Monitoring Options

Certified to BSEN54

All critical signal paths of a voice alarm system must be fully monitored - from the fire officer's microphone, through the amplifiers to the end of the loudspeaker lines. Also, any faults detected with the power supply, internal battery charger and backup batteries must be reported and acted upon. A VIGIL2 system has various monitoring options.

VIGIL 2

BEL1 - END OF LINE:

- Two versions are available:
  - BEL1 - standard.
  - BEL1IP - IP65 rated.
- An active unit which is installed on each loudspeaker circuit.
- Up to four BEL1 units can be placed on one speaker run (see diagram over page). All internal DIL switches must be set correctly.
- Monitors the critical signal path of speaker lines for open, short circuit and earth faults.
- Fault warnings are displayed on the voice alarm rack.
- Each BEL1 unit uses approximately three Watts of power. This needs to be noted when designing a system.

BVRDADC - DC LINE MONITOR:

- DIN rail mounted CANBUS module with screw terminals for connections to amplifiers and loudspeaker lines.
- 11 x amplifier surveillance (10 with automatic amplifier changeover).
- Monitors the integrity of loudspeaker lines by measuring a small DC current. (Each end of line loudspeaker requires a 10K 2W (at 1% tolerance) resistor. Each loudspeaker requires a capacitor - refer to *BVRDADIM/S DC Line Monitor sales leaflet* for details.)
- Monitors for earth faults.
- Fault warnings are displayed on the voice alarm rack.

BEL10 - END OF LINE:

- DIN rail mounted, the BEL10 is the equivalent of ten BEL1 units.
- Loudspeaker lines terminate at the BEL10.
- Monitors the critical signal path of speaker lines for open, short circuit and earth faults.
- Fault warnings are displayed on the voice alarm rack.
- Typically, the BEL10 is used to ease the upgrading of an existing voice alarm system, where loudspeaker lines are wired in a loop back to the rack.
- Each BEL1 unit uses approximately three Watts of power. This needs to be noted when designing a system.

BVRDACO & BVRDNCO - AMPLIFIER/LINE MONITOR:

- DIN rail mounted CANBUS module.
- 10 x BEL1 line surveillance with earth leakage fault detection.
- 11 x amplifier surveillance (10 with automatic amplifier changeover - BVRADCO only).
- Fault warnings are displayed on the voice alarm rack.

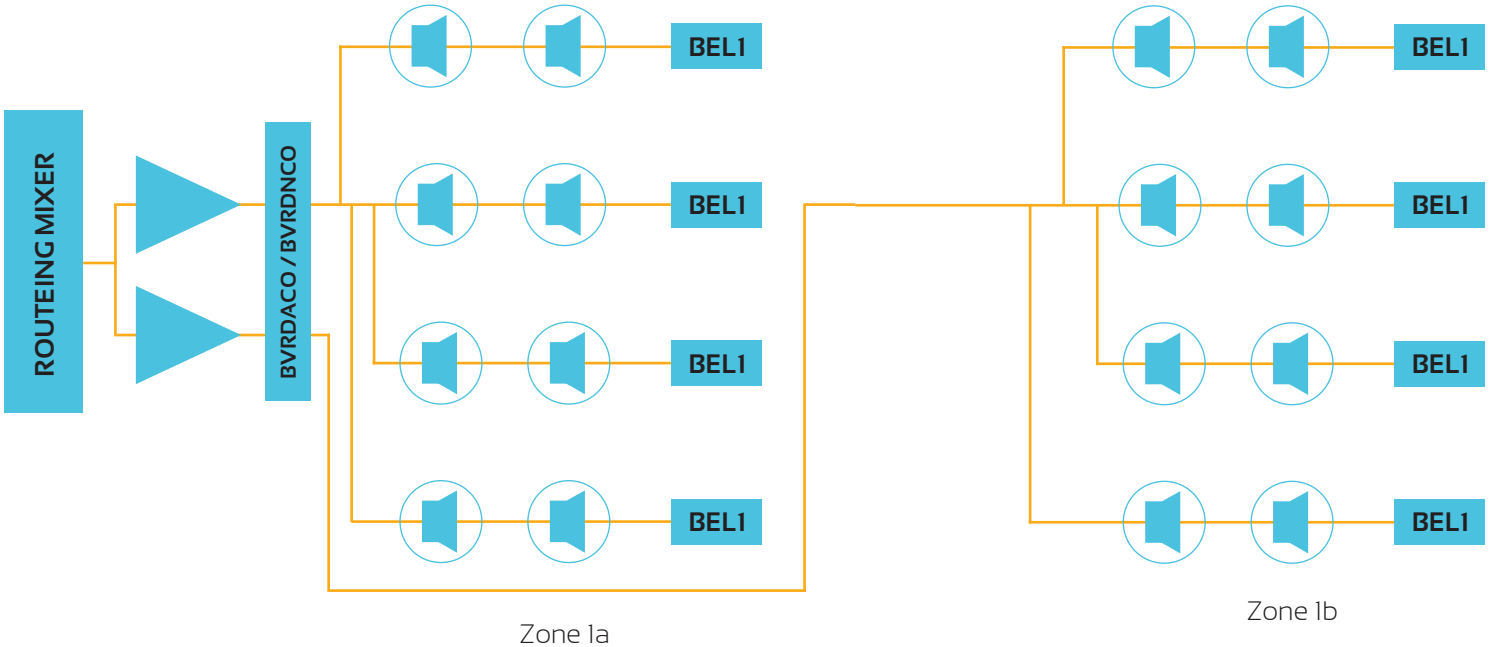
BVRDADIM & BVRDADIS:

- Enables dual loudspeaker circuits to be connected to a single amplifier. (Refer to *separate leaflet* for full details.)

BVLAM - IMPEDANCE MONITOR:

- Rack-mountable unit (1U high). Two units can be mounted across one rack 'shelf'.
- Provides eight loudspeaker zone selection from one amplifier.
- On receipt of a signal from an input (ie zone selecting microphone) the BVLAM triggers the amplifier to output to the selected zone.
- An internal relay enables zone switching.
- The BVLAM provides constant impedance monitoring on each of the eight loudspeaker circuits when not selected.
- LEDs are used to indicate a drop (or increase) in impedance - set at either 20% or 40% by DIL switches.
    - Note: due to detection accuracy, BVLAM is only suitable for BS5839-8 voice alarm systems with less than five speakers per circuit.
- Access faults on any of the zones from the microphone are indicated by LEDs on the BVLAM.
- Additional LED indicators are provided to show 'system healthy' and 'supply healthy'.

TYPICAL BEL1 CIRCUIT COMPRISING OF FOUR SPURS:



Zone 1a

Zone 1b

BALDWIN BOXALL
LEADING THE WAY TO SAFETY

Baldwin Boxall Communications Ltd
Wealden Industrial Estate, Farningham Road,
Crowborough, East Sussex, TN6 2JR, United Kingdom

T: +44 (0) 1892 664422 F: +44 (0) 1892 663146
E: mail@baldwinboxall.co.uk
W: www.baldwinboxall.co.uk