

SRS Labs 6.1 Circle surround encoder/decoder

Matrixed surround has an increasingly important role to play in delivering a wider sonic experience through traditional stereo infrastructures. **ANDY DAY** looks at the latest Pro Tools plug-in offering from another player in the game.

DESPITE THE UNIVERSAL acceptance of 5.1 audio on DVD, there are still some 'bottle necks' in the delivery of multichannel audio to the masses. The music industry is limited to stereo on CD, and terrestrial broadcast (in Europe at least) is still stereo. In the past, broadcasters have used Dolby Surround as a way to get LCRS mixes to millions of viewers with Pro-Logic decoders at home. This has been updated fairly recently with Pro-Logic II, an improved system allowing LCR plus Left Surround and Right Surround mixes to be matrixed into a stereo signal. I was surprised to find that SRS Labs has also been doing this in parallel to Dolby, with considerable success. SRS develops and licenses a wide range of technologies to most of the major consumer manufacturers, not only surround sound products but bass and voice enhancement products too, with several manufacturers incorporating Circle surround decoding in their multiformat AV receivers. This TDM plug-in allows Pro Tools users to encode (and decode) projects all within the Pro Tools environment.

The plug-in can be purchased online or via retail. Authorisation is made to iLok, so you have to be running Pro Tools V6.x or above on Windows XP or Mac OS X. In order to use the plug-in, you just need to create a 6.1 track, and insert the SRS encoder.

The encoder has signal present indicators and output level meters for LtRt (Left total, Right total — the name given to matrixed stereo signals). It can take up to 6.1 channels of audio and combine them into a stereo signal, this is done by some kind of phase shifting and summing to combine the stereo surrounds

and centre information into the LtRt outputs. The .1 or LFE channel is encoded by summing into LtRt. In mixes with lots of LFE this can result in excessive LF information in the LtRt, so there is an option to bass manage the other channels by rolling off the LF, which prevents overload. The decoder can be inserted on the same track or ideally on another 6.1 track. This allows

you to record your LtRt into Pro Tools and simultaneously monitor through the decoder. As with the encoder there are level indicators and meters for the outputs, as well as trims for individual channel adjustment. You can switch between Circle surround, LCRS (Pro-Logic style), stereo and mono decoding, which is useful for testing downward compatibility.

There are also options for different Centre modes, phantom Centre and Centre Surround (Cs) on/off. Certain Circle Surround consumer decoders also have the option of other SRS technologies, True Bass and Dialogue Clarity, both of which can be emulated on the plug-in. True Bass is a very effective bass enhancement process that derives bass from the LtRt and Dialogue Clarity is a dialogue frequency based enhancer, which helps

to improve dialogue intelligibility, particularly in busy mixes.

Both these technologies are optional and user controllable in a consumer decoder, so while it's useful to hear what people might do at home, it's not advisable to mix with them switched in. Setting output levels is simple using the built in pink noise generator, and then you're ready to go.

The channel separation is surprisingly good, particularly in the surrounds, I used an existing feature

film 5.1 track and A/B tested the two. The image width is slightly narrower in Circle surround, but still very good considering it's a matrix system. The LFE channel is a bit hit or miss, but given the added option of True Bass settings in a consumer decoder it always will be. Any extreme pans translate well, even in the surround channels. As with any matrixing process, mono compatibility is a potential problem, basically anything sent exclusively to the surround channels cancelled out in mono. However, with stereo listening becoming more common, due to DAB and Sky, mono compatibility is less of a consideration.

I also A/B tested Circle surround decoding against Pro-Logic II, to see if the plug-in could be used as a PLII encoder. The results were very good, I assume this is because PLII has a similar way of encoding and decoding. Even regular Pro-Logic decoding worked OK. The LtRt signal is quite robust and can be post processed, as long as the phase correlation and levels of each channel are not changed. There is a tendency for the LtRt level to get quite high, especially on busy soundtracks, the only way to avoid overloads is to decrease the level of the material before the encoder. It would be useful to have an input trim included on the encoder, to make this simpler. The stereo LtRt signal can have significant out of phase content, especially when Ls and Rs are at full whack, so for broadcast programmes you would need to keep an eye on the amount of Ls and Rs in the mix, to pass network tech reviews. Music is a great application of SRS, as CDs are limited to stereo making CS encoded mixes is a nice way to introduce 5.1 music to consumers.

The Circle Surround plug-in is a useful tool, not just for CS encoding, but as a PLII or even a PLI encoder. As the Circle Surround process becomes more available on consumer decoders, there may be more use for actually creating CS programmes. The decoder can be used to decode stereo signals into 5.1 or 6.1 and using the 'post processes', improve dialogue intelligibility or derive an LFE channel. At US\$799 it's not exactly cheap, but given the versatility for PLII encoding it's quite reasonably priced. ■



PROS

Surprisingly low channel crosstalk; good compatibility with PLII decoding; not too heavy on Pro Tools DSP; Dialogue Clarity works very well on high action scenes.

CONS

No input level trim on the encoder; LFE encoding not great; slight image narrowing compared to 5.1 discreet.

Contact

SRS LAB, US

Website: www.srslabs.com

UK, Unity Audio: +44 1440 785843