



The VAR8 and its variants are DSP-based Audio Routers, allowing routing of audio inputs to any combination of outputs. Additionally the VAR8 provides full system control and fault reporting functions for the Application Solutions rack mount Voice Alarm systems. The control functions include the monitoring and control of up to 63 V400 Amplifier Mainframes, and their associated amplifiers, and surveillance interface cards.

The VAR8 includes digital storage for 4 DVA messages, 8 single audio outputs, and 8 universal Mic/Line inputs, each of which can support an ASL Paging Microphone. A ninth audio input is provided for miscellaneous functions such as background music. Inputs 1 & 2 support Fire Microphones, which act as All-Call override in the event of processor failure, as required by BS5839 Pt 8.

The VAR8's built-in fire alarm interfaces include 10 opto-isolated sounder circuit inputs, a RS485 serial port, and a common fault output relay. The base unit VAR8 can include a built-in EFI01 European Fire Interface Card, which replaces the base unit's opto-isolated inputs with 8 analogue non-isolated inputs and 8 open collector digital outputs.

With the addition of the EXP8 Interface Expansion Board, an additional 10 opto-isolated inputs are provided. The expanded version is known as VAR8-E.

The base unit VAR8 has a single audio output connection for each channel, which is provided by a RJ45 connector. Separate A&B output connections for driving A&B amplifiers for interleaved speaker circuits, are provided on the EXP8 board by screw-in terminals. Field connection of all other signals is provided by screw-in terminals.

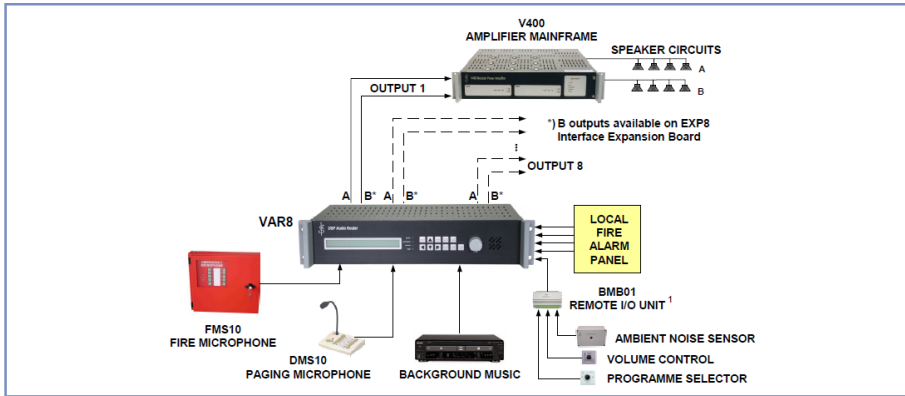
Ambient noise sensing, external volume control, and external programme selection functions are available by connecting the ASL range of ambient noise sensors and remote controls.

Built-in routing and general control inputs enable interfacing to advanced DVA or site control systems, while a serial control port gives the Router the ability to be remotely monitored and configured. The VAR8 also has a front panel display and control interface that provides functions for system commissioning, fault monitoring, and audio monitoring.

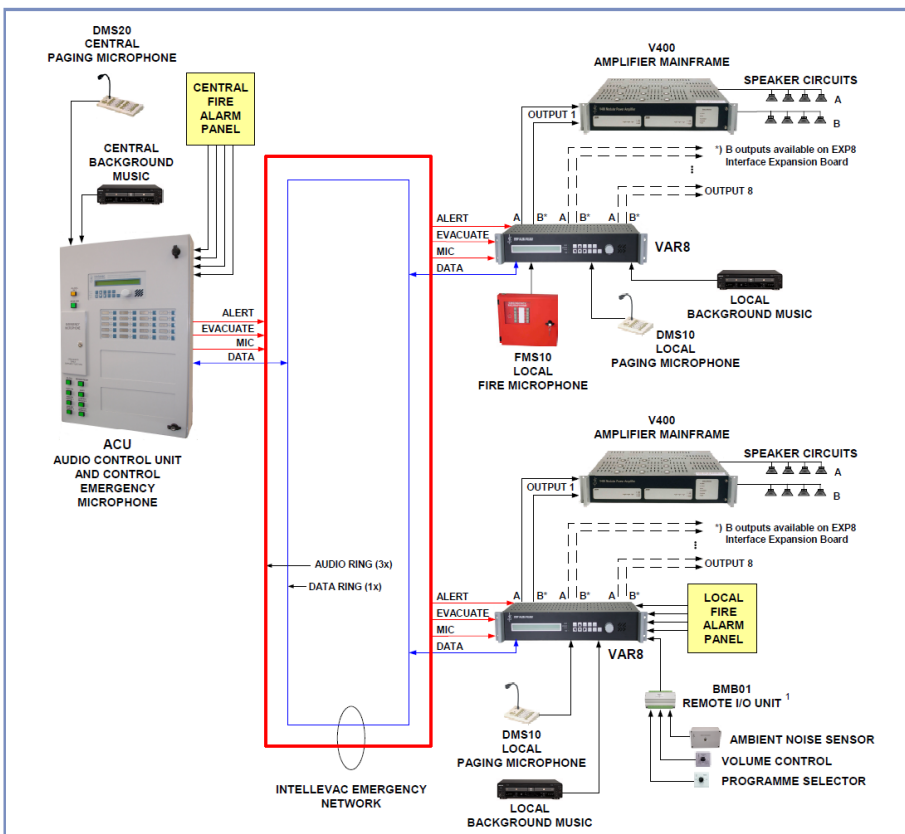
The VAR8 is also available with a built-in ANIC Intellevac Network Interface Card. The Network Interface Card interfaces the VAR8 to an Intellevac Network, allowing the unit to be networked as part of a larger distributed Voice Alarm system, and broadcast of announcements and DVAs initiated from a rack or wall mount Network Audio Control Unit (ACU).

For further details, and for information on other products, please visit [www.asl-control.co.uk](http://www.asl-control.co.uk).

## Application Diagram - Stand-alone System



## Application Diagram - Networked System (VAR8 Fitted with ANIC Intellevac Network Interface Card)



## SPECIFICATION

### General

Supply Voltage Range	18 to 40 V DC
Current Consumption	470 mA @ 24 V DC supply, backlight off and sounder off 580 mA @ 24 V DC supply, backlight on and sounder on
Auxiliary DC supply for external equipment	18 to 36 V DC @ 200 mA
Fault Log	200 events
Real Time Clock (RTC)	Built-in (externally synchronisable)
Night Volume Control	Daily time controlled input / output level control
Format	19-inch rack mounting frame
Field Connections	RJ45 for single audio outputs Screw-in terminals for A&B audio outputs on EXP08 Screw-in terminals for other signals
Colour	Black with silver annotation

### Audio Input

Number of Balanced Audio Inputs	8 <sup>2,3,4</sup>
Sensitivity and Impedance	-20 dBu (77 mV) @ $Z \geq 20 \text{ k}\Omega$
Unbalanced Audio Input	Input 9
Sensitivity and Impedance	Suits 1-2 V RMS units $Z \geq 5 \text{ k}\Omega$
Input Overload Margin	40 dB
Input Attenuator Range	0 to -63 dB
Equalisation	3 band plus LF Cut
Surveillance Tone	20 to 30 Hz Required Level 0 to -40 dBFS

### Audio Output

Number of Balanced Audio Outputs	8 single outputs Separate A and B output connections available on VAR8-E (VAR8 with EXP8 board)
Level and Impedance	0 dBu @ 600 $\Omega$
Graphic Equalisation	$\pm 12 \text{ dB}$ at 125, 250, 500, 1 k, 2 k, 4 k, 8 k, 16 kHz
Surveillance Tone	10 dBu to -30 dBu 30 Hz Pulsed Mode = 1 s on 20 s off
Gain Control Range	0 dB to -63 dB

### DVA

Number of Digital Messages (DVA)	2x50-second messages 2x66-second messages
DVA Bandwidth	100 Hz to 8 kHz

### Audio General

THD Input to Output	<0.1 % @1 kHz
Crosstalk	>70 dB @1 kHz
Residual Noise	<78 dBu (A)
S/N Line	>70 dB (A)
Frequency Response (Input to Output)	100 Hz to 20 kHz, -3 dB

### Audio Monitoring

SPL from Loudspeaker (Sounder Mode) @ 1 m from the equipment enclosure	$\geq 50 \text{ dBA}$
Frequency Response (From Input through to Speaker)	200 Hz to 10 kHz -3 dB
Gain Range Control (Front panel rotary encoder)	0 to -63 dB

### Audio Routing

Number of Concurrent Host Routes	20 (max.)
Override per Output	40 (max.)

### Control Ports

#### Digital Inputs<sup>5</sup>

Number of Digital Inputs	10 on VAR8 20 on VAR8-E (VAR8 with EXP8 board)
Interface	Opto-isolated with built-in resistor to suit voltages of +12 to +40 V

#### Analogue Inputs (on VAR8 with EFI01)<sup>4</sup>

Number of Analogue Inputs	8
Interface	Non-isolated analogue interfaces with internal pull-up to +5 V by 4.7 k $\Omega$
Maximum External Fault Active-Low Input Voltage Threshold	2.5V
Monitored Analogue Contact Thresholds	Faulty - Open Circuit: >3.7 V Healthy - Inactive: 2.5 V - 3.7 V Indeterminate: 0.8 V - 2.5 V Healthy - Active: 0.2 V - 0.8 V Faulty - Short Circuit: <0.2 V

#### Digital Outputs (on VAR8 with EFI01)<sup>4</sup>

Number of Digital Outputs	8
Interface	Open-collector

#### Others

Open Collector Drive (SPEAK NOW LED, ALL CALL LED)	100 mA
Changeover Fault Relay	1 Maximum Global Fault Relay Contact Current Rating: 500 mA
RS485 Port	1 Up to 6 Remote I/O Units (BMB01) and/or Fire Loop Interfaces
RS232 Port	1 For mutually exclusive use by Host PC for configuration, Intellevac Network <sup>6</sup> , or PC/DVA system <sup>7</sup>

<sup>2</sup> Inputs 1 and 2: Hardwire bypass Fire Microphone inputs. Support Fire Microphone, Zoned Fire Microphone, Paging Microphone, Single Button Microphone, or Miscellaneous Input. Support up to 30 microphone buttons.

<sup>3</sup> Inputs 3 to 8: Support Paging Microphone, Single Button Microphone, or Miscellaneous Input. Support up to 20 microphone buttons.

<sup>4</sup> Inputs 1, 3, and 4 Support Network Channel, and are normally used for system networking on VAR8 Routers that are fitted with the ANIC Network Interface Card.

<sup>5</sup> When the VAR8 is fitted with an EFI01, the 10 digital inputs on the VAR8 base unit are replaced by the EFI01 analogue inputs and digital outputs.

<sup>6</sup> The RS232 port is internally used for system networking when the VAR8 is fitted with the ANIC Network Interface Card. It may be temporarily disconnected from the network, and connected to a Host PC for configuration purposes.

<sup>7</sup> PC/DVA system can only be connected to stand-alone VAR8.

