

Bias D1



Easy set up and accessible parameters result in this highly versatile Bias D1 amplifier. The front panel LED display provides status feedback, which can alternatively be obtained by connecting the amp to a PC running Armonia Pro Audio Suite™ software.

A fully integrated, state-of-the-art DSP offers extensive system management features, including sound shaping and limiter functionality. In addition, the DSP hardware and Armonia Pro Audio Suite™ software enable compliance with IEC 60849.

Designed to work with lo-Z (from 2 Ω) and 70V/100V distributed lines, any mixed configuration of low and high impedance output loads is possible, making the Bias D1 suitable for all applications in installed sound reinforcement systems. DSP+D versions of the Bias D1 extend system performance, supported by Dante™ digital audio networking architecture and the on-board, high-end signal processing.

Significant eco-friendly, energy-saving efficiency results in low operational costs, power consumption, heat dissipation and carbon footprint.

Key features:

- Easy to set up, versatile to use
- Status feedback provided via front panel LED display or connection to a PC running Armonia Pro Audio Suite™ software.
- Eco-friendly, energy efficient
- Minimal operational costs and carbon footprint
- Fully integrated, state-of-the-art DSP for extensive system management functionality
- Sound shaping and limiter functions
- DSP hardware enables compliance with IEC 60849
- Designed to work with lo-Z (from 2 Ω) and with 70V/100V distributed lines; any mixed configuration of low and high impedance output loads can be attained
- Extended system performance with the support of Dante™ digital audio networking architecture and on-board, high-end signal processing

Applications:

- Bar, club, lounge
- Corporate and AV
- Indoor and outdoor dance events
- Medium- to large-scale touring
- Live music venues

Bias D1

Channel Handling		
Number of output channels	2 Hi-Z or Lo-Z (bridgeable per ch. pair)	Phoenix PC 5/8-STF1-7,62
Number of input channels		
Analog	2	Phoenix MC 1,5/12-ST-3,81
Dante™	2	1 x RJ45

Audio				
Gain	26 dB	29 dB	32 dB	35 dB
Input sensitivity @ 8 Ω	4.08 Vrms	2.89 Vrms	2.04 Vrms	1.45 Vrms
Max input level	20 dBu			
Frequency Response (±0.5 dB, 1 W @ 8 Ω)	20 Hz - 20 kHz			
Crosstalk (1 kHz)	typical -70 dB			
S/N (32 dB gain, analog input 20 Hz - 20 kHz @ 8 Ω)	> 109 dB(A)			
Input impedance	20 kΩ balanced			
THD+N (from 0.1 W to Full Power)	< 0.1% (typical < 0.05%)			
DIM (from 0.1 W to Full Power)	< 0.05%			
Slew Rate (input filter bypassed @ 8 Ω)	> 50 V/μs			
Damping Factor @ 8 Ω, 20 Hz - 100 Hz	> 500			

DSP	
AD converters	24 Bit Tandem™ @ 48 kHz 125 dB-A Dynamic Range - 0.005 % THD+N
DA converters	24 Bit Tandem™ @ 48 kHz 117 dB-A Dynamic Range - 0.003 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 192 kHz 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	32 bit floating point
Latency	2.5 ms fixed latency architecture
Memory/Presets	128 MB (RAM) plus 512 MB flash for presets
Delay	2 s (input) + 100 ms (output) for time alignment
Equalizer	Raised-cosine, custom FIR, parametric IIR: peaking, hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
Crossover	linear phase (FIR), Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)
Limiters	TruePower™, RMS voltage, RMS current, Peak limiter
Damping control	Active DampingControl™ and LiveImpedance™ measurement

Output Stage	
Maximum output power per channel @ 8 Ω	800 W
Maximum output power per channel @ 4 Ω	800 W
Maximum output power per channel @ 2 Ω	1000 W
Maximum output power @ 4 Ω Bridged	2000 W
Maximum output power @ 8 Ω Bridged	1600 W
Maximum output power @ Hi-Z distributed line 100 V	800 W
Maximum output power @ Hi-Z distributed line 70 V	800 W
Maximum unclipped output voltage @ 8 Ω	115 V _{peak}
Maximum output current	45 A _{peak}

The power figure is calculated by driving and loading symmetrically all the channels: uneven loads allow to achieve higher performances.

AC Mains Power				
Power supply	Universal regulated switch mode with PFC, SRM			
Nominal voltage (±10%)	100-240 V @ 50-60Hz			
Power factor (> 500 W output)	> 0.95			
Consumption/current draw	@ 115 V	@ 230 V		
Idle (DSP+D)	23.0 W	0.34 A	23.3 W	0.21 A
1/8 Max Output Power @ 4 Ω	267 W	2.5 A	274 W	1.5 A
AC Mains connector	IEC C20 inlet (20 A max) region-specific power cord provided			

Thermal				
Cooling	Fan, continuously variable speed, temperature controlled, front to rear airflow			
Thermal dissipation	@ 115 V	@ 230 V		
Idle (DSP+D)	78 BTU/h	19.66 kcal/h	79 BTU/h	19.91 kcal/h
1/8 Max Output Power @ 4 Ω	229 BTU/h	57.71 kcal/h	251 BTU/h	63.25 kcal/h

Networking	
Standards compliance	auto-sensing Fast Ethernet (IEEE 802.3u, 100 Mbit/s)
Supported topologies	Star
Remote interface	Armonia Pro Audio Suite™

Construction	
Dimensions	483 x 44.5 x 358 mm 19.0 x 1.75 x 14.1 in
Weight	7.0 Kg (15.4 lb)

