

Collision Risk Management with Simplified ARPA and DSC/AIS Information

- **Simplified ARPA Function***
- **DSC Information Function***
- **AIS Overlay Function***
- **10.4- inch Color TFT Display**
(480×640 dots)
- **Multiple Languages**
(English, Indonesian, Korean,
Spanish, Thai and Vietnamese)
- **Intuitive User Interface**
- **Optional Video Output Unit**
- **36 NM Range Observation with**
4 kW Output Radome Scanner

* External bearing, speed, position, waypoint, variation, AIS and DSC data is (are) required, when you use these functions.



Simplified ARPA, Wide Viewing Angle Col

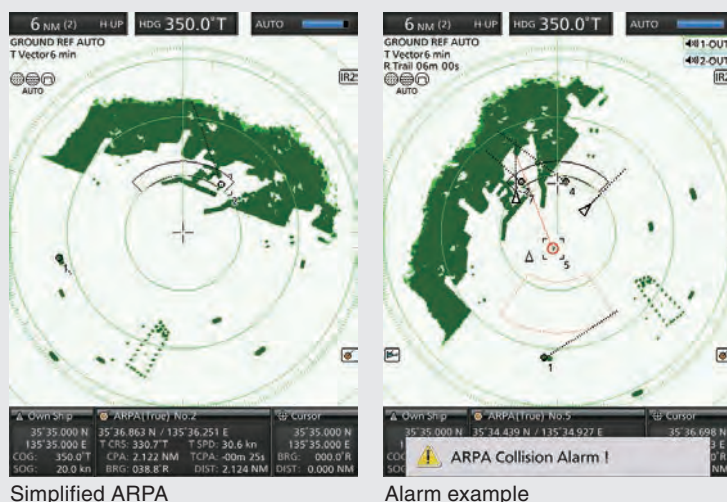
Collision Risk Management Functions



Simplified ARPA (Automatic Radar Plotting Aids) Function*

The simplified ARPA function helps to prevent a collision risk with other vessels or objects. Up to five targets can be automatically tracked on the radar echo, when a target enters within the set watch area, (or up to ten targets can be tracked when manually set). By selecting one of the targets, the target information such as position, course, speed, CPA, TCPA, bearing, and distance is shown on the lower side of the display. When the target enters within the CPA and TCPA limits, an alarm message is displayed with a beep alarm.

* External bearing, speed and position data required.



Simplified ARPA

Alarm example



DSC (Digital Selective Calling) Information Function*

When connected to a DSC radio and a DSC call is received, the received message is transferred to the MR-1010RII. Up to 20 DSC messages can be plotted on the radar echo. If a MOB position information is transmitted from a DSC handheld transceiver (including Icom IC-M93D), the MR-1010RII can show the MOB waypoint on the radar echo to assist in search and rescue operation.

* External bearing, position and DSC data required.



AIS (Automatic Identification System) Overlay Function*

When connected to an external AIS device (including Icom IC-M605 and, IC-M506 AIS), up to 100 AIS target icons are overlaid on the radar echo. By selecting an AIS icon, vessel information such as AIS class, MMSI number, vessel name, course, speed, CPA, TCPA, bearing and distance are shown on the lower side of the display.

* External bearing, position and AIS data required.

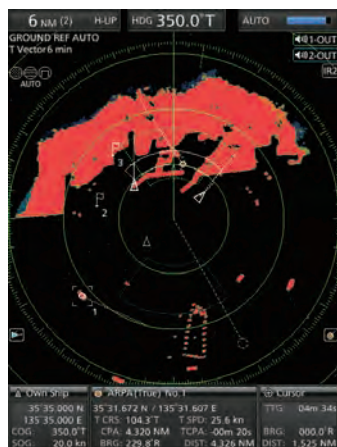


Compatible Icom marine DSC radio example, IC-M605

Wide Viewing Angle Color TFT LCD



The wide viewing angle color TFT LCD offers bright, vivid echoes with 16 steps gradient intensity. The screen intensity and screen color (day, night and user settings) can be instantly adjusted with the "BRILL" button. In addition, the auto hide information function enlarges radar echoes to full size.



Night setting

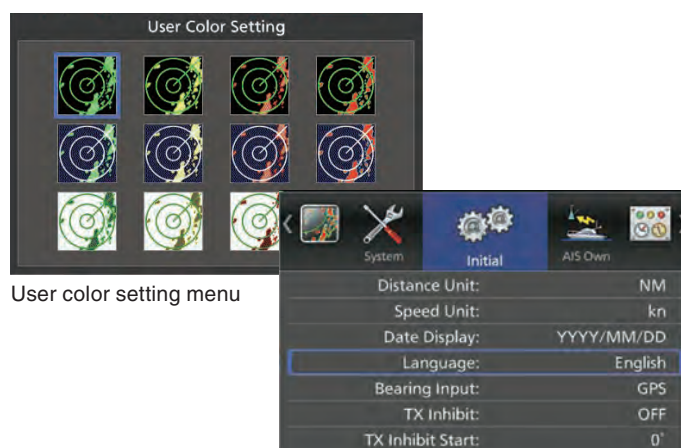


Day setting

Multi-Lingual Intuitive User Interface



The language setting of the MR-1010RII is selectable from English, Indonesian, Korean, Spanish, Thai and Vietnamese. The large eight-direction cursor key provides smooth operation even when wearing gloves. Various settings can be configured through visually intuitive operation.



User color setting menu

Initial menu

The top screenshot displays a received DSC (Digital Selective Calling) message on an AIS (Automatic Identification System) display. The message is from a vessel named 'MOB' (Moby) with a 'Distress' format. The display shows the vessel's position on a radar-like map, with a yellow highlight indicating the received DSC message. The message details are as follows:

- Received DSC
- Format: Distress
- From: 0100000000
- Nature: MOB
- Class: Moby

The bottom screenshot displays 'Other vessel AIS information' for a vessel named 'Class A (True)'. The display shows the vessel's position on a radar-like map, with a yellow highlight indicating the vessel's position. The vessel's details are as follows:

- MMSI: 123456789
- Name: ---
- Lat.: 35° 36.000 N
- Lon.: 135° 33.000 E
- T CRS: 350.0° T
- T SPD: 20.0 kn
- Hdg: 350.0° T
- ROT: 5 0.0°/min



Video output example

SPECIFICATIONS

DISPLAY UNIT

Display type	10.4-inch Color TFT LCD
Resolution	480 × 640 dots
Minimum range	25 m; 82 ft (at 1/8 NM range)
Maximum range	36 NM
Range scales	NM 1/8, 1/4, 1/2, 3/4, 1, 1.5, 2, 3, 4, 6, 8, 12, 16, 24, 32, 36 km 1/4, 1/2, 3/4, 1, 1.5, 2, 3, 4, 6, 8, 12, 16, 24, 32, 36, 48
Preheat time	90 seconds
Power supply	10.2–42 V DC
Power consumption (at zero wind velocity)	55 W (approximately)
Usable temperature range	–15°C to +55°C; +5°F to +131°F
Input data format	NMEA 0183, N+1, AUX, IEC61162-2
Output data format	NMEA 0183

SCANNER UNIT

Type	60 cm; 2 ft radome scanner
Rotation speed	24, 36, 48 rpm typ.
Horizontal beamwidth	4° typ.
Vertical beamwidth	22° typ.
Sidelobe	–22 dB typ.
Usable temperature range	–25°C to +70°C; –13°F to +158°F
Usable humidity range	Less than 95% (at 40°C; +104°F)
Frequency	9410 MHz ±30 MHz
Modulation	PON
Peak output power	4 kW
Pulse-width/repetition rate	80 ns/2160 Hz, 80 ns/1440 Hz, 250 ns/1440 Hz, 350 ns/1440 Hz, 350 ns/720 Hz, 900 ns/720 Hz
Modulator	FET switching
Intermediate frequency	60 MHz
IF bandwidth	10 MHz, 3 MHz
Tuning	Auto/manual selectable
Supplied system cable	15 m; 49.2 ft; OPC-2341

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

Applicable IP Rating

Ingress Protection Standard

Display unit	IPX4 (Water resistance)	Scanner unit	IPX6 (Powerful jet water protection)
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OPTIONS

SYSTEM CABLES



OPC-2339
20 m (65.6 ft)



OPC-2340
30 m (98.4 ft)

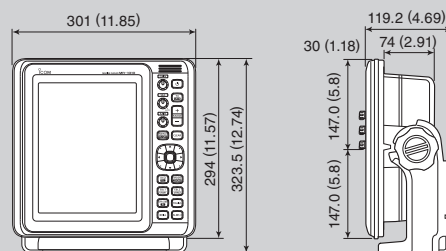
VIDEO OUTPUT UNIT



UX-252
Analog RGB output for
external monitor

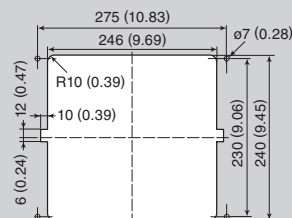
DIMENSIONS

Display unit dimensions

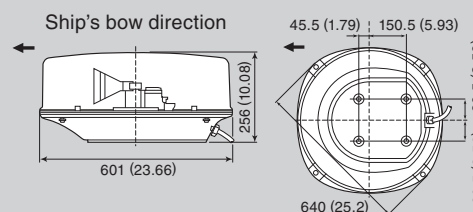


4.3 kg ; 9.5 lb

Cutout dimensions



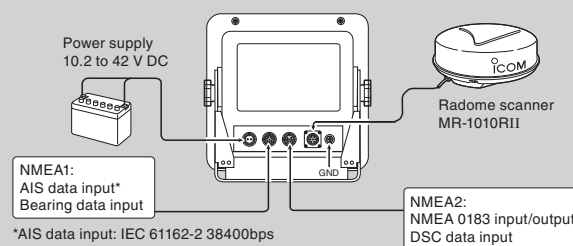
Scanner unit dimensions



8 kg ; 17.6 lb
(without cable)

Unit: mm (inch)

REAR PANEL VIEW



*AIS data input: IEC 61162-2 38400bps

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Icom Inc. 1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

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