NEUMANN.BERLIN

KH 750 DSP

KH 750 DSP

ORDER INFO	ART. NO.
KH 750 DSP D G 10” Active Subwoofer with 2.0 / 0.1 Bass Manager Metallic Anthracite	508296
KH 750 DSP D G CCC 10” Active Subwoofer with 2.0 / 0.1 Bass Manager CCC/KC certified Metallic Anthracite	508297

NEUMANN.BERLIN

Prof. Recording Studio | Home Studio | Computer Desktop | Editing Suite | Broadcast | Domestic Environment

COMPACT DSP-CONTROLLED CLOSED CABINET SUBWOOFER

- Easily installed compact cabinet with a very deep bass response
- DSP engine optimizes output to achieve reference class sound
- Neumann.Control App for iPad® to setup, align and operate in a system

KH 750 DSP

DEEP BASS IN A SMALL SPACE

The compact KH 750 DSP is the ideal choice for smaller rooms and smaller studio monitors, such as the KH 80 DSP. It has a unique and flexible 2.0/0.1 Bass Manager allowing the subwoofer to be used in many different system configurations. On the back panel there are analog and digital inputs and outputs, four routing modes and adaptable acoustical controls to allow for seamless system integration.

The newly designed 10” long-throw driver has a large magnet, linear motor design and a very stiff and flow optimized basket. As subwoofers are usually placed on the floor, a robust grille protects the driver from accidental damage. The well-braced cabinet is a sealed designed which brings the fastest possible transient response.

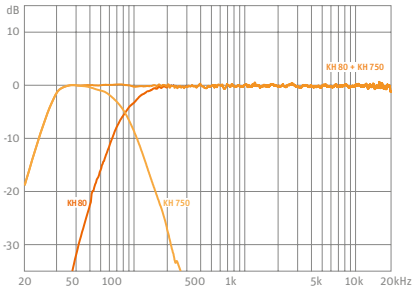
The two analog XLR inputs are balanced as are the two analog XLR outputs. The 192 kHz / 24-bit digital input can accept AES3 and S/P-DIF signals. There is a bypassable standby function and the switch-on time can be adjusted.

CONTROL AND ALIGN YOUR MONITOR SETUP WITH YOUR IPAD®

The Neumann.Control app for iPad® offers several features allowing you to setup, align and operate the KH 750 DSP and KH 80 DSP even in large setups up to 9 loudspeakers. Via standard IP networking, Neumann.Control gives access to many additional functions of the KH 750 DSP subwoofer. Systems of loudspeakers can be designed, from mono to 3D, aligned for a good in-room sound, and then operated centrally: Setup, Align, Operate. At last, you do not have to be an expert to optimally integrate this subwoofer into your system, even in a small room.

The KH 750 DSP can be used in music, broadcast, and post production studios for tracking, mixing, and mastering.

FREQUENCY RESPONSE KH 750 + KH 80



For the complete technical data please refer to www.neumann.com

DEEP BASS IN A SMALL SPACE

1 FRONT PANEL

Compact ultra stiff wooden cabinet

- Tough painted finish and high density rubber isolating feet
- Excellent self-damping properties leading to minimal cabinet resonances
- No standing wave resonances inside cabinet
- Tight bass sound due to very low group delay

2

In-house modelled long-throw bass driver with Extremely Linear Force Factor™ (ELFF™) and robust built-in grille

- Damping of break up modes brings low distortion at high sound levels
- Extremely linear force factor provides low harmonic distortion even at high excursions
- Reduced air noise and improved rocking modes
- Grille protects against mechanical damage

3 BACK PANEL

2.0/ 0.1 Bass Management

- Stereo and externally bass managed applications
- Bypassable 4th order crossover for maximum compatibility with consumer reproduction systems
- Allows main loudspeakers to play louder and with lower distortion

4

Four routing modes

- Stereo 80 Hz bass management
- External bass management
- LFE up to 120 Hz
- LFE full range

5

XLR electronically balanced analog inputs and outputs

- Standard interfacing to professional equipment
- Daisy chain output for subwoofer arrays

6

Wide range input gain and output level controls

- Easier interfacing with signal sources

8-position phase control and continuous low cut control

- More control in various acoustical environments
- Easy to correct room modes

7

Universal switched-mode power supply (100 … 240 V)

- One version works in any country and robust to poor quality mains supply

8

Ground lift

- Reduced noise in electrically noisy environments and overcomes ground loops

9

Low heat dissipation amplifiers with large headroom and sophisticated protection circuitry

- Improved transient response
- Assured reliability and safety

Separate thermo limiter to protect the voice coil and power amplifier

- Soft clip and excursion limiters
- Increase system reliability
- Allows extraction of the maximum performance from the system

10

Digital input and output

- 192 kHz, 24-bit conversion
- BNC connector: AES3 and S/P-DIF signals

11

Network connector using standard IP protocol and your existing network infrastructure

- No additional special equipment needed
- Loudspeaker system can be controlled via the Neumann.Control software

12

Control function

- Use the back panel controls or the control set defined by the Neumann.Control software

13

Standby function

- Reduces power consumption when product is not in use

!

MORE FEATURES

8 x full parametric equalizer incl. Lo-/Hi-Shelf and Low-/High-Pass, controllable via Neumann.Control

- Accurate and flexible alignment of the subwoofer in the room and within systems

Delay

- Lip-sync (100 ms): To align audio and video signals up to 2.5 frames at 50 Hz or 3 frames at 60 Hz
- Time-of-flight (2 x 20.8 ms): To compensate for listening distance differences up to 7.2 m (12 ft 5in)

ACOUSTICS

Free field frequency response ±6 dB	16 … 800 Hz
Free field frequency response ±3 dB	18 … 750 Hz
Sine wave output with a THD < 0.5 % at 1 m in half space	95 dB SPL (>70 Hz)
Bass capability: Max. SPL in half space at 3% THD at 1m (averaged between 50 Hz and 100 Hz)	105.0 dB SPL
Self-generated noise at 10 cm (with input gain set to 100 dB SPL for 0 dBu)	<20 dB(A) SPL

ELECTRONICS

Controller design	Digital; active
Crossover frequency	80 Hz fixed or 60 … 100 Hz via Neumann.Control
Crossover slope	24 dB/oct; 4th order
Equalization: Low cut	30 Hz; 0 … -12 dB
Phase	0; 45; 90; 135 and 0/180 deg
Equalization: via Neumann.Control software	8 x full parametric IIR + low / high shelf global balance
FIR phase correction	For connected analog loudspeakers: Linear phase (170 Hz … 16 kHz; +/- 45°)
Latency	1.5 ms (A-D-A); 1.2 ms (D-A)
Delay: User adjustable delay range	0 … 100 ms and 2 x 0 … 20.8 ms
Output power woofer amplifier (THD+N with limiter deactivated: 10%)	256 W
Volume control range; resolution (via Neumann.Control)	0 … -∞ dB; 0.1 dB
Signal routing modes	Right; External Bass Management; 2 x LFE
Input gain control (sensitivity)	+2 … –12 dB
Output level control (output level at 1 m based on 0 dBu input level)	94; 100; 108; 114 dB SPL

ANALOG INPUTS AND OUTPUTS

Analog inputs	2 x XLR: analog electronically balanced
Analog outputs	2 x XLR; analog electronically balanced
Analog input impedance	>13 kΩ
Max. input level	<+24 dBu
CMRR	>56 dB @ 15 kHz
Crosstalk (1 kHz), level matching	<–90 dB, ±0.1 dB
Analog dynamic range; THD+N	119 dB(A); <0.003% (-90 dB)

DIGITAL INPUTS AND OUTPUTS

Digital inputs	BNC (75 Ω): AES3; S/P-DIF
Digital outputs	BNC (75 Ω): AES3
A/D converter:	
resolution; design	16 … 24-bit DAC; ΔΣ
sampling rate	22.05; 24; 32; 44.1; 48; 64; 88.2; 96; 176.4; 192 kHz
Dynamic range A-D-A	>120 dB(A)
Dynamic range D-A	>123 dB(A)

MAINS POWER

Mains Power Supply: input voltage; frequency	100 … 240 V~; 50/60 Hz
Power consumption: Standby / Idle / Full output	<300 mW / 18 W / 410 W
Standby	Disabled; 90 mins (default); user defined in software

MECHANICS

Height x width x depth	383 x 330 x 383 mm (15 1/8” x 13” x 15 1/8”)
External net volume	48.4 liters
Weight	19.5 kg (43 lbs)
Drivers, magnetically shielded: Woofer	265 mm (10”)
Cabinet surface finish, color: custom	Painted, Metallic Anthracite (RAL 7021)
Baffle cover	Included metal grille