

REDBACK® Line Monitoring Unit



The A 4567 is a line monitoring unit or LMU. An LMU monitors the condition of 100V PA speaker lines and alerts you if there is a problem with the wiring. The A 4567 comes standard with ten separate zones that have individual LEDs to indicate the condition of the Line.

Features

- Up to 10 zones monitored
- LED's to indicate condition of the Line
- Loud alert sound if there is a fault
- Separate rear outputs for the condition LED's

Installing the A 4567 LMU

The A 4567 can be powered by a 240Vac plugpack or 24Vdc. Terminals on the rear are supplied for both.

Hook up the 100V PA amplifier/s to the inputs on the rear. All the inputs are isolated from each other so up to 10 amplifiers can be used or any combination below that number e.g. one amplifier connected to 2 or more inputs. NEVER connect 2 or more amplifiers to one zone it will cause major damage to the A 4567 and the amplifiers.

The output terminals can now be connected to the speaker lines. A maximum of 500 Watts of load per zone is allowed. Any more than this will damage the A 4567. Any number of 100V line transformer / speaker combinations can be used as long as the total load for each zone is below 500 Watts.

Setting up the speaker runs so they work with the A 4567 is as easy as installing a 22uf BP capacitor at the input of each transformer / speaker (please see figure 3). Install an end of line resistor or EOL at the very end of the wiring run before the final transformer / speaker. The end of line resistor must be 100K Ohm in value and at least .25 Watt or above. Unused outputs from the A 4567 need to have a EOL resistor installed across positive and negative terminals. If these are not installed the A 4567 will bring up a fault condition for the non EOL terminated zones.

Powering up the A 4567

When the A 4567 is powered up the unit then pauses for about 10 seconds to allow the protected zones to be checked for the condition they are in.

If there is a fault the A 4567 will alert you with a loud pulsing beep and the Cancel switch LED will flash. A short on a zone is indicated on the front panel by a red LED. An open condition on a zone will be indicated on the front panel by a yellow LED. If there are no faults detected, all zones will indicate good condition with a green LED.

If the A 4567 goes into alarm mode and the beeping is heard it can be stopped by pushing the CANCEL button. The fault LED indicators will remain on until the fault on the zone is corrected. Any new fault conditions will result in the alarm tone sounding again and the Cancel switch LED to flash.

From then on no matter how many times the cancel button is pushed the A 4567 will go into alarm mode any time there is a new fault condition on any of the zones. The alarm will not sound again if a zone goes from a fault (open or short) condition to good condition.

Remote monitoring of faults

The fault status of the zones can be monitored remotely by connecting an external buzzer or warning light to 24Vdc switched outputs. There are three switched outputs.

One for an open condition, another for a short condition and a third for either a short or open circuit condition (combined out). All three outputs switch 24Vdc in either failsafe or normal mode.

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Figure 1: A 4567 rear panel

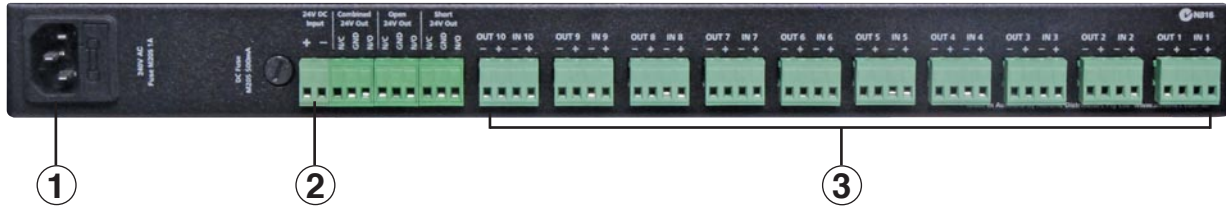


Fig 1. Rear Panel Legend

- | | | | |
|---|---------------|---|---------------------------|
| 1 | 240V ac Input | 3 | Connectors (Zones 1 - 10) |
| 2 | 24V dc Input | | |

Figure 2: A 4567 front panel

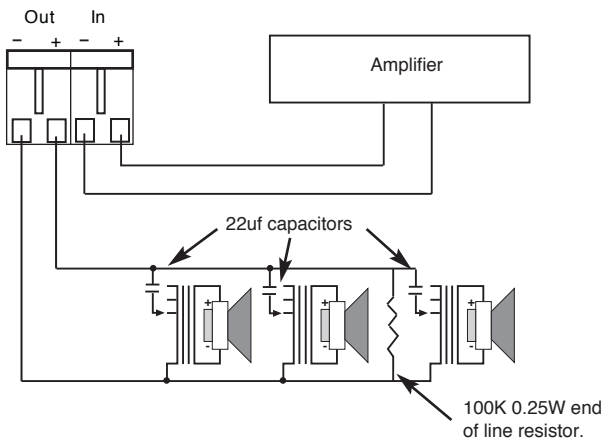


Fig 2. Front Panel Legend

- | | | | |
|---|----------------------|---|---------------|
| 1 | Zone Indicators 1-10 | 3 | Cancel Button |
| 2 | Piezo Buzzer | 4 | Power Led |
| | | 5 | Power Switch |

Fig. 3 Connection Details

Max Load, 500W per zone. Unused zones must have 100k 0.25W end of line resistor installed. Max wire run, 200m.



Note: Speakers on any zone must be wired in a 'loop in' 'loop out' configuration. 'Star' wiring on 'tee offs' are not permitted and will cause the system to go into alarm.

Fault Finding

The A 4567 does not power up: Check that power is applied to the unit either by a 240Vac plugpack or an external 24V dc source.

Unit continues to go into alarm mode and emits a loud continuous beep: Push the cancel button and check the LED display. See which zone is causing the problem (if all zones are showing "normal" the buzzer will not sound continuously).

The SHORT LED is coming up on a zone: First check and see if you have installed

the 100K EOL resistor at the end of the line and the 22uF BP capacitors on each of the

transformer / speakers that are installed on that line (see diagram). If they are all installed there must be a short across the line, once removed the A 4567 will go into NORMAL.

The OPEN LED is coming up on a zone: First check and see if you have installed the 100K EOL Resistor at the end of the line and the 22uF BP Capacitors on each of the transformer / speakers that are installed on that line (see Fig 3.). If they are

all installed there must be a break in the line, once this is removed the A 4567 will go into NORMAL.