

RTS-TB-006**11-June-2009**

Improperly Adjusted ADAM Chassis DC Power Rails may cause audio noise

Issue Severity:	Product(s) Affected:
<input type="checkbox"/> High: URGENT – Immediate Action Required <input type="checkbox"/> Medium: Bosch Security Systems, Inc. strongly recommends you take the action(s) described below. <input checked="" type="checkbox"/> Low: Advisory	<ul style="list-style-type: none">Standards ADAM Frames (not applicable to ADAM-M chassis)
Notification Applies To:	Access Restrictions:
<input checked="" type="checkbox"/> Technical Support (TSS) <input checked="" type="checkbox"/> Repair (ASA) <input type="checkbox"/> Sales (NSO / RSO)	<input type="checkbox"/> Internal Distribution <u>ONLY</u> <input checked="" type="checkbox"/> <u>No</u> Restrictions (Internal & External Distribution)

1.0 Issue

The addition or removal of IO cards in a standard ADAM frame can result in DC power rail fluctuation outside of recommended operating parameters. Symptoms can vary widely but most frequent issues include:

- Poor Audio Quality
- Intermittent Noise
- In very severe cases ---- power supply OKAY LED indicator not illuminated and IC failure

2.0 Resolution / Corrective Actions

Use the ADAM High Current Supply Adjustment procedure to adjust each rail within specification:

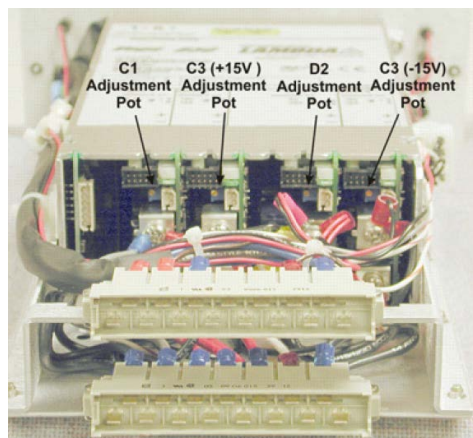
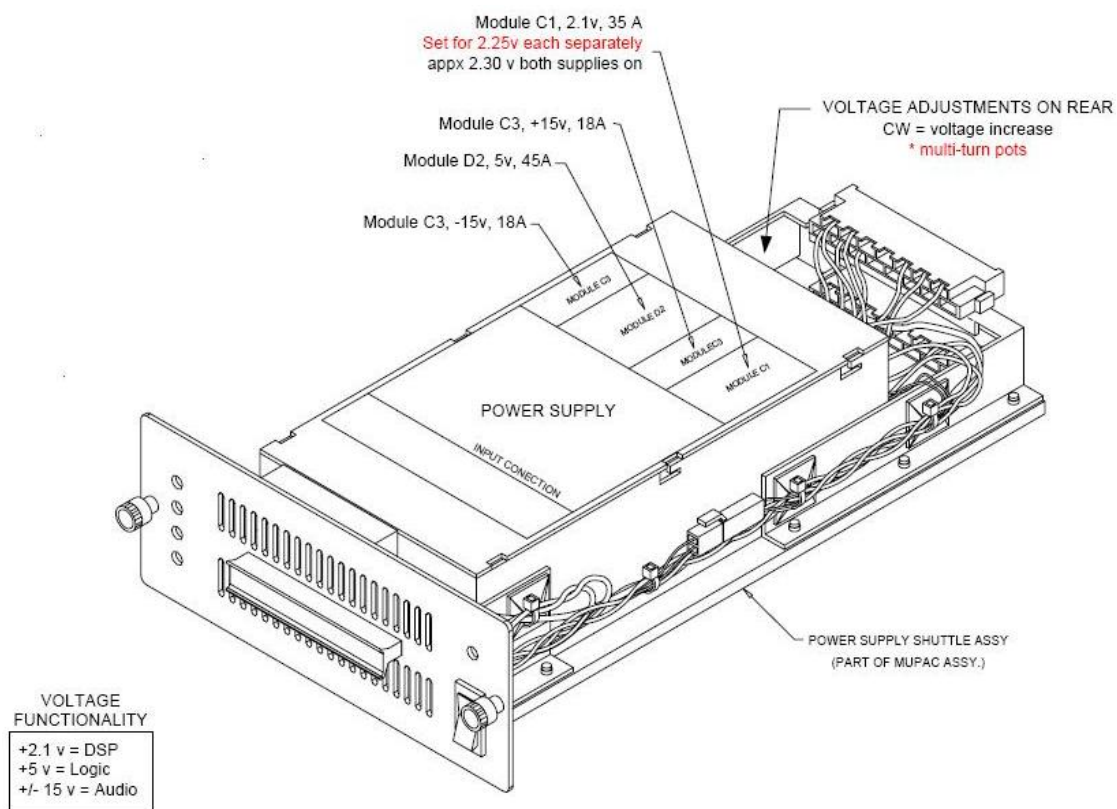
The 2.1v rail is particularly critical. The adjustment procedure expects the combined voltage for the 2.1 Vdc rail be set at 2.25 to 2.3 V. The 2.1 Vdc supply should never be allowed over 2.4 Vdc. Please adjust the individual 2.1 Vdc power rails down to 2.2 Vdc or perhaps 2.15 Vdc. Then re-check that the combined rail voltage does not exceed 2.4 Vdc with both supplies powered up. If it is

still above 2.4 Vdc, reduce each single power rail again until the combined rail is below 2.4 Vdc. Operating the system with the combined 2.1 Vdc rail in excess of 2.4 Vdc cause system bus noise and IC damage.

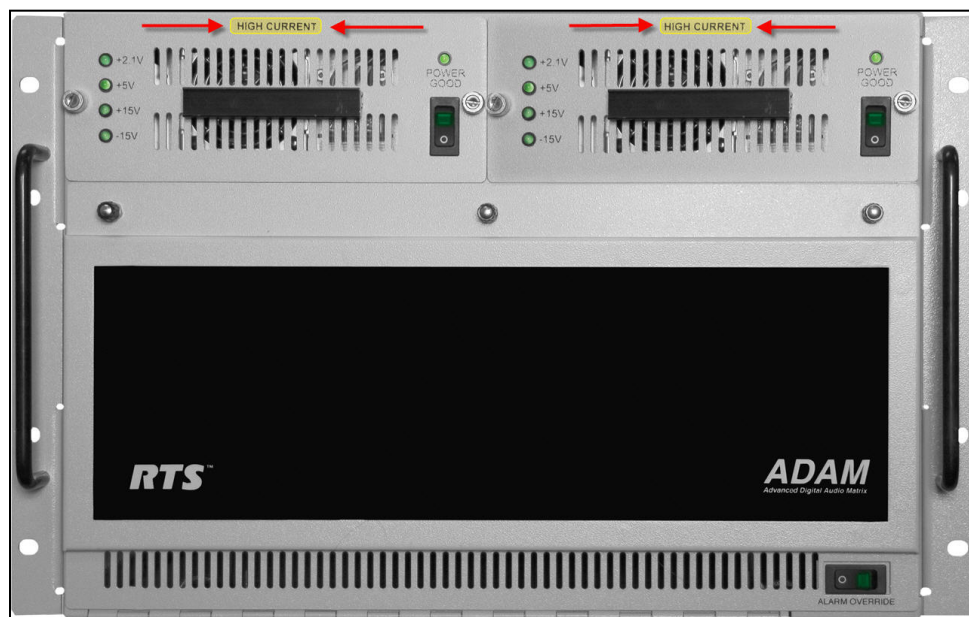
Please follow the below instructions for adjusting the power supply setting of your RTS ADAM high current power supply.

NOTE: The power supplies must be independently adjusted to insure that a single power supply can support the full frame load under a failure condition.

1. Power down the right power supply in the frame.
2. From the voltage test points located just under the front door of the ADAM the following voltages should be verified for the left side supply: +2.25 Vdc - +2.3 Vdc ; +4.9 Vdc - +5.2 Vdc ; +15 Vdc +/- 0.15 Vdc; =15 Vdc +/- 0.15 Vdc
3. If any of these voltage tests are outside the tolerance then make adjustments as needed. Refer to following pages of this document for adjustment pot locations for each supply source and which direction to turn adjustment pots.
4. Turn the right side supply back ON.
5. Turn OFF the left side supply.
6. Remove the left side power supply and either increase or decrease the correct adjustment pot as needed. Re-install the left side power supply and turn the left side supply back ON.
7. Turn off the right side supply and re-check the voltages per Step 2. If the readings are in tolerance then proceed to Step 8. If the readings are still out of range then repeat Steps 4 – 7.
8. Power ON the right side power supply and turn OFF the left side supply. Repeat step 2 – 3 for the right side power supply. If the readings are in tolerance then proceed to Step 9. If the readings are still out of range then repeat Step 6 **for the right hand supply.**
9. Once the right side supply has been properly adjusted, re-install and restore power to the left side supply.
10. Re-check voltage settings with both supplies installed.
11. After running for 48 hours, repeat Steps 1 – 10 to verify voltage is stable.



Old Power Supplies:



New Power Supplies (Rev. 2):

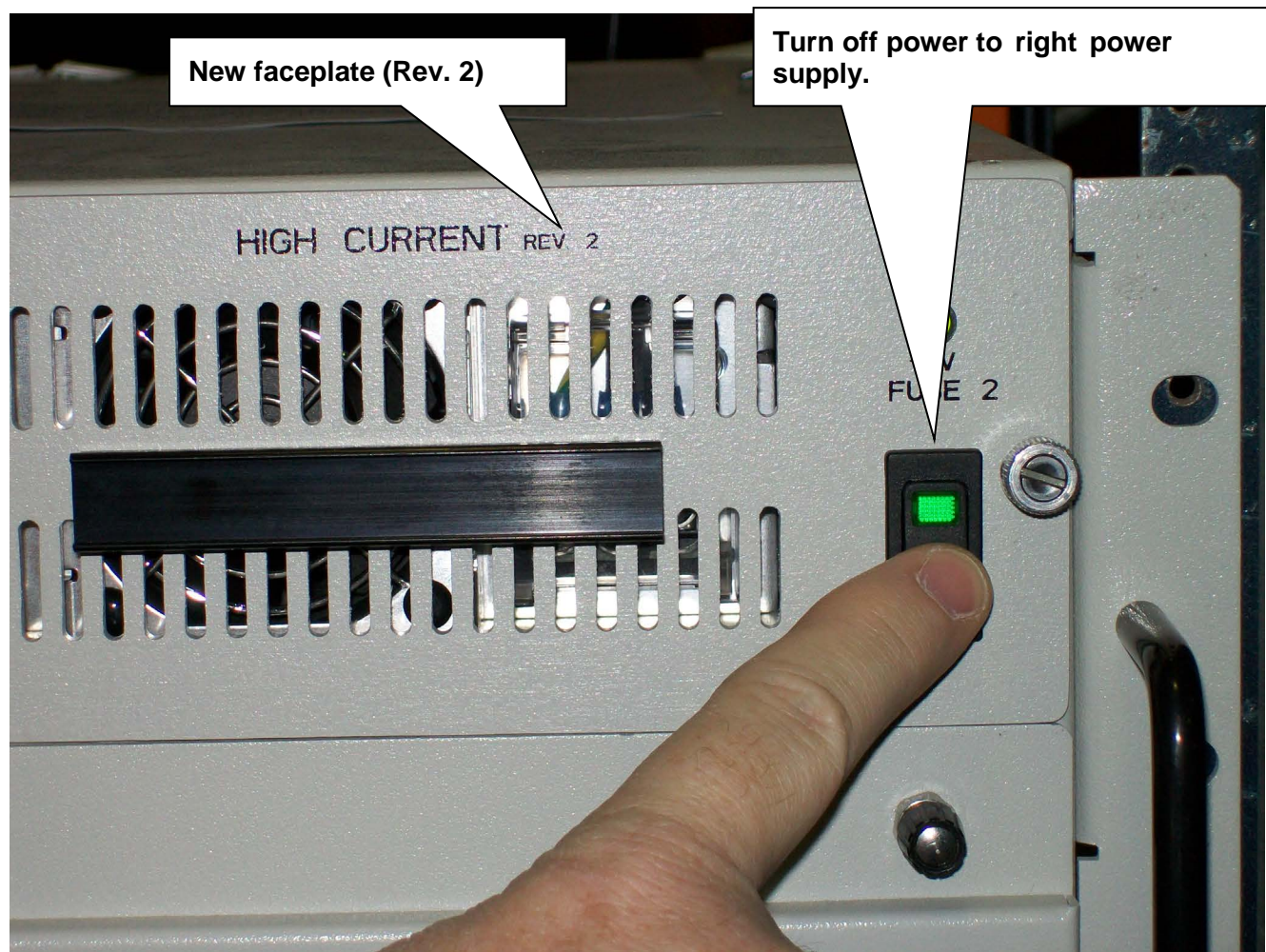


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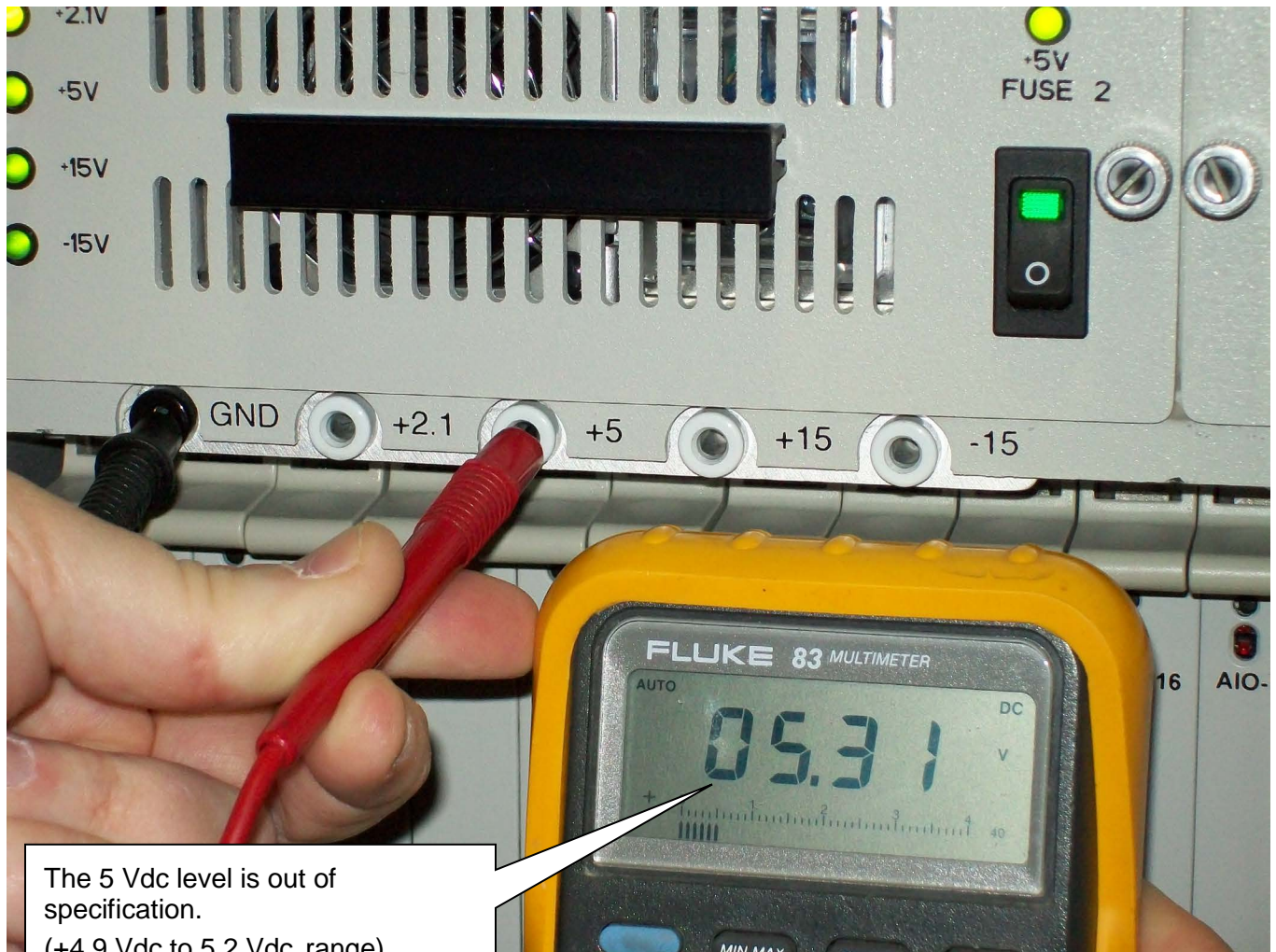
High Current Power Supply (Rev. 2) Adjustment

Purpose: To adjust the power supply outputs to be correct for the three possible conditions. When the left only or right only or both power supplies are running.

Power down the right power supply in the RTS Adam frame.

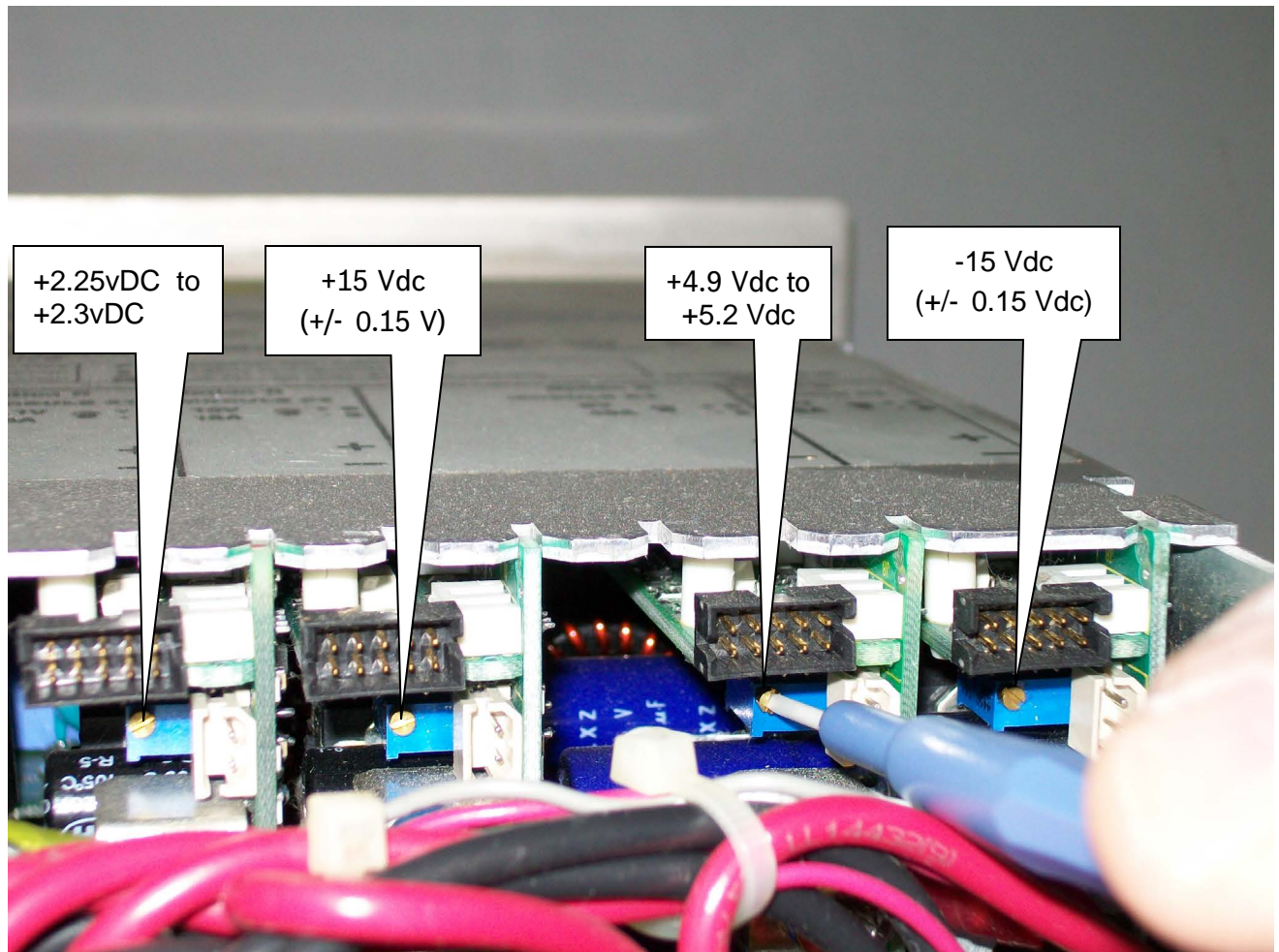


Open the front door and measure each power supply DC voltage. The test points for the DC voltages are located in the top left corner behind the cover.



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Adjust the modules from the rear of the power supply.



Power up the right side power supply. Power down the left side power supply. Repeat the module voltage measurement and adjustment (if necessary).

Repeat the complete previous procedure until no power supply adjustments are necessary for when any single power supply is powered up.

When the previous condition can be met, check the voltages again with both power supplies powered up.



NOTICE!

The power supplies must be independently adjusted to insure that a single power supply can support the full frame load under a failure condition.