

### **The wow factor: Sennheiser presents *David Bowie* in 3D sound**

**Berlin/Hanover, 12 June 2014 – Creating quite a stir at the moment is an exhibition at Berlin's Martin-Gropius-Bau: The life and work of David Bowie can be explored in this multimedia exhibition taking place at the historic building near the former border strip until 10 August 2014. "David Bowie is a pioneer in many artistic fields, making him the ideal subject for an exhibition," says Victoria Broackes who, as co-curator along with her colleague Geoffrey Marsh, has had a key role in realising the exhibition and tirelessly brought together exhibits from different provenances. "The sound is presented as never before at an exhibition," explains the Bowie expert, highlighting Sennheiser's involvement – the technology of the audio specialist is an integral part of the multimedia experience and allows visitors to immerse themselves in soundscapes by this exceptional artist.**

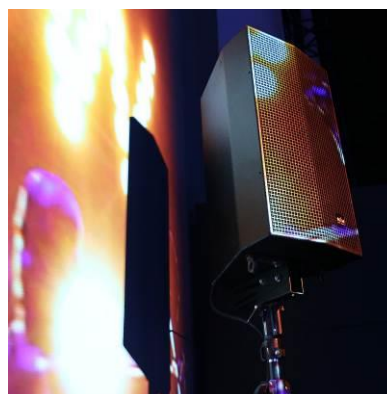
Daniel Sennheiser, CEO of Sennheiser electronic GmbH & Co. KG, commented, "The exhibition's stay of several months in Berlin is one of the highlights of its



international tour due to Bowie's close links with the city. And almost 60 new exhibits have been added to the section of the retrospective dedicated to Berlin for the occasion by the international communications agency Avantgarde. The Sennheiser team, with its passion for good

sound, is proud to be contributing towards the success of the *David Bowie* exhibition by giving visitors direct access to the unique sound universe of this exceptional artist."

The highlight of the audiovisual exhibition tour is an extraordinary 3D sound installation in which visitors can watch videos of Bowie performing and other footage material while being enveloped in amazingly three-dimensional sounding music played via hidden speakers. The 3D experience was created from historic music material, which was available in stereo and in some cases only in mono, via a 9.1 speaker set-up, using a special upmix



algorithm developed by Gregor Zielinsky, Sennheiser's International Recording Applications Manager. "3D audio incorporates the additional aspect of elevation," says the qualified tonmeister and points to four additional speakers mounted high up above the exhibition, which expand the 5.1 set-up established in accordance with the ITU recommendation. The result is an exceptionally open sound, which envelops visitors "from head to toe" and brings previously undiscovered details of the historic music recordings to light – in a way that not even the most ardent fans have heard "Jean Genie" and other Bowie songs! For those interested, the technical details are available to read online in Sennheiser's Blue Stage magazine, and information is also provided in a series of short videos: <http://en-de.sennheiser.com/bluestage-magazine-madness-david-bowie-pop-icon-in-3d-sound>.



At an exclusive event, Gregor Zielinsky explained the special 3D technique used to interested guests. Zielinsky created a 9.1 set-up in an acoustically prepared room with thick carpeting and long acoustic curtains – three Neumann KH 310s (front) and two KH 120s (rear) were arranged in a circle in accordance with ITU-R BS.775-1. Responsible for reproducing the lowest frequencies were two Neumann KH 870 subwoofers. Two KH 310s (front) and two KH 120s (rear) were mounted high above these speakers, in the four corners of the installation, pointing downwards towards the audience at an angle. "The elevation should be around half the distance between the speakers," he explains.

Via an iPad which communicated wirelessly with the playback system, Gregor Zielinsky was able to call up pre-recorded audio tracks, which were played in stereo and in 3D (including the top speakers). The effect when switching between the two was striking and the judgement of audio



professionals present was unanimously in favour of the 9.1 playback – the step back to conventional stereo reproduction was so disappointing that many listeners even suspected there might be a fault with the system.

Those who listened immediately noticed a significant increase in the 3D effect with the 9.1 playback. Gregor Zielinsky pointed out that there was no artificially generated reverb, just spatial information contained in the recording. The stereo and 9.1 playback matched each other in terms of their level – but even so, the loudness



of the multi-channel playback was significantly higher than that of the stereo image. Walking around the room, it was evident that the sweet spot of the provisionally named "Sennheiser 3D" technique is much larger than with a stereo or 5.1 set-up. The advantages of three-dimensional sound reproduction

were illustrated to the guests during the demonstration with examples of various types of music, ranging from classical recordings to songs by Dianne Reeves and Pink Floyd. Particularly striking was a recording produced specifically for the format, created using synthetic sound generators – an impressive demonstration of the possibilities with a definite wow factor!

Hans-Joachim Weymer, CEO of Sennheiser Vertrieb und Service GmbH & Co. KG, summed it up by saying: "Sennheiser has stood for excellence in the field of audio for almost 70 years. We are happy to provide our expertise to bring unique sound concepts to life. Following stages in London, Toronto and São Paulo, we once again have the opportunity to present a top-class 3D sound experience as partners of the *David Bowie* exhibition. To quote Toni Visconti, longtime producer of David Bowie: 'I swear I don't know how they do it. This is magic to me! Things were coming from over my head, down by my feet, over my right shoulder, over my left shoulder, in front of me, to the sides of me.'"

#### **About Sennheiser Vertrieb und Service GmbH & Co. KG**

Sennheiser Vertrieb und Service GmbH & Co. KG employs around 140 people and is the German sales subsidiary of Sennheiser electronic GmbH & Co. KG. The Sennheiser Group is one of the world's leading manufacturers of microphones, headphones and wireless transmission systems. Worldwide, Sennheiser employs more than 2,100 people and has its own production facilities in Germany, Ireland and the USA. The German subsidiary distributes all the Sennheiser Group's brands: Sennheiser,

Sennheiser Communications A/S (headsets for PCs, offices and call centres) and Georg Neumann GmbH (studio microphones and monitor speakers).

Further up-to-date information about Sennheiser is available online at [www.sennheiser.de](http://www.sennheiser.de)

Sennheiser Vertrieb und Service GmbH & Co. KG  
Stefan Peters  
Karl-Wiechert-Allee 76a • 30625 Hanover  
Tel. +49 (511) 5 42 67 - 90  
Fax +49 (511) 5 42 67 - 97  
[Stefan.Peters@sennheiser.de](mailto:Stefan.Peters@sennheiser.de)

Caption 1: The highlight of the *David Bowie* exhibition is an extraordinary 3D sound installation

Caption 2: Tonmeister Gregor Zielinsky explained the special 3D technique to interested guests

Caption 3: 3D audio incorporates the additional aspect of elevation

Caption 4: Pre-recorded audio tracks were called up via an iPad

Caption 5: Gregor Zielinsky, Sennheiser's International Recording Applications Manager

The exhibition in Berlin is organised by the international communications agency Avantgarde.

Further information about the exhibition and tickets are available at [www.davidbowie-berlin.de](http://www.davidbowie-berlin.de)