

DA20.4

4-Channel High-Performance Class-D Amplifier



Applications

- High-output full-range loudspeakers
- Subwoofer amplification (single and dual-driver systems)
- Touring and rental production systems
- Nightclubs, DJs, and live venues
- Houses of worship and performance spaces
- Arenas, event spaces, and mobile stages
- Multi-channel installations and zone-based systems (with external DSP)

Overview

The Sound Barrier DA20.4 is a high-performance 4-channel Class-D amplifier engineered for professional audio applications requiring high output power, efficiency, and reliability.

Built with advanced switching power supply and active PFC technology, the DA20.4 delivers exceptional performance while maintaining reduced energy consumption and heat dissipation. Its compact 1U design makes it ideal for both touring racks and permanent installations.

With selectable gain settings, flexible operating modes (Stereo, Bridge, Mono), and comprehensive protection circuits, the DA20.4 ensures stable operation across a wide range of speaker configurations.

Features

High Efficiency & Power

- Class-D topology with >80% efficiency (up to 90% in lab conditions)
- High output power for demanding applications
- Reduced heat generation and lower operating costs

Flexible Operation

- Stereo, Bridge, and Mono modes
- Selectable gain: 32dB to 41dB
- Compatible with 2Ω, 4Ω, and 8Ω loads

Advanced Power Supply

- 100–240V universal power input
- Active Power Factor Correction (PFC)
- Stable operation worldwide

Compact & Tour-Ready

- Lightweight, compact 1U rack design
- Ideal for mobile and installed systems
- Reduced transport and installation costs

Cooling & Reliability

- Front-to-rear airflow cooling system
- Temperature-controlled fans
- Thermal protection with auto-recovery

Comprehensive Protection

- Over-temperature protection
- DC protection
- Short circuit protection
- Overload limiter
- Undervoltage protection

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4-Channel High-Performance Class-D Amplifier

Channel Handling	
Number of output channels	4 x Neutrik® Speakon® (NL4)
Number of input channels	4 x Balanced XLR inputs
Operating modes	Stereo / Mono / Bridge
Bridgeable output channels	Per Channel Pair (2 Bridged Pairs Possible)
Minimum load: Stereo / Mono	2Ω minimum
Minimum load: Bridge	4Ω minimum
Audio	
Gain	Selectable 41dB / 38dB / 35dB / 32dB
Input sensitivity at 41dB gain	1.65V RMS
Input sensitivity at 38dB gain	2.33V RMS
Input sensitivity at 35dB gain	3.30V RMS
Input sensitivity at 32dB gain	4.66V RMS
Default gain	typical: 0.01% (10% rated power, 8Ω)
Damping factor @ 8Ω	> 5000 (8Ω, 20Hz–200Hz)
Frequency response	Typical: +0 / -0.5dB (10% rated power, 20Hz–20kHz, 8Ω)
Crosstalk	≥90dB (20Hz–1kHz, below rated power)
THD+N	Typical: 0.01% (10% rated power, 8Ω)
Input impedance	20kΩ balanced / 10kΩ unbalanced
Signal LED threshold	Green when input signal is greater than -32dB
Clip / limiter indication	Yellow when output distortion is >1% or power is compressed
Output Stage	
Rated output power @ 8Ω Stereo	4 x 3000W
Rated output power @ 4Ω Stereo	4 x 5000W
Rated output power @ 2Ω Stereo	4 x 6500W
Rated output power @ 16Ω Bridge	2 x 6000W
Rated output power @ 8Ω Bridge	2 x 10000W
Rated output power @ 4Ω Bridge	2 x 13000W
Output RMS voltage	154.8V RMS
Output connector type	Neutrik® Speakon® (NL4)
AC Mains Power	
Nominal AC input (±10%)	100–240 V @ 50/60Hz
Power supply design	Universal Switching Power Supply
Power factor correction	Active PFC (Power Factor Correction)
Power cord gauge	12 AWG
Idle consumption / standby input power	150W

Power Consumption & Heat	
Standby line current	0.7A @ 220V / 1.5A @ 110V
Standby power in / out / dissipated	160.0W / 0.0W / 160.0W
1/8 power @ 8Ω/ch line current	8.6A @ 220V / 17.2A @ 110V
1/8 power @ 8Ω/ch power in / out / dissipated	1896.1W / 1250.0W / 291.7W
1/8 power @ 4Ω/ch line current	13.8A @ 220V / 27.6A @ 110V
1/8 power @ 4Ω/ch power in / out / dissipated	3031.6W / 2125W / 448.0W
1/3 power @ 8Ω/ch line current	19.4A @ 220V / 38.9A @ 110V
1/3 power @ 8Ω/ch power in / out / dissipated	4275.2W / 3333.3W / 469.1W
1/3 power @ 4Ω/ch line current	32.1A @ 220V / 64.3A @ 110V
1/3 power @ 4Ω/ch power in / out / dissipated	7070.6W / 5666.7W / 746.3W
Thermal	
Operating temperature	32°F – 104°F (0°C – 40°C)
Cooling	Front-to-rear Airflow
Fan control	Temperature-controlled fan
Thermal limiting threshold	185°F (85°C)
Thermal shutdown threshold	194°F (90°C)
Side clearance requirement	2.0 in (5cm)
Rear clearance requirement	3.9 in (10cm)
Construction	
Dimensions (W x H x D)	19.02 x 1.77 x 18.31 in (483 x 45 x 465 mm)
Rack width	19.02 in (483 mm)
Height	1.77 in (45 mm)
Depth	18.31 in (465 mm)
Rack space	1U
Net weight	29 lb (13 kg)
Included accessories	Power cord, user manual, 4 rubber feet
Signal-sensitive equipment spacing	7.9 in (20cm) minimum preferred
Protection circuits	Under voltage, DC, over temperature, overload, short circuit
Limiter functions	Over-temperature limiter, overload limiter, short limiter
PWR LED green	Power switch on
PWR LED yellow	Temperature limiter active
SIG LED green	Input signal greater than -32dB
SIG LED yellow	Output distortion >1% or power compression
SIG LED red	Protection condition

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