CEDAR DNS3000

The principle of the Dialogue Noise Suppressor is now firmly lodged in the minds of post professionals everywhere and the dynasty continues with the 3000. NEIL HILLMAN **reports on audio quantitative easing.**

Look, I know that at every turn we're told that these are difficult days, but it has become apparent even to me, the eternal optimist, that there really is a new austerity in audio. I say this not just because this year, yet again, as a dubbing mixer I missed making the *Sunday Times* rich-list by a comfortable margin — I find it rather reassuring that in this respect neither I nor anyone else from postproduction appeared. Nor do I suggest this just because Brown's Britain has been finally exposed as one of fraudulent financiers, bloated bankers and plundering politicians; and a land where hand-wringing executives of terrestrial TV networks plead poverty and slash jobs, seek to divest themselves of public-service commitments while demanding public bail-outs and subsequently award themselves seven-digit salaries for a job well done. There's nothing new there. No, my evidence is based on this one fundamental fact: one of my favourite bits of UK kit is now delivered in a brown paper package, tied up with string.

That's so quintessentially British and it's indicative to the rest of the world of how in this country, we develop in spite of depressions. Furnish an Englishman with a shed, some tin-snips and a gallon of paraffin and he'll give you the jet engine; clothe him in a cardigan and he'll deliver Carbon Fibre too. We're at our best in times of crisis — global, financial, or otherwise.

I actually have no way of knowing whether CEDAR started life in a shed. Obviously, I'd like to think that it did, but I suspect a science park in Cambridge is a more likely late-1980s birthplace; a location more commensurate with what was then the new frontier of Computer Enhanced Digital Audio Restoration.

Back in 1989, thanks to our still fresh love affair with digital audio, we'd become increasingly intolerant of noise and distortion, and CEDAR entered the sound restoration market with de-crackle and de-hiss units that, for the most part, made significant improvements to the pops, clicks, hums and buzzes of real-world analogue actuality recordings. But it was in 2000, by responding to the need for a single low-level, broad-band noise reduction unit, that CEDAR introduced its Dialogue Noise Suppressor product; and it became so successful, within five years it was awarded an Oscar. Now DNS1000s, DNS1500s and DNS2000s are present in almost every film mixing and TV dubbing studio around the world; and I can hand-on-heart say that our DNS1000 gets used almost every single working day.

This new version, the CEDAR DNS3000 remains true to its original objective of reducing or eliminating background noise such as air conditioning, wind, rain and traffic, with minimal effect on the wanted signal; and with its near-zero latency (just 10 samples) it means that audio need not be slipped to maintain lip-sync. What fundamentally changed between the DNS1000/1500 and the DNS2000 models was compatibility with Pro Tools; the DNS2000 came as a 1u rackmount device, accessed through CEDAR Remote Control Software (RCS) and dedicated itself to Pro Tools LE and HD users. The enhancements between the DNS2000 and DNS3000 models maintains this integration, but sees a return to the desk-mounted chassis.

The DNS3000's new features are directly developed from customer feedback: automated-to-timecode noise suppression, on-board scene capture, memories with a simple recall system, moving faders, sample rates up to 96kHz and yet more complete Pro Tools integration for Windows XP and Mac OSX.

But some care is still needed in how you use the CEDAR in a Pro Tools set-up, if you're not to actually experience a 1-frame or more processing off-set. A poll among Pro Tools colleagues shows a general consensus: don't have the RTAS controller plug-in inserted on a channel that carries dialogue, choose any another channel; insert the CEDAR Remote Control Software (RCS) into the first insert on the DNS3000 unit, eliminating any RCS latency, then follow with EQ and other hardware inserts; set the hardware insert delay in the I-O set-up to 0.07ms for the CEDAR inserts; switch Delay Compensation on when mixing.

The DNS3000 itself does not become a plug-in through the RCS though, the RCS only tells the CEDAR hardware how to process the audio and routes it in and out of Pro Tools; therefore the snapshot function is used to save and recall settings on the unit. So, if interior A always has this particular setting, exterior B that setting, actor C the other, as the programme rolls through, the automation will take care of replaying your carefully arrived at settings.

The DNS3000 has EQ choices similarly spread to any conventional mixing desk: Low (20Hz–400Hz), Mid (200Hz-6kHz), High (4kHz-18kHz); Low and Mid, Mid and High or Full; and although the mechanical process of cleaning the signal is idiosyncratic to the CEDAR, it is a strangely satisfying process to go through. First, the frequency range to work within needs to be identified — this is arrived at either by virtue of decades of critical listening, or by simply testing each band in turn, as a broadband background such as wind or traffic could be happily sitting between 2 or even 3 of the CEDAR's Low, Mid or High bands.

Once the range is chosen, the six Gain faders and the master Level fader are pulled fully down, then the master Level is slowly lifted until a clean signal is heard: at this point, the six gain faders are reintroduced back up to unity gain (0 on the fader scale) — then reduced or boosted so that the minimum of attenuation artefacts are present on the signal. These six gain faders represent six low-to-high bands within the chosen range, with the lowest frequency to the left, the highest to the right, and activity LEDs above each Gain fader show whether that fader is attenuating or boosting the signal within its band.

Now you can save a snapshot of those settings or, and to be honest it's what I do in our Fairlight studios, simply record the clip clean into your project and be done with it, and then move on to the next clip to be cleaned. It takes no longer, really, and the new clip becomes consolidated into the project with the net result that you have the freedom to move studios without relying on the presence of a DNS unit.

Notwithstanding the increased level of automation now offered by the CEDAR DNS3000, I do suspect that a lot of mixers will choose to operate this excellent unit in this more manual way; and given the times we find ourselves in, we might think of this rerecording method as a form of audio quantitative easing: the creation of something clean and new out of something dirty and flawed. Get it right and it could be a license to print money. ∎

PROS When it works, it works: the cleaning can be remarkably transparent, and incredibly quick to arrive at; the settings you arrive at within the first 2 minutes are the ones you'll probably end up with; I find our unit still indispensable, 9 years on; it can be moved easily between studios, unlike a plug-in.

CONS It's expensive and some might consider it a disadvantage that it's not a plug-in; it can almost be considered a binary device: it either works or it doesn't – there's no real middle ground; the good news is you'll know quickly whether or not the CEDAR will help or hinder.

Contact
CEDAR, UK:
Website: www.cedaraudio.com