

VA406 Desk Microphone Console

The VA406 has been designed to offer a microphone for AVAC voice alarm systems for public address paging.

The Console comprises a sturdy ABS case c/w a high quality flexible gooseneck microphone, a speak-bar (push-to-talk button), an LED output level meter and two status indicators (OK and Fault).

To page, the microphone's speak-bar is pressed. The speak-bar will be lit solid green and speaking may commence.

This microphone may be used as an emergency microphone (instead of the VA405) provided it is located in a secure position where it cannot be tampered with.



TECHNICAL DESCRIPTION

Speech is picked up by the microphone and the signals are passed to a voltage controlled amplifier under control of a signal derived from rectifying the stage output signals, providing a 3:1 compression ratio. The output of this stage is fed to an LED output level display and a three-band equalizer (100 Hz, 1 kHz and 10 kHz).

The audio line is monitored for faults by means of a 15 V phantom voltage that is injected from the AVAC (only applicable when connected to the emergency microphone input).

FAULT MONITORING (only applicable if connected to the emergency microphone input)

When the Mic. Monitor jumper link is in the 'Enable' position, the microphone capsule is monitored for impedance and current absorption. Any deviation outside this pre-set window is detected as a fault, which lights the Fault LED. The audio lines are monitored by the phantom voltage detect circuit which notifies any loss of the 15 V phantom (due to an open circuit or short circuit line) to the monitor circuit. The monitor circuit causes an open circuit condition to be set on the PTT, signalling a fault to external control equipment.

CABLES

The VA406 is provided with a 2 metre flexible lead terminated in an RJ45 plug. This plug connects to a CatCON wall plate which fits on a dual single gang wall box in order to provide enough space for termination. A single gang blank plate should be fitted over the unused part of the back box.

If the VA406 is used as an emergency microphone then two 1.5 mm² four-core fire-rated cables should be used to connect the AVAC. Maximum distance is 500 metres.

If the VA406 is used as a paging microphone then a single Cat5 cable should be used. Maximum distance 500 metres.

Specification

Connection	8-way RJ45 (CatCON) wall plate (supplied)
Output	0 dB Line Level (775 mV)
EQ Filters	100 Hz, 1 kHz, 10 kHz \pm 12 dB
Master and Chime Levels	$-\infty$ to +4 dB
Supply Voltage	20 – 32 VDC (from AVAC)
Current consumption	<100 mA
Noise gate threshold	-30 dB
Compression ratio	3:1

Internal adjustments

Microphone monitoring selector

This jumper link should be set to the "enable" position to switch on the microphone's fault monitoring circuitry.

Tone controls

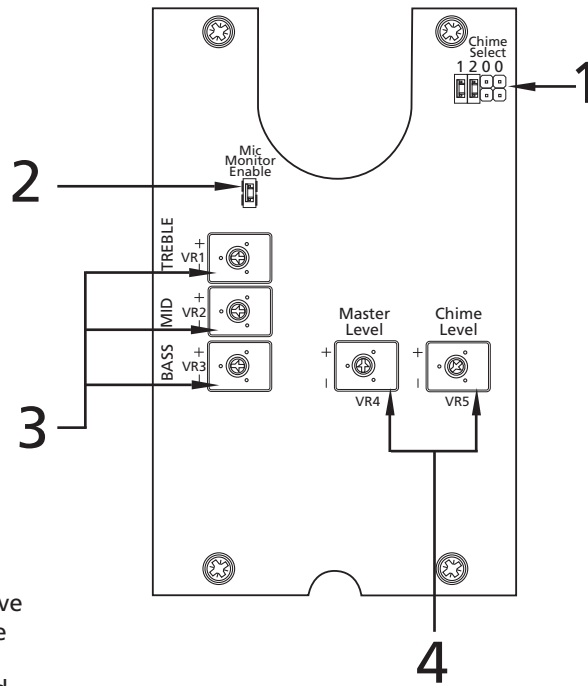
Three Equalization (Tone) controls are provided, each with ± 12 dB of adjustment. These are:-

- Bass (100 Hz)
- Mid (1 kHz)
- Treble (10 kHz)

These can be used to improve intelligibility and reduce the effects of feedback.

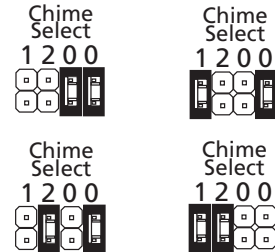
Start by setting the bass and treble to minimum (fully anti-clockwise) and the mid control at maximum.

Then adjust to get the best results.



Chime select

The microphone can be set up so that a 1, 2 or 3 note chime is transmitted when its PTT (push-to-talk) switch is operated. The number of chimes that will sound is dependant on the configuration of the microphone's Chime Select jumper links, as detailed below:-

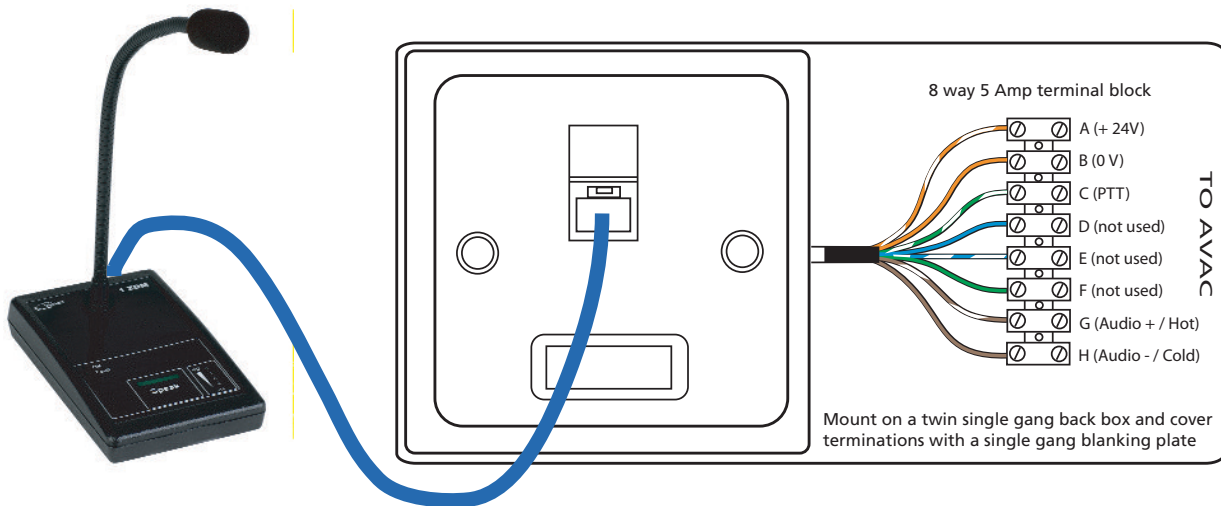


Master and Chime level controls

Adjust the Chime Level control to balance it against the speech level.

Adjust the Master Level control to set up the overall output level.

CatCON wall plate connections



Front panel LEDs

	NAME	FUNCTION/DESCRIPTION
1	OK	GREEN when power is applied
2	FAULT	AMBER when fault detected (only applicable if connected to a monitored microphone input)
3	SPEAK	GREEN when system ready for paging announcement
4	VU METER	Constantly active (even when the speak bar is not pressed). Lights in synch with audio peaks to indicate that the audio path to the input stage is intact.