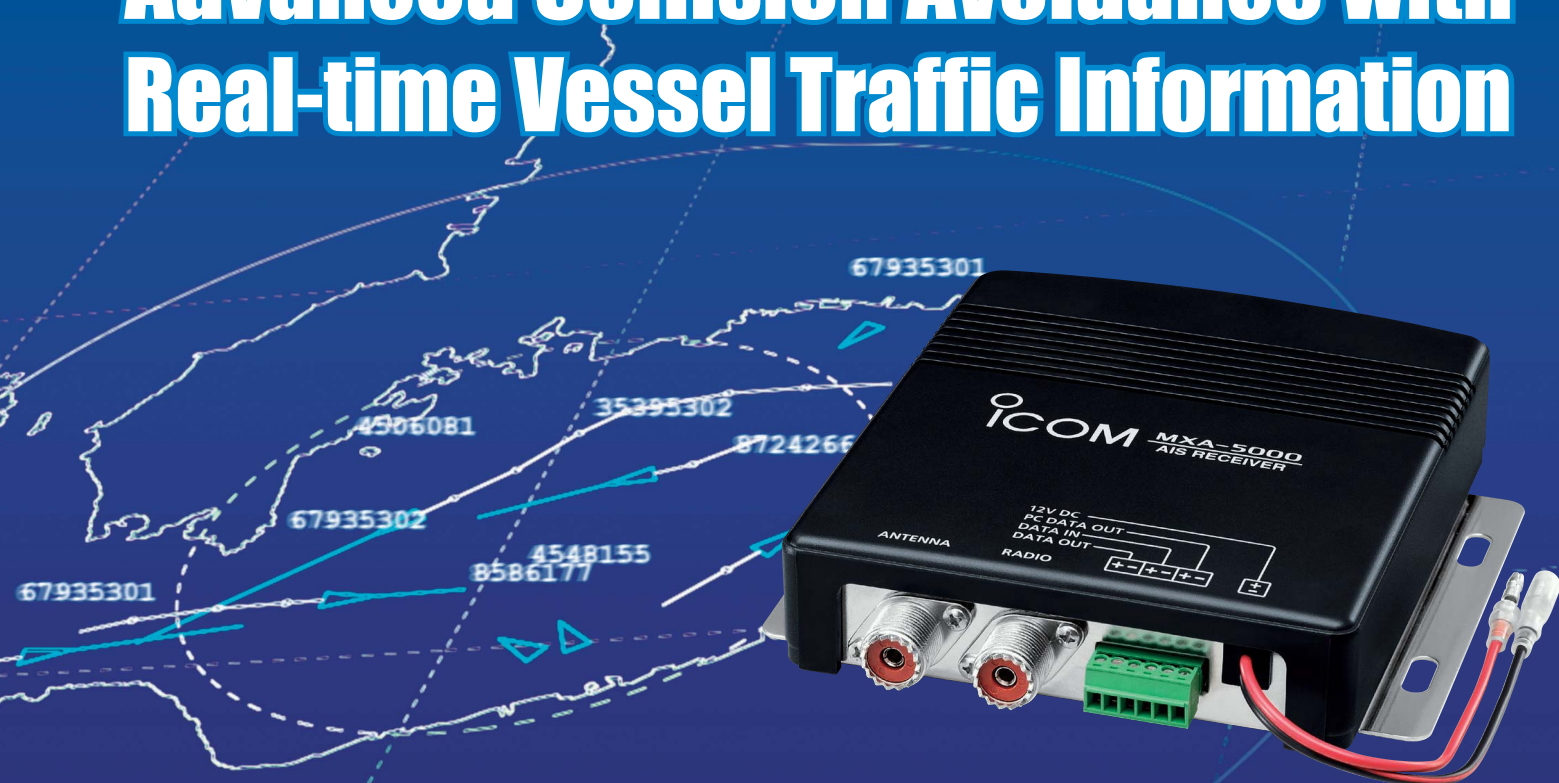


Advanced Collision Avoidance with Real-time Vessel Traffic Information



Dual Channel Receive Capability

The MXA-5000 receives both Ch. 87B (161.975MHz) and Ch. 88B (162.025MHz) simultaneously. This dual channel receive makes the MXA-5000 more flexible for obtaining AIS information from AIS transponders that operate on only one channel. In addition, the MXA-5000 also receives both Class A and Class B AIS data.

Dual Mode Data Output

The MXA-5000 has two data output. One is RS-422 for connection with equipment such as marine radar or GPS chart-plotter. Those equipments which accept the VDM sentence format will show the AIS data on the display.

The second is RS-232C for PC connection. When using with AIS plotter software*, the MXA-5000 allows you to monitor other vessel traffic on your PC.

* Not supplied from Icom.

Built-in Antenna Splitter to Share One Antenna

The MXA-5000 can be installed between a VHF antenna and a VHF radio. While receiving a VHF radio signal*, the MXA-5000 receives AIS data. When you transmit from the connected VHF radio, the Tx signal bypasses the MXA-5000 to protect the internal circuit. * Insertion loss : 3.5dB (approx.)

GPS Data Multiplex

When connected a GPS receiver to the MXA-5000, GPS position information such as RMC, GGA, GNS and GLL formats can be multiplexed with AIS data (VDM format) and simplifies wiring.

Compact Size and Light Weight Body

The MXA-5000 is only 132(W)×34(H)×155(D)* mm and weighs only 400g* for easy and flexible installation.

* Mounting bracket is not included in the dimensions and weight.

What is AIS?

Icom's MXA-5000 AIS (Automatic Identification System) receiver will pick up real-time transmissions from vessels that use an AIS transponder. Such transponders are now required for SOLAS vessels by SOLAS regulations.

The AIS transponder sends accurate navigation information such as:

- **Static Information** — Vessel call sign, name, MMSI number, dimensions, type

- **Voyage-Related Information** — Draft, cargo type, destination and estimated time of arrival
- **Dynamic Information** — Time in universal time, coordinated, latitude/longitude position, course over ground, speed over ground, heading, rate of turn, navigational status.

For more details, please refer to

["http://www.navcen.uscg.gov/enav/AIS/default.htm"](http://www.navcen.uscg.gov/enav/AIS/default.htm)

SPECIFICATIONS

GENERAL

- Frequency coverage : 161.975MHz (Ch 87B) and 162.025MHz (Ch 88B)
Simultaneous receive
- Receive emission : 16K0F1D (GMSK)
designator
- Antenna impedance : 50Ω
- Usable temperature range : -20°C to +60°C
; -4°F to +140°F
- Power supply requirement: 12.0V DC (10.8-15.6V)
- Current drain (12.0V DC) : 0.25A
- Weight (approx.) : 400g; 14.1oz
Mounting brackets attached 460g; 1.0lb

RECEIVER

- Sensitivity : -116dBm typ.
- Adjacent Ch selectivity : More than 70dB
- Spurious response : More than 70dB
- Intermodulation : More than 65dB
- Hum and noise ratio : More than 40dB
- Conducted spurious emission : Less than -57dBm

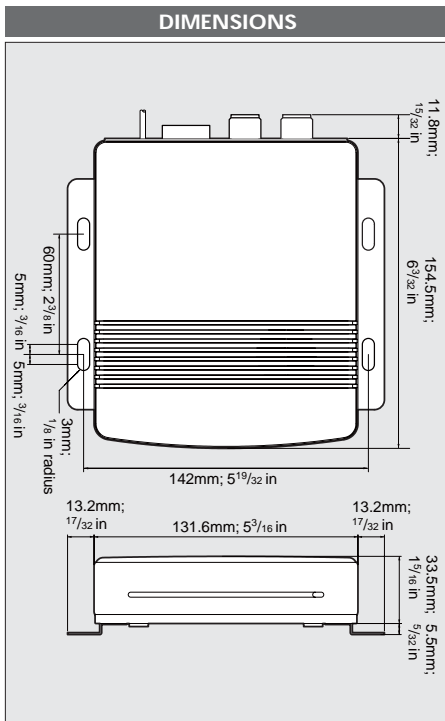
DATA INTERFACE

- Data Input Interface : IEC 61162-1:2000 (4,800bps)
Sentence format RMC, GGA, GNS, GLL
Input level Less than 2mA
(When 2V applied)
- Data Output Interface : IEC 61162-2 (38,400bps)
To navigation equipment RS-422 balanced
Sentence format VDM
Output level 5V, 40mA Max.
- To PC RS-232C unbalanced
Sentence format VDM
Output level ±5V, ±35mA typ.

Measurements made in accordance with IEC 62287-1.

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

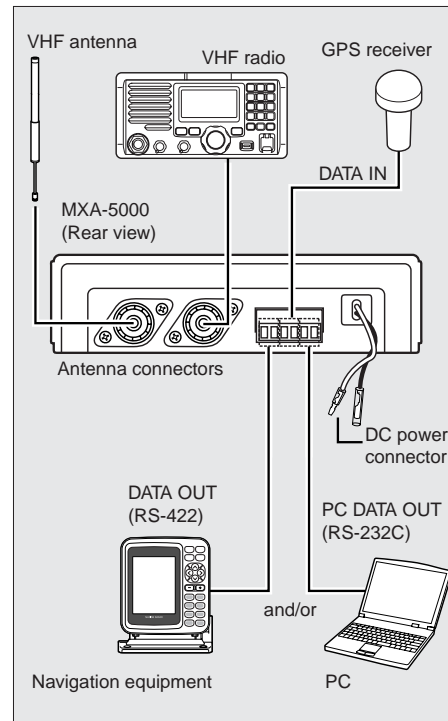
DIMENSIONS



Supplied accessories:

- Mounting bracket kits
- DC power cable

CONNECTION DIAGRAM



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Pre-release Information

CLASS B AIS TRANSPONDER

MA-500TR

Fully capable Class B AIS transponder for pleasure craft and fishing boats



Class B AIS transponder for Non-SOLAS vessels

- 2 W output power
- Dual channel AIS receiver

Full dot-matrix display visually shows real-time vessel traffic information

- PC and other marine network equipment is not required (But can be connected)

IPX7 waterproof protection

- 1m depth for 30 minutes (except connectors)

3 lines of NMEA0183 Input/Output

GPS receiver comes with MA-500TR

Collision-risk management functions

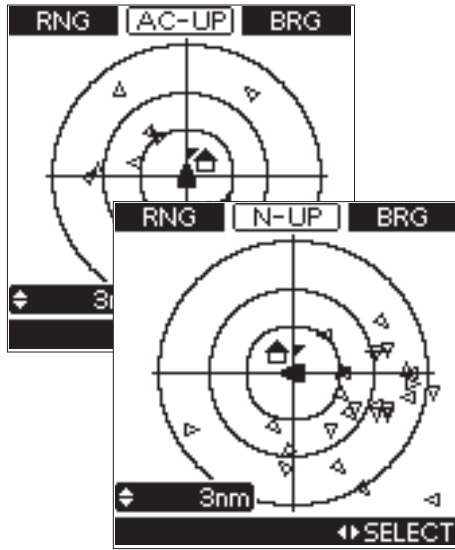
- CPA (Closest Point of Approach) and TCPA (Time to CPA)
- Target list and dangerous list
- Collision alarm
- External alarm connection to emit a collision alarm from external audio equipment on the deck or tower

Integration with Icom VHF radios (IC-M604 or IC-M504*)

- DSC button allows you to make a DSC individual call to a selected vessel instantly
- Matching design with Icom radios

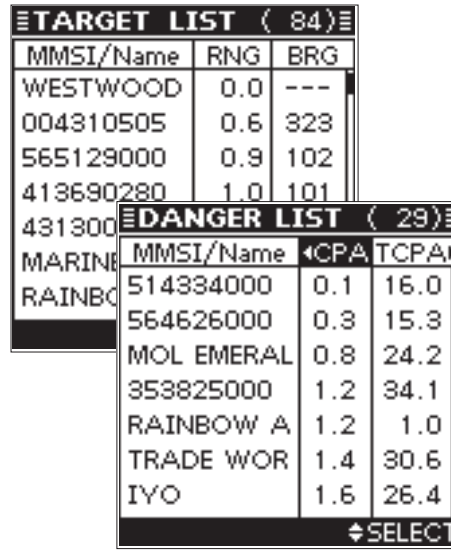
* IC-M604/M504: Compatible new version required.

Plotter screens



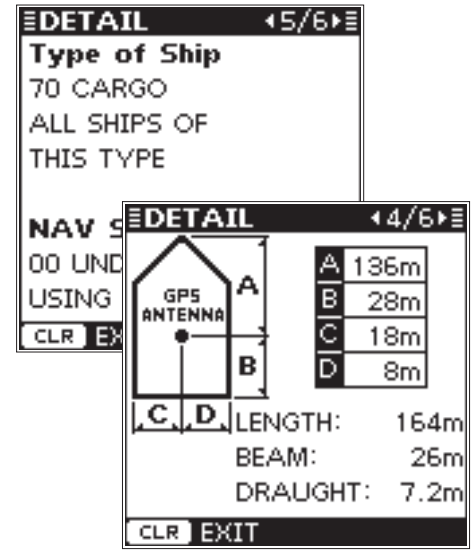
- North up and Auto course up selectable
- CPA and TCPA vessel icons () will blink on the display

Target list and Dangerous list screens



- Dangerous list provides a list of vessels within CPA (6NM) and TCPA (60 minutes) range and can be sorted by CPA or TCPA

Detail screens



- Shows target vessel's information

SPECIFICATIONS

GENERAL

- Frequency coverage : 161.975, 162.025MHz (default)
156.025-162.025MHz
- Type of emission : 16K0GXW (GMSK)
- Antenna impedance : 50Ω
- Usable temperature range : -20°C to +60°C
; -4°F to +140°F
- Power supply requirement: 12.0V DC (10.8-15.6V)
- Current drain Tx : 1.5A
Rx : 0.7A
- Dimensions (W×H×D) : 165×110×123 mm;
(projections not included) 6 1/2×4 11/32×4 27/32 in
- Weight (approx.) : 1000g; 2.2lb

RECEIVER

- Sensitivity : -110dBm (AIS/DSC)
- Adjacent Ch selectivity : More than 70dB (AIS/DSC)
- Spurious response : More than 74dB (AIS)
More than 70dB (DSC)
- Intermodulation : More than 65dB (AIS/DSC)
- Conducted spurious emission : Less than -57dBm (AIS)

Measurements made in accordance with IEC 62287-1.

TRANSMITTER

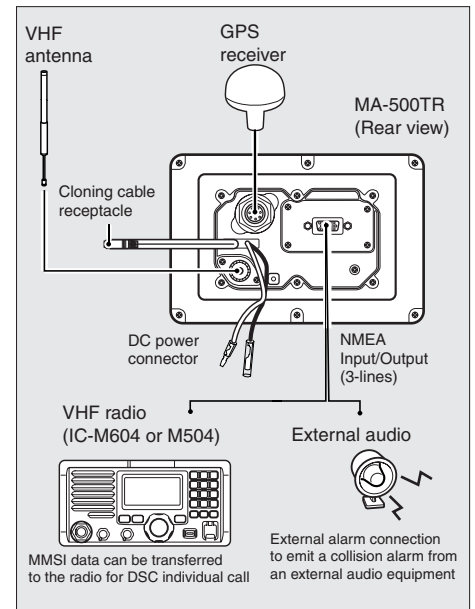
- Transmit power : 2W
- Conducted spurious emission : Less than -36dBm

DATA INTERFACE

- Data Input Interface : IEC 61162-1:2000 (4,800bps)
IEC 61162-2 (38,400bps)
Sentence format : RMC, GGA, GSA, GSV, DSC and VTG
Input level (at 2V applied) : Less than 2mA
- Data Output Interface : IEC 61162-1:2000 (4,800bps)
IEC 61162-2 (38,400bps)
Sentence format : VDM, VDO, ACA, ACS, ALR, TXT, GGA, GSA, GSV, RMC and VTG
Output level : 5V, 40mA Max.
RS-422 balanced
- Rating of alert terminal : DC24V 500mA max.

MA-500TR contents:

- AIS transponder
- GPS receiver with 10m cable
- NMEA connector cable
- Mounting bracket kits
- DC power cable



This device has not been approved by the appropriate authorities in each country. This device may not be sold or leased, or be offered for sale or lease, until approval has been obtained.

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