



Lexicon PCM96 Surround

Following on from the PCM96 comes the PCM96 Surround. With enhanced I-O capabilities and new algorithms specifically designed for multichannel work, the surround variant will be a welcome addition for many users.

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The original PCM96 was, of course, the long awaited replacement for Lexicon's venerable PCM80/81 and 90/91 series of multi-effects processors. With a vastly improved user interface, updates to the DSP and algorithms, and the ability to stream audio natively from a DAW to the device, it had much to recommend it when I first reviewed it (V7.7) — but also a number of niggles. So I was interested to see just how the surround variant had moved things on.

In terms of interfacing, the PCM96 comes in two flavours. For those who will never move outside the digital domain there is a version with six channels of input and output arranged as AES3 pairs, terminating on XLR connectors. If analogue interfacing is required, another version is on hand with six channels of input and output in both analogue and digital (again AES-EBU) variants — this time available on DB25 connectors. Also on the rear panel are a pair of FireWire 400 ports, a pair of Ethernet ports, the usual trio of MIDI ports and a BNC connector for external Word clock input.

The front panel is near identical to the standard PCM96, the only real difference being the inclusion of six small LED bargraph meters as opposed to two. Like the PCM96, the PCM96 Surround is built around a single dedicated DSP processor that can be divided as needed into a number of 'virtual machines' to host a particular preset. The biggest difference with the PCM Surround is the increase in the number of permutations of virtual machines and configurations on offer. As well as being able to cascade stereo or mono machines into each other, you can now run up two separate stereo machines or four separate mono machines with independent I-O — something that isn't possible with the standard PCM96 in standalone mode. Of course, other configurations include a variety of multichannel modes, all of which grab all of the available processing into a single machine. I-O permutations include 2 in and 4 or 5 out, 4 in and 4 out, 5 in and 5 out, and 6 in and 6 out.

To accommodate this surround I-O capability, the algorithms have also all been tweaked slightly, with Chambers, Halls, Delays, Rooms, Plates and Resonant Chords all supporting surround operation. Rather neatly, the parameters available for each preset intelligently re-map themselves according to the machine configuration chosen — so in four in/

four out mode, for example, the centre channel levels are hidden. Also new to the PCM96 Surround are a set of Pitch shifting algorithms, which can work as multi-voice shifting with separate level and pan for each output (which can give some wonderful rising and falling shift effects in surround), as fully coherent, linked shifting on all channels, or as linked shifting across logical channel pairs (L/R and LS/RS).

With in excess of 2200 presets on offer there's a lot of scope to be had in loading them up and playing with them — in the main using the surround implementations on both complete stems (5 in/5 out) and on single stereo sources (2 in/5 out). The presets are all enormously useable and in truth most users will go no further than calling them up and tweaking them to fit using the three small rotary encoders on the front panel as these can bank through the parameters that the preset designers have deemed most likely to need tweaking.

All of the reverb algorithms work well in surround but the real stars of the show are the chambers and rooms. In both two in/five out and five in/five out configurations these can produce some stunningly realistic recreations of space with the rear channels in particular seeming very solidly glued to the fronts, rather than sounding like some vaguely correlated ambience as is sometimes the case with surround reverbs. Also worthy of special mention are the surround implementations of pitch and resonant chords, which become very creative tools for effects design and that's something that hasn't escaped the attention of the preset programmers.

Readers may remember that the PCM96 was also capable of working in a mode whereby audio was streamed to and from a DAW over FireWire, with control of the hardware unit performed by a pseudo plug-in. The same functionality is afforded to the PCM96, although Pro Tools users shouldn't get too excited. As Pro Tools uses VST plug-ins in a RTAS wrapper to perform this function, it will only currently work with stereo machine configurations. The reason for this is, apparently, that Digidesign won't allow the use of multichannel audio streams in a RTAS wrapped plug-in. Logic and Nuendo users can rejoice, though, as native VST and AU implementations work just fine.

Even with Pro Tools, it's still possible to just use the control side of this function with the surround configurations, over either FireWire or Ethernet. In

other words, the audio is routed to and from the unit over AES interconnects and the plug-in simply acts as a rather more elegant GUI for the PCM96 Surround. When this works, it works well but Lexicon still hasn't quite nailed the stability of this mode of operation, particularly over FireWire. It's improved somewhat since the original PCM96 I saw, but I still encountered issues with communication being lost, requiring restarts of the unit or the DAW or both when using Pro Tools.

Despite this, the PCM96 Surround is a great step forward. To be honest, even if you don't specifically need the surround algorithms it probably makes more sense than the original PCM96 because of the enhanced I-O options and the ability to run simultaneous mono or stereo virtual machines with separate inputs and outputs. Throw in what are some truly excellent sounding surround reverbs and effects, and you can't help but feel that this is what the PCM96 should have been to start with... ■

PROS

Much improved I-O capability; terrific surround reverb algorithms; flexible multimachine capability; ease of editing; range of factory presets.

CONS

Still lacking somewhat in stability when used in conjunction with a DAW; can't stream directly to and from Pro Tools over FireWire in surround configurations.

EXTRAS

The Lexicon I-Onix U22, U42S, and U82S USB desktop recording interfaces each provides the tools to transform a



computer into a 24-bit digital recording studio including the USB 2.0 desktop recording interface, Steinberg Cubase LE4 multitrack software, Toontrack EZdrummer Lite virtual instrument software, and the Lexicon Pantheon II VST/AU reverb plug-in. The three models allow different levels of recording capability with the U82S recording eight analogue and two digital channels.

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