**Help Sheet: 306**

# How to Calibration Instruction via BV3ADIM/S for Grade 1

***IMPORTANT: This product is part of a life-safety system.***
***Please Note: Regular inspection and servicing must be performed by a competent person who has specialist knowledge of Fire Detection and Alarm Systems (FDAS), current and relevant training and experience, access to appropriate spare parts, and sufficient information about the system. (Reference: AS1851-2012 Section .6)***

***This document supersedes all previous versions. Please ensure any outdated hard or soft copies are securely discarded. To confirm this is the latest and most applicable version for your task, please contact Fusion Fire Systems directly.***

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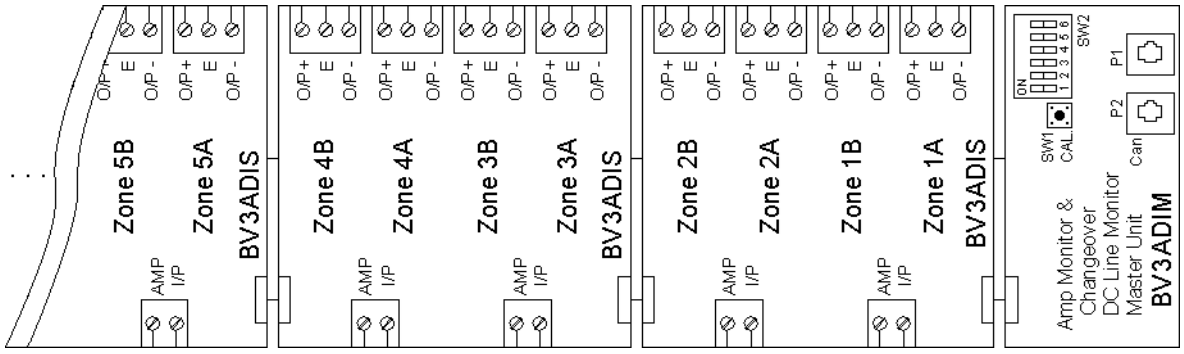
The **BV3ADIM(Master)** is a loudspeaker line monitor and amplifier change-over unit with independent monitoring and Isolation for two loudspeaker circuits (a.k.a 2-way splitter) per Amplifier. The **BV3ADIS**(**Slave**) is an expansion module that enables two amplifiers (and four loudspeaker lines) to be monitored. Each loudspeaker line (including spurs) must have an EOL (10KΩ 2W) fitted in parallel with the last physical loudspeaker on the line.

The BV3ADIM can monitor up to 5 x BV3ADIS modules.

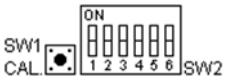



**How the BV3ADIM monitor speaker line**

It monitors the integrity of the loudspeaker line by measuring a small DC current flowing through the EOL resistor(s). Any change in this current indicates either a short circuit or open circuit condition on the loudspeaker line.

If one circuit suffers from a short circuit the BV3ADIM will isolate the affected CCT, allowing the other circuit to function.

## Calibration procedure on BV3ADIM




For the integrity of loudspeaker line(s), it is recommended to perform a calibration of the line(s) if it has been changed since previously calibrated (i.e add/remove speakers)

1. Ensure the initial (internal) calibration procedure has been completed with all BV3ADIS modules connected to the BV3ADIM before carrying out the calibration of loudspeaker line(s). – See the section below for more.
   Note the current positions of SW2.1 to SW2.4 if the CANBUS address has been set.
2. Ensure all individual loudspeaker lines are fault-free.
3. Ensure the load does not exceed the rating of the amplifier.
4. Set SW2.5 to 'ON' (with SW2.1 – 2.4 set to 'OFF') and wait approximately 60 seconds to allow the BV3ADIM to cycle through the calibration process for all lines.
5. Press the SW1 CAL button to set the calibrate reference for all lines.
6. Wait approximately 60 seconds then return SW2.5 to 'OFF' to enable normal operation.
7. Set SW2.1 – 2.4 to original positions (CANBUS address) to enable normal operation.

## Fault reporting on BV3ADIM

| | |
|---|---|
| "L/S Line O/C" | The system has detected a change (either OPEN or SHORT circuit) on CCT A. |
| "L/S Line S/C" | The system has detected a change (either OPEN or SHORT circuit) on CCT B. |
| "AMP FAULT" | The system has detected an amplifier fault<br>The Reserve Amplifier will be switched in (if enabled and available) |
| "RES AMP" | The system has detected a fault with a reserve amplifier |
| "GND FAULT" | The system has detected a loudspeaker line connected to ground (earth) |

**Initial (Internal) Calibration Procedure**

*[NOTE: This is done at the factory. However, the Initial Calibration procedure must be completed whenever a new or re-placement BV3ADIS module is added to a BV3ADIM. This Calibration Procedure ensures the unit will accurately indicate the correct number of EOL when the router is in Configuration > Amp Surv mode.]*

1. Ensure all BV3ADIS modules are connected to the BV3ADIM.
2. Ensure all 100V Loudspeaker Lines (site cabling) are disconnected from the BV3ADIS modules.
3. Ensure both RJ45 CANBUS connectors are disconnected from the BV3ADIM.
4. On the BV3ADIM select DIL SW2.1 – 2.4 to ‘OFF’ and SW2.5 to ‘ON’.
5. Hold Down SW1 ‘CAL’ button.
6. Apply power by connecting one of the RJ45 CANBUS connections.
7. Release SW1 ‘CAL’ button.
8. The LED will flash when the process is complete.
9. Select DIL SW2.5 to ‘OFF’.