

the ear

HI-FI MUSIC GEAR

hardware review



Mola Mola Tambaqui

Thursday November 28, 2019

Jason Kennedy

The Mola Mola or ocean sunfish is quite a substantial beast that can weigh up to a tonne and looks a bit odd. A Tambaqui is a large freshwater fish: clearly something aquatic is afoot. What is also clear is that designer Bruno Putzeys and his colleagues have taken their time in getting this brand and subsequently the Tambaqui DAC to market. Putzeys is the man behind Hypex Ncore, the first decent class D amplifier, and more recently created the Kii Three loudspeaker that blew me away last year, so he has a good track record when it comes to digital audio. The Mola Mola range of electronics is made in Holland and the Tambaqui is the company's first DAC. I asked Putzeys what went into it and got the following response:

"I would have been happy to cobble it together from standard DAC chips etc, if there had been any way it would have checked off my complete shopping list:

- 1) No noise floor modulation.
- 2) Negligible distortion from tiny signal levels up to full output.
- 3) Jitter elimination down to very low frequencies.
- 4) Digital filters with negligible in-band ripple (i.e. no pre-echo).
- 5) Digital filters with moderately slow transition (i.e. reasonably short ring tails).

No DAC chip fulfils the first item in the list and no ASRC does the third (a discrete PLL without SRC conceivably could be built). The remaining three don't seem to occur together in any standard chipset I could find. I was simply forced to take the long way round.

The entire story about how exactly it's done is for geeks, but for me the secret is realising the importance of all five items mentioned above and getting them sorted by whatever means."

Internally the Tambaqui consists of two boards. The first upsamples incoming signals to a huge 32-bit/3.125MHz and converts them to noise-shaped PWM. On the second board each channel is converted to analogue with a 32-stage FIR (Finite Impulse Response) DAC and fourth order filtering I/V conversion, which isn't an R2R ladder or a standard converter but proprietary technology I've not encountered elsewhere.

It has pretty well all the inputs you could want including USB, Ethernet and I²S over HDMI, but output is limited to balanced XLR and two headphone outputs (jack and XLR). The absence of single-ended RCA outputs is an odd omission but the presence of volume control in the output stage means it can be directly connected to a power amplifier. The four buttons on

the front panel relate to the inputs and also act as on/off controls. There is no volume control on the front panel but the supplied 'standard' remote (the lovely aluminium Apple type) allows this, as does the premium handset which I didn't get to try. There is also an app for iOS and Android that provides access to all the functions including line output, headphone output and inputs that can't be accessed from the front panel such as the I²S. The volume level and input are displayed in the round window momentarily, to be replaced by the logo at other times. This fish runs hot by the way, so the presence of an easy access standby state is not merely a convenience.

Sound quality

As my Allegri+ preamp does not have XLR inputs I ran the Tambaqui directly into an ATC P2 power amplifier - a combination that worked extremely well. Using the Ethernet input from an Innuos Zenith SE (using Roon) proved a revealing experience with the DAC showing multiple layers in pretty well any studio recording played through it. It is also very good at reflecting the richness in texture and timbre of acoustic instruments, placing them in a large scale image with a degree of control that's uncommon. Switching to the USB input with a better quality cable (CAD) opened things up further and made instruments sound more realistic. The change in control app required for this: iPeng rather than Roon, meant relinquishing in-app volume control, but the system sounded clearly better with all manner of material including Lana Del Ray's latest offering NFR. Her voice sounded superb in all its close-miked largesse and the rumbling, under-pinning low-end was very nice indeed.



Kurt Vile's 'Dust Bunnies' had excellent depth and added plenty of power and shape to the overall presentation, so I was inspired to try a different (Vertere HB) USB cable. This added more kick to the sound with stronger image definition and greater precision but I found that the CAD cable was more relaxed and better resolved overall. I had a Technics SL-G700 SACD/streamer in the system at the time and wasn't getting the quality of timing I craved from it, so I used an Atlas coax cable to connect to the Tambaqui. This sorted things unequivocally: it seems that Technics have got the streaming side of this product sorted. Adding a decent streamer between a server and a DAC is always beneficial in my experience and so it proved here, bringing focus to the lyrics on Vile's 'Pretty Pimpin' and making them clearer than ever. It also clarified the way that the backing changes as the track progresses, something that isn't normally apparent. Van Morrison's classic track 'Astral Weeks' has a fluency that reveals the true genius of its creation; the timing advantage added by streamer being just enough to make the change from 'sounds good' to 'totally essential'.

I loved the immediacy on ZZ Top's 'Waitin' for the bus', which is replete with detail all the way to the edge of the wide soundstage produced by the Tambaqui for this fabulous tune. I returned to the Technics to solo on the Grateful Dead's 'Cumberland blues': the definitive track for gauging timing capability. The experience was not terribly engaging but adding the Mola Mola to the chain wrought a transformation that revealed this band to be the absolute masters of their art. The way that so many musicians play together on the live version of this song (*Europe '72*) is fabulous to behold. This DAC reveals the vintage of the recording, which is not as polished as other releases of the same era, but has musical qualities that make such factors irrelevant.

I also tried the Tambaqui with an Auralic Aries G1 streamer (via USB) and got equally inspiring results thanks to its ability to present music so coherently no matter how complex the performance. Another live recording, EST's 'Tuesday Wonderland' (*Live in Hamburg*) proved to be a strong performance with surprisingly low noise and plenty of fine detail. It generated



an emotionally powerful experience, inducing some rarely seen 'air' piano in the listening chair thanks to the combination of great playing and great replay.

Foibles encountered include the fact that the Tambaqui seems to respond to remote commands from other handsets, and the coax connection would occasionally drop out for no obvious reason. I would generally recommend USB or AES/EBU connections. The former proved consistently reliable so quite possibly the fault was not with the DAC. It would be useful to have RCA outputs for those without XLR inputs but you can get cables with the appropriate connections, and after a little hunting I found a vintage example from Marantz and used that to tremendously enjoyable effect.

The Mola Mola Tambaqui is an unconventional DAC in both its technology and functionality but it's user friendly and with a good source can reproduce the very fine detail, the dynamics and the emotional impact of the music. It deserves to be compared with converters at rather higher prices because it delves deep into each recording and reveals so much detail in a highly coherent manner. Imaging and timing are in the premier league and I dare say that with a similarly priced source it would reach even higher standards. Let's hope Bruno builds a streamer to match, but what to call it, Chub or Dace?

