

### ADAM-M 2.1 Vdc Power Supply Adjustment

Issue Severity:	Product(s) Affected:
<input type="checkbox"/> <b>High:</b> URGENT – Immediate Action Required  <input type="checkbox"/> <b>Medium:</b> Bosch Security Systems, Inc. strongly recommends you take the action(s) described below.  <input checked="" type="checkbox"/> <b>Low:</b> Advisory	<ul style="list-style-type: none"> <li>All ADAM-M systems which experience audio noise</li> </ul>
Notification Applies To:	Access Restrictions:
<input checked="" type="checkbox"/> Technical Support (TSS) <input checked="" type="checkbox"/> Repair (ASA) <input checked="" type="checkbox"/> Sales (NSO / RSO)	<input type="checkbox"/> Internal Distribution <b>ONLY</b> <input checked="" type="checkbox"/> <b>No</b> Restrictions (Internal & External Distribution)

#### 1.0 Issue

The 2.1 Vdc voltage rail of the ADAM-M frame should not typically exceed 2.28 Vdc. If the voltage rail exceeds this level, this may result in transmission quality errors which are perceived as audio noise in the system. In many cases, this noise has been described as ‘crackling’ or ‘popping’ noises.

This issue is complicated by the fact that the power supplies on several frames were improperly adjusted by the supplier. This led to systems in the field with +2.1 Vdc levels which measured closer to +2.38 Vdc. These issues were seen primarily on ADAM-M frames made prior to 2016. Note that this is NOT the only possible source of audio noise in ADAM-M frames, but it is a common contributor to customer noise complaints. For this reason, the 2.1 Vdc level is a good parameter to verify when troubleshooting ADAM-M noise issues.

## 2.0 Resolution / Corrective Actions

If a customer or technician suspects the 2.1 Vdc rail as a ***possible*** cause of audible noise, one easy troubleshooting step is to temporarily remove one power supply from the ADAM-M frame during normal operation and check if this affects the audio noise problem. The action of temporarily operating the frame from only a single supply will slightly reduce the 2.1 V level. If this minor reduction in voltage eliminates audio noise, there is a high probability that the ADAM-M power supplies need to be adjusted.

If the 2.1 Vdc rail is found to be in excess of 2.28 Vdc, it is definitely necessary for an adjustment to be made to reduce the voltage level on this rail. This procedure is described in the following section.

## 3.0 Adjustment Process



### NOTICE:

Rework should only be performed by qualified personnel who observe proper ESD and handling procedures.

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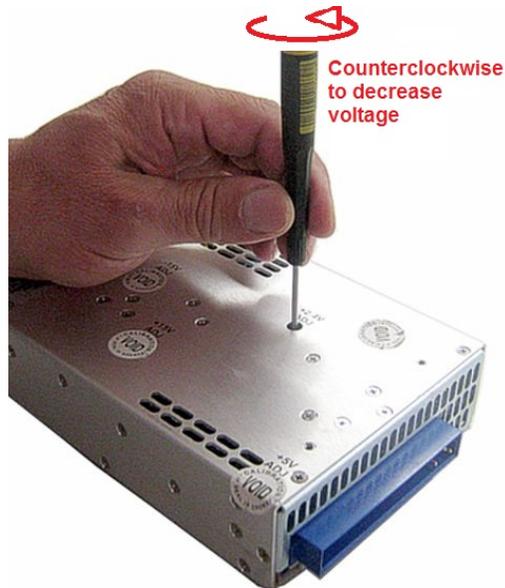
Perform the following steps:

- 1) **Power off both AC/DC supplies in the ADAM-M Frame.**
- 2) Keep all system cards in the ADAM-M frame so that a static load remains on the power supply
- 3) Remove one (and only one) of the AC/DC power supplies
- 4) Locate the 2.1 Vdc rail adjustment opening on the top of the supply. It is labeled "+2.4V ADJ" and is identified in the picture below:



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- 5) If a calibration sticker is present over this adjustment, remove the calibration sticker over this opening.  
**NOTE:** For the 2.1 Vdc rail (and only the 2.1 Vdc rail), removing this sticker and adjusting the voltage does NOT void the warranty.
- 6) Using a small flat blade screwdriver, turn the 2.1 Vdc rail potentiometer counterclockwise (about 1 to 1.5 turns if the supply started at a higher voltage). A flashlight is very helpful in completing this step.



- 7) Reinstall the power supply and power on **ONLY** the adjusted AC / DC supply in the ADAM-M frame. The other AC/DC power supply in the ADAM-M frame should remain powered off for now.
- 8) Using the banana jacks on the front of the ADAM-M frame, measure the 2.1 Vdc rail again now that the power supply has been adjusted.
- 9) Repeat steps 3 through 8 until the measured 2.1 Vdc jack on the ADAM-M banana jacks reads 2.20 Vdc within +/- 0.01 Vdc.
- 10) With only the adjusted AC/DC power supply active in the frame, check to see if the audio 'crackling / popping' noise is still present in the system.

***Independent of whether the noise issue is solved with the above adjustment, Steps 1 through 9 should all be repeated on the second AC/DC power supply so that both supplies are adjusted to 2.20 Vdc +/- 0.01 Vdc when measured at the banana jacks on the front of the ADAM-M frame.***