

## EQUIPMENT REVIEW

EXCLUSIVE!

# Linn Klimax DS network music player

by Alan Sircom

**B**ack in 2007, Linn Products launched a game-changing product called the Klimax DS. It was the first post-physical digital streaming player to really take music seriously. It underwent a couple of changes in the intervening years, but the basic package remained essentially unchanged for one very obvious reason – it sounded bloody good. 2007 in streamer years is ancient, but the Klimax DS has stayed the course, and any Klimax player can be brought up to date to the latest ‘DS/2’ standard.

But now there’s the Linn Klimax DS (the so-called ‘DS/3’), and everything has changed. And, of course, what changed with the DS also applies to the DSM, which adds HDMI and line-level preamp functionality to the standard DS streamer. As both of these products feature the Exakt RJ45 links for fully digital active (aktiv, in Linn-speak) connections to many Linn, B&W, KEF, and Kudos speakers, the preamp is superfluous unless you are adding a line-level source.

The core (kore?) of the latest upgrade is what Linn calls its Katalyst DAC architecture. In many digital systems, digital conversion takes place under fairly tightly constrained digital architectural limitations: the circuit itself is often a variation on a theme of the application notes or application board sent out by the chip designer. In fairness to some makers, there are not a lot of options open to an audio engineer faced with a chip that has very tightly specified demands, but this leads to the

somewhat erroneous but understandable concept that any digital product essentially ‘sounds like its chips’.

Those who know their way around digital design don’t follow so narrow a path. Some – like Chord Electronics and dCS – go as far as to design their own DAC from scratch. Linn went instead with the Katalyst architecture, and just as the Exakt system launched to the pithy ‘the source is in the speaker’ sound-byte, so Katalyst and Klimax is all about ‘a DAC is more than just a chip’. Katalyst involved scanning all the chip catalogues on the planet in search of devices flexible enough to accept not just a single voltage, but multiple power supply feeds – two for modulation and three for the conversion stage – all fed from an extremely stable and fully isolated voltage source. This is perhaps not unexpected from a company like Linn, which has a long history in making stable voltage power supplies for devices like the Radikal for the LP12 turntable, but the process required looking beyond the usual suspects for DAC chips, all of which accept a limited voltage input to the chip, despite that power feeding a range of different sub-systems within the DAC.

Power feed alone makes a big difference to the performance of the DAC, but that’s only part of the Katalyst architecture. The signal is fed through a data optimization process (a 16x, 768kHz upsampler working at 35 bit precision, then to a 8x, 6.144MHz modulator) before being passed to an array of bitstream DACs, and finally passed to a new analogue

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output driver. The whole digital signal path from upsampler to the main conversion of the DAC array, is governed by a high precision master clock.

This data optimization system largely obviates the need for super high-resolution files and DSD, because the upsampling process raises 16/44 to 24/192 PCM files up to such a high performance level internally. Given Linn has been able to track what digital streaming users actually listen to (not individual listeners in some kind of Big Brother tracking, but the Linn DS users as a cohort), it seems that we are moving away from local collections of manicured super high-resolution files and toward online services like TIDAL. As a result, the company sees no need to break its own rules about 'open, commonly used' formats. Moreover, Linn's Studio Master recordings are sold as 24/192 FLAC files, but are also sold as SACD discs, so I guess they would have a good track on what is and isn't important in high resolution audio. This is at odds with the somewhat enforced DSD/MQA 'acronym arms race', and I respect Linn's stance on this.

Linn Klimax DS fits in the standard Klimax chassis from 2007 (very early Klimax cases need some internal surgery to fit), and the solid aluminium chassis with internal chambering to physically separate digital, analogue, logic, and power supply is still a very good way of making a digital device. Linn retained the chassis, and designed the latest DS/3 architecture to be an almost direct replacement for the existing

internals of the predecessor. From a manufacturing standing, that means no retooling or reworking the casework, which given the sophistication of the case is no bad thing. It also allows existing Klimax users to upgrade without losing out.

Linn retains a loyal following, for good reason. And the Klimax demonstrates a major part of that good reason. If you are the owner of an existing Klimax, you don't end up consigning that expensive streamer to trade-in or eBay hell. Instead, if you want, your existing Klimax gets the full DS/3 treatment, and you get your old Klimax DS/2 back in a basic 'Renew DS' box. And now it's time to call on the hackneyed car analogy, because that's like driving your one or two generation old Mercedes S-Class into the showroom, asking the salesperson if they could turn your old S-Class into a new S-Class, then give you back the original drivetrain, electronics, safety features, and interior of that older S-Class, in a new C-Class body. What you do with your Renew DS is up to you: an initial comparison is obvious, but then you could use it to extend your system to another room, adding amp and speakers along the way, you could hand it down to a family member or friend (+500 brownie points guaranteed), or you will get very good money for it if you choose to sell it on. Whatever you choose to do, Linn's 'leave no Klimaxer behind' plan seems eminently sensible to me.

Because this was a very hush-hush review, with strict embargos and non-disclosure agreements that explained in ►



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► graphic detail what would happen to my technical area if I even breathed a word about this product before the middle of September, I listened to the DS/3 in a top-spec Linn system in Scotland, and I used a Klimax DS/2 as comparison. This, however, is a decent place to start because the DS/2 is already among the best digital streamers out there, and many DS/2s will be used in this system context. I had expected the comparison process to be a protracted, nuanced affair, trying to define subtle differences between products that really weren't that different. So, out came 'Son of a Preacher Man' from Dusty Springfield's justly famous *Dusty In Memphis* album [Phillips], which sounded extremely good on the DS/2. Two bars into the same track on the DS/3 and it sounded like she was singing with a band, where the DS/2 now sounded like she was singing to a backing track. It was as if a group of better and better-rehearsed musicians had turned up. In truth, it took longer to acclimate myself to the conditions than it did to parse the differences between the DS/2 and DS/3. In the context of a system you know, if you already have a Linn Klimax DS or DS/2 the amount of time you will need to audition the DS/3 before realising you have to buy a DS/3 is about twice as long as it will take you to read this sentence.

Naturally, this hot Linn-on-Linn comparison action came with several Studio Master albums from the Linn Label. Perhaps the most significant was the Largo from Beethoven's Piano Concerto No. 3 [Scottish Chamber Orchestra, Linn Records]. This is a wonderful piece of music, played beautifully at the best of times, and on the DS/2, listening was a therapeutic experience, as it felt as if your heart rate and blood pressure calmed in the listening. But the new DS/3 took this to new levels. It felt like Beethoven was working on you at a synaptic level. This felt like a serotonin burst... I probably

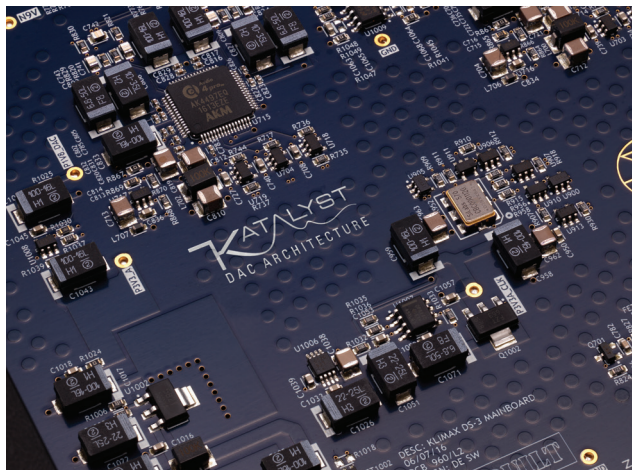
wasn't smarter or a nicer person for the playing of this track, but I felt a burning desire to work some differential calculus while rescuing a kitten. 'Get Lucky' from *Random Access Memories* by Daft Punk [Columbia] sounded like 'Get Lucky' on the DS/2, but on the DS/3, it sounded like 'Get Lucky' on cocaine, in gold lamé hot pants, and with glitter sprinkles.

Then there's the whole finding new music aspect, which comes as a result of that effortless TIDAL connectivity. 'String Trio - Continuity Theory' by the Janaki String Trio on their *Debut* album [Yarlung] is not something I would normally play, but I happened upon it almost at random and found it profound and powerful.

'Profound' is the watchword, here. The DS/3 simply makes music more profound. That sounds trite, but it holds throughout. Although the comparison between DS/2 and DS/3 is an instant one, the difference also has more staying power. With less 'filter' in the way of the music, the Klimax DS/3 opens the listener up to so much greater depth to their music, and as a result sessions get protracted. I sat and listened to all of Zappa's *Joe's Garage* [Zappa Records], smirking along with all the crass jokes, as well as just enjoying the music and the musicianship.

Like the best LP replay systems, you can follow every line of the music, without losing sight of the composition and intent of the music. This was possible with the Klimax DS/2, because of that streamer's unfatiguing delivery and inherently 'undigital' treble, but the level of musical insight the DS/3 brings to the music just makes the whole process a lot more organic, in the way you might turn your attention from one musician to another, or from melody to harmony, when listening to live music.

It's not just audiophile-approved pieces of music that have this kind of effect through the DS/3. 'The Hunter' by ►



*“The last time it got this atavistic, I’m sure there was a big black monolith and a thigh bone involved.”*

- bizarre Icelandic space pixie Bjork, ‘Because’ by the Beatles, ‘God Only Knows’ by the Beach Boys, even ‘Satellite’ by Nine Inch Nails: all captivate, all drag you into the music. This is music replay as orgiastic tribal stuff. The last time it got this atavistic, I’m sure there was a big black monolith and a thigh bone involved.

The strange thing about the Klimax DS/3 sound is you don’t tend to talk about the sound, more about how the sound has an influence on you. It is, obviously, extremely detailed, very tonally accurate, dynamic, coherent, and possessed of the sort of ringing-free, effortless treble that makes a lot of digital audio sound, well, digital. But, where many other products focus on these aspects of performance, this does that rare holistic thing that makes you reach deeper into your musical collection, whether locally streamed or on TIDAL or Qobuz. If you have spent any time with the Klimax DS or DS/2, you’ll know what I am on about here, and what the Klimax DS does, the Klimax DS/3 does an order of magnitude better.

In fact, the first three words I wrote on my note pad sum up the Klimax DS/3 effect better than all the other 1997 or so words written here. And I wrote them in capitals and underlined them twice for good measure: Holy. Living. F\*\*k. That’s the ten-second later comment, and it was still relevant at the time I put away the note-pad.

## TECHNICAL SPECIFICATIONS

### KLIMAX DS/DSM

**Type:** Network music player (DSM with preamp functions)

**Analogue inputs (DSM only):** 1× Balanced XLR pair

**Digital input:** Ethernet RJ45 (DSM adds 3× HDMI Type A, 1× S/PDIF RCA also configurable as output, 2× Toslink)

**Analogue output:** 1× Balanced XLR pair, 1× unbalanced RCA pair

**Digital output:** 2× RJ45 Exakt link (DSM adds 1× HDMI Type A)

**Supported file types:** FLAC, Apple Lossless (ALAC), WAV, MP3, WMA (except lossless), AIFF, AAC, OGG

**Audio sample rates:** 7.35 k, 8 k, 11.025 k, 12 k, 14.7 k, 16 k, 22.05 k, 24 k, 29.4 k, 32 k, 44.1 k, 48 k, 88.2 k, 96 k, 176.4 k, 192 k

**Word Depths:** 16-24bits

**Control Protocol:** Compatible with UPnP™ media servers, UPnP™ AV 1.0 control points, OpenHome.org compatible

**THD+N (line output):** THD+N < 0.0007 %

**Dynamic range:** >110dB

**Gain range:** -80dB to +20dB, 1dB steps

**Finish:** Black or silver

**Dimensions (W×H×D):** 35×6×35.5cm

**Weight:** 8.6kg

**Price:** Klimax DS £15,800, DSM £18,900

Klimax DS upgrade £3,850,

Klimax DSM upgrade £4,200

**Manufactured by:** Linn Products Ltd

**URL:** [www.linn.co.uk](http://www.linn.co.uk)

**Tel:** +44 141 307 7777

**Tel (UK Freephone Only):** 0800 001 5111

I’ve not heard every single digital device, but I’ve heard a lot of them, and Klimax DS/3 is the best of the ones I’ve heard, or at least the best I’ve heard that don’t cost as much as a decent luxury car. And even at the super-lofty end of high-end digital, the Klimax DS/3 stands with the best of them, and even shows a clean pair of heels to some of audio’s upper echelon with ease. It might even be the best of all of them, and therefore comes profoundly recommended. +