



PowerLight 2 Series

Professional Power Amplifiers

PL218 | PL224 | PL230 | PL236 | PL218A | PL224A | PL230A | PL236A

The PowerLight 2 Series is a high performance line of amplifiers designed exclusively for the touring and live sound professional. Four models range in power from 900 watts to 1850 watts per channel, all in two-rack space chassis that are only 14" deep and 21 lbs.

Each of these models is available in two versions: a base model and an "A" version. Base models are ideal for systems using external signal processing. For those looking for integrated solutions, "A" versions offer internal analog signal processing. Full DSP capabilities may also be added to any model with the addition of the DSP-3 Module.

With PowerLight® technology, PowerLight 2 amplifiers take your sound to a whole new level. Not only does it give you tighter bass and clean transparent highs, PowerLight also cuts waste heat, boosts reliability and gets rid of unwanted noise and hum. PowerLight is a revolutionary switching power supply technology that provides ample current to the audio power circuitry by charging the supply rails 230,000 times a second through an ultra-low impedance circuit. So unlike amplifiers that use conventional supplies, the audio signal is never starved prematurely and remains crisp and clean.

Through continued improvement and innovation, QSC's new PowerLight 2 offer features not found in any other professional audio amplifier.



PowerLight 2 Power Amplifiers

Model	Watts per channel		
	8Ω	4Ω*	2Ω**
PL218	310	525	900
PL224	440	715	1200
PL230	575	900	1500
PL236	725	1100	1850

FTC rating: 20 Hz - 20 kHz, 0.03% THD

*FTC 20 Hz - 20 kHz, 0.05% THD

**EIA 1 kHz, 1% THD

Represents PL 2A and PL 2 Base Models

Features

- PowerLight switching technology for improved audio performance
- High-efficiency Class H output circuits lower AC current consumption and cooling requirements by over 40% (PowerLight 224, 230, and 236)
- Increased airflow for improved thermal performance
- DataPort for remote computer control or the addition of external DSP modules
- Detented gain controls with 1 dB steps for precise calibration
- Removable knobs with lock-out security plate to prevent unauthorized tampering
- User defeatable clip limiters and selectable low-frequency filter (5, 30, or 50 Hz)
- 1/4" TRS (base models only), XLR, and 3-pin detachable terminal block input connectors
- Neutrik Speakon® and "Touch Proof" binding post outputs
- "Locking" IEC power cable remains secure on the road
- Personalized badging available

PowerLight 2 "A" built-in signal processing

- Selectable input sensitivity/voltage gain (+4 dBu, 32 dB, or 26 dB)
- Adjustable two-way 4th order Linkwitz-Riley crossover with low frequency delay for driver time alignment
- Adjustable high frequency attenuation
- Independent output power limiters on each channel with adjustable threshold, attack and release times
- Adjustable CD horn equalization
- 3 year warranty, plus optional 3 year extended service contract

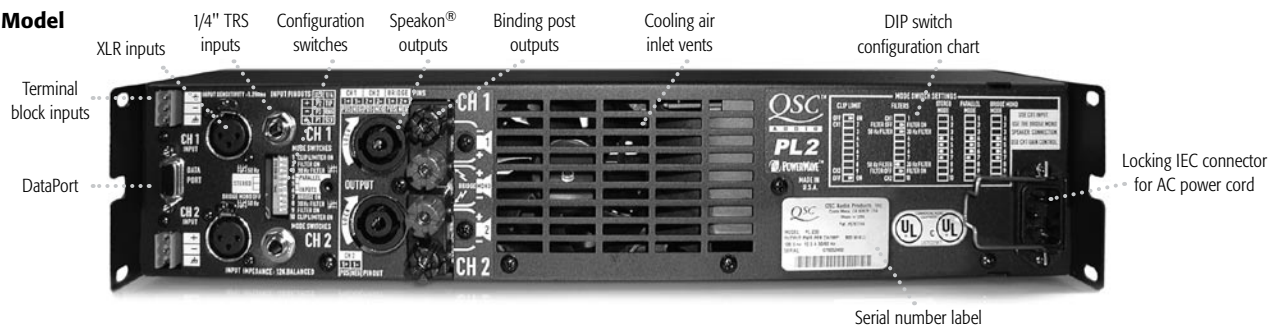
PowerLight 2 Series

PL2 Base Model Specifications

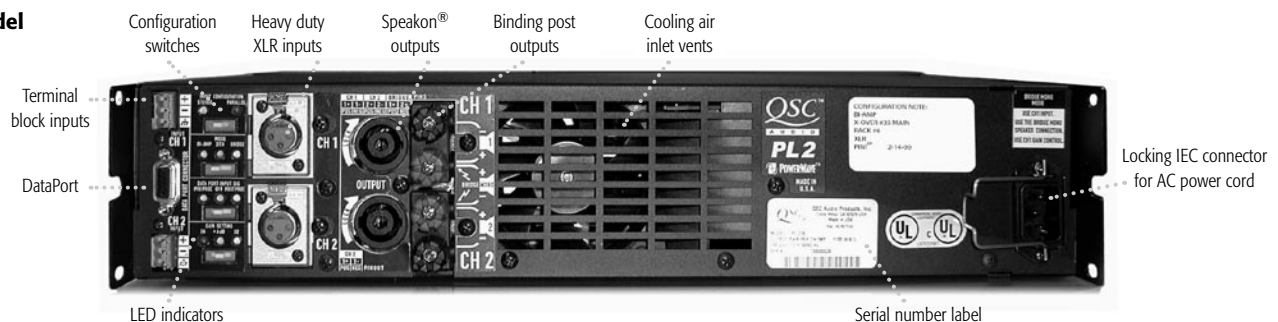
	PL218	PL224	PL230	PL236
Stereo Mode (both channels driven)				
8Ω / FTC 20 Hz - 20 kHz / 0.03% THD	310 W	440 W	575 W	725 W
8Ω / EIA 1 kHz / 1% THD	350 W	475 W	625 W	800 W
4Ω / FTC 20 Hz - 20 kHz / 0.05% THD	525 W	715 W	900 W	1100 W
4Ω / EIA 1 kHz / 1% THD	600 W	825 W	1050 W	1300 W
2Ω / EIA 1 kHz / 1% THD	900 W	1200 W	1500 W	1850 W
Bridge Mono Mode				
16Ω / FTC 20 Hz - 20 kHz / 0.1% THD	650 W	900 W	1200 W	1500 W
8Ω / FTC 20 Hz - 20 kHz / 0.1% THD	1100 W	1500 W	2000 W	2400 W
4Ω / EIA 1 kHz / 1% THD	1800 W	2400 W	3000 W	3700 W
Noise (20 Hz - 20 kHz)	-107 dB	-108 dB	-107 dB	-107 dB
Input Sensitivity at 8Ω	1.23 Vrms	1.16 Vrms	1.17 Vrms	1.23 Vrms
Input Sensitivity at 4Ω	1.15 Vrms	1.10 Vrms	1.07 Vrms	1.07 Vrms
Voltage Gain	32 dB	34 dB	35 dB	36 dB
Output Circuitry	AB	Class H, 2-tier	Class H, 2-tier	Class H, 2-tier
Power Requirements (1/8 power pink noise at 4Ω)**	8 A*	8 A*	9 A*	10 A*
Distortion (SMPTE-IM)	< 0.01%			
Distortion (typical)				
10 dB below rated power; 20 Hz - 20 kHz	< 0.015% THD			
Full rated power: 5 kHz and below	< 0.01% THD			
Frequency Response	20 Hz - 20 kHz, ±0.2 dB / 8 Hz - 100 kHz, +0, -3 dB			
Damping Factor	> 500			
Input Impedance	6k ohm unbalanced / 12k ohm balanced			
Input Clipping	10 Vrms (+22 dBu)			
Cooling (each channel)	Variable speed fan, rear-to-front air flow			
Connectors (each channel)	Input: 1/4" TRS, 3-pin XLR and 3-pin detachable terminal blocks (1 each per channel) Output: Neutrik Speakon® and touch proof binding post			
Controls	Front: AC switch / Ch.1 and Ch.2 gain knobs Rear: DIP switch for Ch. 1 and Ch. 2: clip limiter on/off, LF filter on/off, LF filter frequency select 30 or 50 Hz; inputs parallel or stereo; bridge mode			
Indicators	Parallel Inputs: Orange LED / Bridged: Yellow LED / Power-On: Green LED / Clip/Prot: Red LED / Level -10 dB: Amber LED / Level -20 dB: Green LED / Signal -35 dB: Green LED (1 per channel)			
Amplifier Protection	Full short circuit, open circuit, thermal, ultrasonic, RF protection. Stable into reactive or mismatched loads			
Load Protection	On/off muting / DC-fault power supply shutdown			
Dimensions (HWD)	3.5" (8.9 cm) 2 rack spaces x 19" (48.3 cm) rack mounting x 14" (35.6 cm) from front mounting rails			
Weight - Net / Shipping	21 lbs (9.5 kg) / 27 lbs (12.3 kg)			

*at 120 VAC, both channels driven; multiply current by 0.5 for 230V units ** Note: 1/8 power is representative of current draw with typical music program material with occasional clipping

PL2 Base Model



PL2A Model



PL2A Model Specifications

	PL218A	PL224A	PL230A	PL236A
Stereo Mode (both channels driven)		Continuous average output power per channel		
8Ω / FTC 20 Hz - 20 kHz / 0.05% THD	310 W	440 W	575 W	725 W
8Ω / EIA 1 kHz / 1% THD	350 W	475 W	625 W	800 W
4Ω / FTC 20 Hz - 20 kHz / 0.07% THD	525 W	715 W	900 W	1100 W
4Ω / EIA 1 kHz / 1% THD	600 W	825 W	1050 W	1300 W
2Ω / EIA 1 kHz / 1% THD	900 W	1200 W	1500 W	1850 W
Bridge Mono Mode				
8Ω / FTC 20 Hz - 20 kHz / 0.1% THD	1100 W	1500 W	2000 W	2400 W
4Ω / EIA 1 kHz / 1% THD	1800 W	2400 W	3000 W	3700 W
Noise (20 Hz - 20 kHz)	-103 dB	-103 dB	-103 dB	-103 dB
Input Sensitivity at 8Ω	2.57 Vrms (26 dB) 1.28 Vrms (+4 dBu) 1.28 Vrms (32 dB)	3.05 Vrms (26 dB) 1.20 Vrms (+4 dBu) 1.53 Vrms (32 dB)	3.84 Vrms (26 dB) 1.22 Vrms (+4 dBu) 1.93 Vrms (32 dB)	3.95 Vrms (26 dB) 1.24 Vrms (+4 dBu) 1.98 Vrms (32 dB)
Input Sensitivity at 4Ω	2.37 Vrms (26 dB) 1.18 Vrms (+4 dBu) 1.18 Vrms (32 dB)	2.79 Vrms (26 dB) 1.10 Vrms (+4 dBu) 1.39 Vrms (32 dB)	3.41 Vrms (26 dB) 1.08 Vrms (+4 dBu) 1.71 Vrms (32 dB)	3.45 Vrms (26 dB) 1.09 Vrms (+4 dBu) 1.73 Vrms (32 dB)
Voltage Gain	26, 32, 32 dB	26, 32, 34 dB	26, 32, 35 dB	26, 32, 36 dB
Output Circuitry	AB	Class H, 2-tier	Class H, 2-tier	Class H, 2-tier
Power Requirements (1/8 power pink noise at 4Ω)**	8 A*	8 A*	9 A*	10 A*
Distortion (SMPTE-IM)	< 0.01%			
Distortion (typical)				
10 dB below rated power; 20 Hz - 20 kHz	< 0.025% THD			
Full rated power: 1 kHz and below	< 0.025% THD			
Frequency Response	20 Hz – 20 kHz, ±0.2 dB / 8 Hz – 65 kHz, +0, -3 dB			
Damping Factor	> 500			
Input Impedance	6k ohm unbalanced / 12k ohm balanced			
Input Clipping	10 Vrms (+22 dBu)			
Cooling (each channel)	Variable speed fan, rear-to-front air flow			
Connectors (each channel)	Input: 3-pin rubber isolated XLR and 3-pin detachable terminal blocks (1 each per channel) Output: Neutrik Speakon® and touch proof binding posts			
Controls - Rear				
Input Configuration	Stereo or parallel			
Mode	2-channel, bi-amp, or bridge mono			
DataPort Input Signal	Pre-processing, post-processing, or off			
Gain Sensitivity	26 dB, +4 dB, or 32 dB			
Controls - Side				
Subaudio Filter (each channel)	5 Hz (off), 30 Hz or 50 Hz			
Clip Limiter (each channel)	On or off			
Crossover Controls - Side				
Frequency	Range of 85 Hz to 2500 Hz (configured with SIP resistor)			
Low-frequency Delay Enable (Ch. 1 only)	On or off (active only in bi-amp mode only)			
Low-frequency Delay (Ch. 1 only)	Range of 0.14 to 6.5 mSec. (configured with SIP resistor)			
High-frequency ch. attenuation (Ch. 2 only)	Range of 0 to -15 dB in 1 dB steps (active only in bi-amp mode)			
CD Horn equalization (Ch. 2 only)	Range of 0 to +14 dB boost in 2 dB steps (active only in bi-amp mode)			
Power Limiter Controls - Side				
Power Limiter Enable (each channel)	On or off			
Power Limiter Mode (each channel)	Average or peak attack and release mode			
Power Limiter Threshold (each channel)	Range of 0 to -15 dB in 1 dB steps			
Power Limiter Speed (each channel)	Fast: 1-8 mSec. of attack (depending on limiter mode) and 20 ms release Medium: 10-80 mSec. of attack (depending on limiter mode) and 200 ms release Slow: 180 mSec.-1.6 sec. of attack (depending on limiter mode) and 4 sec. release Ch.1 tracks Ch. 2, Ch. 2 tracks Ch. 1, or off			
Indicators	Front: Power: Green LED Bridged: Yellow LED Parallel: Orange LED Biamp: Blue LED Clip: Red LED (1 per ch.) Level -10: Orange LED (1 per ch.) Level -20: Green LED (1 per ch.) Signal -35: Green LED (1 per ch.) Rear: Stereo: Green LED Parallel: Orange LED Biamp: Blue LED 2CH mode: Green LED Bridged: Yellow LED DP Pre Processing: Blue LED DP Out: Green LED DP Post Processing: Yellow LED Gain 26dB: Orange LED Gain +4dBu: Green LED Gain 32dB: Yellow LED Side: LF filter engaged: Green LED (1 per ch.) Power Limiter Activity: Yellow LED (1 per ch.)			
Amplifier Protection	Full short circuit, open circuit, thermal, ultrasonic, RF protection. Stable into reactive or mismatched loads			
Load Protection	On/off muting / DC-fault power supply shutdown			
Dimensions (HWD)	3.5" (8.9 cm) 2 rack spaces x 19" (48.3 cm) rack mounting x 14" (35.6 cm) from front mounting rails			
Weight - Net / Shipping	21 lbs (9.5 kg) / 27 lbs (12.3 kg)			

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