



Drawmer A2D2 DMS-3

Outboard conversion has long been an accepted equipment category but it hasn't always been appreciated for all the right reasons.

ROB JAMES says the game has moved on recently and that it's important to keep revisiting the subject to stay on top.

You already have a well stocked mic cupboard and one or more 'boutique' mic amps that you love even more than the dog/cat. You also have the killer, all singing, all dancing DAW. So how do you ensure that the pristine analogue output from the mic pre still sounds the same when it is converted to digital and is in the workstation domain?

The importance of top quality conversion is becoming ever more apparent. We've known for years that with anything digital the GIGO (Garbage In, Garbage Out) rule applies. Converter chipsets have improved dramatically in recent years and extremely high quality conversion is now within most people's reach. But there is another issue; clocking. If the

system clock is imprecise or unstable then results are likely to be ultimately disappointing — no matter how good the convertor chips may be.

The A2D2 DMS-3 AES Grade 1 Dual Output A-D convertor, to give it its full title, combines an AES Grade 1 Word clock generator with high quality A-D conversion, precision analogue controls and, as the name states quite unequivocally, dual outputs. In fact, each of these dual outputs has three concurrent connections. Round the back you will find XLR AES-EBU, SPDIF coaxial and SPDIF optical (Toslink) but the really significant feature is the ability to set different sample rates for each group of outputs, 1 & 2. The Word clock output follows the Output 1 setting. Using the dual output feature it is thus

possible to record at 192kHz for the audiophiles (and bats) and record a simultaneous 44.1kHz version for CD. All the standard sampling rates from 44.1kHz to 192kHz are supported but there is no provision for the pull-up and pull-down rates often found in sound for picture work.

We are living in an age when 'repurposing' has become a fundamental of the production lexicon. An audio recording may well have a life as a top-end high sampling rate premium product, as a soundtrack to an HD or SD video product, as a humble CD or even that Uriah Heep of audio recording, the MP3 (*Presumably because it's dreadful just like the band. Ed*). To achieve the best quality possible for the higher-end products and CD or even just to

provide a backup, it is desirable to digitise at more than one sample rate and on more than one recorder. Storage is now cheap and abundant so the extra disk space this approach requires really isn't an issue but, duplication of converters and the added hassle might be. Enter the silver knight. Drawmer's UK£875 (+ VAT) A2D2 is made for the job.

A single pair of XLRs is provided at the rear for analogue input. Coming around to the alloy front panel the unexceptionable analogue variable gain knobs are business-like but not sexy. On the other hand, the recessed multi-turn (20) trimmer pots for the calibrated input option are not only a welcome return to real analogue precision but damnably attractive too. An internally illuminated button toggles between calibrated and uncalibrated modes. Output sample rate is set independently for each output by left and right cursor keys. When you try to step beyond the highest sample rate it jumps back to the lowest and vice-versa so you have the best of both worlds. Each output is also endowed with Ext sync source and Lock LEDs. A single Word clock input BNC on the rear feeds either or both output converters when the Ext option is selected.

Word length is toggled by a button for each output between 24 bits and 16-bit dithered. In the middle of the panel the blue Drawmer logo glows quietly. All of the front panel LEDs are bright and, in the case of the white ones, they are arguably too bright. The 24-segment plus overload bargraph meters are great though and with almost 150mm between -50dB and overload the resultant 'at-a-glance' visibility makes a welcome change. Why are so many meters so small these days? Three LEDs arranged vertically on a 1U panel are as good as useless.

With Burr-Brown analogue input stages and a linear power supply instead of the more common

noisy, but cheap and lightweight, switch-mode compromise, the auguries are good for audio veracity. It's probably worth noting that there is one drawback with the linear power supply. If you need to change voltages the switch is inside the box.

I'm told the unit is calibrated to 0.1dB and I can believe it as there is an air of precision about it. The circuit topology is interesting. Instead of using two stereo converters there is one stereo converter and two sample rate converters. The converter is run at 210.9kHz continuously and this is derived from a thermally stabilised 27MHz crystal. All the output sample rates are down-converted by the two sample rate converters from the fixed rate analogue to digital converter output. The practical benefit of this approach is that when an external clock source has to be used, any jitter present in the signal is taken care of by the SRCs without damaging the pristine output from the A-D.

In operation the A2D2 does not disappoint. Conversion is as clean and uncoloured as my ancient ears would wish and it would take long

and serious comparative listening against expensive converters in ideal conditions to identify any positive or negative nuances.

The A2D2 really is a highly refreshing piece of digital kit. There are no multifunction buttons, so no learning curve and no confusion. With the big precision bargraphs, it is indeed the very model of clarity. It is designed to do one job and does it well. As a bonus, with three AES Grade 1 Word clock BNC outputs on the rear it can also be pressed into service as the master clock for a small studio. This is the most analogue example of a digital box I've seen in years and is all the better for it. We've allowed the manufacturers to make our lives more difficult for far too long. Drawmer is trailblazing with the A2D2 and I hope this excellent 'user interface' is but the first of many.

Nice box, nice price. ■

Contact

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PROS	Excellent converter; superb user interface; AES Grade 1 clock.
CONS	Does not support pull-up or pull-down rates (except with external clock); the knobs are a bit boring; mains voltage switch is internal.
EXTRAS	 <p>M-Clock Plus is a master clock generator offering clock rates from 44.1 to 192kHz, coupled to two sample rate converters, which allow material to be re-sampled and synchronised to the selected high precision clock. In addition to the internal clocks, M-Clock Plus can sync to external Word clock or clocks from AES-EBU signals while precision clock frequency measurement and display indicates the exact frequency of the selected clock, whether internal or external, to an accuracy of 2ppm.</p>