HI-FI WORLD

Fonder Prelude

David Price is surprised to find the new Debussy DAC to be one of his favourite dCS products...

I have to say that I don't regularly ponder the complexities of the model ranges of manufacturers of high end hi-fi. In the same way that I don't concern myself about the Mercedes Maybach limousine options list, nor do I bother especially about whether I'd have this £20,000 DAC or that. With this in mind, it was all the more heartening to find that dCS, purveyors of some of the most expensive, and finest, digital convertors on sale, have gone and introduced a DAC that - in many ways - is even nicer than their ultra high end, mega complex higher priced models, at a more 'affordable' price. Instead of the super rich who need only apply, the dCS owners club has now been widened to the merely 'very well off'!

Of course, I'm not about to denigrate the *Hi-Fi World* Award winning Paganini; it's a stunning product and one of the few around that really spurs me to pick up a silver disc (almost) in preference to a black one. But there's no denying that the full Paganini system, including transport, DAC, clock and upsampler is a massive thing to have in your house, and a massively complex one to get your head round if you want to be sure you're using it to its full potential. The Debussy, on the other hand, is a simple one box affair – and a beautiful box it is too – that's far smaller, easier to use, more inexpensive and yet boasts the 'guts' of the Paganini. Think of it as a cost-cut, lightweight, short wheelbase supercar stripped of the heated leather seats, but with that same glorious engine...

The aforementioned motor is of course the dCS Ring DAC, as used in the flagship Scarlatti, Paganini and Puccini ranges. It's a custom, bespoke designed piece of hardware which does not use any off-the-shelf DAC chips commonly found in other manufacturer's products. The proprietary 5 bit oversampling system spins all digital signals up to either 2.822 or 3.07MHz, performs some very sophisticated digital signal processing on them and then converts them to analogue. A sophisticated multi-mode phase locked loop is used, said to significantly reduce clock jitter, while the Debussy sports faster DSP chips which make for improved filtering. Higher capacity FPGAs (Field Programmable Gate Arrays) give more logic capacity and increase the scope for additional features and enhancements over earlier dCS models. In essence, it's the Ring DAC which gives dCS products their distinctive sound, and which means that no other DACs can sound like them.

The Debussy also sports dCS's patent pending asynchronous USB technology, meaning the unit will work direct from the universal serial bus output of any modern PC or Mac computer, whilst avoiding the unpleasant clock inside it because the computer becomes locked to the DAC. The unit features the aforementioned USB 2.0, AES3, Dual AES and S/PDIF (coaxial) inputs; it's a great shame to my mind that there's no optical TOSLINK S/PDIF; even though this isn't a universal panacea it's especially good at getting 16/44 digital out of computers without any electrical noise (which is one thing computers have got a lot of). The Debussy has a digital volume control, for direct connection to a power

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amplifier, so those minded so to do can eschew a preamplifier (maximum output can be either two or six volts to suit). The Debussy offers two switchable digital filters, offering the choice between linear phase with pre-ringing or non-linear phase without pre-ringing.

Debussy can be locked to an external word clock signal generated by a dCS Master Clock. Experience with the Paganini is such that this should produce a considerable sonic improvement, with an increase in clarity and resolution. The unit can also be periodically upgraded with software updates, loaded from a dCS update disc or connected computer; this is to allow the unit to add new features and adapt to changes in digital formats. The Debussy is also said to have got improved power supplies for lower running temperature and increased tolerance to AC supply variations.

For me, the new casework is a major highlight. The all aluminium casing is large enough to house the umpteen chips inside (the Ring DAC demands this), but far smaller (at 445x392x65mm) than the Paganini, meaning it will sit in your system in a less imposing and more spouse-friendly way. The rear panel sports a switch for 2V RMS or 6V RMS output levels, and sports one stereo pair of male balanced XLRs, and one pair of RCA phono stages, in addition to the aforementioned digital inputs, plus an IEC mains in.

SOUND QUALITY

There's no mistaking the sound of the dCS Ring DAC, and I mean that in a wholly positive sense. There's an innate smoothness to the sound that some might even conflate with dullness. That one could even be talking about 'dullness' with digital is amazing, but there you go; the dCS Ring DAC is a tonally full and unerringly even sounding device that simply doesn't have the laser-etched-into-glass midband that almost every other DAC working at 16bit/44.1kHz has. You can feed it a bright, bracing mid eighties recording such as Sly and Robbie's 'Language Barrier', packed as it is with mid eighties digital synths and drum machines, plus lots of percussive banging and crashing from Messrs Dunbar and Shakespeare, and *not* find yourself jumping behind the sofa before the first four bar phrase is through. With, shall we say, well lit loudspeakers such as my Yamaha NS1000Ms, I never failed to appreciate the dCS's even handed nature.

'Bass and Trouble', a slightly derivative (well, if you've ever heard Herbie Hancock's 'Rock it', which came five years before) but nevertheless bracing slice of electro-funk with heavy, Kraftwerk-style drum machine sequences and Art of Noise-style sampling came over in a captivating way. The Debussy furnished me with vast amounts of detail, mining great seams of music from the digital datastream and stringing it together in a captivating way. It's fair to say that this isn't the most obviously euphonic DAC; it lacks the out and out zest of the classic Philips 16bit designs, for example, but more than makes up for it with a smoothness, incision and even-handedness that is simply on another level. Rather than editorialising, the dCS just gets down and reads the original script, so to speak.

Maintaining an eighties vibe, The Smiths' 'Some Girls are Bigger than Others' proved an unexpected pleasure. The album from which this is taken, 'The Queen is Dead' proved a big disappointment in terms of sonics when it first came out on vinyl in 1986. As my system's got better, it's one of those albums that's almost blossomed before my very ears, requiring seriously high end turntable/arm/cartridge combination to unlock properly. CD, generally, has been a chore, but via the dCS the track duly took off, the DAC conjuring up a wide recorded acoustic with an almost ethereal quality to Morrissey's vocals, which I've only previously experienced via Lyra, Koetsu or Supex-aspirated LP playback. The dCS times extremely well indeed, whilst not overtly giving the impression of so doing; it doesn't sound quite as nimble as, say, the Naim DAC, but it's simply the sound of it not trying so hard to keep up. It's a hoary old hi-fi cliche, but there something of the whiff of high speed open reel tape about the dCS, such is

its relaxed assuredness.

Tonally, whilst not quite warm, it's certainly on the Baileys Irish Cream side of the argument, as opposed to the dry white wine that most rival digital convertors are characterised by. Once again this was a joy with my particular combination of partnering ancillaries, but I can see that with duller loudspeakers and/or amplifiers, it might sound a little less propulsive than it really is. For example, T.Rex's 'Get It On' lacks a degree of raunch to guitar sounds that others imbue it with, yet still the dCS rocks to the beat and works on the beautiful string accompaniments more; in short it gives a more '360 degree' aspect to the song, rather than locking its laser on any eye-catching midband antics. The full, insistent bass was most welcome on early T.Rex material; it's hardly full bandwidth and via many digital sources it doesn't sound much different to AM radio. Happily via the Debussy, it was accorded a full tonality and an expansive soundstage, making it all the more satisfying, if possibly less catchy on a superficial level.

One album that personifies the dCS's sound is Simple Minds' 'New Gold Dream'; the title track is a deep, recessed *melange* of sound that works on subtle repetition and gentle but hypnotic rhythms. This isn't about musicians grandstanding or showboating, it's a glorious indulgence of multilayered sounds. Via the Debussy it was a joy; huge crashing synth pads, powerful, warm, insistent bass guitar, way spacey vocals bathed in reverb. A kind of 'new romantic prog' album (if such a thing could ever exist), there are few DACs I know that could capture the glory of this piece of early eighties pop/rock - aside from dCS's other DACs which I know to sound just a fraction clearer and more detailed, albeit for considerably higher outlay I should add.

Via the USB input, I had my MacBook Pro outputting hi res Beatles with great results; a proper USB connection such as this gives little away to a DVD-Audio player feeding the Debussy by its AES inputs. There's a wonderful clarity to the proceedings, and the ease and 'out of the box' imaging you'd expect from proper digital, along with that complete absence of upper midband grain that you suffer in silence with from Red Book 16/44. But that's not to say it's super smooth and/or euphonic; there's still a stark clarity to both the format and the dCS DAC that – Lyra Titan i via an SME Series V aside – doesn't exist in the parallel universe of analogue vinyl. The beauty of the dCS is, of course, that as new formats come so this can be firmware upgraded to take them, so the line is not drawn in the sand at 24/192.

CONCLUSION

Highly impressive as it is playing hi res, and/or via computer sources, the dCS Debussy stands or falls on its 16/44 playback, which of course forms the vast majority of most people's digital diet. Here this digital convertor really shines, turning in a wide and well ordered soundstage, fine dynamics, oodles of detail, and rich and full bass and silky treble. On top of all this is an easy rhythmic quality that does nothing except promote enjoyment of the music. There are some other designs I've heard which give a more seat of the pants presentation, and make things sound apparently more engrossing, but still I'd come back to the dCS Ring DAC given the choice. The Debussy is one of my favourite incarnations of this to date; it's more affordable, beautifully styled and built, and sports almost all the features you'd want in a real world situation. Its bigger brothers are terribly impressive in their way, but I'd say the Debussy is all *most* people would ever really need. If you've got the requisite amount of money and are on the lookout for such a product, you really must hear this.

REFERENCE SYSTEM
Sony CDP-R1 CD transport
Apple MacBook Pro notebook computer
Musical Fidelity AMS35i integrated amplifier
Yamaha NS1000M loudspeakers

MEASURED PERFORMANCE

Our analysis shows the Debussy has a perfectly flat in-band audio response with both 44.1kHz and 48kHz sample rate signals, and this remained so when the Filter was switched in; the in-band audio response did not change at all. This result applies to both balanced (XLR) and unbalanced (phono socket) outputs.

Distortion levels were low from maximum output down to the lowest levels, the illustrative -60dB figure being a low 0.20% with a 16bit signal and just 0.11% with a 24bit signal from our Rohde & Schwarz digital signal generator, using 1LSB of Gaussian dither to ensure good conversion linearity (this makes very little difference at -60dB).

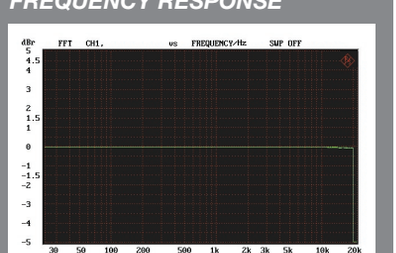
Output from the XLRs with a small rear panel switch set to 6V (maximum) was a true 6V; Philips standard 2V is an option.

EIAJ Dynamic Range was very high at 100dB, due to excellent -60dB linearity and good suppression of higher frequency quantisation products.

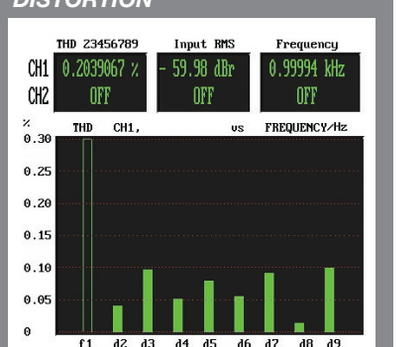
The Debussy measured very well in every area and will likely give excellent sound quality. NK

Frequency response (-1dB)	
CD	**5Hz-19.5kHz**
Distortion (%)	
0dB	**0.0003**
-6dB	**0.0005**
-60dB	**0.20**
-80dB	**4.7**
Separation (1kHz)	**-115dB**
Noise (IEC A)	**-114dB**
Dynamic range	**100dB**
Output	**6V**

FREQUENCY RESPONSE



DISTORTION



HI-FI WORLD

VERDICT

Compact, stylish package bringing the smooth, svelte, spacious sound of dCS to a wider audience.

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FOR
- tonal smoothness
- atmospheric space
- pleasing musicality
- design, engineering, build

AGAINST
- no optical input