

Metronome Technologie DSc1



The Metronome Technology DSc1, standing for Digital Sharing Converter 1, is today the top-of-the-range offer from the French manufacturer for DAC with embedded network player and streamer.

Digital Sharing means that this DAC can connect to different digital sources, whether fixed or mobile, in short a solution to meet all the requirements of a family. Do not imagine taking the DSc1 under the arm to boost the performance of your walkman or smartphone in nomadic mode. The device is bulky and makes its weight!

He also has a hell of a mouth this DSc1. The aesthetic considerations are not necessarily shared by all but this simple and massive design resembling a computer bay I like a lot. The massive aluminum modular cabinet without any visible screws is both original and elegant!

The sobriety also extends to the functions available on the front panel: a switch, two buttons for selecting digital inputs, and a display intensity adjustment button. Regarding the available information, the DSc1 reports the digital input based on the file type (PCM or DSD) and the output sampling rate. It's finally quite spartan but we go to the essential.



What is surprising at first glance is that you can not select the Ethernet input from the front panel controls.

Indeed, we navigate between the two spdif cinch, optical input, USB input and AES-EBU without ever being able to select the Ethernet. You have to actually declare the Metronome streamer as a renderer on your network so that a new entry called "Digital Sharing" will appear on the DSc1 display.

Phew, this causes a little trial and error at first but the advantage is to have an instant feedback on the state of your home network. Indeed, if it fell for some reason, the Ethernet input disappears from the possible options.

Many readers give no information about their recognition by the home computer network. In the case of the Metronome, it's clear and we know where to put our hands in case of unavailability ... But back to the description of DSc1.

At the back, there is an RJ45 network jack and a USB-B socket, dedicated to dematerialization.

For traditional digital transport needs, there is a Toslink optical input, two 75-ohm SPDIFs and a 110-ohm AES / EBU.

No voltage difference between RCA and XLR outputs, both output 3 V with relative impedances of 47 Kohms asymmetrical and 600 ohms symmetrical.

Inside the case, the conversion stage uses two AKM 4497 chips (one per channel). Regarding the power supply, we find the famous Talema transformers followed by 10 lines of regulation, then filtered by a bank of 93 ultra fast capacitors of 1000 uf / 25 V and three Kendall more consistent of 33000 uf.

As usual, Metronome Technology has taken great care in its diet with a star mass plan. The output stage is also very neat with the 4 amps polarized class A allowing a symmetrical output.



On the performance side, the DSc1 Metronome Technology decodes native DSD up to 22.4 MHz (DSD 512) as well as all PCM files up to a maximum resolution of 32 bits / 384 kHz. Compatible with AirPlay and DLNA, no particular problem to go to draw in his favorite libraries dematerialized.

The CDMCM-2121R embedded network card is of Korean origin, that of Convers Digital (which also developed the mConnect player). The choice fell on this card to preserve the compatibility with Roon. Nevertheless the flip side is that it best manages the DSD in i2s in DoP format and exclusively for the DSD64.

Metronome Technology has implemented it even more restrictively since it converts the native DSD64 stream in this configuration to PCM 88.2 kHz ... But the card remains originally PCM managing a range almost restricted nowadays since it is limited at a maximum resolution of 24bit / 192KHz. Also note that I did not manage to read the AIFF files via the network card (but no problem on the other hand via the USB input), without I can diagnose the origin of the problem.

This network adapter must be fully compatible with the mConnect application and the integration of all major online streaming and audio file management platforms such as Spotify, Deezer, Tidal, Qobuz or Roon. It is also compatible with the MQA format.

The only way to use your DSD library to the best of its ability is to use the DSc1 USB input that will handle the native DSD stream. This is a shame for a network drive and a device of this price, because it must then add a DSD transport with USB output to the initial investment already substantial, unless you have a computer sufficiently optimized for audio so as not to lower the resolution level of the Metronome DAC.



The modular layout of the motherboards, D / A conversion, and network playback, however, allows the device to evolve. It is therefore reasonable to expect the manufacturer to be able to make a long-term change to its network reading card in order to insert a more versatile OEM card, just like the models available on the Swiss Engineered Ltd catalog.

The output stage is polarized in class A as usual at Metronome Technologie. The manufacturer did not consider it useful to leave a choice of digital filters accessible to the user and only one was therefore retained in the implementation of the AKM 4497 chips among the 6 available algorithms. It would have a very slight hump in the mid-high frequency band (+0.6 dB according to Paul Miller), and attenuation in the high frequencies of 1.2 dB at 20 kHz and -5 dB at 45 kHz (for a 96 kHz file).

The features provided by the manufacturer bode well for leading performance with a dynamic capacity of 475 dB / and a signal-to-noise ratio of -140 dB. The bandwidth at +/- 0.1 dB ranges from 10 Hz to 20 kHz. Dynamic capacity is given for 140 dB.

The measurements made by our colleague HiFi News complete the manufacturer data with a THD of 0.0002% at 1kHz / -10dBFs on the USB input and 0.0005% on the S / PDIF inputs. Overall, the USB input is the best in terms of jitter and distortion.

Listening impressions:

I mainly tested the DSc1 on its USB and Ethernet, as well as more incidentally on its S / PDIF inputs.

The performance in terms of reading is excellent if we ignore the DSD automatically reformatted PCM 88.2 kHz.

The USB input actually seems to be the quietest of the DAC inputs and allowed me to evaluate the Metronome converter from a Lumin transport (U1 or X1) compared to my Audiomat Maestro 3 Reference DAC or the Denafrips Terminator in its latest version of DSP.

I was also able to compare the DSc1 as a network drive only on a collection of PCM recordings with the Maestro 3 Reference and the Lumin X1.

I will only be hinting at my memories of the DAC C8 + as they are starting to date. But let's say that the DSc1 seems to offer an even more detailed and better stamped restitution. The fact of not having this duality between transistor output stage and tube stage also seems to me more rational: the DSc1 goes straight to the point, namely to offer the most natural reproduction of recordings.

I started using the Lumin U1 by alternating its USB output between the digital input of the DSc1 and that of the Maestro 3.

Between the two devices that use each of the AKM conversion chips, there is still clearly the difference between the different generations of chips and the differences related to the sophistication of the power supply.

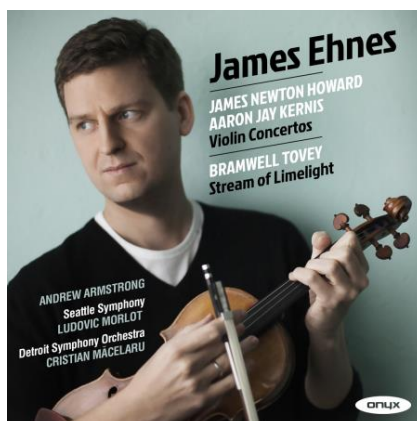
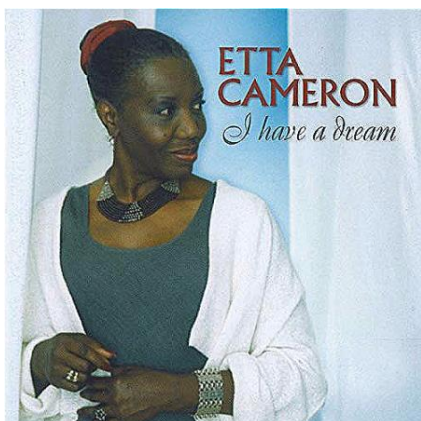
The DSc1 offers a more refined rendering, also calmer than the Maestro 3 Reference, which seems more extroverted and more approximate overall, a consequence of a lower level of definition compared



to the Metronome. The softness and the great tonal variety that emerge from the DAC Metronome are particularly pleasant. This does not make it a DAC too clinical presentation and lacking relief. No, it's the natural way to listen to the DSc1, a natural good without artifact or small coquetry that could forge a sound signature ...

I then replaced the DAC Audiomat with one of the latest in the high-end market: the Denafrips Terminator.

It is a product much more different from the DSc1 than my Maestro 3 Reference is. It does not carry a network card, it is a scaled DAC (R2R) and is significantly more affordable financially than the metronome.



Listening to "What a wonderful world" played by Etta Cameron, the voice seems more serious with the Terminator while it seems more natural and articulated with the DSc1. More room details and more reverb are perceived with the Metronome. It seems that all the small nuances of micro-dynamics stand out more clearly.

On the recent album of the violinist James Ehnes playing the concertos of James Newton Howard and Aaron Jay Kernis, the Metronome Technology shows more dynamics and finesse, with a scene a little deeper than that encamped by the high-end DAC of Denafrips.

On the first track of this album, the violins behind the soloist stand out with a precision and a rather new naturalness with the DSc1, the Terminator also offering a good level of definition (even excellent in fact), but with less natural and a balance tonal a little more gray.

Turning to rock with the soundtrack of "A Star is born", the Terminator reveals its muscles. The introductory piece "Black eyes" gives the impression of obtaining a slightly duller result than the Metronome DSc1, the voice of Bradley Cooper having more body, the guitars being a little less incisive.

But it's the bass and the energy that take the advantage with the Terminator. It's more muscular, less smoothed than with the DAC Metronome Technology.

On "Maybe It's time", Cooper's voice is more nasal with the DSc1 while the Terminator makes it slightly more serious and sweet.

If the bass has more presence and impact with the Terminator, the energy in the high end is nevertheless in favor of the DAC Metronome Technology. But on pop or rock, and although the two DAC is really a very good level, the Denafrips wins with a short head because it is still a bit less polite, or a little more addictive that the DSc1 whose restitution focuses more on clarity and analysis.

But the gap between the two converters is really not huge on this type of music.



Last comparison between these two contenders, and we return to classical music with the concerto by Poulenc for two pianos (Argerich, "Lugano concertos").

The DSc1 still provides a little more detail and tutti bring out more nuances, with wind instruments that are not completely drowned by the bass or the timpani.

By using my Lumin X1 on its USB output to resample tracks in DSD128, the Metronome Technology offers a sound quality rarely achieved. It is also quite convincing with the Denafrips, especially when upsample in OS mode (abandoning actually the upsampling of the Lumin).

But what we deliver the DSc1 with the Lumin X1, confined to the role of simple digital transport, is simply outstanding.



Replacing the Terminator with the Audiomat Maestro 3 Reference, and returning to the Violin Concerto by Aaron Jay Kernis, the Maestro 3 Reference reveals skills to infuse life and densify the melodic line of the violin, something that the other two devices do not have. had not really demonstrated, or at least not in such proportions.

The Audiomat has indeed a sound stage and a dynamic superior to the Denafrips as well as Metronome Technology.

The vibrato of James Ehnes is much more intense. It was necessary to very finely adjust the volume of my SPEC H-VC5 controller to equalize the balanced output levels of the two DACs.

The Audiomat has a rather high output level, but is not so far away from the Metronome Technology that I suspect to be slightly above the advertised 3V on its balanced outputs. Like the Metronome Technology, the other French competitor has a slightly higher output level than the Terminator.

The Maestro 3 Reference is probably the most romantic of the three converters, while the Metronome would be the most natural and defined, while the Terminator would be the most analytical.

Listening to Bradley Cooper on the track "Black eyes" or "Maybe It's time" of the duet album with Lady Gaga, the Maestro 3 Reference seems more extroverted than the DSc1. It is not as brutal as the

Terminator but it develops a very large stereo image, while it is a little more restricted in the DAC Metronome Technology but on the other hand more structured and focused. No doubt the big transformers selected by Denis Clarisse allow to give a little more amplitude to the sound stage.

On "What a wonderful world", while the Maestro 3 Reference seems to simplify the message, placing it in a luminous halo certainly pleasant but losing a little resolution, the DSc1 brings a more natural shine to the voice of the singer Bahamian-Danish, with a medium less swollen and saturated, but nevertheless more nuanced and textured.

Martha Argerich raises against my predictions the Maestro 3 in the race for precision, with a very playful and stamped restitution. On this live recording, the fiery side of the Maestro 3 Reference allows you to go beyond the more relaxed and rigorous side of the DAC Metronome Technology.

The Lumin X1 used as a built-in player immersed me in a darker climate. The latest developments in high-end AKM DACs seem to further differentiate them from Saber ESS chips.

Question of taste, preferably tonal? Perhaps, but we must recognize that the clarity is on the side of the DSc1 while the dark side of the force is rather at the door standard of the Hong Kong manufacturer.

Association question? No doubt, too. But the price difference between the two devices seems to respect a certain hierarchy in terms of benefits. It must nevertheless be considered that the transport part used in this comparison remained the same, namely that of the Lumin X1, which still considerably increases the cost of DSc1 ...

Listening to the third and final movement of Aaron Jay Kernis's concerto, the orchestra's tutti are much more comfortable on the DSc1 than with the DAC section of the X1. The quality of the timbres is also in favor of the DSc1, while the accuracy and stability of the stereo image are almost identical on both converter sections.



Francis Poulenc's Concerto for two pianos also goes in the same direction, with an identical result in terms of the quality of the sound image, with a fairly clear advantage of the DSc1 on the timbres.

And for good reason, the tonal differences between the two pianos stand out much more clearly with the Metronome Technology than with the integrated reader Lumin.

In DSD, the difference is smaller between the two machines, or turns in favor of the Lumin X1 if you operate the DSc1 on its own Ethernet input.

On pop rock music, the hierarchy does not change fundamentally either. But we can prefer an X1 not for its transparency and level of detail but rather for the seating it gives to the voice of Bradley Cooper in the low end, a little like the Denafrips Terminator ...

Conclusion:

The Metronome Technology therefore remains in my opinion a superb converter, very defined and homogeneous in its presentation. It keeps a real supremacy in terms of quality of stamps compared to all competing DACs that I could confront him.

The only downside to this very positive opinion is the network card that does not exploit the potential of DSD files, which is a shame at this price level. Admittedly, the addition is salty, and this device aims to be integrated in very high-end systems.

But the sound performance rivals the best machines on the market, in all price categories, and we know that prices can still reach much higher prices at renowned manufacturers such as DCS, Totaldac or MSB.

It only remains to hope that the subsequent evolutions brought to this reader-converter can raise the performance of the reading card at the converter and what it is able to deliver on its USB input.

For those who have very few DSD files, or those who prefer the use of a computer or an external drive mechanical or dematerialized, then there is really no reserve to issue: it is a device to put on the top of your list.

Joel Chevassus - September 2019

Equipment used for the test bench:

Sources: Esoteric K-03, Lumin U1, Lumin X1, Audiomat Maestro 3 Reference, Denafrips Terminator, Metronome DSc1 Technology, IMac Yosemite Apple OSX / JRiver Media Center 21, MacBook Yosemite OSX.

Amp / Preamps: SPL Volume2, Coincident Technology Statement Line Preamplifier MK2, 2 Luxman M800a (bridged), Lumin M1, Red Dragon S500 x 2, SPEC RPA-W3 EX x 2, Lake People G100.

Speakers: Vivid Audio G1 Spirit, Elipson Planet L, Leedh E2 Glass, Harp Lawrence Audio, Care Orchestra Deep Breath Duetto Edition.

Cables: USB Lumina Spirit, Esprit Lumina S / pdif, Esprit Eterna USB, Skywire 2020 Digital, Natural Live Audio 8 MK2, Grimm Audio TPM, Phi Audio Cables, CST Statement HP + Modulation, ZenWave Audio D4 XLR .

Power cords: LH Audio power strip, Triode Wire Labs 10+, DIY + Phi Audio cords.

(translated from French language by Google Chrome Translator)