
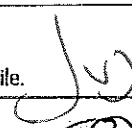
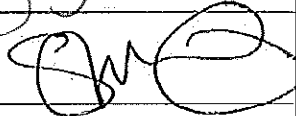


Field Service Spares Replacement Procedure – Codan 8W BUC

Approval:

Approving Authority	Signature	Date
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Revision History

Rev.	ECO	Description of Change	Date
A	8798	Initial release	08-12-2011
B	9041	Clerical revisions	10-18-2011

Field Service Procedure – Replacement Codan 8W BUC Kit (135372)

1. Brief Summary:

Troubleshooting document for inspecting and replacing the Codan 8W Block Up Converter (BUC) on KU-band VSAT antennas.

2. Theory of Operation:

The Codan 8W BUC is used to convert the L-band signal from the satellite modem into the Ku-band signal waveform which is then transmitted by the antenna.

3. Troubleshooting:

If there is a transmit issue with the system verify that the satellite modem is receiving a valid GPS input.

Is the BUC receiving the 48VDC to power it? If the green LED on the BUC isn't illuminated, troubleshoot the source. This could be provided by a separate power supply or from the below decks on the TX line.

Verify the connections and cabling along the TX path from the satellite modem to the BUC including the rotary joint.

A 10MHz reference is typically sent from the modem to the BUC for stability, verify if this is present (if applicable).

Codan BUCs are supplied with a default attenuation setting in them; verify that this isn't set too high by logging into the BUC using progterm or hyper terminal (please refer to the BUC manual provided with the antenna).

If a the BUC has a fault the red error LED will be illuminated on the unit, refer to the Codan BUC manual provided with the system to diagnose the fault.

4. Replacing the Codan 8W Block Up Converter (BUC):

4.1. Tools.

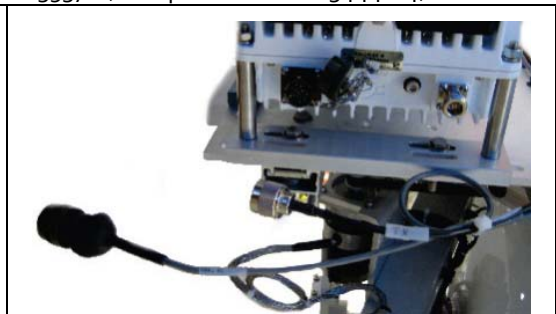
- 3mm Allen Wrench/Key
- 7mm Wrench/Spanner
- 7/16" Wrench/Spanner
- Loctite 2760

4.2. Procedure.






Procedure for replacing the Codan 8W BUC, Sea Tel kit part number: 135372 (BUC part number: 134442-4).

***Caution:** Power down the system and disconnect the TX IF cable at the radome base prior to performing this procedure.

1. Disconnect the TX IF and Radio M&C cables from the BUC.



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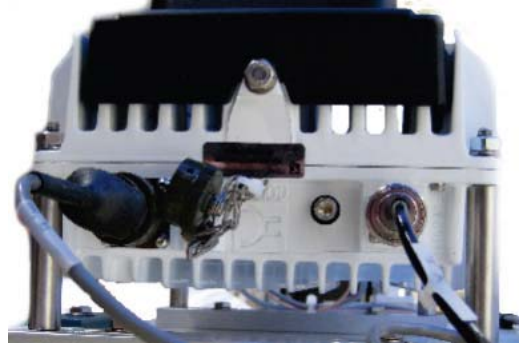
<p>2. Disconnect the DC Power Cable from the BUC.</p>	 A close-up photograph showing a hand using a black power cable connector to disconnect a DC power cable from the BUC. A yellow warning label is visible on the equipment.
<p>3. Using a 3mm Allen Head wrench and 7mm wrench, remove the hardware that secure the transmit pass (receive reject) filter to the BUC waveguide interface. Retain the hardware for future use.</p>	 A close-up photograph of a hand holding a white rectangular transmit pass filter. A yellow warning label is attached to the filter, reading "WARNING Non-ionizing radiation. Handle waveguide correctly. Do not breathe circuit dust.".
<p>4. Using a 7/16" wrench or socket, remove the flat washer, lock washer & nuts that secure the BUC to the mounting standoffs. Retain the hardware for future use.</p>	 A photograph showing a hand using a blue 7/16" wrench to remove hardware from the BUC. A red box highlights the specific area where the hardware is being removed. A yellow warning label is visible on the equipment.
<p>5. Carefully remove the BUC from the mounting standoffs.</p>	 A photograph showing a hand carefully removing the BUC from the mounting standoffs. The BUC is a black rectangular component with a white heat sink.
<p>6. Install replacement BUC and secure using the hardware removed in step 4 using Loctite 2760.</p>	 A photograph showing a hand installing the replacement BUC and securing it with the hardware removed in step 4. The BUC is being held in place by the mounting standoffs.

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7. Using the hardware removed in step 3, secure the BUC's waveguide port to the transmit pass filter. Ensure that the "O" ring is completely inside the waveguide flange groove.



8. Reconnect the TX IF and radio M&C cables removed in step 1.



9. Reconnect the DC power cable removed in step 2.
10. Check and if required, perform an antenna balance procedure.

