MÉTRONOME

TEST & REVIEW

DSC mini

Digital to Analogue Converter



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Métronome Technologie is a Toulouse-based company founded in 1987 by Dominique Giner. It has earned an enviable reputation in the ultra-high-end market with its Kalista series. With the DSC mini converter, Métronome Technologie enters a new era, opening the French manufacturer's advanced technology to a wider audience of music lovers at a more accessible price.

Description

Designed to be paired with DDS 2 streaming transport (€4,590) via an I2S (HDMI) link, DSC mini is compatible with any device fitted with a coaxial S/PDIF, AES/EBU, Toslink optical or USB output.

It features the ESS Sabre ES9038PRO conversion chip and incorporates the most advanced management systems.

The HDMI I2S, S/PDIF, AES/EBU and USB inputs accept PCM and DSD signals from 44.1 to 384 kHz/32-bit. The Toslink optical input is limited to 44.1–192 kHz/32-bit. Via the USB port, it decodes native DSD up to DSD512 and all PCM files up to 32-bit/384 kHz, and supports the MQA codec.

It offers two types of analogue output: unbalanced on RCA connectors (3 V RMS at 0 dB – 100 kOhms) and balanced on XLR connectors (3 V RMS at 0 dB – 150 Ohms).

Its 3.5-inch display, with a resolution of 320 x 240 pixels, shows all relevant information clearly and legibly. It lets you switch inputs and displays the sampling rate of the track currently playing. Brightness can be adjusted across five levels, and the display can also be switched off. DSC mini's chassis is machined from solid aluminium and is available in two finishes: black and silver.

Listening

We tested the DSC mini with a Sony transport connected optically (Toslink) and the Naim Audio ND5 XS 2 streamer connected via coaxial (S/PDIF). Interconnect duties were handled by a Naim Audio Hi-Line cable. We also connected the Grimm Audio MU1 network player, which we had in for review, first to the S/PDIF input and then to the AES/EBU input, notably for playing high-res files. We did not test the I2S (HDMI) input or the USB-B (computer) input.

The DSC mini is of course designed to deliver the best musical experience with high-resolution files, and we made the most of them. But since the vast majority of albums are released at 16-bit/44.1 kHz, we carried out most of our listening in that format — hence the photo at the top of this article. What struck us first was the fluidity of the music, which the DSC mini handles masterfully. The sometimes clinical definition of digital gave way to a

definition full of finesse and suppleness. We never noticed any tension, whether in tutti passages or crescendos. I am quite willing to believe that the ESS Sabre ES9038PRO conversion chip contributed to the success of this sonic signature, but I am deeply convinced that the power supply design and the analogue components inside the Métronome played an essential role in the density and soundstage the DSC mini delivers.

So we put the question to Jean-Marie Clauzel, Managing Partner at Métronome, who put us in touch with Cyril Monestier, head of the design office. Here, in brief, is what they told us:

“Despite the DSC mini’s compact footprint, the converter’s electronic architecture is built around nine fully independent regulation stages.

The regulators used are of very high quality, with operating precision and stability close to the microvolt. But their main strength lies in their extremely low ‘noise’ — which could also be described as ‘electrical pollution’ (Ultra-Low-Noise, High-PSRR LDO voltage regulators). These regulators are, of course, paired with dedicated capacitors placed as close as possible to each circuit, to guarantee the quality and stability of all the DC voltages, which are highly sensitive to interference.

Upstream of all the regulation stages, we use two resin-encapsulated toroidal transformers offering very low losses (98% energy efficiency, meaning very little heat) and high performance.

The first transformer powers all the digital electronics.

The second is used exclusively to power the (ultra-high-quality) operational amplifiers in the analogue output stages, as well as those performing the current-to-voltage (I/V) conversion at the converter’s output.

In the analogue stage, we use a dual pair of op-amps to convert the positive and negative outputs of the left and right channels coming from the DAC — which, as a reminder, are current outputs — into voltage outputs. Why a dual pair? Because we use one circuit per channel, and each circuit consists of two independent op-amps. The quality of the op-amps we have selected gives rise to exceptional analogue performance, both in the breadth of the frequency spectrum reproduced and in the air between notes, instrument placement, soundstage depth and the fluidity of frequency transitions…

What this fundamentally translates into is an unrivalled analogue sound — the very hallmark of our craft.”

Indeed, this converter’s superiority lies in its ability to deliver a very natural sound, often described as analogue, as opposed to digital sound, which is wrongly portrayed today as cold and artificial. The voice test is proof enough for me — provided, of course, that you have heard the voice in real life and not through the filter of a pair of speakers or headphones. On this front, the DSC mini proved astonishingly realistic. When technology serves the music, the result is a device of this calibre.

Conclusion

The Métronome DSC mini is not only a high-calibre, versatile and compact D/A converter: thanks to its features, it is also the ideal partner for the Métronome DSS 2 network player or the Métronome Le Streamer, just as it is for any other brand's server or streamer, which it will elevate through the excellence of its circuitry.

Highly musical and highly recommended.