

SA8 Eight Channel Power Amplifier

Hardware Reference



Updated 2024-12-19

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SA8 Eight Channel Power Amplifier



SA8 Overview

The SA8 is an eight-channel power amplifier that delivers up to 1.5 watts of power per speaker to up to eight speakers. The unit features high channel separation with low cross talk combined with low noise and distortion. The gain for all eight channels can be set to 0, -6, -10 or -13 dB.

Power

The SA8 Power Amp is powered via the System 3 zBus (ZB1PS). No PC interface is required.

SA8 Features

Inputs

There are eight available inputs located on the DB9 connector on the front panel of the SA8.

Outputs

The eight output channels are accessible via the DB25 connector and are arranged for optional direct connection to a PP16 Patch Panel. For easy wiring and connection to a wide variety of transducers, the eight outputs are duplicated on the DB25 and sufficient ground pins are provided to allow for connections requiring a single ground for all channels or paired grounds for each channel.

See [Mapping SA8 Analog Outputs to PP16 Connectors](#) for more information on easy access to SA8 output channels via the patch panel.

Gain

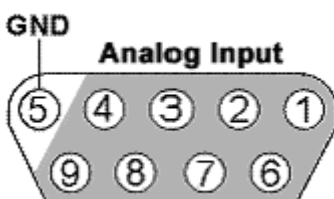
The gain is controlled by two toggle switches on the front panel of the SA8. The following table describes the selectable gain values.

| Left Toggle | Right Toggle | dB Gain |
|-------------|--------------|---------|
| Up | Up | 0 |
| Up | Down | -6 |
| Down | Up | -10 |
| Down | Down | -13 |

SA8 Technical Specifications

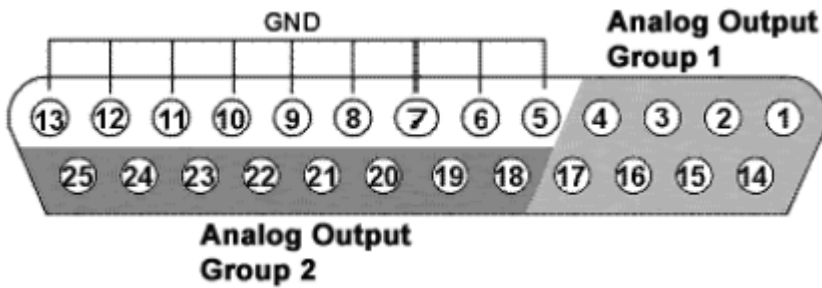
| | |
|--------------------|---|
| Input Signal Range | ±10 V peak |
| Power Output | 5 W total into 5.5 ohm loads, split across all connected channels |
| Spectral Variation | <0.1 dB from 50 Hz to 200 kHz |
| Signal/Noise | 116 dB (20 Hz to 80 kHz) |
| THD | <0.02% at 1 W from 50 Hz to 100 kHz |
| Noise Floor | 10.5 uVrms |
| Input Impedance | 10 kOhm |
| Output Impedance | 2 ohms |
| Cross Talk | <-60 dB |

Analog Input Pinout



| Pin | Name | Description | Pin | Name | Description |
|-----|------|-----------------------|-----|------|-----------------------|
| 1 | A1 | Analog Input Channels | 6 | A2 | Analog Input Channels |
| 2 | A3 | | 7 | A4 | |
| 3 | A5 | | 8 | A6 | |
| 4 | A7 | | 9 | A8 | |
| 5 | GND | Ground | | | |

Analog Output Pinout



| Pin | Name | Description | Pin | Name | Description |
|-----|------|------------------------|-----|------|------------------------|
| 1 | A1 | Analog Output Channels | 14 | A2 | Analog Output Channels |
| 2 | A3 | (Group 1) | 15 | A4 | (Group 1) |
| 3 | A5 | | 16 | A6 | |
| 4 | A7 | | 17 | A8 | |
| 5 | GND | Ground | 18 | A1 | Analog Output Channels |
| 6 | GND | | 19 | A2 | (Group 2) |
| 7 | GND | | 20 | A3 | |
| 8 | GND | | 21 | A4 | |
| 9 | GND | | 22 | A5 | |
| 10 | GND | | 23 | A6 | |
| 11 | GND | | 24 | A7 | |
| 12 | GND | | 25 | A8 | |
| 13 | GND | | | | |