



SOUNDFIELD 'THE SURROUND ZONE'

PLUG-IN FOR SADIE SERIES 5

NIGEL PALMER sets to work with the ultimate SoundField system, and the new complementary SADiE plug-in.

THE REVIEWER

Nigel Palmer has been a musician, sound engineer and producer for over 20 years. Head Of Audio for children's media company CYP since 1995 he also runs his own CD mastering business, Lowland Masters, from his home in rural Essex where he lives with his wife, two daughters, and a greyhound.

The development path of the SoundField marque is a long and illustrious one. I could wax lyrical about its roots in the 1930s with the stereophony-related patents filed by the legendary Alan Blumlein, and how in the 1970s mathematical work done by Michael Gerzon, Peter Craven and others expanded on those original ideas and theory became reality courtesy of Ken Farrar and colleagues at Calrec; I could further trace the establishment of SoundField Ltd in 1993 to its arrival at the present day with a mature collection of products, but what does that heritage mean in practice to the average sound engineer on the street or in the studio? Two things...

SoundField Microphone Overview

Firstly, that SoundField microphones are about the most natural sounding I've heard: neutral when used at a distance, and warm and rich closer in for vocals and acoustic instruments. I've never found a better mic for Uilleann pipes, for example, and I've tried many different types on this very expressive but sonically challenging instrument since first encountering it in the late Eighties. SoundField mics all exhibit the same basic sound character

regardless of their position in the range, the differences being more to do with the fineness of control and/or portability the accompanying hardware box allows. From the entry-level SPS422B to the highly-specced and revamped Mark V with its advanced hardware functions and display, all have a proprietary tetrahedral capsule array in common which behaves as a point source in spite of the four subcardioid capsules being slightly offset, the result being that there are no phase problems or comb filtering of the kind you usually get with a spaced set-up. By manipulating the hardware the engineer can quickly create a mono or stereo pickup with different polarities and widths, plus varying degrees of remote movement of the mic from the control room — time saved over setting up conventional arrays is significant, and helps keep performers on-side as I've discovered for myself in the past. With a SoundField microphone you'll transform the capabilities of your mic cupboard as it's like having many different types in one package, and you don't need fancy (and expensive) mic pre-amps as pre-amplification takes place in the control box, providing an ultra-clean line level signal to your recorder or console. If I sound like an enthusiast, it's ►

▶ because I am one — in ten years of using these versatile recording tools I can only think of a handful of occasions where a SoundField was replaced by another brand of microphone, and that was usually when something more robust was needed owing to a danger of the mic being hit or otherwise damaged.

Secondly, there is a related recording format, known as B-Format, which can, if required, reproduce any sound generated in a 360° sphere (that's 'sphere', not 'plane', do pay attention at the back — height information is available as well) relative to the mic, and a consequent 'virtual' mic that can be rotated, zoomed, or tilted either live or in post production without having to move the physical one, assuming reasonable placement to begin with. The icing on the cake in our increasingly multi-channel world is that this four-channel output (generated by all current SoundField models) may be decoded to any number of channels you wish through mono, stereo, 5.1, 6.1, 7.1, plus others that might happen along in the future, offering complete forwards and backwards compatibility. The phase coherence of the system comes into its own here too, enabling the straightforward derivation of a true 'sub' channel.

The Surround Zone Overview

Against this background has appeared The Surround Zone, SoundField's first plug-in which provides all the features of their existing hardware surround decoder plus a few tricks of its own at a considerably lower price. The software runs on the SADiE Series 5 platform (v5.1.1 or later) following in the footsteps of CEDAR's Retouch software, which although compatible with both v4 and 5 is also SADiE-only to date. Once installed in a process which ties use of the plug-in to a single SADiE 5 machine (in my case a PCMB) you're ready to go, bearing in mind that SoundField recommend a PC with a minimum 1.7GHz Pentium 4 processor, and SADiE say that a dual-processor machine is most suitable if you intend much in the way of plug-in usage. The Surround Zone becomes available as a tab in the mixer's Process Palette, and dragging it to a mixer brings up a SoundField strip which you then route to the playlist, along with a button to display the large blue-and-grey Decoder window.

At the top of this window, which has a pleasingly 'retro' appearance, are buttons to select the channel configuration: anything from stereo (which includes mono) to eight-channel with three 5.1 variations that include different polarity patterns; a button marked 'arrays' next to these provides background information on the particular set-up invoked. To the left of the window are the B Format inputs and metering plus a global level control modifying the four

channels together, and next to that are buttons to invert the mic (real or virtual: it's worth remembering we could be adjusting a feed from a live mic here or manipulating B Format tracks in post production) or flip it to 'end fire' mode with the long axis pointing at the sound source.



5.1 screenshot.

All channel set-ups have three knobs in common at the bottom of the window labelled rotate, tilt, and zoom. These do pretty much what the names suggest, with the proviso that 'tilt' has deliberately been limited to 45° up or down, and 'zoom' will become increasingly mono as you go in, though it can still be very useful for fine tuning your source. With 5.1 and above these knobs are complemented with rear pattern polarity plus front and rear width controls, and the rest of the display is taken up with level sliders set initially to standard channel level defaults — these have solo and mute buttons and are adjustable in .1dB steps.



Stereo screenshot.

The stereo set-up is worthy of special mention. It mimics to a degree the facilities found on the SPS422B (stereo plus B Format) mic's hardware box, but the box doesn't have rotate, tilt and zoom — that's reserved for more expensive models in the range but is present in the plug-in, an advantage to using the software. There are MS controls here too, along with a high-pass filter variable from 20 to 250Hz (the mic boxes offer fixed filters only); and separate stereo angle, or width, and polarity knobs. One of the handiest features of the stereo set-up is a pattern display which gives a graphical representation of what's happening as the various parameters are adjusted — I thought this was a gimmicky add-on at first,

but closer inspection showed it to be potentially very useful.

In Use

I was provided with various B Format test files on CDROM to try and loaded them into SADiE without difficulty. They consisted of SFX recordings and some music including a fiddle and a cittern player standing in front and behind the original recording's mic: even in stereo it was fascinating to be able to look round the back at what the cittern was doing with the rotate control, and the effect in 5.1 was very realistic, allowing the user to spin the whole picture if required to give the effect of the musicians walking around the mic. Such moves are not, at present, automatable, but this feature is expected to be included as a future update. I was also given a good

recording of a Bulgarian women's choir, and the ability both to allow the hall where the recording was made to play a bigger or smaller part in the presentation, or to zoom in on different sections of the choir to highlight particular musical parts was an ear-opener for me — again, lovely in surround. I made some B Format recordings of my own with a Mark V microphone provided for the review, and tried the plug-in both as a replacement for the Mark V's hardware controls and as a means of manipulating the recording after the fact — there was no discernable difference.

Conclusion

In The Surround Zone plug-in SoundField has for the first time given engineers a complete digital recording and post package, and I believe this marks a major shift in where the product, perhaps previously seen as high-quality but rather arcane, is headed. Emphasis now is on accessibility and user-power as seen in the ability to use a less expensive microphone more fully and the relabelling of controls such as the former obscure 'dominance' to the more obvious 'zoom'. I personally think SoundField microphones are always worthy of consideration by anyone

serious about sound quality, and if you're a SADiE 5 user recording acoustic sources with an eye to their surround compatibility I'd recommend a double demo as soon as possible. □

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