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# Metronome Technologie Kalista Ultimate Sig./Nausicaa

With its avant-garde styling and immaculate build quality, this French made CD transport/DAC combination is the epitome of high-end audio exotica  
Review: **John Bamford** Lab: **Paul Miller**

If you could have the best and most extravagantly crafted CD player of your dreams what might you plump for? Ignoring vintage collectors' items, there remain several go-for-broke designs dedicated solely to high-end CD replay from specialist manufacturers. But which would you choose if you had to cherry pick just one of them?

Ask Ricardo Franassovici, proprietor of the UK's premier high-end audio distributor Absolute Sounds, to choose his favourite and without hesitation he'd opt for the Kalista CD transport with its outboard Elektra power supply, from French boutique manufacturer Metronome Technologie.

Metronome's flagship Kalista and slightly less expensive Calypso designs take the 'art of audio engineering' to the *n*th degree, employing Philips' CDM12 Pro 2 v6.8 CD mechanisms which the company modifies in-house, built into elaborately-sculpted chassis formed of acrylic, aluminium and stainless steel that look a million dollars. The Kalista transport is a manual top-loader, the silver disc held in place with a plexiglass/stainless steel clamp. An acrylic dust cover is provided to protect the laser pickup when not in use.

## SONG OF THE SIREN

At the Munich High End show last May the company introduced a new flagship DAC designed to partner the Kalista and Calypso transports. Named Nausicaa (after a siren from Homer's *Odyssey*) it's a highly modified version of the company's £16,500 C8 Tube Signature D-to-A converter that employs 32-bit internal processing and four Delta-Sigma 24-bit/192kHz-capable DACs, two for each channel. As with the C8 DAC, the Nausicaa has an AES/EBU (XLR)

**RIGHT:** Kalista transport (here on a Silent Base plinth) features a Philips CDM 12 Pro mechanism modified by Metronome. Chromed buttons below the display provide disc navigation

input, two S/PDIF inputs (one electrical on a WBT RCA socket, the other optical via a high quality metal connector) and an asynchronous USB input for computer audio playback. Each input employs its own digital input receiver and they all accept data up to 24-bit/192kHz.

The DAC also features two Class A analogue output stages, selectable via a front panel switch. One is solid-state, employing four operational amplifiers 'chosen for their exceptional sound quality', the other a tube stage featuring a pair of paralleled Philips JAN 6922 valves – military spec versions of the 6DJ8/ECC88 triode designed in the 1960s. Both single-ended (RCA) and balanced (XLR) analogue outputs are provided, the latter employing Swedish Lundahl transformers. The Nausicaa Signature (to give it its full name), in its sculpted chassis designed to dissipate

vibration and to match the Calypso and Kalista CD transports, costs £29,888.

Add one of Metronome's elaborate Silent Base isolation platforms (£5950) and it's known as the Nausicaa Reference. In fact there are several ways to combine the company's top-line CD transports and the new Nausicaa DAC, depending on how far you want to push the envelope [see boxout, adjacent].

'I felt I could get up from my sofa and shake the musicians' hands'

## CARE NEEDED WITH PSU

Both the Kalista and Nausicaa come with external Elektra power supplies [shown on p23]. The size of many a heavyweight power amplifier, the Elektra employs three toroidal transformers and independently regulated lines for each critical part of the transport or DAC that it feeds. Metronome says that the Elektra's inter-stage EMI/RFI radiation protection helps imbue their digital playback system with an 'analogue-



**RIGHT:** In this configuration the Silent Base platform supports the Nausicaa DAC, with the Kalista on top. It's a sight to behold, each component formed of immaculately finished alloy and Perspex. The Silent Base rests on ball bearings sitting in stainless steel cups



like sound quality'. Hand-made umbilical cables with 16 wires and locking multi-pin connectors feed the juice from each Elektra to the Kalista and Nausicaa. No doubt your dealer will be installing your rig for you, but be careful should you ever be doing it yourself. While the cables' plugs (and the sockets at the rear of the Kalista and Nausicaa) are identical, the Elektras' are *not*, the transport and DAC requiring different voltages from their respective power supplies.

#### **TAKEN TO ANOTHER PLACE**

Like so many designers focused on engineering the 'perfect' CD player, Metronome Technologie's Dominique Giner

strives to make digital replay sound as close as possible to analogue in terms of its sense of musical flow and naturalness. Certainly this luxurious combination of Kalista and Nausicaa delivers musical magic in spades, the sound gutsy and powerful in the lower registers, full-bodied through the midband and smooth in the treble. High frequencies notably lack 'digital glare' – except when the playback system is asked to reproduce over-bright and harsh, splashy recordings, of course.

But even with the worst of the pop/rock breed, treble hardness can be ameliorated to some degree by activating the Nausicaa DAC's tube output stage to subjectively soften the presentation [see Lab Report].

Concentrating initially on the Kalista/Nausicaa combo's abilities with audiophile-grade recordings, I listened to several tracks from the CD version of Carlos Franzetti's *The Jazz Kamerata* [Chesky Records JD283]. Thanks to the recording having captured the sound of instruments in a wholly natural acoustic, with oodles of space around the performers, the combo delivered one of those glorious walk-into-the-sound-image listening moments where disbelief is suspended and you're transported to another place.

With the bass player wa-ay back in the image and the piano, winds, reeds and strings so clearly depicted as occupying their own locations in the recording venue, I felt like getting up from the sofa and shaking the musicians' hands, such was the sense of a live musical performance happening between and beyond the loudspeakers.

Later during the subjective listening evaluation the Kalista/Nausicaa combo pulled off the same magical illusion with Dave Brubeck's evergreen 'Take Five' from 1959's *Time Out* [Sony/Columbia Legacy], the drum kit, piano and string bass each positioned explicitly in a wholly believable image, seemingly with ideal scale and perspective – save for the recording's balance causing the saxophone to sound bloated in size compared to the

#### **WHICH VERSION?**

Metronome's Kalista and Nausicaa combo can be configured in various ways to achieve the ultimate in CD replay, tuneable by adding the company's Silent Base platforms. The firm's Calypso transport (£21,900 or £26,500 in its 'Reference' guise with Elektra supply) can also be upgraded with a square-shaped Silent Base isolation platform (£6500). The setup we auditioned featured one triangular Silent Base (£5950) supporting the Nausicaa and Kalista in an imposing stack. But a further option – if you've the space to accommodate it – would be to have the transport and DAC side-by-side, each on Silent Base plinths. Metronome also builds a special edition of the Kalista transport. Limited to 100 pieces worldwide, it's called the Kalista Ultimate SE and incorporates an additional 40mm thick Perspex platform and half-metre long aluminium legs. For this floorstanding SE version add £7500 to the price of the Kalista Ultimate.

## DOMINIQUE GINER

Based near Toulouse, Metronome Technologie was founded in 1987 by Dominique Giner. A furniture maker by trade (and a music lover) he found himself designing A/V furniture before building his own loudspeakers in 1984 which were in the shape of a metronome. They were a runaway success, Dominique selling over 1200 pieces and subsequently forming his own audio company three years later – using this shape as his brand's logo.

'The first electronics product I designed was in fact the JD1 compact disc player, developed for Jadis who are local to this area,' recalls Dominique. 'Then we started to develop our own CD players, CD transports and D-to-A converters, arriving today at some 15 components of which the Kalista transport is our flagship.'

'We are a small team working with several highly experienced suppliers who manufacture our parts, and electronics experts who help us in product development. Everything is assembled in our own factory before testing and shipping.'

'Our priority is to get from our products the most analogue-type sound possible, rich in harmonic realism, dynamics and three-dimensional spatiality. Fine-tuning the mechanical structures of our components increases musical performance, we have found – dissipating vibrations improves the scale of the soundstage and enhances dynamic contrasts.'



**ABOVE:** Nausicaa's triode output stage can be seen through its acrylic top plate. Panel buttons switch between the DAC's tube or solid-state outputs and allow scrolling through its digital inputs

accompanying instruments. Tonally the sound was exquisite, leading edges of transients and the dynamic contrasts in the performers' playing as convincing as anything I've heard from the CD medium.

Whether you'll prefer the Kalista transport set to output data at CD's native sampling frequency or at 96kHz will be both recording- and system-dependent. For the most part I thought the sound appeared more vital and explicitly depicted in our Krell/B&W reference system when set to 96kHz, although there were occasions – eg, energetic rock recordings – when the sound was preferred with the Kalista's output set to its native 44.1kHz.

A good example of this was Skunk Anansie's 'Hedonism (Just Because You

Feel Good)' from 1996's *Stoosh* [One Little Indian, Tplp85cd]. It's hardly what you'd call a sharp or brittle recording. Indeed, of its type, it's rather sympathetically balanced with a good sense of depth perspective engineered into the mix. But when the guitarist hits the loud pedal and

thrashes out the song's power chords, together with the drummer crashing his cymbals, the sound compresses.

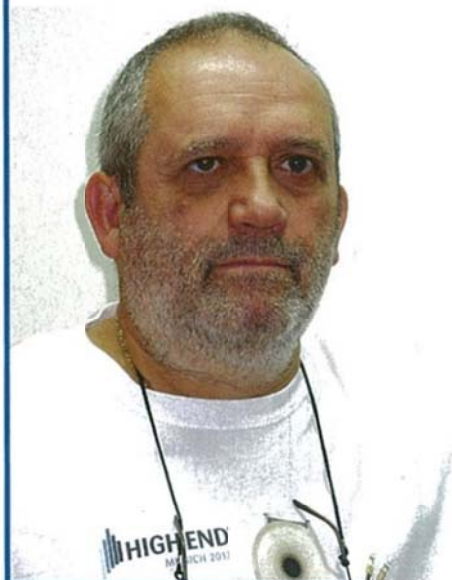
It seemed less forced and better controlled, dynamics *slightly* less compressed, when the

*'Instruments were better delineated with the transport set to upsample'*

Nausicaa was receiving a 44.1kHz data stream from the Kalista. But this was extremely subtle, and since instruments appeared better delineated when the transport was set to upsample to 96kHz (with top-quality recordings) this is



**ABOVE:** The Kalista CD transport and Nausicaa DAC both come with outboard Elektra power supplies. The transport's front panel display may be defeated via its power supply (top)



## METRONOME KALISTA/NAUSICAA

As a CD player, the Kalista Signature/Nausicaa combo offers a superb performance with a massive 7V maximum (balanced) output from a 'drive anything' 20ohm source impedance, a huge 116.6dB A-wtd S/N ratio and jitter reduced to a state-of-the-art 116psec (the practical limit for 16-bit encoding). There is almost no difference in performance between the transport's native 44.1kHz output and its 96kHz upsampled output, except the latter has a marginally superior stopband rejection (128dB vs. 117dB). Interestingly, the reason why the transport upsamples to 96kHz and not 192kHz is because the Nausicaa DAC is limited to 96kHz and will *downsample* all higher rates (via S/PDIF or USB) back to this value. Thus, the maximum frequency response is +0.0/-0.5dB (20Hz-45kHz) with both 96kHz and 192kHz inputs. Nevertheless, this process is managed with the utmost transparency, maintaining the same huge 117dB A-wtd S/N ratio and class-leading 15psec jitter with 24-bit input data [see Graph 2, below].

Metronome uses M2Tech-derived PC USB drivers and, as we've seen with the Chord QBD64HD, M2Tech Young, North Star Essensio and other DACs [HFN Sep '11, HFN Jun '12 etc] the S/N here is also reduced to a 16-bit 96dB. Otherwise the performance is on a par with the S/PDIF input, including its remarkably consistent ~0.0007% distortion at all frequencies over the top 30dB of its dynamic range [see Graph 1]. The Nausicaa's tube output has a significant (analogue) impact, reducing the output by a detectable -0.7dB, increasing the source impedance to 1kohm, adding sufficient noise to reduce the A-wtd S/N by 10dB and increasing peak-level distortion by 350x [see blue trace, Graph 1 below]. PM



**ABOVE:** Kalista and Nausicaa have AES/EBU and S/PDIF (electrical and optical) interfaces. DAC also has a USB input and both single-ended and balanced analogue outs. Switch next to the Kalista's RCA digital socket selects 44.1kHz or 96kHz output

probably how you will leave it set – especially as the up-sampling on/off toggle switch is hidden at the back of the Kalista.

### TUBE OR SOLID-STATE?

Using the Nausicaa as a standalone DAC, feeding its asynchronous USB input a selection of standard resolution and hi-res files from a laptop PC, was entirely glitch-free and wholly satisfying, the sound best described as liquid and beguiling. Playing Johnny Cash's 'Hurt' from *American IV: The Man Comes Around* [American Recordings 063 339-2] revealed an inky-black background and the DAC's ability to paint vivid tonal colours. Cash's acoustic guitar burst into life, its resonance decaying with uncanny naturalness.

Then there's the spatial depth. Hearing The Police's 'Roxanne' performed by Sting on *...All This Time* [A&M 493 156-2] once again showed the DAC's ability to paint a three-dimensional picture of a live music event, the performance arresting even played at low levels.

As for the Nausicaa's tube and solid-state output stages, the difference between them is audibly much more obvious. They can't

be selected via the handset: a pity, as you will probably want to switch between them on a regular basis if you've a substantial music collection, the valve stage delivering a softer and more gentle colour filter to the presentation.

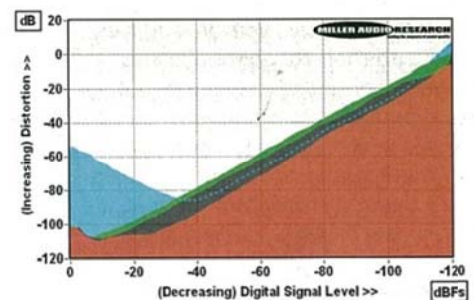
Metronome suggests that triode amplification is more musical but subjectively 'slower' sounding. In fact the Nausicaa manual states: 'If you prefer fast transitions it will be better to use the solid-state output stage'. I'd say 'If you want to hear instruments vividly portrayed you should *definitely* use the solid-state output stage... particularly when feeding hi-res digital data into the DAC's USB input!' ☺

### HI-FI NEWS VERDICT

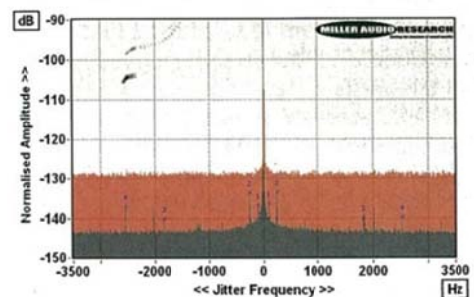
As much works of sculpture as high-end audio components, the Kalista transport and Nausicaa DAC sound as striking as they look. The combo delivers a richly-textured and sumptuous sound, with fabulous three-dimensionality when playing fine recordings. Put it on your 'must audition' list if you're in the privileged position of shopping for one of the most luxurious CD players money can buy.

Sound Quality: 90%

0 - - - - - 100



**ABOVE:** THD vs. digital level over 120dB. S/PDIF input (48kHz/24-bit; 1kHz, red); CD (1kHz, black); USB (1kHz, green); S/PDIF (1kHz, tube output, blue)



**ABOVE:** 24-bit/48kHz jitter spectra – 48kHz/24-bit over S/PDIF (black) and via USB (red)

### HI-FI NEWS SPECIFICATIONS

Maximum output level (Balanced)	7.02Vrms at 20ohm
A-wtd S/N ratio (CD/SPDIF/USB/tube)	116.6dB/116.8dB/95.9dB/105.6dB
Dist. (1kHz, 0dBFS/-30dBFS / tube)	0.0007%/0.0006% (0.25%/0.009%)
Dist. & Noise (20kHz, 0dBFS/-30dBFS)	0.0006% / 0.0006%
Freq. resp. (20Hz-20kHz/40kHz)	0dB to -0.11dB/-0.54dB
Digital jitter (CD / S/PDIF / USB)	117psec / 15psec < 10psec
Res. @ -100dB (CD / S/PDIF / USB)	±0.3dB / ±0.2dB / ±0.2dB
Power cons. (Transport/DAC)	27W / 34W
Dimensions (WHD, Transport/PSU)	450x135x460/450x105x435mm

