

AMS Neve 8051

The move to multichannel throws up a number of issues when it comes to dynamics most of them pertaining to configuration and control. **ROB JAMES** says that you ought to be able to take your favourite dynamics sound with you.



FOR SOUND FOR PICTURE post, I've never been a huge fan of compressors as a species. Something along the lines of, 'If God had meant us to use compressors he wouldn't have given us fingers, automation and the reverse button.' Music is another matter. Limiters, on the other hand, are absolutely indispensable. The only compressors that have ever really 'done it for me' have come from Neve. Even in the digital age, given the choice, I would still use a 33609 compressor/limiter in preference to anything else. The overall effect can be summed up with the word 'natural'. Even when you deliberately overdo it, the artefacts are far from unpleasant. I have long nurtured the hope that AMS Neve would someday get around to building a proper 5.1 surround version. At the UK price of UK£5950 + VAT, the 8051 is almost, but not quite, what I had in mind. It has the look and feel of the older Neve units but currently lacks limiting.

Linking control of left and right signals of a stereo compressor should be second nature, unless of course you enjoy the inadvertent and disturbing 'autopan' effect. In surround mixing things can become a lot more complicated. Whether for music or other purposes it is far from uncommon to feed completely different material to the various groups of channels. In these instances applying the same gain reduction to all channels because one channel has exceeded the threshold may be wholly inappropriate.

With exactly this dilemma in mind, the 8051 has two sidechains, A and B, each with an independent set of controls for the six transformer-balanced audio paths. Each channel can be controlled from sidechain A or B or both. The six signal paths can be assigned to the two sidechains in any required format. For example, L, C, R, LS, RS on sidechain A and LFE on sidechain B or L, C, R on sidechain A and LS, RS on sidechain B or as a pair of independent stereo compressors, and so on.

The majority of analogue compressors apply gain reduction entirely dependent on the input signal level. The 8051 uses the same feedback architecture as the 33609 compressor. This monitors the output of each

gain cell and continually adjusts the gain based on this control voltage feedback to accurately apply the required gain reduction. This is arguably responsible for the characteristic Neve dynamic sound.

The compression characteristic is 'soft-knee' and ratio increases the more the threshold is exceeded. Maximum nominal is around 8:1. Each sidechain's analysis circuit reacts to the highest signal present and the resulting compression is applied equally to all channels assigned to that sidechain. This multichannel equivalent of stereo compressor linking prevents unwanted image shifts.

A 12dB per octave 80/100/120Hz low-pass filter can be inserted on any one channel to create a sub-bass or LFE channel and a 80/100/120Hz high-pass filter can be inserted in each channel's sidechain path to prevent unwanted compression due to LFE content.

Channels are assigned to sidechains using individual push buttons and are automatically assigned to the corresponding control voltage link. This is necessary to maintain the closed loop feedback. Once this is established, further channels can be added to the sidechain output so that they are subject to the same gain changes without their audio content affecting the compression applied. A channel can have its control voltage linked to both sidechains and in this case the sidechain applying the most gain reduction and gain make up controls the channel. Sidechain levels can be

trimmed on four controls that group the six channels into two stereo pairs and two mono channels.

The Ext buttons switch in an insert point in the control voltage signal for each sidechain while a send and return allows the control signal to be processed by external devices. Alternatively the Ext mode can take a control voltage from the rear connector instead of the sidechain outputs and this enables the unit to be slaved from a second 8051 or a 33609. A Bias control is used to balance the control voltages from the two sidechains by applying up to 6dB of cut and boost, gently modifying the compression ratios.

An adjustable Key Input enables an external source to be used to trigger the gain reduction. The key input control signal can also be used in parallel with the control signal from one of the audio inputs — for example, the centre channel signal can control different compression of front and rear signals in a surround mix. Any spare audio input can, in effect, be used as an extra key input by simply putting it into bypass mode.

Gain reduction meters show the degree of processing being applied and once above the sidechain's threshold level the link button for the largest signal on that sidechain illuminates in red. Any other channel with signal above the threshold and within 2dB of the highest also lights in red.

Apart from the standard model the 8051 is also available as a specialised mastering version. This unit differs in that the Trim and Bias controls are indented so they can be accurately reset and -1dB switches are fitted to the Threshold and Gain Make-Up controls. There is also a version for Neve 88R series consoles available new or as a retro-fit.

Rotary switches and stepped attenuators still do it for me even before switching the unit on. Leaving aside the ease with which settings can be repeated they are satisfyingly tactile in a way no pot, let alone a mouse, can hope to emulate. The buttons are equally reassuring and latch electronically.

I'm not going to pretend that setting this unit up for different tasks is as easy as recalling a preset on a digital compressor, but the rotary switches and stepped attenuators make it as simple as possible. No matter how convenient and cost effective digital processing becomes I have yet to hear anything digital that produces the same effect as passing signals through this unit. I suspect it may be something to do with the nature of properly designed transformers. Whatever, the effect varies from gentle dynamic range reduction, all the way to compressed to hell in the nicest possible way. Real Neve sound for the surround epoch. ■

Contact

AMS NEVE, UK
Website: www.ams-neve.com

PROS	The sound; versatile control linking; proper engineering.
CONS	No separate limit controls as on 33609; proper engineering isn't cheap.
EXTRAS	The 1073 DPA and the 1073 DPD are 1U rackmounting dual-channel units that provide two 1073 Class A mic preamps at a new price point. The 1073 DPD adds A-DCs that run to 192kHz and a Neve DSD output.