



PowerLight™ 3 Series

Professional Power Amplifiers

PL325 | PL340 | PL380

The PowerLight™ 3 Series is designed for the most demanding live audio users, whether in touring rigs or fixed installations. The most requested features of the PowerLight 2 series have been upgraded to deliver “the ultimate analog amplifier”, while the QSC DataPort ensures full compatibility with advanced digital processing and QSControl. Three models range in power from 1250 watts to 4000 watts per channel at two ohms, all in two-rack space chassis that are only 15.6" (40 cm) deep and 22 lb (10 kg).

In addition to higher power, the PowerLight 3 Series offers higher input voltage, selectable sensitivity, and easily adjusted rear panel switches with color coded LED indicators. For those users who simply want a high performance amplifier to go with their existing processor or console, the PowerLight 3 Series is an ideal choice, offering high power, excellent value, and zero signal latency. When complete integration of amplifier control, monitoring and DSP is desired, the PowerLight 3 Series is fully compatible with the QSControl BASIS networked audio platform, with its comprehensive drag and drop DSP functionality. Simpler DSP requirements can be met with the DSP-4 processing module.

The flagship of the PowerLight 3 Series is the new 8000 watt PL380. This highly refined, all-switchmode amplifier incorporates nearly 40 years of QSC engineering experience, resetting expectations for Class D audio quality. The PL380 combines a pair of 4000 watt Class D amplifier channels with the well proven PowerLight supply, to deliver more than twice as much audio power as previous 2 rack unit PowerLight amplifiers. Reactive “back EMF” from the speaker is recycled to the power supply, and unmatched “plug-to-plug” efficiency of 85% keeps AC power needs to a minimum, while delivering more energy to the speaker.

Years of patient development have resulted in outstanding 20 - 20 kHz audio performance, plus complete protection from normal hazards of the trade. Even simple features such as dependably silent, surge-free on-off switching indicate the special care taken to keep things safely under control. The most pronounced “sonic signature” of the PL380 is one of immense headroom, sailing through even the most difficult loads with no signs of stress or change of tonality.

For lower power applications, the PL325 and PL340 offer the same feature set, matched to upgraded versions of QSC’s most advanced linear amplifier platform. Recent advances in power supply capacitors further improve power and low impedance performance, while continuing to offer the best available audio performance. As a result, designers have the choice of running a single type of amplifier throughout their rig, or matching amplifier performance to specific transducer types.

In keeping with normal QSC design standards, back-to-front airflow provides up to twice as much long-term average power as most competitors, without dumping hot air into the rack. All PowerLight 3 models are built in the same chassis size, with common back panel layouts to facilitate easy racking and hookup.

PowerLight™ 3 Power Amplifiers - Watts at Clipping

Model	Watts per channel		
	8Ω	4Ω	2Ω
PL325	500	850	1250
PL340	800	1250	2000
PL380	1500	2500	4000*

EIA 1 kHz 1% THD

*Burst mode testing required due to AC service current limitations



Features

- PowerLight switchmode power supply for highest efficiency and improved audio performance
- Flow-thru air path and solid aluminum heat sinks for maximum cooling
- DataPort supports remote computer control and/or external DSP-4 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 per channel (3 Hz, 30 Hz, or 50 Hz)
- Three selectable input gains (26 dB, 32 dB, or 1.2V)
- Front and rear panel LEDs indicate status of switch settings at a glance
- Parallel Dataport, XLR/M and XLR/F connectors for simple loop-through connectivity
- Neutrik Speakon® and “Touch Proof” binding post outputs
- Neutrik Powercon® power cable remains secure on the road (early PL380 units will have hardwired power cables until UL approval of 30A Powercon is complete)
- 3 year warranty, plus optional 3 year extended service contract

PL340 and PL325

- Linear Class H output circuit doubles standard Class B efficiency to reduce AC current consumption and cooling requirements

PL380

- Class D output circuit re-doubles the output power with even lower losses and minimal increase in average AC power, dramatically reducing power distribution demands compared to older high power amplifiers

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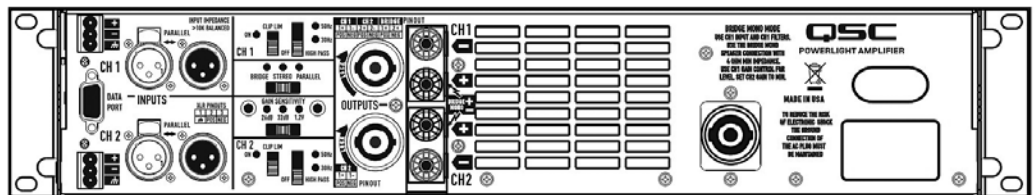
Preliminary Specifications

	PL325	PL340	PL380
Stereo Mode (both channels driven)			
8Ω / EIA 1 kHz / 1% THD	500 W	800 W	1500 W
4Ω / EIA 1 kHz / 1% THD	850 W	1250 W	2500 W
2Ω / EIA 1 kHz / 1% THD	1250 W	2000 W	4000 W*
Bridge Mono Mode			
8Ω / EIA 1 kHz / 1% THD	1700 W	2600 W	5000 W
4Ω / EIA 1 kHz / 1% THD	2500 W	4000 W	8000 W*
Typical Distortion (20 Hz - 3 kHz, 3dB below clip, or 20 Hz - 5 kHz, 10dB below clip, or 20 Hz - 20 kHz, 20dB below clip)			
8Ω	0.002 - 0.01%	0.002 - 0.01%	0.01 - 0.03%
4Ω	0.005 - 0.01%	0.005 - 0.01%	0.03 - 0.06%
2Ω	0.02%	0.02%	0.10%
Maximum Distortion (20 Hz - 20 kHz, 1 dB below rated power)			
4 - 8Ω	0.05%	0.05%	0.20%
Frequency Response (8Ω)	20 Hz - 20 kHz, +/-0.2 dB	20 Hz - 20 kHz, +/-0.2 dB	20 Hz - 20 kHz, +/-0.2 dB
Noise (20-20 kHz, 32 dB Gain)	-106 dB	-105 dB	-104 dB
Dynamic Headroom (4Ω)	2 dB	2 dB	2 dB
Damping Factor (8Ω)	500	500	200
Output Circuitry	Class H (2-tier)	Class H (2-tier)	Class D
Input Sensitivity			
(26 dB Setting)	3.28V	3.92V	5.27V
(32 dB Setting)	1.60V	1.96V	2.67V
Input Gain (1.2V Setting)	34.5 dB	36.4 dB	39.1 dB
Input Impedance	>10k, balanced or unbalanced	>10k, balanced or unbalanced	>10k, balanced or unbalanced
Maximum Input Level			
(1.2V Setting)	11 V (+23 dB)	11 V (+23 dB)	10 V (+22 dB)
(32 dB Setting)	14.6 V (+25.5 dB)	18 V (+27.4 dB)	22 V (+29 dB)
(26 dB Setting)	25 V (+30 dB)	25 V (+30 dB)	25 V (+30 dB)
Controls and LEDs - Front Panel	Common: AC Power Switch, Power (Blue), Br Mono (Yellow), Par (Orange) Each Channel: Signal -35 dB, -20 dB (Green), -10 dB (Orange), Clip/Prot (Red) Gain Control, 21 detents, 1 dB steps		
Controls and LEDs - Rear Panel	Common: Input Mode: Parallel (Orange), Stereo (Green), Br Mono (Yellow) Sensitivity: 26dB (Orange), 32dB (Green), 1.2V (Yellow) Each Channel: LF Filter: Off, 30 Hz (Yellow), 50 Hz (Orange) Clip Limit: Off, On (Yellow)		
Input Connectors	Common: HD-15 DataPort (inputs wired in parallel with XLR) Each Channel: Male XLR, Female XLR, 3-pin terminal block connector		
Output Connectors	Each Channel: 5-way Binding Posts, Neutrik Speakon®, (Ch 1 wired to both channels)		
Amplifier and Load Protection	Short circuit, open circuit, thermal, RF protection. On/off muting, DC fault shutdown, active inrush limiting		
AC Power**/ Cordset			
120V 50/60 Hz	8.5A/NEMA-15	12A/NEMA-15	18A/30A Twist-Loc
230V 50 Hz	7.5A/Euro 16A	7A/Euro 16A	11A/Euro 16A
Dimensions (HWD)	Height: 3.5" (8.9 cm) 2 RU / Width: 19" (48.3 cm) / Depth: 15.63" (39.7 cm) from front mounting rails		
Weight - Net/Shipping	22 lb (10 kg) / 31.5 lb (14.3 kg)	22 lb (10 kg) / 31.5 lb (14.3 kg)	24 lb (11 kg) / 33.5 lb (15.2 kg)

U. S. Patent no. 5767744 and patents pending

* Burst mode testing required due to AC service current limitations

** Representative of current draw with typical music program material with occasional clipping



All specifications are subject to change without notice.

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