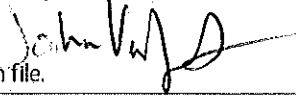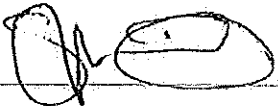# Field Service Spares Replacement Procedure – Media Xchange Port (MXP) PCB Kit

Approval:

Approving Authority	Signature	Date
Doc Control:	Ron Chaffee / Signature on file.	5-30-11
Assistant Service Manager, Global	John VanderJagt / Signature on file.	5/30/12
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Revision History

Rev.	ECO	Description of Change	Date
A	9487	Initial release	05-10-2012

Field Service Spares Procedure – Replacement Media Xchange Port PCB Kit
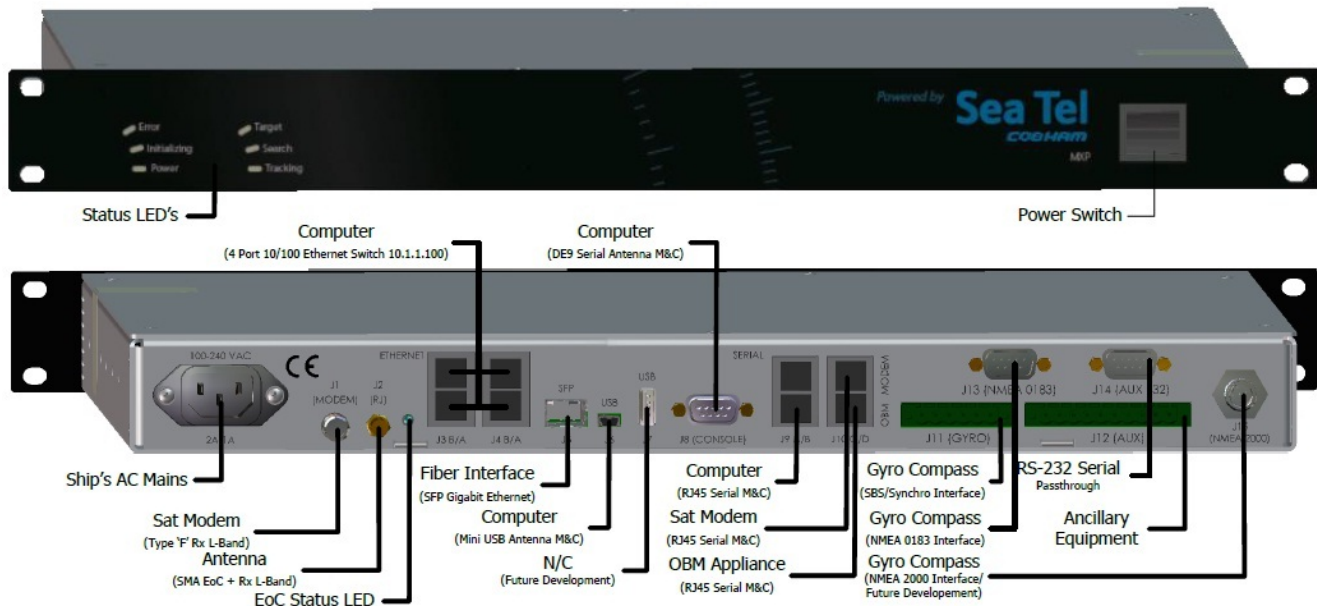
1.   Brief Summary:

Troubleshooting document for diagnosing a fault with and replacing the media exchange port (MXP) PCB.

2.   Checklist:

- Verify Communications
- Verify IP Connection
- Fix Mode

3.   Theory of Operation:

The MXP is an interface into the integrated control unit ICU for configuring the pedestal settings and satellite tracking settings. An Ethernet connection is used to log into the unit via a web browser to access and configure the antenna settings as well as viewing errors, error log files, running diagnostic graphs and functional tests. Communications from the MXP are sent to and from the ICU via Ethernet over coax (EoC). With the tracking receiver integrated into the above decks the ICU will then take the receive signal from the LNB and pass it down the coax along with the EoC communications to the MXP so it can be fed into the satellite modem. The connections to the MXP are as follows:

4.   Communication Diagnostics (EoC):

The MXP and ICU both contain a diagnostic LED to verify the status of the systems communications. One of the EoC (Ethernet over Coax) LEDs will blink to verify the status of the communications between the ADE and BDE. Based on which unit (MXP or ICU) has sent the verification command will depend on which once of the EoC LED's is blinking, if neither of the LEDs are blinking then further diagnostics needs to be undertaken.

5.   Data Corruption:

If the MXP corrupts its data when shut down or loses its power it will repair itself when it's reinitialized. The sea tel logo will flash which means the MXP is repairing its corrupt files. During this time no other LEDs will be illuminated and the unit should be left powered to run these tests and repair itself (which can take up to 3 minutes).

6.   Verify IP Address:

The Default IP address of the J3 Ethernet port is used for access to the MXP is: 192.168.30.195. If for some reason the port of the laptop has been verified to work and its IP settings are correctly configured then there is the potential that the IP address of the port has been reconfigured. Progterm can be used to serial into the j8 (console) port using a straight through serial cable, to verify the IP address of the port.

7.   Replacing the MXP PCB:
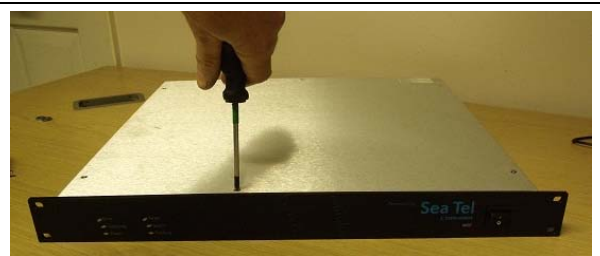
7.1.   Tools.

- #1 Phillips Screwdriver
- 1/2" Socket/Wrench
- 5/16" Socket/Wrench
- 3/16" Socket/Wrench
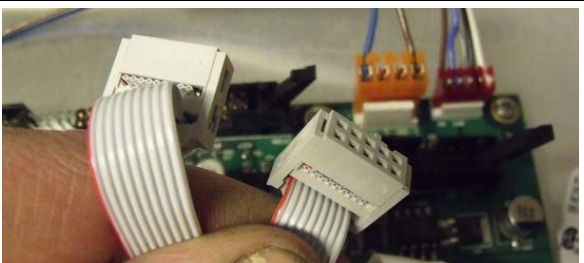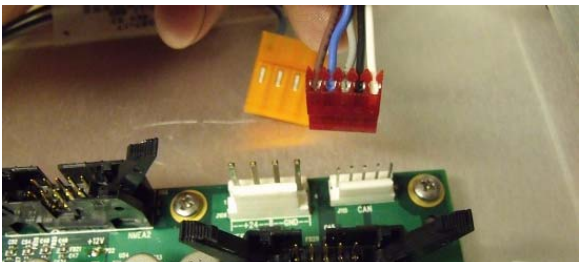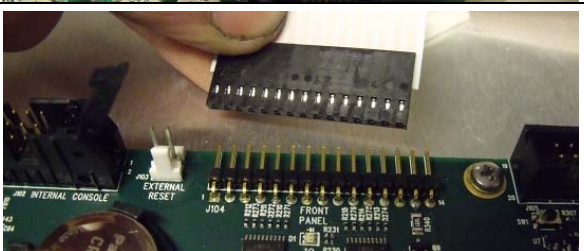- Loctite 242/248

7.2.   Procedure.

Procedure for replacing the media exchange port PCB, Sea Tel kit part number: 136738 (MXP PCB kit part number: 133373-1).

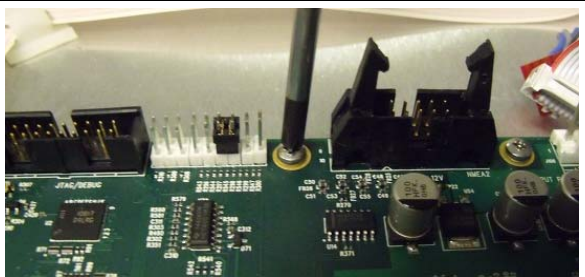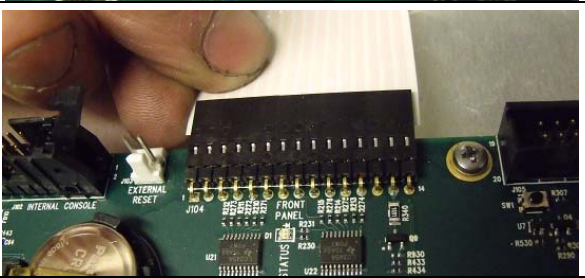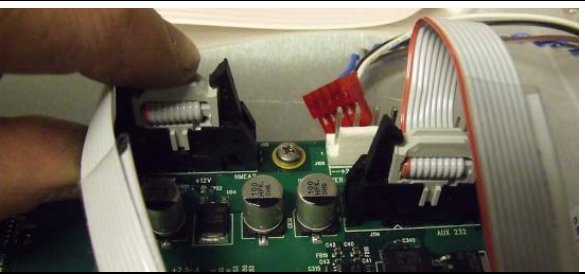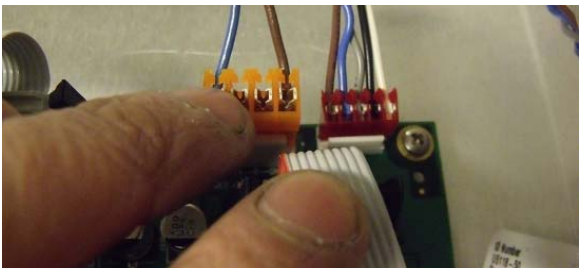|	
Caution: Disconnect the AC voltage input from the MXP before following this procedure. 1. Using a #1 Phillips screwdriver remove the 6 screws securing the lid of the MXP. Save the hardware for future use.	

2. Disconnect the two ribbon cables from the MXP PCB, noting there orientation.	
3. Disconnect the IDC connectors from the MXP PCB.	
4. Disconnect the front panel connector from the MXP PCB by hand.	
5. Using a 1/2" drive socket/wrench remove the nut and star washer securing the J1 modem connection to the rear of the MXP. Save the hardware for future use.	
6. Using a 5/16" socket/wrench remove the nut and star washer securing the J2 rotary joint connection from the rear of the MXP. Save the hardware for future use.	
7. Now using a 3/16" socket/wrench remove the two standoff securing the J8 console port D-sub connector to the rear of the MXP. Save the hardware for future use.	

8. Using a #1 Phillips screwdriver remove the 12 screws securing the MXP PCB.	
9. Install the replacement MXP PCB using the 12 new screws provided in the kit. Apply Loctite 242/248 to the threads.	
10. Connect the display panel connector to the replacement MXP PCB.	
11. Connect the ribbon cables to the replacement MXP PCB.	
12. Connect the IDC connectors to the replacement MXP PCB.	

13. Using a 1/2" socket/wrench install the nut and star washer to the J1 modem connector on the rear of the MXP. 14. Using a 5/16" socket/wrench install the nut and star washer to the J2 rotary joint connector on the rear of the MXP.	
15. Using a 3/16" socket install the standoffs to secure the J8 console port of the rear f the MXP. *Note:* It's advisable to tighten the socket by hand to avoid damaging the threads of the standoffs.	
16. Reinstall the lid of the MXP using the 6 screws removed in step 1 of this procedure. Apply Loctite 242/248 to the threads.	