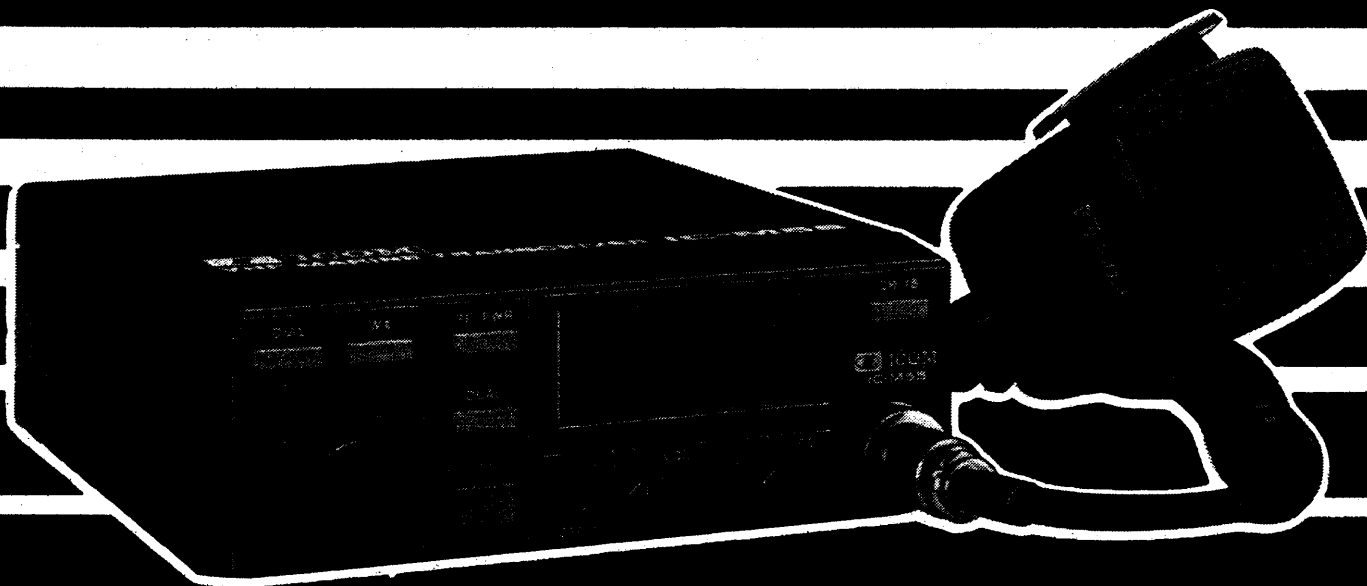




VHF FM MARINE TRANSCEIVER **IC-M55**

OWNER'S MANUAL



ICOM INCORPORATED

FOREWORD

Thank you for choosing the IC-M55, one of the finest VHF FM Marine Transceivers on the market today. It was designed and built by ICOM INCORPORATED, a long-time leader in the field of VHF communication. This transceiver incorporates state-of-the-art technology, and it was built specifically for Marine applications using experience gained over a long period of time.

Please read this owner's manual carefully before using your IC-M55 transceiver. With proper care, the IC-M55 will provide many years of dependable and enjoyable communication.

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SECTION 1 FEATURES

- * All marine and weather channels pre-programmed.
- * 10 user-programmable memory channels with a backup lithium battery.
- * 4 different channel scanning systems.
- * Dual watch mode for monitoring channel 16 while listening on a different channel.
- * Auto-monitor for channel 16.
- * Advanced RF front end circuitry with helical resonators, MOSFETs and both crystal and ceramic filters for improved adjacent channel and intermodulation rejection.
- * Mounting bracket with adjustable viewing angle.

SECTION 2 SPECIFICATIONS

GENERAL

Dimensions	: 50.5mm(H) x 140mm(W) x 163mm(D)
Weight	: 1.3kg
Number of channels	: All U.S.A. and International channels 10 Memory channels 10 Weather channels
Frequency stability	: 0.001%
Temperature range	: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Channel spacing	: 25kHz
Power supply requirement	: 13.8V DC
Antenna impedance	: 50 ohms

RECEIVER

Frequency range	: 156 ~ 163MHz
Sensitivity	: Less than $0.3\mu\text{V}$ for 12dB SINAD
Intermediate frequencies	: 1st IF: 21.4MHz 2nd IF: 455kHz
Audio output	: 3W to a 4 ohm speaker @ 10% ditortion

TRANSMITTER

Frequency range	: 156 ~ 157.5MHz
Maximum deviation	: $\pm 5\text{kHz}$ (16F3)
RF power output	: High: 25W Low: 1W
Microphone	: 600 ohm microphone
Current drain	: High power: 5.5A (LCD light ON)

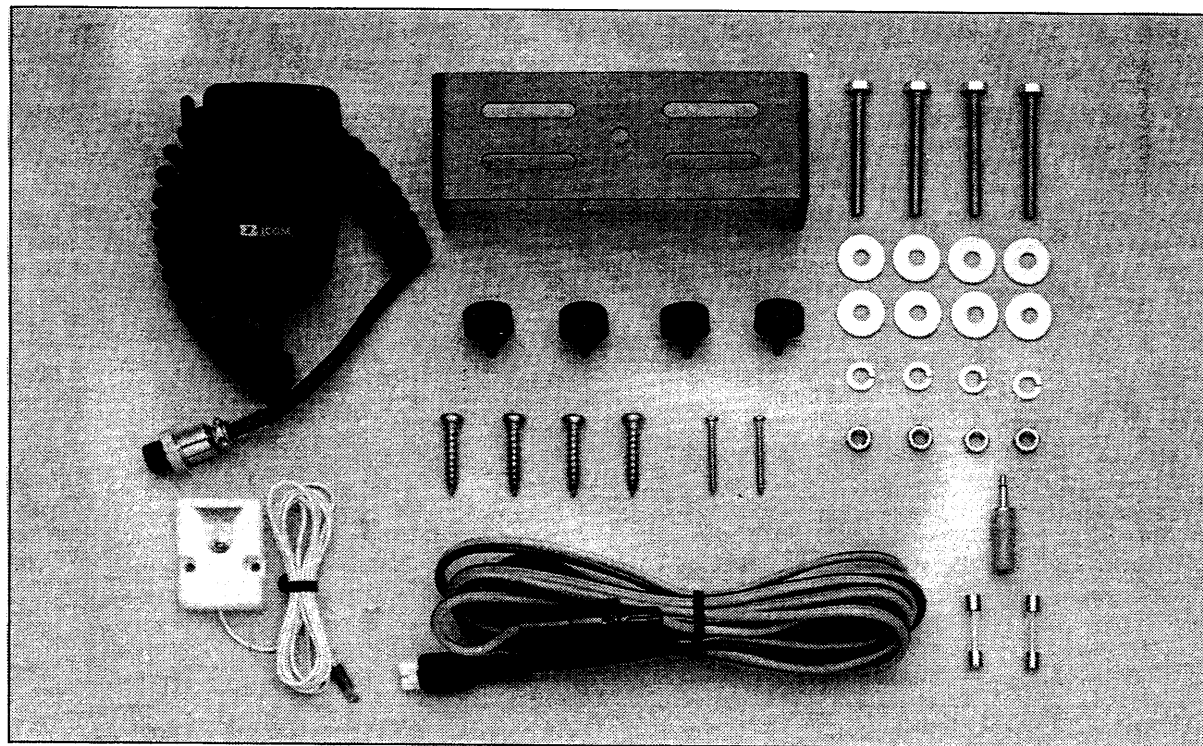
SECTION 3 INSTALLATION

UNPACKING

Carefully remove your transceiver from the packing carton and examine it for signs of shipping damage. Notify the delivering carrier or dealer immediately, stating full details, should any damage be apparent. We recommend you keep the shipping carton for storing, moving or reshipping the transceiver if necessary. Accessory hardware, cables, etc. are packed with the transceiver. Make sure you have removed all equipment and parts before discarding the packing material.

Accessories included with the IC-M55:

1. Microphone	1
2. Microphone hanger	1
3. Microphone hanger screws	2
4. DC power cable	1
5. Fuses (10A)	2
6. External speaker plug.	1
7. Mounting bracket	1
8. Mounting bracket screws.	4
9. Mounting screws	4
10. Mounting bolts	4
11. Mounting washers.	8
12. Mounting nuts.	4
13. Mounting lockwashers	4
14. Hole plugs	2
15. Owner's manual	1

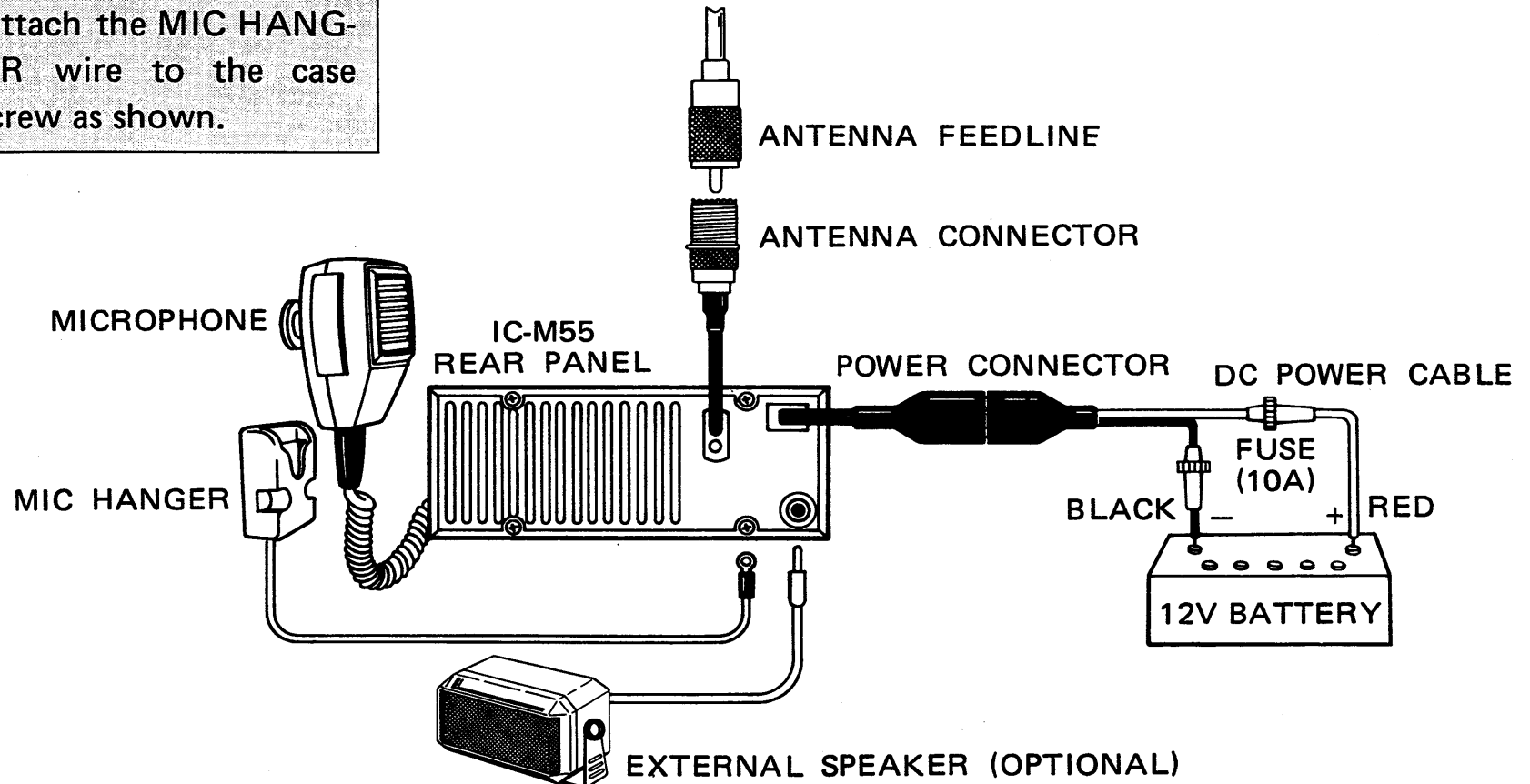


MOUNTING LOCATION

Select a location for the IC-M55 which allows easy access to the front panel controls, good air circulation and rear clearance for connecting or removing cables.

Avoid long cable runs to the antenna and power source. Also, keep the cables as far as possible from electrical pumps, generators, alternators and other electrical apparatus. In particular, do not run the cables in the vicinity of magnetic compasses or near electronic instruments.

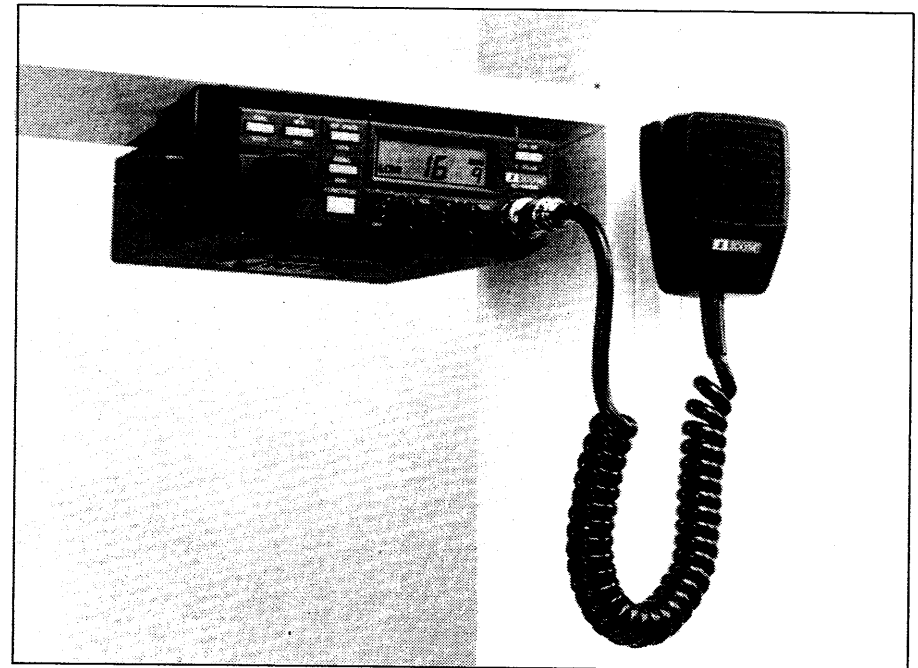
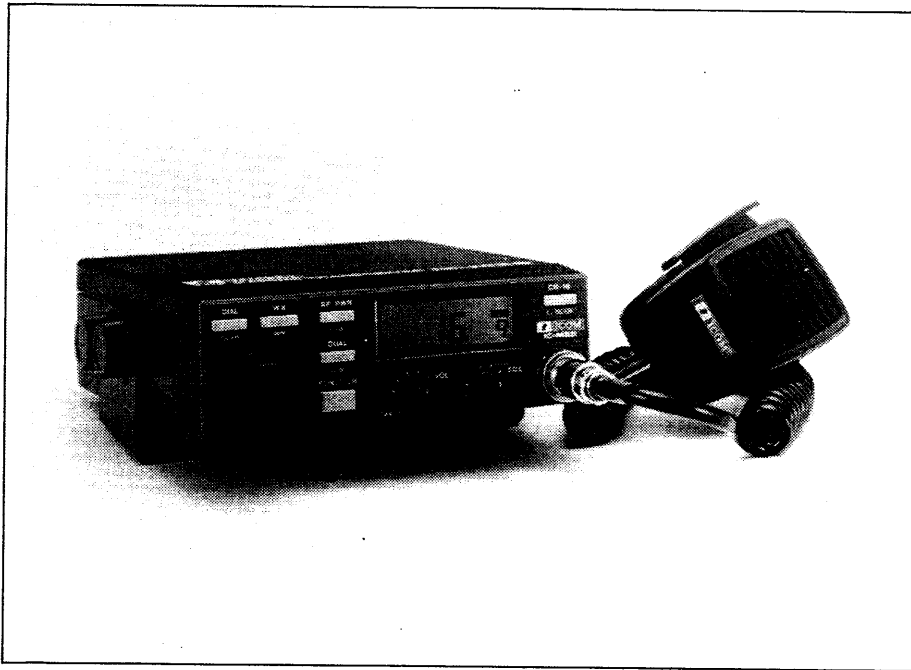
NOTE: Attach the MIC HANGER wire to the case screw as shown.

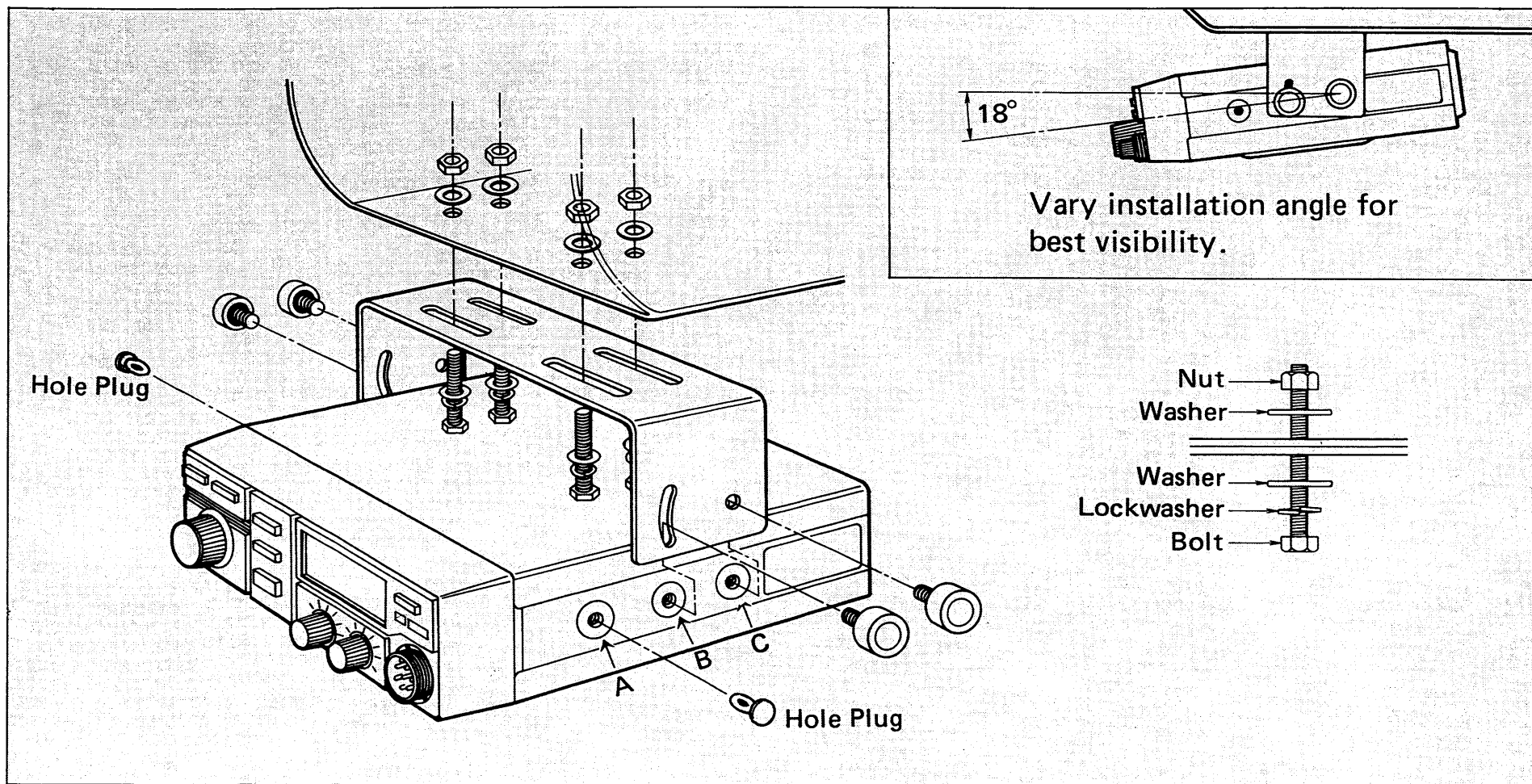


MOUNTING THE TRANSCEIVER

The universal bracket supplied with your transceiver allows “over” or “under” mounting. Install the bracket so the unit is adequately supported, thus protecting it from wave shock and excessive vibration.

The mounting hardware supplied is suitable for most installations, but if you need special hardware, any good marine store should be able to assist. As in any marine installation, it is recommended that only high quality marine hardware be used. Try to avoid drilling new mounting holes in the bracket as balance of the transceiver may be affected.





1. The installation angle of the IC-M55 can be varied by about 18 degrees to provide the best visibility.
2. Loosen one screw on each side of the mounting bracket nearest the faceplate of the transceiver, and tilt the unit to the best angle.
3. Install the IC-M55 using mounting holes B and C, or holes A and B. Insert hole plugs into the unused holes.

PRIMARY POWER

If at all possible, use the supplied power cable. If it is necessary to run the power cable further than 10 feet, use the wire gauge specified in the table. Color coding of the power cable is as follows:

Red wire : Positive (+) terminal of the battery

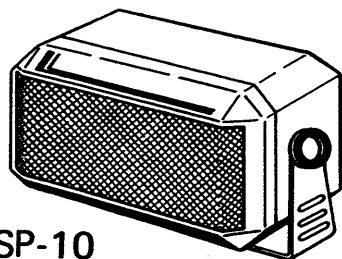
Black wire : Negative (—) terminal of the battery

When connecting the power wires, make the splices as close as possible to the power side of the fuse holders. Solder all joints, and ensure the connections are clean, tight and moisture-free.

Leave enough slack in the power cable so the set can be removed for servicing without straining the cables.

POWER CABLE	
WIRE GAUGE	MAXIMUM DISTANCE
14	15'
12	25'
10	35'
8	60'
6	100'

EXTERNAL SPEAKER (OPTIONAL)



SP-10

ANTENNA

The IC-M55 has a built-in speaker suitable for most installations, however if an external speaker is desired, connect it to the EXTERNAL SPEAKER JACK on the rear panel of the IC-M55 using the supplied EXTERNAL SPEAKER PLUG.

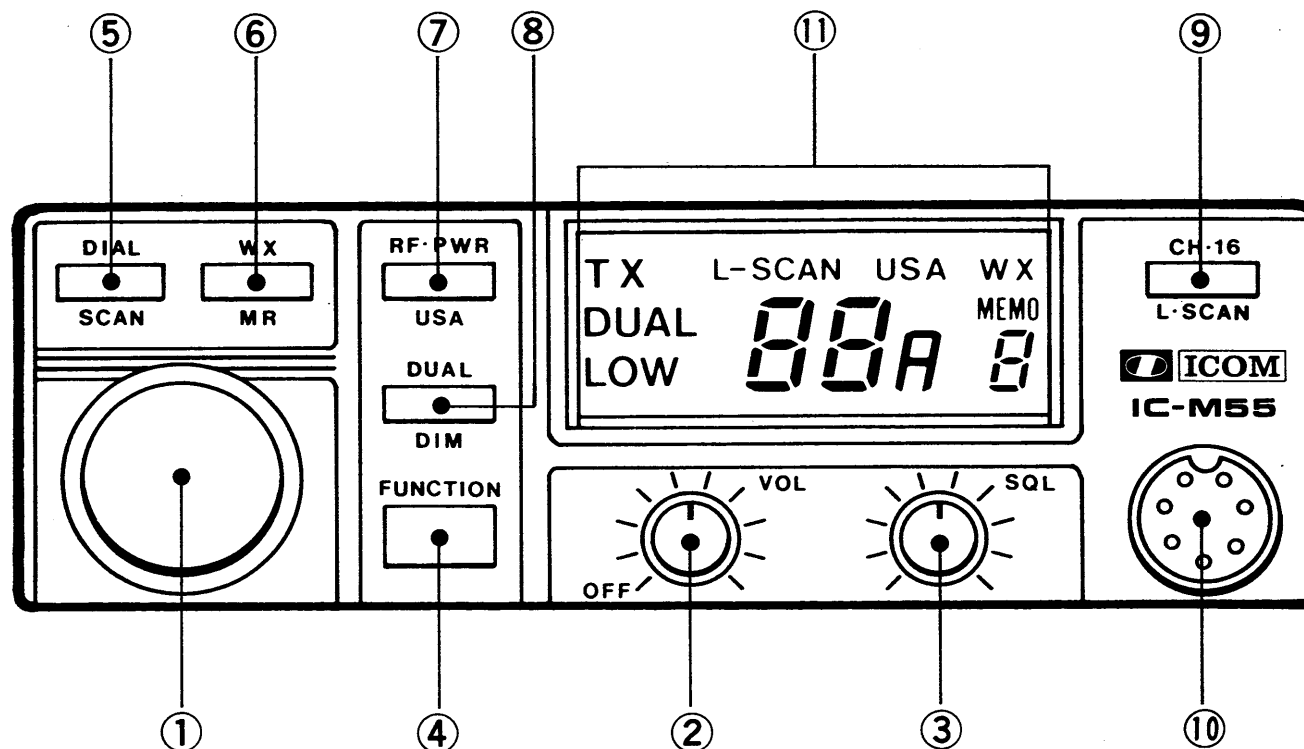
When an external speaker is plugged into the jack, only the external speaker operates. Pushing the push-to-talk (PTT) switch on the microphone automatically mutes the audio from the speaker.

The antenna is the most important item that influences the performance of your transceiver. Any good quality, 50 ohm marine antenna will suffice, but a gain antenna is preferable. The mounting location is also important, therefore consult your dealer if you are uncertain where to install the antenna. Follow the antenna manufacturer's instructions exactly. If using a previously installed antenna system, check that all connections are corrosion-free and secure.

LOGS

Most countries require that a log be maintained of all contacts made over the transceiver. The Ship Radiotelephone Station licensee is the person responsible for compliance with this rule. See page 30 for more information.

SECTION 4 CONTROL FUNCTIONS



NOTE:

If your IC-M55 does not operate as described in Sections 4 and 5, the transceiver's CPU (microprocessor) may need resetting. For example, common symptoms of this problem are:

- 1) The transceiver functions do not operate correctly, or do not operate at all, when the switches or controls are used.
- 2) The CHANNEL and FUNCTION DISPLAY shows incomplete or incorrect information.

Remember, resetting the CPU erases all personal programming of the MEMORY CHANNELS. See page 21 for further instructions.

① CHANNEL SELECTOR

Selects a programmed channel, memory channel or weather channel. Rotate clockwise or counterclockwise to change the operating channel in any mode.

② VOLUME CONTROL/POWER SWITCH

Varies the audio output level from the speaker in the receive mode, including the level of the switch BEEP tones as each panel switch is operated. Rotate clockwise to increase the sound level.

Also, a power switch for turning the transceiver ON and OFF.

③ SQUELCH CONTROL

Varies the squelch threshold level for quiet monitoring when no receive signal is present. Rotate completely counterclockwise to turn OFF the squelch function, and clockwise to increase the threshold level.

④ FUNCTION SWITCH

Activates the secondary function of each dual function switch on the front panel. Push this switch first, and then push the SCAN, MR, USA, DIM or L-SCAN switches to activate their respective functions. After pushing the FUNCTION switch, you have 3 seconds to push dual function switches before they return to their primary functions.

⑤ DIAL/SCAN SWITCH

Selects the dial mode. Rotate the CHANNEL SELECTOR to choose an operating channel. See page 15 for more information.

Also, starts/stops the scanning functions. Refer to page 22 for the operating procedure.

⑥ WX/MR SWITCH

Selects the weather mode. Rotate the CHANNEL SELECTOR to choose the desired weather channel. See page 15 for more information.

Also, selects the memory mode. Refer to page 17 for the operating procedure.

⑦ RF POWER/USA SWITCH

Alternately changes the transmit output power between the HIGH (25 watts) and the LOW (1 watt) positions. HIGH power is useful for long distance communication whereas LOW power is best for contacting stations nearby.

Also, selects the International and U.S.A. channel systems alternately.

⑧ DUAL WATCH/DIMMER SWITCH

Activates the dual watch (sea watch) function. This function permits monitoring of channel 16 while listening on a different channel. Refer to page 26 for the operating procedure.

Also, controls the illumination of the CHANNEL and FUNCTION DISPLAY. See page 28 for more information.

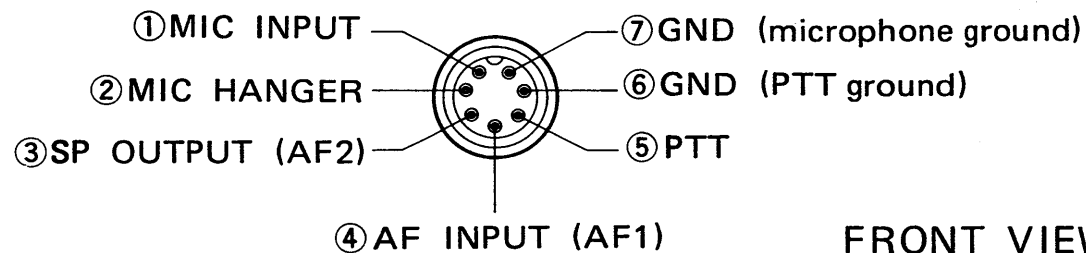
⑨ CHANNEL 16/LOCK-OUT SCAN SWITCH

Selects the channel 16 auto-monitor mode. This function overrides all other switch functions. Each time the microphone is replaced in the microphone hanger, the transceiver switches to the channel 16 auto-monitor mode. See page 27 for further information.

Also, starts/stops the lock-out scanning function. Refer to page 25 for the operating procedure.

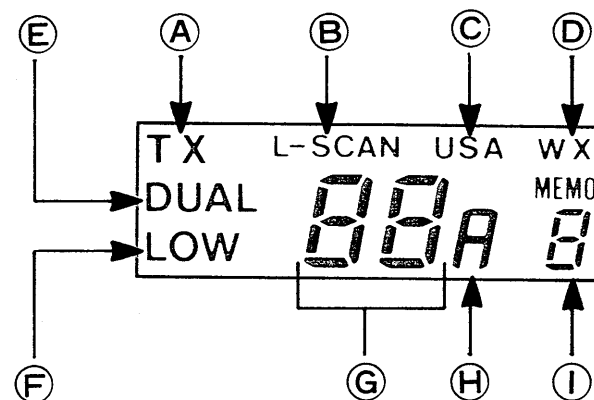
⑩ MIC CONNECTOR

Connect the supplied microphone to this jack.



⑪ CHANNEL AND FUNCTION DISPLAY

Displays the operating channel and status of the transceiver using an illuminated liquid-crystal display (LCD).



**⑪ CHANNEL AND
FUNCTION DISPLAY
DESCRIPTION**

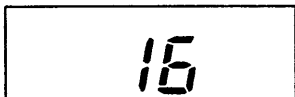
The letters and numbers on the display represent the following:

- Ⓐ TRANSMIT indicator: "TX" appears when the set is transmitting.
- Ⓑ LOCK-OUT SCAN indicator: "L-SCAN" appears when the set is scanning those channels which are not locked out.
- Ⓒ CHANNEL SYSTEM indicator: "USA" appears when the U.S.A. channel system is selected. No indicator appears if the International channel system is selected.
- Ⓓ WEATHER indicator: "WX" appears when a weather channel is selected.
- Ⓔ DUAL WATCH (SEA WATCH) indicator: "DUAL" appears when the dual watch function is operating.
- Ⓕ TRANSMIT POWER indicator: "LOW" appears when the LOW (1W) transmit power position is selected. No indicator appears when the HIGH (25W) power position is selected.
- Ⓖ CHANNEL NUMBER indicator: Indicates the operating channel number with two digits.
- Ⓗ U.S.A. CHANNEL indicator: "A" appears when a U.S.A. channel allocation is selected.
- Ⓘ MEMORY CHANNEL indicator: "MEMO" and the selected memory channel number appear when in the memory mode.

SECTION 5 OPERATION

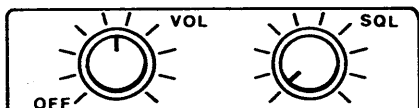
RECEIVING

1. POWER ON



- 1) Rotate the VOLUME control/POWER switch clockwise to approximately the 9 o'clock position. The number "16" appears on the CHANNEL and FUNCTION DISPLAY indicating the power is ON, and the transceiver is receiving channel 16.

2. ADJUST VOLUME

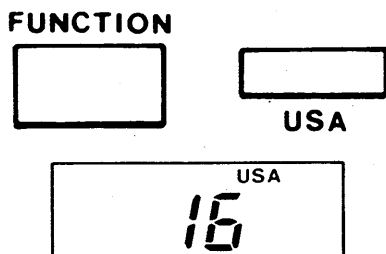


- 1) Rotate the SQUELCH control completely counterclockwise.
- 2) Rotate the VOLUME control clockwise for a suitable noise level from the speaker if no signal is present, or a suitable audio level if there is a signal on the channel.

3. ADJUST SQUELCH

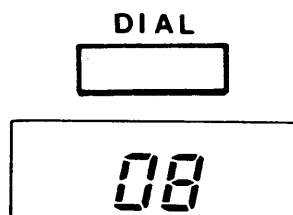
- 1) Rotate the SQUELCH control clockwise until the channel noise just disappears. Perform this setting when there is no signal present on the channel.

4. SELECT INTERNATIONAL or U.S.A. CHANNELS

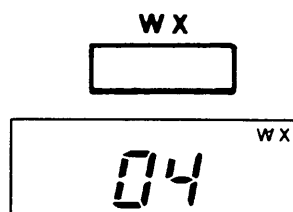


- 1) The transceiver is presently in the International mode and will tune any of these channels.
- 2) If a U.S.A. channel is required, push the FUNCTION switch, and then push the USA switch. The U.S.A. mode is now selected as indicated by the letters "USA" on the CHANNEL and FUNCTION DISPLAY.
- 3) To change back to the International mode, push the FUNCTION switch, and then the USA switch.

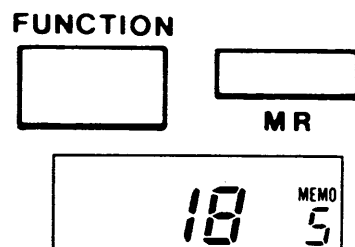
5. SELECT CHANNEL



6. WEATHER MODE



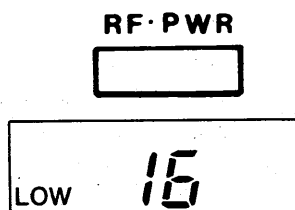
7. MEMORY CHANNEL MODE



- 1) Push the DIAL switch.
 - 2) Rotate the CHANNEL SELECTOR to choose the required operating channel. The selected channel number appears on the CHANNEL and FUNCTION DISPLAY, and the set is now receiving the indicated channel.
-
- 1) Push the WX switch. The letters "WX" appear on the CHANNEL and FUNCTION DISPLAY indicating the set is in the weather mode.
 - 2) Rotate the CHANNEL SELECTOR to choose the desired weather channel. The channel number of the selected weather channel (1 ~ 10) appears on the CHANNEL and FUNCTION DISPLAY.
 - 3) The transceiver only operates in the receive mode when the weather channels are selected. Pushing the push-to-talk switch on the microphone mutes the receiver audio, but no signal is transmitted. Consequently, the letters "TX" DO NOT appear on the CHANNEL and FUNCTION DISPLAY.
-
- 1) Push the FUNCTION switch, and then push the MR switch.
 - 2) Rotate the CHANNEL SELECTOR to choose a memory channel (0 ~ 9). See the section on MEMORY CHANNELS page 17 for further information.
 - 3) The channel number and memory number selected appear on the CHANNEL and FUNCTION DISPLAY.

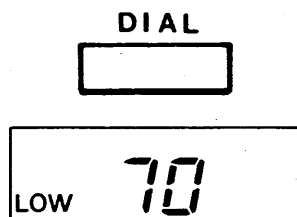
TRANSMITTING

1. SELECT OUTPUT POWER



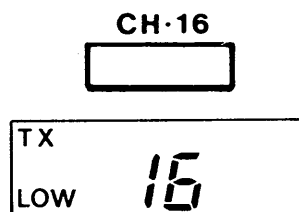
- 1) The IC-M55 automatically resets to the HIGH (25W) power position when the set is turned ON.
- 2) Push the RF POWER switch to select the LOW (1W) power position. The letters "LOW" appear on the CHANNEL and FUNCTION DISPLAY when LOW power is selected.
- 3) Push the RF power switch again to change back to the HIGH power position, if required. There is no "HIGH" power indicator on the CHANNEL and FUNCTION DISPLAY.

2. SELECT OPERATING CHANNEL



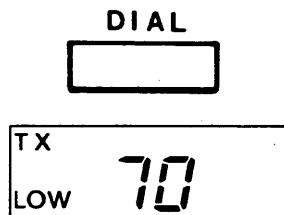
- 1) Push the DIAL switch.
- 2) Rotate the CHANNEL selector to choose a channel suitable for the type of communication intended.
- 3) Listen carefully to be sure the channel is clear.

3. MOVE TO CALLING CHANNEL



- 1) Push the CH 16 switch, and wait until the channel is clear.
- 2) Push the push-to-talk (PTT) switch on the microphone and call the party you are trying to contact. Hold the microphone fairly close to your mouth and speak in a clear, natural voice. When finished speaking, release the PTT switch, and the transceiver automatically changes back to the receive mode.

4. MOVE TO OPERATING CHANNEL

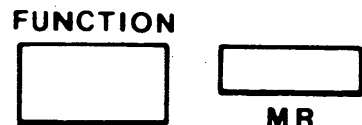


- 1) After establishing contact with the desired party, push the DIAL switch to move to the channel previously selected in step 2.
- 2) Resume your conversation.
- 3) When your conversation is completely finished, return the microphone to the hanger, and the transceiver automatically changes to channel 16.

MEMORY CHANNELS

Programming the Memory Channels

1. SELECT MEMORY MODE

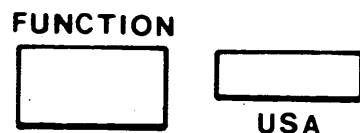


- 1) Push the FUNCTION switch, and then push and hold the MR switch for approximately 2 seconds until the word "MEMO" on the CHANNEL and FUNCTION DISPLAY begins to blink.

2. SELECT MEMORY CHANNEL

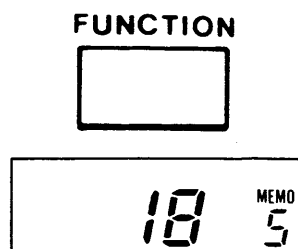
- 1) Rotate the CHANNEL SELECTOR to choose a memory channel.

3. SELECT CHANNEL SYSTEM (INTERNATIONAL/U.S.A.)



- 1) Push the FUNCTION switch, and then push the USA switch to choose the opposite channel system (International/U.S.A.), if required. DO NOT push the USA switch if the correct channel system is already selected. The previously programmed channel number begins to blink after pushing the FUNCTION switch. If no channel has been programmed before, then channel number 16 begins to blink.

4. SELECT CHANNEL NUMBER

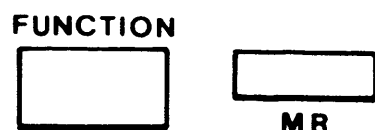


- 1) Rotate the CHANNEL SELECTOR to choose the desired channel to be stored in the memory channel.
- 2) Push the FUNCTION switch to store the selected channel in the memory channel.

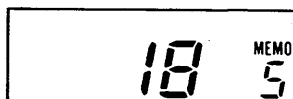
NOTE: The weather channels cannot be stored in the memory channels. Also, remember, all channels programmed in the memory channels are saved even if the transceiver is turned OFF or disconnected from a power source since the set has an internal battery specifically for this purpose.

Using the Memory Channels

1. SELECT MEMORY MODE



2. SELECT MEMORY CHANNEL



- 1) Push the FUNCTION switch, and then push the MR switch.

- 1) Rotate the CHANNEL SELECTOR to choose a memory channel (0 ~ 9). Memory channels which have not been programmed cannot be selected. Refer to "Programming the Memory Channels" for instructions explaining how to store channels in the memories.
- 2) The channel number and memory number selected appear on the CHANNEL and FUNCTION DISPLAY.

LOCK-OUT FUNCTION

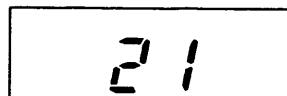
Locking-Out a Channel

1. SELECT DIAL MODE

DIAL



2. SELECT CHANNEL

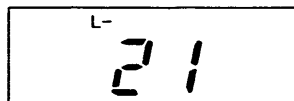


3. LOCK-OUT CHANNEL

FUNCTION



L-SCAN



The purpose of the lock-out function is to disable specific channels so, when in the All Channel Scan mode, the transceiver does not stop on these channels. This feature allows you to customize the scanning characteristics of the transceiver to your exact requirements.

1) Push the DIAL switch.

1) Rotate the CHANNEL SELECTOR to choose the channel to be locked-out.

1) Push and hold the FUNCTION switch, and then push the L-SCAN switch. The "L—" symbol appears.

2) Release the FUNCTION switch. The "L—" symbol disappears.

3) The channel is now locked-out. If you wish to have the "L—" symbol appear as a reminder that the channel is locked-out, turn the CHANNEL SELECTOR to select an adjacent channel and then shift back to the original channel.

NOTE: Locking-out an International channel simultaneously locks-out the U.S.A. channel with the same number and vice versa. For example, locking-out channel 21 also locks-out channel 21A.

Cancelling a Locked-Out Channel

1. VERIFICATION

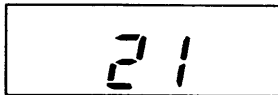
- 1) Confirm the channel of interest is skipped in the All Channel Scan mode. See page 22 for details of the All Channel Scan mode.

2. SELECT DIAL MODE



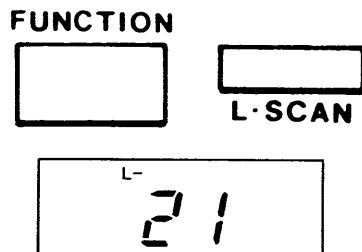
- 1) Push the DIAL switch.

3. SELECT CHANNEL



- 1) Rotate the CHANNEL SELECTOR to choose the channel you no longer wish locked-out.

4. CANCEL LOCK-OUT

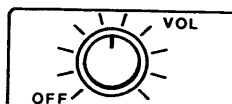


- 1) Push and hold the FUNCTION switch, and then push the L-SCAN switch. The "L—" symbol appears.
- 2) Release the FUNCTION switch. The "L—" symbol disappears.

Cancelling All Locked-Out Channels (Resetting the CPU)

WARNING: DO NOT perform this procedure if you wish to keep the channels stored in the memories. This procedure erases all memory channels, and resets MEMO 0 to CH16.

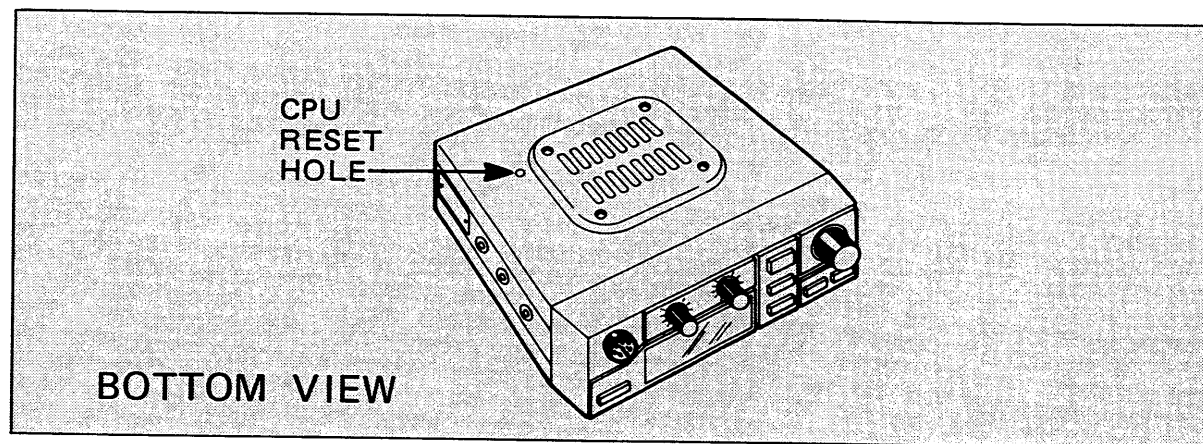
1. POWER ON



- 1) If the transceiver is not ON, rotate the VOLUME control/POWER switch clockwise to approximately the 12 o'clock position. The number "16" appears on the CHANNEL and FUNCTION DISPLAY indicating the power is ON.

2. RESET CPU

- 1) Locate the small hole in the bottom cover of the IC-M55.
- 2) Insert a plastic or insulated probe into the hole. Push and release the small reset switch.
- 3) The CPU is now reset. All channels are clear of the lock-out function and all memories are vacant except MEMO 0 (CH16).



SCANNING

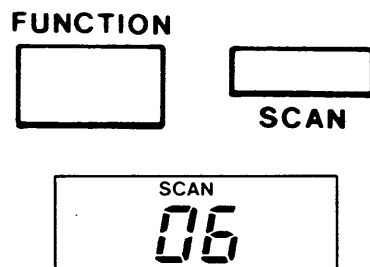
All Channel Scanning

1. SELECT DIAL MODE



2. ADJUST SQUELCH

3. ACTIVATE SCAN



4. STOPPING THE SCAN

The following procedure explains how to automatically scan all marine channels. Scanning operates in the dial, weather or memory modes.

1) Push the DIAL switch.

1) Rotate the SQUELCH control clockwise until the channel noise just disappears. Perform this setting when there is no signal present on the channel being monitored.

1) Push the FUNCTION switch, and then push the SCAN switch.

2) The letters "SCAN" appear on the CHANNEL and FUNCTION DISPLAY, and begin to blink to indicate the scan has started.

3) The scan begins from the displayed channel and moves upwards through all channels of the particular channel system selected (either International or U.S.A.). On reaching the highest channel, the scan continues from the lowest channel upwards in a continuous loop.

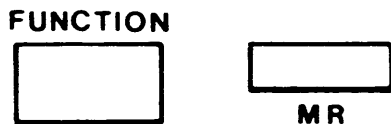
4) Each time the set reaches a channel with a signal, the scan stops as long as the signal is present. When the channel is clear, the scan resumes upwards.

1) Push any one of the DIAL, WX, CH 16 or FUNCTION switches to stop the scanning function.

Memory Channel Scanning

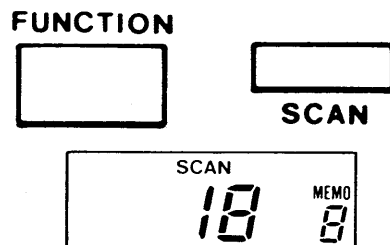
1. PROGRAM CHANNELS

2. SELECT MEMORY MODE



3. ADJUST SQUELCH

4. ACTIVATE SCAN



5. STOPPING THE SCAN

The following procedure explains how to automatically scan the memory channels.

1) Program the desired channels to be monitored in memory channels 0 ~ 9. See MEMORY CHANNELS on page 17.

1) Push the FUNCTION switch, and then push the MR switch.
2) A memory channel and a channel number appear on the CHANNEL and FUNCTION DISPLAY.

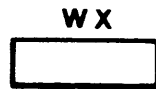
1) Rotate the SQUELCH control clockwise until the channel noise just disappears. Perform this setting when there is no signal present on the channel being monitored.

1) Push the FUNCTION switch, and then push the SCAN switch.
2) The letters "SCAN" appear on the CHANNEL and FUNCTION DISPLAY, and begin to blink to indicate the scan has started.
3) The scan begins from the displayed memory channel and moves upwards through all programmed memories. On reaching the highest programmed memory, the scan skips to the lowest programmed memory and moves upwards in a continuous loop.
4) Each time the set reaches a channel with a signal, the scan stops as long as the signal is present.

1) Push any one of the DIAL, WX, CH 16 or FUNCTION switches to stop the scanning function.

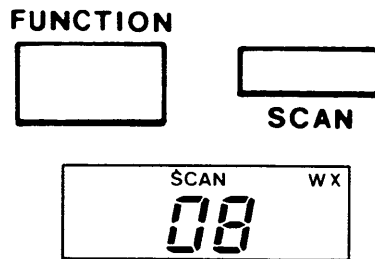
Weather Channel Scanning

1. SELECT WEATHER MODE



2. ADJUST SQUELCH

3. ACTIVATE SCAN



4. STOPPING THE SCAN

The following procedure explains how to automatically scan the weather channels.

- 1) Push the WX switch.
- 2) A weather channel number appears on the CHANNEL and FUNCTION DISPLAY.

- 1) Rotate the SQUELCH control clockwise until the channel noise just disappears. Perform this setting when there is no signal present on the channel being monitored.

- 1) Push the FUNCTION switch, and then push the SCAN switch.
- 2) The letters "SCAN" appear on the CHANNEL and FUNCTION DISPLAY, and begin to blink to indicate the scan has started.
- 3) The scan begins from the displayed weather channel and moves upwards through all the weather channels. On reaching WX channel 10, the scan skips to WX channel 1 and moves upwards again in a continuous loop.
- 4) Each time the set reaches a channel with a signal, the scan stops as long as the signal is present. When the channel is clear, the scan resumes upwards.

- 1) Push any one of the DIAL, WX, CH 16 or FUNCTION switches to stop the scanning function.

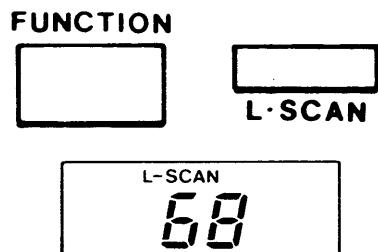
Lock-Out Scanning

The following procedure explains how to automatically scan only those channels which are not disabled by the lock-out function.

1. ADJUST SQUELCH

- 1) Rotate the SQUELCH control clockwise until the channel noise just disappears. Perform this setting when there is no signal present on the channel being monitored.

2. ACTIVATE LOCK-OUT SCAN



- 1) Push the FUNCTION switch, and then push the L-SCAN switch.
- 2) The letters "L-SCAN" appear on the CHANNEL and FUNCTION DISPLAY, and begin to blink to indicate the scan has started.
- 3) The scan begins from the displayed channel and moves upwards in the same manner as the All Channel Scan (see page 22) except that those channels which are locked-out are skipped over, and the scan does not stop on these channels even if a signal is present.

3. STOPPING THE LOCK-OUT SCAN

- 1) Push any one of the DIAL, WX, CH 16 or FUNCTION switches to stop the lock-out scanning.

DUAL WATCH (SEA WATCH)

This function allows a check of channel 16 while listening on another channel. When a signal appears on channel 16, the transceiver automatically switches to channel 16 until this signal has cleared, then the set returns to the original channel.

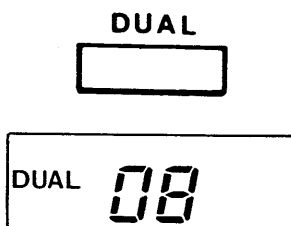
1. SELECT CHANNEL

- 1) Choose the desired operating channel using the dial, memory or weather modes. See the RECEIVING and MEMORY CHANNEL sections for further details.

2. ADJUST SQUELCH

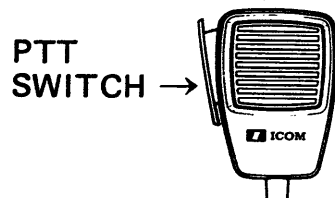
- 1) Rotate the SQUELCH control clockwise until the channel noise just disappears. Perform this setting when there is no signal present on the channel.

3. SELECT DUAL WATCH MODE



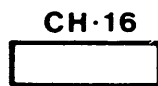
- 1) Push the DUAL switch.
- 2) The letters "DUAL" appear on the CHANNEL and FUNCTION DISPLAY, and begin to blink to indicate the dual watch function has started.
- 3) The transceiver now alternates between the channel selected in step 1 and channel 16. The set monitors the selected channel for approximately 2 or 3 seconds, and then checks channel 16 for a moment before switching back to the selected channel again.
- 4) When a signal appears on either channel, that channel is monitored. However, if a signal appears on both channels simultaneously, then channel 16 has priority. The set remains locked on channel 16 until it is clear, and then switches to monitor the other signal.

4. TRANSMITTING ON SELECTED CHANNEL



- 1) Push the push-to-talk (PTT) switch on the microphone and begin speaking.
- 2) Release the PTT switch to stop transmitting.

5. TRANSMITTING ON CHANNEL 16



- 1) Push the CH 16 switch.
- 2) Push the push-to-talk (PTT) switch on the microphone and begin speaking.
- 3) Release the PTT switch to stop transmitting.
- 4) Push the DUAL switch to engage the DUAL WATCH operation again when your communication on channel 16 is completed.

6. CANCELLING DUAL WATCH MODE

- 1) Push any one of the DIAL, WX, CH 16 or FUNCTION switches or rotate the CHANNEL SELECTOR to stop the dual watch.

CHANNEL 16 AUTO-MONITOR



The channel 16 auto-monitor circuit simplifies operation of the transceiver by automatically switching to channel 16 when the microphone is replaced in its hanger. However, even with the microphone in its hanger, any channel (including the weather channels) may be monitored simply by pushing the appropriate switches.

DISPLAY LIGHT and LIGHT DIMMER

The IC-M55 has an illuminated CHANNEL and FUNCTION DISPLAY for easy reading in dim or no light situations. The light may be turned ON and OFF, and also the intensity may be varied to suit the ambient light conditions.

1. LIGHT ON/LIGHT OFF

FUNCTION

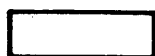


DIM

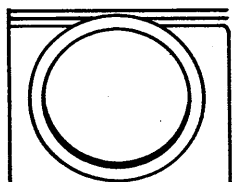
- 1) Push the FUNCTION switch, and then push the DIM switch to turn the light ON/OFF.
- 2) Repeat step 1) to change the state of the light.

2. LIGHT INTENSITY

FUNCTION



DIM



CHANNEL SELECTOR

- 1) Push and hold the FUNCTION switch, and then push the DIM switch.
- 2) Rotate the CHANNEL SELECTOR to vary the light intensity.
- 3) Release the FUNCTION switch.

SECTION 6 OPERATING RULES AND GUIDELINES

PREVENT INTERFERENCE

Before transmitting, monitor the channel you wish to use to avoid interrupting transmissions in progress.

CALL PROCEDURES

Calls must be properly identified and time limits must be respected.

1. Give your call sign each time you place a call to another vessel or a coast station. If a call sign has not been assigned, identify the station by announcing the vessel name and the name of the licensee.
2. Give your call sign at the end of each transmission of more than 3 minutes duration.
3. You must break and give your call sign at least once every fifteen minutes during long ship-to-shore calls.
4. Keep your unanswered calls short (less than thirty seconds) and do not repeat a call for two minutes.
5. Unnecessary transmissions are not allowed.

PRIORITIES

1. Read all the rules and regulations pertaining to priorities and keep an up-to-date copy handy. Safety and Distress messages take priority over all others.
2. You must monitor and be able to transmit on 156.8MHz, Channel 16.
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.

LOGS

Use of this equipment requires entry of the watch period of 156.8 MHz (CH 16) by the operator with vessel name, call sign and operator signature. All distress, emergency and safety messages must be recorded in complete detail. Log date activity is usually recorded in 24 hour time. Universal Time (formerly GMT) is frequently used.

Adjustments, repairs, channel frequency changes and authorized modifications affecting electrical operation of the equipment must be kept in the maintenance log and entries signed by the authorized licensed technician performing or supervising the work. A sample maintenance log is included in the back of this manual.

RADIO LICENSES

1. Ship Station License

When your craft is equipped with a VHF/FM transceiver such as the IC-M55, you must possess a current radio station license before using the equipment. 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. Your 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. You can usually obtain this permit by mail without examination. Again, contact your marine dealer or appropriate government agency for information or applications.

The Restricted Radiotelephone Operator Permit must be posted 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, and ends the call, and makes the necessary log entries. A current copy of the applicable government rules and regulations is usually required to be kept.

CHANNEL ALLOCATIONS

A channel system has been internationally adapted for the marine VHF band. Each frequency within the spectrum has been assigned a channel number, for example, 156.300MHz is Channel 6. Specific purposes have been assigned to each channel under this system (either inter-ship between two vessels or ship-to-shore). The MARINE VHF TRANSCEIVER CHANNEL chart lists the channel/frequency relationships. Each geographical area has specific channels assigned to it for use with the land telephone system.

DEAD SPOTS

Topography may prevent reception and/or transmissions from some locations. Move to another location if you find a "dead spot".

BATTERY

Prevent battery drain during prolonged transmissions by keeping the vessel's engine running. Check the battery voltage often. Your electrical system should be checked if the voltage is less than 11 or more than 16 volts at the radio.

ROUTINE MAINTENANCE

Your ICOM transceiver is designed to perform well for many years if cared for in a proper manner. Each year you should have the following checked by a licensed technician.

1. Check the antenna system.
2. Check the transmitter frequency, deviation, and power output.

SECTION 7 MARINE VHF TRANSCEIVER CHANNEL CHART

Channel	Ship Transmit	Ship Receive	Mode S/D	Only Intl	Only Com	USCG	Function		Type of Operation
							Ship - Ship	Ship to Shore	
1	156.050	160.650	D	yes			no	yes	Public Correspondence, Port Operation
2	156.100	160.700	D	yes			no	yes	Public Correspondence, Port Operation
3	156.150	160.750	D	yes			no	yes	Public Correspondence, Port Operation
4	156.200	160.800	D	yes			no	yes	Public Correspondence, Port Operation
5	156.250	160.850	D	yes			no	yes	Public Correspondence, Port Operation
6	156.300	156.300	S				yes	no	Safety
7	156.350	160.950	D		yes		no	yes	Public Correspondence, Port Operation
7A	156.350	156.350	S		yes		yes	yes	Port Operation
8	156.400	156.400	S		yes		yes	no	Intership
9	156.450	156.450	S				yes	yes	Port Operation
10	156.500	156.500	S		yes		yes	yes	Port Operation
11	156.550	156.550	S		yes		yes	yes	Port Operation
12	156.600	156.600	S				yes	yes	Port Operation
13	156.650	156.650	S				yes	yes	Bridge to Bridge, (1W) Navigational
14	156.700	156.700	S				yes	yes	Port Operation
15		156.750	S				Rcv	Rcv	Recv Only - Coast to Ship
16	156.800	156.800	S				yes	yes	Calling & Safety
17	156.850	156.850	S				no	yes	State Controlled - Ship to Coast (1W)
18	156.900	161.500	D	yes			no	yes	Port Operation
18A	156.900	156.900	S		yes		yes	yes	Port Operation
19	156.950	161.550	D	yes			no	yes	Port Operation
19A	156.950	156.950	S		yes		yes	yes	Port Operation
20	157.000	161.600	D				no	yes	Port Operation
21	157.050	161.650	D	yes			no	yes	Port Operation
21A	157.050	157.050	S			yes	yes	yes	Port Operation (USCG)
22	157.100	161.700	D	yes			no	yes	Port Operation
22A	157.100	157.100	S			yes	yes	yes	Port Operation (USCG)
23	157.150	161.750	D	yes			no	yes	Public Correspondence
23A	157.150	157.150	S			yes	yes	yes	Port Operation (USCG)
24	157.200	161.800	D				no	yes	Public Correspondence
25	157.250	161.850	D				no	yes	Public Correspondence
26	157.300	161.900	D				no	yes	Public Correspondence
27	157.350	161.950	D				no	yes	Public Correspondence
28	157.400	162.000	D				no	yes	Public Correspondence

Channel	Ship Transmit	Ship Receive	Mode S/D	Only Intl	Only Com	USCG	Function		Type of Operation
							Ship - Ship	Ship to Shore	
60	156.025	160.625	D	yes			no	yes	Public Correspondence, Port Operation
61	156.075	160.675	D	yes			no	yes	Public Correspondence, Port Operation
62	156.125	160.725	D	yes			no	yes	Public Correspondence, Port Operation
63	156.175	160.775	D	yes			no	yes	Public Correspondence, Port Operation
64	156.225	160.825	D	yes			no	yes	Public Correspondence, Port Operation
65	156.275	160.875	D	yes			no	yes	Public Correspondence, Port Operation
65A	156.275	156.275	S				yes	yes	Port Operation
66	156.325	160.925	D	yes			no	yes	Public Correspondence, Port Operation
66A	156.325	156.325	S				yes	yes	Port Operation
67	156.375	156.375	S		yes		yes	no	Port Operation
68	156.425	156.425	S				yes	yes	Port Operation
69	156.475	156.475	S				no	yes	Port Operation
70	156.525	156.525	S				yes	no	Interhip
71	156.575	156.575	S				no	yes	Interhip, Port Operation
72	156.625	156.625	S				yes	no	Interhip
73	156.675	156.675	S				yes	yes	Port Operation
74	156.725	156.725	S				yes	yes	Port Operation
77	156.875	156.875	S		yes		yes	no	Interhip
78	156.925	161.525	D	yes			no	yes	Port Operation
78A	156.925	156.925	S				no	yes	Port Operation
79	156.975	161.575	D	yes			no	yes	Port Operation
79A	156.975	156.975	S		yes		yes	yes	Port Operation
80	157.025	161.625	D	yes			no	yes	Port Operation
80A	157.025	157.025	S		yes		yes	yes	Port Operation
81	157.075	161.675	D	yes			no	yes	Port Operation
81A	157.075	157.075	S			yes	yes	yes	Port Operation (USCG)
82	157.125	161.725	D	yes			no	yes	Port Operation, Public Correspondence
82A	157.125	157.125	S			yes	yes	yes	Port Operation (USCG)
83	157.175	161.775	D	yes			no	yes	Public Correspondence
83A	157.175	157.175	S			yes	yes	yes	Interhip, Port Operation (USCG)
84	157.225	161.825	D				no	yes	Port Operation, Public Correspondence
85	157.275	161.875	D				no	yes	Public Correspondence
86	157.325	161.925	D				no	yes	Public Correspondence
87	157.375	161.975	D				no	yes	Public Correspondence
88	157.425	162.025	D	yes			no	yes	Public Correspondence
88A	157.425	157.425	S		yes		yes	no	Interhip
WX1		162.550					Rcv	Rcv	NOAA Weather (Rcv Only)
WX2		162.400					Rcv	Rcv	NOAA Weather (Rcv Only)
WX3		162.475					Rcv	Rcv	NOAA Weather (Rcv Only)
WX4(21R)		161.650					Rcv	Rcv	Canada Weather (Rcv Only)

SECTION 8 SAMPLE LOGS

MAINTENANCE LOG — Refer to page 30.

Radio Set Serial No. _____	Date (Initial Reading)	Date	Date	Date	Date	Date	Date
Transmitter RF Power Output							
Transmitter Deviation							
Transmitter Frequency CH 16							
Transmitter Frequency CH 6							
TECHNICIAN SIGNATURE, ADDRESS, FCC LICENSE NO., EXPIRATION DATE							

Radio Set Serial No. _____	Date (Initial Reading)	Date	Date	Date	Date	Date	Date
Transmitter RF Power Output							
Transmitter Deviation							
Transmitter Frequency CH 16							
Transmitter Frequency CH 6							
TECHNICIAN SIGNATURE, ADDRESS, FCC LICENSE NO., EXPIRATION DATE							

SECTION 9 MINOR TROUBLESHOOTING

Your IC-M55 was designed to provide years of trouble-free operation in many different environments. This is possible by using the most current technology along with ICOM's years of experience in the production of high quality, dependable VHF/FM equipment.

However, as with all marine electronic equipment, it is possible that some problems may occur that would interfere with the operation of the set. Should such a problem occur, we recommend that you take your transceiver directly to an ICOM dealer or authorized ICOM repair service center for qualified service.

Some problems may occur which interfere with the operation of the radio, but which are not directly related to the electronic circuitry within your set. Below is a brief description of common problems outside the set that may occur, and a means of identifying them.

1. ANTENNA

If it appears that you are having unusual difficulty in transmitting or receiving properly, it is possible that the cause is due to a defective or faulty antenna system.

The most common problems that occur with antenna systems include broken or shorted antenna feedlines, or corroded or defective connectors. Double check to be sure the feedline is soldered to the connector, and that neither are shorted.

Visually inspect the system to try to isolate any problems. Obtain a qualified technician if the antenna problem cannot be located.

2. POWER LOSS

If, after turning your radio ON, the display fails to light and no sound is heard from the speaker, a common problem is low or no power from the battery source in the boat. Visually inspect the power cable from the battery for breaks or shorts. Also, inspect the fuse block in the vessel and the fuse holder in the power cable going to the radio for corrosion or a blown fuse.

3. MICROPHONE CABLE

If, when transmitting, either the voice is not heard or the "TX" letters are not displayed on the LCD (Be sure you're NOT in the weather mode!), the problem could be in the microphone cable. Inspect the microphone wires for possible breaks or tears that could be the source of the problem. If such is the case, replace the microphone cable.

4. IGNITION NOISE

Occasionally, ignition noise from the vessel's engine may cause interference to your transceiver. Refrigeration or power generating equipment may also cause static interference. Ignition noise, alternator "whine" and spurious signals from other electrical devices may be found and cured by experienced technicians using special techniques and noise reduction devices.

SECTION 10 EMERGENCIES

IF YOUR VESSEL REQUIRES ASSISTANCE, ATTRACT THE ATTENTION OF OTHER VESSELS AND THE COAST GUARD BY SENDING A DISTRESS MESSAGE ON CHANNEL 16.

DISTRESS SIGNAL PROCEDURE:

1. "MAYDAY MAYDAY MAYDAY" - - - (repeat three times)
2. "THIS IS _____" - - - (name of vessel)
3. "LOCATED AT _____" - - - (vessel's position)
4. Give the reason for the distress call.
5. Explain what assistance is required.
6. Give additional information such as vessel type, length and color to help those who come to your assistance.
7. Use channel 16 only to make initial contact.
8. After establishing initial contact, move to an alternate frequency such as channel 22A or channel 6. Clear channel 16 for other traffic.

A-0651A



ICOM INCORPORATED

1-6-19, KAMIKURATSUKURI, HIRANO-KU,

OSAKA, JAPAN