

NEUMANN KH 80 DSP

Home recording made easy

The Neumann brand name is mainly known for high-end studio microphones, but at the other end of the signal chain the microphone specialist also has interesting products to offer: The KH 80 DSP – the new and smallest representative of the KH monitor range, equipped with unique control possibilities.

For some time, the microphone specialist Neumann has also been working at the other end of the signal chain, offering high-quality near-field and mid-field monitors in its KH studio monitor range. Their latest product, the KH 80 DSP, not only extends the product range, it also provides remote DSP control and integrated back panel controls to ensure that the monitors are ideally adapted to the room and adjusted to the listening environment.

A miracle in terms of space

When you hold the two KH 80 DSP units in your hands for the first time, you will be surprised at how much the manufacturer has managed to fit into this small housing – not only the loudspeakers, but also a two-channel output stage with the DSP control, the power supply unit and a two-part bass reflex channel. Every cubic centimeter is used to the max! The housing made of composite polycarbonate creates a solid and stable impression, and the simple design and clear lines give the loudspeaker a classic and high-quality external appearance.

The front of the KH 80 DSP is characterized by the 10 cm (4") woofer, which is visible behind a metal grille, and the 2.5 cm (1") grilled tweeter, which is integrated into a waveguide. The dimmable illuminated Neumann logo has been placed to the left between the two drivers, and its color changes to show the status of the loudspeaker. When the logo lights up in white, everything is OK. If the logo flashes in rosé, this shows that some



The KH 80 DSP also adapts very well to rooms with little space

network activity is in progress. If the logo lights up in red, this indicates a problem. The illustrated instruction manual provides an exact breakdown of the individual LED colors and their meanings and facilitates operation of the KH 80.

Optimum room adaptation

All of the connectors and operating controls can be found on the back of the KH 80 DSP. On the right, next to the power cable inlet, is the on/off switch for the mains power supply. The power supply unit can cope with alternating currents of between 100 and 240 Volt at 50/60 Hz so these monitors can be used all over the world, as long as the matching power cable is at hand.

To the right of the on/off switch is the RJ-45 socket which enables the KH 80 DSP to be integrated into a LAN and to be controlled with a control software that will be available free of charge early 2018.

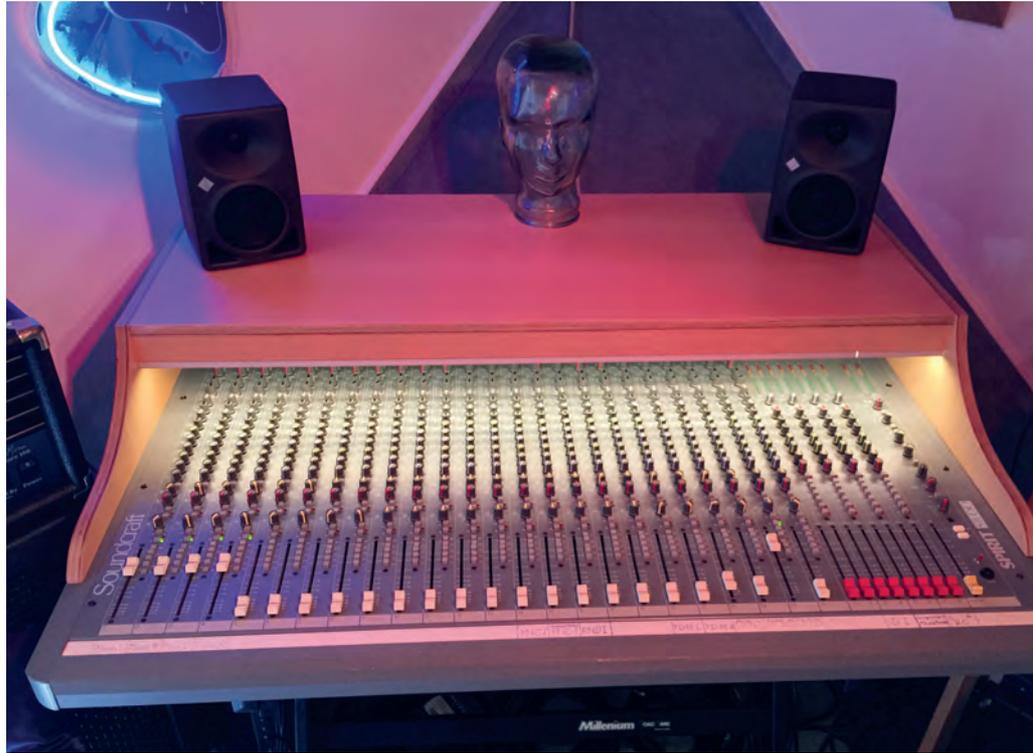
An XLR/jack combo socket accepts both symmetrical and asymmetrical inputs signals with a level up +24 dBu. When the loudspeaker boxes have been properly installed and correctly mounted, a fairly simple task thanks to the detailed information in the operating manual on the correct installation and positioning, the loudspeakers can then be adjusted to the specific situation of the room. All necessary operating controls are in a panel on the top edge of the back of the loudspeakers, so they are also easily accessible from the front.

On the very left is the “Settings” switch with four setting options to control the stand-by function and at the same time to select the general loudspeaker control method: either manually on the loudspeaker = “Local Control” or via the network with the Neumann.Control software = “Network Control”. The values set with the software are stored in the loudspeaker and can still be called up even after a complete power failure.

It is also possible to reset the KH 80 to the factory settings using the “Settings” switch.

Next to the “Settings” switch there is another switch with four fixed settings and the label “Acoustical Control”. If, for example, the loudspeaker is installed on the meter bridge of a mixer, the mixing console strongly boosts the low mid-range frequencies, so they are accentuated at the listening position, and the larger the surface and the shorter the distance from the loudspeaker, the more extreme the accentuation of the low mid-range frequencies becomes.

The next four-position switch, which is labelled “Output Level”, is used to adapt the sensitivity of the loudspeaker to the level of the audio signal. With an input signal of -20 dB, the switch should be set to the position “114”, but at a normal studio level of +4 dB it should be set to the position “94” (dB SPL). The continuous “Input Gain” control is then used for the fine adjustment of the volume of each loudspeaker to ensure that, at the listening position, the loudspeakers have the same level. Neumann recommends that the loudspeaker adjustment should be exactly measured, at least when the KH 80 DSP is installed for the first time, since only this guarantees that the loudspeaker can deliver optimum quality and provide the best result.



The KH 80 DSP is the ideal monitor for any home recording or project studio

Due to the woofer size of only 4" and the lower volume, one would expect a strong emphasis on the mid-range sounds, but what a surprise! What came out of the small loudspeaker boxes was a rounded sound image which was linear down to the lowest frequencies, with an excellent resolution of the important mid-range, with silky, crystal-clear highs and a powerful, rich but clearly defined low end. The KH 80 DSP was also really impressive in its output level, with no signs of weakness at all. Even at high output levels the sound image was still very linear, without any audible resonance frequencies.

With the KH 80 DSP, Neumann has really managed to put a fully professional monitor on the market which is worthy of the name of Neumann and gives a sound quality which can match its much larger brothers at all times. It is the ideal monitor for any ambitious home recording or project studio!

Text: Michael Hennig

SPECIFICATIONS – NEUMANN KH 80 DSP

Frequency response:

57 Hz – 21 Hz

Crossover frequency:

1.8 kHz

Max. input level:

+24 dBu

Max. SPL:

108.8 dB SPL

Output power:

90 W (woofer) / 50 W (tweeter)

Woofer:

100 mm (4 inches)

Tweeter:

25 mm (1 inch)

Dimensions:

233 x 154 x 194 mm

Weight:

3.4 kg

Price (RRP):

593.81 EUR

Sales:

Sennheiser, www.neumann.com