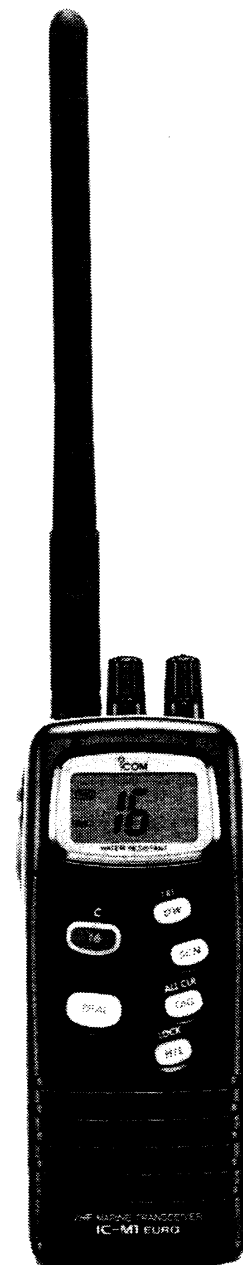# ICOM

VHF MARINE TRANSCEIVER

IC-M1 EURO

Icom Inc.

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-M1euro**.

⟨CE⟩ The IC-M1euro complies with the essential requirements of the 89/336/EEC directive for Electromagnetic Compatibility.

CAUTIONS

⚠**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.

MAKE SURE the flexible antenna and battery pack are securely attached to the transceiver and that the antenna and battery pack are dry before attachment. Exposing the inside of the transceiver to water will result in serious damage to the transceiver.

NEVER allow children to touch the transceiver.

NEVER charge battery packs except in the methods described in this manual.

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

DO NOT use or place the transceiver in areas with temperatures below −15°C or above +55°C or, in areas subject to direct sunlight, such as the dashboard.

AVOID the use of chemical agents such as benzine or alcohol when cleaning, as they may damage the transceiver surfaces.

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

After exposure to saltwater, clean the transceiver thoroughly with a fresh water soaked cloth to avoid corrosion.

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■ Front panel

FUNCTION DISPLAY (p. 3)

**DUALWATCH/TRI-WATCH SWITCH [DW•TRI] (p. 10)**
- Starts dualwatch when pushed momentarily.
- Starts tri-watch when pushed for 1 sec.
- Stops dualwatch/tri-watch when either is activated.

CHANNEL 16 SWITCH [16•C]
- Selects channel 16 when pushed. (p. 5)
- Selects the call channel when pushed for 1 sec. (p. 5)
- Enters call channel write mode when the call channel is selected and this switch is pushed for 3 sec. (p. 9)

DIAL SWITCH [DIAL•I/U]
- Selects the regular channels when pushed momentarily. (p. 5)
- Toggles between international and U.S.A. channels when pushed for 1 sec. (p. 5, for the U.K. and Italy versions)
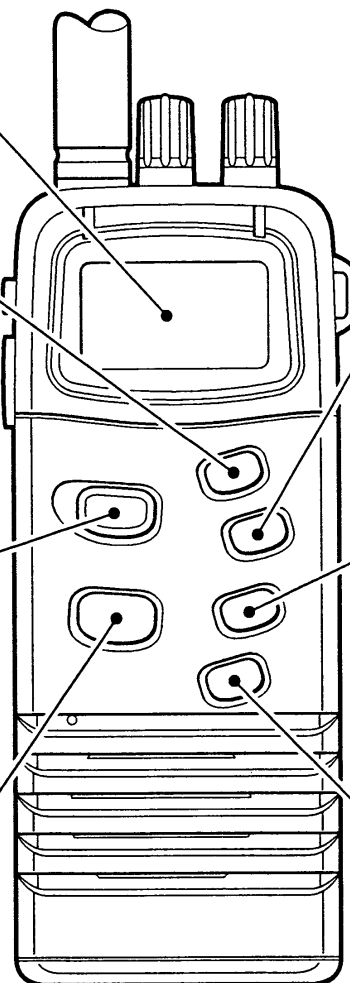
SCAN SWITCH [SCN•SCRM]
- Starts and stops priority scan when tag channels are programmed. (p. 12)
- Activates an optional voice scrambler function when pushed for 1 sec. This function is permitted in some countries only. (p. 8)

TAG SWITCH [TAG•ALL CLR]
- Sets the displayed channel as a tag (scanned) channel when pushed. (p. 11)
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TRANSMIT POWER/LOCK SWITCH [H/L•LOCK]
- Toggles high power and low power when pushed. (p. 7)
- While pushing [SQL], push this key to select extra low power (150 mW) for the U.K. and Italy versions. (p. 7)
- Toggles the lock function ON and OFF when pushed for 1 sec. (p. 6)

■ Top and side panels

SQUELCH/MONITOR SWITCH [SQL]
- Opens the squelch and monitors the operating channel while being pushed.
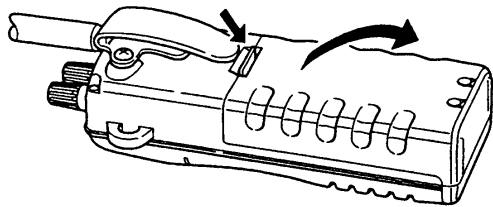- Sets the squelch level with the channel selector. (p. 6)

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

BATTERY PACK RELEASE BUTTON
To remove the battery pack:
Push and hold the battery release button downwards, then open the battery pack as shown below.

To attach the battery pack:
Mate the notched ends of the transceiver and the battery pack, and click the battery pack into place.

ANTENNA CONNECTOR (p. 17)
Connects the supplied antenna.

VOLUME CONTROL [OFF/VOL]
Turns power ON and adjusts the audio level. (p. 7)

CHANNEL SELECTOR [CH]
- Sets an operating channel during normal operation. (p. 5)
- Sets a squelch threshold level while pushing [SQL]. (p. 6)
- Checks tag channels or changes scanning direction during scan. (p. 12)
- Selects the set mode contents in SET mode. (pgs. 13, 14)
- Selects the optional scrambler code when [SCN•SCRM] is pushed and held. This function is permitted in some countries only. (p. 8)

■Function display

LOW POWER INDICATOR (p. 7)
• Appears when low power is selected.
• Blinks when extra low power* is selected.

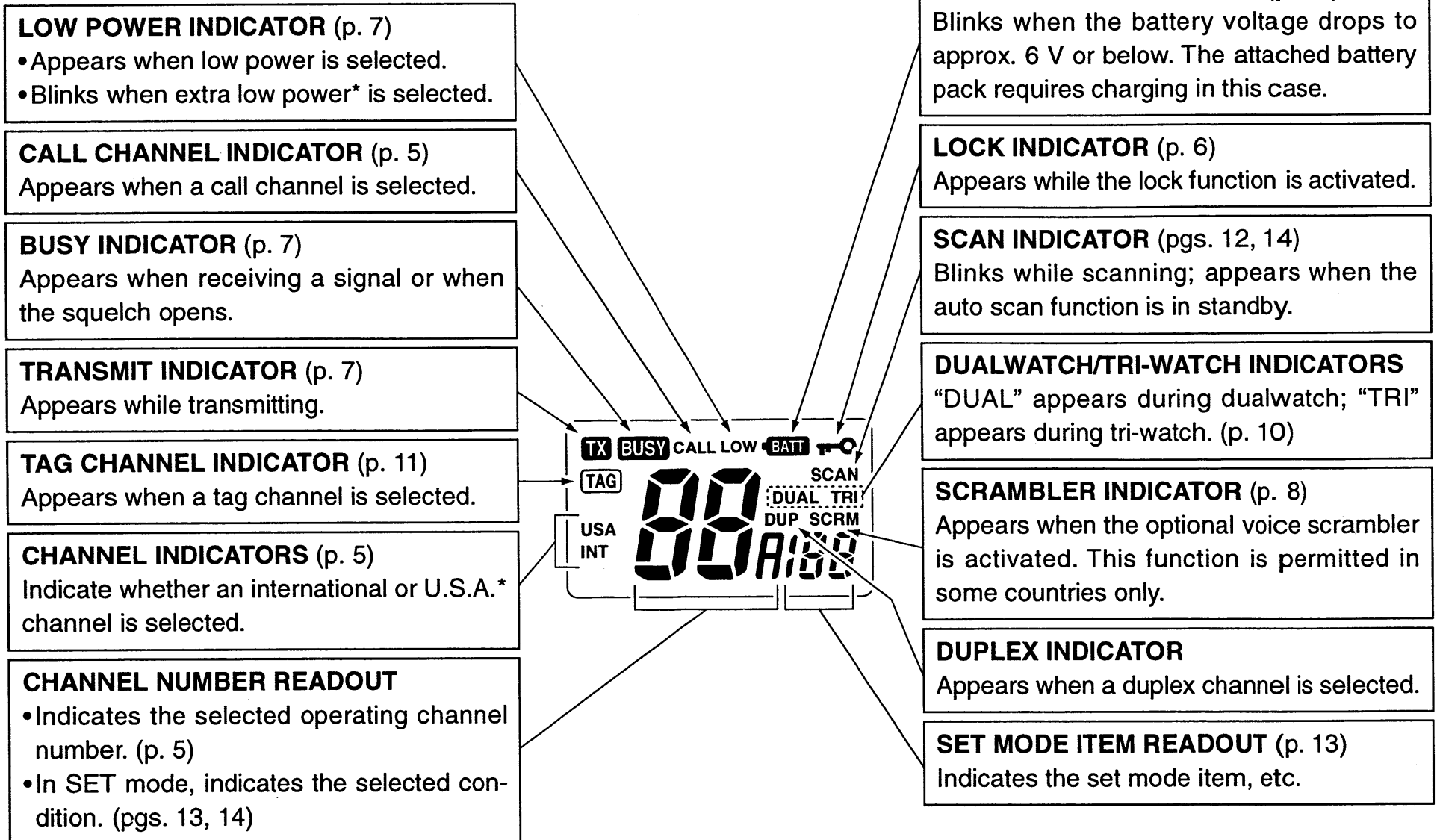**CALL CHANNEL INDICATOR** (p. 5)
Appears when a call channel is selected.

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

TRANSMIT INDICATOR (p. 7)
Appears while transmitting.

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

CHANNEL INDICATORS (p. 5)
Indicate whether an international or U.S.A.* channel is selected.

CHANNEL NUMBER READOUT
• Indicates the selected operating channel number. (p. 5)
• In SET mode, indicates the selected condition. (pgs. 13, 14)

LOW BATTERY INDICATOR (p. 15)
Blinks when the battery voltage drops to approx. 6 V or below. The attached battery pack requires charging in this case.

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

SCAN INDICATOR (pgs. 12, 14)
Blinks while scanning; appears when the auto scan function is in standby.

DUALWATCH/TRI-WATCH INDICATORS
"DUAL" appears during dualwatch; "TRI" appears during tri-watch. (p. 10)

SCRAMBLER INDICATOR (p. 8)
Appears when the optional voice scrambler is activated. This function is permitted in some countries only.

DUPLEX INDICATOR
Appears when a duplex channel is selected.

SET MODE ITEM READOUT (p. 13)
Indicates the set mode item, etc.

*Available for the U.K. and Italy versions.

■ Operating rules

● PRIORITIES

① 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.

② You must monitor channel 16 when you are not operating on another channel.

③ False or fraudulent distress signals are prohibited and punishable by law.

● PRIVACY

① Information overheard but not intended for you cannot lawfully be used in any way.

② Indecent or profane language is prohibited.

● RADIO LICENSES

(1) SHIP STATION LICENSE

You must have a current radio station license before using the transceiver. It is unlawful to operate a ship station which is not licensed.

Inquire through your dealer or the appropriate government agency for a Ship-Radiotelephone license application. This government-issued license states the call sign which is your craft's identification for radio purposes.

(2) OPERATOR'S LICENSE

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

The Restricted Radiotelephone Operator Permit must be posted or kept with the operator. Only a licensed radio operator may operate a transceiver.

However, non-licensed individuals may talk over a transceiver if a licensed operator starts, supervises, ends the call and makes the necessary log entries.
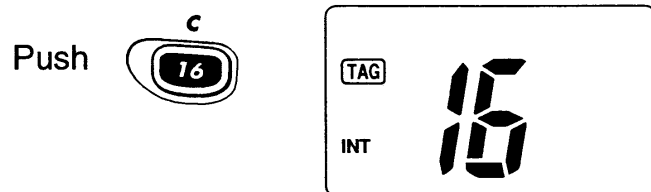
Keep a copy of the current government rules and regulations handy.
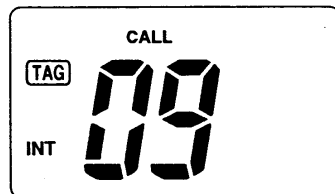
■ Channel selection

◇ 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

Call channel is the pleasure call channel and is monitored during tri-watch. The call channels can be programmed (p. 9) and are used to store your most often-used channels for quick recall.

- Push [16•C] for 1 sec. to select the call channel.
  - "CALL" and call channel number appear.
  - For the U.K. and Italy versions, each regular channel group has separate call channels and may have an independent call channel after changing a call channel.
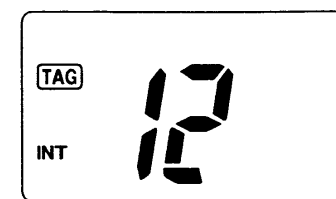
◇ International channels

There are 55 international channels for the IC-M1EURO.

① Push [DIAL] to select an international channel.
② Rotate the channel selector to select a channel.
  - "DUP" appears for duplex channels.
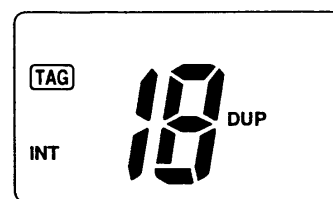
Duplex channel
Used for ship-to-coast

Simplex channel
Used for ship-to-ship

## ◇ U.S.A. channels (U.K. and Italy versions only)

For the U.K. and Italy versions, there are 58 U.S.A. channels in addition to 55 international channels. These channel groups may be specified for the operating area.

① Push [DIAL] to select a regular channel.
② To change the channel group, push [DIAL•I/U] for 1 sec.
③ Rotate the channel selector to select a channel.
  - "DUP" appears for duplex channels.

■ Lock function

This function electronically locks all keys and switches to prevent accidental frequency changes and function access.
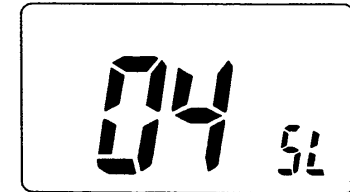
- Push [H/L•LOCK] for 1 sec. to turn the lock function ON and OFF.
  - Only [PTT], [H/L] and [SQL] are functional.
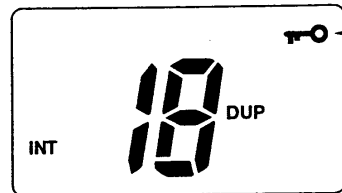
Appears when the lock function is in use.

■ Adjusting the squelch level

The IC-M1EURO 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 4: Max. squelch level

① While pushing [SQL], rotate the channel selector.
  - The first click of the channel selector indicates the current squelch level.
  - There are 5 squelch levels to choose from: 0 is completely open; 4 is the maximum squelch level.
② Release [SQL] when the desired squelch level is indicated in the function display.

NOTE: Squelch level 1 is designed for receiving weak signals so that the squelch delays before closing. If you want to cut the squelch noise, set the level to 2 or more.
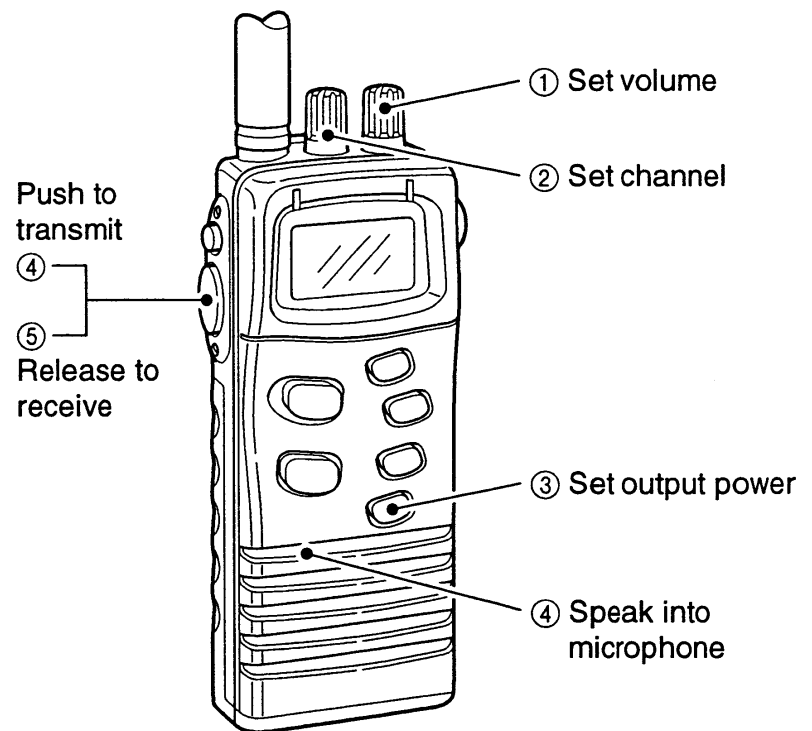
■ Receiving and transmitting

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 Rotate the channel selector 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 10 to 15 cm from your mouth and speak at a normal voice level.

NOTE: The transceiver has 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.

NOTE: For the U.K. and Italy versions, an extra low power is available for short distance communications. Push [H/L] while pushing [SQL] to access this extra low power.

Push to transmit
④—
⑤—
Release to receive

① Set volume
② Set channel
③ Set output power
④ Speak into microphone

■ Optional voice scrambler operation

In some countries, this function is not available, since radio law varies according to countries. Available where permitted by law. To activate the function, an optional UT-98 is necessary. Ask your dealer for details.

◇ Activating the scrambler

The optional voice scrambler provides private communications. In order to receive or send scrambled transmissions you must first activate the scrambler function.

① Select an operating channel except channel 16.
② Push [SCN•SCRM] for 1 sec.
  - "SCRM" appears.
③ To turn the scrambler function OFF, repeat step ②.
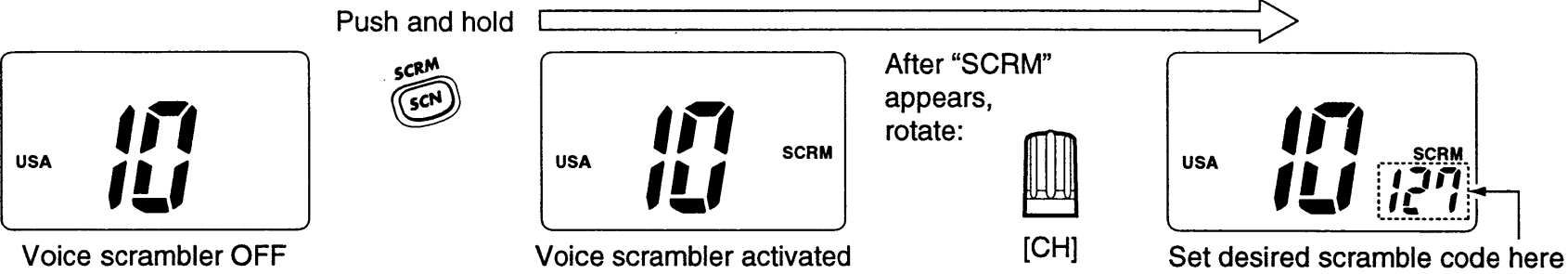 - "SCRM" disappears.
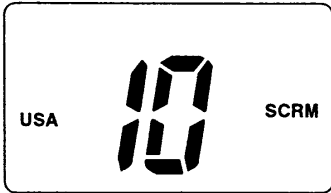
◇ Programming scramble codes

There are 128 codes (00 to 127) available for programming. In order to understand one another, all transceivers in your group must have the same scramble code.

① Select an operating channel except channel 16.
② Make sure the scramble function is OFF, then push and hold [SCN•SCRM] until step ④.
  - "SCRM" appears.
③ While continuing to push [SCN•SCRM], rotate the channel selector to select the desired scramble code.
  - The first click when rotating the channel selector shows the currently selected code.
④ Release [SCN•SCRM].
  - The scramble code disappears from the function display but remains in effect while the scramble function is activated.

[Example]: Programming scramble code 127.

Push and hold

Voice scrambler OFF

Voice scrambler activated

After "SCRM" appears, rotate:

[CH]

Set desired scramble code here

■ Call channel programming

The call channel key is used to select a specified channel, however, you can program your most often-used channels in each channel group for quick recall.
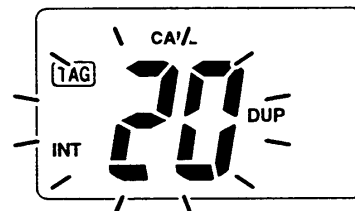
① Push [16•C] for 1 sec. to select the call channel.
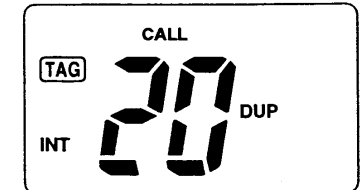 - "CALL" and call channel number appear.
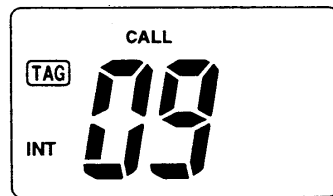
② Push [16•C] again for 3 sec. (until long beep changes to 2 short beeps) to enter call channel programming condition.
  - Call channel number to be programmed flashes.
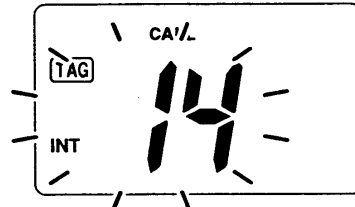
③ Rotate the channel selector to select the desired channel.

④ Push [16•C] to program the displayed channel as the call channel.
  - The call channel number stops flashing.

For the U.K. and Italy versions, push [DIAL•I/U] for 1 sec. in advance to select the desired channel group (INT, USA) to be programmed.

■ Automatic backlighting

This function is convenient for nighttime operation. The automatic backlighting can be activated in SET mode. (p. 13)

• Push any key except for [PTT] to turn the backlighting ON.
  - The backlighting is automatically turned OFF 5 sec. after operation.
  - Push [SQL] to turn the backlighting ON without changing the operating condition.

■ 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/TRI-WATCH SIMULATION

Dualwatch

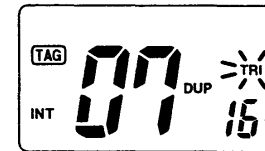Call channel†
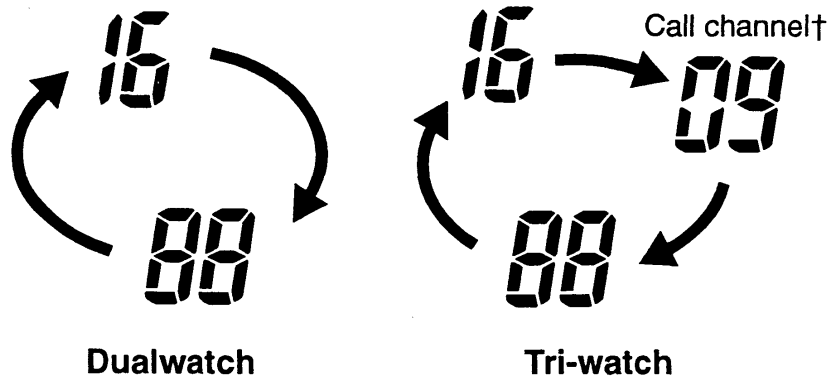
Tri-watch

† Differs depending on version.

- 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].
- If no signal is received, the transceiver enters the power saving condition for 0.5 sec. after checking the operating channel every cycle.

■ 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 tone sounds when a signal is received on channel 16.
  - Tri-watch becomes dualwatch when receiving a signal on the call channel.
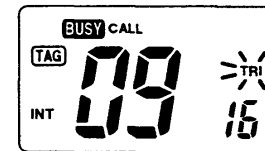③ To cancel dualwatch/tri-watch, push [DW•TRI] again.

[Example]: Operating tri-watch on INT channel 07.
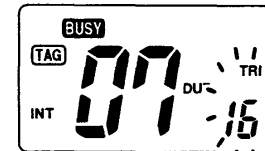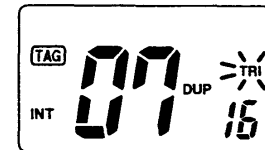
Push for 1 sec.

Tri-watch starts.

"16" appears during dualwatch/tri-watch.

Signal is received on call channel.

Signal received on channel 16 takes priority.

Tri-watch resumes after the signal disappears.

■Scan function

Scanning is an efficient way to locate signals quickly over a wide frequency range. The transceiver has priority scan. Set or clear the tag channels (scanned channels) before scanning.

In addition, automatic scan start function is available for standby convenience. (p. 14)

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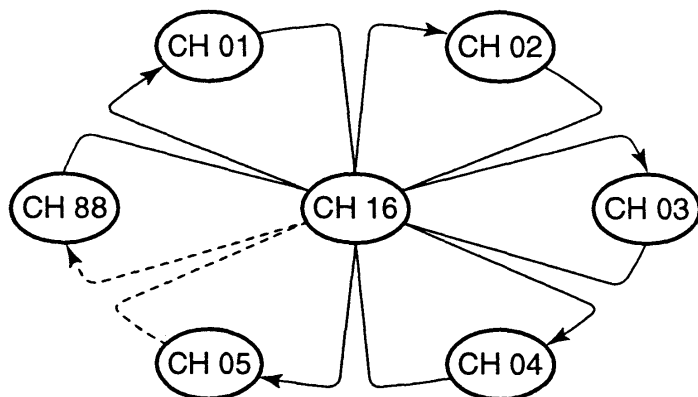
Priority scan searches through all tag channels in sequence while monitoring channel 16. When a signal is detected on channel 16, scan pauses until the signal disappears; when a signal is detected on a channel other than channel 16, scan becomes dualwatch until the signal disappears.

■Setting tag channels

For more efficient scanning, add desired channels as tag channels or clear tag channels for unwanted channels. Channels not "tagged" channels will be skipped during scanning.

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

Appears for channels set to be scanned. ──►
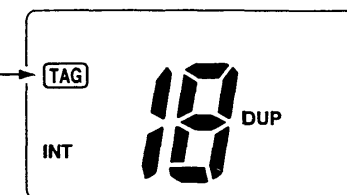
For the U.K. and Italy versions, tag channels can be assigned to each channel group (INT, USA) independently. Select the desired channel group in advance by pushing [DIAL•I/U] for 1 sec.

■ Starting a scan

Set scan resume timer and auto scan function in advance using SET mode. (p. 14)

① Make sure the squelch is set to the threshold point.
② Push [SCN] to start priority scan.
- "SCAN" appears and flashes in the function display.
- "16" appears during 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 scan.)
- Rotate the channel selector to check the scanning tag channels, to change the scanning direction or resume the scan manually.
③ To stop the scan, push [SCN].
- "SCAN" disappears.
- Pushing [PTT], [16•C], [DIAL] or [DW•TRI] also stops the scan.

/// For the U.K. and Italy versions, select the desired channel group (INT, USA) in advance by pushing [DIAL•I/U] for 1 sec.

■ Clearing all tag channels

To clear all tag channels, operate as follows:
- Push [TAG•ALL CLR] for 3 sec. to clear all tag channels.

/// For the U.K. and Italy versions, select the desired channel group (INT, USA) in advance by pushing [DIAL•I/U] for 1 sec.

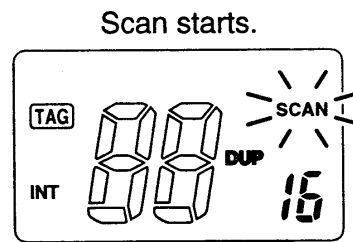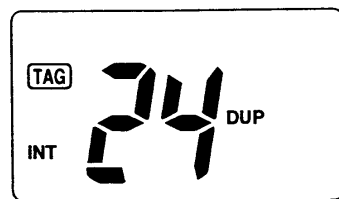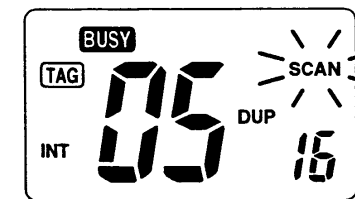
[Example]: Starting a priority scan.

Push
SCRM
(SCN)

Scan starts.

Scan pauses when receiving a signal and audio is emitted.

Push to stop the scan.
SCRM
(SCN)

■ SET mode programming

SET mode is used to change the conditions of 4 transceiver functions: the beep tone function, the automatic backlighting, scan resume timer and auto scan function.

① Turn power OFF.
② While pushing [SQL], turn power ON and continue pushing [SQL] until "bP" appears.
③ After the display appears, release [SQL].
④ Push [SQL] to select the desired item, if necessary.
⑤ Rotate the channel selector to select the desired condition of the item.
⑥ To exit SET mode, push [16].
  - Turning power OFF, then ON again also exits SET mode.

•SET MODE CONSTRUCTION

Beep tone
bP

Auto scan *At*   Push (SQL)   *bL* Automatic backlighting

St

Scan resume timer
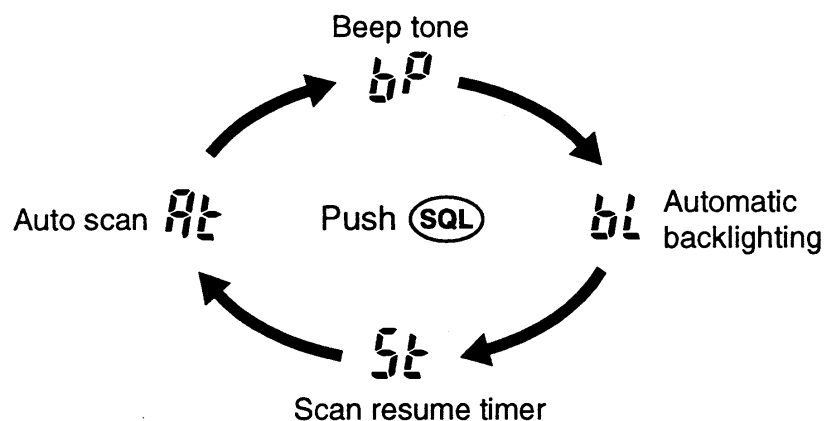
■ SET mode items

◇ 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].

On bP
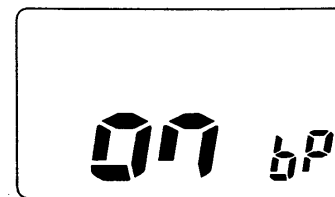
Beep tone ON (default)

◇ 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 5 sec. after operation.
• Push [SQL] to turn the backlighting ON without changing the operating condition.

On bL
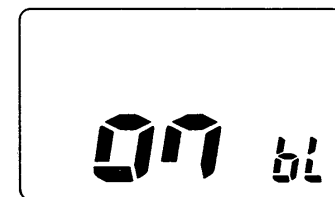
Automatic backlighting ON (default)

◇ 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 the signal disappears. When ON is selected, the scan pauses 5 sec. and resumes even if a signal is being received on channels except for channel 16.
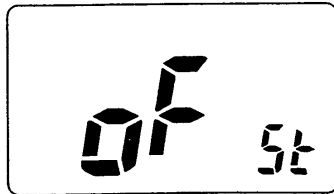
Scan timer OFF (default)

◇ Auto scan function "At"

While in standby, this function automatically starts priority scan 30 sec. after operation.
• "SCAN" always appears when the function is turned ON.

NOTE: The transceiver has a power save function but the power save function does not function when the auto scan function is in use.

Auto scan OFF (default)

■Battery cautions

NEVER incinerate used battery packs. Internal battery gas may cause an explosion.

NEVER immerse the battery pack in water. If the battery pack becomes wet, be sure to wipe it dry BEFORE attaching it to the transceiver.

NEVER short terminals of the battery pack. Also, current may flow into nearby metal objects so be careful when placing battery packs in handbags, etc.

If your battery pack seems to have no capacity even after being charged, completely discharge it by leaving the power ON overnight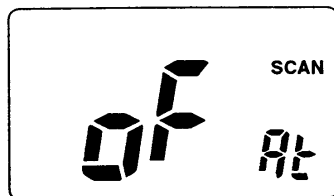. Then, fully charge the battery pack again. If the battery pack still does not retain a charge (or very little), a new battery pack must be purchased.

■Battery charging

Prior to using the transceiver for the first time, the battery pack 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
• Use the supplied charger (AD-58) or optional charger (BC-119/BC-121 for rapid charging) only. **NEVER** use other manufacturers' chargers.
• An optional cable OPC-515L (for 13.8 V power source) or CP-17L (for 12 V cigarette lighter socket) can be used instead of the AC adapters supplied with the above chargers.

When using AD-58: If the charge indicator lights red, the vehicle battery voltage is low and charging may not be performed. Check the vehicle battery voltage in this case.

When using BC-119: If the charge indicator flashes orange, the vehicle battery voltage is low and charging may not be performed. Check the vehicle battery voltage in this case. If the charge indicator flashes red, there may be a problem with the battery pack (or charger). Re-insert the battery pack or contact your dealer.

◇ Attaching the AD-58 to a wall
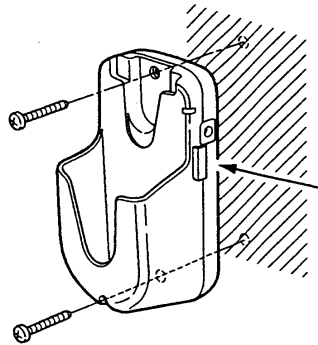
Eyelet:

USE a rubber band to secure the transceiver, if desired.

◇ Installing the AD-69 to the BC-119

① Connect the cable as shown below.
② Attach the AD-69 with the 2 supplied screws.

AD-69

BC-119
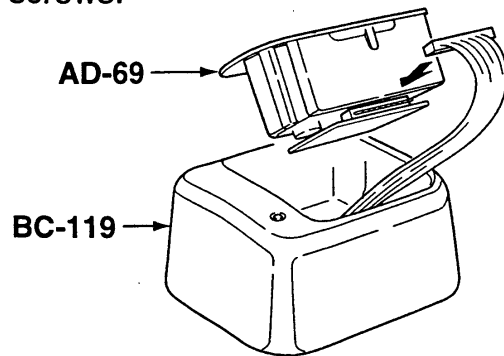
◇ Charging with the AD-58

① Connect the AC adapter (BC-122) or optional cable (CP-17L or OPC-515L) as shown below.
② Insert the transceiver with attached battery pack into the charger.
• The charge indicator lights orange.
③ Charge the battery pack for 15 hours.

Turn power OFF.

AVOID overcharging! The AD-58 is **NOT** a transceiver hanger. Take out the transceiver within 48 hours.

CP-17L or OPC-515L

AD-58

BC-122A/E
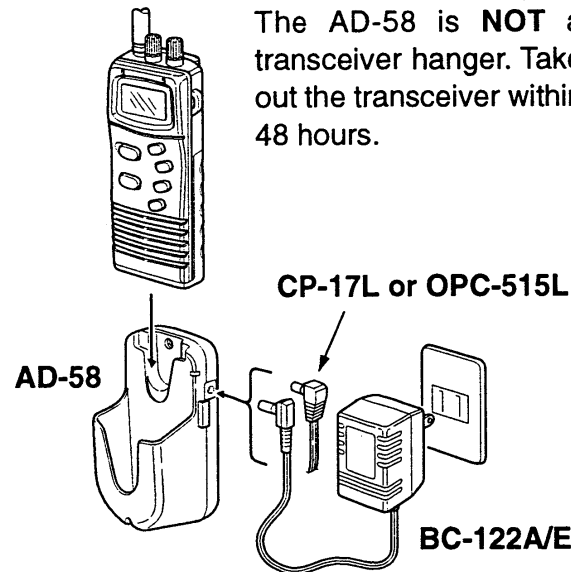
◇ Charging with the optional BC-119+AD-69

① Connect the AC adapter (BC-123) or optional cable (CP-17L or OPC-515L) as shown below.
② Insert the transceiver with attached battery pack (or the battery pack only) into the charger.
• The charge indicator lights orange.
③ Charge the battery pack until the charge indicator changes to green.
• Charging time: Approx. 1 to 1.5 hours

Turn power OFF.

BP-185 or BP-186

CP-17L or OPC-515L

BC-119+ AD-69

BC-123A/E
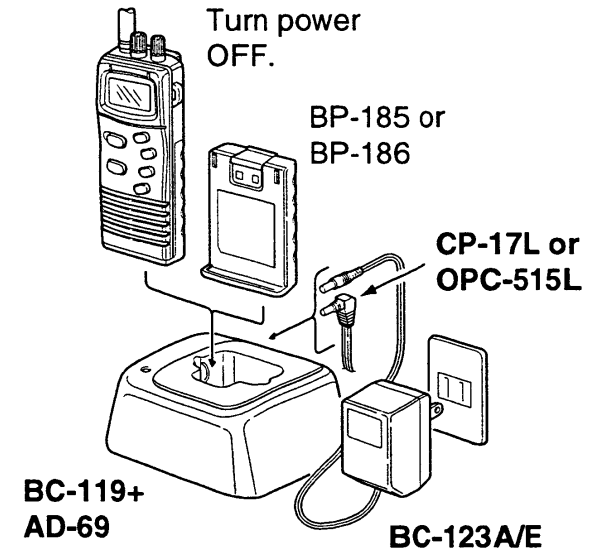
◇ Unpacking

The following accessories are supplied: Qty.
① Flexible antenna (FA-S57V) 1
② Handstrap 1
③ Belt clip 1
④ Screws for the belt clip (M3 × 4) 2
⑤ Battery charger (AD-58) 1
⑥ Screws for the AD-58 (M3.5 × 30) 2
⑦ AC adapter* (BC-122A/E) 1
⑧ Battery pack (BP-185 except for the Italy version) 1
　 Battery pack (BP-186 for the Italy version) 1
*Not supplied with some versions.

◇ Flexible antenna

CAUTION: Attach the supplied antenna securely for water resistance.
CAUTION: Transmitting without an antenna may damage the transceiver.

Insert the supplied antenna into the antenna connector and screw down the antenna as shown in the diagram at right.
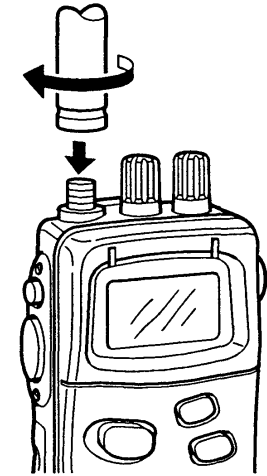
◇ Belt clip

Attach the belt clip with the supplied metal screws. Conveniently attaches to your belt.

NEVER use the supplied screws without the belt clip, otherwise, the screw holes may be damaged and the transceiver might not be water-resistant. Use the supplied screws only when attaching the belt clip.
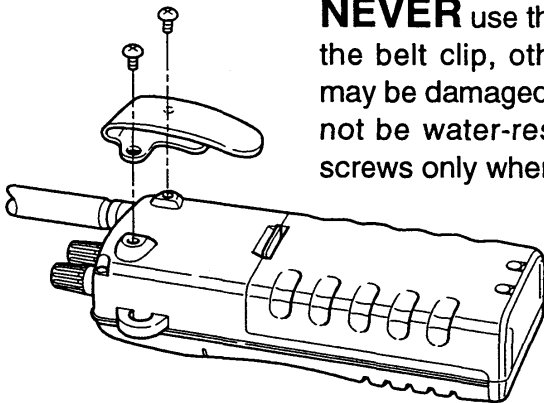
◇ Handstrap

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

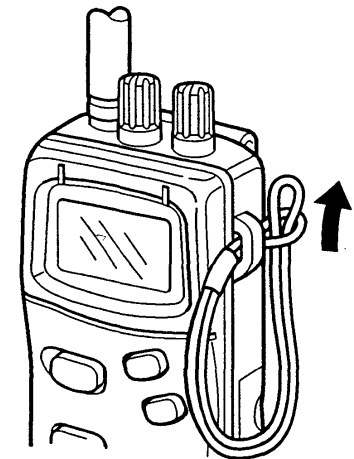| PROBLEM	POSSIBLE CAUSE	SOLUTION	REF.
No power comes ON.	•The battery is exhausted. •Bad connection to the battery pack.	•Recharge the battery pack. •Check the connection to the transceiver.	p. 15 p. 2
No sound comes from the speaker.	•Squelch level is too deep. •Volume level is too low. •Speaker has 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 cannot be selected.	•Some channels are for low power or receive only. •The battery is exhausted. •The output power is set to low or extra low.	•Change channels. •Recharge the battery pack. •Push [H/L] to select high power.	pgs. 5, 7 p. 15 p. 7
The displayed channel cannot be changed.	•Lock function is activated.	•Push [H/L•LOCK] for 1 sec. to cancel the function.	p. 6
Scan does not start.	•"TAG" channel is not programmed.	•Set the desired channels as "TAG" channels.	p. 11
Scan starts automatically.	•Auto scan function is activated.	•Cancel the auto scan function in SET mode.	p. 14
No beep sounds.	•Beep tone is turned OFF.	•Turn the beep tone ON in SET mode.	p. 13
Receive signal cannot be understood.	•Optional voice scrambler is turned OFF. •Scramble code is not set correctly.	•Turn the optional voice scrambler ON. •Reset the scramble code.	p. 8 p. 8

•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†	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†	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‡	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			

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

† Low power only for U.K. and Italy versions.   ‡ Receive only.

■ Specifications

• GENERAL

Frequency coverage	: Transmit 156–157.5 MHz
	Receive 156–162 MHz
Mode	: FM (16K0G3E)
Channel spacing	: 25 kHz
Current drain (at 8.4 V)	: TX High (5 W) 1.8 A max.
	Max. audio 300 mA max.
	Power saved 13 mA typ.
Power supply requirement	: Icom battery packs
Frequency stability	: ±1.5 kHz (−15°C to +55°C)
Useable temperature range	: −15°C to +55°C
Dimensions (with BP-185)	: 52.5 (W) × 129 (H) × 30 (D) mm
(Projections not included)	
Weight (with BP-185)	: 280 g

• TRANSMITTER

Output power (with BP-185)	: 5 W, 1 W and 0.15 W (U.K. version)
	1 W and 0.15 W (France version)
(with BP-186)	4.5 W, 1 W and 0.15 W (Italy version)
Hum and noise	: Better than 40 dB down
Max. frequency deviation	: ±5.0 kHz
Spurious emissions	: 0.25 μW

• RECEIVER

Sensitivity (20 dB SINAD)	: Less than 1 μV
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	: 250 mW (U.K. and France versions)
(at 10% distortion with an 8 Ω load)	100 mW (Italy version)

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

■ Options

• AD-58 BATTERY CHARGER + BC-122A/E AC ADAPTER
Used for regular charging of battery packs. The same as supplied with the transceiver. Charging time: 15 hours.

• BC-119 DESKTOP CHARGER (or BC-121 MULTI-CHARGER) + AD-69 DESKTOP CHARGER ADAPTER
Used for rapid charging of battery packs. Charging time: 1 to 1.5 hours. An AC adapter is supplied with the chargers. BC-121 rapidly charges up to 6 battery packs at once.

• CP-17L CIGARETTE LIGHTER CABLE
Connects to a ship's or vehicle's cigarette lighter socket (12 V) for use with the AD-58 or BC-119.

• FA-S57V FLEXIBLE ANTENNA
Same as supplied with the transceiver.

• OPC-515L DC POWER CABLE
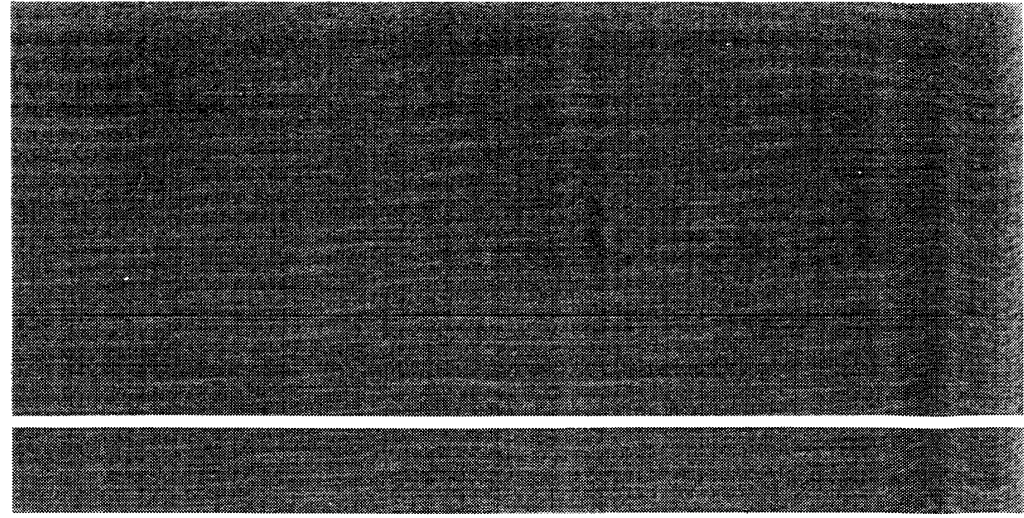Used for charging with external power supply.

• UT-98 VOICE SCRAMBLER UNIT
Ensures private communications. 128 codes are available. Not available in some countries.

◇ Battery packs

Battery pack	Voltage/ capacity	Output power	Height	Approx. operating time*		
				High	1 W	0.15 W
BP-185	8.4 V/ 400 mAh	5.0 W	129 mm	4 h	8 h	13 h
BP-186	7.2 V/ 1050 mAh	4.5 W	159 mm	10.5 h	21 h	34 h

*Condition: Tx : Rx : Standby (Power saved) = 5 : 5 : 90

Count on us!