

# Bias Q3

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The four-channel Bias Q3 DSP touring amplifier provides reliable premium-grade power with intuitive front panel control. The Q3 offers ample power, allowing for high SPL even with 8 or 16  $\Omega$  loads, and is capable of delivering 4 x 2000 W output on 4  $\Omega$  loads, increasing to 2300 W when driven asymmetrically. This amplifier has been designed with versatility and ease of use in mind, and is suitable for high-power, full-range systems in any configuration. As with all other Bias amplifiers, it offers total integration with the Armonia Pro Audio Suite™ enabling extended control on smart phones and tablets.

## Key features

- Innovative power supply design
- Flexible routing and mixing
- 4.3" touch screen display and rotary encoder for intuitive control
- Four input channels with physical analogue and digital AES3 link in/out connectors for maximum flexibility
- Analogue to Dante conversion and forwarding for ease of signal distribution
- Customisable input backup policy to automatically switch input source in case of signal failure for improved reliability
- Complete user interface integrated into Armonia Pro Audio Suite™
- Top-grade DSP with high dynamic range and extensive feature set
- Multi-stage signal processing
- Input and output IIR, FIR, IIR+FIR equalizers and raised-cosine filters
- Complete sets of limiters (peak, RMS voltage, RMS current, and TruePower™)
- Speaker cable loss compensation with Active DampingControl™
- Full protection circuitry: over/under AC voltage; troublesome signals (clipping, VHF, long-term RMS); DC; thermal; short circuit; and mute at power on/off

## Applications

- Festivals & events
- Live music venues
- Nightclubs & bars
- Small to medium scale touring

# Bias Q3

Channel Handling	
Outputs	4 x Speakon NL4
Inputs	4 Dante/AES67 TX (from local input or DSP)
Analog	4x XLR female
	4 x XLR male (LINK)
Digital AES3	4 (2x XLR)
	4 x XLR male (LINK)
Digital Dante/AES67	2 XLR Ethercon (4 x audio channels)

Audio		
	Gain	Vrms
Input sensitivity @ 8 $\Omega$	32 dB	2.86
S/N (20 Hz - 20 kHz @ 8 $\Omega$ )	109 Typ. dB(A)	
Max input level	24 dBu	
Frequency response @ 8 $\Omega$ load	20 Hz - 20 kHz +/- 1.0 dB	
Crosstalk (1 kHz)	-75 dB typ.	
CMRR	65 dB typ	
THD+N (from 0.1 W to Half Power)	<0.1% (typical < 0.05%)	
SMPTE IMD (from 0.1 W to Half Power)	<0.1% (typical < 0.05%)	
Output impedance at 100 Hz	30 m $\Omega$	

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 Dynamic Range - 0.003 % THD+N
Sample rate converter	24 Bit @ 96 kHz 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	32 bit floating point
Latency	2.5 ms fixed latency architecture
Memory/Presets	50 amplifier snapshots, virtually unlimited speaker 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

Display Specifications	
Resolution	480x272, 4.3" diagonal
Brightness	600 nit
Control	Multitouch capacitive. Rotary encoder 20 steps/turn with pushbutton

Output Stage			
Max output power	per channel @ 8 $\Omega$ (symmetrical)*	1400 W	
	per channel @ 4 $\Omega$ (symmetrical)*	2000 W	
	per channel @ 2 $\Omega$ (symmetrical)*	2000 W	
	per channel @ 8 $\Omega$ (asymmetrical)**	1500 W	
	per channel @ 4 $\Omega$ (asymmetrical)**	2300 W	
	per channel @ 2 $\Omega$ (asymmetrical)**	2000 W	
	@ 8 $\Omega$ bridged	4000 W	
	@ 4 $\Omega$ bridged	4000 W	
	Maximum unclipped output voltage	155 V <sub>peak</sub>	
	Maximum output current	>55 A <sub>peak</sub>	

\* All channels driven and loaded symmetrically  
 \*\* All channels driven but channels 2 and 4 at -6 dB

Power & thermal			
@ 100 V	Standby	Power	15.8 W
	Idle	Power	33.7 W
	1/8 power @ 4 $\Omega$	Power	1429 W
		Current Draw	14.7 A <sub>rms</sub>
		Thermal Loss	1458 BTU/h
@ 240 V	Standby	Power	17.2 W
	Idle	Power	33.5 W
	1/8 power @ 4 $\Omega$	Power	1327 W
		Current Draw	6.0 A <sub>rms</sub>
		Thermal Loss	1111 BTU/h
Power supply		Universal regulated switch mode with PFC, SRM	
Nominal voltage ( $\pm$ 10%)		100-240 VAC @ 50-60 Hz	
Operating voltage		90-264 VAC @ 50/60 Hz	
AC mains connector		IEC C20 inlet (20 A max)	

Networking	
Connectivity	Two Gigabit Ethernet ports, integrated switch, Ethercon connectors
Supported topologies	Star, Daisy Chain
Remote interface	ArmoniaPlus or other preferred software

Construction	
Dimensions	483 x 381 x 88.9 mm (19 x 15 x 3.5 in)
Weight	11.5 Kg (25.4 lbs)