



Linn Klimax DS (KATALYST)

MARTIN COLLOMS TRIES OUT A REFERENCE LEVEL STREAMER FROM LINN PRODUCTS

This is the top model in Linn Products' *DS* (digital streamer) range, the current pinnacle of Linn's historic strategy which stopped the production of CD players back in 2007, and handed over all unitary digital audio replay responsibility to an expanding range of *DS-series* network connected streamers.

The *Klimax DS* is a slim and beautifully made component, and our matt black review sample certainly carried some weight, turning the scales to a substantial 8.7kg (19lb). A key contributing factor is the fact that the interior space was machined out of a solid aluminium alloy billet of outstanding rigidity, which will help in combating structural resonances. The mains switch is hidden below the front panel, which initially caused a moment's confusion.

The input/output connection facilities are partly concealed below a fixed rear overhang, making a neat visual appearance, even though this does make it a little more awkward to install cables. However, there's no need to avoid using latching AES balanced connections, as a revised orientation is used to assist unlatching in this restricted space.

Do note that this specialist product does not replay DSD material, and does not have digital audio signal inputs. Jason Kennedy evaluated the earlier *Klimax Exact DSM* streamer for us two years ago in 2015 (*HIFICRITIC Vol9 No3*; note that the cover of this issue was mis-numbered as *Vol9 No2*). The *Klimax Exact DSM* is a less expensive streamer which was also equipped with analogue input facilities as well as the network input. It was also reviewed alongside Linn *Exact* power amplifiers, using the *SO* loudspeaker/room correction options, and with notable success.

Our review streamer/DAC is the first Linn Product to feature the *KATALYST* digital-to-

analogue conversion architecture – the company's fourth generation DAC design. *KATALYST* brings multiple isolated power supplies to a specially selected DAC-processor, all sections synchronised by a high-precision master clock. Careful optimisation of the data before conversion uses a 768kHz up-sampler operating at 35-bit precision, the processing optimised by a single very low jitter master clock. It is suggested that by this means even 16-bit/44.1kHz CD grade feed is lifted near to 'hi-res' standards. The processor even incorporates correction for a new low-distortion output driver stage, where the distortion profile (even including that of the balanced output transformers) is characterised and compensated for. Obviously the analogue output is taken very seriously in this design.

Space Optimization (SO) is a computer program that runs inside a Linn *Klimax* streamer (*DS* or *DSM*), re-computing the audio signal in the DAC stage to include pre-calibrated room correction for the low frequencies. The physical position of the sources of low frequency sound in the room, and the dimensions of the room itself need to be measured and entered in the accompanying software.

Having input the room dimensions and speaker locations, and after characterising the speakers themselves in terms of their size and typical performance, the program calculates a surprisingly subtle and detailed correction of the audio signal output that's valid for the listener region. [There is also a *Space+* which works with the *Exact* separates processor units, using advanced FPGA (field programmable gate array) processors; these can accept more detailed input data, including the separate locations of multiple bass drivers and of a related bass port.]