



# CEDAR Audio DNS 8D

**SIMON CLARK** hears only what he wants to hear via Dante

It's a source of puzzlement to me that, as cameras get more sensitive and able to work at lower light levels, the level of noise they produce on set has increased. Fans whir and servos whine louder than a cinematographer whose coffee isn't hot enough.

Thankfully CEDAR is fixated on cleaning up the audio environment. Many of you will be familiar with their audio sorcery, originally focussed towards archives and pre-mastering, then post, forensics, security — and now live broadcast plus production sound — with the DNS 8 Live followed by DNS 2 used on location in real time.

DNS 8D is a logical evolution from the previous model, with the most noticeable difference being the implementation of the Dante protocol, but the company tell us that their super-secret processing has been improved as well (I reckon this means a more powerful daemon is imprisoned in the box). The two channel ultra-portable DNS 2 has a bank of complex filters, and the Learn function identifies the noise content at each frequency, but the controls revealed to the user are simplified and if overcooked, leave dialogue floating in an unnatural void. Its big brother has more of the full-fat studio equipment's functionality.

As the name implies this 1U rack unit has eight independent channels of dialogue noise suppression. I'm a sucker for a helpful, pretty interface and DNS8D scores highly for me. Hitting the top left of a group of six illuminated buttons fires it up and a bright, but thankfully dimmable OLED display screen is partnered with eight smaller, portrait format siblings, one for each rotary control.

## A learning process

In common with the original DNS 8 Live there are two modes of control — Summary and Detail combined with a continuous Learn function. In Summary the default for a channel's rotary encoder is to adjust the amount of noise attenuation. Pressing/clicking the encoder switches it to adjust Bias (the propensity of the algorithm to detect noise).

Increase the Bias and DNS 8D will detect more noise and vice versa. The trick to avoiding artefacts is to lower the Bias level as much as you can without letting noise through, although the default level works for most situations. Learn

does what the name implies, the unit works out continuously what it considers noise as opposed to dialogue — and very good it is too. Switching off this mode freezes a sample noise profile.

It is in Detail mode that DNS 8D is more sophisticated than the two channel DNS 2. When engaged using the bottom right push-button, Detail gives the user control over the processing applied to six different parts of the spectrum. This is achieved through clever dual functionality of the eight rotary encoders. The OLED display shows the different bands (each band contains numerous filters) in a layout similar to a graphic equaliser, and the first six rotary encoders control Bias and Attenuation of individual bands. Encoder seven becomes a global control while number eight switches between channels. This mode allows unwanted noise to be eliminated whilst preserving a degree of natural atmosphere.

## Dante's quieter inferno

Not having an original DNS 8 Live to hand to compare, I cannot comment on differences versus the current algorithm. For me, however, it's the excellent implementation of the increasingly ubiquitous Dante audio networking standard that appeals. Even in my world of location audio for Film and TV, Dante is becoming the way we connect. My current recorder/mixer offers 32 channels of Dante so I was able to interface the DNS 8D seamlessly. Connecting a computer running Audinate's Dante Controller software via one of the Ethernet sockets deals easily with the initial setup. After that the units talk to each other without further intervention. The DNS 8D will work in either Switched or Redundant modes, having double Ethernet ports plus one for remote control.

DNS 8D also provides AES53 i/o, but not simultaneously with Dante. Routing the processed and unprocessed signals through adjacent busses allowed me to confirm the insignificant latency of ten samples. It is this which allows the unit to be used in live situations. Switching the processing in and out did not reveal any significant damage to the original dialogue, until I mixed in ridiculous amounts of broadband noise and ramped up the bias and attenuation to ridiculous levels.

After that the testing game was to find something which I could sneak past the system.



/ XDNS 8D linked to Sound Devices CL-16 via Dante

I tried, traffic, crowd noise, hums, buzzes and even staccato transients like birdsong — all of which were sonically eaten by the black magic inside the box (although the odd tweet did get through!). Of course, there are understandable limitations to what DNS 8D can do. If the level of the unwanted noise approaches that of the wanted dialogue the daemon stops casting spells, and sulks after mangling your audio. There are other specialist CEDAR processes, using different algorithms, to obtain results in situations where the SNR approaches 0dB or is even negative.

I spoke to two colleagues who are DNS 8D users who both told me they use the unit on every job, mostly in the 'fit it and forget' (Summary) mode. One works in the world of location audio for feature film, and finds that reducing rather than eliminating background noise makes the editor's job far easier. The other colleague, who mixes huge TV entertainment shows, finds it invaluable in dealing with the frightening noise floor on that kind of production. 📍

## resolution/VERDICT

**PROS** Extremely simple interface; lack of colouration despite powerful real-time noise reduction; Dante integration; 12V DC and mains option; insignificant latency.

**CONS** They won't let me keep it!

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