ICOM

INSTRUCTION MANUAL

VHF MARINE TRANSCEIVER

IC-M10A
IC-M10E

This device complies with Part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

Icom Inc.

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL – This instruction manual contains important safety and operating instructions for the IC-M10A/E.

VERSION NOTES

This manual describes operating procedures for both the U.S.A. and U.K. versions of the IC-M10A/E. Note that while basic operation is identical for both of these versions, there are some minor differences (see table below). Keep these differences in mind when following the instructions in this manual.

DIFFERENCE	U.S.A.	U.K.
SCAN	Priority/normal	Priority only
WEATHER CHANNELS	1 to 10	None
CALL CHANNEL	Programmable	Ch 37A (fixed)
CALL SWITCH LABEL	[9]	[C]

CAUTIONS

NEVER allow children to operate the transceiver.

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

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

AVOID exposing the transceiver to direct sunlight for long periods of time.

AVOID operating the transceiver in areas with temperatures below −20℃ or above +60℃.

BE CAREFUL! If immersed in fresh or saltwater, permanent damage may result.

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1 GETTING STARTED

■ 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 calls are prohibited under 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

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.

(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. You can usually obtain this permit by mail.

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 usually required to be on hand.

■ Unpacking and accessory attachment

◇ UNPACKING

The following accessories are supplied:

	Qty.
① Flexible antenna (FA-B55V)	1
② Handstrap	1
③ Belt clip	1
④ Battery charger* (AD-54)	1
⑤ AC adapter* (BM-113U/E)	1
⑥ Battery pack or battery case*	1

*Not supplied with some versions.

◇ FLEXIBLE ANTENNA

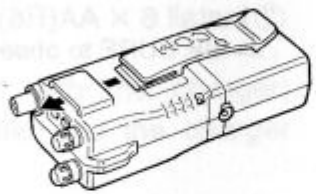
Mate the 2 notches on the antenna base with the two protrusions on the antenna connector; then, while pushing the base towards the transceiver, rotate it clockwise until it clicks into place.

CAUTION: Transmitting without an antenna may damage the transceiver.

◇ BELT CLIP

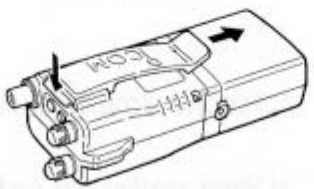
To attach:

Slide the belt clip into the plastic loop on the back of the transceiver.



To remove:

Push the top of the belt clip towards the transceiver and at the same time, 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.

■ 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.

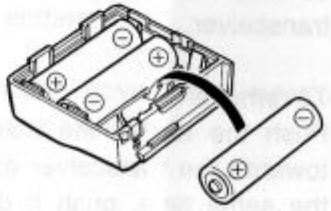
◇***RECYCLING INFORMATION*** (U.S.A. only)
The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your dealer or local solid waste officials for details in your area for recycling options or proper disposal.

■ Installing dry cell batteries

When your transceiver comes equipped with a battery case (BP-130A) instead of a battery pack (BP-160 or BP-174), follow the instructions below for battery installation.

① Open the case as illustrated below.

② Install 6 × AA(R6) size dry cell batteries.
• BE SURE to observe the correct polarities.



■ 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.

- The BP-130A BATTERY CASE cannot be charged even when Ni-Cd batteries are installed.
- Recommended temperature range for charging: 10℃ to +40℃ (+50℉ to .+104℉).
- Use specified Icom chargers only.
- BC-79 accepts 12 V only via optional CP-13 when a cigarette lighter socket is used instead of an AC adapter.
- AD-54 accepts 12* or 24 V via optional CP-1 when a cigarette lighter socket is used instead of an AC adapter.

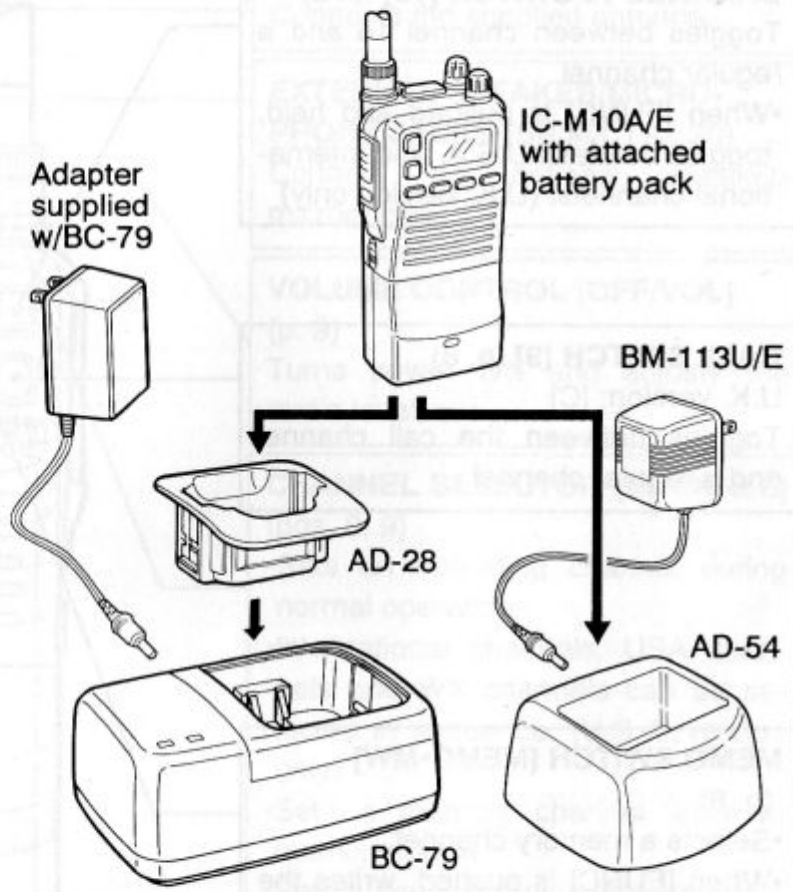
*24 V only for charging the BP-174.

①Connect the AC adapter (supplied with the charger) between a domestic AC power outlet and the charger (BC-79 or AD-54).

②Insert the transceiver with attached battery pack (or the battery pack only) into the charger.
- The charge indicator lights.

③When charging is complete, the BC-79's charge indicator automatically turns OFF.
- The AD-54 continues charging even when the battery pack is fully charged.

◇Charging with the AD-54 or optional BC-79+AD-28



Charging time: approx. 15 to 20 hours (AD-54)
approx. 1 to 3 hours (BC-79 + AD-28)

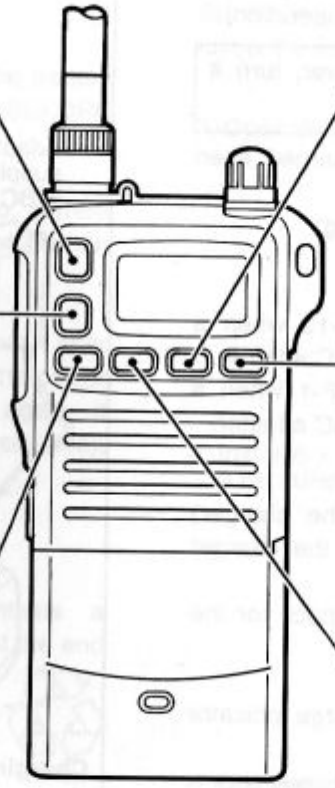
2 PANEL DESCRIPTION

■ Front panel

CHANNEL 16 SWITCH [16] (p. 8)
Toggles between channel 16 and a regular channel.
•When [FUNC] is pushed and held, toggles between U.S.A. and International channels. (U.K. version only)

CALL SWITCH [9] (p. 8)
U.K. version: [C]
Toggles between the call channel and a regular channel.

MEMO SWITCH [MEMO•MW] (p. 8)
•Selects a memory channel.
•When [FUNC] is pushed, writes the indicated channel into a selected memory.



TRANSMIT POWER SWITCH [H/L] (p. 9)
Selects high or low output power.

LIGHT SWITCH [LIGHT•SCRM] (pgs. 10, 16)
•Turns the function display lighting ON and OFF.
•When pushed and held, activates the optional scrambler unit.
•In addition, when [FUNC] is pushed and held, activates the lock function.

DUAL WATCH SWITCH [DUAL•SCAN] (pgs. 12–14)
•Starts and stops dual/tri-watch.
•When pushed and held, starts normal or priority* scan.
*U.K. version has priority scan only.
•In addition, when [FUNC] is pushed and held, this switch locks out the indicated channel.

■ Top and side panels

PTT SWITCH [PTT] (p. 9)
Push and hold to transmit; release to receive.

FUNCTION SWITCH [FUNC]
Push and hold to activate the secondary functions of other switches.

BATTERY RELEASE BUTTON

To remove the battery pack:
Push and hold the battery release button upwards, then slide the battery pack to the right with the transceiver facing you.

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

ANTENNA CONNECTOR (p. 2)
Connects the supplied antenna.

EXTERNAL SPEAKER/MICROPHONE JACKS [SP/MIC] (p. 20)
Connect an optional speaker-microphone.

VOLUME CONTROL [OFF/VOL] (p. 9)
Turns power ON and adjusts the audio level.

CHANNEL SELECTOR [CHANNEL] (pgs. 8, 9)
- Sets an operating channel during normal operation.
- International channels, USA channels and WX channels can be selected in sequence. (U.S.A. version only)
- Sets a memory channel while in memory mode.
- Sets a squelch threshold level while pushing [FUNC].

■ Function display

BUSY INDICATOR (p. 9)
Appears when receiving a signal or when the squelch is set too low (p. 10).

TRANSMIT INDICATOR (p. 9)
Appears while transmitting.

LOCK INDICATOR (p. 10)
Appears while the lock function is activated.

DUALWATCH INDICATOR (p. 12)
"DUAL" appears during dualwatch; "DUAL" and "◤" appear during tri-watch.

CALL CHANNEL INDICATOR (p. 8)
Indicates the call channel is selected.

TRANSMIT POWER INDICATOR (p. 9)
Appears when low output power is selected; disappears when high output power is selected.
High output power cannot be selected on some channels. (See channel list, p. 18.)

SCAN INDICATOR (p. 14)
Appears while a scan is activated.

CHANNEL INDICATORS (p. 8)
Indicate whether a U.S.A., international or weather* channel is displayed.
*U.S.A. version only.

LOCKOUT CHANNEL INDICATOR (p. 14)
Appears when the displayed channel is locked out.

SCRAMBLER INDICATOR (p. 16)
Appears when the optional voice scrambler function is activated.

MEMORY INDICATOR (p. 8)
Appears when in memory mode.

MEMORY CHANNEL/SCRAMBLE NUMBER CODE (pgs.11, 16)
- Indicates the selected memory channel number or the scrambler code number while setting a scramble code.
- In SET mode, indicates the selected condition.

CHANNEL NUMBER INDICATOR (p. 8)
- Indicates the selected operating channel number.
- In SET mode, indicates selected item.

■ Channel selection

◇ Channel 16

Channel 16 is the distress channel. It is used for establishing initial contact with another station and for emergency communications. While standing by you are required to monitor channel 16.

Push [16]

◇ Regular channels

There are 85 INT, 58 USA and 10 WX*[1] channels. Establish initial contact on channel 16, then move to an agreed upon channel for communications.

Push [16] once or twice

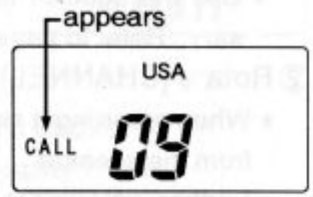
- Pushing [9] or [MEMO] twice also selects a regular channel.
- Rotate the channel selector to set the desired channel.
- INT, U.S.A. and WX channels can be selected in sequence*[1]
- While pushing [FUNC], push [16] to toggle the International and U.S.A. channels*[2].

*[1]U.S.A. version only. *[2]U.K. version only.

◇ Call channel

The call channel is used to store your most often-used channel for quick recall. In addition, the call channel is monitored during tri-watch. The default for the call channel is channel 9 (U.S.A. version) or channel 37A (U.K. version).

Push [9] or [C]

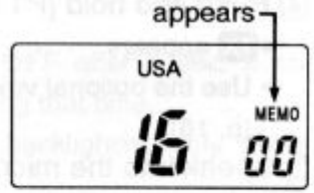


- See p. 11 for call channel programming.

◇ Memory channels

24 memory channels are used to store often-used frequencies for easy recall and scanning.

Push [MW] [MEMO]



- Rotate the channel selector to set the desired memory channel.
- See p. 11 for memory channel programming.

■ 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 12 o'clock position.
- Use the squelch function to mute any audio noise if necessary. Refer to page at right for details.

② Rotate [CHANNEL] to select the desired channel.
- When receiving a signal, BUSY appears and audio is emitted from the speaker.
- Further adjustment of [OFF/VOL] may be necessary at this point.

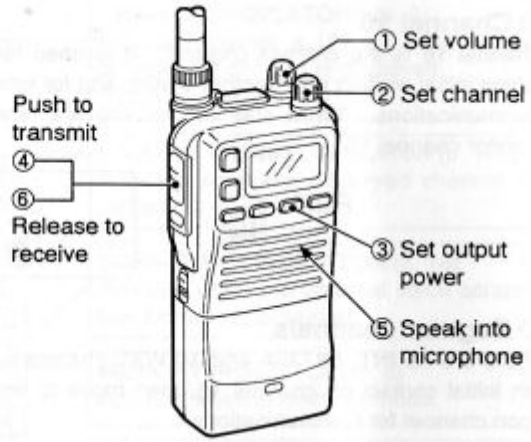
③ Push [H/L] to select the output power if necessary.
- "LOW" appears when low power is selected.
- Choose low power to conserve battery power; choose high power for longer distance communications.

④ Push and hold [PTT] to transmit.
- TX appears.
- Use the optional voice scrambler function for privacy, if desired (p. 16).

⑤ Speak into the microphone.

⑥ 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.



CHANNEL RESTRICTIONS

CHANNEL NUMBER	U.S.A. CHANNELS	INTERNATIONAL CHANNELS
13	Low power only	No restriction
15	Receive only	Low power only
17	Low power only	
67	Low power only	No restriction
70	Low power only	

■ Adjusting the squelch

The IC-M10A/E 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.

As a general rule, the squelch should be adjusted to its threshold point i.e. the point where audio noise is just muted.

①While pushing [FUNC], rotate the channel selector.
- The first "click" of the channel selector indicates the current squelch level.
- There are 9 squelch levels to choose from:
  0 is completely open (all signals, including noise, are received);
  8 is completely closed (only strong signals can be received).

Level 8: squelch closed

②Release [FUNC] when the desired squelch level is indicated in the function display.
- The squelch indicator disappears.

NOTE: The squelch indicator does not appear when adjusting the squelch during scanning or dual/tri-watch.

■ Lock function

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

①While pushing [FUNC], push [LIGHT•SCRM(🔒)].
- "LOCK" appears.
- Only [PTT], [H/L] and [LIGHT] are functional.

②To cancel the function, repeat step ① above.
- "LOCK" disappears from the function display.

■ Function display backlighting

This is convenient for nighttime operation.

①Push [LIGHT] to turn the function display backlighting ON.
- The backlighting automatically turns OFF after 5 sec. if no other keys or switches are pushed during that time.
- To conserve battery power, use the backlighting only when necessary.

②To turn the function display backlighting OFF before 5 sec. have elapsed, push [LIGHT] again.

4 MEMORY AND CALL CHANNEL PROGRAMMING

■ Memory channels

◇ *To program:*

① Push [MEMO] to select a memory channel.

② While pushing [FUNC], push [MEMO•MW].
- "MEMO" and the memory channel number flash.

③ Rotate [CHANNEL] until the desired memory appears.

④ Push [MEMO] again.
- Channel number flashes.

⑤ Rotate [CHANNEL] until the desired channel appears.

⑥ While pushing [FUNC], push [MEMO•MW] to complete programming.
- Channel number stops flashing.

■ Call channel

◇ *To program:**

① Push [9] to select the call channel.

② While pushing [FUNC], push [9].
- The previously selected regular channel flashes.

③ Rotate [CHANNEL] until the desired channel appears.

④ While pushing [FUNC], push [9] again to complete programming.
- The call channel stops flashing.

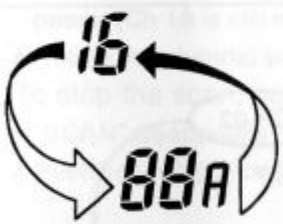
*The call channel for the U.K. version is fixed (channel 37A) and cannot be programmed.

■ Description

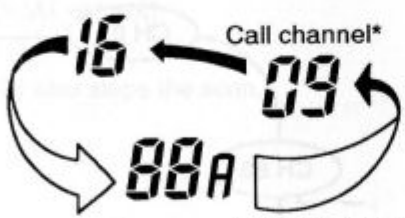
Dualwatch monitors ch 16 while you are receiving another channel; tri-watch monitors ch 16 and the call channel while receiving another channel. Select dualwatch or tri-watch in advance using SET mode (p. 15).

DUALWATCH/TRI-WATCH SIMULATION

Dualwatch



Tri-watch



*Ch 37A for the U.K. 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].

■ Operation

① Select the desired operating channel.
② Push [DUAL] to start dualwatch/tri-watch.
- "DUAL" blinks during dualwatch; "DUAL◤" blinks during tri-watch.
- Tri-watch becomes dualwatch when receiving a signal on the call channel.

③ To cancel dualwatch/tri-watch, push [DUAL] again.

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

Push **DUAL**

Tri-watch starts.

"16" appears for U.K. version

Signal received on call channel.

Signal received on channel 16 takes priority.

Tri-watch resumes after the signal disappears.

6 SCAN FUNCTIONS

■ Scan types

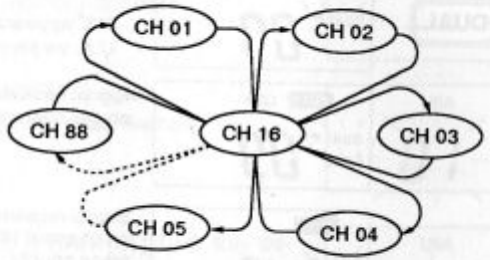
Scanning is an efficient way to locate signals quickly over a wide frequency range. The transceiver has 4 scan types:

- Priority scan (regular ch)
- Priority scan (memory ch)
- Normal scan (regular ch)
- Normal scan (memory ch)

In addition, channels can be locked out of any scan type. Lock out channels which inconveniently stop scanning, such as beacon channels.

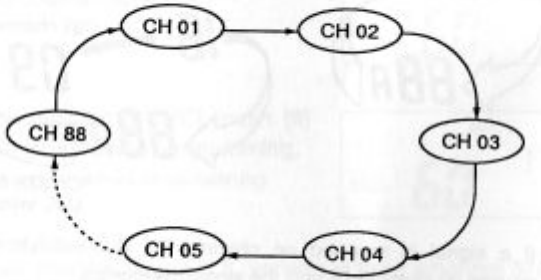
NOTE: Choose priority or normal scan in SET mode. (The U.K. version has priority scan only.)

Priority scan



Priority scans search through all channels/memory 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 dual watch until the signal disappears.

Normal scan



Normal scans, like priority scans, search through all channels/memory channels in sequence. However, unlike priority scan, channel 16 is only checked in sequence as other channels/memory channels are.

■ Starting a scan

Set priority scan or normal scan in advance using SET mode (see p. 15).

① Make sure channel 16 or the call channel is not selected.
- Select a regular channel or memory channel (see p. 8).

② Push and hold [DUAL•SCAN] for 2 seconds.
- "SCAN" appears and flashes in the function display.
- When a signal is detected, scan pauses until the signal disappears. (Ch 16 is still monitored during priority scan.)
- Rotate the channel selector to change the scanning direction.

③ To stop the scan, push [DUAL•SCAN].
- "SCAN" disappears.
- Pushing [16], [C] or [MEMO] also stops the scan.

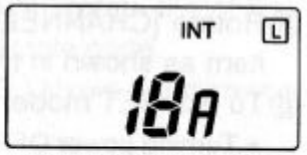
■ Channel lockout

For more efficient scanning, set unwanted channels as lockout channels. Channels set as lockout channels will be skipped during scanning. Channel lockout is assigned to regular channels and memory channels independently.

① Select the channel to be locked out (either a regular channel or a memory channel).
- Channel 16 or the call channel CANNOT be locked out.

② While pushing [FUNC], push [DUAL•SCAN Ⓛ].
- "Ⓛ" appears in the function display and the channel is locked out.

③ To unlock a channel, repeat step ② above.



This example shows a regular channel locked out.

Starting a scan (example — normal scan of regular channels):

Push [16] or [MEMO] to select a regular channel if necessary.

Push for 2 secs.

Scan starts

Scan pauses when receiving a signal and audio is emitted.

Push to stop the scan.

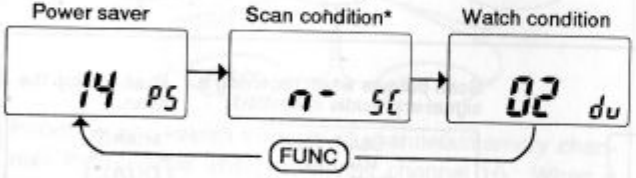
7 SET MODE

■ SET mode programming

SET mode is used to change the conditions of 3 transceiver functions: the power saver function, the dual/tri-watch function and the scan* function.

①Turn power OFF.
②While pushing [FUNC], turn power ON and continue pushing [FUNC] until the display appears.
③After the display appears, release [FUNC].
④Push [FUNC] to select the desired item, if necessary.
⑤Rotate [CHANNEL] to select the desired condition of the item as shown in the table at right.
⑥To exit SET mode, push [16].
- Turning power OFF, then ON again also exits SET mode.

These displays show the default settings.



■ SET mode items

DISPLAY	CONDITION	COMMENT
00 PS	Power saver OFF	The power saver function helps conserve battery power by automatically resting the receiver circuit when the transceiver is idle. For maximum battery conservation, choose the highest duty cycle: 1 : 8
14 PS	Power saver duty cycle 1 : 4	
18 PS	Power saver duty cycle 1 : 8	
P- SC	Priority scan	Select priority scan if you want to monitor the distress channel (16) while scanning.
n- SC	Normal scan*	
02 du	Dualwatch operation	Choose tri-watch if you want to monitor the call channel in addition to channel 16 and a selected channel.
03 du	Tri-watch operation	

*Scan condition does not appear for the U.K. version, because the U.K. version has priority scan only.

OPTIONAL VOICE SCRAMBLER FUNCTION 8

■ 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. To activate the function an optional UT-98 must be installed.

①Push and hold [LIGHT•SCRM] for 2 seconds.

- The transceiver emits 2 beeps and "SCRM" appears in the function display.

②To turn the scrambler function OFF, repeat step ①.

- The transceiver emits 2 beeps and "SCRM" disappears from the function display.

NOTE: The voice scrambler function CANNOT be activated on Channel 16.

■ Programming codes

There are 128 codes available for programming. In order to understand one another, all transceivers in your group must have the same code programmed into the channel you are communicating on.

①Select the channel you wish to program a code into.

- Channel 16 cannot be selected.

②Make sure the scramble function is OFF, then push and hold [LIGHT•SCRM] until "SCRM" appears.

③While continuing to push [LIGHT•SCRM], rotate the channel selector to select the desired scramble code.

- The first "click" after rotating [CHANNEL] shows the currently selected code.

④Release [LIGHT•SCRM].

- The scramble code disappears from the function display but remains in effect while the scramble function is activated.

[Example]: Programming scramble code 127.

9 TROUBLESHOOTING

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. 3,4 p. 6
No sound comes from the speaker.	• Squelch level is too deep. • [OFF/VOL] is turned completely CCW.	• Set squelch to the threshold point. • Set [OFF/VOL] to a suitable level.	p. 10 p. 9
Transmitting is impossible, or high power cannot be selected.	• Some channels are for low power only. • The battery is exhausted. • The output power is set to low.	• Change channels. • Replace or charge the batteries. • Push [H/L] to select high output power.	p. 8 p. 3,4 p. 9
The displayed channel cannot be changed.	• Lock function is activated. • Channel 16 mode has been selected. • Dual/tri-watch has been activated. • Scan has been activated.	• While pushing [FUNC], push [LIGHT ⊷]. • Push [16] to return to normal operation. • Push [DUAL•SCAN] to cancel dual/tri-watch. • Push and hold [DUAL•SCAN] to cancel scan.	p. 10 p. 8 p. 12 p. 14
Scanning or dual-watch/tri-watch does not function.	• Channel 16 mode has been selected. • The squelch is open.	• Push [16] to return to normal operation. • Set squelch to the threshold point.	p. 8 p. 10
Memory scan does not function.	• Not enough memory channels are programmed with channel information.	• Program 2 or more memory channels with channel information.	p. 11
Dualwatch functions but tri-watch doesn't or vice versa.	• You must set the transceiver to operate one or the other.	• Select dualwatch or tri-watch operation in SET mode.	p. 15
Receive signal cannot be understood.	• Optional voice scrambler is turned OFF. • Scramble code not set correctly.	• Turn the optional voice scrambler ON. • Reset the scramble code.	p. 16 p. 16

CHANNEL LIST 10

Channel number		Frequency (MHz)	
INT	USA	Trans-mit	Receive
01		156.050	160.650
	01A	156.050	156.050
02		156.100	160.700
	02A	156.100	156.100
03		156.150	160.750
	03A	156.150	156.150
04		156.200	160.800
	04A	156.200	156.200
05		156.250	160.850
	05A	156.250	156.250
06	06	156.300	156.300
07		156.350	160.950
	07A	156.350	156.350
08	08	156.400	156.400
09	09	156.450	156.450
10	10	156.500	156.500
11	11	156.550	156.550
12	12	156.600	156.600
13	13*	156.650	156.650
14	14	156.700	156.700
15*	15†	156.750	156.750
16	16	156.800	156.800
17*	17*	156.850	156.850
18		156.900	161.500
	18A	156.900	156.900

Channel number		Frequency (MHz)	
INT	USA	Trans-mit	Receive
19		156.950	161.550
	19A	156.950	156.950
20	20	157.000	161.600
	20A	157.000	157.000
21		157.050	161.650
	21A	157.050	157.050
22		157.100	161.700
	22A	157.100	157.100
23		157.150	161.750
	23A	157.150	157.150
24	24	157.200	161.800
25	25	157.250	161.850
26	26	157.300	161.900
27	27	157.350	161.950
28	28	157.400	162.000
60		156.025	160.625
	60A	156.025	156.025
61		156.075	160.675
	61A	156.075	156.075
62		156.125	160.725
	62A	156.125	156.125
63		156.175	160.775
	63A	156.175	156.175
64		156.225	160.825
	64A	156.225	156.225

Channel number		Frequency (MHz)	
INT	USA	Trans-mit	Receive
65		156.275	160.875
	65A	156.275	156.275
66		156.325	160.925
	66A	156.325	156.325
67	67*	156.375	156.375
68	68	156.425	156.425
69	69	156.475	156.475
70*	70*	156.525	156.525
71	71	156.575	156.575
72	72	156.625	156.625
73	73	156.675	156.675
74	74	156.725	156.725
75	75	Guard	Guard
76	76	Guard	Guard
77	77	156.875	156.875
78		156.925	161.525
	78A	156.925	156.925
79		156.975	161.575
	79A	156.975	156.975
80		157.025	161.625
	80A	157.025	157.025
81		157.075	161.675
	81A	157.075	157.075
82		157.125	161.725
	82A	157.125	157.125

Channel number		Frequency (MHz)	
INT	USA	Trans-mit	Receive
83		157.175	161.775
	83A	157.175	157.175
84	84	157.225	161.825
84A§		157.225	157.225
85	85	157.275	161.875
85A§		157.275	157.275
86	86	157.325	161.925
	86A	157.325	157.325
87	87	157.375	161.975
87A§		157.375	157.375
88	88	157.425	162.025
	88A	157.425	157.425

WX channel (U.S.A. only)	Frequency (MHz)	
	Transmit	Receive
01	RX only	162.550
02	RX only	162.400
03	RX only	162.475
04	RX only	162.425
05	RX only	162.450
06	RX only	162.500
07	RX only	162.525
08	RX only	161.650
09	RX only	161.775
10	RX only	163.275

*Low power only †Transmit is inhibited §Appears U.S.A.version only

NOTE: U.S.A. version includes all "A" channels in the INT channel group.

11 SPECIFICATIONS AND OPTIONS

■ Specifications

• GENERAL

Frequency coverage	: Transmit 156–157.5 MHz Receive 156–163 MHz
Mode	: FM (16K0G3E)
Channel spacing	: 25 kHz
Current drain (w/supplied battery pack)	: TX High 1.8 A max. TX Low 900 mA max. Max. audio 300 mA max. Power saved 19 mA typical (squelched)
Power supply requirement	: Icom battery pack (see table on opposite page)
Frequency stability	: ±0.0005% (−20℃ to +60℃)
Usable temperature range	: −20℃ to +60℃ (−4℉ to +140℉)
Dimensions	:
with BP-130A/BP-160	60(W) × 127(H) × 40(D) mm 2.4(W) × 5.0(H) × 1.6(D) in
with BP-174	60(W) × 155(H) × 40(D) mm 2.4(W) × 6.1(H) × 1.6(D) in
Weight	:
with BP-130A (incl. 6 dry cells)	300 g (10.6 oz)
with BP-160	310 g (10.9 oz)
with BP-174	422 g (14.9 oz)

• TRANSMITTER

Output power	
High	: 6 W (with BP-174) 3 W (typical; with BP-160/BP-130A)
Low	: 0.5 W
Modulation system	: Variable reactance phase modulation
Max. frequency deviation	: ± 5.0 kHz
Spurious emissions	: −65 dB (0.25 µW*)

• RECEIVER

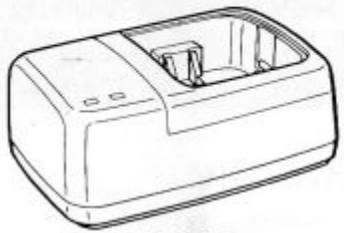
Receive system	: Double-conversion superheterodyne
Sensitivity (12 dB SINAD)	: 0.35 µV
Squelch sensitivity	: Less than 0.3 µV (at threshold)
Intermodulation rejection ratio	: 60 dB (68 dB*)
Spurious response rejection ratio	: 60 dB (70 dB*)
Adjacent channel selectivity	: 60 dB (70 dB*)
Audio output power	: 500 mW with an 8Ω load

*These values are U.K. specifications measured in accordance with ETS300 162.

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

■ Options

◇ CHARGERS AND CABLES



BC-79

AD-54

- **AD-54 BATTERY CHARGE ADAPTER**
  Used for regular charging of battery packs. Supplied with some versions. Charging time: 15 to 20 hrs.
- **BC-79 DESKTOP CHARGER + AD-28 CHARGE ADAPTER**
  Used for rapid charging of battery packs.
  Charging time: 1 to 3 hrs.
- **BM-113U/E AC ADAPTER**
  Connects to an AC outlet for use with the AD-54. Supplied with some versions.
- **CP-1 CIGARETTE LIGHTER CABLE**
  Connects to a ship's or vehicle's cigarette lighter socket (12* or 24 V) for use with the AD-54.
  *The BP-174 cannot be charged when using a 12 V socket.
- **CP-13 CIGARETTE LIGHTER CABLE**
  Connects to a ship's or vehicle's cigarette lighter socket (12 V only) for use with the BC-79.

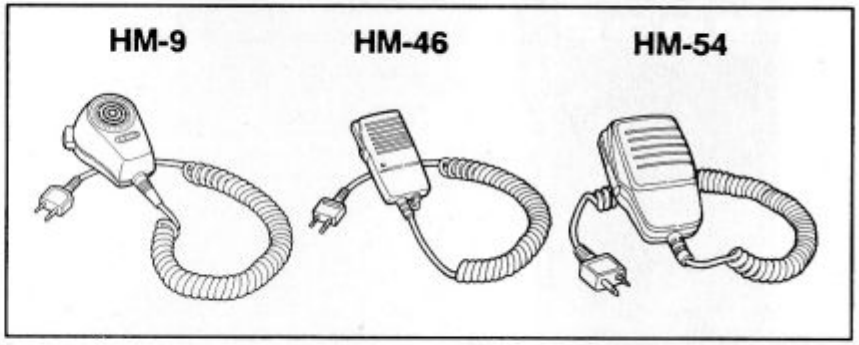
◇ BATTERY PACKS

BATTERY PACK	VOLTAGE/ CAPACITY	OUTPUT POWER	HEIGHT
BP-130A	Battery case for 6 × AA(R6) cells	3.0 W*	50 mm/2.0 in
BP-157A	7.2 V/900 mAh	3.0 W*	50 mm/2.0 in
BP-160	7.2 V/700 mAh	3.0 W*	50 mm/2.0 in
BP-174	12 V/600 mAh	6 W	78.2 mm/3.1 in

*typical value

◇ OTHERS

- **HM-9** speaker-microphone
- **HM-46** speaker-microphone
- **HM-54** speaker-microphone
- **HS-51** headset
- **UT-98** voice scrambler unit
  Ensures private communications. 128 codes available.



Count on us!

A-5320S-1EX-②

Icom Inc.