

Shape the Future of Audio:

Sennheiser Presents AMBEO 3D Audio Technology

Early in 2016, audio specialist Sennheiser unveiled a strategic focus on 3D immersive audio, a groundbreaking technology that promises the ultimate in audio capture and reproduction. "3D audio is the new frontier of excellence, set to transform the listening experience for users across a broad range of applications, from virtual reality gaming to audio recording and broadcasting," announced co-CEOs Daniel Sennheiser and Dr. Andreas Sennheiser, speaking at CES 2016. "We have been active in this area for some time with 9.1 mixing and recording and the audio design for high-profile exhibitions. We are now increasing our efforts considerably to introduce this amazing sound quality into new products and applications, enabling users to experience and shape the future of audio." Sennheiser's 3D immersive audio products and activities will bear the new AMBEO trademark.



3D immersive audio is increasingly becoming a format of choice in professional recording, mixing and listening. The composer, producer, and musician Simon Franglen, well known for his work on the films *Titanic*, *Avatar*, and most recently *Spectre*, commented: "Every time I

do an immersive mix, I notice how much more clearly I can hear what's going on within a track. The extra playback area allows individual voices and instruments room to breathe in a way that the flat plane of a stereo mix can never hope to accomplish. 3D audio gives a completely new experience to the listener. Not only are they inside the music, but they get the opportunity to really hear the detail and the arrangement that the musicians, arrangers and producers put into the recordings. Even as a professional, I have listened to tracks that I have thought I knew intimately to discover so much more than the stereo or mono mix was able to give me. Once you hear this, music changes forever."

AMBEO 3D Audio Recording and Listening Experience

Sennheiser has been doing original 9.1 recordings since 2010, and has promoted this immersive format ever since at numerous audio congresses, workshops and

tradeshows around the globe. In the course of this work, a tonmeister-quality upmix algorithm was developed to turn legacy stereo material into stunning 9.1 music. A key highlight in Sennheiser's work with the format includes the design of two immersive audio installations for the internationally successful "David Bowie is" exhibition.

VR Gaming

Sennheiser's expertise in 3D audio technology is also being featured by gaming specialist, Soulpix, which has drawn on the audio specialist's long experience in the field for its virtual-reality game, EDEN. Through a proprietary Sennheiser algorithm, the sounds in the game are easily localizable and transport the listener to an imaginary yet utterly realistic soundscape. "The Sennheiser 3D sound rendering engine used in EDEN allows a smooth transition between real-life sounds and virtual audio sources," explained Andreas Sennheiser. "Such an engine will be the future of 3D sound in augmented reality applications."

Virtual reality mic

Another part of the AMBEO 3D audio world is a Sennheiser virtual reality microphone. Designed with VR content producers, including VR production company Visualise, whose content will be featured, the unobtrusive mic captures high-quality audio in four quadrants. The VR microphone will be a staple tool in any live action VR production and will launch in Q4 2016.

Venue Modeling

A further highlight in AMBEO 3D audio, Sennheiser's forthcoming Venue Modeling software allows DJs to experience their sets in advance by replicating the sound characteristics of a venue in which they will be performing. Unlike other reverb tools and plug-ins, this VST plug-in lets ambitious DJs, PA artists and EM producers experience their audio tracks as if present in the location they desire for the performance – a milestone in virtual room acoustics replication. The current demo version features the room characteristics of Mighty in San Francisco, the Rex Club in Paris, and Berghain in Berlin. The plug-in helps to tailor the audio to any desired room atmosphere, and a growing venue database connected to the plug-in will offer DJs an ideal source to prepare for their show. The VST plug-in will become available in December 2016.

Image caption:

AMBEO.jpg: AMBEO is Sennheiser's trademark for breathtaking 3D immersive audio

About Sennheiser

Audio specialist Sennheiser is one of the world's leading manufacturers of headphones, microphones and wireless transmission systems. Based in Wedemark near Hanover, Germany, Sennheiser operates its own production facilities in Germany, Ireland and the USA and is active in more than 50 countries. With 19 sales subsidiaries and long-established trading partners, the company supplies innovative products and cutting-edge audio solutions that are optimally tailored to its customers' needs. Sennheiser is a family-owned company that was founded in 1945 and which today has 2,700 employees around the world that share a passion for audio technology. In 2014, the Sennheiser Group had sales totaling €635 million. www.sennheiser.com

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