



hd QT-Series

4-Channel Touring System Amplifier

Harmonic Design system amplifiers are equally suited to all types of touring and installation applications. Across all loudspeaker series, they are at the same time the ideal drive and control center for the greatest possible performance and linearity of Harmonic Design sound reinforcement systems.

The **hd QT-Series** are 4-channel class D power amplifiers with switched-mode power supplies specially optimized for long-term maximum performance, which deliver high energy (= power × hold time) for the best LF reproduction. That's why the **hd QT8** generates 4x 2,000 W at 4 ohms and the **hd QT12** 4x 3,000 W at 4 ohms with a crest factor of 3 dB! Concentrated on the essentials and cost-efficient: Reduced to the most important features in everyday touring and intuitive to use, the hd QT series delivers reliable high performance day after day in just 2 U. Four analog inputs enable Plug&Play. A generously dimensioned cooling system with temperature-controlled fans allows operation under full load with minimal noise development.

The user interface consists of an LCD display with navigation buttons for visual information and quick access to key functions such as presets, routing matrix, delay and gain. A USB port on the front is used to connect to the proprietary hd LevelZ software suite. This is used for comprehensive system planning, simulation, management and system tuning of all Harmonic Design systems, from the 2.1 active system to large sound reinforcement systems, and offers maximum freedom in sound shaping and loudspeaker management.

Features

- 4-CH High-Power Class D amplifier 4x 3.000 W
- SMPS with PFC specially optimized for long-term maximum performance
- High-End hd MultiDSP with 4In/4Out
- FIR & IIR filter
- maximum operational safety & unlimited flexibility
- multistage limiter architecture (Peak/RMS)

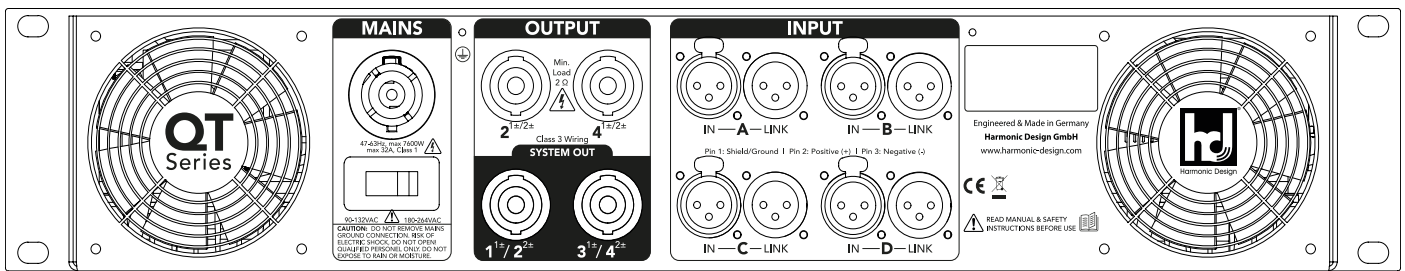
The hd MultiDSP combines IIR and FIR filters to create perfectly linearized phase curves and significantly improved impulse responses for a smooth, more natural, transparent and realistic sound experience.

Very practical for rentals that change on a daily basis: the DSP of the system amplifier can be reconfigured using a notebook or power bank without a mains connection and without integration into the network, and it can be quickly and easily prepared for the next use. Time-consuming reconfiguration of basic systems is no longer necessary.

Application

Concert Hall, Arena, Stadiums, Open-air events,
Live Sound, Club

Datasheet_QT-Series_1V0_EN



Specifications

Channel Handling	
Number of input channels	4x XLR (female) 4x XLR LINK (male)
Number of output channels	4 (4x Speakon NL4)
Audio	
Gain	35.5 dB
S/N (20 Hz - 20 kHz @ 8 Ω)	> 90 dB
Max. input level	8 dBu
Frequency Response	20 Hz - 20 kHz ± 0.5 dB
Crosstalk (1 kHz)	< -85 dB
Input impedance	20 kΩ
CMRR	> 55 dB
THD+N	< 0.05% (typ. < 0.01%)
SMPTE IMD	< 0.1% (typ. < 0.03%)
Output impedance (f<1kHz)	3 mΩ
DSP	
AD converter	24 bit, 107 dB dynamic range
DA converter	24 bit, 108 dB dynamic range
Internal precision	32 bit fixed point
Latency	1.12ms
Memory/Presets	20 presets
Delay	100 ms per output
Equalizer	custom FIR, parametric IIR: peaking, hi/lo-shelving, all-pass, notch, hi/lo-pass (Butterworth, Linkwitz-Riley, Bessel: 12 to 48 dB/oct)
Limiter	RMS voltage, RMS current, Peak voltage
Display Panel	
Display	3.2" LCD display, LED-VU meter each channel
Control	5x navigation buttons, USB B jack

Output Stage		hd QT8	hd QT12
maximum output power	@ 8 Ω*	1200 W	1800 W
	@ 4 Ω*	2000 W	3000 W
	@ 2 Ω*	2000 W	3000 W
Bridgeable	no		
Max. unclipped output voltage	170 V		
Max. output current	48 A		
Output circuit	Class-D Full-Bridge		
Protection circuit	switch-on delay, input limiter, overcurrent, DC-fault detection, overtemperature, short circuit, temperature and output current monitoring		

*measured with 3dB crest factor

Power & Thermal		hd QT8	hd QT12
Standby Power		37 W	53 W
Idle Power		171 W	191 W
Max. Power		3800 W	7600 W
1/8 Power @ 4 Ω	Power	1402 W	1980 W
	Current Draw	7 A	10 A
	Thermal Loss	1200 BTU/h	1700 BTU/h
Power supply		High Efficiency High Power Audio SMPS	
AC mains connector		Powercon 16A	Powercon 32A
Operating Voltage		115VAC: 90-132VAC, 47-63 Hz 230VAC: 180-264VAC, 47-63 Hz	
Mechanics		hd QT8	hd QT12
Enclosure		2 mm steel sheet, powder coating black, silkscreen white	
Weight		15 kg	16 kg
Dimensions (W x H x D)		19" x 2U x 503 mm	

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Dimensions [mm]

