

Eco Warrior

David Price is struck by the latest and greatest incarnation of Leema's popular Antila CD player, the IIS ECO...



It's always nice to spot new talent. We came across Leema Acoustics some seven years ago, hearing an early pair of loudspeakers and being impressed. No surprise really, as founders Lee Taylor and Mallory Nicholls (Leema, *geddit?*) are both ex-BBC engineers who went on to build studio monitoring electronics. The company was founded in 1998 and has steadily evolved since then; indeed evolution is very much a central theme for Leema. We've seen their range of electronics grow to encompass CD players and amplifiers, and all have enjoyed substantial development. As the Antila IIS ECO reviewed here shows, the guys just can't leave the design alone, sporting a long list of tweaks over its four year lifetime; this machine represents the culmination of all the work and among several other things adds a full 'eco' standby mode, hence its new appellation.

The Antila is the company's top integrated silver disc spinner, and is built in Wales with most components sourced from the EU. It's built in a way that befits its £2,995 price tag; it's a weighty beast at 12kg, if not quite of Japanese 'battleship' mass. It's fairly large too, measuring 440x110x310mm. I wouldn't say it's the swishest looking or feeling of things; rather it has the feel of something handmade to high standards from good quality materials (which I suspect is pretty much what it is). Alloy front and top plates punctuate cooling fins either side; these are more about form than function as no CD spinner is ever going to produce enough heat!

The alloy plates are chunky, but more importantly are beautifully surfaced, nicer it must be said than many aluminium clad hi-fi separates I have seen from China. The Leema logo is drilled into the top plate, and the fascia is quite unusually laid out; illuminated buttons provide transport controls and a large backlit inverted LC display displays track and time. While I'd still say a high end Marantz or Denon feels a more exotic proposition, congratulations to Leema for actually having put thought into the look and feel of the machine, and a fair whack of cash too.

Inside is of course where it really counts and here in the very latest incarnation of the Antila we see Leema's new Quattro Infinity Multi-DAC (as it's called), which employs no less than eight 24bit/192kHz Crystal CS454x multibit delta-sigma converters, said to be selected for their audio quality, fed from a fully balanced digital datastream. This latest machine gets a new audio motherboard with separated left and right channel areas, Wolfson digital receiver and the aforementioned DAC. The power supply driving this sports nine regulated power rails.

The new digital convertor section uses eight DACs, (four stereo DAC chips), but only actually feeds a signal to four of these, half of each stereo DAC, two for left and two for right. Each pair is then potted in its own screening vessel, the resulting output doesn't need to go through an analogue 'summing' stage which the previous twenty DAC model used, so there's one less stage in the analogue signal path, Leema says. The whole circuitboard is also said to be "much

better laid out" with separated sections for each channel. Leema haven't yet worked out upgrade prices for the IIS ECO but it will be "very costly" as the new board requires a new chassis so that's audio motherboard, chassis, power supply, etc. It's possible then that this mod won't be completely retrofittable. In this instance, Leema would advise buying a new machine.

As with previous machines, the Antila IIS ECO has Leema's Intelligent Protocol System which hooks up to other Leema components, allowing a press of the play button to power up the amplifier(s) from standby and select the CD input, for example. If used in a totally purist, single-source system with the Hydra II power amplifier, the Antila IIS ECO will even control the amplifier's volume via LIPS commands, the company says. Round the back, there are TOSLINK and coaxial optical digital outputs, RCA line level phono outputs and balanced XLRs (used for this review).

SOUND QUALITY

Not having heard the Antila in reference conditions for a good few years, it was fascinating to set ears upon this very distinctive British CD player. I've spent a lot of time recently with Japanese high end stuff and enjoyed it, but listening to the Leema I'm reminded how different the 'house sound' of Brit machines is, and why they're so liked in Japan! Put simply, the Leema has a more organic sound than you'd get from a serious Nipponese machine, yet doesn't give away even so much as a ha'ppeny in its resolution. Indeed, the Antila IIS ECO struck me as



offering the rare and desirable combination of incredible insight and yet consummate smoothness. It's almost as if you can hear right inside the mix, seemingly beyond the ones and noughts, to a world that's unconcerned with all the failings and compromises of Red Book CD; what the Antila does heroically well is fool you into thinking you're not listening to digital, coming over with much of the smoothness, authority and effortless detail of high end open reel tape.

For example, Sueno Latino's 'Sueno Latino' came over as something of a three dimensional odyssey of sound, rather than the muddle it normally is. Even the opening words sounded far more tactile, more accurately placed in space and intricate than they normally do, and when the looped rhythms kicked in the song came over with scale and clarity. Small percussive effects, like those warbling electronic birds and whistles blowing right at the rear of the mix were clear as day, despite those thunderous bass sequences. Piano stabs sparkled out of the mix, rich with harmonics, and the Roland TR909 hi hats rang out like bells in the night. Interestingly, this track sounds good on lo-fi portables but generally bad on hi-fi; it's only the very top source components that seem to be able to unlock all of the strands of the mix and frame them

coherently, without falling over their feet.

It was this sense of order and composure which made the likes of the Luxman D-05 sound rather showy and eager to please, yet rough around the edges. The Lux I liked a lot, but it just isn't in the same league; the Electrocompaniet is far closer to the Leema in overall ability, but I fear it too cannot quite match the Antila's forensic detail recovery allied to the seemingly hewn from granite sense of

Leema didn't boom the bass guitar out at me; it doesn't over-egg the pudding, yet nor did it sound in any way lacking in weight. On 'King', the bassist is right down at the bottom of the scale, yet I could hear his playing with absolute accuracy, fingers frantically running up and down the bottom E string (circa 80Hz) with speed and dexterity, yet no boom or muddle. No less impressive was how well it syncopated with the rhythm guitar and drum section.

"the Leema managed to excavate vast tracts of information while stringing it together as a cohesive musical whole..."

authority and stability it has. Cueing up UB40's 'Tyler' showed this all too clearly; I was struck by the beautiful sax sound the Leema summoned up; its metallic quality was carried with uncanny accuracy, and yet it had a lovely smoothness to it too, almost as if delivered to my speakers via a classic early eighties Koetsu moving coil cartridge. Well, maybe it wasn't quite as romantic as that, but it certainly wasn't your average digital disc spinner doing brass.

At the same time, I was taken with the bass, which was highly tuneful, wonderfully supple and absolutely right in its level; the

The Fun Lovin' Criminals' 'Up on the Hill' showed a beguiling combination of rhythmic flow and the ability to pick through a dense mix, unpeeling it like onion skin, to reveal what's inside. Whereas the Luxman D-05 was able to scythe through this song like the proverbial hot implement through Lurpak, it didn't do it in anywhere near as effortless a way. Fascinatingly the Lux simply threw lots of miscellaneous detail at you, as if to say, "there you go, have a bit, and have another bit, and another"; the result was lots of detail alright, but where did the music go? The Leema showed



where, managing to excavate vast tracts of information while stringing it together as a cohesive musical whole. Suddenly I heard previously lost backing vocals, Fender Rhodes overdubs, triangles supplying minor percussive detailing and backing saxophones and sitars, all perfectly slotted into the right place in the mix; where so many other CD spinners simply blurred them into a hazy background. This sort of revelatory listening experience reminds me of the moment I upgraded my old Rega moving magnet cartridge to a Supex moving coil; things were the same yet somehow magically different!

Switching to baroque classical in the shape of Linn's new (and immaculately recorded) disc of Telemann's 'Concerto in G major', and I heard a shimmering rendition of a very special recording in front of my very ears. Recorders, traditionally a difficult instrument for CD players of any kind, sounded eerily lifelike and devoid of distortion. Harpsichords had an authentic metallic quality, the harmonic structures of every note carried adroitly. Violins were a revelation, quite superb by Red Book CD standards, again richly resonant and uncannily lifelike. All individual instruments were located with precision; there was no sense of listening to 'dual mono' as with some even quite expensive silver disc spinners; and all were set into the recorded acoustic in such a way as to convey the great sense of the scale of the concert hall. Dynamic accenting was as clear as the imaging was pin-point; this is an incredibly precise sounding device.

CONCLUSION

You'll probably have gathered by now that I've come away rather enamoured with this new silver disc player. But superb as it is, how does it compare with other similarly exalted products that I've reviewed over the past year or two? Well, firstly it reminds me of the SimAudio Moon CD3.3 inasmuch as it has a similarly velvety tonality and a musical nature. True enough, but while it's only £500 more expensive, I'd say it's considerably more capable, building

on the former's strengths to give a far more insightful presentation. Ditto the Meridian GO8.2, which to my ears it betters through superior fine detailing and rhythmic flow; the difference isn't so profound, and it lacks the Meridian's visual design flair (in my humble opinion), but it's worth the extra outlay. The closest machine I've heard to the Leema is the Electrocompaniet EMP-1/S, which has a slightly fruitier and more spirited sound, but again lacks the subtle detailing and polish; considering the Antila IIS ECO is over fifteen hundred pounds cheaper, that's quite an achievement...

Fundamental to this player's sound is its exactly forensic detail retrieval, which is utterly exceptional at or near the price, plus the relaxed yet musical way it strings it all together. It delivers a very 'undigital' sort of sound which will appeal to analogue addicts and silver disc upgraders alike. This machine doesn't have a hugely obvious character of its own, which makes it all the better

to let the contents of the original recording shine. As such, right now I'd say it's one of the best CD players under £5,000.

2009 ANTILA II (£495 TO UPGRADE FROM MK 1)

New output filters using audiophile grade 1% film capacitors instead of surface-mount parts, new audio board for filters and revised grounding.

2010 ANTILA IIS (£995 FROM MK 1, £595 TO UPGRADE FROM MK II)

New metal tray loading drive to replace original Philips, new servo and interface board, new control firmware developed by Leema.

2011 ANTILA IIS ECO (UPGRADE PRICES T.B.C.)

New Quattro Infinity DACs, full Eco standby mode, new audio motherboard, new firmware, Wolfson digital receiver chip in place of Burr Brown.

MEASURED PERFORMANCE

Frequency response of the Antila shows an even characteristic with no peaking or fall off, measuring -1dB at 21.6kHz; a normal enough result for 44.1kHz sample rate CD.

Distortion levels were low throughout the entire dynamic range, measuring 0.001% at 0dB or full level, down to 0.21% at -60dB, good if not exceptional figures. Consequently EIAJ Dynamic Range was a fair 97.5dB figure, a little below the best at 100dB. Output was the same through line out and XLR out, both measuring 2.37V; commonly XLR offers double line, although with unbalanced to balanced line driver chips there is no fixed relationship between the two.

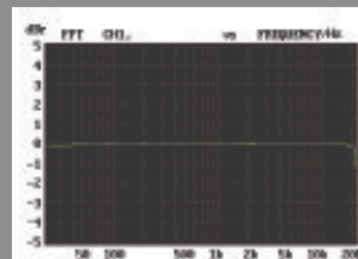
Jitter from the digital output was very low, random jitter measuring 5pS across the audio band, with no signal related peak at 1kHz from a -60dB 1kHz test tone - an unusually good result. There was a little low rate clock drift but at 40pS this was also lower than usual (300pS is common).

The Antila is a well engineered player that produces good and consistent results under test. NK

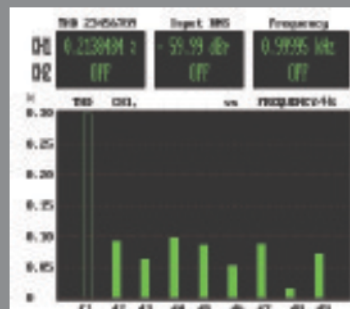
| | |
|---------------------------|-------------|
| Frequency response (-1dB) | 2Hz-21.6kHz |
| CD | |
| Distortion | |
| 0dB | 0.001 |

| | |
|-------------------|--------|
| -6dB | 0.002 |
| -60dB | 0.24 |
| -80dB | 3.1 |
| Separation (1kHz) | 124dB |
| Noise (IEC A) | -104dB |
| Dynamic range | 97.5dB |
| Output | 2.37V |

FREQUENCY RESPONSE



DISTORTION



VERDICT

Stable and smooth yet detailed and musically engaging, it's currently class of the affordable high end CD player field.

LEEMA ANTILA IIS ECO £2,995
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www.leema-acoustics.com

FOR

- forensic detail
- beguiling rhythms
- pronounced dynamics
- build and engineering
- metal disc tray

AGAINST

- nothing at the price