

Lehmann Black Cube SE II (£600)

This special edition MM/MC phono stage from Norbert Lehmann's stable is lifted to new heights with the addition of the outboard PWX power supply
Review: **Andrew Sydenham** Lab: **Paul Miller**

Since its introduction in 1995, Lehmann's Black Cube phono preamp has attracted quite a following thanks to its combination of flexibility and great sound quality. The latest incarnation of this 'affordable high-end' MM/MC stage, the SE II, sees the original utilitarian plastic case replaced with a very solid non-magnetic aluminium housing that includes an 'anti-resonance' treatment on the top surface. Our sample sported an attractive silver brushed aluminium fascia panel, but the Black Cube is also available in, somewhat unsurprisingly, black. In either guise, its 114x124mm footprint allows the unit to sit unobtrusively next to any record deck.

PREMIUM PSU

A captive two-metre shielded cable terminating in a Neutrik connector joins the Cube to the PWX 30VA high current power supply, which employs a weighty toroidal transformer, premium foil capacitors and metal foil resistors. This amply long cable allows the PWX power supply to be positioned well away from sensitive or poorly screened cartridge/arm combinations – always good practice to avoid interference. The

LEHMANN'S LEGACY

Developed and manufactured in Germany since 1988, Lehmann's range of audiophile products has grown to include the Black Cube Stamp Power amplifier and excellent Black Cube linear headphone amp, which earned itself an 'Outstanding Product' accolade in the October 2009 issue of *Hi-Fi News*.

Designer Norbert Lehmann is an audio engineer with an enviable reputation in the pro-audio world and his phono stages have become objects of desire among vinyl aficionados ever since the Black Cube was first introduced in 1995.



supplied power cord is detachable and I replaced it with an Audusa mains cable for the purposes of the review.

The Lehmann Black Cube SE claims to be compatible with practically all available cartridges from high output MMs to low output MCs. Six sets of easily accessible DIP switches on the base of the Cube allow switchable gain for MM and MC cartridges, with three preset loading options plus a custom slot for a user's choice of resistor adding to its flexibility. Sixteen possible filter curves between 7Hz and 90Hz are available, through a combination of switches, to fine-tune the Cube's bass roll off.

Lehmann's range of phono stages culminates in the £3250 Silver Cube, so with such an illustrious sibling I was keen to find out what the Black Cube SE II could offer. As my source I used an Ortofon 2M Red moving-magnet cartridge mounted in an SME 3009/Audio Origami arm atop a Garrard 401 deck modified with a Kokomo bearing. To these ears this classic combination – updated and modified – snaps at the heels of many a 'superdeck' and I felt it would reap benefits from a relationship with a quality phono stage.

NO SMOOCHING

No sooner had the stylus hit the first groove than I was struck both by the clarity and space between instruments

and the width and depth of the well-defined soundstage before me. Clearly, I was dealing with a very capable and musical performer indeed.

First up for the musical workout was Peter Gabriel's fourth album [Charisma PGMC4] which boasts a vast dynamic range thanks to the unique percussion and synthesiser sounds used. Via the Black Cube this complex production was played out with fine resolution and timing. Indeed, *Shock the Monkey* was a revelation, its attack and decay being wonderfully precise. True, I have heard tighter, deeper bass from this track, but all else was sweet and satisfying.

If I ever I need to persuade an analogue atheist of the truth of the cause then it's Dire Straits' eponymous debut album [Vertigo 9102 021] I hire as evangelist. From the Cube, I was looking for accuracy. None of the passages ever sounded rushed or blurred; rather, it felt as if the Knopfler brothers had all the time in the world. Never was the tonal quality over-rich, and I basked in a presentation that walked that tricky line between warmth and precision.

However, perhaps the Cube's real strength is its midrange performance. On The Band's *Stage Fright* [Capitol EA-SW 425] I hung on to every word of 'Daniel And The Sacred Harp', the breathy quality of Richard Maue's foot-pumped organ having real palpability while the

LEHMANN BLACK CUBE SE II (£600)

Without question, the Black Cube SE II is the most impressive sub-£1000 phono stage to grace the lab bench in recent times, exceeding Lehmann's own specification in most instances. The MM/MC gain is +36dB/+56dB which equates to an input sensitivity of 16mV and 1.6mV, respectively, to realise a 1V output. If you are saddled with an extremely low output cartridge then Lehmann does include an extra +10dB gain option under the lid. Otherwise, this phono preamp offers a useful 150mV/15mV input overload margin (a headroom of +30dB over the standard 5mV/500µV input levels) together with fabulously wide 86dB (MM) and 77dB (MC) A-wtd S/N ratios. This is a very quiet phono stage. Distortion, too, is uncommonly low – as low as 0.0002% through the midrange and typically <0.001% over the bulk of the audio range [see Graph 2, below].

Lehmann offers numerous low frequency response options for the Black Cube SE II, with its default setting (a specified 7Hz corner frequency) rolling off to -1.1dB/20Hz. The 23Hz, 30Hz and 47Hz options reach 20Hz at -4.5dB, -6.1dB and -8.9dB, respectively [see Graph 1, below]. The last of these represents quite a substantial LF roll off which contrasts with the extended ultrasonic response of the preamp, reaching out to +0.2dB at 100kHz. Few cartridges are capable of reproducing anything close to this bandwidth, Ortofon's Cadenza series being a notable exception. Readers are invited to view a QC Suite test report for Lehmann's Black Cube SE II MM/MC phono amp by navigating to www.hifinews.co.uk and clicking on the red 'Download' button. PM



LEFT: Three pairs of DIP switches act in combination to select between four gain settings (between 36-66dB) and a choice of 16 different bass rolloff frequencies extending from 7Hz to 90Hz [see Lab Report, opposite]

texture of the instruments and raw quality of the vocals were stunningly portrayed. If there was a rough edge to a phrase it was never glossed over, yet the freshness and beauty of the performance shone through.

LAID BARE

Nevertheless, experimenting with some recordings from my distant past I was not surprised to find that the Black Cube didn't take kindly to surface noise, blips and scratches. I heard the lot, while poor production and recording techniques were also laid bare. It's fair to say that in doing the job so well there is a 'what you see is what you get' aspect to the accuracy on offer here and that you'd never confuse the Black Cube with the more forgiving presentation of many a valve phono stage. Having said that, never did I feel that musicality was sacrificed for transparency.

Coming back to the Cube after having left it powered up over a weekend brought a perceivable improvement in the depth and breadth of the soundstage – not to mention an extra sweetness of tone. This was particularly noticeable when playing 'American Tango' from Weather Report's sublime *Mysterious*

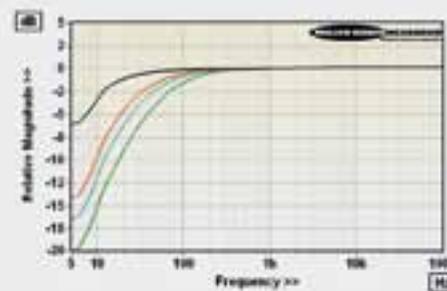
Traveller LP [CBS 80027]. The silences between the musical phrases were inky black while the decay of the hi-hats was fully resolved. To find more depth and detail in music I know so well was a remarkable experience and I warmed to this little gem of a phono stage all over again.

Niggles? The lack of an on/off switch is unfortunate as it means the unit has to be completely unplugged from the mains to be powered down. But then the absence of such a switch might partly account for the remarkably low noise floor here. ☺

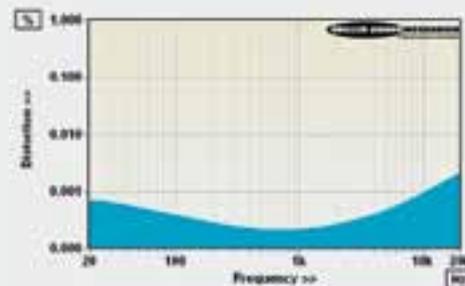
HI-FI NEWS VERDICT

This is a true audiophile phono stage and, partnered with equipment of equal quality, the results are remarkable. Indeed, the SE II is difficult to fault even compared to competition in a much higher price bracket. The exceptionally low background noise allied to a fabulous rhythmic and tonal rendition make it worthy of consideration for those seeking the most detail from their vinyl without having to make a hyperspace price jump.

Sound Quality: 82%



ABOVE: RIAA corrected frequency response from 5Hz-100kHz [black = flat (7Hz); red = 23Hz; blue = 30Hz; green= 47Hz corner freqs.]



ABOVE: Distortion versus frequency is extremely low (MM sensitivity, 47kohm loading), at 1V output

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm/100pF / 100-470ohm
Input sensitivity (MM/MC re. 0dBV)	15.67mV / 1.60mV
Input overload (MM/MC)	150mV / 15.0mV
Maximum output (re. 1% THD)	>7V
A-wtd S/N ratio (re. 5mV/500µV in)	85.9dB / 77.2dB
Frequency response (20Hz-20kHz)	-1.1dB to +0.17dB
Distortion (20Hz-20kHz, re. 0dBV)	0.0002-0.0022%
Power consumption	2W
Dimensions (WHD)	114x45x93mm (not inc. PSU)