

# LQ2804

High Efficiency 4 Channels Amplifier for Professional Applications



## PRODUCT DESCRIPTION

The Powersoft LQ2804 is a professional four channel power amplifier designed to meet the most stringent requirements of professional users in sound reinforcement and professional fixed installations.

Designed by Powersoft R&D team the LQ2804 is exclusively built in Italy with internal components selected for premium quality and proven durability.

Each modular subassembly is pre-tested, and the assembled LQ2804 receives a rigorous test for total quality control.

Powersoft bridgeable switch mode fixed frequency class D patented outputs provide high quality sound, good damping factor and cooler circuits for stable performances over time and longer amplifier life.

Optional plug-in DSP externally programmable with 2 inputs and 3 outputs.

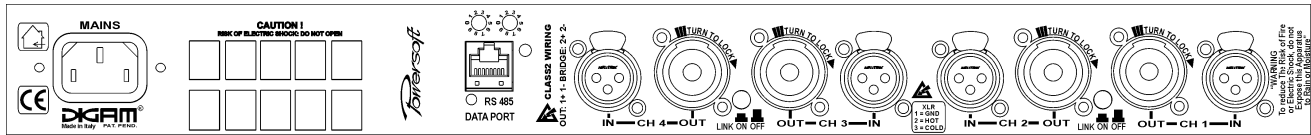
Optional TU4 one rack unit 4 channel transformer output module for constant voltage used.

The Powersoft LQ2804 is CE, CSA and KETI approved.

## LQ2804 FEATURES

- Switch mode power supply with 115/230V selectable range and up to 290V tolerant
- Fixed frequency switch mode output
- Patented output filter with ripple cancellation network
- Comprehensive front panel indicators
- Neutrik® XLR balanced inputs with loop thru XLR and Speakon® outputs connectors
- Fully protected circuit design with:
  - AC protection: shut down power supply when AC mains voltage is outside operating range
  - Clip limiter: prevents severely clipped waveforms from reaching loudspeakers, while still maintaining full peak power output
  - DC protection: protects against infrasonic signal at the outputs
  - VHF protections: protects the loudspeakers against non audible, strong, non musical very high frequency signals
  - Short circuit protection: protects the amplifier from short circuit or other stressful events for the output circuits with automatic protection reset
  - Thermal protection: when output rails reach 75°C (167°F) amplifier shut down outputs, they will unmute automatically when temperature will reach 65°C (149°F)
  - Long term limiter: protects the loudspeaker against steady long term rms (non audio) signals reducing maximum output.
- Temperature controlled continuous variable speed fan, front to back airflow
- Optional plug-in DSP with 24bit/48KHz AD/DA converters, 26 bit inner processing; 2 inputs, 3 outputs; 7 biquad (general Butterworth, Bessel, peaking, shelving, arbitrary IIR) filters per channel for HPF, LPF and system equalization; dual dynamic processor per channel, with arbitrary input/output curve and adjustable time constants; mixed balanced output for subwoofer drive with 12/24dB oct programmable slope and cut-off; 0 – 3.7ms variable delay per channel for speaker alignment; 105 dBA in/out (analog to analog) signal to noise ratio; 1.5 ms processing delay time.
- Recessed stepped attenuators
- Detachable AC mains cable with IEC 16A socket
- Modular construction
- Full three years warranty

POWER SPECIFICATIONS	8 Ω Stereo	4 Ω Stereo	2 Ω Stereo	8 Ω Bridged	4 Ω Bridged
EIAJ test, 1 kHz, 1% THD	4 x 360 W	4 x 700 W	NA	2 x 1400 W	NA



## GENERAL SPECIFICATIONS

<b>Power requirements</b>	AC 115/230V (+15/-25%) internally switchable, 50/60 Hz, 290V tolerant
<b>Idle power</b>	68 VA (0,29A @ 230V / 0,58A @ 115V)
<b>Consumption</b>	506 VA, 2,2A @ 230V, 4,4A @ 115V (1/8 max output power @ 4 Ohm) 943 VA, 4,1A @ 230V, 8,2A @ 115V (1/4 max output power @ 4 Ohm)
<b>Thermal emission (1/8 power @ 4 Ω)</b>	485 BTU/Hour
<b>Thermal emission (1/4 power @ 4 Ω)</b>	784 BTU/Hour
<b>Cooling</b>	Temperature controlled continuous variable speed fan, front to rear airflow
<b>Environmental operating temperature</b>	0°-45° C (32°-113° F)
<b>Construction</b>	1 mm (0,04 in) steel chassis, 3 mm (0,12 in) steel front panel
<b>External dimensions</b>	1 standard rack unit, 358mm deep (14,1 in)
<b>Net Weight-Shipping Weight</b>	7,3 Kg (16,1 Lbs) – 8,8 Kg (19,4 Lbs)

## FRONT & REAR PANEL SPECIFICATIONS

<b>Input connectors</b>	Balanced Neutrik® XLR with positive on pin 2+
<b>Output connectors</b>	Neutrik® Speakon® NL4MD (1+1- stereo, 2+2- bridge)
<b>Power switch</b>	Front panel push on/push off mains power switch
<b>LED indicators</b>	Green for signal (-24dBV) for each channel, green for amplifier ready and yellow for amplifier thermal protection, 3 led meter (2 green, 1 red) per channel output meter
<b>Attenuators</b>	One per channel from $-\infty$ to 0 ( $-\infty$ , 4, 14, 18, 24, 22, 24, 26, 28, 30, 32 dB) stepped attenuators
<b>Power connector</b>	IEC 16A on rear panel
<b>Power cable</b>	IEC16A/Schuko for EU, IEC16A/American 15A 3 pin plug
<b>Link switch</b>	Rear panel link switch to connect input channel 1 to input channel 2

## AUDIO SPECIFICATIONS

<b>Input impedance</b>	10 KΩ, balanced	<b>Slew Rate @ 8 Ω</b>	40V/μs input filter bypassed
<b>Input sensitivity @ 8Ω</b>	1,34 V / 4,76 dBu	<b>Damping factor</b>	>200 @ 100 Hz
<b>Gain</b>	32dB / X40	<b>THD+N</b>	<0,5% from 0,1W to full power (typically <0,1%)
<b>Frequency response</b>	5Hz-30KHz (+/-3dB) for 1W @ 8Ω	<b>SMPTE IMD</b>	<0,5% from 0,1W to full power (typically <0,1%)
<b>S/N ratio</b>	> 105 dB/A (20-20K Hz A weighted)	<b>DIM100 IMD</b>	<0,02% from 0,1W to full power (typically <0,01%)
<b>Crosstalk</b>	>70 dB @ 1 KHz	<b>Max Output Voltage</b>	75 V

Powersoft reserves the right to make improvements in manufacturing or design which may affect product specifications.