



@udio  
Logistics

# PERMA 4

## Voice Alarm Amplifier



### Key Features:

- Meets or exceeds EN54-16, BS5839pt8:2008
- Two independent 200W Class D amplifiers
- Silent DC load monitoring of up to eight spurs
- Simplified rack cable management
- Battery charging and monitoring to EN54-4
- Priority and Page inputs for local systems
- 2u Convection cooled chassis
- Intelligent "Hot Swap" system
- Impedance monitor option
- Auxillary power for matrices

The @udio Logistics PERMA range of amplifiers from Current Thinking are designed to provide the power amplification needed by Voice Alarm systems of all sizes, by using the latest class D techniques the amplifiers are both smaller in size and run cooler than their conventional equivalents.

### Overview

By using an advanced switching topology each power module produces 200W at 100V line with an efficiency in excess of 86%. This increased efficiency reduces the battery requirements and the heat generated within the rack, additionally the amplifiers will produce full rated power with batteries down to 22V.

Each dual amplifier is provided with a high capacity mains supply and monitored battery charger which also supplies up to 1A of auxiliary DC to power matrices and routers. The built in 1.5A SLA battery charger is fully monitored to EN54-4 for AC, DC, fuse faults and deep discharge. When the batteries are discharged to 20V the amplifier will shut down to prevent battery damage.

### Inputs and Monitoring

Each amplifier channel has two separate inputs, Priority and Page, with independent level controls. The priority input is always mixed to the output, and will mute the page input when a priority access signal is asserted. The page input can be set to mute until a page access signal is asserted, or to be permanently live until overridden by the Priority input allowing local music and paging systems to integrate with ease.

Load monitoring is provided for each channel, and detects open circuit, short circuit and earth leakage using silent DC techniques, allowing up to eight individual spurs to be fully monitored per module using only two cores. Impedance monitoring is also available with a dedicated two wire end of line device, offering a 10% accuracy for legacy systems.

### Mounting

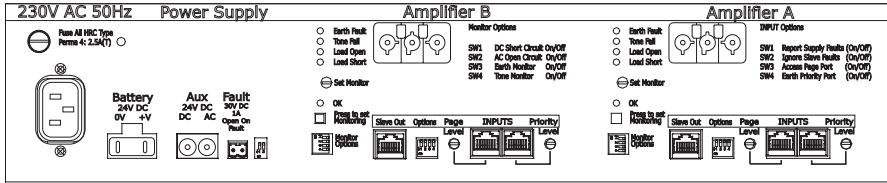
The case is manufactured from brushed stainless steel with black aluminium rack wings and extruded aluminium guide rails, the case is designed to mount directly in to a 19" rack occupying 2u of space, however support rails are recommended.

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### Connections

The use of Cat5 patch leads for audio reduces the build labour on all the systems, all power and speaker connections use industry standard connectors for ease of replacement.

### Hot Swap (optional use)

When required, hot swapping of the power amplifier is easily achieved, using the slave output connector, which has a dedicated signal for this purpose, the swap is only activated if the amplifier has failed and a priority has been asserted, giving more redundancy in the system.

### Technical Specification

#### Audio Inputs (per channel)

Quantity	2, Page & Priority
Connection	Cat 5 (RJ45)
Sensitivity	0dB

#### Audio Outputs

Type	100V line
Power	Dual 200W
Impedance	50Ω
Gain	50dB
Noise	<-80dB
THD+Noise	<0.1%
Switch Frequency	768KHz
Connector	ST18

#### Display

Per Channel	
Level	2, Signal & Peak
Access	2, Page & Priority
Power	1, On
Fault	3, Load, Protect, Swap
PSU	
Power	2, AC & DC
Fault	2, PSU, Fuse
General	
OK	Blue

#### Power Supply

Mains	230VAC ±10%
Battery	24V nominal
Charger Type	Constant Voltage
Charge Voltage	27.6V
Charge Current	1.5A
Aux Supply	1A
Quiecent Current	440mA (both Channels active)

#### Standards Compliance

EMC	EN55103-1, EN55103-2
LVD	EN60065
Product Family	EN54-16, EN54-4

#### Physical

Height	89mm (2u)
Width	483mm (19")
Depth	330mm
Weight	13.2kg
Material	Stainless steel, extruded Aluminium
Colour	Natural / Black

All information believed to be correct at time of printing E&OE. Current Thinking operate a policy of continuous improvement; always confirm specification details before purchase.

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