

SoundField Surround Zone for Nuendo 2.0

Marketing departments and reviewers often fall prey to a common ailment. Excessive use of the lexicon of superlatives is an occupational hazard. 'Unique', while not necessarily a superlative, certainly suffers from over exposure to the point of severe sunburn or hypothermia, depending on the season. **ROB JAMES** is talking about a plug-in.

CONFESSION TIME — despite generally being considered to be a bit of a techie, I have little or no facility with mathematics (unless there is a currency symbol involved) but I know an elegant mechanical solution when I see one. To fully understand and appreciate the beauty of the SoundField concept requires a knowledge of maths at the level of art. The essence of the idea is based on the Mid/Side technique as defined by Alan Blumlein in his seminal 1933 patent. Among other things, this patent provided the foundation for all coincident microphone techniques.

In the 1970's, mathematicians Michael Gerzon, Peter Craven and colleagues extended the original thesis to develop the concept of a microphone system capable of reproducing a fully three-dimensional soundfield. Blumlein and Gerzon both believed sound could only be reproduced faithfully, without phase distortion anomalies, if sampled at a single point in space.

Theories are all well and good. My practical experience with handling recordings made with a variety of M&S microphone set-ups have hitherto not been very encouraging. Most are marred by phase anomalies, highly unpleasant to my ear yet seemingly



inaudible to others. It is my belief, from empirical observation, that this and other phase dependent techniques are only satisfactory with identical capsules

and impeccable engineering.

Ken Farrar and his colleagues deserve high praise for precision engineering a practical product at least as

elegant as the underlying maths, which delivers on the single point promise in the real world.

The microphones consist of a patented tetrahedral array of very closely spaced sub-cardioid capsules. SoundField A-format is simply the raw output of the four capsules. The MKV, ST250 and SPS422B processors take this and transform it into the four components W,X,Y and Z, known as SoundField B-Format. W is overall sound pressure, X is Front/Rear, Y is Left/Right and Z is Up/Down.

There are many misconceptions about what a SoundField mic is and what it can do. It is not a magic bullet and it does not absolve the recordist from the responsibility for correct microphone placement. However, given good technique, recordings made with a SoundField mic provide for an unusual degree of 'after the fact' rebalancing.

The Surround Zone plug-in for Nuendo 2 brings clear and accessible control over manipulating B-format recordings to a much wider audience. At UK£495 (UK£295 if bought with a microphone) this plug-in is a most welcome development.

Operation is simple. Surround Zone may be used to process live or prerecorded material depending on where it is inserted. I used some prerecorded material, as I didn't have a SoundField mic, to get used to the operation. Forget the clever stuff for a minute, the most impressive thing about the microphone is the sound as demonstrated by the supplied material. Not a hint of a phasey artefact, unless it was already an acoustic characteristic of the space the recording was made in. Returning to the plug-in, the same applies. Only extreme or unrealistic settings produced anything less than comfortable results. With certain material, the effect of the soundfield controls is almost uncanny, especially where there is an obvious 360 degree soundfield.

For anyone likely to be on the receiving end of B-format recordings this is a most effective way of decoding and manipulating them.

It is hard to think of suitable superlatives for the SoundField, they all seem inadequate. Suffice to say I have a serious case of microphone envy. If ever I manage to satiate it, the Surround Zone plug-in will be a must have.

Controls

Some controls apply equally to the surround modes and to stereo, others obviously do not. The Mode page is selected by pressing Stereo or one of the Surround buttons. Arrays, toggles an information page for the selected mode. Invert maintains the correct perspective when the mic has been suspended upside down. Similarly, End Fire maintains perspective when the mic was used like a torch, pointing at the sound source. Of course, with existing recordings, you have to know how the mic was used, or work it out by ear.

The Input section has four horizontal bargraphs showing the level of the W, X, Y and Z components with a slider to adjust the level. A Master level slider sets the output gain.

In the Stereo page, variable Stereo Angle sets the angle between the virtual coincident pair and Polar Pattern controls the virtual polar patterns from omni through sub-cardioid, cardioid, hypercardioid to Fig-8. There is also a switchable high-pass filter, fully variable from 20Hz to 250Hz, an M/S encoder and three soundfield controls. Rotate moves the centre of the image anywhere on the full 360 degree circle, Tilt tilts the soundfield up or down by ± 45 degrees and Zoom gives the effect of moving closer or further away from the sound source. Graphics provide useful visual cues to the effect of the controls.

The surround section has six different modes, three 5.1 presets, a 6.1, a 7.1 and an 8-channel preset.

Each of the X.1 presets provides an omni LFE-channel filtered at 90Hz. 5.1 cardioid simulates a standard five-cardioid microphone array, 5.1 fig-8 gives three front cardioids (LCR) and two rear fig-8s (LS/RS), and 5.1 hyper provides a five hyper-cardioid microphone array. 6.1, 7.1 and 8-channel modes all use cardioid patterns for the array. In all surround modes a separate slider and bargraph is provided to control each output channel level.

Rear Pattern varies the polar pattern of the rear surround channels except in 8-channel mode. Front and Rear Width controls allow the front and rear stage width to be independently varied. ■

PROS

Beautifully crafted software; uncanny effects; superb sound; Surround Zone is also available for SADiE Series 5.

CONS

Cannot do the impossible i.e. mic placement is still important; you need a SoundField mic to make the most of it (maybe that should be a PRO).

Contact

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