Pure love

Followers of fashion know that DAC/preamps are all the rage, and with the PureDAC, it’s justifiably so, says David Price

here’s more to life than hill you know, and indeed many consumers are it is beginning to think the least of you have, the better. This is hereditary stuff to those who grew up during the seventies and eighties, when we were taught that if it didn’t come in separate boxes, it simply couldn’t be any good. Now, though, suddenly there are all sorts of possibilities presenting themselves. The Scandinavians are an example of this is the DAC/preamp. It’s a sort of Sports Utility Vehicle of the hi-fi world, promising to do lots of important things very well, without you needing to own the component parts. This is what I had thought B.M.C.’s new PureDAC to be, but the company claims it is more than this, and uses a host of proprietary technologies to make an unusually sophisticated host of proprietary technologies to make an unusually sophisticated

made calls it a ‘digital analogue power converter’ no less – something that integrates all analogue functions into an extremely dense signal path while performing each single function better than the traditional way. “Virtually losses” digital conversion is achieved by the company’s proprietary Current Injection circuitry, and there’s passive sample noise filtering and a special Digital Intelligent Gain Management system. As far as the end user is concerned, it still presents itself as a multi-source DAC and headphone amp with a (digital) preamplifier thrown in. The showroom appeal is further heightened by the low price and swish build quality. The backlit acrylic on its fascia stands for Balanced Music Concept. It’s a pretty striking-looking thing, and not one with a compact mass. At 18cm high by 28cm wide by 8cm deep, it comes from high-quality aluminium extrusions that have been specially anodised to give a luxurious, silky feel. The satiny styling conforms additional status on the product, but B.M.C., says the central curative also functions as a well for reducing resonance in the casing. Power it up and the mirror section of the front panel lights up like a Honda Civic dashboard. Bright white LED light issues from behind, labelling all the control buttons for you and displaying the digital source selected and the sampling rate used. The worst part is the slightly fiddly buttons, which aren’t the easiest to use. It’s very tidy inside too, with a decently sized toroidal transformer rigidly bolted onto the lower case extension. Digital audio, logic, analogue audio and headphone driver stages all have their own separate power feeds, and inside the sections there is further electronic separation for important functional groups like master-clock, DAC and USB. Special balanced current capacitors are used for their low-impedance characteristics, and are said to have an absolutely symmetrical charge and discharge pattern. Low inductance automotive fuse panels and film bypasses are featured everywhere in the circuitry. Next to the transformer sits the control PCB, which interfaces with the front panel displays and switching, and behind is the main board, much of which is taken up by power supply components. The balanced preamplifier section is said to be properly integrated with the DAC’s current-to-voltage converter, which converts and filters the DAC’s current, eliminating the need for an extra stage. The DAC fitted is an ESS Sabre 9016, used because it covers all standards including DSD64, DSD128 and up to 32-bit, 384kHz PCM via the USB input. The S/PDIF inputs are limited to 24/96. An important part of the package is the headphone amplifier, which is claimed to deliver high current (the balanced output is said to be close to 0ohms!). B.M.C. cites

headphones with strong motors, like Beyers Dynamis Tesla series or Fostex’s TH900” as being especially fulfilling. Speaking of plugging things in, round the back you get AES/EBU, Toslink, coaxial and USB digital inputs, while a pair of balanced XLR and unbalanced RCA send the music out. There are also special link sockets for connecting with other members of its family.

Sound quality

I have no experience of any past designs, but the PureDAC doesn’t take long to tell me it has been very well thought through. I start listening using it purely as a DAC, into an integrated amplifier, just to gauge its merits, and am more than a little surprised to hear it cope with one of my favourite torture tracks – REM’s Life And How to Live it – without breaking into a sweat. Frankly this CD is hard work even via a really good CD player; the vinyl version is a lot more listenable. But the PureDAC isn’t fazed, and delivers an even, open and enjoyable rendition. That’s going some for any Hi-Fi DAC converter, so horrible is this digital disc; Joe Boyd’s parrotical production (think the opposite of Dune Dunes’s lush soundscapes) full of ringing Rickenbackers isn’t easy to get right. But the song bounces along; tonal balance and the piñering guitar work doesn’t grate as much as feared. Meanwhile, singer Michael Stripe grumbles through the track in his familiarly, the PureDAC conveying those gravelly vocals clearly and cleanly. Rhythmically, things ramp up, and I get a fine sense of the micro dynamics of the song, the subtle accents that make it so much more involving. All of which tells me that the PureDAC is a clean, open and even-sounding device, and that’s particularly strong on low-level detail.

Switching to full-blown preamplifier duties, I am even more encouraged. Driving either good solid-state or tube amplification, it doesn’t let itself down when substituted for the superb MF Audio Passive preamplifiers. Fed digits by an Esoteric CD transport, it makes light work of Randy Crawford’s You Might Need Somebody. A warm and bready but powerful Tommy LiPuma production, the PureDAC really gets into the swing of things. Vocals have an admirable purity of tone, but are still carried with emotion and passion. Backing brass stabs and electric guitar again have excellent texture, coming over as real, believable instruments with realistic timbre. At the same time, things move along well in rhythmic terms, the song getting a sense of its own swing. The DSD DAC is used, and with an extra stage. The DAC

The PureDAC doesn’t take long to tell me it has been very well thought through
Q&A

Karl Smith
Director Colab Audio

DP: Where does the PureDAC sit in the great scheme of things?
KS: Our Pureline currently includes PureDAC and PureVox speakers, while the PureAmp will be released at Munich and a Pureline media server will be on dem there too. A phono stage will also come soon. Basically, it’s the affordable entry point to the brand designed for budget conscious audiophiles. We also have a high-end range that includes the DAC1 DAC/PREamp, MCCi phono stage, CS2 integrated amp, MD monoblocks, BDCPi belt drive CD player/transport and Arcadia loudspeaker. This is complimented by special mono crystal interconnects, phono cables and speaker cables.

What is Digital Intelligent Gain Management system?
A traditional analogue volume control divides a good DAC output signal to a fraction of its original value, adding gain twice afterwards (pre and power amp). DIgM is a new and definitely better approach. The PureDAC changes the gain, or to be more precise, the conversion factor of the I/V converter resulting in a variable signal output level. When the volume is reduced with DIgM, the noise, distortion and stability improve. DIgM is digitally controlled, but works on the analogue domain only. Combining the PureDAC with a amplifier extends the gain management advantages by letting the PureDAC manage the amp’s gain to an optimum combination. Volume control with DIgM improves the overall sound instead of downgrading it.

What is Current Injection?
Current Injection (CI) absorbs a source signal current (eg DAC output) and routes the original current in a way that the output voltage is made from the original and so virtually lossless. Any op-amp or standard feedback amp replaces the original signal by a copy. We consider it natural to keep the number of copies as low as possible for preserving quality. When the PureDAC combines with an amp, the amplifier’s gain stage is replaced by a CI stage, which clearly improves the sound quality.

Conclusion
One of the ancient hi-fi laws laid down way back in the mists of time – probably somewhere around the seventies – is that sound quality stands in inverse proportion to style or functionality. Well, products like this confound such notions – here’s a lovingly built, stylishly presented device with a wide range of inputs and facilities, it costs surprisingly little for what it has got, and sounds superb. Indeed, any suspicions that you might be harbouring that the PureDAC is ‘all show and no go’ will be quickly dispelled when you plug one in and give it a listen. Its evenness of tone and general across-the-board competence is such that it should appeal to lovers of many types of music, running a wide variety of systems, too. Who says that you can’t always get what you want?

WE SAY:

- Open, powerful, detailed sound;
- Features; styling; build;
- Buttons a little fiddly;
- Excellent sounding; versatile DAC/preamp that’s fantastic value for money.

OVERALL

REPRINTED FROM HifiChoice