

**5.1 the easy way: Sennheiser's Esfera microphone system creates perfect broadcast surround sound from just two channels**

Amsterdam/Wedemark, 13 September 2013 – At IBC, audio specialist Sennheiser will unveil its brand-new Esfera surround microphone system. Esfera provides 5.1 surround sound from just two channels, making complicated surround mic installations a thing of the past. The system consists of a high-quality stereo microphone, designed with Sennheiser's renowned RF condenser technology, and a 19" rack-mount processing unit that converts the stereo signal into a complete 5.1 signal – anywhere in the production workflow, whether in real time or during post production. The compact size of the microphone unit and the versatile connectivity of the processing unit ensure that Esfera can easily be integrated into existing workflows. The system will be available from March 2014.



"Esfera is the ideal surround microphone for any broadcast format that requires 5.1 HD audio in a fast and uncomplicated way," says Kai Lange, product manager for wired microphones at Sennheiser. "Sports broadcasts in particular will benefit from Esfera. These broadcasts are almost entirely produced in 5.1 and will profit from the quick microphone installation, the user-friendliness of the processing unit and the freedom in workflow design that the system offers.

**Just two channels do the trick: workflow examples of fixed installations and cameras**

In **fixed installations**, the Esfera microphone is positioned alongside the field or underneath the stadium roof. Its audio signal is fed into the stadium's network via two standard microphone cables, then converted into an AES3 signal and routed to the OB van, where the host broadcaster has a choice of two options.

The two audio channels can be converted into a 5.1 signal onsite – with the settings defined by the A1 of the host broadcaster – and transmitted to the local broadcasters. Or, alternatively, the stereo audio signal is directly transmitted to the local broadcasters who do the conversion into 5.1 with their own preferred settings.



Esfera will only occupy two of the four audio inputs on **broadcast cameras**, allowing the crew to also work with other microphones – for example, a clip-on microphone and a boom microphone. During the entire production process from the recording to editing and post production, the audio signal is in sync with the video signal and will only be decoded into 5.1 during the last step of production.

Esfera is also the first system that allows the recording of 5.1 surround sound from a wireless camera. As the system only requires two channels, the audio can be transmitted together with the image and later be converted into 5.1, for example in the OB van.

#### **Esfera – the SPM 8000 stereo microphone**

Two radio-frequency condenser microphones are at the heart of Esfera's SPM 8000 stereo microphone. This microphone pair offers all the advantages that Sennheiser RF condenser microphones are renowned for: natural, detailed sound, transparency, high resistance to adverse climatic conditions and ruggedness.



The microphones feature an extremely low inherent self-noise, ensuring that even the finest sound structures remain intact. Due to the symmetrical transducer design, the mics have very low distortion figures. They are inherently fully floating and balanced and do not require an additional balancing circuit or transformer to protect them from external interfering signals.

“Of course the microphone unit can also be used on its own wherever a high-quality stereo microphone is required,” explains Kai Lange. The SPM 8000 is supplied complete with a windshield basket and hairy cover, a suspension/pistol grip and a stereo cable (XLR-5 to 2 x XLR-3).

### Esfera – the SBP 8000 processing unit

The Esfera processing unit uses a special algorithm to generate a full 5.1 surround signal with sampling rates of up to 96 kHz from the microphones' stereo signal. An integrated compressor ensures a broadcast-friendly signal.



The design of the processing unit is clearly laid out with four directly selectable presets. If needed, these presets can be modified via an Ethernet interface. The processor software enables the user to adjust the gain of the individual channels, modify the front and surround focus, determine the surround delay, adjust several filters with their cut-off frequencies and set the compression, the limiter and the treble boost.



To ensure the utmost in flexibility for the signal flow, the input side of the SBP 8000 is fitted with two analogue XLR-3 sockets with P48 phantom powering and two digital inputs for an AES3 signal. On the output side, the unit has six digital outputs (left, right, centre, LFE, surround left, surround right) for three AES3 signals.

The Esfera system will be presented to the public for the first time at IBC and made available from March 2014.

### Visit Sennheiser at the IBC in Hall 8, Stand D 50.

The Sennheiser Group, with its headquarters in Wedemark near Hanover, Germany, is one of the world's leading manufacturers of microphones, headphones and wireless transmission systems. In 2012 the family company, which was founded in 1945, achieved a turnover of around 584 million euros. Sennheiser employs more than 2,300 people worldwide, and has manufacturing plants in Germany, Ireland and the USA. The company is represented worldwide by subsidiaries in France, Great Britain, Belgium, the Netherlands, Switzerland and Liechtenstein, Germany, Denmark (Nordic), Russia, Hong Kong, India, Singapore, Japan, China, Australia and New Zealand, Canada, Mexico and the USA, as well as by long-term trading partners in

many other countries. Also part of the Sennheiser Group are Georg Neumann GmbH, Berlin (studio microphones and monitor loudspeakers), and the joint venture Sennheiser Communications A/S (headsets for PCs, offices and call centres).

You can find all the latest information on Sennheiser by visiting our website at [www.sennheiser.com](http://www.sennheiser.com).

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**Photo captions:**

*Esfera System.jpg*: Sennheiser's Esfera microphone system creates a full 5.1 surround sound from a stereo signal

*Esfera microphone unit.jpg*: The Esfera microphone unit consists of two radio-frequency condenser microphones. The stereo microphone comes complete with a windshield basket and hairy cover, a suspension/pistol grip and a stereo cable (XLR-5 to 2 x XLR-3)

*Esfera processing unit.jpg*: The Esfera processing unit generates a full 5.1 surround from the stereo microphone signal

*Esfera web interface.jpg*: The parameters of the 5.1 conversion can be modified via an Ethernet interface