

SA-320

Installation Guide



Date: Nov., 2004
Version: 1.0

All Rights Reserved

TABLE OF CONTENTS

1. Product Overview.....	3
1.1 Main Features.....	3
1.2 Applications.....	3
1.3 Package Content.....	3
2. Installation.....	4
2.1 Mounting methods.....	4
2.2 Cable Wires Definition.....	5
3. Technical Specification.....	5
4. Limited Warranty.....	7
5. Appendix.....	7

1. Product Overview

1.1 Main Features

- **Built-in patch antenna**
- **12 parallel tracking channels**
- **Fast TTFF and low power consumption**
- **On-board rechargeable battery sustained Real-Time Clock and control parameters memory for fast satellite acquisition during power-up**
- **Automatic cold start without user reset**
- **Interference filter to major VHF channels of marine radar**
- **WAAS compliant with EGNOS support**

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.

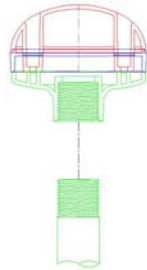
- **Installation Guide and Warranty Card**
- **SA-320 GPS Receiver with Cable**
- **Thread Adaptor**
- **Screw Pairs**

- Mounting-Hole-Drill Alignment Mask
- User CD

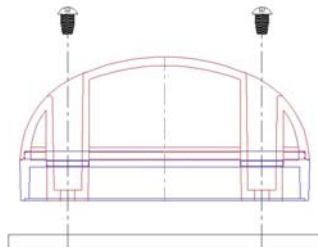
2. Installation

2.1 Mounting Methods

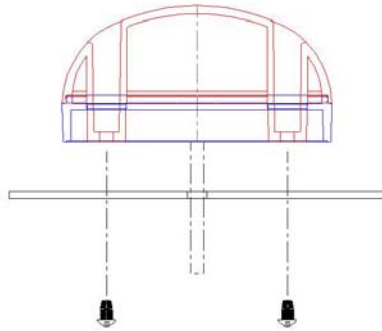
2.1.1 To mount the SA-320, with Thread Adaptor, on a standard cable pole.



2.1.2 To screw the SA-320 on the surface of the plate.



2.1.3 To screw the SA-320 on the surface of a plate from the other side.



2.2 Cable Wires Definition

Wire Color	Designation
Green	PGND, Power Ground
Blue	VCC, Power Supply +
Yellow	NC
Brown	RS-232 Transmit Tx, Output Signal
White	NC
Violet	RS-232 Receiver Rx, Input Signal
Black	SGND, Signal Ground

3. Technical Specification

Performance Specification

Features	Description
General	L1 1575.42MHz, C/A code, 12-channel, Carrier-Aided with HWTrack©
Sensitivity	-165dBW minimum
Update Rate	1Hz
Accuracy	Position: 15m CEP without S/A Velocity: 0.1m/sec without S/A Time: ± 1µs
WAAS Accuracy	Position: 5m CEP Velocity: 0.05m/sec



SA-320 Installation Guide

Acquisition	Cold start: < 120sec (typical) Warm start: < 45sec (typical) Hot start: < 15sec
Reacquisition	<100msec
Dynamics	Altitude: -1000m to 18000m Velocity: 500m/sec Acceleration: $\pm 4g$
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%

Physical characteristics

Features	Description
Input current	Maximum 150mA
Dimensions	Diameter: 83.3mm or 3.27-inch, Height: 60mm or 2.36-inch
Weight	8.46oz or 240g

Protocol

Features	Description
Protocols	EverMore at 4800/9600 baud, 8N1 NMEA-0183 v2.20 at 4800 baud
NMEA messages	GGA, GLL, GSA, GSV, RMC, and VTG

Interface Specification

Features	Description
Interface	RS-232C



Power Input	+9V TO +34V DC
-------------	----------------

Preliminary Specification, Subject To Change without Notice

4. Limited Warranty

The SA-320 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.

© EverMore Technology, Inc. All rights reserved.

Not to be reproduced in whole or part for any purpose without written permission of EverMore Technology Inc. Information provided by EverMore Technology Inc. is believed to be accurate and reliable. However, no responsibility is assumed by EverMore Technology Inc. for its use. EverMore Technology Inc. reserves the right to change specification at any time without notice.