

D+ / D+Q AMPLIFIER

POWER AMPLIFIER



- Light Weight and high power density: 11.5kg 2U chassis
- R-SMPS, regulated switchmode power supply with PFC for highest efficiency and improved audio performance
- Two and four channel versions
- Class D output circuit controlled by modulator for high efficiency and sonic transparency
- All channels bridgeable

Product Information

The D+ / D+Q models are based on Class D output circuit. The great advantages of this technology are: low dissipation, compact size and sonic integrity. Reactive 'back EMF' from the speaker is recycled to the power supply and an efficiency higher than 85% keeps AC power needs to a minimum, while delivering more energy to the speaker. Thanks to the high efficiency the D+ / D+Q series dramatically reduce power distribution demands compared to older high power amplifiers. In addition to higher power, the D+ / D+Q Series offers higher input voltage, multiple selectable input gains, and with the four channel models a very high power density. For those users who simply want a high performance amplifier to go with their existing processor or console, the D+ / D+Q series is an ideal choice, offering high power, excellent value, and zero signal latency. The D+ / D+Q series have an open input architecture and can have as option a Digital Signal Processing board and a remote control that allows monitoring of all key amplifier parameters: power on/off, channel mutes, and channel solo functions. The high efficient global power supply is regulated (R-SMPS), works anywhere in the world and offers PFC (Power Factor Correction). The regulated power supply easily deals with a very high variation in the AC mains voltage: it can drop by up to 20% below its nominal level e.g. to 180VAC instead of 230VAC without any loss of the amplifier's rated output Power. D+ / D+Q Series incorporates comprehensive warning and protection features to safeguard the amplifier and all connected loudspeaker drivers. Front-panel indicators give clear warnings when any potential problems are detected. Protection measures are enabled only when critical thresholds are passed or at start-up. Additionally, a soft-start circuit limits initial current draw when amplifier is turned on. The complete protection / warning suite includes: Short circuit, open circuit, thermal, RF protection, mains over / lower voltage, on/off muting, DC fault shutdown, clip limiter. Under normal use these features are inaudible and all protection methods are independent for each channel. The L.S.C. protection constantly monitors the current at the amplifier's output. When load's current exceed the amplifier's limit, the output voltage will be automatically re-adjusted to keep the output devices in a security condition. An additional circuit, with automatic reset, shut down the amplifier's channel if a full short is made between a positive output and GND. The temperature management system sense the output devices temperature. In case of inadequate ventilation or overload, the hi-temp LED start to blinking and a level compensation process will be enabled. This protection safeguard the amplifier and prevent the definitive muting for overtemperature. The cooling is front to back airflow.

D+ / D+Q Benefits

- Strong Reduction of kW/hr needed and power distributions demands, this is GREEN POWER
- Low Heat Dissipation
- Flow-thru air path and solid aluminum heat sinks for maximum cooling
- Continuously variable speed fans
- Clip Limiters
- Multiple selectable (from rear panel) input gains 26 - 29- 32 - 35 - 38 - 41 - 44dB
- Selectable low-freq. HP Filters (30Hz or 75Hz)
- Tamper-proof optional DSP board
- 3 year Warranty



LSS ADVANCED SPEAKER SYSTEMS

D+/D+Q AMPLIFIER

POWER AMPLIFIER

Data Sheet

MODEL	D+3.6	D+4.0	D+5.0	D+6.4	D+8.0	D+Q5.0	D+Q7.0	D+Q8.0	D+Q10.0
Number fo Channels	2	2	2	2	2	4	4	4	4
Power Ouput Per Channel 1)									
16Ω per ch. (all channels driven)	310W	430W	560W	620W	830W	260W	430W	550W	610W
8Ω per ch. (all channels driven)	550W	750W	1050W	1250W	1500W	450W	750W	1000W	1250W
4Ω per ch. (all channels driven)	1000W	1250W	1850W	2200W	2600W	750W	1250W	1700W	2100W
2Ω per ch. (all channels driven)	1800W	2000W	2500W	3200W	4000W	1250W	1750W	2000W	2500W
Power Ouput Bridge 1)									
8Ω per ch.	2000W	2500W	3700W	4400W	5200W	1500W	2500W	3400W	4200W
4Ω per ch.	3600W	4000W	5000W	6400W	8000W	2500W	3500W	4000W	5000W
Performance with Gain									
THD+D 20Hz ~ 20kHz for 1W @ 4Ω					32dB				
THD+@1kHz 1dB Below Clipping @ 4Ω					<0.2%				
Signal to Noise Ratio					>100dBA				
Frequency Response(1W@8Ω) +0/-1dB					20Hz ~ 20kHz				
Damping Factor @8Ω Load, 10Hz ~ 200Hz					>200				
Output Slew Rate @8Ω (input filter bypassed)					45V/μS				
Input Impedance Balanced/Unbalanced					20k/10kΩ				
Input CMRR					>50dB				
Gain and Level									
Input Sensitivity@4Ω(32dB Gain) ±3%	1.5V	1.78V	2.16V	2.36V	2.56V	1.38V	1.59V	1.78V	2.30V
Input Gain Selectable(all Ch. internal jumpers)					26, 29, 32, 35, 38, 41, 44dB				
Default Gain					32dB				
Level Adjustment(per Ch.)	Front panel potentiometer, 21 pos. stepped gain from -Inf. to 0dB								
Front Panel Indicators									
Common	Active On(Normal Status), Acftive Off(Mute); Hi Temperature(Blinking for Power Reduction and on for Mute); Digital Signal								
Processor(DSP) Preset Board Present	Per Channel								
Per Channel	Signal Output -35dB, -20dB, -10dB; Clip / Limit; Protect								
Connectors and Switches									
Input Connectors(per Ch.)	Balanced: Neutrik Combo™ (XLR and 1/4" jack), XLR pin 2 and TRS tip positive, and 3-pin detachable Europlug (Phoenix)								
Output Connectors(per Ch.)	Neutrik Speakon™ (Bi-Wiring Connected)								
Output Bridge Mode per Two Ch.	A+B - ch. A is Signal Input Source; C+D - ch. C is Signal Input Source								
Rear Pannel 4 Position DIP Switches Power (On/Off)	Ch. A / B (C / D) High Pass Filter 30/75 Hz on; Ch.'s A+B (C+D) link/Bridge on Switch on Front Panel								
Output Circuitry	Class D technology								
Power Supply	(R-SMPS) Regulated Switch Mode Power Supply with PFC (Power Factor Correction); The unit w orks anywhere in the world								
Cooling	Two Fans, Front to Rear Air Flow, Temperature Controlled Speed; Front Panel Removable Dust Filter								
Amplifier and Load Protection	Short Circuit, Open Circuit, Thermal, RF Protection, Mains over/Lower Voltage. On/Off Muting, DC Fault Shutdown, Clip Limiter								
Power									
Operating Voltage	95 - 265V AC - 50/60 Hz, min. power up voltage 80 V								
Current Draw @ 230V/ AC 1/8 Power 4Ω	4.2A	4.9A	6.2A	7.6A					
Current Draw @ 230V/ AC 1/3 Power 4Ω	8.7A	10.2A	13.2A	16.2A					
Current Draw @ 230V/ AC idle	0.5A	0.5A	0.5A	0.5A					
Soft Start/Inrush Current Draw @ 230V AC	Yes / Max. 2A								
AC Cordset	230V CE: 16A, CEE7; 115V ETL; 15A, NEMA-15								
Options	Digital Signal Processing Board (DSP Board-1), Handles								
Dimensions(H x W x D)mm	88.9 x 483 x 490mm								
Weight	10kg								11.5kg
Approvals	CE EN55103-1(Emissions), EN55103-2(Immunity), EN60065, Class I(Safety)								

Note 1) EIA 1kHz - 1% THD @ 230V AC

Note 2) The Amplifier will be fully operational @ 2Ω loads (or @ bridge-mode @ 4Ω loads), but due to physical constraints in the construction the Hi Temp Protection may occur and max. Output Power will not be significantly higher than running the Amp. @4Ω loads (or bridge-mode @ 8Ω loads) and therefore not stated here All specifications are subject to change without notice.

