

Distributed Amplifier Panel

VIUV-DAP



Unicorn Voice is a unique distributed wallmounted, panel based voice alarm and fire telephone solution that is compliant to EN54-16.

- Modern 2.8" touch screen user interface
- Unique 1st fix enclosure/2nd fix chassis
- Optional integral EVC module
- Efficient 25W/50W/100W amplifier modules
- 4 x audio panel outputs
- Distributed digital network-64 panels
- 256 audio outputs across network
- NAC/FAD output for VADs, vibrating pillows etc

Overview

Unicorn Voice simplifies the specification and installation of voice alarm and fire telephone systems by offering a one cabinet solution. Comprising a range of master amplifier panels, distributed amplifier panels, desk microphones, wall microphones and remote volume controls. Additionally, the system can be supplied without EVC capability.

The Unicorn Voice system is suitable for a wide range of applications, from small stand-alone buildings, through to multi-storey and campus-style developments. Unicorn Voice is compatible with any fire alarm system.

Ideal for Smaller Applications

The DAP can be utilised as a standalone V1 voice alarm system suitable for smaller applications, for example shop units, by adding a message module. It can also be upgraded to a V2 system with the addition of a microphone for live announcements.

Larger Sites

When used with a master amplifier or desk microphone the DAP/DAP-T allows for very large site coverage. Each panel can provide 4 x amplifiers and is typically situated within a riser cupboard or plant room.

Touch Screen User Interface

Control and indication functions utilise a 2.8" TFT touch screen, this intuitive user interface makes use of icons wherever possible, simplifying the user experience.



Networking

Unicorn Voice can be networked using either copper, multimode fibre or single-mode fibre by adding din rail modules. This provides flexibility, as for instance, copper may be used to network within a building, then fibre could be used for longer lengths between buildings. The network is dual redundant fault tolerant which uses 6 x audio channels for VA and two channels for EVC functions, this enables simultaneous automatic broadcast of evacuate, alert messages and live broadcasts without any interruption.

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Amplification and NAC/FAD Outputs

The distributed amplifier panel can be specified with or without amplifier modules to suit customer requirements. The amplifier modules are available as 100-watt, 50-watt and 25-watt, the MAP can be specified in a dual or quad format up to a maximum size of 400 watts in a single cabinet. See ordering information for standard configurations.

The use of individual amplifiers per loudspeaker output allows for equalisation of sound in difficult acoustic spaces which can be broadcast over any of the six available channels. This enables simultaneous alert, evacuation messages and live announcements, something not achievable with relay switched amplifier designs.

In addition, one standby amplifier can be specified per cabinet to back up any of the four amplifier modules. A NAC/FAD output for driving visual alarm devices or similar is provided per amplifier. This enables VADs to alert people who are hard of hearing during a live announcement, which may be difficult to achieve if VADs are driven from the fire alarm system. If additional loudspeaker circuits are required, an A/B speaker splitter module can provide 2 x independently protected outputs per amplifier.

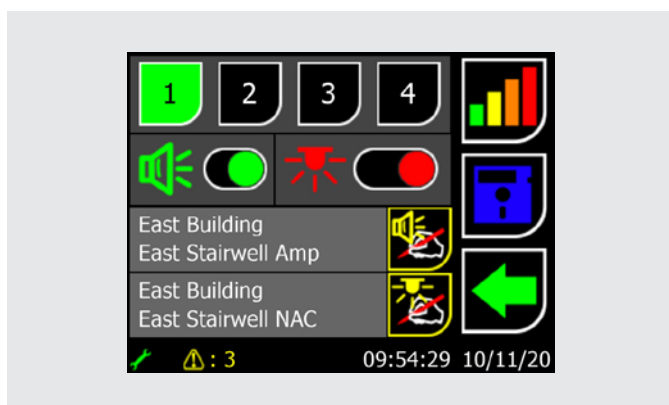
Emergency Voice Communication

Where phased evacuation is specified, voice alarm and fire telephone systems are needed, therefore a system which can meet both requirements is advantageous. Unicorn Voice distributed amplifier panels can be specified with an integral EVC module to provide eight lines per panel for fire telephone, disabled refuge, and emergency assistance alarms. All amplifier panels can be specified with an EVC module which gives a system capacity of 512 lines across the network, a full range of compatible outstations is available.

At least one master amplifier panel MAP/T must be specified to provide a master handset for EVC control. If additional EVC control is required then further MAP/T panels can be added to the system.

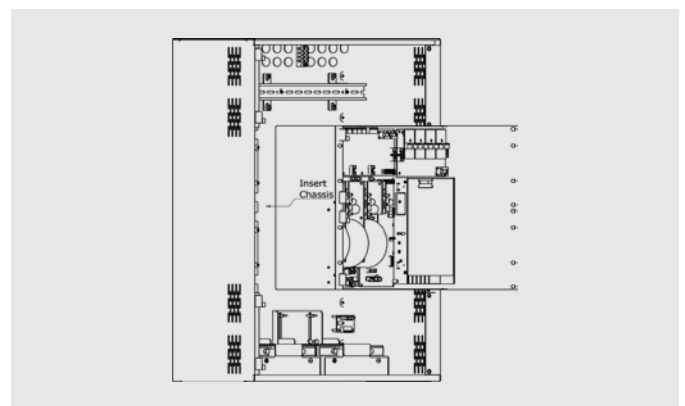
Easy Configuration

The touch screen display allows for very easy configuration of a standalone DAP without the need for a PC.



Innovative Cabinet Design

As Unicorn Voice is a wall mounted system, weight and ease of installation are big considerations. Vox Ignis designers have a unique solution. The DAP is supplied in two parts whereby the cabinet is supplied empty other than a din rail. Thereby the installation of the back box, including all the cabling, can be carried out without any risk of damage to the electronics. The amplifiers, motherboard, battery charger and power supply are contained within a secondary chassis which is fitted at commissioning stage alongside the display module which houses the touch screen.



Digital Signal Processing

At the heart of Unicorn Voice there is a powerful Digital Signal Processor. All audio is processed here providing compression, limiting and gating. Five band parametric EQ is provided on all inputs and seven band parametric EQ on the outputs. It also features an 11x10 digital audio matrix.

Distributed Amplifier Panel

ViUV-DAP

Technical Specification

| Details | ViUV-DAP | ViUV-DAP-T |
|--|---|------------|
| Power | | |
| AC supply voltage | 100-240V AC + or -10% | |
| AC supply frequency | 50/60Hz | |
| Batteries | | |
| Capacity | 2x 12V 7Ah, 12Ah, 17Ah, 24Ah VRSLA | |
| Standby time | Perform battery calculation using Unicorn Voice battery sizing calculator | |
| Controls and Indications | | |
| | AC, DC, PSU Status | |
| Statutory Indicators | General, CPU fault | |
| | VA, EVC Status | |
| Touchscreen | All controls via 2.8" TFT touchscreen | |
| Audio Inputs | | |
| BGM | 1 | |
| Front panel microphone | N/A | |
| External microphone | 1 | |
| Fire input-opto-isolated sounder circuit with optional pull up | 4 | |
| Reset input | 1 | |
| Auxiliary inputs | 4 | |
| Input sensitivity | 0dBV | |
| Max input level | +3dBV | |
| EQ | 5 band parametric | |
| Dynamics | Gate/Compressor/Limiter | |
| Messages | | |
| Message module | Fitted as an option for redundancy | |
| | 64 total messages (8 Evacuate, 8 Alert, 8 Test, 40 General purpose) | |
| Storage | 16-bit sample 32K WAV file (512kbs) | |
| | Monitored store held on Micro SD card | |
| Amplification | | |
| Quantity | Up to 4 | |
| Power | 25W, 50W, 100W Type D Max power per panel 400W | |
| Efficiency | 25W 50W 100W | >85% >81% |
| Loudspeaker line monitoring | DC EOL resistor 22kΩ | |
| Loudspeaker voltage | 70V / 100V | |
| Frequency response | 70Hz to 14kHz | |
| SNR | >72dBA | |

| Details | ViUV-DAP | ViUV-DAP-T |
|--------------------------------|--|---|
| Audio Output Processing | | |
| EQ | 7 band parametric | |
| Dynamics | Compressor/Limiter | |
| Outputs | | |
| Fault Relay | 1x Volt free NC, Com | |
| Relay 1 | Programmable Volt free NO, Com-Default Operation-VA | |
| Relay 2 | Programmable Volt free NO, Com-Default Operation-EVC | |
| EVC Module | | |
| Number of EVC Lines | N/A | 8 per panel (512 lines total system capacity) |
| Cabling | N/A | 1 x 2 core 1.5mm screened fire rated |
| Line Monitoring | N/A | 10kΩ 0.5W resistor |
| Network | | |
| Max no of amplifier panels | 64 | |
| Channels | 6x Audio, 2x EVC | |
| | Copper - 250m | |
| Max distance between panels | Single-mode fibre - 4km | |
| | Multi-mode fibre - 1.6km | |
| Speed | 4.096 M Baud | |
| | Copper - 2x 2 core 1.5mm screened fire rated | |
| Network cables | Single-mode fibre - 9/125µm | |
| | Multi-mode fibre - 62.5/125µm | |
| Environmental | | |
| Operating temperature | -5°C to +40° C | |
| Humidity range | 0 to 80% non-condensing | |
| Ingress protection | IP3X | |
| Environmental | | |
| Back box finish | RAL 7026 Graphite Grey | |
| Dimensions (HxWxD) | 740mm x 500mm x220mm | |
| Entries | 30x knockouts top, 24x rear, 2x mains | |
| Weight without batteries | Max 28KGs | |

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Technical Specification

| Part Code | Description |
|------------------------------------|---|
| Distribute Amplifier Panels | |
| ViUV-DAP-D25 | Distributed panel – dual 25W amplifiers |
| ViUV-DAP-Q25 | Distributed panel – quad 25W amplifiers |
| ViUV-DAP-D50 | Distributed panel – dual 50W amplifiers |
| ViUV-DAP-Q50 | Distributed panel – quad 50W amplifiers |
| ViUV-DAP-D100 | Distributed panel – dual 100W amplifiers |
| ViUV-DAP-Q100 | Distributed panel – quad 100W amplifiers |
| ViUV-DAP-T-D25 | Distributed panel – 8 EVC lines, dual 25W amplifiers |
| ViUV-DAP-T-Q25 | Distributed panel – 8 EVC lines, quad 25W amplifiers |
| ViUV-DAP-T-D50 | Distributed panel – 8 EVC lines, dual 50W amplifiers |
| ViUV-DAP-T-Q50 | Distributed panel – 8 EVC lines, quad 50W amplifiers |
| ViUV-DAP-T-D100 | Distributed panel – 8 EVC lines, dual 100W amplifiers |
| ViUV-DAP-T-Q100 | Distributed panel – 8 EVC lines, quad 100W amplifiers |

DAP Factory Fit Options

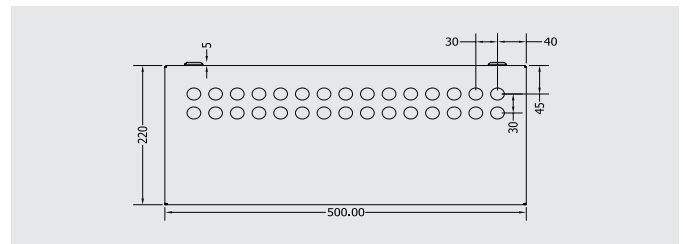
| | |
|--------------------------------------|--|
| Add MSG- after DAP(-T)- in part code | Integral message store for redundancy |
| Add -HS to end of part code | Integral hot standby amplifier (100Watt) |
| For example – ViUV-DAP-T-MSG-Q100-HS | |

Optional Modules

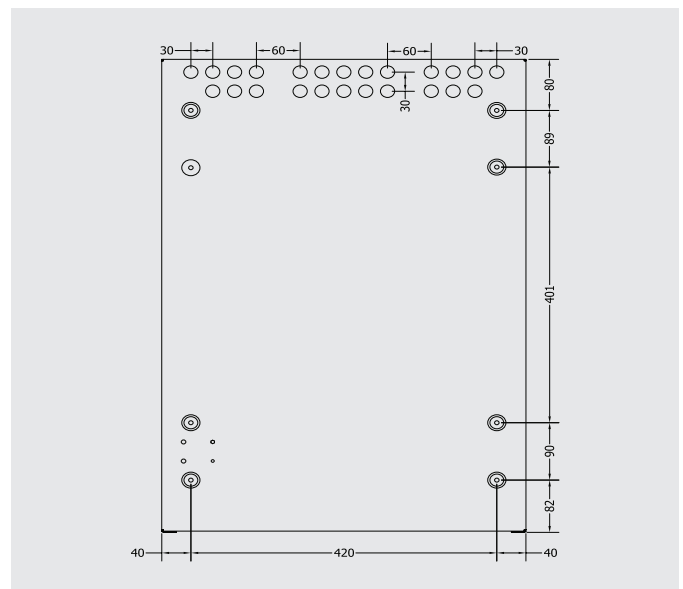
| | |
|--------------|---|
| ViUV-SPT | A-B loudspeaker splitter module (max 1 per amplifier) |
| ViUV-CMI | Galvanically isolated copper network interface |
| ViUV-SMI | Single-mode fibre network module |
| ViUV-MMI | Multi-mode fibre network module |
| ViUV-AMP-25 | 25W complete amplifier assembly |
| ViUV-AMP-50 | 50W complete amplifier assembly |
| ViUV-AMP-100 | 100W complete amplifier assembly |

Mechanical Details

Top view



Rear view



ISO view

