



# Now DAC's what I call music

The striking dCS Debutty DAC first launched back in 2008 and now appears to be an affordable, high-end classic, reckons **David Price**

**D**ata Conversion Systems launched in Castle Park, Cambridge in 1987. It did electronics engineering consultancy work but early on in its history was hit by the peace dividend, which meant the British government wasn't investing as much in military hardware – so founder Mike Story

instead decided to focus his business on his passion for music. In 1989, the dCS 900 analogue-to-digital converter was launched. It wasn't just technically clever, it also sounded great. Soon the request was made for a matching digital-to-analogue converter and in 1993 the dCS 950 was born. Using the superb

sounding, firmware-upgradable dCS Ring DAC, it gained a particularly strong following in Japan. It was still ostensibly a studio product, so dCS duly made a 'consumer' version in the shape of the Elgar in 1996. Warp forward to 2007, and dCS launched its luxurious Scarlatti CD/SACD transport, clock and DAC. This

flagship range was effectively the inflection point for dCS. The following year, the dCS Scarlatti Upsampler arrived – this repackaged upsampling technology was also seen in the dCS 972, which was the world's first 24-bit/96kHz-capable digital-to-digital converter. It was this product that saw the discovery of the upsampling effect.

So, having invented the Ring DAC, given the world the first hi-res DAC and ADC and discovered the sonically beneficial properties of upsampling, what would dCS bring to the digital party next? The answer was asynchronous USB connectivity. Although USB digital inputs had been around for a while, they were sonically compromised by relying on the computer's internal clock.

## It has a mastertape feel, serving things up without any additional character

Asynchronous USB allowed the DAC to clock the digital data stream down the USB cable, and not the computer. This gave clear sonic benefits and made USB respectable for hi-fi applications. But if only this feature was more accessible, and not limited to just a purpose-built upsampler for a high-end DAC...

Enter the dCS Debutty, essentially a cost-cut Scarlatti DAC with that all-important asynchronous USB functionality. It was the first ever DAC to have asynchronous USB, selling for £7,500 in the UK. A versatile, swish and modern-looking product, it nevertheless had a proper dCS Ring DAC at its heart.

Debutty sported a single, full-width, slimline case with matt silver-finished aluminium casework. It was a versatile device with USB 2.0, AES3, Dual AES and S/PDIF coaxial inputs, plus balanced XLR and unbalanced phono line outputs. It had a digital volume control so it could be connected directly to a power amp, too. Purists could sync Debutty to an external word clock signal generated by a dCS Master Clock, making it a powerful product that could be later upgraded.

As with all dCS designs, the Debutty could also be periodically upgraded with software updates, loaded from a special disc placed in whatever digital disc transport you're using. This only further contributed to the Debutty's 'jack-of-all-trades' feel; here was a

flexible product that had a good deal of future-proofing built in.

It's a pleasure to use – providing you don't mind the fascia's small fiddly buttons and tiny status LEDs. Your best bet was to use the supplied remote control. This is a large, chunky thing that's nicer to use than any app I have ever tried, and you can really make use of the DAC's variable output level with it – a boon for those running things straight into a power amplifier. For these people, the Debutty has a maximum output level of either 2 or 6V, switchable on the rear panel. It sports two switchable digital filters, offering the choice of linear phase with pre-ringing or non-linear phase without pre-ringing. It can be locked to an external word clock signal generated by a dCS Master Clock. Round the back, you'll find one stereo pair of male balanced XLRs and one pair of RCA phonos.

## Quality across the board

Many have said that the dCS Ring DAC sounds rather cerebral. By the time the Debutty appeared in 2008, however, we were leaving this behind. Both the Ring DAC's control board – its hardware – and the conversion algorithm had been upgraded, so the result was a digital converter that provided an extremely high-quality sound across a wide range of music. From reggae and new-wave to ambient and electronica, this was a redoubtable performer.

The dCS sound certainly isn't warm, it doesn't sugar coat poor recordings or add extra presence and vibrancy when there isn't any there in the first place. It offers a very highly resolved sound that pushes right under the surface of the recording to tell you what is really going on. It gives a balanced tonality, handles the time

## RING CYCLE

While regular, bought off-the-shelf DAC chips featured 16 resistors fed in parallel – each of which is twice as big as the other – with the outputs summed to give 16 different current sources, dCS' Ring DAC ran just five resistors at the far higher speed of 2.8MHz. All number crunching is done on a field-programmable gate array (FPGA) – effectively a chip that retains its memory when the power is turned off, without having to be 'hard coded' like read only memory (ROM). This means that the signal processing algorithm is done in software and can be recoded then 'squirted' into the FPGA as a firmware update. We're all pretty familiar with this concept now, but at the end of the eighties it was pretty spectacular stuff. In effect then, the Debutty is a 2008 DAC whose development wasn't frozen in time.

domain very well and also is rather special spatially. It has a mastertape-like feel to making music, serving things up without any obvious additional character but letting you get right into what you're listening to.

## Open all hours

It is tonally smooth, well rounded and even, offering a powerful but taut bass, open and spacious midband and very well resolved treble that's clean and sparkling. There's a forensic accuracy to how instruments are placed and impressive depth perspective. If there's any criticism, it doesn't give the feeling of boundless enthusiasm for the music; it's more measured and sober.

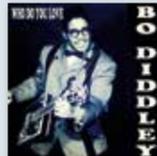
In 2018 the Debutty was quietly replaced by the Bartók network DAC, with optional headphone output. Operationally far more sophisticated, app-controllable and with built-in streaming, it makes the Debutty look like a relic from another era. The old model is now effectively redundant, meaning it's available secondhand for as little as £4,000. Better yet, you can send the Debutty back to

**Debutty's tiny status LEDs are the only real draw back**



the Cambridgeshire factory for a service, cosmetic repairs and/or firmware updating – effectively bringing it back to as-new condition. This is what makes it such a great used proposition and why so many dCS owners stay with the brand. In effect, this is set to become a modern classic; a rare, high-performance product with excellent functionality matched only by its beautiful build and finish. ●

## A brief history of dCS

1987	1989	2008	2018
<p>Mike Story founds Data Conversion Systems as Whitney Houston's CD single is the first to make it to number one</p> 	<p>dCS unveils its professional 900 analogue-to-digital converter as Paul McCartney releases Back In The USSR in the USSR</p> 	<p>dCS introduces its Debutty DAC as The Dave Clark Five vocalist Mike Smith, Bo Diddley, Isaac Hayes and Eartha Kitt all sadly pass away</p> 	<p>dCS discontinues the Debutty as The Moody Blues' Ray Thomas, Fall's Mark E Smith and Buzzcocks' Pete Shelley sadly follow suit</p> 