ORBIT

OceanTRx™

OceanTRx7™

Maritime Stabilized VSAT System

Technical Note

GPS Module

Document: TEC32-1664-008,

September 2013

COMMUNICATION WITHOUT BOUNDARIES

Orbit Communication Systems Ltd. P.O.B. 42504, Israel, Tel: +(972) 9 892 2777, Fax: +(972) 9 885 5944 **www.orbit-cs.com**

Copyright

Disclaimer of Warranty

Orbit Communication Systems Ltd. has made every effort to ensure the accuracy and relevancy of the material in this document. It is expected that all sections of this document will be read thoroughly and that all information and procedures should be fully understood.

However, Orbit Communication Systems Ltd. assumes no responsibility for any errors that may appear in this document, and reserves the right to make changes to the document without notice.

Orbit Communication Systems Ltd. makes no warranty of any kind in regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Orbit Communication Systems Ltd. disclaims any responsibility for incidental or consequential damages in connection with the furnishing, performance or use of this document.

Parts of this document may be based on hardware or software developed by third-party vendors. Orbit Communication Systems Ltd. disclaims any responsibility for the accuracy of this document with respect to such hardware and software, and assumes no responsibility for incidental or consequential damages arising due to discrepancies between this document and such hardware or software.

Revision History and Control

Revision History

Rev #	Modified by	Date	Comments
.	Albert	September 24, 2013	New Release

About this Manual

This manual is designed to guide you through the procedures required for maintaining the `GPS MODULE` for the OceanTRx7™ Maritime Satellite Communication System.

Text Conventions

Style	Indicates	Example
Text	Normal descriptive text	Contents
`Text`	Words or figures that appear on the screen or that should be typed The name of a file or directory	`System Status`
`<Text>`	A key to be pressed	`<ESC>`
`TEXT`	The name of a hardware component	`ANTENNA`
Text	The name of a GUI element	**Operation Screen**
➢	The description of a procedure	➢ **To configure…**

Notations

	Indicates important information that should be noted.
	Indicates a potential hazard.
	Indicates the safest method of installation or an operation that *must be adhered to.*

Effective Releases

This document is effective for both OrBand™ and OceanTRx7™ Maritime Satellite Communication Systems.

For a description of the changes between OrBand™ and OceanTRx7™, refer to the *OceanTRx7™ Maritime Satellite Communication System Release Notes*.

Table of Contents

1 Introduction

1.1 Purpose

The purpose of this Technical Note is to provide detailed instructions on how to replace and configure a GPS MODULE.

1.2 GPS Module Description

The GPS MODULE is mounted on the ACU and servo driver POWER SUPPLY MODULE COVER and connected directly to the ACU.

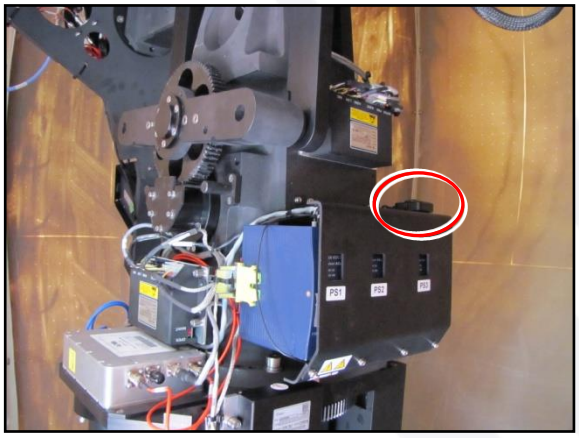


Figure 1-1: GPS Module OceanTRx7™

1.3 Spare Kit Contents

The following table provides a list of the parts in the GPS MODULE spare kit.

Table 1-1: Spare Part Kit Contents

KIT32-1664-012-SP		
P/N	**Description**	**Quantity**
E16000006	GPS MOUSE 5V IND USB-A MALE, CABLE LENGTH 2.5M	1
E18000017	DUAL LOOK, RECLOSABLE CLEAR = 45 MTR	1

1.4 Required Tools and Parts

The following table provides a list of tools and customer-supplied parts that are needed to perform the procedures in this Technical Note.

Table 1-2: Required Tools and Parts

Tool/Part Name	Notes	Figure
Tie cutter		
Cable ties		

2 Preliminary Procedures

The following preliminary procedure must be performed before replacing the GPS MODULE:

1. Open the RADOME hatch.
2. Switch off the ADE POWER BOX at the ANTENNA PEDESTAL base (located inside the RADOME).
3. Toggle the SERVO DRIVER MAINT/OPER switch on the servo driver to MAINT position to release the brake and allows smooth movement of the axis .
4. Manually rotate the PEDESTAL AXES to gain convenient access to the serviced unit.

In the following procedures, be very careful when tightening and loosening the screws with which the parts are assembled and attached to the system. Some of these screws are delicate and can be damaged by excess force. When using an Allen key make sure to insert the key all the way into the screw head to avoid thread stripping.

WARNING!

The Utility Outlet is connected directly to the vessel's AC voltage input terminals (125 VAC / 250 VAC). Therefore, there still exists live voltage at the Utility Outlet after disconnecting the power supply to the ADE using the Mains Power On/Off Switch.

Only qualified and authorized personnel are allowed to carry out system service/maintenance procedures.

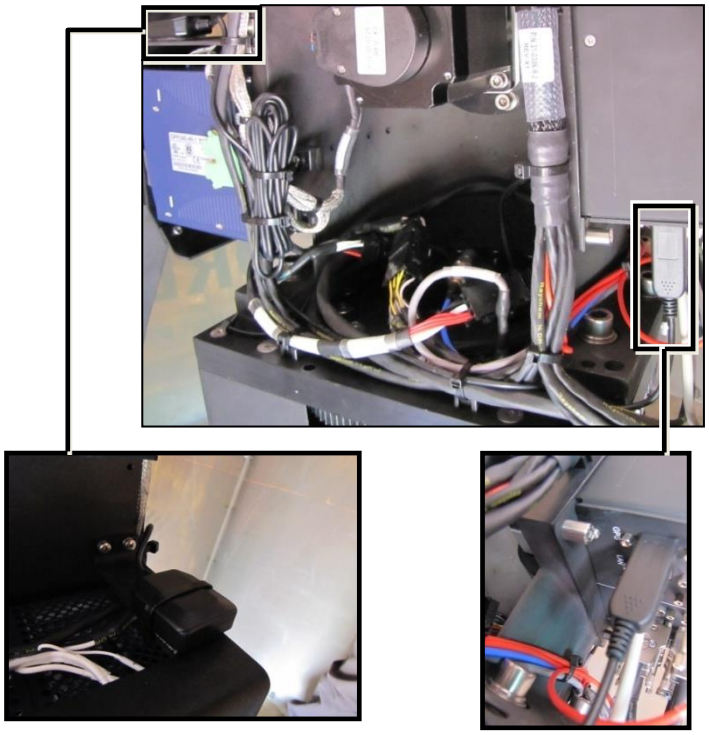
3 Replacing the GPS Module

3.1 Removing the GPS Module (OceanTRx7™)

Step 1

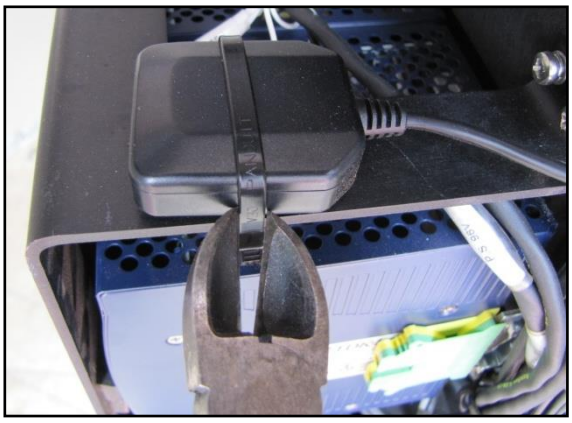
Locate `GPS MODULE`.

Locate `GPS MODULE USB` plug.



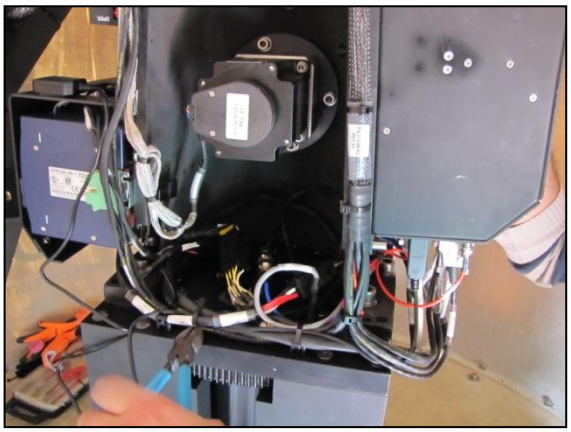
Step 2

Cut tie wrap securing `GPS MODULE`.



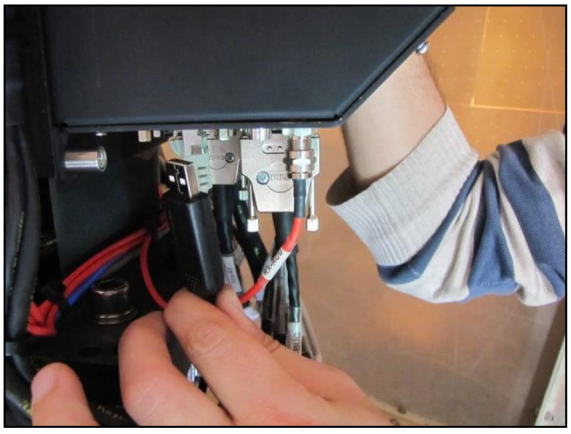
Step 3

Cut carefully all tie wraps securing GPS MODULE cable.



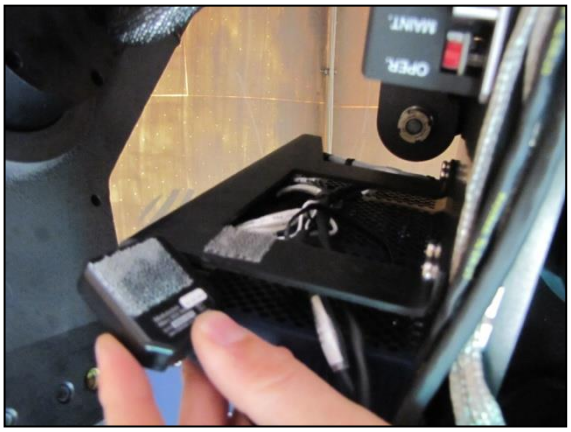
Step 4

Remove GPS USB plug.



Step 5

Remove GPS MODULE.

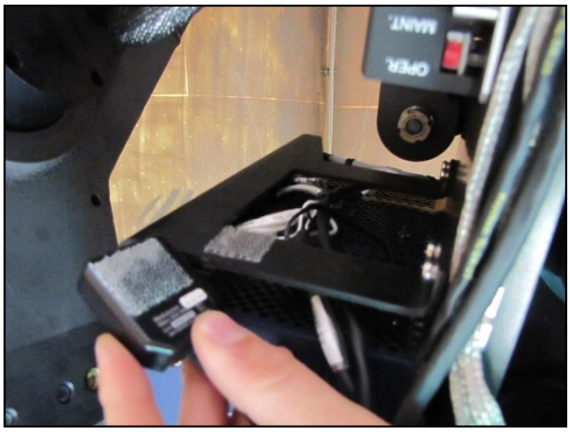


Scotch securing GPS MODULE to its place.

3.2 Installing a GPS Module

Step 1

Apply scotch and install new GPS MODULE.



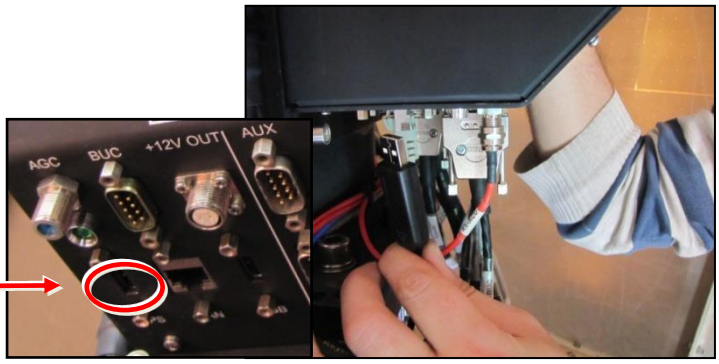
Step 2

Use a tie wrap to secure GPS MODULE on the PSU cover.

Step 3

Connect GPS USB plug to the ACU.

The GPS USB socket on the ACU.



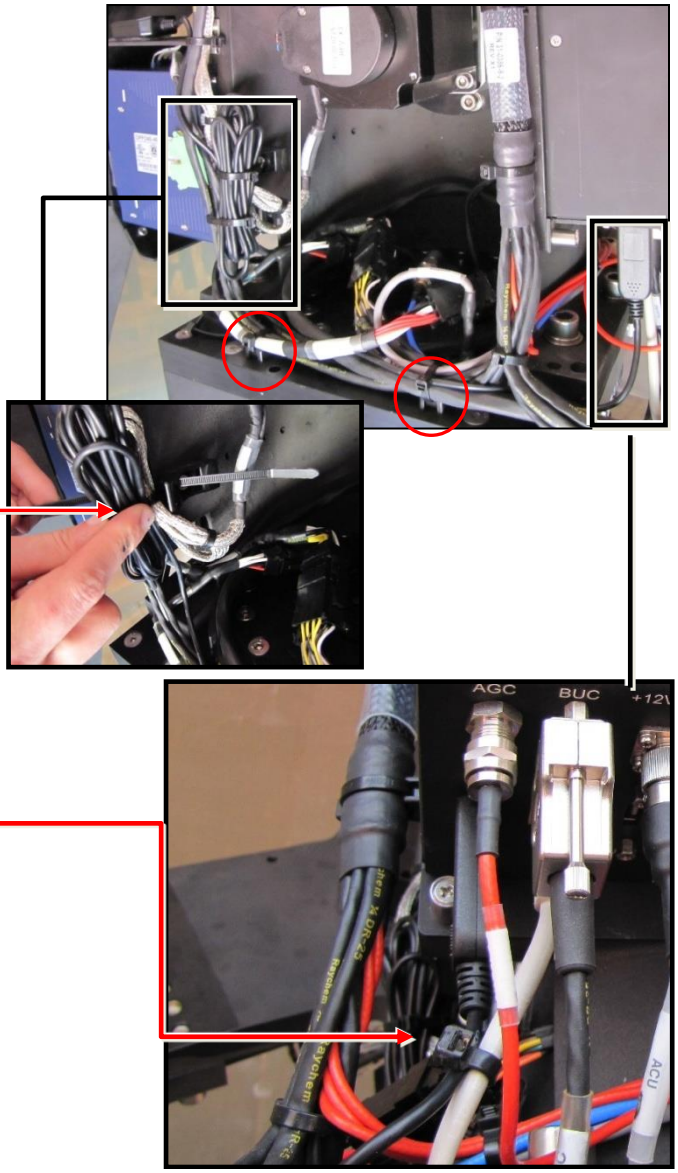
Step 4

Use tie wraps to secure GPS MODULE cable, use designated tie wraps locations.

Start from GPS MODULE PLUG side and work your way towards GPS MODULE.

Role spare cable and secure as described.

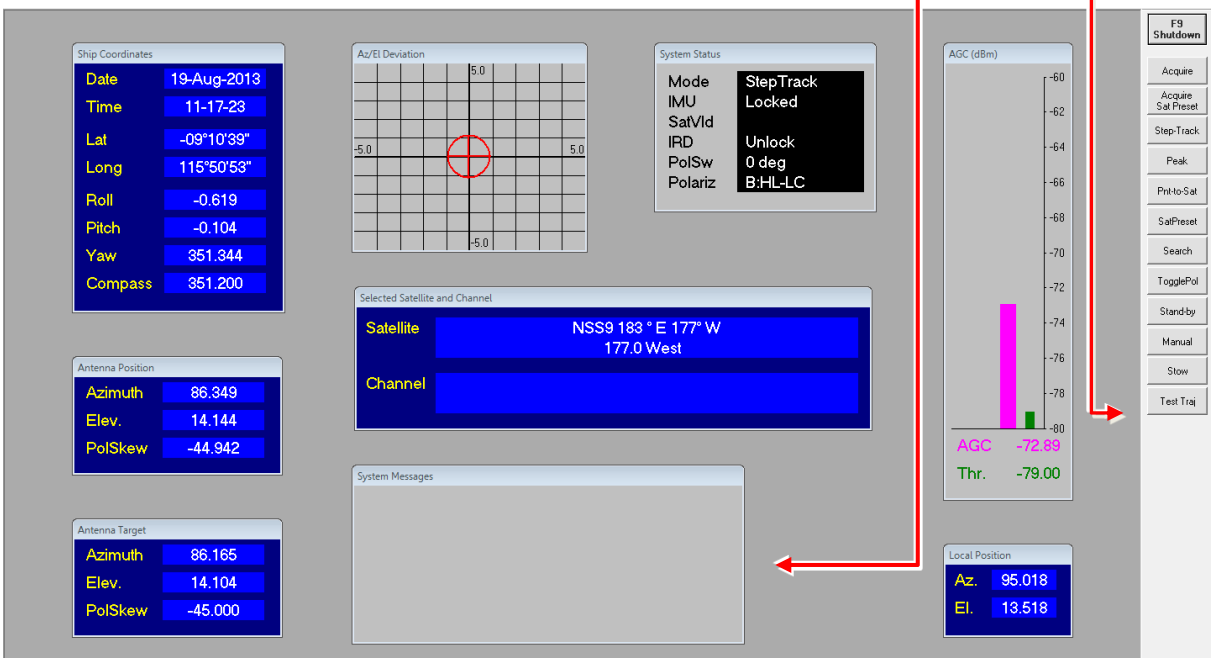
Pay special attention securing the GPS USB plug to the LAN cable using a tie wrap!



4 Performing Verification Test

➢ **To Perform Verification Test:**

1. Start up the system (see the *OceanTRx7™ Installation and Operation Manual* for instructions).
2. Verify **Lat** and **Long** values are accurate. Compare it with ship GPS system
3. To make sure the technical process completed successfully click on **Test Traj.**
4. Make sure no error messages appear in the **System messages** window.



5.

Wait, at least 4 min to allow GPS MODULE to obtain satellite GPS fix.