



HSD KD Series Amplifier

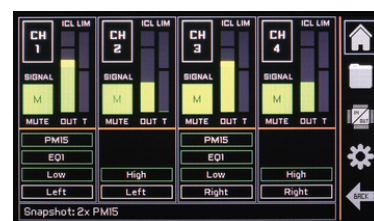


- Large IPS display, capacitive touch panel user interface
- 64 bit double-precision 96kHz DSP process
- Optional AES67 (ATMOS and RAVENNA compatible), Dante™ and AES3 Digital inputs
- Two ports Ethernet and USB port for DSP control
- High efficiency class D topology
- Universal power supply with PFC
- Up to 20000 W in 4 channels
- 8, 4 and 2 Ohm low impedance operation
- 100, 70, 50 and 35 V high impedance modes
- HSD Audio Power Control Management (PCM™)
- Optional GPIO module for 5KD and 10KD
- Neutrik® XLR and Speakon® connectors
- Up-side-down design to avoid fan dust accumulation
- Temperature controlled, front to back cooling
- Neutrik® PowerCon connector (32A for 14KD/20KD models)

DSP management: HSD OCS and amplifier display:

Two general working modes: User and Advanced (manufacturer)

- User functionalities:
 - Input Routing/Matrix (basic or advanced)
 - Input EQ section with 7 filters and 20 memories
 - Input EQ Mode section, predefined by the manufacturer
 - Speaker Preset selection, predefined by the manufacturer
 - Snapshot library management (up to 20 snapshots)
- Advanced functionalities (manufacturer):
 - Input EQ Mode section creation (10 filters, 20 Modes)
 - Way routing section (Locked/Unlocked)
 - IIR EQ section: XOver, Gain, Delay, and 12 EQ filters
 - FIR EQ section: 22 linear phase XOver and EQ filters, 20 Phase filters or custom file up to 1000 taps
 - RMS and Peak Dynamic control
 - Snapshot library management up to 20 presets (Locked/Unlocked)
 - Speaker Preset library management (up to 100 presets)
 - 5 Security levels definition to limit final user functionality



DSP Specifications - HSD_OCS Control

Overall:

- High performance 96kHz/24 bits AD/DA converters
- 64 bit double-precision 96kHz DSP process
- 0.85 ms minimum process latency time
- Custom FIR process up to 1000 taps
- AES67, Dante and AES3 input versions

Input Section (x4):

- Gain, Mute and Phase inversion
- Delay: in In A: 333ms (114m), In B/C/D: 90ms (31m)
- Input EQ: 36 filters (Param., Shelving, LP, HP, BP, SB, AP)

Output Section (x4):

- Crossover Filters: FIR and IIR (up to 48dB/oct, Butterw./LR/Bessel)
- Output Delay: 0 to 31 meters (90ms) per channel
- Output IIR EQ: 12 filters per channel (Param., Shel, LP, HP, BP, SB, AP)

- Output FIR EQ: 22 filters per channel (Parametric, Shelving, LP, HP, BP, SB, AP), or Custom. Up to 1000 taps
- RMS and Peak limiter per channel

Communications:

- Two port Ethernet switch for daisy chain connection
- USB 2.0 Type B port

Miscellaneous:

- 100 Manufacturer system preset memories library
- 20 User preset memories library
- 20 User snapshot memories library
- Manufacturer/User passwords
- User control groups for virtual Equalization, Gain and Delay
- Zones definition for library management and alerts information
- Smaart® analysis software integration



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Power Table

Model	HSD 4-5KD	HSD 4-10KD	HSD 4-14KD	HSD 4-20KD
# of Channels	4	4	4	4
Total Output Power	5,000 W	10,000 W	14,000 W	20,000 W
2 Ω	4 x 1,250 W / 1 x 1,250 W	4 x 2,500 W / 1 x 2,500 W	4 x 3,500 W / 1 x 3,500 W	4 x 5,000 W / 1 x 5,000 W
2.67 Ω	4 x 1,250 W / 1 x 1,700 W	4 x 2,500 W / 1 x 3,300 W	4 x 3,500 W / 1 x 4,700 W	4 x 5,000 W / 1 x 6,700 W
4 Ω	4 x 1,250 W / 1 x 2,500 W	4 x 2,500 W / 1 x 2,500 W	4 x 3,500 W / 1 x 3,750 W	4 x 5,000 W / 1 x 6,000 W
8 Ω	4 x 1,250 W / 1 x 1,250 W	4 x 1,250 W / 1 x 1,300 W	4 x 1,800 W / 1 x 1,900 W	4 x 2,500 W / 1 x 3,000 W
Bridge @ 4 Ω	2 x 2,500 W	2 x 5,000 W	2 x 7,000 W	2 x 10,000 W
Bridge @ 8 Ω	2 x 2,500 W	2 x 5,000 W	2 x 7,000 W	2 x 10,000 W
Hi-Z 70 V	4 x 1,250 W / 1 x 1,800 W	4 x 2,500 W / 1 x 2,500 W	4 x 2,950 W / 1 x 2,950 W	4 x 3,500 W / 1 x 3,500 W
Hi-Z 100 V	4 x 1,250 W / 1 x 2,500 W	4 x 2,500 W / 1 x 2,500 W	4 x 3,500 W / 1 x 4,200 W	4 x 5,000 W / 1 x 5,000 W

Technical Specifications

Amplifier Model	HSD 4 - 5KD	HSD 4 - 10KD	HSD 4 - 14KD	HSD 4 - 20KD
Max Output Voltage	150 Vpeak	150 Vpeak	189 Vpeak	235 Vpeak
Max Output Current	36 Apeak	50 Apeak	59 Apeak	71 Apeak
Total Harmonic Distortion	<0.05%	<0.05%	<0.05%	<0.05%
Crosstalk (20 Hz - 1 kHz)	>70 dB	>70 dB	>70 dB	>70 dB
Voltage Gain	26 dB - 44 dB	26 dB - 44 dB	26 dB - 44 dB	26 dB - 44 dB
Signal to Noise Ratio	111 dB	111 dB	113 dB	115 dB
Operating Voltage (50 Hz - 60 Hz)	90V - 265 VAC	90V - 265 VAC	90V - 265 VAC	90V - 265 VAC
Consumption ½ power (120 V, 230 V @ 4 Ω)	7.2 A / 817 W, 3.7 A / 817 W	14 A / 1634 W, 7.3 A / 1634 W	19.2 A / 2288 W, 10 A / 2288 W	26.8 A / 3268 W, 14.0 A / 3268 W
Dimensions	19 x 3.5 x 14 in 483 x 89 x 355 mm	19 x 3.5 x 14 in 483 x 89 x 355 mm	19 x 3.5 x 14 in 483 x 89 x 355 mm	19 x 3.5 x 14 in 483 x 89 x 355 mm
Net Weight	15.4 lbs / 7 kg	15.4 lbs / 7 kg	19.8 lbs / 9 kg	19.8 lbs / 9 kg

Protections: Soft-start, Turn-on Turn-off transients, Muting at turn-on, Over-heating, DC, RF, Short-circuit, Open or mismatched loads, Overloaded power supply, ICL™, PCM™
IEC filtered pink noise signal (40Hz-5kHz, 12dB crest factor)