OceanTRx7™

Maritime Stabilized VSAT System

Technical Note

Above Deck Mux (ADMx)

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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**

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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 Above Deck Mux (ADMX) 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 an ADMX.

1.2 Principles

The following principles must be followed when performing the procedures in this Technical Note.

1.2.1 Torque Table

The following table provides the torque that should be used when tightening screws of the listed types, as relevant.

Table 1-1: Torque Values

Screw Type	Torque
M8	$25^{N}/_{m}$
M6	$10.2^{N}/_{m}$
M5	$6^{N}/_{m}$
M4	$2.5^{N}/_{m}$
M3	$1.35^{N}/_{m}$

1.3 ADMx Description

The ADMX (mounted on the PEDESTAL) and the BDMX (inside the BDE CCU) multiplexer modules form the communications link between the ADE and BDE, minimizing the physical connection to a single coaxial cable (LMR-200, LMR-400 or LMR-600, depending on the required cable length).

The ADMX also provides integral amplification and attenuation of the Tx and Rx paths.

Figure 1-1: ADMx

1.4 Spare Kit Contents

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

Table 1-2: Spare Part Kit Contents

KIT32-1664-008-SP		
P/N	**Description**	**Quantity**
25-1184-2	ADMX - FOR AL-7103/7107-SYS	1
H04014071002	SCKT FH90 SCR M4X10 STST	4
H04015071202	SCKT FH90 SCR M5X12 STST	4

1.5 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 1-3: Required Tools and Parts

Tool/Part Name	Notes	Figure
Open/ring wrench 13, 8 mm		
Allen keys: 2.5, 3mm		

2 Preliminary Procedures

➢ **To Perform Preliminary Procedures:**

The preliminary procedures described below must be performed before replacing the ADMX.

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.

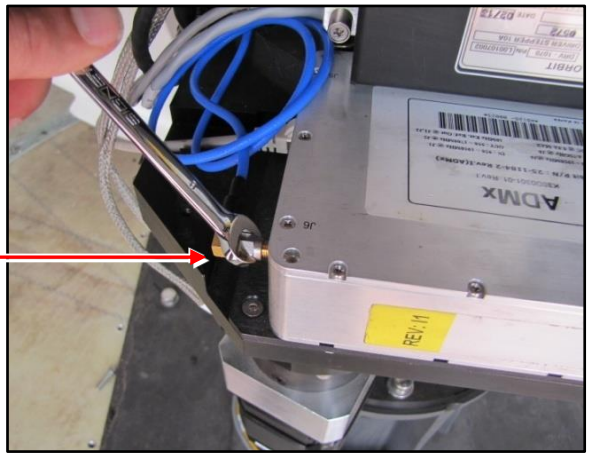
3 Replacing the ADMx

3.1 Removing the ADMx

➢ **To Remove the ADMx:**

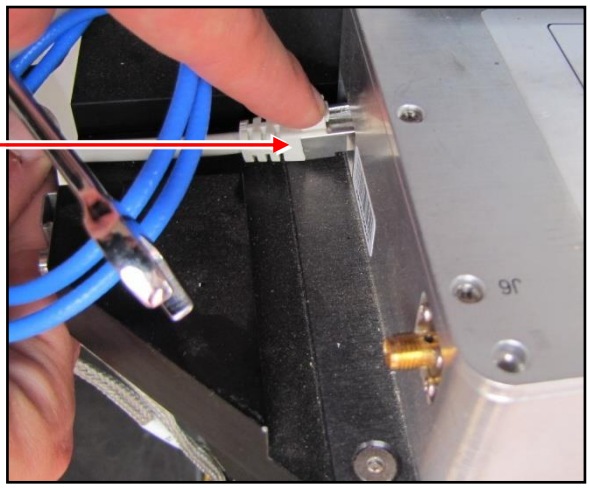
Step 1

Using an 8mm Open wrench, disconnect the J6 RF cable from the ADMX.



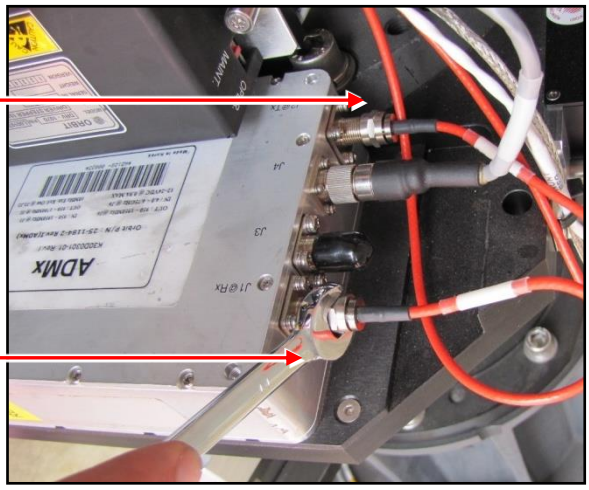
Step 2

Unlock and remove the LAN cable.



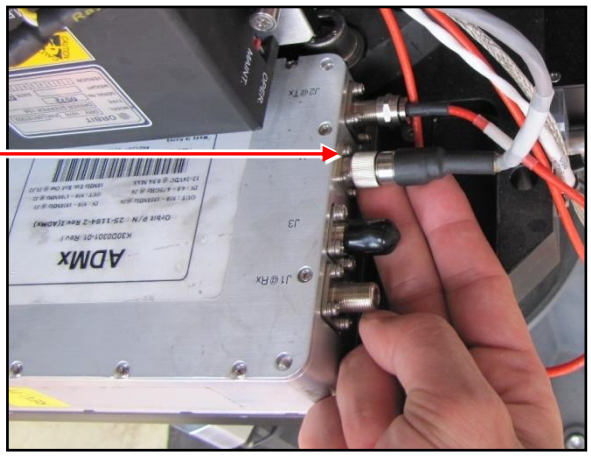
Step 3

Using an 8mm Open Wrench, disconnect the two described RF cable from the ADMX.



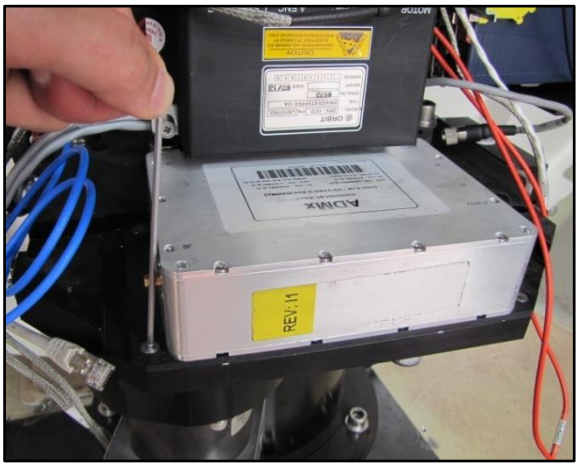
Step 4

Untighten remove the J4 connector by hand.



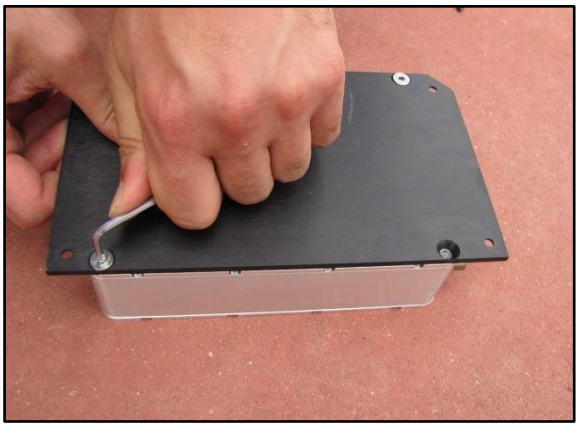
Step 5

Use a 2.5mm Allen key to remove the four screws securing the ADMX mounting plate.



Step 6

Use a 3mm Allen key to remove the four screws securing the ADMX to its mounting plate.



3.2 Installing an ADMx

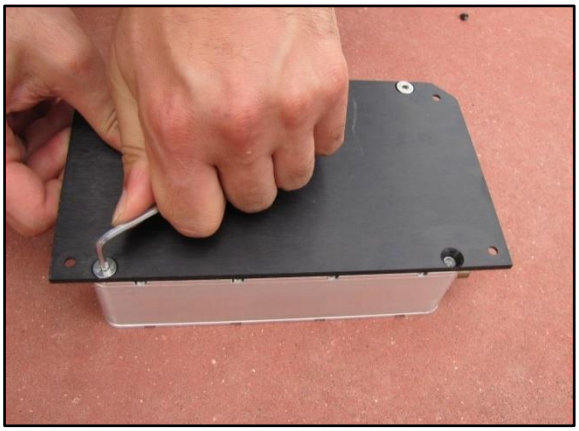
Step 1

Position the mounting plate as described.

Note the plate's angle.

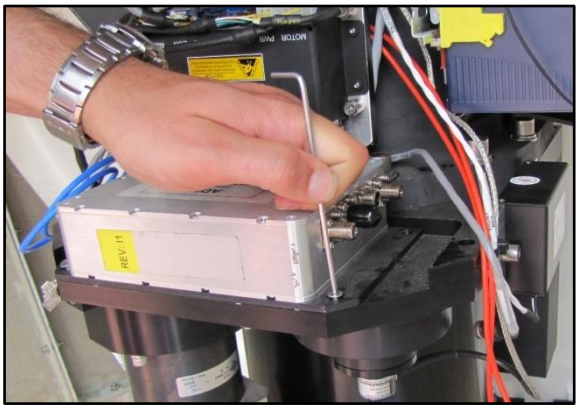
Step 2

Secure the new ADMX to its mounting plate using a 3mm Allen key.



Step 3

Mount the ADMX mounting plate in its place on the PEDESTAL and secure it using a 2.5mm Allen key.



Step 4

Attach J4 plug to the ADMX

Tight by hand.

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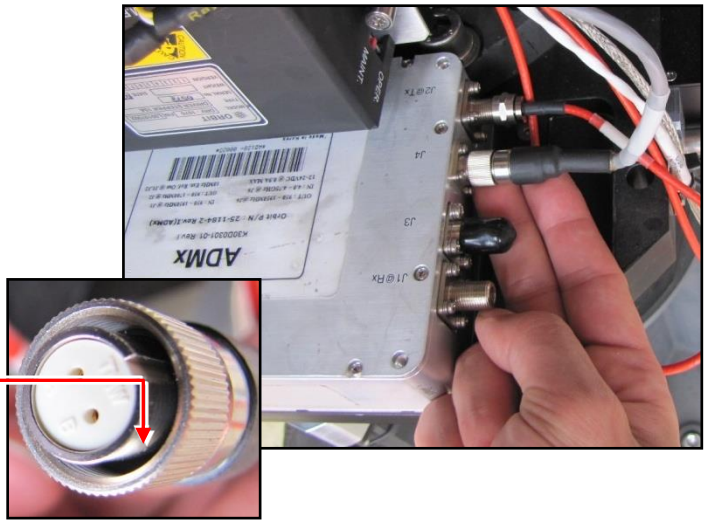
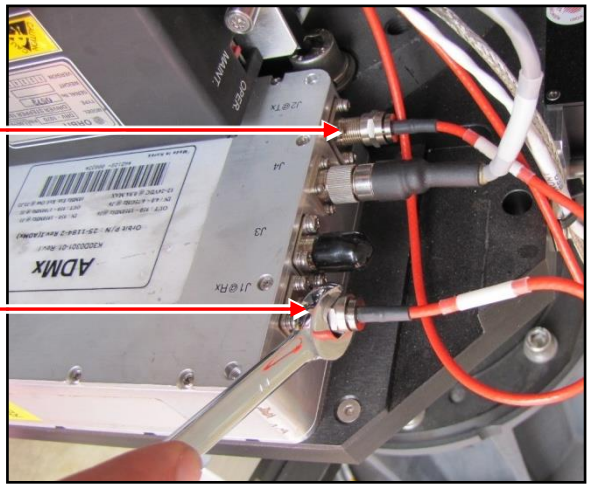


Mind the plugs pins and lead!

Step 5

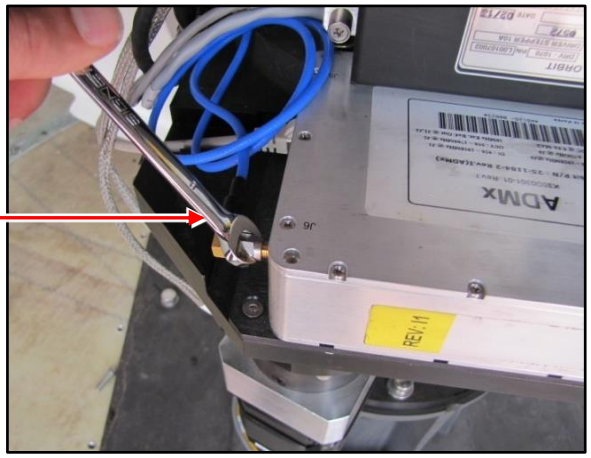
Connect and tighten the TX red RF cable to J2.

Connect and tighten the RX red RF cable to J1.



Step 6

Reconnect and tighten blue RF cable to the ADMX.



Step 7

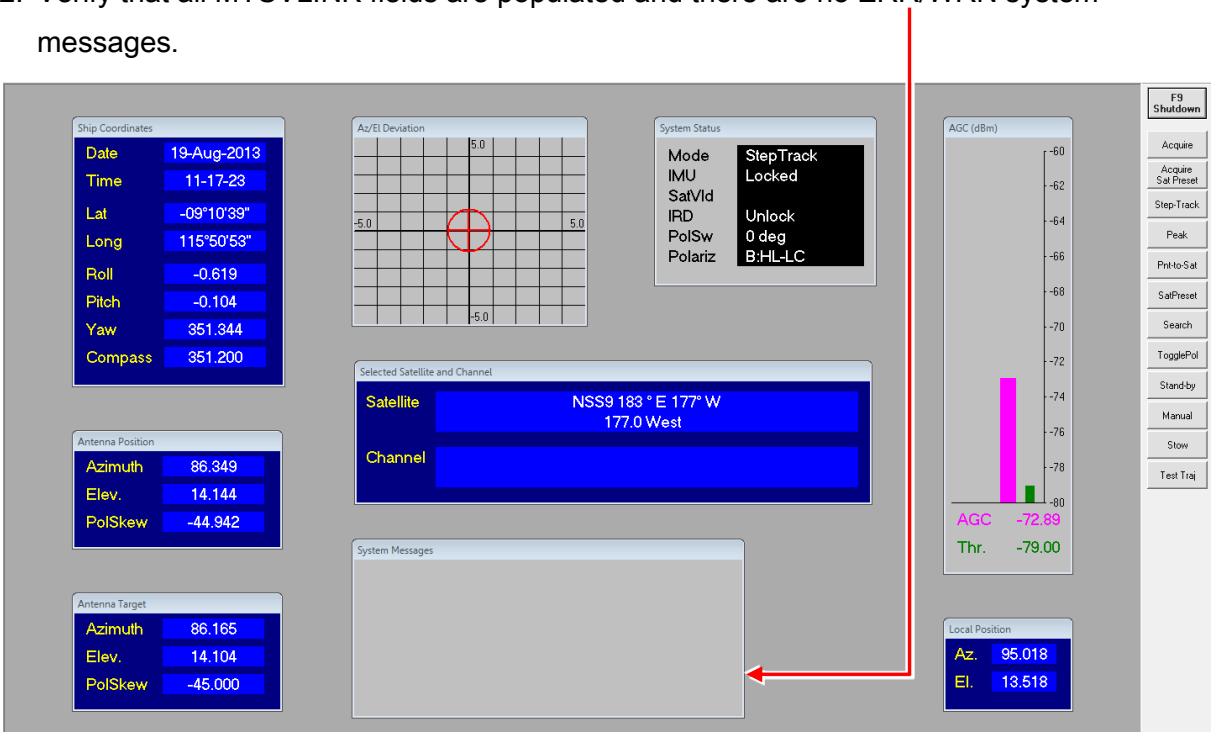
Reconnect the LAN cable to the `ADMX`.

4 Perform Verification Test

➢ **To Perform Verification Test:**

After the ADMX has been replaced, perform the following test procedures to verify system functioning.

1. Start up the system (see the *OceanTRx7™ Installation and Operation Manual*).
2. Verify that all MTSVLINK fields are populated and there are no ERR/WRN system messages.



3. Acquire satellite and verify you have normal AGC level.
4. Check with the NOC and confirm the modem's RF parameters are nominal for the service.