Metrum Acoustics Menuet

Non-Oversampling Digital to Analog Converter

REVIEW BY: PARIS KOTSIS

pariskotsis@gmail.com

How important is the source in a sound system? And the driver in a car! Nothing wins a race by itself; it needs balance of power and admirable man-machine cooperation. Previously, during the domination of the turntable, the British passed on the mentality of shit in-shit out to promote their famous plateau (see Linn LP12) with the world of high fidelity treading quietly and regularly, with more and more expensive head amp/moving coil cartridges, sophisticated suspension and arms, to provide a quality signal to amplifiers and speakers of the time.

The CD reversed this situation unexpectedly. It can be blamed for years of "clinical and sterile" digital audio, due to the impressions of the first CD players (with their non-oversampling converters * see addendum) and perhaps has never fully satisfied - with dry treble or ambiguous cue and flow, but this is only half true. The other half is that very high signal-ratios of the optical disc with respect to Vinyl and brutal solid state amplifiers and speakers.

Starting in forums well-hidden weaknesses in the power stages, power supplies, diaphragms, filters etc. perhaps, indeed, lampatoi (valve ?) amplifiers returned ... to save us from "bad digital" in the 90s, contributing to both harmonics and flow ... and the increase of noise in order to restore a temporary balance in our systems .

There was significant intervention admittedly, from the exotic variety of the Valve zero feedback SET, which clearly identified the areas of distortion with push-pull and feedback - key causes in degradation of musicality and threw light on the neglected (for years) area of time domain. The red book has certainly not stopped improving, especially since we chased the subject of jitter but in essence the speakers and our amplifiers are those that show the most dramatic changes in recent 30 years of digital audio sovereignty. Needless to say, the turntable has also benefitted from the developments that have led to the improved CDP audio chain.

Simplicity for Good Timing.

It is no coincidence that today we will talk about a type of converter - "first generation" non oversampling (NOS), a modern incarnation so to speak, of the famous chip TDA1541, which in recent years has gained mythical proportions for musical qualities but become very scarce and on the verge of extinction.

The Dutch Metrum own design NOS DAC with R2R network, not dependent on the old chip of course and targeting better technical behavior but with the philosophy of an unfiltered digital signal without any oversampling remains true to the old. It is a school that values precision in the time domain as with the SET but a little lacking in frequency level to upper treble with 16/44.1 material – as with several other renowned manufacturers (Audio Note, 47Labs etc.) … shortly after the "whirlwind" of upsampling from others, since the start of the new Millenium.

In essence, there began a confrontation between heavily processed digital signals, which although gave ‘air’ also caused more timing and treble problems in transition and the pattern of least possible intervention that represents the school of minimalism. The NOS DAC is now quite a popular category of converter and offers the important advantage of high-resolution files which restores the frequency domain in the upper treble but their weakness is the lack of compatibility with DSD files in native form, as is the current ‘fashion’ of the day.

Of course, there is admittedly a lot of confusion regarding the controversy of PCM vs DSD and indeed it is likely that many of the high-resolution files are simply the product of upsampling and conversion from one format to another. Moreover, the music sold in DSD format (i.e. the DSD files) is minimal and does not allow safe comparison with our Vinyl and CDs, let alone the creation of timely collection of current recordings.

This sounds good on paper but if unable to translate sound as natural instruments with a musical style of play and express complete melodies and rhythms to known and favorite music - like a turntable - or if it is limited to audiophile "exercises", then it is meaningless. Let us not forget that the world, has moved massively - not even aware of Flac and moving increasingly away from a rotating platform ... a DAC therefore, must be judged primarily on the basis of abundant material for standard analysis - followed by Hi-rez material.

In a good system, moreover, the differences between the two are never night and day (bigger difference usually occur in the quality of the recording and production, rather than digital formats) - as many computer audiophiles think today who listen with headphones or with active speakers - where the sound is small and favours small claims in the treble and the absence of body in the middle with severe low dynamic range.

Transient Attack.

The Menuet is the middle DAC from Metrum Acoustics, as part of this new generation based on custom chips (Transient module) of the Dutch manufacturer. The previous generation is still available and uses a "secret" converter, source-enabled management level restricted to 24/192. The new Metrum range can accommodate 384KHz (DXD) thanks to the new NOS converters, naturally achieved through the USB inputs. The Menuet, like the other two models from the company, has a characteristic simplicity in appearance. A number of buttons select the digital inputs, including an AES/EBU and coaxial with BNC and there is a standby button and that's it. Neither display nor headphone level adjustment.

For the money, these deficiencies will certainly discourage many, combined with the inability to play native DSD. On the other hand, the build quality is beyond reproach. Menuet uses four Transient modules (two on each channel), giving a weighted topology thus offering XLR outputs. Each module comprises two 16 bit processing sections, of which 12 bit is used in the most linear position on each section - for a total of 24bit. Sure the 24bit word is divided in the middle, executed by a programmable FPGA chip.

There is of course no treatment involving oversampling or digital filtering but the output operates a very mild analog filter acting to 70KHz, allowing for maximum frequency response to 65KHz with high definition signals. The challenge of course is how it behaves with standard signal analysis and that (measuring overall to give -3dB at 20KHz) is something that one should hear and not assess with specs, after the series of problems that red book exhibits i.e. treble and absence of oversampling. Each NOS DAC manufacturer uses its own techniques to address these problems. For Metrum, in this case, the speed of the new converter is probably the key point for the success of 16/44.1 material.

Focus, Cues and Transition without "Cooking".

The Menuet was examined in two Hi-end systems, an introduction which was connected via Coaxial to a CD Transport and compared with a CD player. Also connected via USB to a computer in a Windows environment in Foobar and compared both with CD player and with a Turntable. In both cases the Players using oversampling and custom digital filters. The Menuet did not hide any surprises from system to system, played in a stable manner in tone and time but made clear the preference for the second system that had the largest sound, the more neutral hues and more analysis.

The middle Metrum generally is a high precision instrument, which will add nothing to your system, leaving music uncoated by anything artificial and "views". Tint, indeed there is a weak character to upper treble with material of standard analysis, in relation to both the CD player and Foobar, where they apply upsampling.

In recordings with plenty of air and upfront detail virtually nothing is missing. In most soft and laid back productions we have a small drop of acidity, however, it is not a deterrent for delight, as the air and the distances between the instruments are excellent with analysis "excess". If we apply to these recordings upsampling from the computer, it becomes obvious that the added acidity is artificial, like a bright aura around the organs without being associated precisely to them. Some people will like and/or will not notice this in their system but it is a deviation from the design philosophy of Menuet.

In no case was any roughness detected or messing of the treble due to the absence of digital filters, none of the tonal curve imposed /blamed on retro equipment, as is the case with other NOS converters. In essence, the Menuet just shows the boundaries of information contained in 16/44.1, which occurs

with absolute timing, i.e. pure, uncompressed flow. "Anything more" comes with its own ambiguity in conventional implementations, either talking about light blur on high frequency transients (which we are accustomed to hearing and only notice when missing), spreading of treble images or anything mischievous, because of natural defects in digital filters.

Instead, the Menuet knows nothing about Blur (a small sound and fuzzy), has top focus under all conditions and extremely detailed texture. It also flows perfectly in an absolutely compact manner with wonderful synchronisation in all areas. Perhaps because it is so straightforward and direct with immediate timing, the deep bass gives an impression of being dry but in essence is more rapid and instant and shows large contrasts, the peaks of which are perceived with the force that we have grown accustomed to with the turntable.

Passing high-resolution material, stimulated a little sense more of scale to the treble and bass but the most significant difference (compared with other conventional converters) is that these recordings make more musical sense, after you lose the flamboyant character in treble frequency areas (mostly with 192KHz) and lose a "glass" shade in the middle that I've learned to expect from files over 96KHz.

Really impressed with a file in 192KHz - ‘Black Coffee’ from Ella Fitzgerald, where I have gained all the vinyl like harmonics and sweetness from the medium, that I also get from my turntable. The relevant experience with the same piece in a DSD file was probably more euphonic with a leading DSD DAC (I've heard more dry with inferior) but not as transparent and detailed in terms of harmonics and rhythm.

The Menuet is a DAC that will clearly appeal to leading class systems and listeners who love Vinyl but are bothered by digital trickery. It will not save mediocre recordings nor caress the ears in the same way that good recordings can. The fact it provides the clear mark of a diaphanous phono stage is neither coincidence nor manipulation but the common result of a process towards the sonic truth, that has merely started from a different starting point.

*Addendum : Sony’s first CD Player actually employed the 1st Non Oversampling D/A chip (just one), whilst Philips, due to their 14 Bit technology of the day, introduced Oversampling technique to their D/A conversion and 1st Player - to compensate for Sony’s 16 Bit technology. Sony thereafter adopted

Oversampling for all subsequent models - as did all other manufacturers for quite some time. CSI

High End News Review systems :

Digital Sources : Gold Note Koala & Marantz CD-7 Players : Line Magnetic 502CA & Wadia Dacs.

Amplifiers : Gold Note S-3 Sig., Audio Technologies VA-60, Jadis & PHOS Line Preamplifier.

Speakers : Ocellia Calliope.30 Sig., Paul W. Klipsch model Klipschorn and ELAC.

Cables & Accessories : Ringmat Developements, Transparent.