ICOM®

INSTRUCTION MANUAL

MARINE RADAR

MR-570R

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Icom Inc.

SYSTEM COMPONENTS

MODEL NAME	DISPLAY UNIT	SCANNER UNIT
SX-2464	EX-2473 (5.7 inch LCD)	EX-2474 (Radome type)

SUPPLIED ACCESSORIES

• **EX-2473** (5.7 inch LCD display unit)

	Qty.
① NMEA connector (NS1007 7P)	2
② Spare fuse (FGB 10 A)	1
③ Spare fuse (FGB 5 A: for over 24 V power supply)	1
④ DC power cable (OPC-928)	1
⑤ NMEA connector cover	2
⑥ Self-tapping screws (5 x 30)	4
⑦ Spring washers (M5)	4
⑧ Flat washers (M5)	4
⑨ Mounting spacer	4
⑩ Mounting rubbers	4

• **EX-2474** (Scanner unit)

	Qty.
① System cable (OPC-1075: 10 m)	1
② Installation bolts (M10 x 50)	4
③ Installation bolts (M10 x 25)	4
④ Installation nuts (M10)	4
⑤ Flat washers (M10)	4
⑥ Spring washers (M10)	4

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before attempting to operate the marine radar.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the MR-570R.

PRECAUTIONS

⚠**NEVER** let metal, wire or other objects touch any internal part of the radar.

⚠**NEVER** place the radar within the reach of children.

⚠**NEVER** expose the display unit to rain, salt water or any other liquids.

NEVER connect the radar to AC or more than 42 V DC. This will damage the radar.

AVOID placing the display unit in excessively dusty environments or in direct sunlight.

AVOID placing the display unit near heating equipment or in direct sunlight or where hot or cold air blows directly onto it.

AVOID using the scanner unit in areas where the temperature is below –25˚C (–13˚F) or above +70˚C (+158˚F). **AVOID** using the display unit in areas where the temperature is below –15˚C (+5˚F) or above +55˚C (+131˚F).

AVOID using strong solvents such as benzene or alcohol for cleaning the radar, as they may damage the surfaces.

FOREWORD

Thank you for purchasing ICOM's **MR-570R MARINE RADAR.**

The radar is designed especially for fishing boats. It has powerful transmission power, a 5.7 inch LCD display and many other advanced features.

If you have any questions regarding the operation of the radar, contact your nearest authorized Icom Inc. dealer.

EXPLICIT DEFINITIONS

The following explicit definitions apply to this instruction manual.

WORD	DEFINITION
⚠**WARNING**	Personal injury, fire hazard or electrical shock may occur.
⚠**CAUTION**	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. personal injury, fire hazard or electrical shock will not occur.

CAUTION!

SART signal may not be detected and may not be displayed on the screen depending on the **SEA**, **RAIN** or **IR** settings.

Follow the following settings to detect the SART signal on the screen.

1. Select the screen range between 6 NM to 12 NM.
2. Set the [GAIN]* as high as possible.
3. Set the [SEA]* to minimum.
4. Set the [RAIN]* to minimum.
5. Turn the [IR]* OFF.
6. Turn the [ES]* OFF.

*See the [ADJ] menu on p. 6.

TABLE OF CONTENTS

The MR-570R is supplemental aids to navigation and are not intended to be a substitute for accurate and current nautical charts.

DANGER! HIGH VOLTAGE

• NEVER OPEN THE UNIT

This product contains high voltage that could be FATAL. This product has no user-servicable parts inside. All repairs and adjustments MUST be made by a qualified electronics technician at your Marine Navigation Dealer.

• HIGH VOLTAGE

High voltages of up to 3,500 volts are used in this equipment. Although prudent measures for safety have been adopted, sufficient care must be taken in the operation, maintenance and adjustment of the equipment.

Electric shock of 1,000 volts or more may cause electrocution and death; even an electric shock of only 100 volts may be fatal.

• PREVENTION OF ELECTRIC SHOCK
(FOR QUALIFIED ELECTRONIC TECHNICIANS ONLY)

To prevent such accidents, turn OFF the power source and do not reach inside the unit until you have:

① Discharged the capacitors by disconnecting the power cable from the power source for 5 min.;
② Checked that no electric charges remain inside the device.

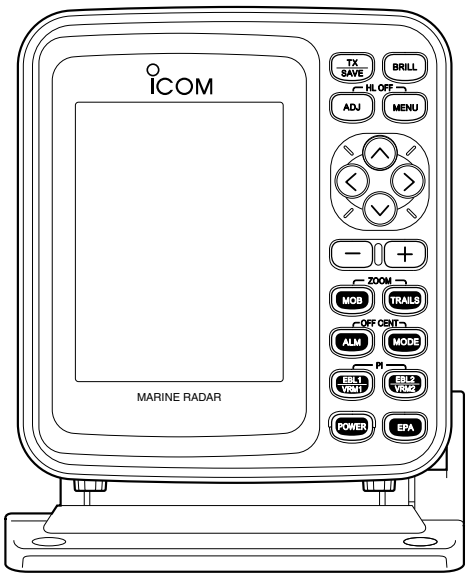
Also, it is safest to wear dry insulated rubber gloves. **NEVER** use both hands simultaneously; keep one hand in your pocket.

RADIATION HAZARD

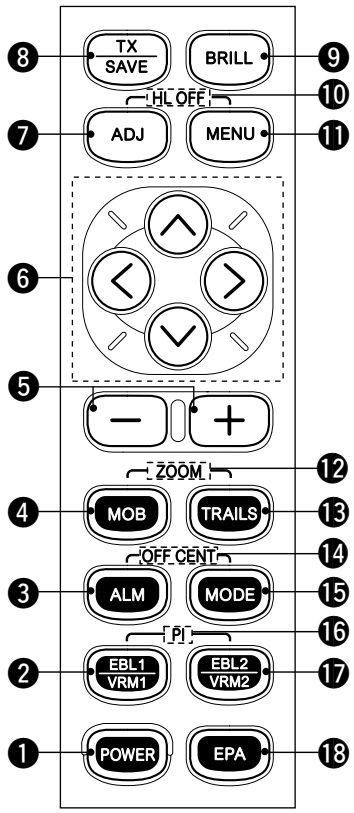
• Radiation emitted from the scanner unit can be harmful, particularly to the eyes. To avoid harmful radiation, ensure the radar power is in the OFF position before beginning work on the scanner unit.

2 PANEL DESCRIPTION

■ Front panel



Control panel



❶ POWER SWITCH [POWER] (p. 10)
Turns power ON and OFF.
- The standby screen appears for 90 sec. while warming up the magnetron.
- The initial screen appears with a beep after the power has been turned ON.

❷ EBL1 (VRM1) SWITCH [EBL1 (VRM1)] (pgs. 16–18)
Push to display the electronic bearing line 1 (EBL1) and the variable range marker 1 (VRM1) on the cross line cursor position from own ship.
- EBL1 bearing and VRM1 distance are displayed, in the bottom window.
- When EBL1 and VRM1 are displayed, the beginning of EBL2 appears at own ship or the intersection point of EBL1 and VRM1.

❸ ALARM SWITCH [ALM] (p. 19)
Push [ALM] to toggle the alarm function ON and OFF.
Push and hold [ALM] for 0.5 sec. to enter the alarm area setting condition.
- Push [∧]/[∨]/[<]/[>] key to move the cross cursor to the zone starting point, then push [ALM] for 0.5 sec. The starting ring of the zone is created. Then push [∧]/[∨]/[<]/[>] to fix the finish point, the desired alarm zone will automatically form.

❹ MAN OVERBOARD [MOB]
Push to mark the man overboard point on the screen. In the case of when a crew member falls overboard, push [MOB] to display the MOB marker ( ) on the screen.
- MOB readout shows the bearing, distance and estimated time to the MOB point with current speed.
- Push and hold [MOB] for 0.5 sec. to cancel the function.
- Position and bearing data are necessary.
- External data is required for screen display information. (p.38).

❺ RANGE UP/ DOWN SWITCH [+/ –] (p. 16)
Push [+] to increase the screen range.
Push [–] to decrease the screen range.

❻ UP, DOWN, LEFT, RIGHT KEY [UP][DOWN][RIGHT][LEFT]
Set the cross line cursor, alarm area, EPA target, etc. according to the switch pushed.
Use the [∧]/[∨] key to select menu item and [<]/[>] key to set the item.
Using the [∧]-[<]/[>] or [∨]-[<]/[>] key combination allows you to move the cross line cursor to the upper (or lower) left or right.

❼ ADJUST MENU [ADJ] (p. 6)
Push [ADJ] to show the adjust menu on the display.
- Adjustable items; TUNE, GAIN, SEA, RAIN, IR, ES, PULSE length.

❽ TRANSMIT/SAVE SWITCH [TX (SAVE)] (p. 11)
Push to toggle between the TX mode and the standby mode.
Push and hold for 0.5 sec. to turn the power save function ON. The radar for TX interval scan is fixed at 10 revolutions. (p. 14)
- Select the save time in FUNCTION menu.

❾ DISPLAY BRILLIANCE SWITCH [BRILL] (p. 6)
Push [BRILL] to turn the brilliance adjustment menu ON or OFF.
- The brilliance and contrast of the symbol, character and illumination can be adjusted in [BRILL.] and [CONTR.] of the [BRILL] menu independently.
- Positive or Negative selection is available in [DISP.] menu.
- Pushing and holding [BRILL] for 1 sec. to turn the contrast and brilliance to the default setting.

❿ HEADING LINE OFF FUNCTION [HL OFF] (p. 11)
Push [ADJ] and [MENU] simultaneously to turn off all indication except the PPI (Plan Position Indicator) screen, temporarily.

⓫ MENU SWITCH [MENU] (pgs. 7–9)
Push [MENU] to toggle the FUNCTION and EPA menu. Push [∧]/[∨] keys to select the items and push [<]/[>] keys to change the setting.
- Enter the “INT. SETTING” from the “EPA” menu.
- Enter the “SERVICE MAN” menu from the “INT SETTING MENU”.

⓬ ZOOM FUNCTION [ZOOM] (p. 13)
Push [MOB] and [TRAILS] simultaneously to toggle the ZOOM function ON and OFF. ZOOM function expands the target to 2 times normal.
- Move the cursor to the target, then turn the function ON.
- The screen zooms around the middle of the cursor and own ship.
- This function is not available at 1/8, 3/4 and 32 NM or above ranges.

⓭ TRAILS SWITCH [TRAILS] (p. 14)
Push to toggle the trail function ON and OFF. This is useful for watching other ship’s tracks, approx. relative speed etc.
- Trail Time can be set in FUNCTION menu.

⓮ OFF CENTER FUNCTION [OFF CENT] (p. 12)
Push [ALM] and [MODE] simultaneously to turn the OFF CENTER function ON or OFF.
- This function is not available at 32 NM or above ranges.

⓯ MODE SWITCH [MODE]
Push to select one of Head-up (H UP), Course-up (C UP), North-up (N UP) or True motion (TM) screens.
- The North-up, Course-up and TM screens require ‘External data’ (p. 38).
- TM screen is not available at 32 NM or above ranges.

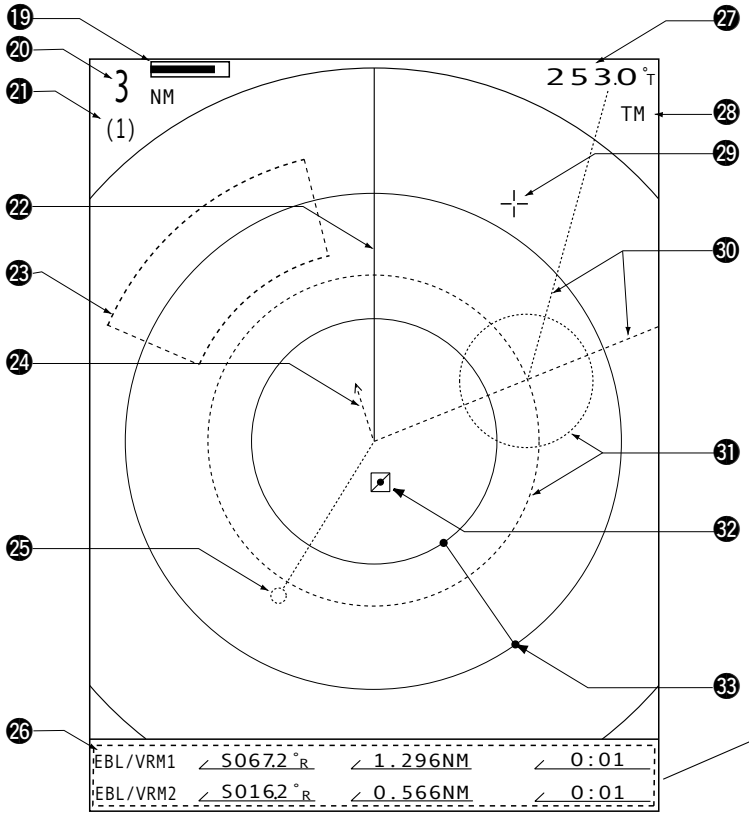
⓰ PARALLEL INDEX LINE FUNCTION [PI]
Push [EBL1] and [EBL2] simultaneously to turn the parallel index line ON.
Push [EBL1] or [EBL2] to turn the line OFF.
- Push [<]/[>] keys to rotate the lines, and push [∧]/[∨] keys to adjust the line spaces.

⓱ EBL2 (VRM2) SWITCH [EBL2 (VRM2)] (pgs. 16–18)
Push to display the Electronic Bearing Line 2 (EBL2) and the Variable Range Marker 2 (VRM2) while EBL1 and VRM1 are displayed on the screen.
- Push [EBL2/VRM2] to toggle the center of VRM2 as follows.

Own ship ➔ Intersection of the EBL1 and VRM1 ➔ OFF.

⓲ EPA SWITCH [EPA] (pgs.20–22)
Push to enter the EPA position data.
Push the [EPA] for 0.5 sec. to toggle the EPA display and navigation display.
- Push [∧]/[∨]/[<]/[>] key to move the cross cursor on the echo which you want to plot on the screen before turning the function ON.
- Select “EPA” function ON in the “EPA” menu, set the appropriate VECT, No. DISP, ALARM, CPA LIMIT and TCPA LIMIT setting.
- External data is required for screen display information. (p.38).

■ Screen



NOTE:
DATA display area may differ depending on DATA DISP selection in the FUNCTION menu.

⑲ TUNING LEVEL INDICATOR
Shows the receiver tuning level.

⑳ SCREEN RANGE READOUT (p. 16)
Shows the maximum range of the displayed screen.
- The range indicated is nautical miles (NM).

㉑ FIXED RING RANGE READOUT (p. 16)
Shows the interval range of the fixed ring.
- This readout appears when the "RING" of the FUNCTION menu is turned ON.

㉒ HEADING LINE (p. 11)
Heading line indicates the ships bow.

㉓ ALARM ZONE (p. 19)
Shows the alarm zone.
- Appears when the alarm function is in use.
- External data is required for screen display information. (p.38).

㉔ OWN SHIP VECTOR INDICATOR
Shows the vector of your own ship.

㉕ WAYPOINT MARKER (p. 15)
Shows the waypoint received from navigation equipment.
- This marker appears when the "WPT" of the FUNCTION menu is turned ON.
- External data is required for screen display information. (p.38).

㉖ EBL1/VRM1,EBL2/VRM2 READOUTS (pgs. 16-18)
Shows the bearing of the displayed Electronic Bearing Lines (EBL) and the distance of the displayed Variable Range Markers (VRM).
- Nautical miles (NM) and kilometres (KM) can be selected in the INT.SETTING menu as the distance unit.

㉗ HEADING INDICATOR
Shows the heading bearing readout.
- The HDG readout indicates the bow of the ship's bearing in a clockwise direction from north.
- External data is required for screen display information. (p.38).

㉘ MODE INDICATOR
Head-up, Course-up (CUP), North-up (NUP) and True Motion (TM) screens are available.
- External data is required for screen display information. (p.38).

㉙ CROSS LINE CURSOR
Used for measuring the bearing and distance, setting the alarm zone, selecting the EPA targets, etc.
- Push [∧]/[∨]/[<]/[>] several times to move the cursor.

㉚ **EBL1/2** (pgs. 16-18)
Used for bearing measurement. When a target is selected, the EBL readout ㊱ shows the bearing.

㉛ **VRM1/2** (pgs. 16-18)
Used for distance measurement. When a target is selected, the VRM2 readout ㉘ shows the distance.

㉜ **MOB SYMBOL**
Push [MOB] to mark the [MOB] marker on the screen.
• External data is required for screen display information. (p.38).

㉝ **FIXED RANGE RINGS** (p. 16)
Shows the distance in fixed intervals.
•These rings appear when the "RING" of the FUNCTION is turned ON.

■DATA DISPLAY
Data readout may differ depending on "DATA DISP" setting of the function menu.
•When "OFF" is selected;

㉞ **ALARM INDICATOR** (p. 19)
Appears when the alarm function is in use.

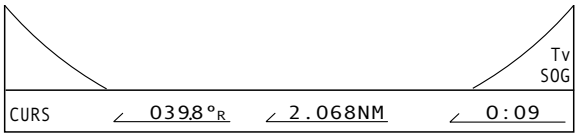
㉟ **TRAILS INDICATOR** (p. 14)
Shows the trail time.
•Echo remains with gradation during the trail time period on the screen. (Except for the trail time; ∞)
•Progressing time counter starts to count the time until the timer reaches the trail time.

㊱ **VECTOR INDICATOR** (pgs. 20-22)
Shows the EPA and OWN vector type.
•Tv: True vector
• Rv: Relative vector
• External data is required for screen display information. (p.38).

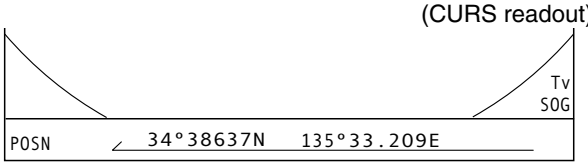
㊲ **SHIP SPEED READOUT** (p. 15)
Shows the ship speed.
•SOG: When GPS is selected in the INT. SETTING menu.
•STW: When LOG is selected in the INT. SETTING menu.
• External data is required for screen display information. (p.38).

NOTE:
When L/L DISP function in the [FUNCTION] menu is turned ON, [CURS], [WPT] and [MOB] readouts will be displayed as Latitude/Longitude.
When L/L DISP function in the [FUNCTION] menu is turned OFF, [CURS], [WPT] and [MOB] readouts will be displayed as bearing and distance.

•When "CURS" or "SHIP" is selected;



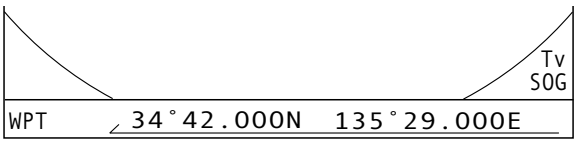
(CURS readout)



(SHIP readout)

㊳ **POSITION/CURSOR READOUT** (p. 15)
Shows your own ship or cursor latitude and longitude readout when external NMEA data with 0183 format is connected.
•Select 'CURS' or 'SHIP' in the FUNCTION menu.
• External data is required for screen display information. (p.38).

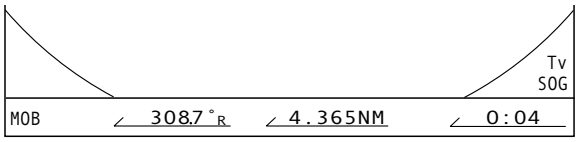
•When "WPT" is selected;



㊴ **WAYPOINT READOUTS** (p. 15)
Shows the bearing and distance to the waypoint received from navigation equipment.
•This readout appears when the "WPT" of the FUNCTION menu is selected.
• External data is required for screen display information. (p.38).

㊵ **TIME INDICATOR**
Shows the estimated time to the waypoint with current speed.
• External data is required for screen display information. (p.38).

■MOB



㊶ **MOB READOUTS**
Shows the bearing and distance to the MOB (Man Over Board) event marker.
•Push and hold [MOB] for 0.5 sec. to cancel the readout and the symbol.
•When [MOB] function is activated, [MOB] readout is prior to displayed except [EBL/VRM] readouts.
• External data is required for screen display information. (p.38).

Count on us!

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