Portable Wide Band Direction Finder RT-400

SAR & Law Enforcement to locate and decode COSPAS-SARSAT

The Leader in DF

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The product

The RT-400 is a portable direction finder, designed for search and rescue operations (SAR), law enforcement and localizing of radio interference sources. Due to its wideband, the system allows homing to any radio transmitter with a frequency between 118 and 470 MHz including all emergency frequencies such as 121.5, 243 and 406 MHz (COSPAS-SARSAT). The DF system uses a tablet with a compass and GPS. The DF-Scout software allows displaying and saving bearing lines on the moving map as well as localizing beacons by triangulation. In case of COSPAS-SARSAT decoding, the beacon position, true bearing and the distance to target are also indicated directly on the map. Homing COSPAS-SARSAT beacons becomes easier when the SAR Scan algorithm is running, which detects the correct COSPAS-SARSAT frequency and scans for 121.5 MHz between C/S pulses. The antenna is mountable on vehicles or can be carried by a person. This allows searching from the vehicle until the terrain becomes impassable and proceeding by foot with the same antenna. Light weight, comfortable frame and the wireless antenna / tablet communication makes moving handling easy. This system is stable and water-resistant for use during inclement weather and over rough terrain.








RT-400
All features at a glance

- Portable DF System for search and rescue operations (SAR), law enforcement activities and localizing of radio interference sources
- Wideband homing on frequencies between 118 and 470 MHz including all relevant emergency frequencies such as 121.5 MHz, 243 MHz and COSPAS-SARSAT (406 MHz)
- Bearing display on moving map and beacon localization by triangulation
- Decoding of COSPAS-SARSAT messages and displaying beacon positions on the map
- Intelligent SAR Scan algorithm with up to 4 frequencies monitored between COSPAS-SARSAT pulses
- Displaying the own track and defining GPS waypoints
- Mount on vehicles or carry the DF-system backpack for versatility in all types of terrain
- Water-resistant system for use during inclement weather
- Light weight, comfortable frame and wireless antenna / tablet communication makes handling easy

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Technical data

DF Method:		Doppler
Bearing Accuracy:		5° RMS[1]
Frequency Range:	VHF Air Band	118.000 - 124.000 MHz 118.000 - 136.992 MHz (Option)
	Marine Band	154.000 - 163.000 MHz 137.000 - 224.995 MHz (Option)
	UHF Air Band	240.000 - 246.000 MHz 225.000 - 399.975 MHz (Option)
	COSPAS-SARSAT	400.000 - 406.092 MHz all 19 COSPAS-SARSAT Channels
	UHF FM-Band	406.100 - 410.000 MHz 406.100 - 470.000 MHz (Option)
Receive Frequency Tuning Steps:	VHF Air Band	8.33 kHz
	Marine Band	5 kHz
	UHF Air Band	25 kHz
	COSPAS-SARSAT	8.33 kHz
	UHF FM-Band	5 kHz
Bearing Sensitivity:	VHF Air Band ±5° bearing fluctuation	≤ 4µV/m / 2,5µV/m typical
	Marine Band ±5° bearing fluctuation	≤ 3µV/m / 2µV/m typical
	UHF Air Band ±5° bearing fluctuation	≤ 6µV/m / 4µV/m typical
	COSPAS-SARSAT ±5° bearing fluctuation	≤ 6µV/m / 4µV/m typical
	UHF FM-Band ±5° bearing fluctuation	≤ 6µV/m / 4µV/m typical
Response Time[2]:		≤ 50 ms typical
Power Supply Antenna Unit:	Input Voltage	12…30 V DC
Power Pack Recommended Battery Types:	Accumulator Batteries Alcaline Batteries	12 x 1.2 V NiMH, 4500 mAh 12 x 1.5 V Type C
Operational Time (Antenna Unit):	with 12 x 1.2V NiMH, 4500 mAh	> 8 h
Data Interface:	Tablet - Antenna Unit	WiFi

Mechanical characteristics

	Carrying Frame:	Antenna Unit:	Battery Pack:	Car Kit:	Complete System[3]:
Weight:	5.5 kg	2.3 kg	1.8 kg	6.3 kg	9.34 kg
Operating temperature:		- 40° C to + 60° C			- 20° C to + 60° C
Storage temperature:		- 55° C to + 80° C			- 30° C to + 80° C
Ingress protection:		IP 67	IP 67		see tablet spec.
Dimensions:		Ø 270 mm x 185 mm			

[1] Measured with unmodulated, undisturbed wave field at field strength ≥ 20 dB above sensitivity level by changing the angle of incidence with the antenna rotating on a revolving table in order to eliminate environmental influences on the results.

[2] Measured with field strength ≥ 20 dB above sensitivity level. Signals below this level can increase the response time.

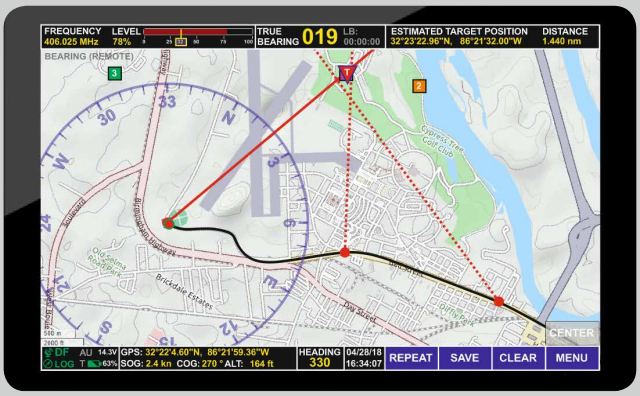
[3] Measured with Samsung Galaxy Tab S3

Errors and omissions excepted

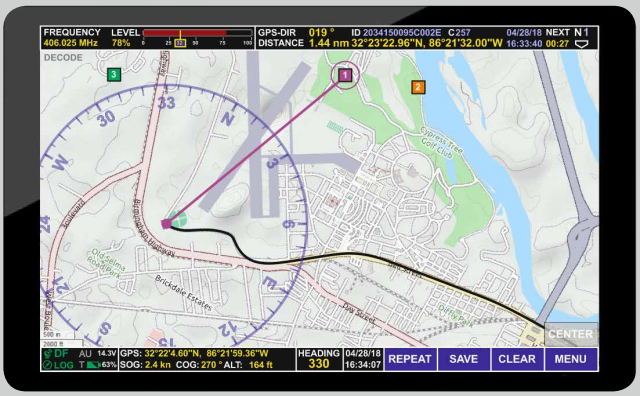
Approved Tablets

Galaxy Tab S3 (Samsung):	ALGIZ RT7 (Handheld):	LR7 (Roda):
• Model number: SM-T825	• Processor: Cortex A53, 1.2 GHz	• Processor: Intel Bay Trail-I E3827, 1.75 GHz
• Screen size: 9.7''	• Screen size: 7''	• Screen size: 10.1''
• Screen resolution: 1536x2048 pixels	• Screen resolution: 1024x600 pixels	• Screen resolution: 1920x1200 pixels
• OS: Android 7.0	• OS: Android 6.0	• OS: Android 5.1

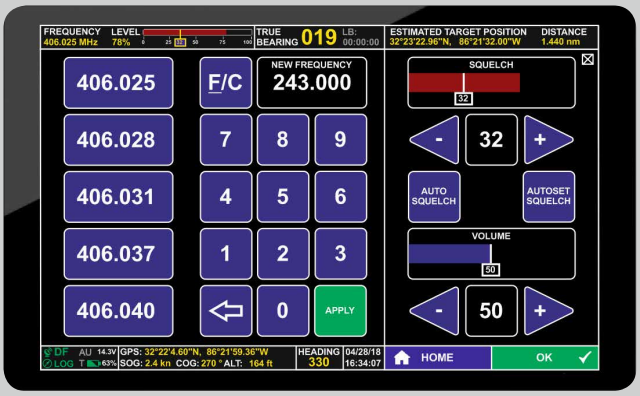
DF-Scout Software



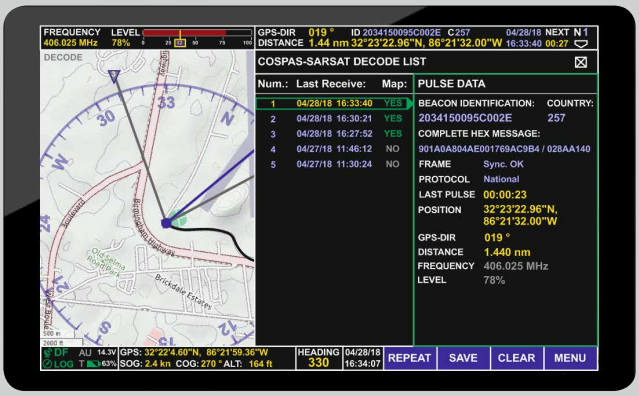
Triangulation from different positions



GPS-Position of COSPAS-SARSAT beacon decoded

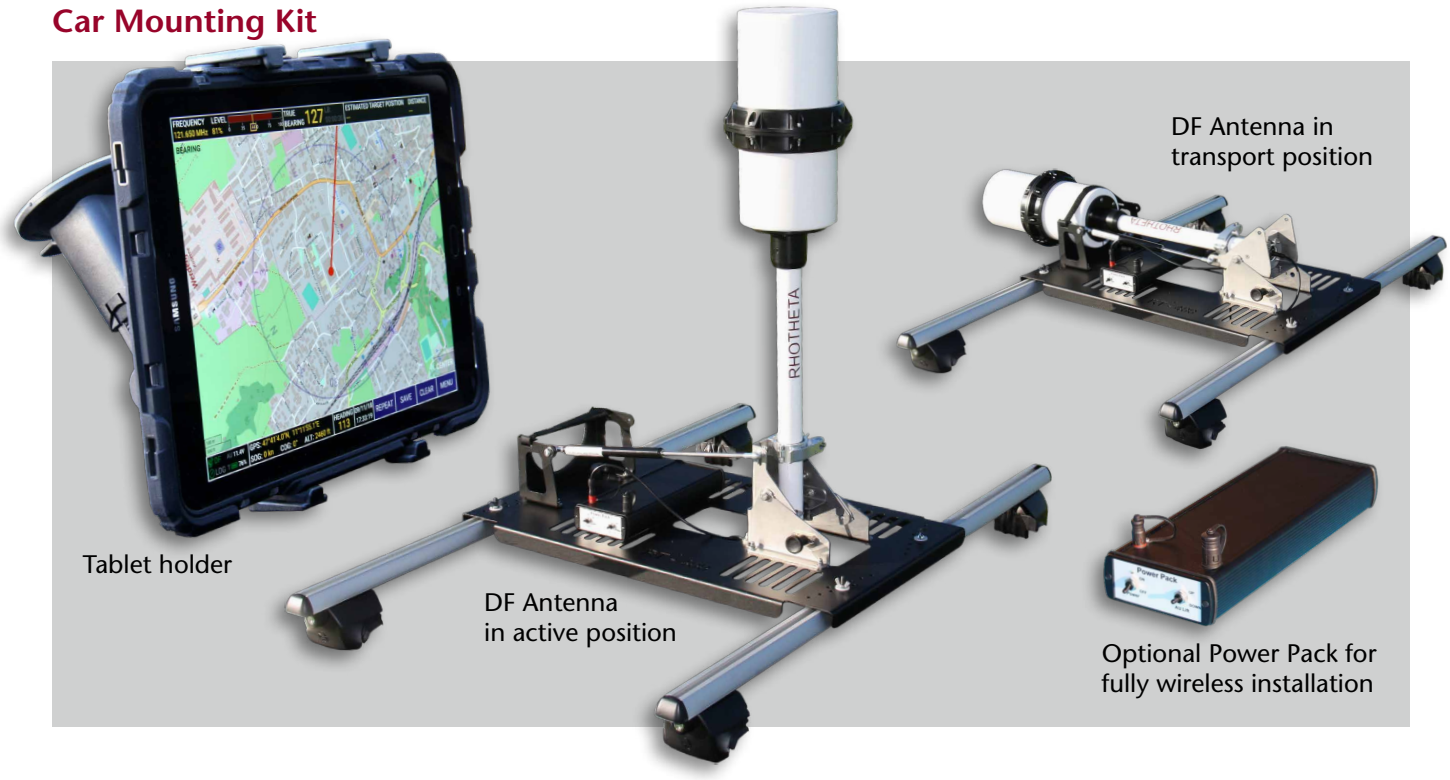


Frequency, squelch and volume setup



List of COSPAS-SARSAT messages received

Car Mounting Kit



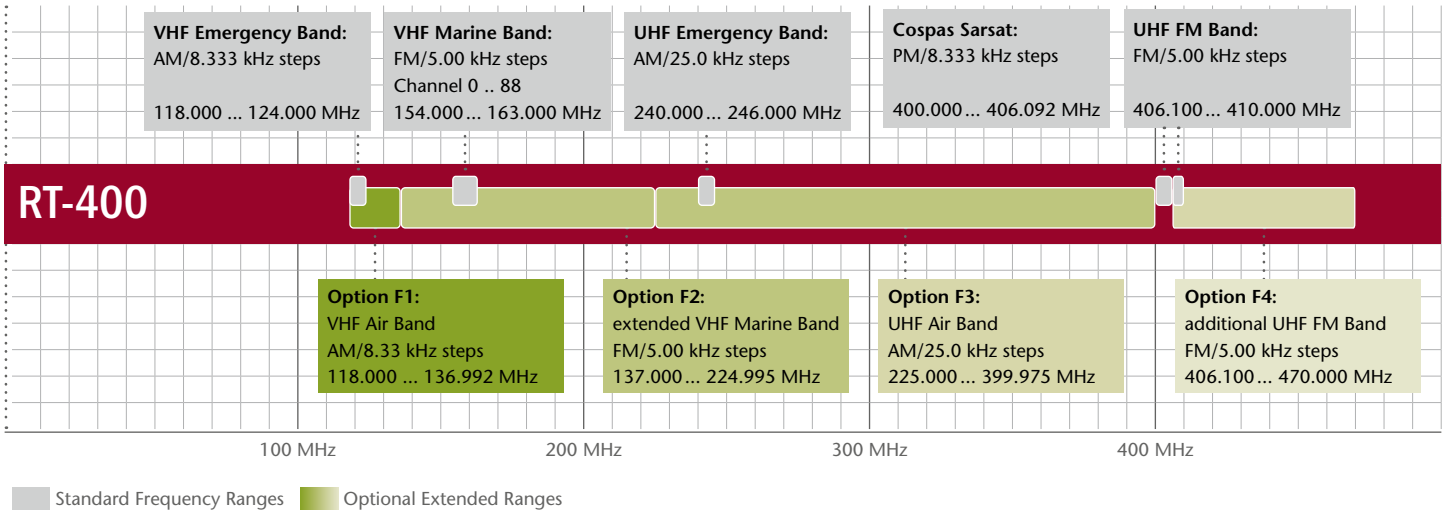
Tablet holder

DF Antenna in transport position

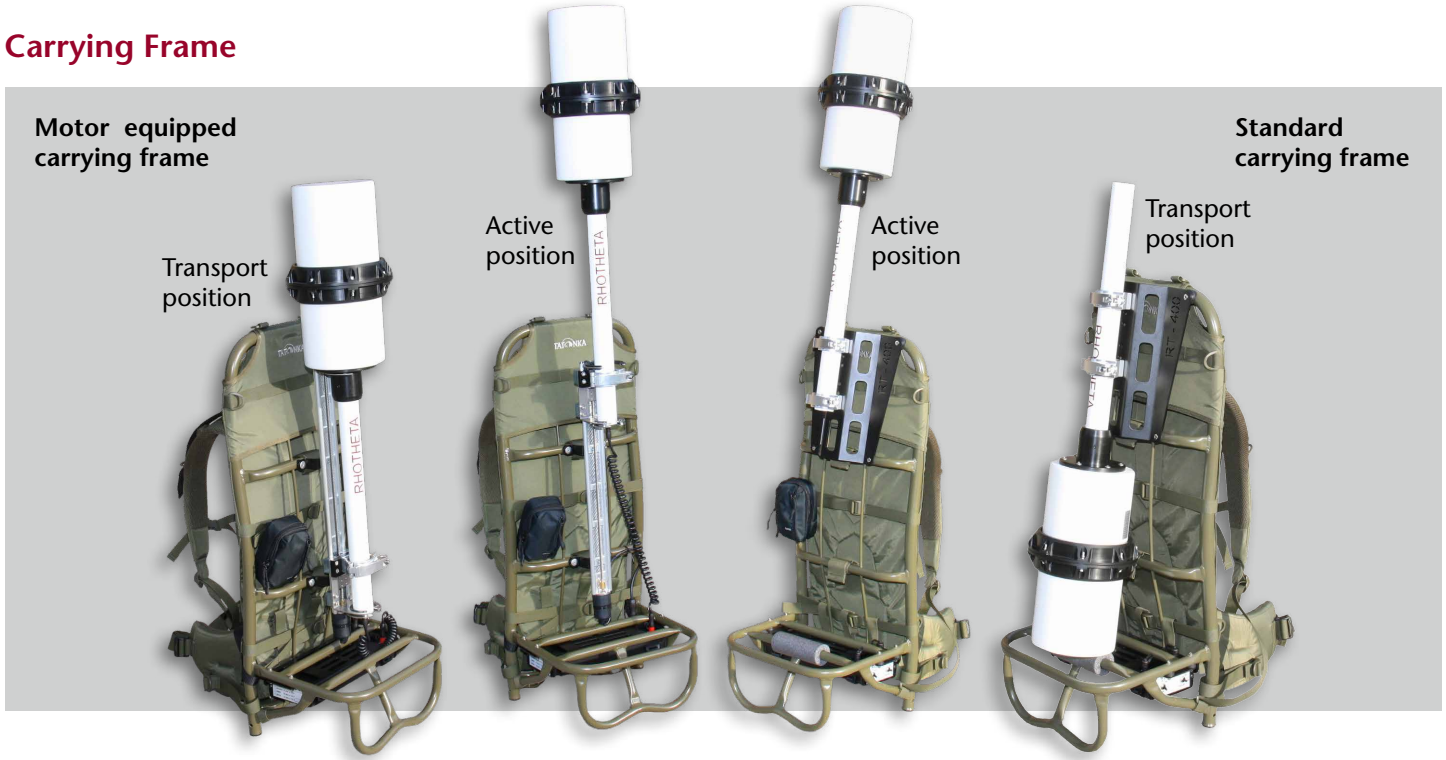
DF Antenna in active position

Optional Power Pack for fully wireless installation

Frequency options



Carrying Frame



All product specifications subject to change without notice. LoJack is a registered trademark of LoJack Cooperation.

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Coordinates: N 47.6842° / E 11.1982° / (WGS 84)

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