

SA-920

Installation Guide



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Version: 2.4

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1. Product Overview

1.1 Main Features

- **SiRF starIII Chipset 20 Channels all in view tracking**
- **High Sensitivity -159dBm**
- **Reacquisition Time: 0.1 second**
- **Support Standard NMEA-0183 at 4800 bps baud rate**
- **On-board rechargeable battery sustained real-time clock and memory for fast satellite acquisition during power-up**
- **Interference filter to major VHF channels of marine radar**
- **Perfect Static Drift for both of speed and course**
- **Magnetic Declination compensation**
- **Is protected against reverse polarity voltage**
- **Support USB or RS-232 or RS-422 interface**

1.2 Applications

- **Marine Navigation**
- **Fishing Aid**
- **Fleet Management**
- **Time Synchronization Control**
- **Vehicle Tracking**
- **Robotic**

1.3 Package Content

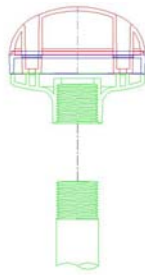
When open the package, please check it includes the following items. Contact your dealer immediately if any item is missing or damaged.

- **SA-920 GPS Receiver with Cable**
- **Thread Adaptor**
- **Screw Pairs**
- **Mounting-Hole-Drill Alignment Mask**
- **CD Manual**

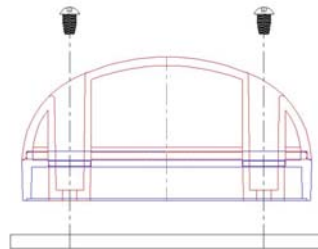
2. Installation

2.1 Mounting Methods

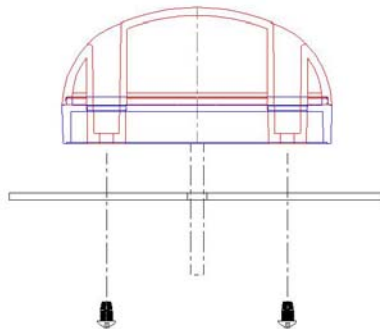
2.1.1 To mount the SA-920, with Thread Adaptor, on a standard cable pole.



2.1.2 To screw the SA-920 on the surface of the plate.

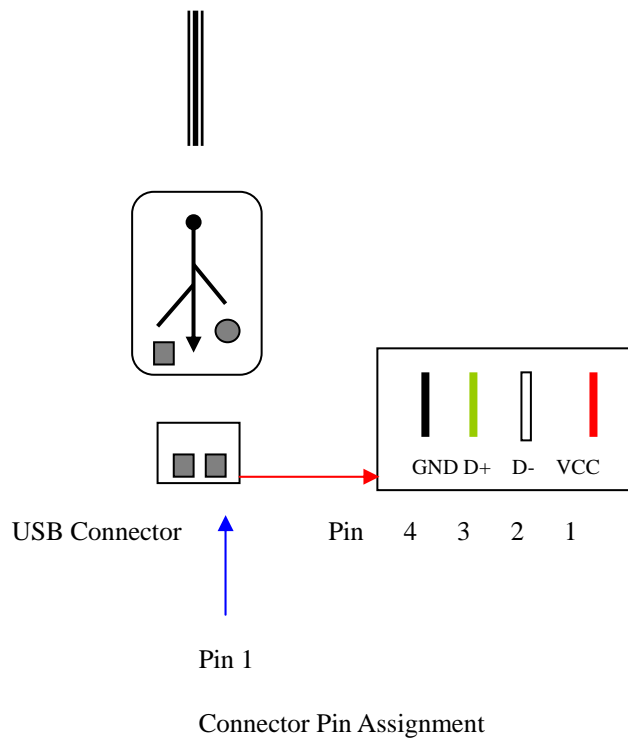


2.1.3 To screw the SA-920 on the surface of a plate from the other side.



2.2 USB Connector Definition

Pin	Function	Color
1	VCC, 5V	Red
2	D-	White
3	D+	Green
4	GND	Black



2.3 Bare Wires Pin Definition

2.3.1 Bare Wires Definition (RS-232) For EverMore Standard



Wire Color	Designation
Violet	NC
Red	VCC, Power Supply (VDC 9V-34V)
Brown	NC
Green	RS-232 Transmit Tx, Output Signal
Blue	NC
White	RS-232 Receiver Rx, Input Signal
Black	Ground
Gray	Shield Wire, Signal Ground

2.3.2 Bare Wires Definition (RS-422) For EverMore Standard



Wire Color	Designation
Violet	NC
Red	VCC, Power Supply (VDC 9V-34V)
Brown	RS-422 Transmit Tx -, Output Signal
Green	RS-422 Transmit Tx+, Output Signal
Blue	RS-422 Receiver Rx -, Input Signal
White	RS-422 Receiver Rx + , Input Signal
Black	Power Ground
Gray	Shield Wire, Signal Ground

3. Technical Specification

Performance Specification

Features	Description
General	L1 1575.42MHz, C/A code, 20-channel all in view tracking
Sensitivity	-159 dBm minimum
Update Rate	1Hz
Accuracy	Position: 3-15m without S/A Velocity: 0.1m/sec without S/A Time: ± 100 ns synchronized to UTC time
WAAS Accuracy	Position: 3m CEP Velocity: 0.05m/sec
Acquisition	Cold start: 42 sec average Warm start: 38 sec average Hot start: 1 sec average
Reacquisition	0.1 second
Datum	WGS- 84
DGPS	WAAS/EGNOS
Dynamics	Altitude: 18,000m Max Velocity: 500m/s Acceleration: 4g Max
Antenna	Built-in Patch Antenna

Environmental Specification

Features	Description
Operation Temperature	-30°C to +80°C degrees Celsius
Storage Temperature	-40°C to +90°C degrees Celsius
Operating Humidity	5% to 95%



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Physical characteristics

Features	Description
Input current	Maximum 100 mA
Dimensions	Diameter: 83.3mm or 3.27-inch, Height: 60mm or 2.36-inch
Weight	8.46oz or 240g

Protocol

Features	Description
Protocols	NMEA-0183 V3.0 at 4800 baud rate , 8-None-1
NMEA messages	Default : GGA, GSA, GSV, RMC, VTG

Interface Specification

Features	Description
Interface	USB or RS-232 or RS-422
Cable Length	USB (6M) , RS-232 (10M) , RS-422 (10M) Optional : RS-422 cable 15M/30M/60M
Power Input	VDC +5V (USB) or VDC 9V-34V (RS-232/RS-422)

Preliminary Specification, Subject To Change without Notice



4. Limited Warranty

The SA-920 GPS receiver is warranted to be defect free in material designed to use and production for one year from the date of purchase. Under normal operation conditions, any failure of this product caused by material/production within the warranted period, it would be replaced with no charge.

5. Appendix

EverMore Website

Welcome to EverMore website at <http://www.emt.com.tw> or <http://www.globalsources.com/gpsevermore.co> for updated product information and drivers download.

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