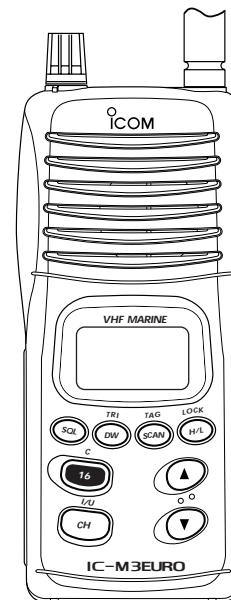# iCOM

INSTRUCTION MANUAL

VHF MARINE TRANSCEIVER

IC-M3EURO

Icom Inc.

FOREWORD

Thank you for purchasing this Icom product. The IC-M3EURO VHF MARINE TRANSCEIVER is designed and built with Icom's superior technology and craftsmanship. With proper care this product should provide you with years of trouble-free operation.

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-M3EURO.

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.

FEATURES

☞ **Dual watch and tri-watch functions**
Convenient functions which allow you to monitor the distress channel (ch 16) while receiving a channel of your choice—dual watch; or monitor the distress channel and another channel while receiving a channel of your choice—tri-watch.

☞ **Large, easy-to-read LCD**
With dimensions of $18(H) \times 32(W)$ mm, the IC-M3EURO's function display is easy to read and shows operating conditions at a glance. Backlighting and contrast can be adjusted to suit your preferences.

☞ **Simple operation**
Ergonomic design with a minimum number of switches and controls provides simple intuitive operation.

CAUTIONS

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

⚠️**WARNING! NEVER** hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 5 to 10 cm away from the lips and the transceiver is vertical.

NEVER connect the transceiver to a power source other than the BP-204. Such a connection will ruin the transceiver.

AVOID using or placing the transceiver in direct sunlight or in areas with temperatures below −15°C (5°F) or above +55°C (+131°F).

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

KEEP the transceiver at least 1 meter away from your vessel's magnetic navigation compass.

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.

4. "LOCATED AT ...." (your position)

5. The nature of the distress and assistance required.

6. Any other information which might facilitate the rescue.

TABLE OF CONTENTS

◇ 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

SHIP STATION LICENSE

When your craft is equipped with a VHF FM transceiver, 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. This license includes the call sign which is your craft's identification for radio purposes.

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 near the transceiver or be 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.

2 PANEL DESCRIPTION

■ Front panel

q DUALWATCH /TRI-WATCH SWITCH [DW•TRI]
• Starts dualwatch when pushed momentarily.
• Starts tri-watch when pushed for 1 sec.
• Stops dualwatch/tri-watch when either is activated.

w SQUELCH SWITCH [SQL]
• Push this switch, then set the squelch level with the UP/DOWN [▲]/[▼] switches. (p. 6)

e CHANNEL 16 SWITCH [16 • C]
• Selects channel 16 when pushed.
• Selects the call channel when pushed for 1 sec.
• Enters call channel write mode when the call channel is selected and this switch is pushed for 3 sec.

r CHANNEL SWITCH [CH•I/U]
• Selects the regular channels when pushed momentarily.
• Selects INT or U.S.A. channels in sequence when pushed for 1 sec. (UK and Italy version only.)
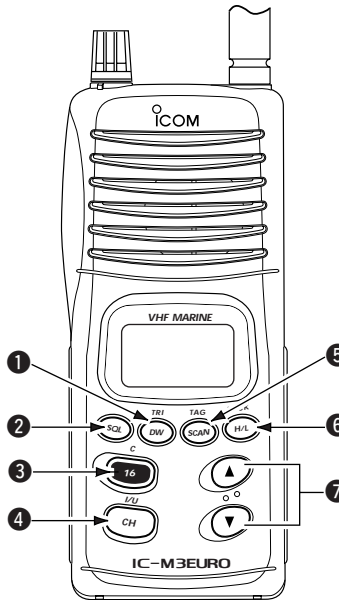
t SCAN/TAG SWITCH [SCAN • TAG]
• Starts and stops normal or priority scan when tag channels are programmed.
• Sets and clear the displayed channel as a tag (scanned) channel when pushed for 1 sec.
• While pushing this switch, turn the power ON to clears all tag channels in the selected regular channel group.

y TRANSMIT POWER/LOCK SWITCH [H/L • LOCK]
• Toggles high and low power when pushed.
• Toggles the lock function ON/OFF when pushed for 1 sec.

u CHANNEL UP/DOWN SWITCHES [▲]/[▼]
• Select an operating channel in the selected channel group.
• Selects the set mode condition of the item.

■ Top and side panels

❶ PTT SWITCH [PTT]
Push and hold to transmit; release to receive.
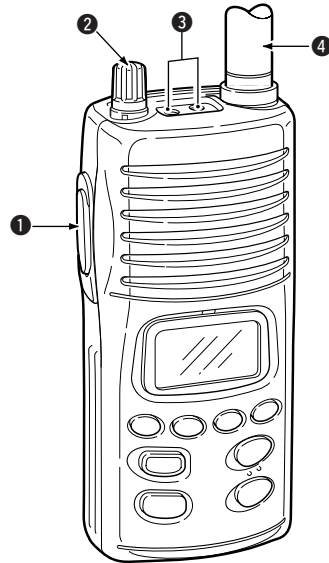
❷ VOLUME CONTROL [OFF/VOL]
Turns power ON and adjusts the audio level.

❸ EXTERNAL SPEAKER AND MICROPHONE JACKS [SP/MIC]
Connect an optional speaker-microphone or headset, if desired. The internal microphone and speaker will not function when either is connected.

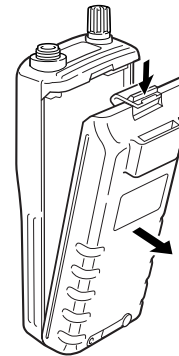**❹ ANTENNA CONNECTOR**
Connects the supplied antenna.

◇ BATTERY CASE RELEASE BUTTON
To remove the battery case:
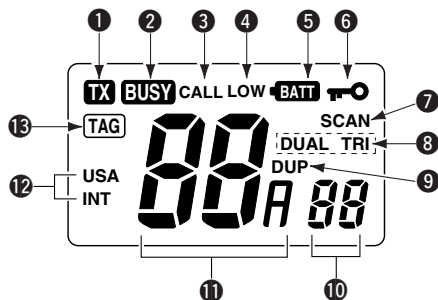Push and hold the battery release button downwards, then open the battery case as shown below.
To attach the battery case:
Mate the notched ends of the transceiver and battery case,and click the battery case into place.

■ Function display

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

❷ BUSY INDICATOR
Appears when receiving a signal or when the squelch level is set to the "OFF" position. (p. 7)

❸ CALL CHANNEL INDICATOR
Appears when the call channel is selected. (p. 9)

❹ LOW POWER INDICATOR (p. 7)
Shows that low output power is selected.

❺ LOW BATTERY INDICATOR
Blinks when the battery voltage drops to approx. 6 V or below. The attached Ni-Cd batteries require charging in this case.

❻ LOCK INDICATOR (p. 6)
Appears while the lock function activated.

❼ SCAN INDICATOR (p. 11)
Blinks while scanning.

❽ DUALWATCH/TRI-WATCH INDICATORS
"DUAL" appears during dualwatch; "TRI" appears during tri-watch. (p. 9)

❾ DUPLEX INDICATOR
Appears when a duplex channel is selected.

❿ SET MODE INDICATOR
Shows the set mode items. (pgs. 12, 13)

⓫ CHANNEL INDICATOR
• Indicates the selected operating channel number. (p. 5)
• In set mode, indicates the selected condition. (p. 12)

⓬ MODE INDICATORS (p. 5)
• "USA" shows that USA channels are selected. (UK and Italy version only)
• "INT" shows that international channels are selected.

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

■ Channel selection

◇ Channel 16
Channel 16 is the distress channel. It is used for establishing initial contact with another station and for emergency communications. Channel 16 is monitored during dualwatch/tri-watch. While standing by you are required to monitor channel 16.

Push

◇ Call channel
Each regular channel group has a separate leisure-use call channel. The call channel is monitored during tri-watch. The call channels can be programmed (p. 9) and are used to store your most often-used channels in each channel group for quick recall.
Push [16] for 1 sec. to select the call channel for the selected channel group.
• "CALL" and call channel number appear.
• Each channel group can have its own call channel after changing a call channel. (UK and Italy version only)

◇ International channels
There are 55 international channels for the IC-M3EURO.

① Push [CH • I/U] to select a regular channel.
② Push [▲]/[▼] switches to select a channel.
• "DUP" appears for duplex channels.

◇ U.S.A. channels (UK and Italy versions only)
For the U.K. and Italy versions, there are 61 U.S.A. channels in addition to 55 international channels. These channels groups may be specified for the operating area.
① Push [CH • I/U] to select a regular channel.
② Push and hold [CH • I/U] for 1 sec. to toggle the international and U.S.A. channels.
③ Push [UP]/[DN] to select a channel.
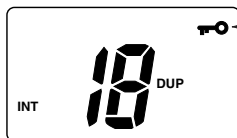• Channels are memorized separately for each channel group.

■ Lock function

This function electronically locks all keys and switches to prevent accidental frequency changes and function access.

Push [H/L • LOCK] for 1 sec. to turn the lock function ON and OFF.
  • Only [PTT], [H/L] and [SQL] are functional.

Appears when the lock function is in use.

■ Adjusting the squelch level

The IC-M3EURO has a squelch even though there is no control knob for it. In order to receive signals properly, as well as for scan to function, the squelch must be adjusted to a suitable level.

Level 10: Max. squelch level

① Push [SQL], then select the squelch level with the [▲]/[▼] keys.
  • There are 11 squelch levels to choose from: OFF is completely open; 10 is the maximum squelch level.
  • When no key is pushed for 5 sec., the display returns to normal indication.
② Push [SQL] once more when the desired squelch level is indicated in the function display.
 • The display returns to normal indication.

■ Receiving and transmitting

CAUTION: Transmitting without an antenna may damage the transceiver.

① Rotate [OFF/VOL] clockwise to turn power ON, then set to the 10 o'clock position.
  • Use the squelch function to mute any audio noise if necessary. Refer to the previous page for details.
② Push [▲]/[▼] to select the desired channel.
  • When receiving a signal, 🄱🄾🅂🅈 appears and audio is emitted from the speaker.
  • Further adjustment of [OFF/VOL] may be necessary at this point.
③ Push [H/L] to select the output power if necessary.
  • "LOW" appears when low power is selected.
  • Choose low power to conserve battery power, choose high power for longer distance communications.
  • Some channels are for low power only.
④ Push and hold [PTT] to transmit, then speak into the microphone.
  • 🅃🅇 appears.
  • Channel 70 cannot be used for transmission (for GMDSS use).
⑤ Release [PTT] to receive.

IMPORTANT: To maximize the readability of your transmitted signal, pause a few sec. after pushing [PTT], hold the microphone 5 to 10 cm (2 to 4 inches) from your mouth and speak at a normal voice level.

NOTE: The transceiver has a power save function to conserve the battery power and cannot be turned OFF. The power save function activates automatically when no signal is received for 5 sec.

① Set volume
④ Push to transmit
⑤ Release to receive
③ Set output power
② Set channel
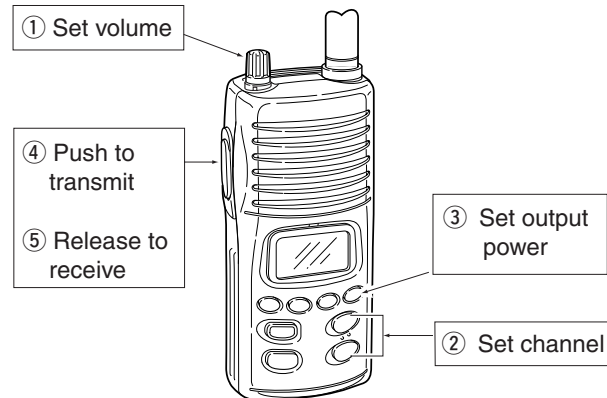
■ Call channel programming

The call channel switch is used to select a specified channel, however, you can program your most often-used channels in each channel group for quick recall.

① Push [16 • C] for 1 sec. to select the call channel of the selected channel group.
 • "CALL" and call channel number appear.

② Push [16 • C] again for 3 sec. (until long beep changes to 2 short beeps) to enter call channel programming condition.
 • Call channel number and channel group to be programmed flash.

④ Push [▲]/[▼] to select the desired channel.

⑤ Push [16 • C] to program the displayed channel as the call channel.
 • The call channel number and channel group stop flashing.
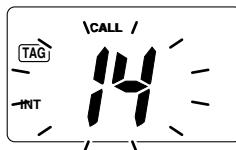
NOTE: For the UK and Italy versions, push [CH • I/U] for 1 sec. in advance to select the desired channel group (INT, U.S.A.) to be programmed.

■ Automatic backlighting

This function is convenient for nighttime operation. The automatic backlighting can be activated in SET mode. (p. 12)

Push any key except for [PTT] to turn the backlighting ON.
 • The backlighting is automatically turned OFF after 5 sec. of inactivity.

■ Description

Dualwatch monitors channel 16 while you are receiving another channel; tri-watch monitors channel 16 and the call channel while receiving another channel.

DUALWATCH/TRIWATCH SIMULATION
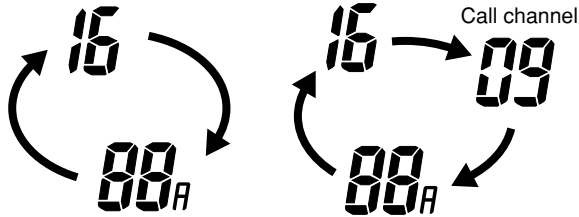
Call channel

Dualwatch   **Tri-watch**

- If a signal is received on channel 16, dualwatch/tri-watch pauses on channel 16 until the signal disappears.
- If a signal is received on the call channel during tri-watch, tri-watch becomes dualwatch until the signal disappears.
- To transmit on the selected channel during dualwatch/tri-watch, push and hold [PTT].

■ Operation

① Select the desired operating channel.
② Push [DW • TRI] momentarily to start dualwatch; push [DW • TRI] for 1 sec. to start tri-watch.
  - "DUAL" flashes during dualwatch; "TRI" flashes during tri-watch.
  - Beep tones sound when a signal is received on channel 16.
  - Tri-watch becomes dualwatch when receiving a signal on the call channel.
③ To cancel dualwatch/tri-watch, push [DW • TRI] again.

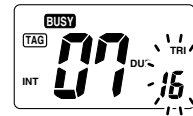**[Example]:** Operating tri-watch on INT channel 07.

Push for 1 sec.
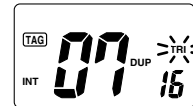

Tri-watch starts.

Signal is received on call channel.

Signal received on channel 16 takes priority.

Tri-watch resumes after the signal disappears.

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5 SCAN OPERATION

■ Scan types

Scanning is an efficient way to locate signals quickly over a wide frequency range. The transceiver has a priority scan and a normal scan.

Set the tag channels (channels to be scanned) before scanning. Clear the tag channels which inconveniently stop scanning, such as those used for digital communications.

░ **NOTE:** Choose priority or normal scan in SET mode. (p. 12)

PRIORITY SCAN
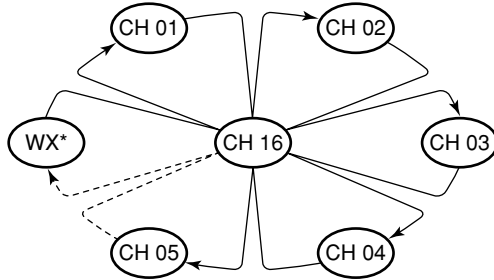
Priority scan searches through all tag channels in sequence while monitoring channel 16. When a signal is detected on channel 16, scan pauses until the signal disappears; when a signal is detected on a channel other than channel 16, scan becomes dualwatch until the signal disappears.

NORMAL SCAN
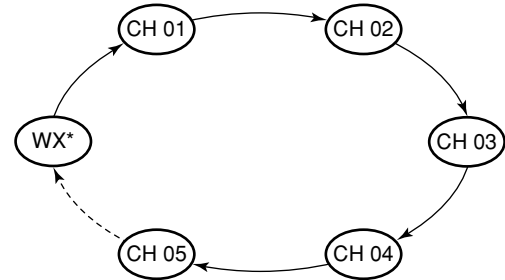
Normal scan, like priority scan, searches through all tag channels in sequence. However, unlike priority scan, channel 16 is not checked unless channel 16 is set as a tag channel.

■ Setting tag channels

For more efficient scanning, add desired channels as tag channels or clear tag channels for unwanted channels. Channels set as non-tag channels will be skipped during scanning. For the UK and Italy versions, tag channels can be assigned to each channel group (INT, U.S.A.) independently. Select the desired channel group in advance by pushing [CH • I/U] for 1 sec.

① Select the desired channel to set as a tag channel.
② Push [SCAN • TAG] for 1 sec. to set the displayed channel as a tag channel.
  • TAG appears in the function display.
③ To cancel the tag channel setting, push [SCAN • TAG] for 1 sec.
  • TAG disappears.

• **Clearing all tag channels**
While pushing [SCAN • TAG], turn the power ON to clear all tag channels in the channel group.

■ Starting a scan

Set scan type, and scan resume timer in advance using SET mode. (p. 13)
For the UK and Italy versions, select the desired channel group in advance by pushing [CH • I/U] for 1 sec.

① Push [SCAN • TAG] to start priority or normal scan.
  • "SCAN" appears and flashes in the function display.
  • "16" appears during priority scan.
  • When a signal is detected, scan pauses until the signal disappears or resumes after pausing 5 sec. according to SET mode setting. (Channel 16 is still monitored during priority scan.)
  • Push [▲]/[▼] to check tag channels, to change the scanning direction or resume the scan manually.
② To stop the scan, push [SCAN • TAG].
  • "SCAN" disappears.
  • Pushing [PTT], [16 • C], [CH • I/U] or [DW • TRI] also stops the scan.

[Example]: Starting a normal scan.

Push | Scan starts. | Scan pauses when receiving a signal and audio is emitted. | Push to stop the scan.
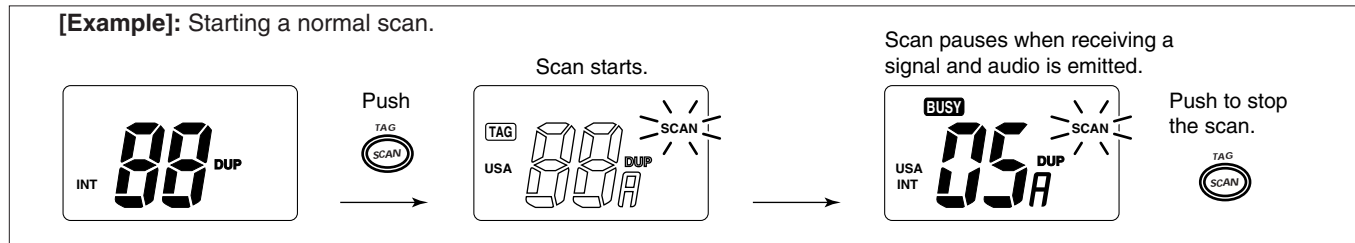
SET MODE

■ SET mode programming

SET mode is used to change the conditions of 5 transceiver functions: the beep tone function, the automatic backlighting, normal/priority scan, scan resume timer and power save function.

① Turn power OFF.
② While pushing [SQL], turn power ON and continue pushing [SQL] until "bP" appears.
③ Release [SQL].
④ Push [SQL] to select the desired item, if necessary.
⑤ Push [▲]/[▼] to select the desired condition of the item.
⑥ To exit SET mode, turn the power OFF, then ON again.

•SET MODE CONSTRUCTION

Beep tone
Power save
Push SQL
Scan resume timer
Automatic backlighting
Scan type
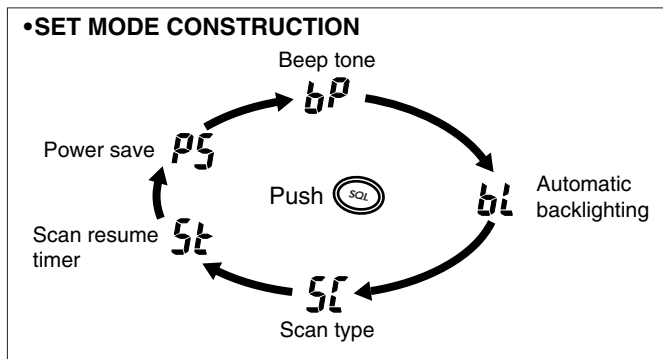
■ SET mode items

◊ **Beep tone** "bP"
You can select silent operation by turning beep tones OFF or you can have confirmation beeps sound at the push of a switch by turning beep tones ON. The beep tone volume is linked with [OFF/VOL].

Beep tone ON (default)

◊ **Automatic backlighting** "bL"
This function is convenient for nighttime operation. The automatic backlighting turns the backlighting ON when pushing any key except for [PTT].
• The backlighting is automatically turned OFF after 5 sec. of inactivity.

Automatic backlighting ON (default)

◇ Scan type selection "SC"

The transceiver has 2 scan types: normal scan and priority scan. Normal scan searches all tag channels in the selected channel group. Priority scan searches all tag channels in sequence while monitoring channel 16.
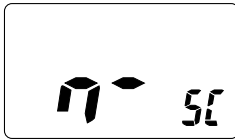
Normal scan (default)

Priority scan

◇ Scan resume timer "St"

The scan resume timer can be selected as a pause (OFF) or timer scan (ON). When OFF is selected, the scan pauses until a received signal disappears. When ON is selected, the scan pauses for 5 sec. after receiving a signal and then resumes even if the signal is still being received.

Scan timer OFF (default)
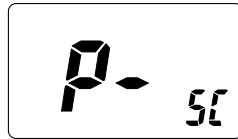
◇ Auto power save function "PS"

The power save function reduces current drain by deactivating the receiver circuit for preset intervals.

Power save ON (default)

BATTERY CHARGING

■ Installing batteries in the battery case

When using a battery case attached to the transceiver, install 6 AA(R6) size Ni-Cd or alkaline batteries as illustrated below.

① Remove the battery case from the transceiver.
② Install 6 × AA(R6) size Ni-Cd or alkaline batteries.
   • Be sure to observe the correct polarity.

CAUTION:
  • When installing batteries, make sure they are all the same brand, type and capacity. Also, do not mix new and old batteries together.
  • Keep battery contacts clean. It's a good idea to clean battery terminals once a week.

Ni-Cd • • ALKALINE
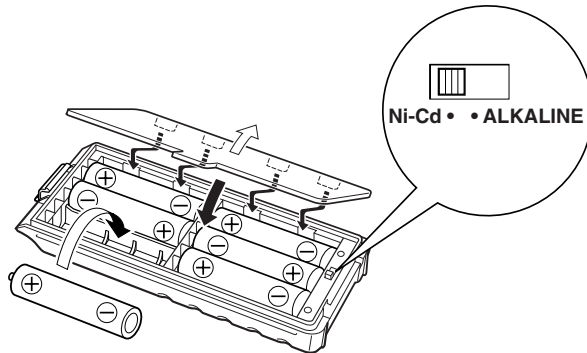
■ Battery charging

Prior to using the transceiver for the first time, the Ni-Cd batteries must be fully charged for optimum life and operation.

CAUTION: To avoid damage to the transceiver, turn it OFF while charging.

• Recommended temperature range for charging:
  +10°C to +40°C (+50°F to +104°F)
• Use the supplied AC adapter (BC-131A, BC-110D) only. **NEVER** use other adapters.
• An optional cable OPC-254L (for 12 V power source) or CP-12L (for 12 V cigarette lighter socket) can be used instead of the supplied AC adapter.

Before connecting DC power, make sure the internal switch is set to the proper battery type—Ni-Cd or alkaline. **NEVER** connect DC power to the battery case when installing alkaline batteries. Such a connection will damage the transceiver.

◇ **Charging connections**

① Install 6 AA(R6) size Ni-Cd batteries into the battery case.
② Turn the battery selector switch to the Ni-Cd position.
③ Connect the AC adapter (BC-131A, BC-110D) or optional
   cable (CP-12L or OPC-254L) as shown below.
   • The charge indicator lights red.
④ Charge the Ni-Cd batteries for 15 hours.

CAUTION: Make sure the [CHARGE] switch is in the
ALKALINE position when operating the transceiver with
alkaline batteries.

**OPC-254L or
CP-12L**

**BC-131A/
BC-110D**
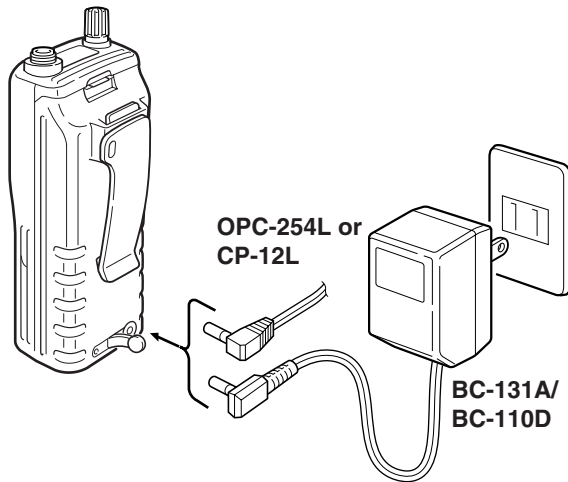
■ Battery cautions

NEVER incinerate used Ni-Cd batteries. Internal battery gas
may cause an explosion.

NEVER immerse batteries in water. If the battery case be-
comes wet, be sure to wipe it dry BEFORE attaching it to the
transceiver.

NEVER short terminals of the battery case. Also, current may
flow into nearby metal objects so be careful when placing bat-
tery cases in handbags, etc.

If your Ni-Cd batteries seem to have no capacity even after
being charged, completely discharge them by leaving the
power ON overnight. Then, fully charge the Ni-Cd batteries
again. If the Ni-Cd batteries still do not retain a charge (or
very little), new Ni-Cd batteries must be purchased.

SUPPLIED ACCESSORIES AND ATTACHMENT

◇ **Supplied accessories**

The following accessories are supplied:

Qty.

① Flexible antenna 1
② Belt clip 1
③ Handstrap 1
④ Battery case (BP-204) with 6 Ni-Cd (AA) batteries . . .1
⑤ AC adapter* (BC-131A or BC-110D) 1

* Not supplied with some versions.

◇ **Flexible antenna**

Connect the supplied flexible antenna to the antenna connector.

CAUTION: Transmitting without an antenna may damage the transceiver.
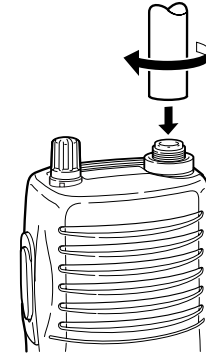
◇ **Belt clip**

To attach: Slide the belt clip into the plastic loop on the back of the battery case.

To remove: Push the top of the belt clip towards the transceiver and out at the same time, then push it downwards and free of the plastic loop.
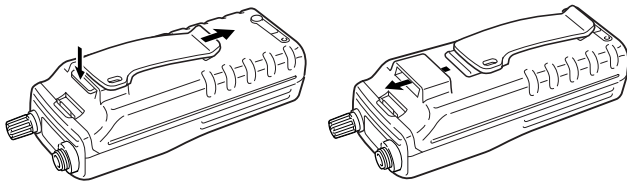
◇ **Handstrap**

Slide the handstrap through the loop on the side of the transceiver as illustrated at right. Facilitates carrying.

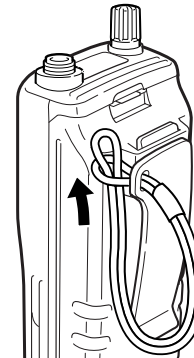| PROBLEM	POSSIBLE CAUSE	SOLUTION	REF.
No power comes ON.	• The battery is exhausted. • Bad connection to the battery pack.	• Recharge the battery pack. • Check the conection to the transceiver.	p. 15 p. 3
No sound comes from the speaker.	• Squelch level is too deep. • Volume level is too low. • Speaker has been exposed to water.	• Set squelch to the threshold point. • Set [OFF/VOL] to a suitable level. • Drain water from the speaker.	p. 6 p. 7 —
Transmitting is impossible, or high power can not be selected.	• Some channels are for low power or receive only. • The battery is exhausted. • The output power is set to low.	• Change channels. • Recharge the battery pack. • Push [H/L] to select high power.	pgs. 2,4 p. 15 p. 2
The display channel cannot be changed.	• Lock function is activated.	• Push [H/L • LOCK] for 1 sec. to cancel the function.	p. 2
Scan does not start.	• "TAG" channels are not programmed.	• Set the desired channels as "TAG" channels.	p. 11
No beeps sound.	• Beep tones are turned OFF.	• Turn the beep tones ON in SET mode.	p. 13

◇ International channels

CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive
01	156.050	160.650	11	156.550	156.550	21	157.050	161.650	62	156.125	160.725	72	156.625	156.625	84	157.225	161.825
02	156.100	160.700	12	156.600	156.600	22	157.100	161.700	63	156.175	160.775	73	156.675	156.675	85	157.275	161.875
03	156.150	160.750	13	156.650	156.650	23	157.150	161.750	64	156.225	160.825	74	156.725	156.725	86	157.325	161.925
04	156.200	160.800	14	156.700	156.700	24	157.200	161.800	65	156.275	160.875	77	156.875	156.875	87	157.375	161.975
05	156.250	160.850	15*1	156.750	156.750	25	157.250	161.850	66	156.325	160.925	78	156.925	161.525	88	157.425	162.025
06	156.300	156.300	16	156.800	156.800	26	157.300	161.900	67	156.375	156.375	79	156.975	161.575			
07	156.350	160.950	17*1	156.850	156.850	27	157.350	161.950	68	156.425	156.425	80	157.025	161.625			
08	156.400	156.400	18	156.900	161.500	28	157.400	162.000	69	156.475	156.475	81	157.075	161.675			
09	156.450	156.450	19	156.950	161.550	60	156.025	160.625	70*2	156.525	156.525	82	157.125	161.725			
10	156.500	156.500	20	157.000	161.600	61	156.075	160.675	71	156.575	156.575	83	157.175	161.775			

*1 Low power only. *2 Receive only.

◇ U.S.A. channels (for UK and Italy version only)

CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive	CH	Frequency (MHz) Transmit	Receive
01A	156.050	156.050	12	156.600	156.600	22A	157.100	157.100	64A	156.225	156.225	77*1	156.875	156.875	86	157.325	161.925
02A	156.100	156.100	13*1	156.650	156.650	23A	157.150	157.150	65A	156.275	156.275	78A	156.925	156.925	86A	157.325	157.325
03A	156.150	156.150	14	156.700	156.700	24	157.200	161.800	66A	156.325	156.325	79A	156.975	156.975	87	157.375	161.975
04A	156.200	156.200	15*1	156.750	156.750	25	157.250	161.850	67*1	156.375	156.375	80A	157.025	157.025	87A	157.375	157.375
05A	156.250	156.250	16	156.800	156.800	26	157.300	161.900	68	156.425	156.425	81A	157.075	157.075	88	157.425	162.025
06	156.300	156.300	17*1	156.850	156.850	27	157.350	161.950	69	156.475	156.475	82A	157.125	157.125	88A	157.425	157.425
07A	156.350	156.350	18A	156.900	156.900	28	157.400	162.000	70*2	156.525	156.525	83A	157.175	157.175			
08	156.400	156.400	19A	156.950	156.950	60A	156.025	156.025	71	156.575	156.575	84	157.225	161.825			
09	156.450	156.450	20	157.000	161.600	61A	156.075	156.075	72	156.625	156.625	84A	157.225	157.225			
10	156.500	156.500	20A	157.000	157.000	62A	156.125	156.125	73	156.675	156.675	85	157.275	161.875			
11	156.550	156.550	21A	157.050	157.050	63A	156.175	156.175	74	156.725	156.725	85A	157.275	157.275			

*1 Low power only. *2 Receive only.

■ Specifications

• GENERAL

Frequency coverage	: Transmit 156–157.5 MHz
	Receive 156–163 MHz
Mode	: FM (16K0G3E)
Channel spacing	: 25 kHz
Current drain (at 7.2 V)	: TX High (5 W) 1.6A typical.
	Max. audio 230 mA typical
	Standby 60 mA typical
	Power saved 20 mA typical
Frequency stability	: ±10 ppm (−15°C to +55°C)
Useable temperature range: −15°C to +55°C; +5°F to +131°F
Dimensions	: 58 (W) × 140(H) × 43(D) mm
(Projections not included)	2.3 (W) × 5.5 (H) × 1.7 (D) in
Weight	: 410g (14.5 oz)

• TRANSMITTER

Output power (at 7.2 V)	: 5 W and 1 W (EUR, UK version)
	3 W and 1 W (Italy version)
	1 W and 0.5 W (Hol, FRA version)
Modulation system	: Variable reactance phase modu-
	lation
Max. frequency deviation	: ±5.0 kHz
Spurious emissions	: Less than 0.25 μW

• RECEIVER

Receive system	: Double-conversion superhetero-
	dyne
Sensitivity (20 dB SINAD)	: 1.0 μV typical
Squelch sensitivity	: Adjustable up to 23 dB
	SINAD
Intermodulation rejection ratio	: More than 68 dB
Spurious response rejection ratio	: More than 70 dB
Adjacent channel selectivity	: More than 70 dB
Audio output power	: 100 mW (Italy version)
(at 10% distortion with an 8 Ω load)	300 mW (other version)

All stated specifications are subject to change without notice or obligation.

■ Options

• **CP-12L** CIGARETTE LIGHTER CABLE WITH NOISE FILTER
Connects to a ship's or vehicle's cigarette lighter socket (12V).

• **OPC-254L** DC POWER CABLE
Used for charging with an external power supply.

• **BP-204** BATTERY CASE
Battery case for R6(AA) × 6 alkaline or Ni-Cd cells.

• **BC-110D/V** AC ADAPTER
Regulary charge battery packs attached to the transceiver in 15 to 20 hrs.

• **HM-54/HM-46/HM-75A** SPEAKER MICROPHONES.
Combination speaker-microphone that provides convenient operation while hanging the transceiver from your belt clip.

Count on us!