result in an electric shock, cause a fire or damage the transceiver. Always disconnect the power source and antenna before a storm.

⚠ **WARNING! NEVER** place the transceiver where normal operation of the vessel may be hindered, or where it could cause bodily injury.

**CAUTION: DO NOT** install the transceiver and/or microphone less than 1 meter from the vessel's magnetic navigation compass.

**CAUTION: DO NOT** place or leave the transceiver in areas with temperatures below  $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$  ( $-4^{\circ}\text{F} \sim +140^{\circ}\text{F}$ ), or in areas subject to direct sunlight, such as a dashboard.

**CAUTION: 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.

**BE CAREFUL!** The transceiver's rear panel will become hot when transmitting continuously for long periods of time.

**NOTE:** Place the transceiver in a secure place to avoid inadvertent use by unauthorized persons.

**BE CAREFUL!** The transceiver meets IPX7 requirements for waterproof protection\*. However, once the transceiver or microphone has been dropped, or the waterproof seal is cracked or damaged, waterproof protection cannot be guaranteed because of possible damage to the case or the waterproof seal.

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

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# PRÉCAUTIONS

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⚠ **AVERTISSEMENT ! NE JAMAIS** relier l'émetteur-récepteur à une prise CA. Cela pourrait provoquer un choc électrique ou un incendie.

⚠ **AVERTISSEMENT ! NE JAMAIS** brancher l'émetteur-récepteur sur une source d'alimentation supérieure à 16 V CC, comme une batterie de 24 V. Cela pourrait endommager l'émetteur-récepteur.

⚠ **AVERTISSEMENT ! NE JAMAIS** inverser la polarité du câble d'alimentation CC lors de la connexion à une source d'alimentation. Cela pourrait endommager l'émetteur-récepteur.

⚠ **AVERTISSEMENT ! NE JAMAIS** couper le câble d'alimentation CC entre la prise CC à l'arrière de l'émetteur-récepteur et le porte-fusible. L'émetteur-récepteur peut être endommagé par la suite en cas de connexion inappropriée.

⚠ **AVERTISSEMENT ! NE JAMAIS** utiliser l'émetteur-récepteur durant un orage. Cela risquerait de provoquer un choc électrique, un incendie ou d'endommager l'émetteur-récepteur. Toujours débrancher la source d'alimentation et l'antenne avant une tempête.

**MISE EN GARDE : NE JAMAIS** installer l'émetteur-récepteur à un emplacement où il pourrait gêner le fonctionnement normal du navire ou provoquer des blessures corporelles.

**INSTALLER** la VHF et le microphone à au moins 1 m du compas de route du navire.

**NE PAS** utiliser ou placer l'émetteur-récepteur dans des zones où la température est inférieure à  $-20^{\circ}$  ou supérieure à  $+60^{\circ}$  ou dans des zones soumises au rayonnement solaire direct, telles le tableau de bord.

**NE PAS** nettoyer l'appareil avec des solvants agressifs tels que benzène ou alcool, susceptibles d'endommager les surfaces exposées du boîtier. En cas de dépôt de poussière ou de salissures sur l'émetteur-récepteur, il faut l'essuyer avec chiffon doux et sec.

**MISE EN GARDE !** La face arrière de la VHF chauffe en cas d'utilisation continue sur une longue durée.

**REMARQUE:** Placer l'émetteur-récepteur hors de portée des enfants pour éviter toute utilisation inopinée.

**MISE EN GARDE !** La face avant de l'émetteur-récepteur est étanche conformément à la norme IPX7\*. L'étanchéité ne peut plus être garantie après une chute de l'appareil en raison des risques de fissures du boîtier, de dégradation du joint d'étanchéité, etc.

\*Les connecteurs sur le panneau arrière ne sont pas étanche IPX7.

Si la face avant est exposée à de l'eau de mer, **ASSUREZ-VOUS DE LE NETTOYER ENTIÈREMENT AVEC DE L'EAU DOUCE** lorsque la protection étanche sur le panneau avant fonctionne. Dans le cas contraire, les touches et le commutateur risquent de ne plus fonctionner en raison de la cristallisation du sel.

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## RECOMMENDATION

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**CLEAN THE TRANSCEIVER AND MICROPHONE THOROUGHLY WITH FRESH WATER** after exposure to saltwater, and dry it before operating. Otherwise, the transceiver's keys, switches and controllers may become unusable, due to salt crystallization.

**NOTE:** If the transceiver's waterproof protection appears defective, carefully clean it with a soft, wet (fresh water) cloth, then, dry it before operating.

The transceiver may lose its waterproof protection if the case or connector cover is cracked or broken, or the transceiver has been dropped.

Contact your Icom distributor or your dealer for advice.

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## INSTALLATION NOTE

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### **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 1.76 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 1.76 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 is 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.

## KEY ICON DESCRIPTION

The keys are described in this manual as followings:

- The keys that have an icon on them are described with the characters “[ ]”.  
Example: [MENU], [CLR]
- The software keys are described with the icon such as **ENT** or **DISTRESS**. The function of the keys are shown at the bottom of the display. Push the key below the desired function.
- You can use the following keys on the Menu screen.

| FUNCTION                           | ACTION                                   |
|------------------------------------|--|
| Select                             | Rotate [DIAL], or push [▼] or [▲].       |
| Enter                              | Push [ENT], <b>ENT</b> , or [DIAL].      |
| Go to the next tree level          | Push [ENT], <b>ENT</b> , [DIAL], or [▶]. |
| Go back to the previous tree level | Push [CLR], <b>BACK</b> , or [◀].        |
| Cancel                             | Push [CLR].                              |
| Exit                               | Push [MENU] or <b>EXIT</b> .             |

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## ◇ **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 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 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**

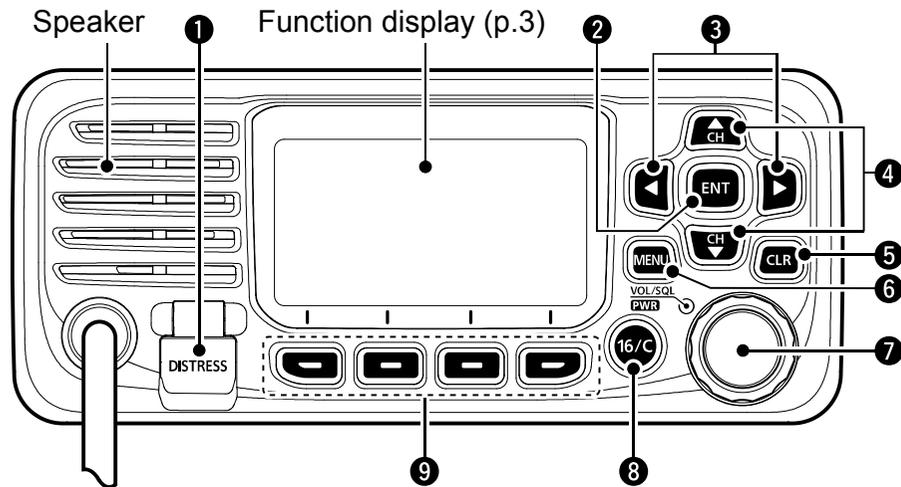
A Restricted Radiotelephone Operator Permit is the license most often held by small vessel radio operators when a radio is not required for safety purposes.

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.

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



### ❶ DISTRESS KEY [DISTRESS]

Hold down for 3 seconds to transmit a Distress call.

### ❷ ENTER KEY [ENT]

Push to set the entered data, selected item, and so on.

### ❸ LEFT/RIGHT KEYS [◀]/[▶]

- Push to scroll the Software Key functions. (pp. 4 ~ 5)
- Push to select a character or number in the entry mode.

### ❹ UP/DOWN KEYS [▲]/[▼]

- Push to select an operating channel, Menu items, Menu settings, and so on. (pp. 4)
- Push to select a character or number in the entry mode. (pp. 7, 8, 14, 18, 20)

### ❺ CLEAR KEY [CLR]

Push to cancel the entered data, or to return to the previous screen.

### ❻ MENU KEY [MENU]

Push to display or close the Menu screen.

### ❼ POWER/VOLUME/SQUELCH SWITCH [PWR/VOL/SQL]

(Also described as [DIAL] in this manual.)

- Hold down for 1 second to turn the transceiver ON or OFF.
- Rotate or push once to display the volume level setting screen, then rotate to adjust the volume level. (p. 11)
- Push twice to display the squelch level setting screen, then rotate to adjust the squelch level. (p. 11)
- On the Menu screen, rotate to select an item. (p. 47)
- In the entry mode, push to select a character or number, or rotate to move the cursor. (p. 7, 14, 18, 20)

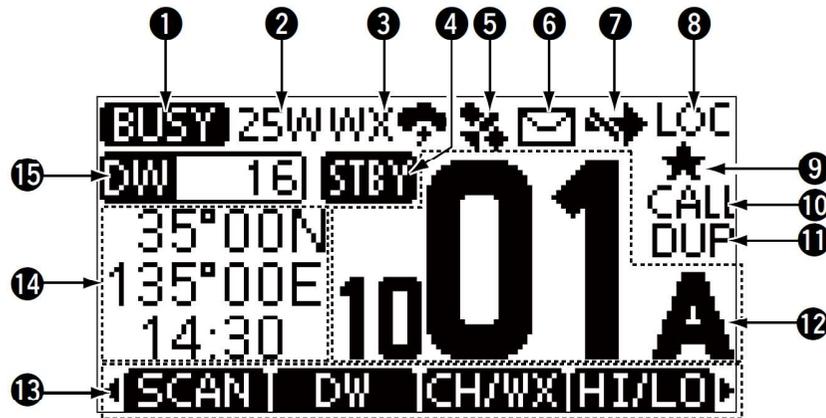
### ❽ CHANNEL 16/CALL CHANNEL KEY [16/C]

- Push to select Channel 16. (p. 9)
- Hold down for 1 second to select the Call channel. (p. 9)

### ❾ SOFTWARE KEYS (pp.4 ~ 5)

Scroll the key functions pushing [◀] or [▶], then push either of the 4 software keys to select the function displayed at the bottom of the display.

## ■ Function Display



### ① STATUS INDICATOR (p. 13)

- TX: Displayed while transmitting.
- BUSY: Displayed while receiving, or the squelch is open.

### ② POWER INDICATOR (p. 5, 6)

- 25W: High power
- 1W: Low power

### ③ CHANNEL GROUP INDICATOR (p. 10)

Displays the selected channel group, INT (International), USA, CAN (Canada), ATIS, WX (Weather channel), or DSC.

- ① The selectable channels differ, depending on the version or presetting.
- ① When the WX-Alert is set to ON, "☁" is displayed instead of "WX." (For only the USA version)

### ④ STATUS INDICATOR

- STBY: Standby mode.
- RT: Displayed while in the Radio Telephone (RT) mode.
  - ① Returns to the Standby mode if no operation occurs during the preset period of time.

### ⑤ GPS ICON

- Displayed when valid GPS position data is received.
- Blinks while no position data is received.

### ⑥ MAIL ICON (p. 38)

- Displayed when there is an unread DSC message.
- Blinks until one of the called messages is read.

### ⑦ CHANNEL SWITCH ICON (p. 42)

Displayed when the "CH Auto SW" is set to "Ignore after 10 sec." or "Manual."

### ⑧ LOCAL INDICATOR

Displayed when the RF Attenuation is ON. (For only the USA and Australian versions)

### ⑨ FAVORITE CHANNEL (p. 16)

Displayed when a Favorite channel is selected.

### ⑩ CALL CHANNEL (p. 9)

Displayed when a Call channel is selected.

### ⑪ DUPLEX CHANNEL

Displayed when a Duplex channel is selected.

### ⑫ OPERATING CHANNEL NUMBER (pp. 9, 14)

Displays the selected operating channel number.

- ① "A" or "B" is displayed when a simplex channel is selected.

## 2 PANEL DESCRIPTION

### 13 SOFTWARE KEYS FUNCTION DISPLAY (p. 4 ~ 5)

The functions of each key are displayed.  
See “Software keys” on the next page for details.

### 14 POSITION/TIME READOUTS

Readouts the current position and time when valid GPS data is received, or when manually entered.

#### **Received GPS data:**

- “NO POS NO TIME” is displayed if no GPS data has been received, and then a warning message is displayed for 2 minutes after turning ON the transceiver.
- “??” blinks if no GPS data is received for 30 seconds after receiving valid GPS data, and then “??” and a warning message are displayed after 10 minutes.
- A warning message is displayed if no GPS data is received for 4 hours after receiving valid GPS data.

#### **Manually entered GPS data:**

- A manually entered GPS data is valid for 23.5 hours, and then a warning message is displayed.

### 15 SCAN INDICATOR

- “SCAN” or “SCAN 16” is displayed while scanning. (p. 16)
- “DW” or “TW” and the watched channel number is displayed while using the Dualwatch or Tri-watch function. (p. 17)

## ■ Software keys

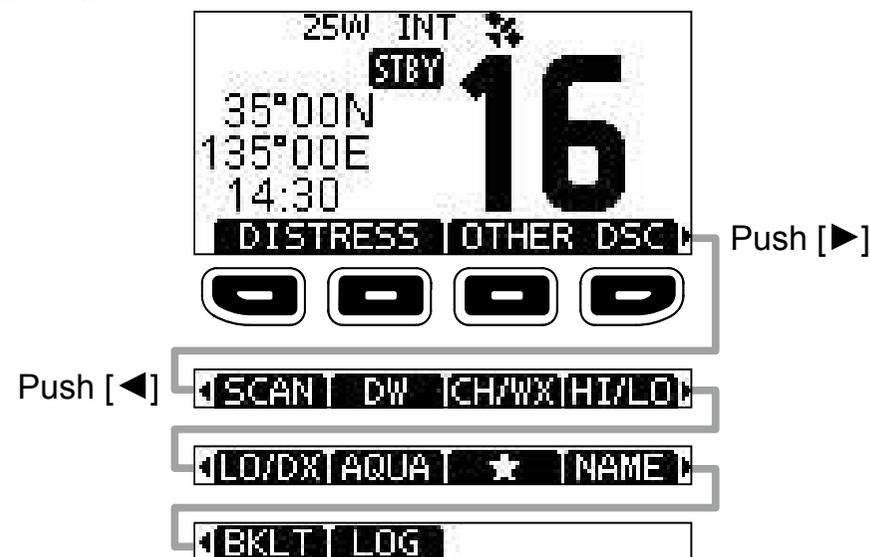
Various often-used functions are assigned to the software keys for easy access. The functions’ icons are displayed above the software keys, as shown below.

### ◇ Using the software keys

Selecting a software key function

Push [◀] or [▶] to slide through the selectable functions that are assigned to the software keys.

Push the software key under the function’s icon to select the function.



**NOTE:** The displayed icons or their order may differ, depending on the transceiver version or the presetting. When the MMSI code is not set, the software keys for DSC function are not displayed.

## ◇ Software key functions

### **Distress Call** **DISTRESS** (p. 22)

Push to display the “Distress” screen to select the nature of distress, then to make a call.

- ① **DTRS** is displayed in the Multiple-task mode. (For only the USA version)

*NEVER MAKE A DISTRESS CALL IF YOUR SHIP OR A PERSON IS NOT IN AN EMERGENCY. A DISTRESS CALL SHOULD BE MADE ONLY WHEN IMMEDIATE HELP IS NEEDED.*

### **Other DSC** **OTHERDSC** (p. 24)

Push to compose an Individual call, Group call, All Ships call or a Test call.

- ① **OTH** is displayed in the Multiple-task mode. (For only the USA version)

### **Task** **TASK** (For only the USA version) (p. 40)

Displayed only in the Multiple-task mode. Push to display the task list.

### **Scan** **SCAN** (p. 15)

Push to start or stop a Normal or Priority scan.

### **Dualwatch/Tri-watch** **DW**/**TW** (p. 17)

Push to start or stop Dualwatch or Tri-watch.

### **High/Low** **H/LO** (p. 6)

Push to set the output power to high or low.

- ① Some channels are set to only low power.

### **Channel/Weather channel** **CHWX** (p. 10)

Push to select regular channels or Weather channels.

- ① The Weather channel is for only the USA and Australian versions. **CHAN** is displayed for other versions.
- ① While the Call channel or Channel 16 is displayed, push this key to return to the regular channel mode.

### **Low** **LO/DX** (For only the USA and Australian versions.)

Push to turn the Attenuator ON or OFF.

### **AquaQuake** **AQUA** (p. 14)

Hold down to turn ON the AquaQuake function to clear water from the speaker grill.

### **Favorite channel** **★** (p. 16)

Push to set or release the displayed channel as a Favorite channel.

### **Channel Name** **NAME** (p. 14)

Push to edit the name of the displayed channel.

### **Backlight** **BKLT** (p. 12)

Push to display the backlight brightness adjustment screen.

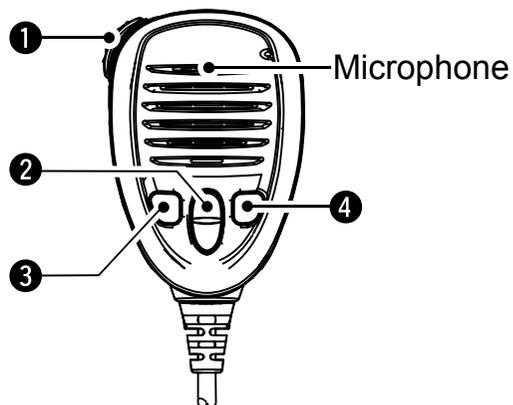
- ① While in the adjustment mode, push [▲]/[▼]/[◀]/[▶] or rotate [DIAL] to adjust the brightness of the display and keys' backlight to between 1 and 7, or OFF.

### **LOG** **LOG** (p. 38)

Push to display the received call log or distress message log.

## 2 PANEL DESCRIPTION

### ■ Microphone



#### ❶ PTT SWITCH [PTT] (p. 13)

Hold down to transmit, release to receive.

#### ❷ UP/DOWN KEYS [▲]/[▼] (p. 9)

Push to change the channel.

① When the “FAV on MIC” item is set to “ON,” you can select Favorite channels, change scanning direction or manually resume a scan. (p. 51)

#### ❸ TRANSMIT POWER KEY [HI/LO]

● Push to set the power level to high or low.

① Some channels are set to only low power.

● While holding down this key, turn ON the transceiver to turn the Microphone Lock function ON or OFF. (p. 13)

#### ❹ CHANNEL 16/CALL CHANNEL KEY [16/C] (p. 9)

● Push to select Channel 16.

● Hold down for 1 second to select the Call channel.

• The “CALL” icon is displayed.

## ■ Entering the MMSI code

The Maritime Mobile Service Identity (MMSI: DSC self ID) code consists of 9 digits. You can only enter the code when turning ON the transceiver for the first time.

**This initial code entry can be done only once. After entering, it can be changed only by your dealer or distributor. If your MMSI code has already been entered, doing the steps below is not necessary.**

1. Hold down [DIAL] to turn ON the transceiver.
  - Three short beeps sound, and “Push [ENT] to Register your MMSI” is displayed.
2. Push [ENT] to start entering the MMSI code.
  - The “MMSI Input” screen is displayed.
  - ① Push [CLR] twice to skip the entry.
    - If you skip the entry, you cannot make a DSC call. To enter the code after skipping, turn OFF the power, and then turn it ON again.
3. Enter the MMSI code.



**TIP:**

- Select a number using [◀] and [▶].
- Push [ENT] to enter the selected number.
- Select “←” or “→,” or rotate [DIAL] to move the cursor.

4. Repeat step 3 to enter all 9 digits.
5. Push the software key below **FIN** to set the entered code.
  - The “Confirmation” screen is displayed.
6. Enter your MMSI code again to confirm.



7. Push **FIN** to set the entered code.
  - When your MMSI code is successfully entered, “MMSI Successfully Registered” is briefly displayed, and then enters the operating screen.



- ① Your MMSI code is also displayed on the operating screen.

**NOTE:** Except for the USA and Australian versions, the ATIS ID is also required to be set. See the next page and set it.

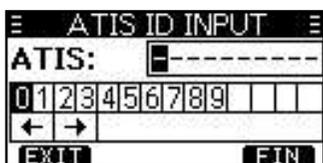
### 3 PREPARATIONS

## ■ Entering the ATIS ID (For Dutch and German versions)

The Automatic Transmitter Identification System (ATIS) ID consists of 10 digits. You can enter the ID in the “ATIS ID Input” item on the Menu screen.

**This ID entering can be done only once. After entering, it can be changed only by your dealer or distributor. If your ATIS ID has already been entered, doing the steps below is not necessary.**

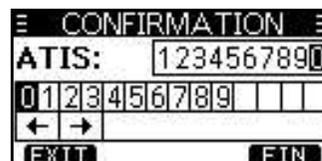
1. Push [MENU].
  - The Menu screen is displayed.
2. Push [▲] or [▼], or rotate [DIAL] to select “ATIS ID Input,” then push [ENT] to start entering.
  - The “ATIS ID Input” screen is displayed.
3. Enter your ATIS ID.



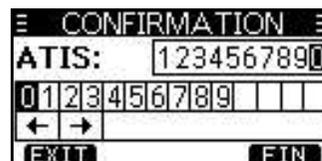
#### TIP:

- Select a number using [◀] and [▶].
- Push [ENT] to enter the selected number.
- Select “←” or “→,” or rotate [DIAL] to move the cursor.

4. Repeat step 3 to enter all 10 digits.
5. Push **FIN** to set the entered ID.
  - The “Confirmation” screen is displayed.
6. Enter your ATIS ID again to confirm.



7. Push **FIN** to set the entered ID.
  - When your ATIS ID is successfully entered, the screen displays “ATIS ID Successfully Registered,” and then enters the operating screen.



- ① You can check the ATIS ID in “Radio Info” on the Menu screen.

## ■ Selecting a channel

### ◇ Regular Channel

You can select a channel by pushing [▲] or [▼].

### ◇ Channel 16

Channel 16 is the distress and safety channel. It is used to establish the initial contact with a station, and for emergency communications. Channel 16 is monitored during both Dualwatch and Tri-watch. While in the standby mode, you must monitor Channel 16.

- Push [16/C] to select Channel 16.



- ① To return to the previously selected channel, push [◀] or [▶] to display **CHAN** or **CH/WX**, then push the software key below **CHAN** or **CH/WX**.

### ◇ Call channel

Each Channel Group has separate leisure-use Call channels. The Call channel is scanned during Tri-watch. The Call channels can be selected and used to store your most often used channels in each Channel Group, for quick recall.

- ① See page 12 for details on setting the Call channel.

- Hold down [16/C] for 1 second to select the Call channel.
- The Call channel number and “CALL” are displayed.



- ① To return to the previously selected channel, push [◀] or [▶] to display **CHAN** or **CH/WX**, then push the software key below **CHAN** or **CH/WX**.

## 4 BASIC OPERATION

### ◇ Selecting a Channel Group

Channel Groups are preset into your transceiver. You can select a Channel Group for USA, International, Canadian, DSC, and ATIS, depending on the transceiver version.

| Version    | Preset Channel Group |     |     |     |      |
|------------|----------------------|-----|-----|-----|------|
|            | USA                  | INT | CAN | DSC | ATIS |
| USA        | ✓                    | ✓   | ✓   |     |      |
| UK         | ✓                    | ✓   |     |     |      |
| European   |                      | ✓   |     |     |      |
| Dutch      |                      | ✓   |     |     | ✓    |
| German     |                      | ✓   |     | ✓   | ✓    |
| Chinese    | ✓                    | ✓   | ✓   |     |      |
| Australian | ✓                    | ✓   |     |     |      |

1. Push [MENU].
  - The Menu screen is displayed.
2. Push [▲], [▼] or rotate [DIAL] to select “Radio Settings,” then push [ENT].
  - The “RADIO SETTINGS” screen is displayed.
3. Push [▲], [▼] or rotate [DIAL] to select “Channel Group,” then push [ENT].
  - The “CHANNEL GROUP” screen is displayed.
4. Push [▲], [▼] or rotate [DIAL] to select a Channel Group, and then push [ENT].
  - ① Push **EXIT** to exit the Menu screen.
  - ① The selected Channel Group’s icon is displayed on the operating screen.

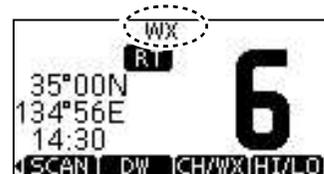
### ◇ Weather channels and Weather Alert

The USA and Australian version transceivers have 10 preset Weather channels. The transceivers are capable\* of monitoring broadcasts from the National Oceanographic and Atmospheric Administration (NOAA). The transceiver automatically detects a Weather alert tone on the selected weather channel, or while scanning.

\*When used within range of the broadcasts.

#### Selecting a Weather channel

1. Push **CH/WX**.
  - “WX” is displayed on the operating screen instead of the Channel Group.



2. Push [▲] or [▼] to select a Weather channel.

### Setting the Weather Alert

① See page 51 for details on the Weather Alert function.

1. Push [MENU].
2. Push [▲], [▼], or rotate [DIAL] to select “Radio Settings,” and then push [ENT].
  - The “RADIO SETTINGS” screen is displayed.
3. Select “WX Alert,” and then push [ENT].
  - The “WX Alert” screen is displayed.

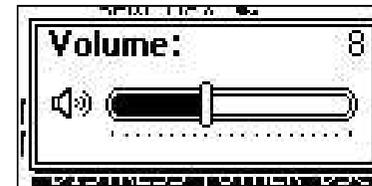


4. Select “On with Scan” or “On.”
  - “☀” is displayed next to the weather channel icon.



## Adjusting the volume level

- Rotate [DIAL] to adjust the audio volume level.



- ① If no key is pushed for 5 seconds, the screen automatically closes.

## Adjusting the squelch level

Squelch enables the audio to be heard only while receiving a signal that is stronger than the set level. A higher level blocks weak signals, so that you can receive only stronger signals. A lower level enables you to hear weak signals.

1. Push [DIAL] twice.
  - The squelch level adjustment screen is displayed.



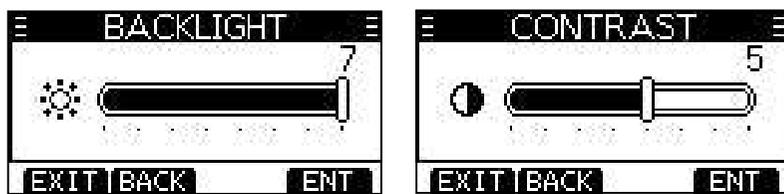
2. Rotate [DIAL] to adjust the squelch level.
  - ① If no key is pushed for 5 seconds, the screen automatically closes.

### ■ Adjusting the backlight or the display contrast

1. Display the “BACKLIGHT” or “CONTRAST” screen.

[MENU] > Configuration > **Backlight**

[MENU] > Configuration > **Display Contrast**



2. Push [▲], [▼], or rotate [DIAL] to adjust, then push [ENT] to set.  
① Push **EXIT** to exit the Menu screen.

### ■ Setting the Call channel

By default, a Call channel is set in each Channel Group. You can set your most often-used channel as your Call channel in each Channel Group for quick recall.

1. Display the “CALL CHANNEL” screen.

[MENU] > Radio Settings > **Call Channel**

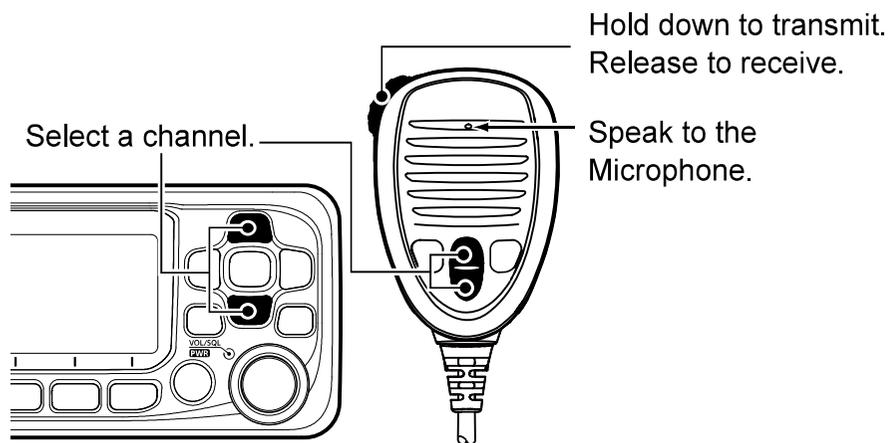


2. Push [▲], [▼], or rotate [DIAL] to select the channel.
3. Push [ENT] to set the selected channel as the Call channel.  
① Push **EXIT** to exit the Menu screen.

## ■ Receiving and transmitting

**CAUTION: DO NOT** transmit without an antenna.

1. Push [▲] or [▼] to select the channel to call on.
  - The channel number and name are briefly displayed.
  - (Only when “CH Close-up” is ON.)
  - ① You cannot transmit on Channel 70.
  - ① **EUSY** is displayed while receiving a signal.
  - ① You can also select the channel with [▲] or [▼] on the microphone. (Only when “FAV on MIC” is OFF.)
2. Hold down [PTT] on the microphone to transmit.
  - **TX** is displayed while transmitting.
3. Release [PTT] to receive.



**TIP:** To maximize the readability of your transmitted signal, pause for a second after holding down [PTT] and hold the microphone 5 to 10 cm (2 to 4 inches) from your mouth, and then speak at your normal voice level.

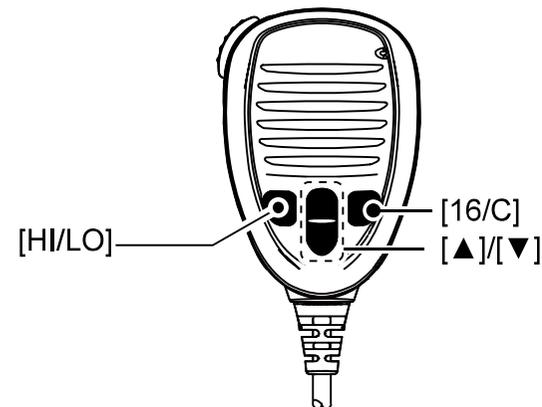
**NOTE:**

- The Time-out Timer function cuts OFF transmission after 5 minutes of continuously transmitting, to prevent prolonged transmission.

## ■ Microphone Lock function

The Lock function electronically locks all keys on the microphone except [PTT] to prevent accidental channel changes or functions access.

1. Hold down [DIAL] for 1 second to turn OFF the transceiver.
2. While holding down [HI/LO] on the microphone, hold down [DIAL] for 1 second to turn the Lock function ON or OFF.



## ■ AquaQuake Water Draining function

Water in the speaker grill may muffle the sound coming from the speaker. The AquaQuake Water Draining function removes water from the speaker grill by vibrating the speaker cone.

**CAUTION: DO NOT** use the AquaQuake Water Draining function when an external speaker is connected.

1. Push [◀] or [▶] to display **AQUA**.
2. Hold down **AQUA** to turn ON the function.
  - A low frequency vibration beep sounds to drain the water, regardless of the volume level setting.



- ① This function is activated for a maximum of 10 seconds, even if you continue to hold down **AQUA**.
3. Release the key to turn OFF the function.

## ■ Editing a channel name

You can edit the name of each operating channel and weather channel, using numbers, uppercase letters, symbols, and a space. This enables easy recognition of the channels or stations. All VHF marine channels are set with default names.

1. Push [▲] or [▼] to select the channel to edit.
2. Push [◀] or [▶] to display **NAME**.
  - ① You cannot edit a channel name during Dualwatch, Tri-watch, or a scan.
3. Push **NAME**.
  - The “CHANNEL NAME” screen is displayed.



4. Edit the channel name.

### TIP:

- Select **!\$?** to enter symbols, and select **123** to enter numbers and letters.
- Select characters or a space using [▲]/[▼]/[◀]/[▶].
- Select “◀” or “▶” to scroll.
- Push [ENT] to enter the selected character.
- Select “←” or “→,” or rotate [DIAL] to move the cursor.
- Push **EXIT** to cancel editing.

5. Push **FIN** to save the edited name and return to the operating screen.

## ■ Scan types

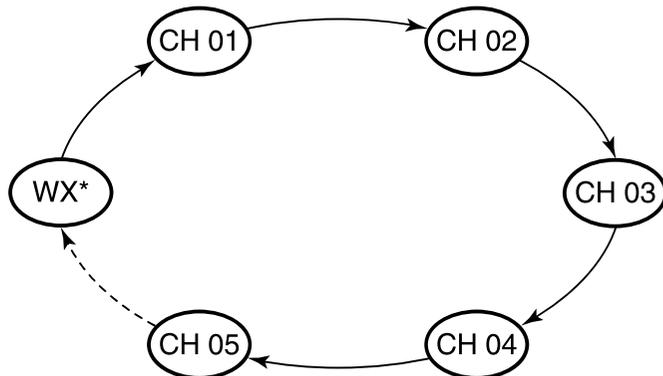
You can find ongoing calls by scanning the Favorite channels.

### Before starting a scan, you need to:

- Set the channels that you want to scan as Favorite channels. (p. 16)
  - ① Only the Favorite channels are scanned.
- Set the scan type to “Priority Scan” or “Normal Scan” on the “Radio Settings” screen. (p. 50)

### Normal Scan

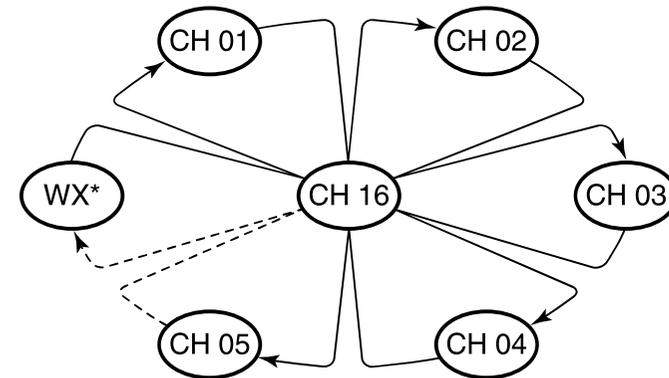
The Normal Scan sequentially searches through all Favorite channels. However, Channel 16 is not checked unless it is set as a Favorite channel.



\*For USA and Australian versions. When the Weather Alert function is ON, the previously selected Weather channel is also scanned.

### Priority Scan

The Priority Scan sequentially searches through all Favorite channels, while also monitoring Channel 16.



\*For USA and Australian versions. When the Weather Alert function is ON, the previously selected Weather channel is also scanned.

### When a signal is received:

#### On Channel 16

The scan pauses until the signal disappears.

#### On a channel other than Channel 16

The scan becomes Dualwatch until the signal disappears.

## 5 SCAN OPERATION (Except for the Dutch Version)

### ■ Setting Favorite channels

You can quickly recall often-used channels by setting them as Favorite channels. You can set Favorite channels in each Channel Group.

1. Select a Channel Group on the Menu screen. (p. 10)
2. Push [▲] or [▼] to select the channel.
3. Push [◀] or [▶] to display **★**.
4. Push **★**.
  - The selected channel is set as a Favorite channel, and “★” is displayed.
  - ① To cancel the setting, push **★** again.

**TIP:** You can set all channels as Favorite channels, clear all settings, or reset to the default. By default, some channels are preset as Favorite channels. The preset channels differ, depending on the transceiver version.

### ■ Starting a scan

1. Select a Channel Group on the Menu screen. (p. 10)
2. Push [◀] or [▶] to display **SCAN**.
3. Push **SCAN**.
  - The scan starts.
  - “**SCAN**” is displayed during a Normal Scan, and “**SCAN 16**” is displayed during a Priority Scan.
  - “**SCAN**” and “**BUSY**” are displayed when a signal is received.
  - ① When a signal is received, the scan pauses until it disappears, or resumes after 5 seconds, depending on the Scan Timer setting in “Radio Settings.”
  - ① A beep sounds and “16” blinks when a signal is received on Channel 16 during a Priority scan.
4. To stop the scan, push **SCAN**.

**TIP:** To properly receive signals, be sure to adjust the squelch to a suitable level.

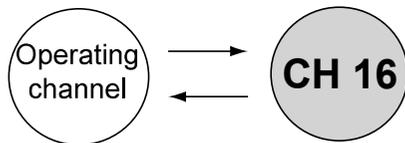
**Example:** Starting a Normal Scan.



## ■ Description

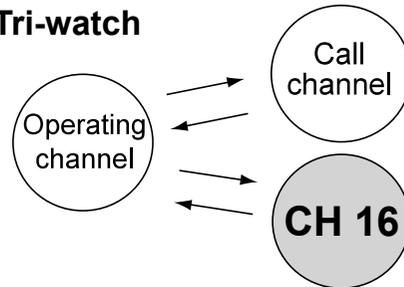
Dualwatch and Tri-watch are convenient to monitor Channel 16 while you are operating on another channel.

### Dualwatch



Monitors Channel 16 while receiving on another channel.

### Tri-watch



Monitors Channel 16 and the Call channel while receiving on another channel.

### When a signal is received:

#### On Channel 16

Dualwatch/Tri-watch pauses on Channel 16 until the signal disappears.

#### On the Call channel

Tri-watch switches to Dualwatch until the signal on the Call channel disappears.

## ■ Operation

1. Select Dualwatch or Tri-watch on the Menu screen.
2. Push [▲] or [▼] to select a channel.
3. Push [◀] or [▶] to display **DW** (Dualwatch) or **TW** (Tri-watch).
4. Push **DW** or **TW**.
  - Dualwatch or Tri-watch starts.
  - “**DW 16**” is displayed for Dualwatch, and “**TW 16**” is displayed for Tri-watch.
  - ① “**BUSY**” is displayed when a signal is received.
  - ① A beep sounds and “**DW 16**” or “**TW 16**” blinks when a signal is received on Channel 16.
5. To cancel Dualwatch or Tri-watch, push **DW** or **TW** again.

**Example:** Operating Dualwatch on INT Channel 27.



## ■ DSC address ID

### ◇ Entering an Individual ID

You can enter a total of 60 Individual IDs, and assign names to them of up to 10 characters.

1. Display the “INDIVIDUAL ID” screen.

[MENU] > DSC Settings > **Individual ID**

- “No ID” is displayed if no ID is entered.
2. Push **ADD**.
    - “The Individual ID” entry screen is displayed.



3. Enter an Individual ID.

#### TIP:

- Select a number using [◀] and [▶].
- Push [ENT] to set the selected number.
- Select “←” or “→,” or rotate [DIAL] to move the cursor.

**NOTE:** The first digit is fixed as “0” for a Group ID. The first two digits are fixed as “0” for any coast station ID.

4. Push **FIN** to start entering the name.



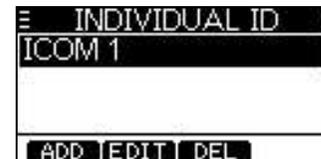
#### TIP:

- Push **!\$?** to use characters, and select **ABC** to use numbers and letters.



- Select characters or space using [▲]/[▼]/[◀]/[▶].
- Select “◀” or “▶” to scroll.
- Push [ENT] to enter the selected character.
- Select “←” or “→,” or rotate [DIAL] to move the cursor.

5. After entering, push **FIN** to save, and return to the previous screen.
  - The entered name is displayed.



### ◇ Entering a Group ID

You can enter a total of 30 Group IDs, and assign names to them of up to 10 characters.

1. Display the “GROUP ID” screen.

[MENU] > DSC Settings > **Group ID**

- “No ID” is displayed if no ID is entered.

2. Push **ADD**.
  - The Group ID’s entry screen is displayed.
3. Enter the Group ID and its name in the same way as described on the previous page.
4. After entering, push **FIN** to save, and return to the previous screen.
  - The entered name is displayed.

**NOTE:** The first digit is fixed as “0” for a Group ID. The first two digits are fixed as “00” for any coast station ID.

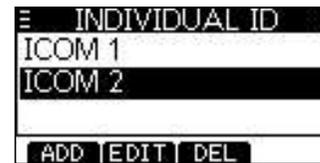
### ◇ Deleting an entered ID

(Example: Deleting an Individual ID: ICOM 2)

1. Display the “INDIVIDUAL ID” screen.

[MENU] > DSC Settings > **Individual ID**

2. Push [▲] or [▼] to select “ICOM 2.”



3. Push **DEL**.
  - “Are You Sure?” is displayed.
4. Push **OK** to delete.
  - ① Push **CANCEL** to cancel the deletion.
  - The selected ID is deleted, and then returns to the previous screen.

**TIP:** You can edit an ID and its name by pushing **EDIT** in step 3.

## ■ Entering the position and time

A Distress call should include the vessel's position, date and time. If no GPS data is received, manually enter the position and Universal Time Coordinated (UTC) time.

### NOTE:

- The manual entry is disabled while valid GPS data is received.
- The manually entered position and time is valid only for 23.5 hours, or until turning OFF the transceiver.

1. Display the "POSITION INPUT" screen.

[MENU] > DSC Settings > **Position Input**

2. Enter the latitude.



### TIP:

- Select a number or a compass direction using [▲]/[▼]/[◀]/[▶].
- Select "←" or "→," or rotate [DIAL] to move the cursor.
- Push [ENT] or **FIN** to save the selected number.

3. Enter the longitude and the UTC time.

① See the TIP in step 2 to enter.



4. Push **FIN** to set the entered position and time.
5. Push **EXIT** to return to the standby screen.



① The entered position and time are displayed on the operating screen.

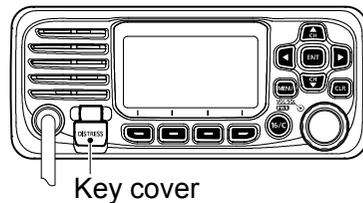
## ■ Sending DSC calls (Distress)

A Distress call should be sent if, in the opinion of the Captain, the ship or a person is in distress and requires immediate assistance.

**NEVER MAKE A DISTRESS CALL IF YOUR SHIP OR A PERSON IS NOT IN AN EMERGENCY. A DISTRESS CALL SHOULD BE MADE ONLY WHEN IMMEDIATE HELP IS NEEDED.**

### ◇ Simple call

1. Confirm that no Distress call is being received.
2. While lifting up the key cover, hold down [DISTRESS] for 3 seconds until you hear 3 short countdown beeps and a long beep sound.
  - The backlight blinks.



3. After sending, wait for an Acknowledgement call.
  - “Waiting for ACK” is displayed.



- The Distress call is automatically sent every 3.5 to 4.5 minutes, until an Acknowledgement is received, or a Distress Cancel call is sent.

4. When you receive an Acknowledgement, an alarm sounds. Push **ALARM OFF** to turn OFF the alarm.
  - Channel 16 is automatically selected.



5. Hold down [PTT], and then explain your situation.
6. After you have finished your conversation, then push **CANCEL** to return to the operating screen.

**TIP:** A default Distress alert contains:

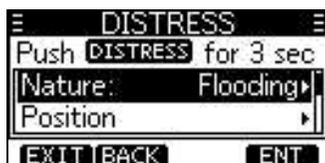
- Nature of distress: Undesignated distress
- Position information: The latest GPS, or manually input position, that is held for 23.5 hours, or until you turn OFF the transceiver.

## 7 DSC OPERATION

### ◇ Regular call

Select the nature of the Distress call to include in the Regular Distress call.

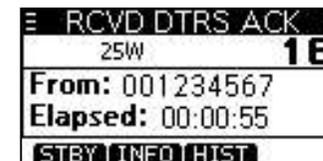
1. Push **DISTRESS**.
  - The “DISTRESS” screen is displayed.
2. Push [ENT] to enter the Nature selection mode.
3. Push [▲], [▼], or rotate [DIAL] to select the nature of the Distress, then push [ENT]. (Example: Flooding)
  - The setting is saved and returns to the previous screen.



- ① If no valid GPS data is being received, push [▲], [▼], or rotate [DIAL] to select “Position,” then enter the latitude, longitude, and UTC.
    - ① See “Entering the position and time” on page 20 for details.
4. While lifting up the key cover, hold down [DISTRESS] (the red button) for 3 seconds until you hear 3 short countdown beeps and a long beep sound.
  - The backlight blinks.



5. After sending, wait for an Acknowledgement call.
  - “Waiting for ACK” is displayed.
    - ① The Distress call is automatically sent every 3.5 to 4.5 minutes, until an Acknowledgement is received, or a Distress Cancel call is sent. (p. 23)
6. When you receive an Acknowledgement, an alarm sounds. Push **ALARM OFF** to turn OFF the alarm.
  - Channel 16 is automatically selected.



7. Hold down [PTT] to communicate.

**TIP:** You can also send a Regular call by selecting the “Distress” item on the Menu screen.

◇ Distress call software key description

**While waiting for an Acknowledgement:**

- CANCEL:** Cancels the Distress call and enables you to send a Cancel call. (See the right column)
- RESEND:** Enables you to resend the Distress call by holding down [DISTRESS] again.
- PAUSE:** Pauses the countdown to resend the next Distress call.
- INFO:** Displays the information of the Distress call that you have sent.

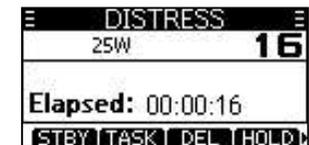
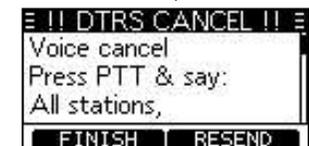
**After receiving an Acknowledgement:**

- STBY:** Closes the Distress operation, and returns to the operating screen.
- HIST:** Displays the “DISTRESS HISTORY.”
- INFO:** Displays the information of the received Distress Acknowledgement.

◇ Distress Cancel call

If you have accidentally made a Distress call, or made an incorrect Distress call, send a Distress Cancel call to cancel the call as soon as possible while waiting for an Acknowledgement call. Be sure to report the purpose of the cancellation.

1. While waiting for an Acknowledgement call, push **CANCEL**.
  - The screen to the right is displayed.
2. Push **CONTINUE**.
  - The Distress Cancel call is sent.
  - Channel 16 is automatically selected.
3. Hold down [PTT] to report the purpose of the cancellation.
  - ① You can display the wording of the cancellation by pushing [▼].
4. After communicating, push **FINISH**.
  - The screen to the right is displayed.
5. Push **STBY** to finish the Distress Cancel call.
  - Returns to the operating screen.



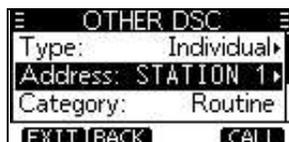
## ■ Sending DSC calls (other)

**NOTE:** To ensure proper DSC operation, be sure to correctly adjust the “CH 70 SQL Level” item on the Menu screen. (p. 43)

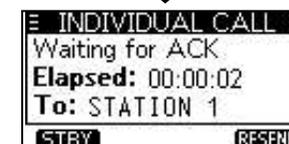
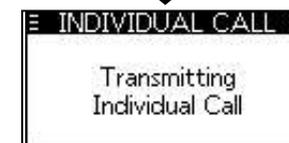
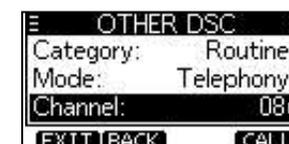
### ◇ Sending an Individual call

An Individual call enables you to send a DSC signal to only a specific station. You can communicate after receiving the Acknowledgement “Able to comply.”

1. Push **OTHER DSC**.
  - The “OTHER DSC” screen is displayed.
  - ① You can also display the “OTHER DSC” screen by selecting the “Other DSC” item on the Menu screen.
2. Select “Type,” and then push [ENT].
3. Select “Individual Call,” and then push [ENT].
  - Returns to the “OTHER DSC” screen.
4. Select “Address,” and then push [ENT].
5. Select the station to send an Individual call to, and the push [ENT].
  - Returns to the “OTHER DSC” screen.
  - ① You can also select “Manual Input” to manually enter the target station.
6. Select “Channel,” and then push [ENT].



7. Select a channel to assign, and then push [ENT].
  - ① The assigned channels are preset by default.
8. Push **CALL** to send the Individual call.
  - “Transmitting Individual Call” is displayed, and then “Waiting for ACK” is displayed.
  - ① If Channel 70 is busy, the transceiver stands by until the channel becomes clear.
9. When you receive an Acknowledgement “Able to comply”:
  - An alarm sounds.
  - The screen to the right is displayed.
10. Push **ALARM OFF** to turn OFF the alarm.
  - The channel assigned in step 7 is automatically selected.
  - ① If the called station cannot use the channel that you assigned, a different channel is selected by the station.
11. Hold down [PTT] to communicate.



**Acknowledgement “Unable to comply”**

Push **ALARM OFF** to turn OFF the alarm.

- The Acknowledge information is displayed.
- ① Push **STBY**, and then **OK** to return to the operating screen.

◇ **Sending an Individual Acknowledgement**

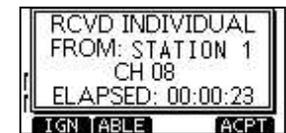
When you have received an Individual call (p. 33), send an Acknowledgement to the calling station. When you send an Acknowledgement, select “Able to Comply,” “Propose New CH,” or “Unable to Comply.”

1. While an Individual call is being received, push **ALARM OFF** to turn OFF the alarm.



- The received call’s information is displayed.

2. Push **ACPT**.
  - The Acknowledgement category screen is displayed.



- ① If you want to send an Acknowledgement “Able to comply” right away, push **ABLE**.
- ① If you cannot communicate, and want to return to the operating screen, push **IGN**.

# 7 DSC OPERATION

## ◇ Sending an Individual Acknowledgement (Continued)

3. Push **ABLE**, **UNABLE**, or **NEWCH** to select the Acknowledgement type.



- **ABLE** (*Able to Comply*): Sends an Acknowledgement call without any changes.
- **UNABLE** (*Unable to Comply*): Sends an Acknowledgement call but cannot communicate.
- **NEWCH** (*Propose New CH*): Able to communicate but proposes another channel. Specify the channel by pushing [**▲**] or [**▼**]. (Example: Channel 69)



4. Push **CALL** to send the Acknowledgement call.

◇ **Sending an All Ships call**

All Ships, that have DSC transceiver, use Channel 70 as their listening channel. When you want to announce a message to these ships, if they are within range, use the All Ships Call.

1. Push **OTHER DSC**.
  - The “OTHER DSC” screen is displayed.
  - ① You can also display the “OTHER DSC” screen by selecting the “Other DSC” item on the Menu screen.

2. Select “Type,” and then push [ENT].
  - The “MESSAGE TYPE” screen is displayed.



3. Select “All Ships,” and then push [ENT].
  - The All Ships call is selected, and returns to the “OTHER DSC” screen.

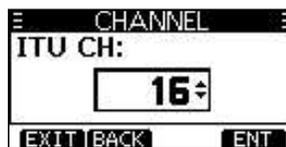
4. Select “Category,” and then push [ENT].
  - The “CATEGORY” screen is displayed.



5. Select a category of the call, and the push [ENT].
  - The category is set, and returns to the “OTHER DSC” screen.

6. Select “Channel,” and then push [ENT].

7. Select the channel to assign, and then push [ENT].
  - ① The assigned channels are preset by default.



8. Push **CALL** to send the All Ships call.
  - “Transmitting All Ships Call” is displayed, and then the assigned channel is automatically selected.
  - ① If Channel 70 is busy, the transceiver stands by until the channel becomes clear.



9. Hold down [PTT] to communicate.

# 7 DSC OPERATION

## ◇ Sending a Group call

A Group call enables you to send a DSC call to only a specific group.

① You can send a Group call to a pre-entered group address, or manually enter the address before sending. (p. 18)

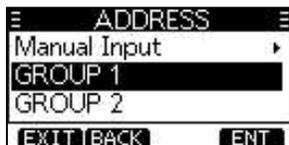
1. Push **OTHER DSC**.
  - The “OTHER DSC” screen is displayed.
  - ① You can also display the “OTHER DSC” screen by selecting the “Other DSC” item on the Menu screen.
2. Select “Type,” and then push [ENT].
  - The “MESSAGE TYPE” screen is displayed.

3. Select “Group,” and then push [ENT].
  - The Group call is selected, and returns to the “OTHER DSC” screen.



4. Select “Address,” and then push [ENT].
  - The “ADDRESS” screen is displayed.

5. Select the group to send a Group call to, and the push [ENT].
  - ① You can also select “Manual Input” to manually enter the target group.



6. Select “Channel,” and then push [ENT].
7. Select the channel to assign, and then push [ENT].

① The assigned channels are preset by default.



8. Push **CALL** to send the Group call.
  - “Transmitting Group Call” is displayed, and then the assigned channel is automatically selected.
  - ① If Channel 70 is busy, the transceiver stands by until the channel becomes clear.



9. Hold down [PTT] to communicate.