



Orbitsound: Spatial stereo technology

London, 3 June 2010: It was in 1931 that scientist and inventor Alan Blumlein discovered that it was possible to record and reproduce 'spatial sound'. Using an omni-directional microphone to record main signal information and a dipole microphone to record spatial information, he discovered that – by calculating the difference – it was possible to create conventional 'left' and 'right' audio signals. By reproducing this 'left' and 'right' information using a normal monopole loudspeaker and coincident dipole loudspeaker, he found that the combination produced a representative 'image' of the sound.

It sounds straightforward. But what we now know as 'stereo' has its flaws. Unless the listener is standing at the right distance from each speaker – or, as it's more commonly known, in 'the sweet spot' – the accuracy of the stereo image and the level of sound quality are impaired. Multiple signal sources mean that separate sound waves interact with and distort one another, leading to a muddled picture and a lower quality of sound. Fortunately for audio lovers, tackling these problems is at the very heart of Orbitsound's spatial stereo technology.

Alongside their own electronic processing, Orbitsound's technology uses a particular positioning of speakers to help overcome sonic inaccuracies. Main audio information is generated from a single wide bandwidth transducer, while two smaller and less powerful spatial loudspeakers are directed at 90 degrees to the 'main' loudspeaker and 180 degrees from one another. Interactions between the three speakers takes place in the mid frequency band, with those at higher frequencies reduced. In a similar way to high frequency drivers in a conventional hi-fi speaker, this leads to improvements in the sound fidelity.

In addition, another technique used in Orbitsound's technology is the 'surface effect' of acoustic propagation. Here, sound volume is maintained even at a distance from the speaker, by being reproduced on or close to a flat surface of greater linear dimension than the sound wavelengths. It's the same principle that can allow a quiet conversation on one side of a lake to be heard right across the water, and provides greater sound clarity - wherever the listener is standing.

The result is a unique technology with a number of significant advantages over traditional stereo

sound reproduction. There's no longer any need to position speakers in a particular way to experience great sound quality, and greater clarity can be achieved even at a distance compared to two speaker set-ups. With the potential to add crisp, clearly defined spatial sound to hi-fi systems, televisions, radios, PCs and portable media players, it shouldn't be long before Orbitsound's spatial stereo technology is heard loud and clear around the globe from all manner of household devices. And with a number of major consumer electronics manufacturers already in active discussions with the company regarding licensing its technology, Orbitsound is confidently expecting worldwide recognition as setting a new standard for sound production from consumer devices.

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About Orbitsound

Orbitsound's unique spatial stereo technology was first designed and realised in 2005 by Ted Fletcher, a former musician and renowned audio electronics designer with more than five decades in the music business. Former investment bankers Harvinder Hungin and John Cameron supported the development of the technology from early 2006, becoming Executive Directors of Orbitsound shortly after the company was established later the following year. At CES 2008 Orbitsound's products were highlighted on BBC and CNN news, and won a prestigious place in Disney's *Best of CES* show. And at this year's CES Unveiled, Orbitsound was showcased by UK Trade & Investment (UKTI) as one of the top two innovative UK technology companies with potential for international success. The latest range launches globally in 2010.

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