

# Neumann MA 1 Monitor Alignment Kit with KH 80 DSP and KH 750 DSP

## Specifications

### Neumann MA 1 Monitor Alignment

- **Acoustical operating principle:** Pressure transducer
- **Directional pattern:** Omnidirectional
- **Frequency range:** 20Hz – 20kHz
- **Sensitivity at 1kHz into 1 kohm:** 30 mV/Pa -30dBv +/- 3dB uncalibrated | 30 mV/Pa - 30dBv +/- 0.5dB calibrated (via software)
- **Rated impedance:** 50 ohms
- **Rated load impedance:** 1000 ohms
- **Equivalent noise level, CCIR:** 39dB
- **Equivalent noise level, A-weighted:** 27 Db-A
- **Maximum SPL for THD 0.5%:** 132dB
- **Signal-to-noise ratio, CCIR (re. 94 dB SPL):** 55dB
- **Signal-to-noise ratio, A-weighted (re. 94 dB SPL):** 67 dB
- **Maximum output voltage:** 10dBu
- **Supply voltage (P48, IEC 61938):** 48V +/- 4V
- **Current consumption (P48, IEC 61938):** 3 mA
- **Matching connector:** XLR3F
- **Weight:** 37g
- **Diameter:** 23mm
- **Length:** 117mm

### Neumann KH 80 DSP A Studio Monitor

- **Woofers:** 4" (100mm) With Integrated Black Grille
- **Tweeters:** 1" (25mm) With Integrated Black Grille
- **Bass Amplifier Output:** 90W, 120W
- **Treble Amplifier Output:** 50W, 70W
- **Controller Design:** Digital, Active
- **Crossover Frequency:** 1.8kHz
- **Crossover Slope:** 48 dB/oct, 8th Order With Phase Correction
- **Equalisation - Low Mid:** 0dB, -1.5dB, -3dB, -4.5dB
- **Equalisation - Via Neumann Control:** 8 x Full Parametric IIR + Low/High Shelf Global Balance
- **FIR Phase Correction:** Linear Phase (170Hz - 16kHz, +/- 45°), Analog Emulation
- **Protection Circuitry:** Independent Soft Clip, Peak and Thermo Limiters For Woofer and Tweeter. Woofer Excursion Limiter
- **Infrasonic Filter - Frequency; Slope :** 61Hz; 12dB/oct
- **Input:** XLR/TRS Combo, Analog Electronically Balanced
- **Impedance:** 14kOhms
- **Input Gain Control:** 0 dB to -15dB
- **Output Level Control:** 94dB/100dB/108dB/114dB Sound Pressure Level
- **CMRR:** >56 dB @ 15kHz
- **Max Input Level:** +24 dBu for 94dB SPL Setting
- **Digital Converter:** 24-bit DAC
- **Digital Internal Sampling Rate:** 48kHz

- **Dynamic Range D-A - Woofer, Tweeter:** 114dB, 117dB
- **User Adjustable Delay Range:** 0ms - 70ms
- **Audio-Video/Lip Sync Max Frames:** 1.75 or 2.1
- **Time-Of-Flight Max Distance:** 24m
- **Resolution:** 0.1 ms / 3.44 cm
- **Mains Power Supply:** 100-240V, 50/60Hz
- **Cabinet Surface:** Painted Compositive Polycarbonate Material
- **Operating Conditions:** +10° C to +40° C
- **Transport/Storage Conditions:** -25° to +70°
- **Mounting Points:** 2 x M6 Threaded Inserts With 70mm Spacing On Back Panel, Depth From Outside of Cabinet 16mm
- **Dimensions:** 233mm x 154mm x 194mm (H x W x D)
- **Weight:** 3.4 kg

### Neumann KH 750 DSP Active Studio Subwoofer

- **Free Field Frequency Response  $\pm 6$  dB:** 16 – 800 Hz
- **Free Field Frequency Response  $\pm 3$  dB:** 18 – 750 Hz
- **Sine Wave Output with a THD 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):**
- **Controller Design:** Digital; active
- **Crossover Frequency:** 80 Hz fixed or 60 – 100 Hz via Neumann.Control
- **Crossover Slope:** 24 dB/oct; 4th order
- **Equalisation (Low-cut):** 30 Hz; 0 – -12 dB
- **Phase:** 0; 45; 90; 135 and 0/180 deg
- **Equalisation (via Neumann.Control Software):** 8 x full parametric IIR + low/high shelf global balance
- **FIR Phase Correction:** For connected analogue 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 –  $-\infty$  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
- **Analogue Inputs:** 2 x XLR; analogue electronically balanced
- **Analogue Outputs:** 2 x XLR; analogue electronically balanced
- **Analogue Input Impedance:** >13 k $\Omega$
- **Max. Input Level:**
- **CMRR:** >56 dB @ 15 kHz
- **Crosstalk (1 kHz), Level Matching:**
- **Analogue Dynamic Range; THD+N:** 119 dB(A);
- **Digital Inputs:** BNC (75  $\Omega$ ): AES3; S/P-DIF
- **Digital Outputs:** BNC (75  $\Omega$ ): AES3
- **A/D Converter:**
  - **Resolution; Design:** 16 – 24-bit DAC;  $\Delta\Sigma$
  - **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 Supply (Input Voltage; Frequency):** 100 – 240 V ; 50/60 Hz

- **Power Consumption (Standby / Idle / Full Output):**
- **Standby:** Disabled; 90 mins (default); user defined in software
- **Drivers, Magnetically Shielded (Woofers):** 265 mm (10")
- **Cabinet Surface Finish, Colour (Custom):** Painted, Metallic Anthracite (RAL 7021)
- **Baffle Cover:** Included metal grille
- **Dimensions:** 383 x 330 x 383 mm
- **Weight:** 19.5 kg