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Musette

The beginning : Duo and Quad DAC

It is Autumn 2010 when Cees Ruijtenberg of Metrum Acoustics approached me, because he had just (literally), put together a Digital to Analog converter in his kitchen - according to his own design. At that time, mainstream Audio Media were the eyes and ears for new and daring developments, plus new entrants to the field. I soon made an appointment to try the Duo and Quad DAC's at home. It was the start of a successful series for Metrum - which still keeps going.

It does not take long before the kitchen and Cees, enter into a partnership with an electronics company that takes care of most of the work, enabling Cees more time to return to designing.

From the start he used an Industrial DAC chip, many times faster than the regular DAC chips from manufacturers like Philips, Wolfson, Burr Brown and others. Furthermore Cees holds to the principle of Non-oversampling - going against the (mainstream) current - he does not use upsampling. The primary principle of the R2R ladder DAC remained firmly on the ground. Duo had two DAC chips on board, Quad had four which later developed into the Octave with eight and then sixteen for Hex.

A typical Cees Ruijtenberg design

Transient :

A new R2R converter development called Transient has now been created, designed in-house by Metrum Acoustics and All Engineering. Featuring new circuitry and launched a while ago with the successful Pavane DAC. There are eight such modules put to work, where in each case, two modules can handle a 16 to 24 bit signal, with the data divided by an FPGA - so that all the bits, LSB (Least) and MSB (Most Significant Bits) can be processed, where noise and distortion are almost immeasurable .

The smaller Menuet DAC follows that same principle but the smallest model i.e. Musette must make it without FPGA and uses only one Transient module per channel. Because a Transient module can process only 16 Bits, the Musette does not go as far as its bigger brothers but dither techniques take care of signal/noise levels a little bit, in the DAC itself. Which at the input can still receive 24 Bits of data and be handled correctly, with the notation that a high sample rate is more important than the signal extending beyond 16 Bits.

The Musette has two Coaxial inputs which accept up to 24 Bit 192kHz data, an Optical input to 96 kHz and a USB port that can handle sample rates up to 384 kHz. Two RCA's which equate to a standard 2 Volt output signal. A single toroidal transformer and the common power supply provide the necessary power for the dual mono constructed circuits.

The front of the Musette shows five push buttons for Input choices and On/Standby, the real power switch is on the back. Not that it is really necessary - in truth DAC enthusiasts rarely turn off their digital system. At the most during holiday periods and then with a heavy heart.

The Musette with its compact dimensions of 190 x 60 x 245 mm is a typical Cees Ruijtenberg design, very sturdy casing, black or aluminum-colored front and no unnecessary costs to increase finery. Internally, the boards are made with SMD (surface mount) technology and from experience I know how thorough testing procedures are at All Engineering.

The retail price of 1,250 Euros represents development costs, materials, assembly, testing and delivery, with a margin which ensures that the company will continue to exist and can further develop. Also herein lies the kind of designer who values sustainability and technology - a much higher priority than buying a Porsche or a second home.

As a proud owner of a Metrum Acoustics Pavane DAC, you quickly tend to put aside the tiny Musette. I managed to control myself, because Pavane is four times the price of a Musette and to compare therefore, makes absolutely no sense.

The Musette disappeared in the "small" rig where normally an excellent NAD M51 performs - with a sound enhancing combination comprising a Pass Labs XP-10 Preamp with XA30.5 Power Amplifier taking care of the analog signal. The source is a Blue Sound Node 2, while Harbeth P3ESR speakers stand atop Tonträger stands. Cables are from AudioQuest (Digital), Van den Hul (XLR Analog), Supra (Power cords) and Simply Audio (Speaker cables).

I initially played the Musette with Crystal Cable Piccolo interlinks, which were then replaced by CC Reference and later by CC Ultra because the cables became the limiting factor as it turned out, not the Musette. The Balanced M51 is connected to the XP-10, the unbalanced Musette however, leads to a difference in level at the output of the XP-10. Therefore, the output level of the NAD M51 with the internal

volume -6 dB adapted for a fair comparison. Of course the M51 can also connect via RCA but then I lose my reference and will not get the most out of the DAC.

Music !



Rose : Et Puis Garden (because the Musette to a French dancing layman), it seemed appropriate to begin the review text with Rose (real name is Keren Meloul), a French singer who combines her CD "Et Puis Juin" with simplicity, harmony and joy. The recording is not particularly good but Musette extracts the maximum from the mix to establish the correct height and free up the instruments behind her. Intelligibility is high and with my poor knowledge of the French language, I can follow nevertheless, a little concerning what she is singing about.

More Rose and Sarah ...



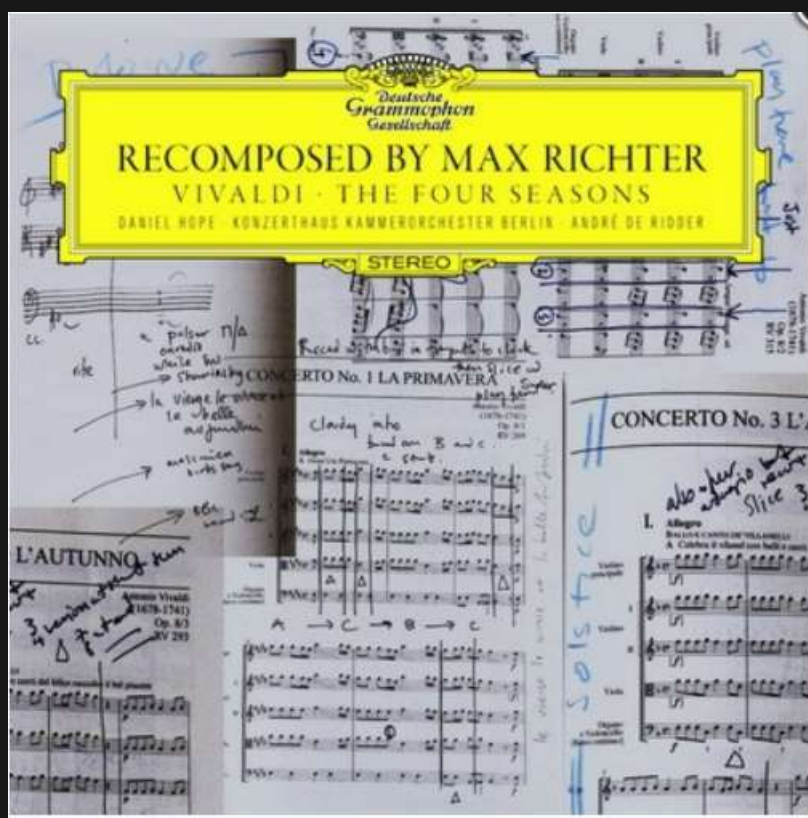
Music flows into the room and is the reason to play her latest CD "Pink Lady". Then I move on to a technically much better recording, by Sarah McKenzie, a lady who comes from the jazz corner. On "That's it, I quit" from her downloaded album "We could be lovers," it is first the bass that steals the show and then a xylophone which fully exploits the spatial properties of the Musette.



Sarah herself is an intimate distance from the listening position and "authenticity" is emphasized. Absolutely not too close, the Musette brings the atmosphere of a small jazz club to you, which is exactly why I so enjoy Sarah. The voice and the instruments appear slightly warmer than the NAD M51, which in comparison has a more barren view.

Sarah McKenzie - We Could be Lovers. A good warm up was necessary, as from cold, Musette will not let you hear the wealth of information out of the box. The Musette is characterless in the proper sense; it seems to add nothing or leave anything out and keeps the right timbre of the instruments. Because of accuracy and the total absence of deformation, it took some time before I was able to estimate the dynamic properties correctly.

As was the case until such time the track "Tight" plays, where Sarah is put to one side, replaced by drums, bass and trumpet. A trumpet blasts and is more than impressive on this recording.



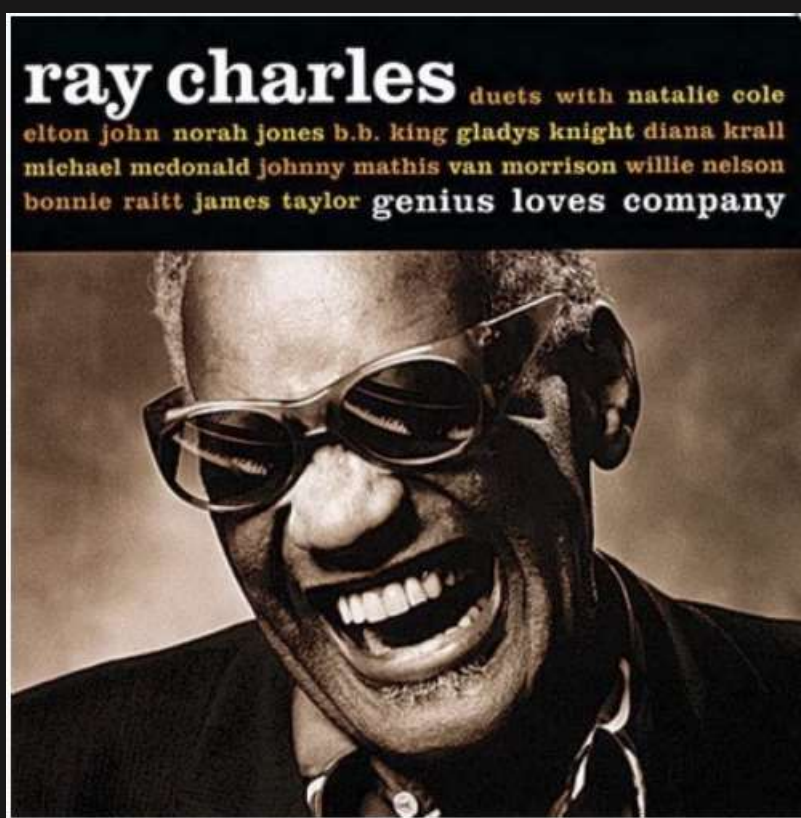
In Munich I listened for the first time at the High End Show, to the "Four Seasons" by Vivaldi but edited by Max Richter and knew straight away I had to purchase this after returning home. Max Richter - Vivaldi The Four Seasons De "Spring" is truly the strangest version I have ever heard. The violins are prominently forward while the bass and other instruments seem to float in the background. On the small Harbeths in my own room, they don't pull out the overwhelming Munich impression that was left in my ears, but I can with the Musette DAC come a long way towards it – but that is to be expected. Tonally it's a picture with the sound of instruments in the lead and breathtaking musical excursions of the original work. Although the performance for me, remains unusual and the listener is always on the back foot.

Totally different - Janine Jansen with her rousing violin can bring about total rapture for me. The same with the Musette DAC - as soon as the sound fills the air. Depth and height is nothing to complain about, the width could go a little further. My NAD DAC does a little better. Differences remain small, no drama, whether positive or negative, a change of interconnects can have a greater impact.



Liebermann

Katherine Bryan - Liebermann concert. It takes great effort to pull me (figuratively, dear reader) away from listening to Janine. But I stay in the classical mood with "Liebermann concertos for flute and orchestra," with flute in the hands of Katherine Bryan. Here again I listen to that huge space in which the flute can make itself completely free from the orchestra. The tension radiating from the music in this way, seems like a fairy tale unfolding before the eyes of the listener. At times when the orchestra sounds powerful, nothing is lost, even in the bass which 9 times out of 10 is the victim in DACs, in or under the Musette price. There was at no time any sharpness, even with all the other music which passed through Musette.



Ray Charles – Duet Music by Ray Charles with Natalie Cole on "Fever," raises things a few degrees. Perhaps the best example to prove the superiority of this DAC, is the timbre of voices - a solid full bass definition plus Natalie Cole who raises every hair on my arms. You would not think Bonnie Raitt could improve on it, and yet she does in "Do I ever cross your mind?". Rhythm, snap, speed, sound, space and beautiful presentation - everything is better together in this setup than other DACs I've heard to date - at both the same price level to twice the price of the Musette.

Epilogue

OK, let me be open and honest and admit that I like the properties Metrum Acoustics DACs exhibit. From the moment I had the Duo and Quad I have tried various famous brands but I keep coming back, time and time again to a Metrum product purchased for personal use. Which like no other DAC's I have formerly owned, want to change - because they all had quality.

However, it is the presentation of the music that fascinates. The accuracy of the performance is due to the creator's love of music, his ears and his technical understanding. A Metrum takes you to the concert, a jazz club, a live performance or street parade. The Musette has these properties to a great extent - inherited from the Transient modules, which are available in the DAC ONE range, from bottom to the top.

Or maybe I will let Musette go, I do not know, my own DAC has a few tricks I can use very well for review work - a single volume, HDMI inputs, Toslink to 192 kHz, plus XLR and RCA out. Purely based on music reproduction, the most important argument, I cannot send the Musette back. A dilemma where I will have to go back to spinning the Ray Charles album "Genius Loves Company" - going to be difficult !

René van Es