





# PHONO PRE, SEEN THROUGH

Of all the ways to build phono preamplifiers, one is still the exception: the exclusive use of tubes, up to and including MC preamplification. This one is such an exception.





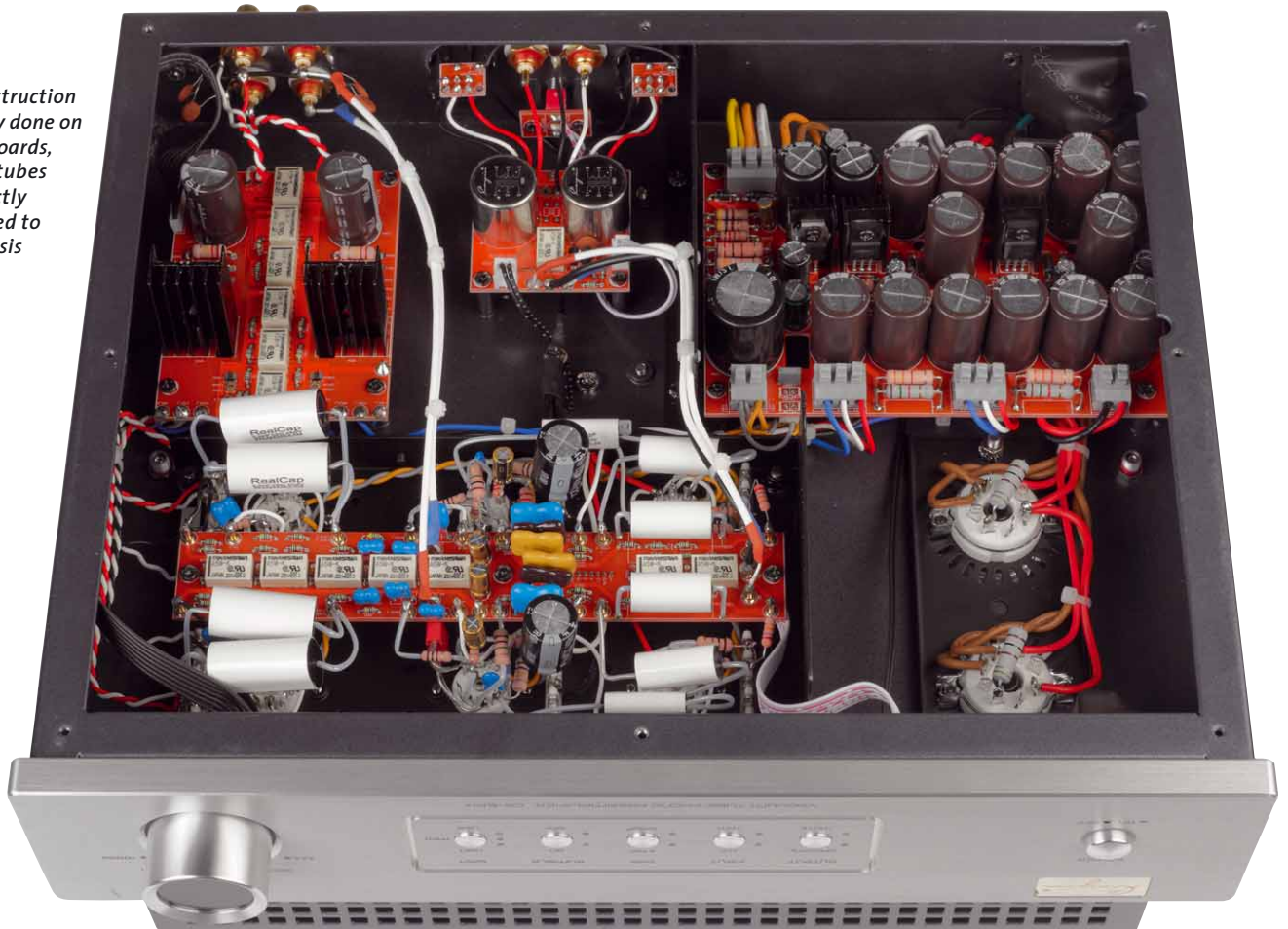
*The two transformers provide the symmetrical output signals*

### Background

There are good reasons why so few manufacturers fall for entrusting MC signals in the range of less than 100 microvolts to tubes. With such small signals, microphonics becomes a significant issue, and the large-area components inside the glass bulbs are excellent antennas for spurious radiation of all kinds. What can still be handled quite well with high-level and even phono MM signals is a real problem with adequate MC preamplification and places high demands on the tubes' quality and the equipment's layout. In the heyday of tube amplifiers, the first stage of voltage amplification was, therefore, often placed in the responsibility of transformers. There's plenty to read about such things in this issue of „LP.“

But: You don't necessarily have to do it this way, as today's proband proves.

*The construction is mainly done on circuit boards, but the tubes are directly connected to the chassis*



## Appearances

It goes by the type designation CS-6PH, costs a moderate EUR 2680 considering the package on offer, and comes from the manufacturer Cayin, which manufactures in the Far East. This is a company that has gained a considerable reputation in 20 years in the field of all kinds of tube equipment and not without reason also successfully manufactures products for numerous other brands.

The new phono preamplifier from Cayin is, without a doubt, a very ambitious device. Eleven and a half kilograms of technology are responsible for nothing else but equalizing more or less tiny phono signals and amplifying them to a level that „normal“ amplifiers can handle. For this purpose, Cayin relies on eight tubes, all mounted free-standing on the chassis. The chassis is kept in an elegant metallic gray, and the paint quality is excellent. You have the choice between a black or silver anodized front panel. The tube ensemble usually works under a protective perforated metal cage, which can be mounted or removed with a flick of the wrist. Attaching this accessory with banana plugs and sockets is a trick Cayin invented many years ago and has been adapted by many manufacturers. The six amplifier tubes are also protected from external interference by shielding cups – also painted in chassis color – which is certainly not a bad idea considering the low signal levels.

## Features

One MM and one MC cartridge can be connected to the CS-6PH. Both inputs can be used at the same time. The two pairs of RCA jacks are equipped with a grounding screw terminal, and on the output side, there are balanced XLR connectors in addition to the RCA output; a toggle switch selects between the two operating modes. These XLRs are genuine symmetrical outputs; two transformers directly in front of the sockets generate the corresponding signals.

*Signals are switched in the device basically by relay on site*

The front panel houses a range of control and display elements, making the CS-6PH convenient to parameterize. There's the hard power switch on the left, and on the right, a rotary knob with which the input impedance can be set. In MC mode, 47, 100, 200, 470, and 1000 ohms are available. In MM mode, the knob has no effect. The standard 47 kilohms are parallel to the input sockets. Behind the rotary knob is a rotary encoder; all switching operations in the device are performed by relays directly on site - that's how it should be in this class. The five buttons in the center are responsible for the other settings. One mutes the output if required, one selects between MM and MC mode, and the third decides whether you want 47 or 100 picofarad termination capacitance at the MM

## Teammates

### Cartridges:

- Benz ACE-L
- Denon DL-103
- van den Hul Colibri Grand Cru

### Turntables:

- TechDAS Air Force III / Reed 3p / Reed 1x
- Transrotor Fat Bob / SME M2-12

### Integrated amplifiers:

- Thivan Labs 811 Anniversary

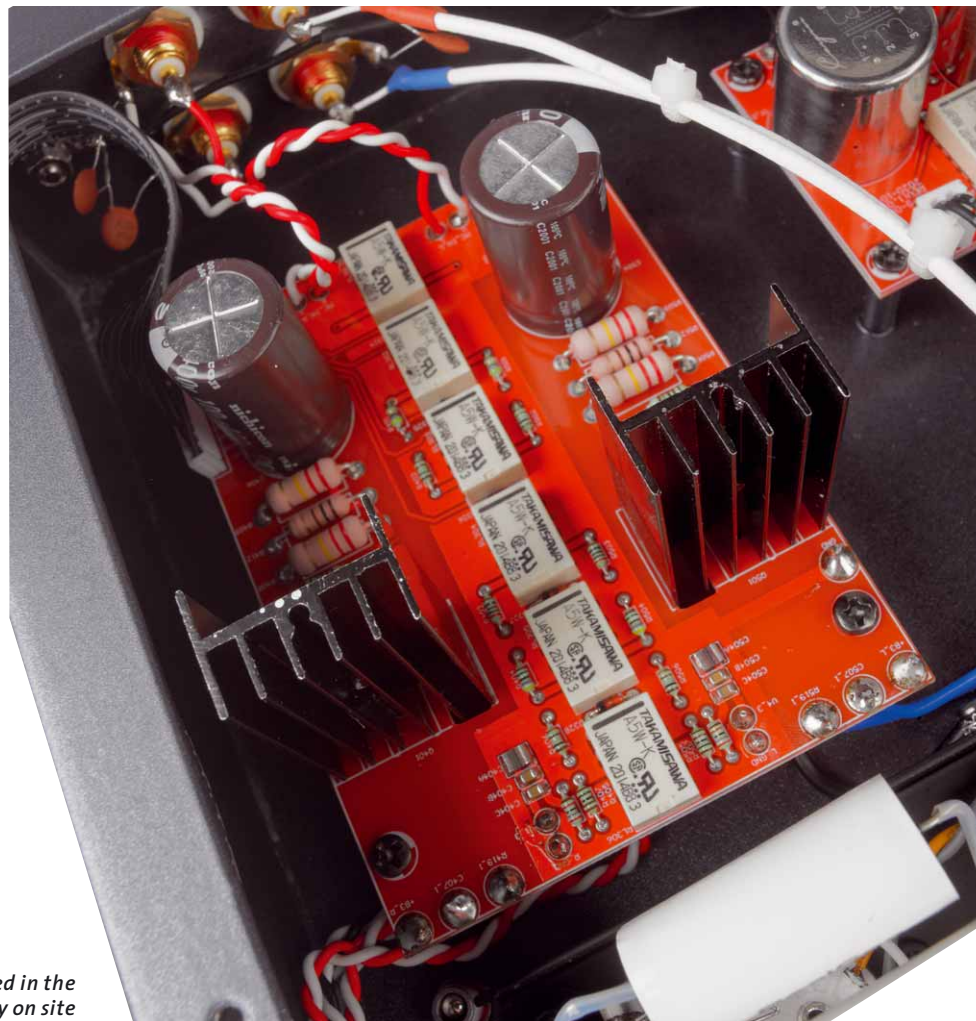
### Loudspeakers:

- DIY Focal / JBL

## Competitors

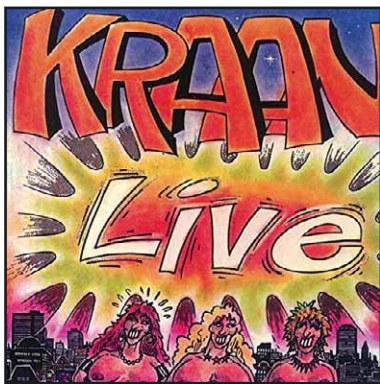
### Phono Preamplifier:

- MalValve preamp three phono





Kraan - Live



What we played

**Kraan**

Live

**John Coltrane**

A Love Supreme

**Led Zeppelin III**

**Rickie Lee Jones**

It's Like This

input. Number four adds the rumble filter if needed, and the last allows the selection of three different gain factors in MC mode. A maximum of about 60 decibels of amplification is possible. This is sufficient for all MCs that do not belong to the extremely quiet category; everything from perhaps 0.3 millivolts output voltage fits. The other two settings offer 55 and 51 decibels of amplification; in MM mode, it's a practical 40 decibels. By the way, the device remembers the set values so that everything is as it was set before the next time it is switched on.

### Tube configuration

Probably the most noticeable tubes of the CS-6PH are the two that are not under shielding caps. They are type 22DE4, which I have never seen in the HiFi environment. These so-called „TV Dampers“ from the television field are used as rectifiers. They were produced by RCA at the time and are still readily available. The idea is good; a clean supply is essential for this unit. The MC amplification is done by a 6922 per

channel, which is roughly equivalent to an E88CC. Certainly one of the lowest noise double triodes and therefore the first choice in this case. The MM amplification is provided by a JJ ECC83 per channel, which is also a good choice due to its higher gain. An ECC81 per side takes care of the outputs' low impedance driving. The manufacturer puts good standard hardware everywhere, opening up a vast playground for Tube Rollers.

### Interior views

Under the base plate, there is a lot of technical effort, which was expected considering the tubes. The electronics are distributed over four circuit boards, and the tube sockets are mounted directly on the chassis. Fourteen small-signal relays take over the input configuration and the operating gain switching. The manufacturer has invested in electronically stabilized operating voltages and uses only high-quality passive components – very nice.

*The Cayin phono preamplifier features a convenient operating concept*



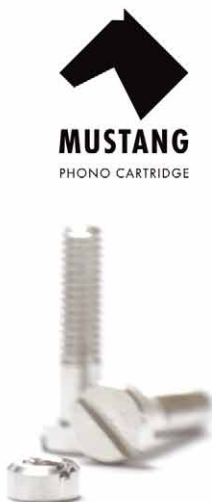


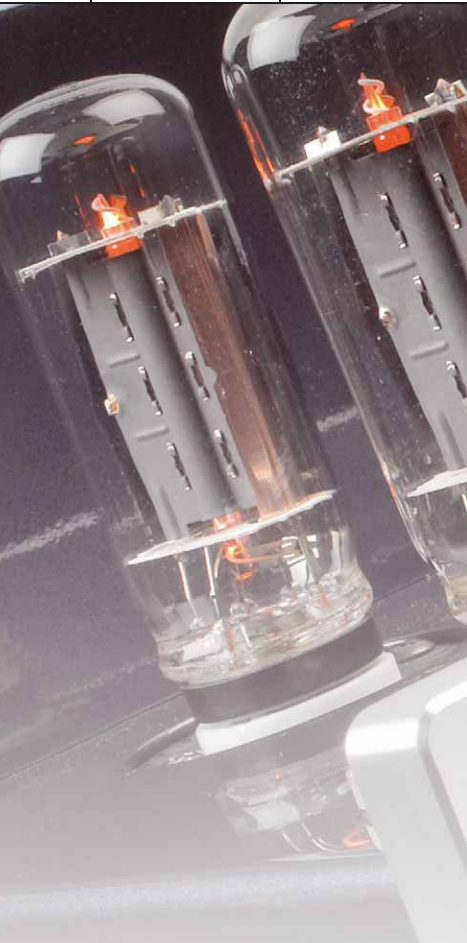
## Sound

The CS-6PH is a unique phono amplifier, and there are reasons for that: The manufacturer has left the path of virtue in the dimensioning of the equalization and built in a few small specialties. And these are noticeable sound-wise, which doesn't have to be unpleasant. I started the listening test

with the excellently produced album „Kra-an Live“ from 1974, which was perhaps a bit daring to get warmed up. Notably, what drummer Jan Fride delivers there is an absolute stunner in terms of pressure and heft. No doubt the 50-hertz boost does its part, but I don't find it unpleasant. Where the connected Benz ACE L is usually cha-

*An MM and an MC cartridge can be operated at the same time on the device*





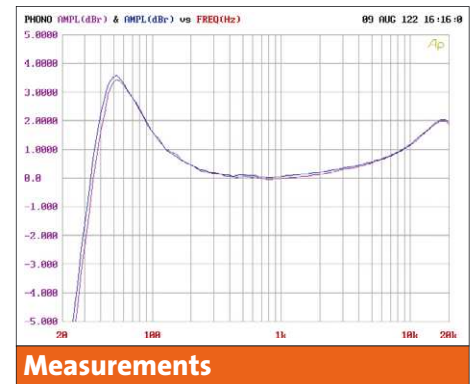
acterized by tonal linearity, it spreads a real party mood in this case. Even the small plus at the upper end of the spectrum doesn't bother me at all.

If you are into unconditional asceticism, the Cayin phono preamp is not for you. It practically always goes one step further, swings and grooves like hell. At the same time, it sounds very smooth and relaxed, like the proverbial analog warmth.

We try it with jazz and try John Coltrane. „A Love Supreme“ once again attracts attention with a heated and lively pace. The „bass boost“ is primarily noticeable in the drums, but the effect is kept within limits, just like the shot of extra freshness in the cymbals. Here, too, a very fluid and smooth gait is apparent. By the way, the noise be-

havior of the tube MC solution proves to be inconspicuous in practice and even pleasant. The residual noise in quiet passages has a sonorous, unobtrusive character. When switching to a Denon DL-103, its proportion increases somewhat due to the lower signal voltage ratio, but it is still very discreet. The Denon doesn't seem ideal in this combination; its powerful bass provides a bit too much of a good thing with the Cayin. Surprisingly, the luxurious van den Hul Colibri Grand Cru feels right at home and plays extremely sweet, soft, and wonderfully detailed. Here, the CS-6PH's ability to create extremely deep spatial representations becomes noticeable.

*Holger Barske*



### Measurements

#### Lab commentary

*The Cayin's frequency response reveals a few peculiarities: In the bass around 50 hertz, there is an increase in the region of 3.5 decibels, and above one kilohertz, the frequency response also shows a noticeable upward trend. At 15 kilohertz, we arrived at about a plus of two decibels. At maximum gain (around 60 decibels), the extraneous frequency response is a respectable 48 decibels(A), and the channel level is 43 decibels. Naturally, this is better in MM mode, where both values are in the neighborhood of 72 decibels(A). The distortion is around 0.6 percent at 60 decibels gain and 0.5 millivolts at the input, and 0.02 percent in MM mode (5 millivolts). The device consumes a constant 66 watts of power.*


*The signal tubes are protected by shielding cups*



## Cayin CS-6PH



- Price approx. 2,680 Euro
- Distribution Cayin, Glashütten-Schlossborn
- Phone +49 6174 9554412
- Internet cayin.com
- Warranty 2 years
- Dimensions (W x H x D) 380 x 177 x 309,5 mm
- Weight approx. 11.5 kg



Cayin  
CS-6PH

International 3/22

» A very special phono preamp with tonal distinctiveness, a very smooth and fluid gain. A lot of phono for the money!