The Product

The RT-500-M is a high-performance, wideband radio direction finder for professional shipboard and mobile SAR operations, marine asset recovery, and radio band monitoring in all weather conditions. CH16 and MOB functions for crew safety are standard features.

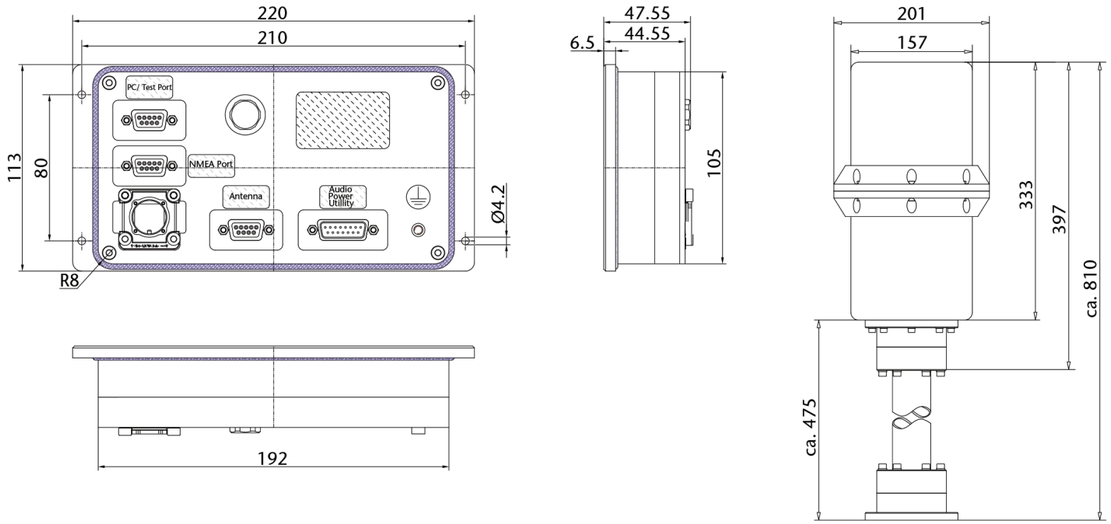
It operates from 118 to 470 MHz, including all international distress frequencies. All 19 COSPAS-SARSAT channels can be scanned and monitored, displaying LOBs in Bearing mode, and COSPAS-SARSAT messages in Decode mode, including beacon lat-long location.

The RT-500-M consists mainly of a compact Antenna Unit (AU) and a Display Control Unit (DCU). These two components easily install on practically any vessel. The AU is a self-contained DF sensor with built-in receiving and computing electronics and firmware, including an advanced algorithm for calculating best averaged bearing values.

The DF data is available via serial and NMEA interfaces to other systems on board. If interfaced with a compass, true and magnetic bearing can be displayed. The RT-500-M does not require the use of any RF cables.

System Characteristics

Parameter	Condition	Data
Wind Load, Antenna Unit	Constant wind speed, without ice deposit	150 km/h: 115 N 180 km/h: 165 N
Max. Wind Speed		270 km/h



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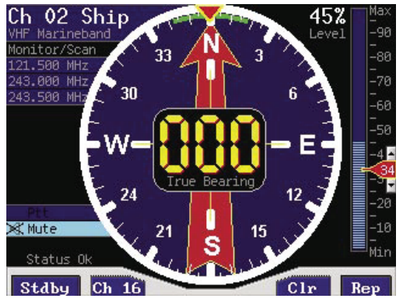
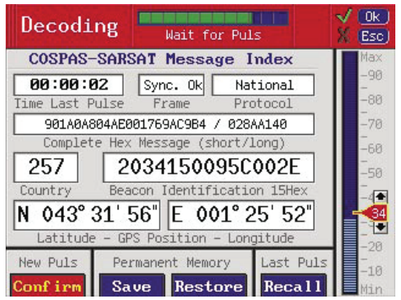
Wideband Radio Direction Finder RT-500-M

For professional maritime and mobile SAR

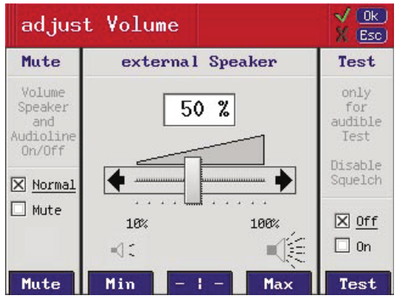
RHO International Inc THETA The Leader in DF



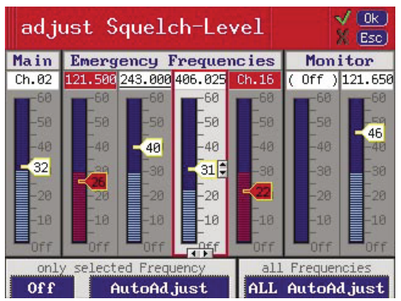
◀ Convenient, user friendly graphical interface showing essential DF information in bearing mode



COSPAS-SARSAT data message decoding. Country code, beacon ID, and GPS location are displayed and can be saved ▶

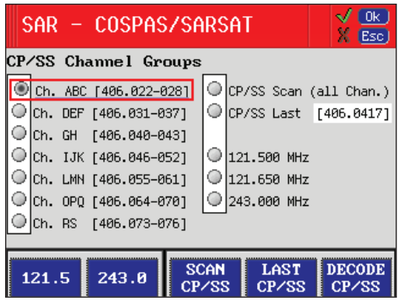


◀ Simple, intuitive menus for quickly adjusting frequently used settings



Easy automatic or manual adjustment of all active squelch levels for maximum sensitivity ▶

◀ Save and identify commonly used channels and frequencies in memory for faster recall



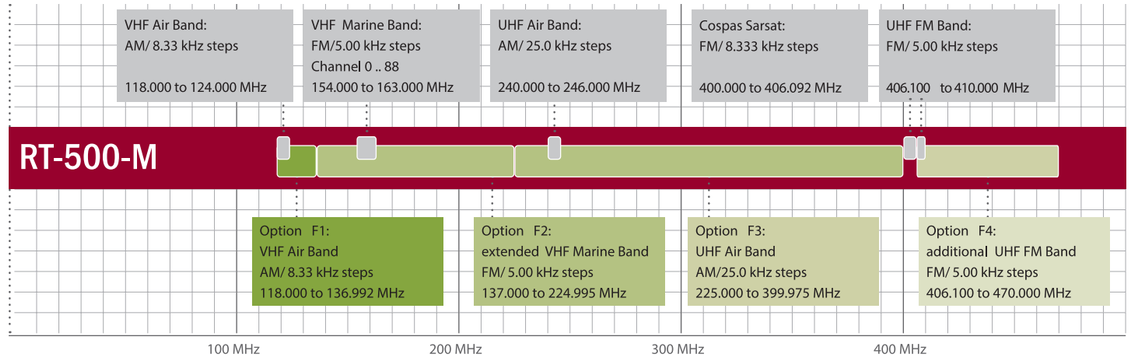
Direct access to all international SAR frequencies and COSPAS-SARSAT Scanning and Decoding ▶

RT-500-M

All features at a glance

- Best price-performance ratio
- Compact, self-contained, rugged DF optimized for use at sea
- Wideband 118 to 470 MHz (F1 to F4 Options), AM/FM/PM
- High sensitivity allows detection of extremely weak signals
- High direction finder accuracy
- Decoding of transmissions on all 19 COSPAS-SARSAT channels
- Bearing of COSPAS SARSAT signal on all 19 channels
- Automatic monitoring of 4 frequencies from different bands
- Fast scanning of up to 8 frequencies from different bands (F5 option)
- Antenna system Patent DE 4421759 C1
- Slave secondary DCU with full control and display functionality
- NMEA, RS-422/232 interfaces for integration and remote control
- Graphic TFT color display 950 cd/m²
- 8,33 and 25 kHz channel spacing in VHF Air band
- Full UHF Air AM-band (F3 Option)
- Full UHF LMR/PMR FM-band (F4 Option)
- All system components waterproof and IP67 rated
- Easy Installation, no RF cables required
- Maintenance-free, no moving parts

Frequency options



System Characteristics

Parameter	Condition	Data
DF Method		Doppler (3 kHz rotation frequency)
Bearing Accuray [1]		±5° RMS
Bearing Sensitivity Continuous signal	VHF Air Band, ±5° bearing fluctuation	≤ 4 µV/m / 2,5 µV/m typical
	Marine Band, ±5° bearing fluctuation	≤ 3 µV/m / 2 µV/m typical
	Marine Band above 174 MHz, ±5° bearing fluctuation	≤ 5 µV/m / 3 µV/m typical
	UHF Air Band, ±5° bearing fluctuation	≤ 6 µV/m / 4 µV/m typical
	COSPAS-SARSAT, ±5° bearing fluctuation	≤ 6 µV/m / 4 µV/m typical
	UHF FM Band, ±5° bearing fluctuation	≤ 6 µV/m / 4 µV/m typical
Response Time [2]		≤ 50 ms typ.
Power Supply		12 V to 30 V DC
Rated Current		2,5 A
External Data Interfaces	NMEA Bus	Either RS-422 or RS-232 (9600 baud | 9 pin D-Sub)
	Secondary DCU	Ethernet RJ-45
Storage Temperature Range	RT-500-M DCU	- 30 °C to + 80 °C
	RT-500-M AU	- 55 °C to + 80 °C