

# PRO TWIN PACK



How many manufacturers do you know to have six different phono preamplifiers in their product range? There's probably only one: Norbert Lehmann.

*Two little boxes, one mission: outsourcing of the power supply is a useful measure.*



Lehmann? Isn't that the guy with the "Black Cube"? Right, that's him. About everyone who has been seriously dealing with the subject of turntables in the past ten or twelve years should have come in contact with the (more or less) small boxes from the Rhineland. And chances are pretty good that such a unit is currently doing service on the tonearm cable: because Norbert Lehmann can justifiably claim to count among the greats of the phono pre domain and that his precious helpers meet with an enormous success all over the globe.

This is because Lehmann has been dealing with the topic consistently since 1996 – at that time, it still seemed unthinkable that you could lead a company to success almost exclusively with such a "dead" product category. Today this mindset is passé and Norbert Lehmann has even some more arrows in his quiver besides phono preamps – for example the headphone amplifier "Black Cube Linear" which cuts an excellent figure also as a line level preamp, or the little "Stamp" switching power amplifiers.

Currently playing in our listening room is the second largest phono preamp in the Lehmann range which answers to the name "Black Cube Decade". The "Decade" comes from the fact that the unit was launched on the occasion of the company's 10th anniversary and it is to bridge the gap between the "Black Cube" and the extremely ambitious top-of-the-line model "Silver Cube". However, the "Black Cube Decade" presents itself as neither black nor cubical. Ok, black is available as an option, whereas the cubic form is not: the equipment consists of two flat and rather deep boxes which cannot be combined with the best will in the world to form a cube.

Job sharing of the tandem follows the proven design principle: one amplifier, one power supply. The concept of keeping transformers and power cords away from the sensitive circuit components of high-gain, low-level signal devices is still true, and so in the Decade the connection between "good" and "bad" is made via an umbilical cord fitted with 4-pole XLR connectors. The power supply is called "PWX II" and can also feed an additional Lehmann device besides the Decade, if need be; to this end it features a second output on the rear. Furthermore, it's supposed to be an

outstanding upgrade option for the regular Black Cube. There are not many controls on the PWX II; the mains switch sits on the back and sweetens the life of his owner with a blue permanent light from the front-mounted LED, provided he or she prefers not to use that switch regularly. In view of a continuous power consumption of 13 watts it is, however, no fault to turn the unit off, at least when it's not used for a longer period.

The blue joybringer of the power supply (I once wrote an editorial about my slightly deranged relationship with blue LEDs) is joined by a maximum of four similar lights on the amplifier itself. One acts as a power-on control (no comment ...), just like the one on the power supply, while the other three signalise the position of the toggle switches next to them – and here things get interesting. With the two little switches, discreetly recessed in the front panel and labeled “High” and “MC”, the gain setting is selected in four steps between 36 and 66 decibels. Switch number three is – no, not a subsonic filter in the classical sense. Otherwise it would have to be rather steep and have a very low cutoff frequency. This would have required additional active circuits in the signal path and this is what Norbert Lehmann bluntly refused: instead we find a filter here called “Soft Bass Rolloff” which smoothly decreases the level by six decibels per octave from about 100 Hertz. Its advantage: the circuit design is narrowed down to one capacitor which can be bypassed using the switch.

The only things you cannot adjust quite as easily are the input impedance and input capacity. For this miniature dip switches are provided on the bottomside, which is still much more comfortable than unscrewing the unit. Impedance settings are 47 kilohms, 1 kilohm and 100 ohms; these are complemented by a free slot inside the unit which may be fitted solderless with a customized resistor value. In this case, however, you do have to resort to a screwdriver then.

Which is what we did anyway to take a look at the Decade's holy of holies. The sight is not surprising, for it's the same with all Lehmann devices: a perfectly clean layout, high-quality components, an elaborate circuit design – this is extremely professional. All Lehmann phono preamps use passive equalization, the Decade makes no exception here. For this you need an ultra low-noise gain stage in the first place. This

is provided by a special IC by “That” which, curiously enough, is nowhere else used, followed by the equalization; the filters are fitted with excellent foil capacitors by Epcos. A Burr-Brown OP amp takes care of the second gain stage then. The components for the gain adjustment and for the sub-low filter are switched on site by relays to minimize signal paths. Finally there is a class A buffer stage with bipolar transistors which should not have problems even with longer and “touchy” cables.

You won't find regulators of the operating voltages here, these are located in the power supply, together with a decently sized toroidal mains transformer, good BC Components electrolytic capacitors and various chokes: teamed with those caps, the latter provide a very efficient filtering of the operating voltages. Wherever you look – the designer knows definitely all those little tricks how to turn a standard application into a highclass product. You notice consideration behind the selection of every component and the construction can hardly be improved any more – this is how things look if a circuit design has been perfected for over 12 years. Well, let's reinsert the screws and then listen to music.

The first crosscheck with the superb Whest PS.30R from last month's issue ended with a good hiding for the Lehmann. That was beyond any comparison. Oops, did somebody dare listen to music over a brand-new Lehmann again? I'm pleading guilty – of course, I know that the little machines from the Rhineland need plenty of time to show what they can really do.

## Team players

### Turntable:

- Acoustic Solid One

### Tonearms:

- SME M2-12

### Pickup cartridges:

- Clearaudio Goldfinger
- Denon DL103R
- MFSL Carbon 3.5

### Integrated amplifier:

- Symphonic Line Klarheit 1

### Loudspeakers:

- Klang + Ton „Cheap Trick 230“
- Lumen White Silver Flame

## Opposing players

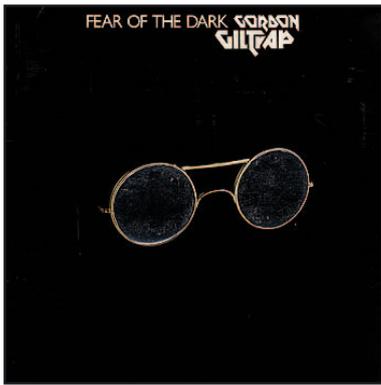
### Phono preamplifier:

- Whest PS30R
- malvalve preamp three phono

*The power supply (below) can feed two Lehmanns, it has ample reserves.*



Gordon Giltrap – Fear Of The Dark



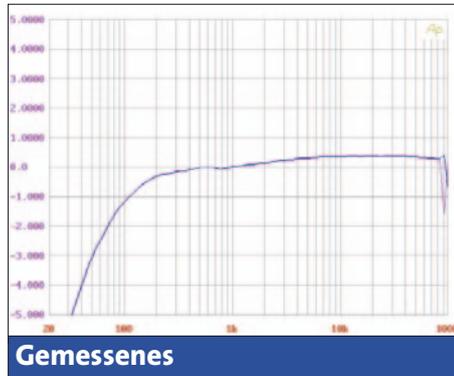
Played records

**Gordon Giltrap**  
Fear Of The Dark

**Roger Waters**  
Amused To Death

**Supertramp**  
Crime Of The Century

**Rickie Lee Jones**  
Pirates



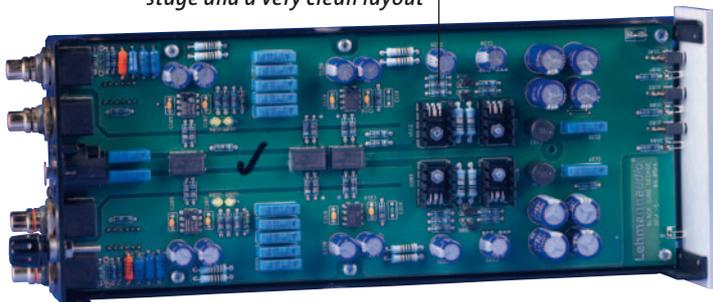
**Measurements-Metrological comment**

*Without doubt, the most extraordinary fact about the Decade is the effect of the low-cut filter (see diagramme): its -3dB point is at about 50 Hertz. This bass roll-off is audible and therefore the listening check took place without this filter. Otherwise the Decade shows an exemplary behaviour: S/N ratios of 82.3/69 decibels (at 36/66 decibels of gain and 5/0.5 millivolts input voltage) are good, channel separation is even better. THD is a vanishingly low 0.006/0.044 per cent (same conditions like above). Only the power consumption should be noted: 13 watts are not insignificant for a phono preamp.*



For a phono preamp, the power supply is rather potent and impressive with plenty of filter caps and chokes.

This is how the studio pro does it: two gain stages, class A output stage and a very clean layout



So let's forget about the first experiment and move the clocks ahead by two weeks during which the Decade could "grow" almost secretly. And, boy, did it grow.

Whereas the first notes were still flowing rather unpolished and raw from its RCA phono sockets (which are pretty good, by the way), the Decade had gained an enormous finesse and refinement by now. Accordingly, the repeated crosscheck with the PS.30R delivered quite another picture: speaking of tonality, suddenly the two of them are by far not that dissimilar any more and very positively on the linear side. Ah, yes – both have been designed by studio professionals, so one shouldn't be too surprised at this. Yet there are also differences: the Briton tucks in more boisterously than the Rhinelander, which in turn appears to sound a bit more peacable and holistic. Subsequently I was listening a

lot of "music for lazybones" in the form of various concept albums and such records that you just play from A to Z without picking certain tracks. In doing so, several things became clear: The Decade masters some tricks normally associated with the notion "Class A sound": it is very fast and three-dimensional, delivers an excellent resolution of details while sketching room dimensions deeper than wide. Tonally on the safe side, yes – however not just boringly reproducing, but in an absolutely exciting and tingling manner. My experiences with the large Lehmann Silver Cube date back some more years, yet from my memory I would say that it lacks the finesse of the Decade (to be fair: the Silver Cube has been updated several times since then). But as things are now, this is my favourite Lehmann and at all events a phono preamp which has a substantial voice in this chapter.

Holger Barske



Lehmann Audio  
Black Cube Decade

- Price 1,440 Euro
- Distributor Lehmann Audio, Bergisch Gladbach
- Phone (+49) 2202 / 2806240
- Internet www.lehmannaudio.de
- Guarantee period 2 years
- Dimensions per unit (W x H x D) 120 x 55 x 280 mm
- Weight (both units together) 3 kg

**On balance ...**

A good phono preamp is the endeavour to reconcile a wealth of requirements; in the Black Cube Decade the combination of practical features, professional design and a technically correct, yet extremely exciting sound quality has worked out perfectly.

